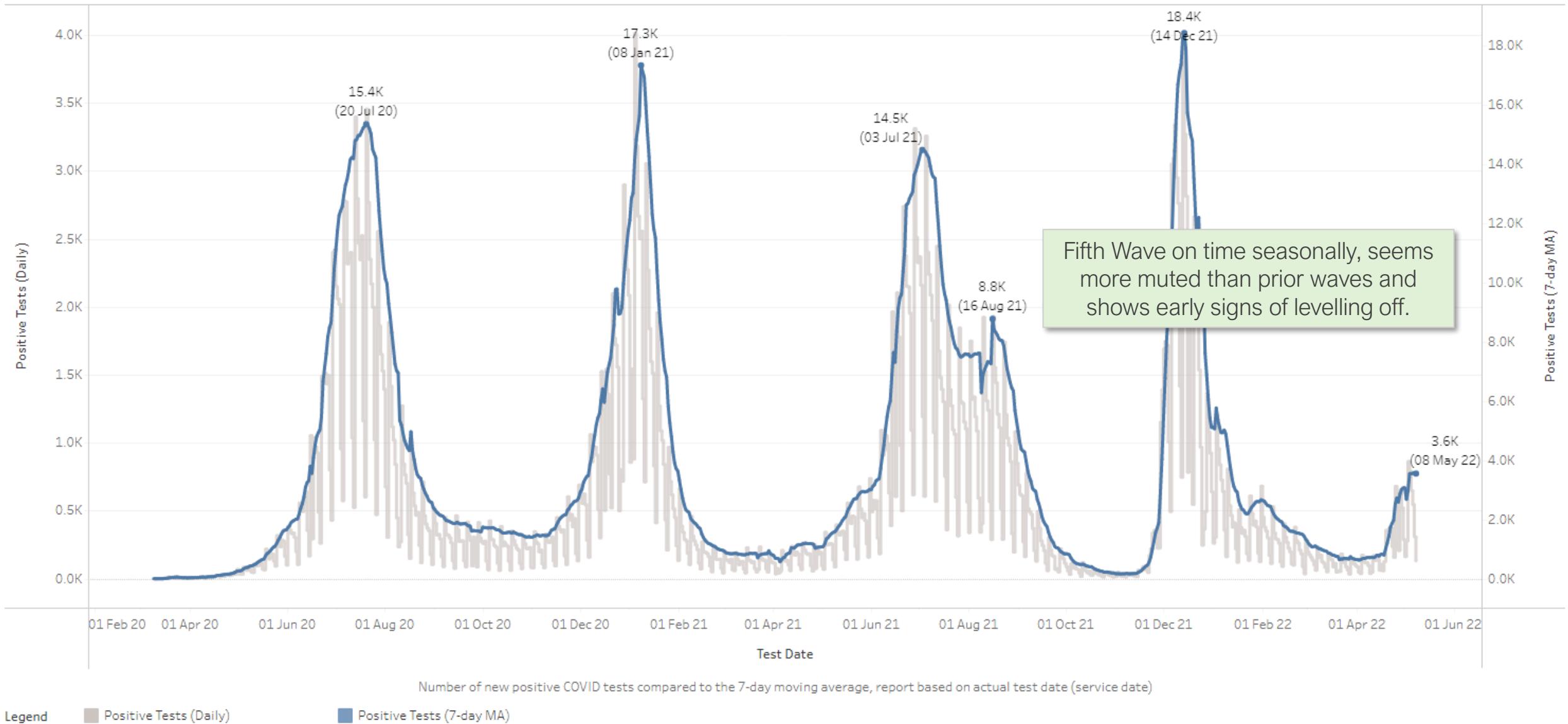


COVID19, the next wave and beyond

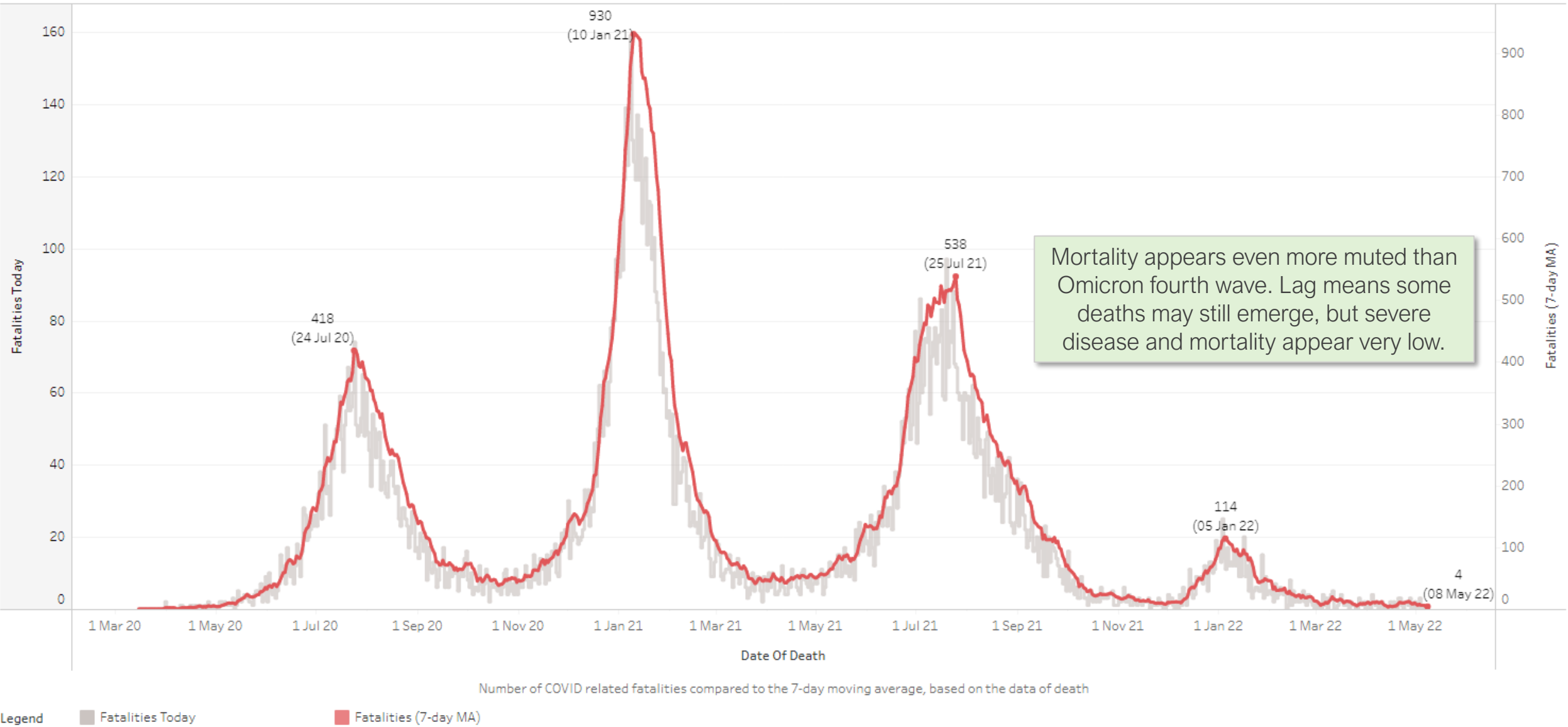
Presentation to Life Assurance Sessional

17 May 2022

SARS-COV-2 Cases



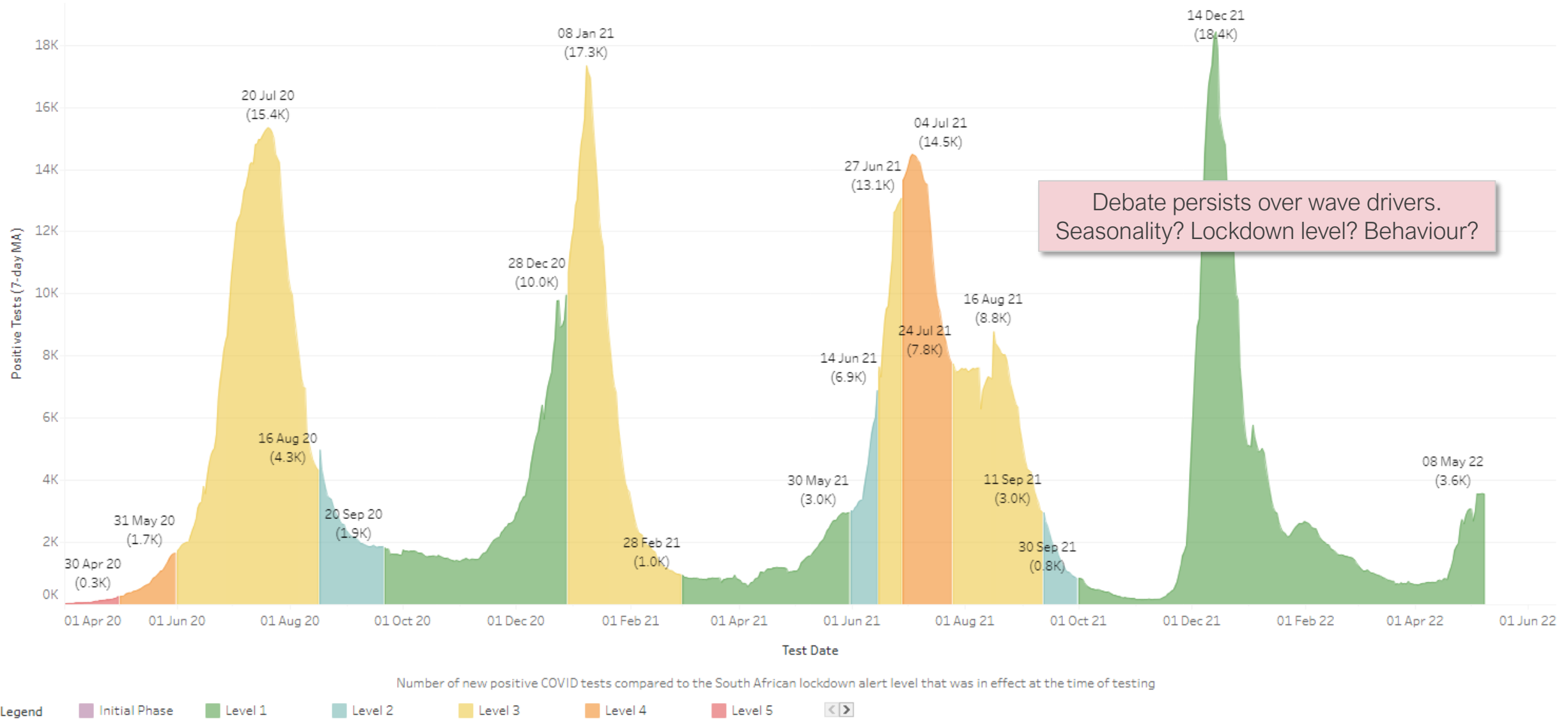
SARS-COV-2 Fatalities



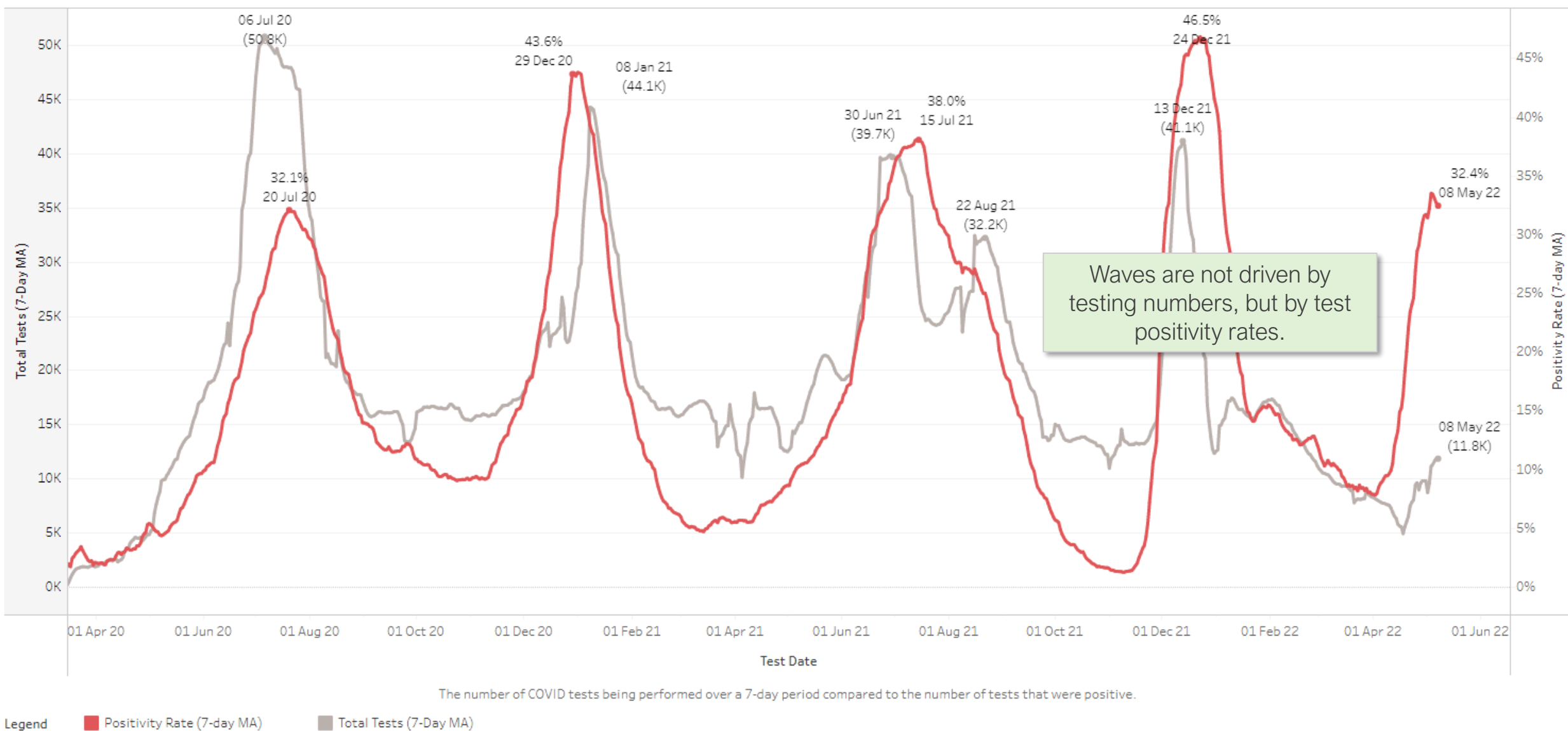
Data underlying these dashboards constitute an aggregate house view of private medical schemes in South Africa, which form part of Insight Actuaries & Consultants universe of data. Data is updated daily and draws on both administrator and pathology lab data. Metrics are based on the service date (actual test date) rather than reporting date up to 8 May 2022. Graphs are shown based on a 3-day lag to allow for the delay between testing and reporting.



SARS-COV-2 Cases compared to lockdown levels



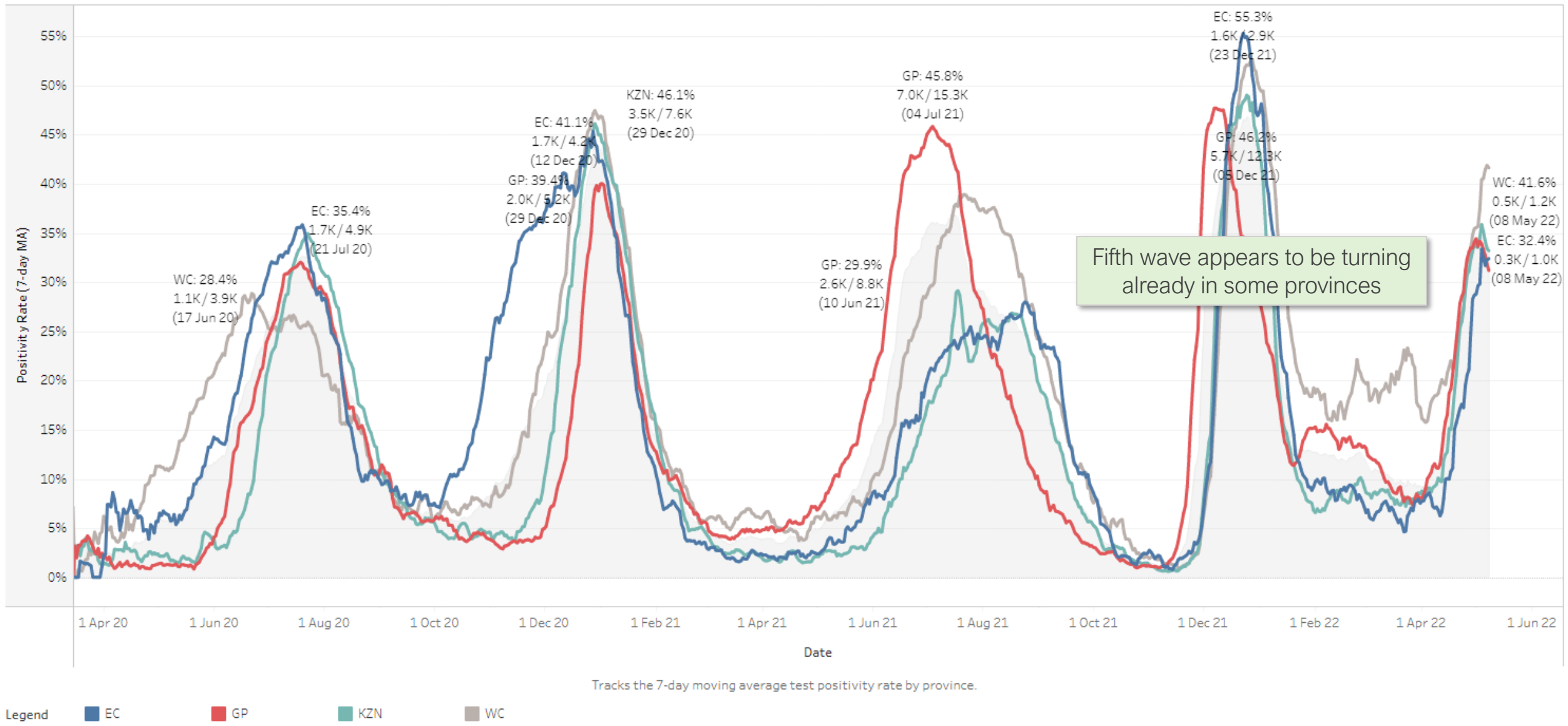
SARS-COV-2 Tests vs Test Positivity Rate



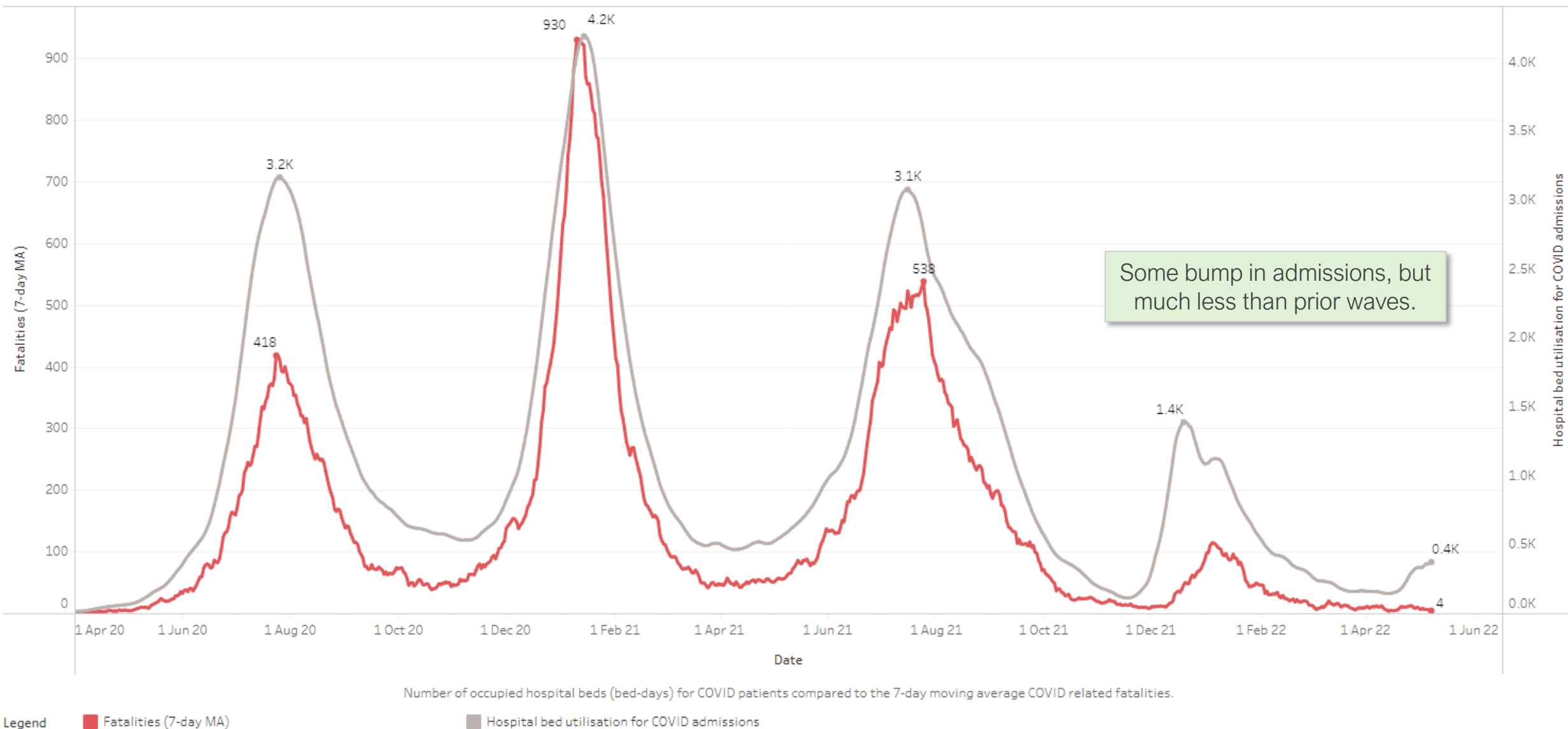
The number of COVID tests being performed over a 7-day period compared to the number of tests that were positive.



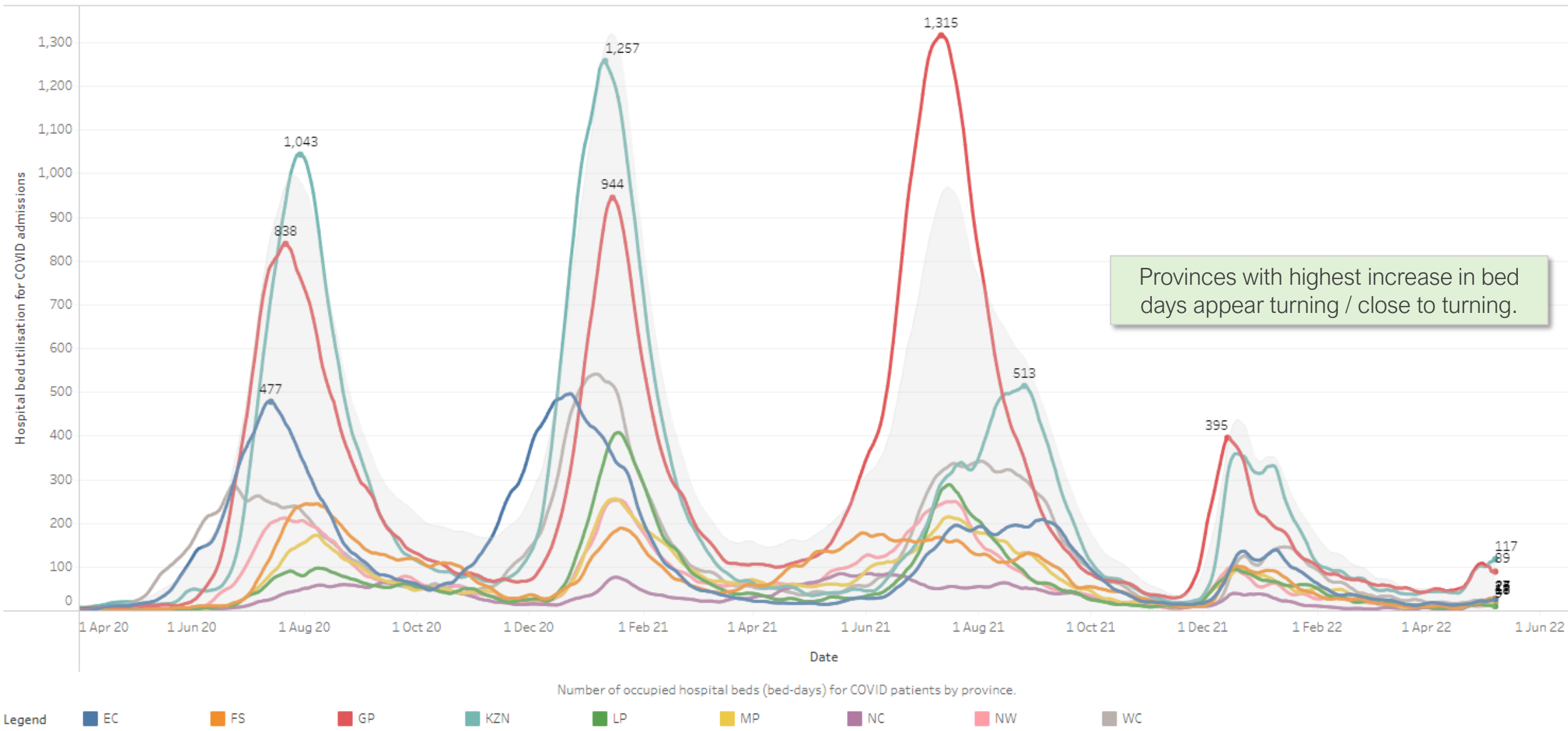
SARS-COV-2 Test Positivity Rate 7-day MA (High Exposure Provinces)



Average SARS-COV-2 hospital bed-day utilisation vs fatalities



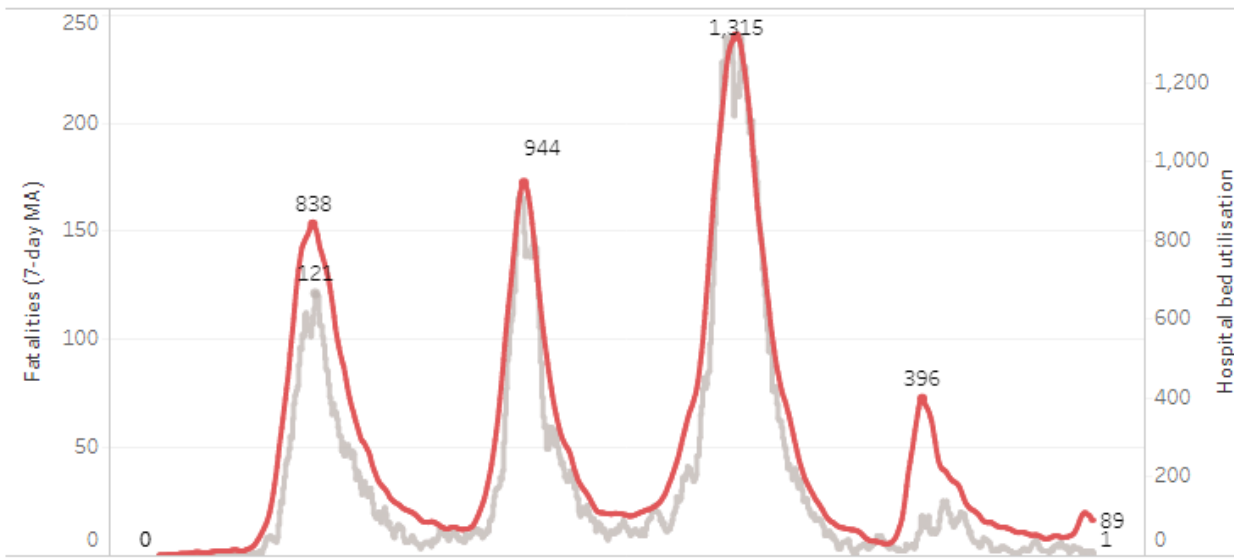
Average SARS-COV-2 hospital bed-day utilisation by Province



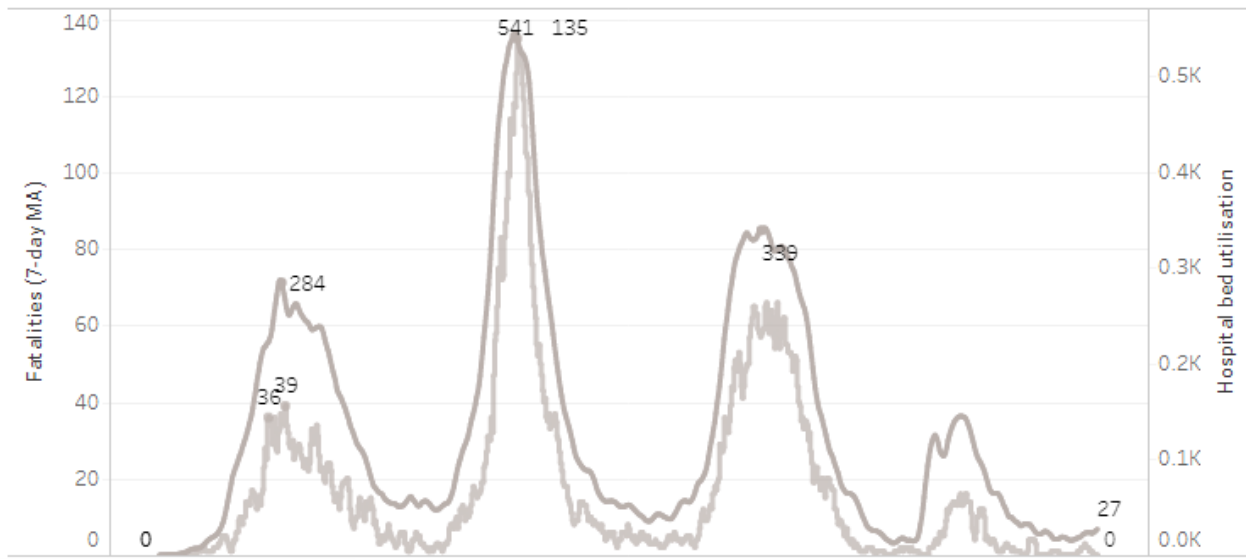
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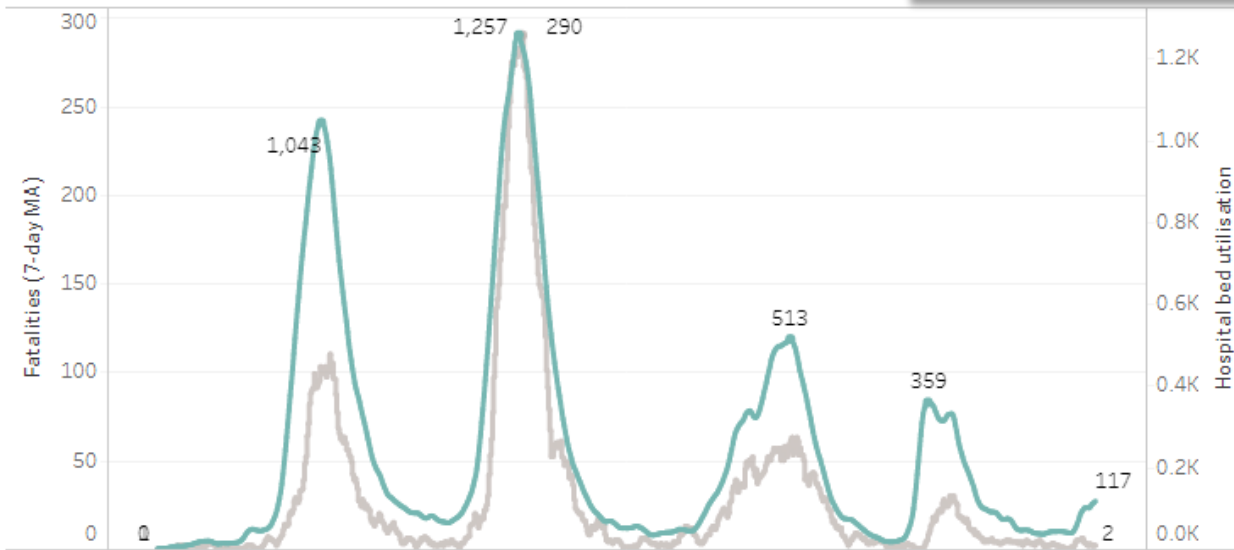
Bed Days Used vs Fatalities (GP)



Bed Days Used vs Fatalities (WC)

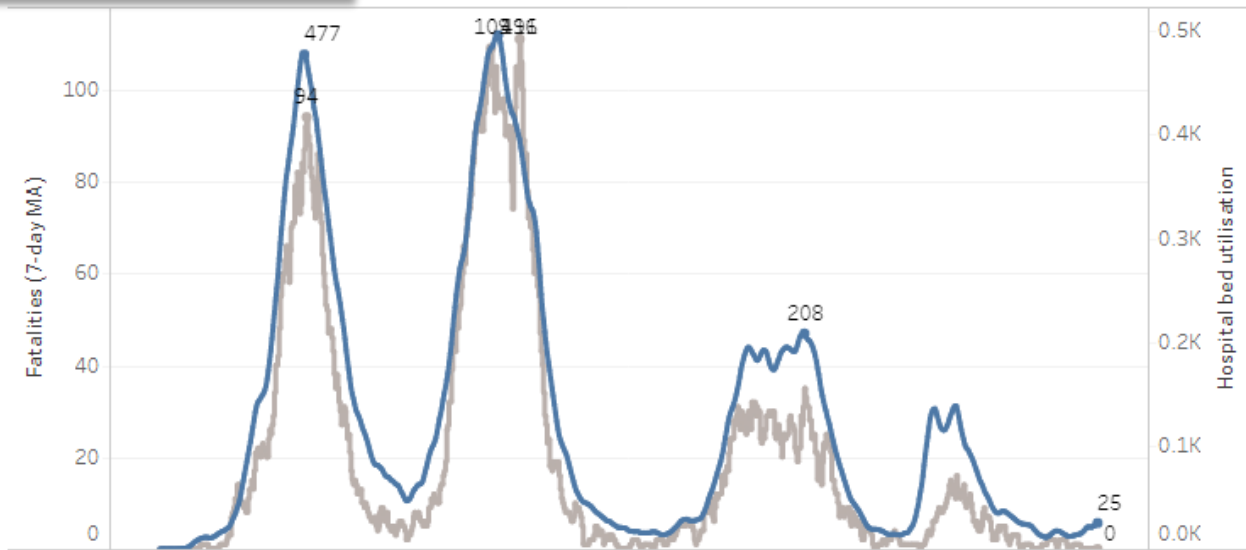


Bed Days Used vs Fatalities (KZN)



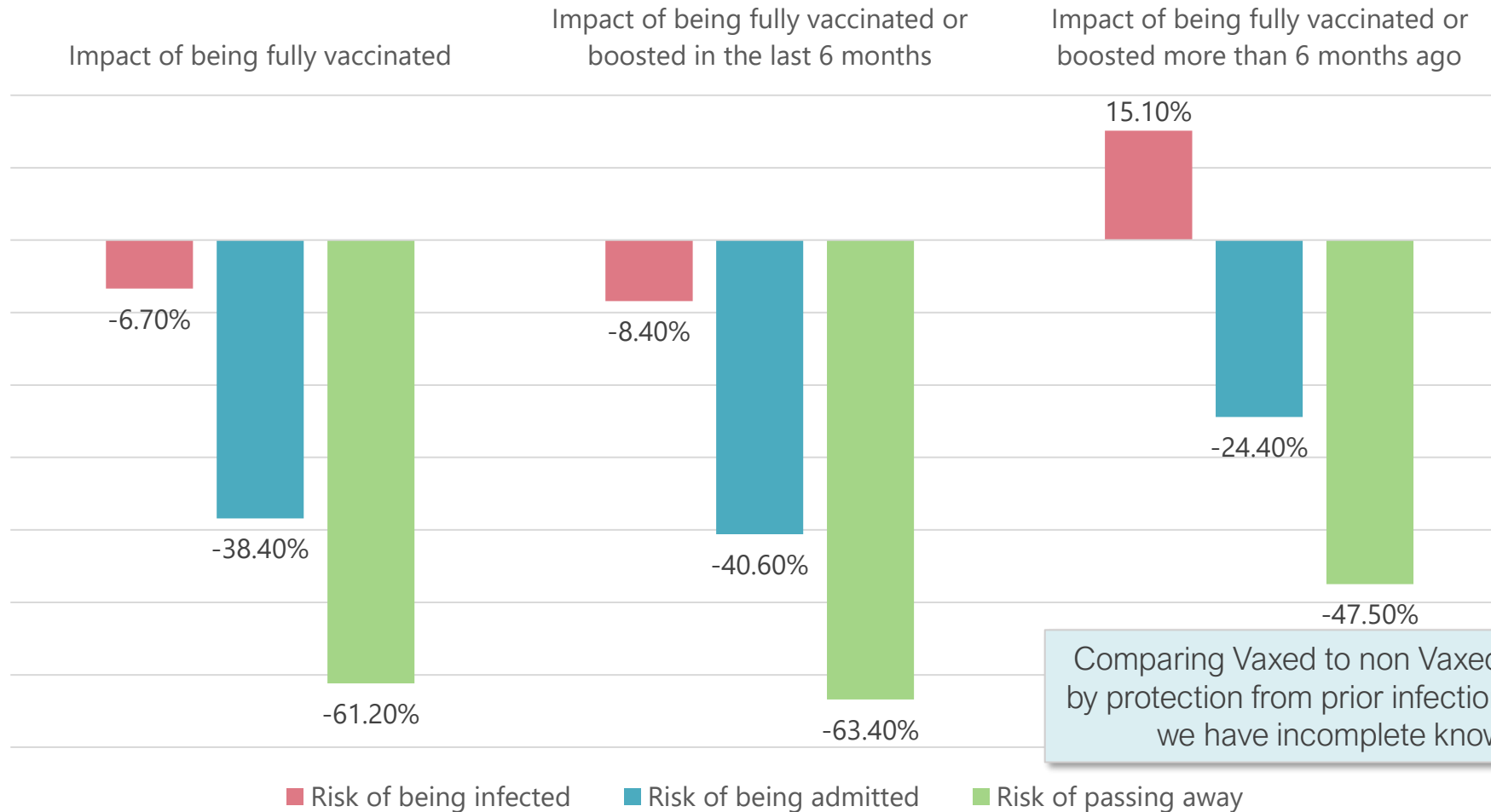
Mortality very low across main provinces

Bed Days Used vs Fatalities (EC)



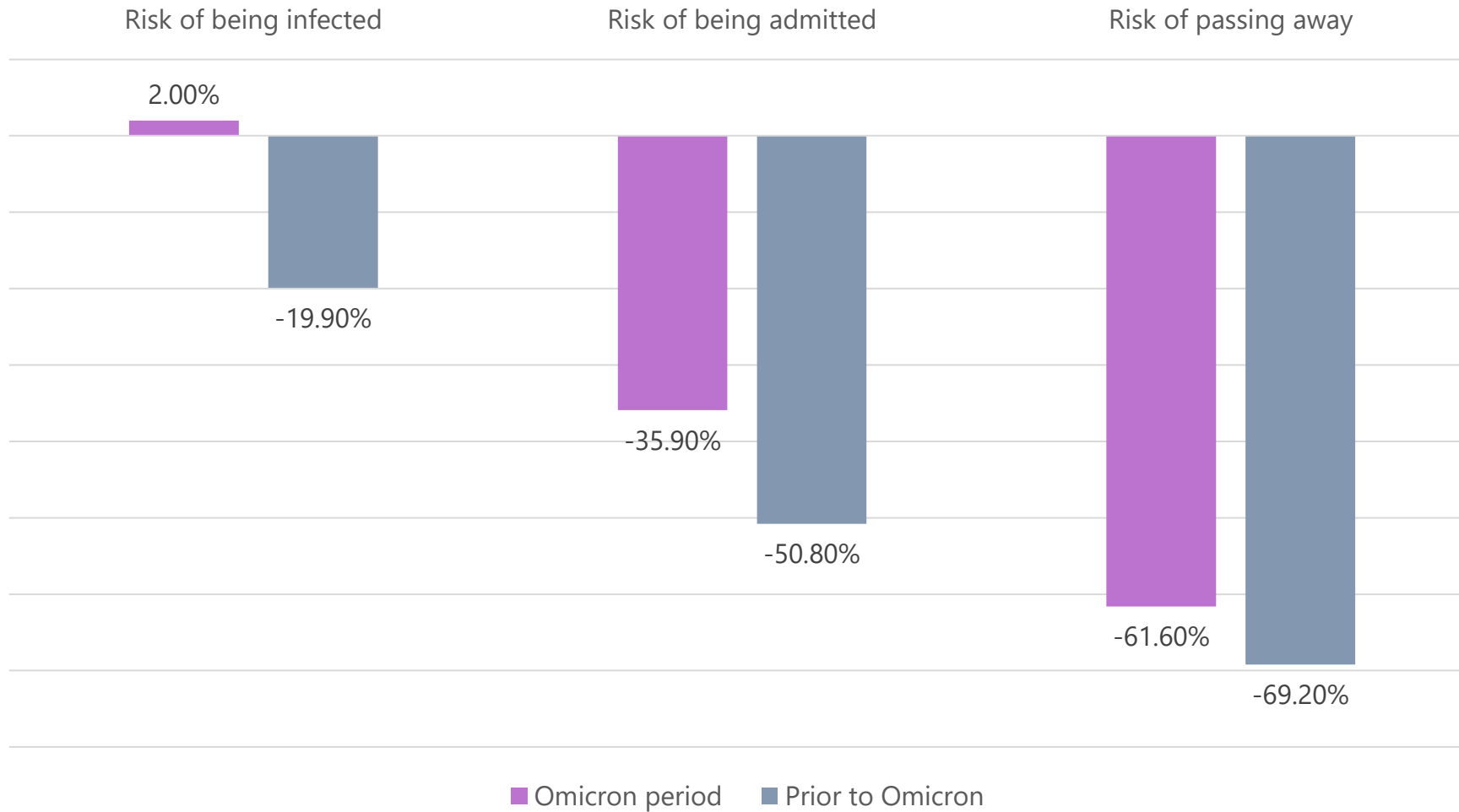
Fully Vaccinated, effect over time

(versus non vaccinated, risk adjusted, wave adjusted)

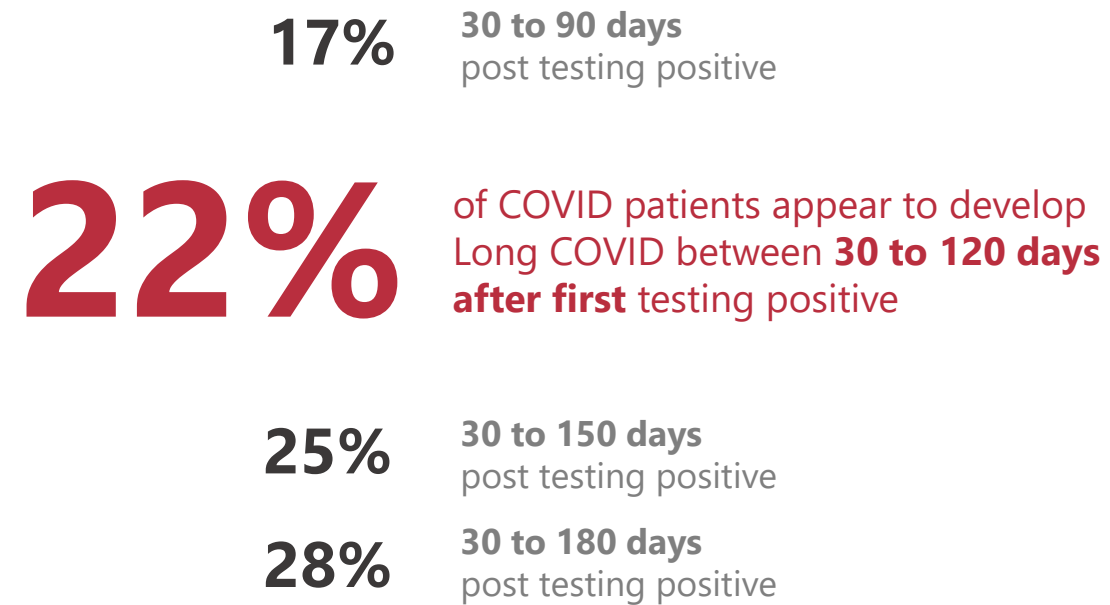


Fully Vaccinated, before/after Omicron

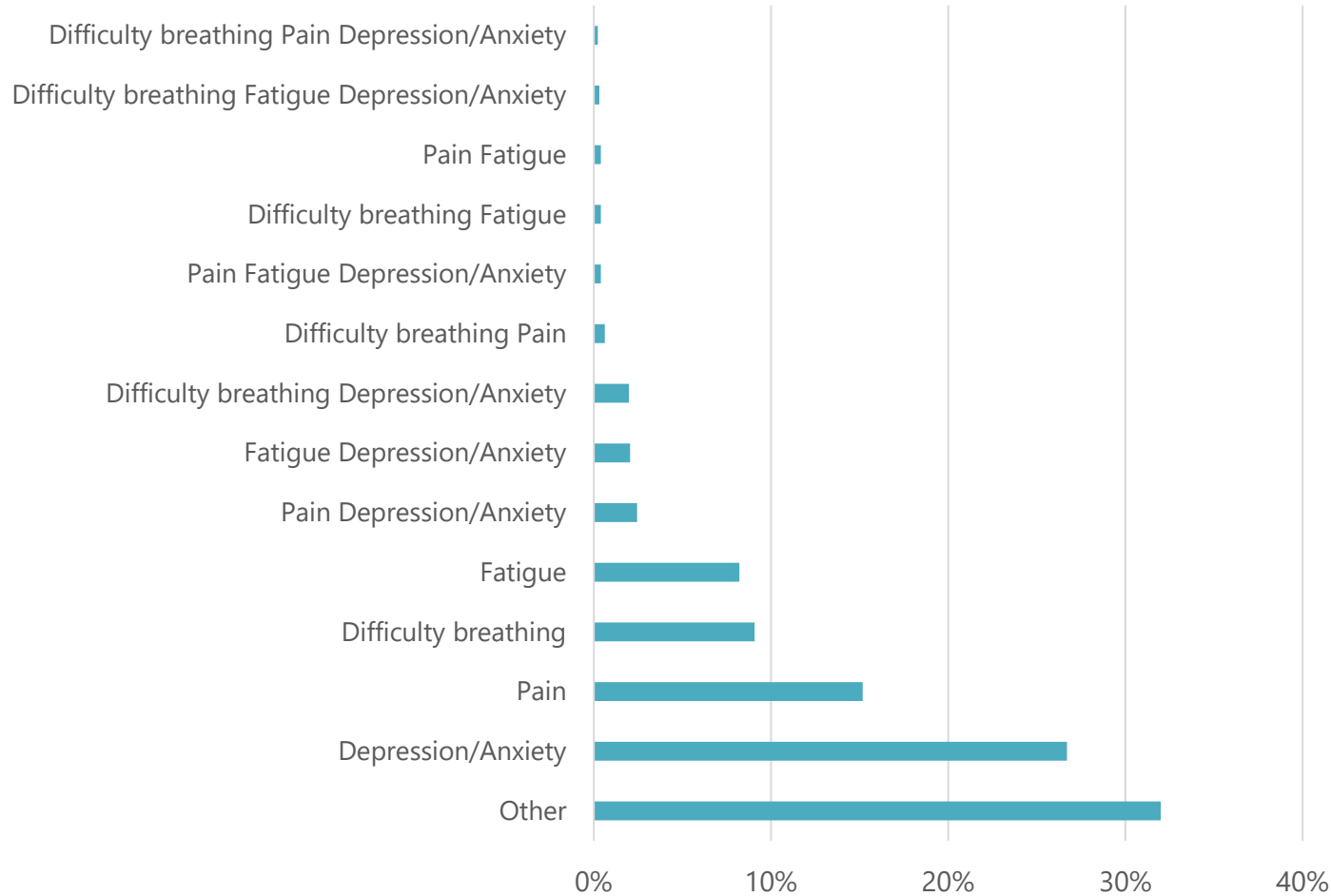
(versus non vaccinated, risk adjusted, wave adjusted)



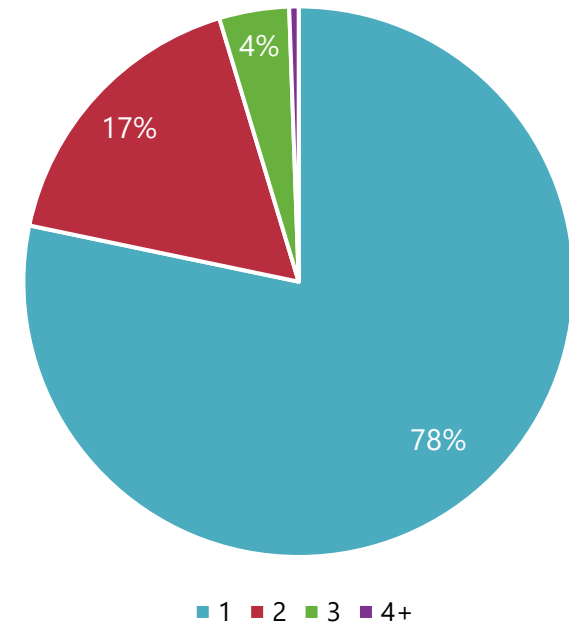
A Glimpse at Long Covid



ICDs of interest to Long COVID



Majority of Long COVID patients don't present with multiple symptoms



Items to note

Depending on your definition of Long COVID, 10% - 30% of COVID patients impacted

Women do appear to be more impacted than men (due to inclusion of depression)

Common symptoms include depression, pain, difficulty breathing, fatigue

Schemes can provide support through comprehensive day to day benefits.
Schemes could develop access criteria for specific benefits

A large percentage of Long COVID patients already had pre-existing conditions

20% of Long COVID patients develop depression, which was not pre-existing, putting them at higher risk

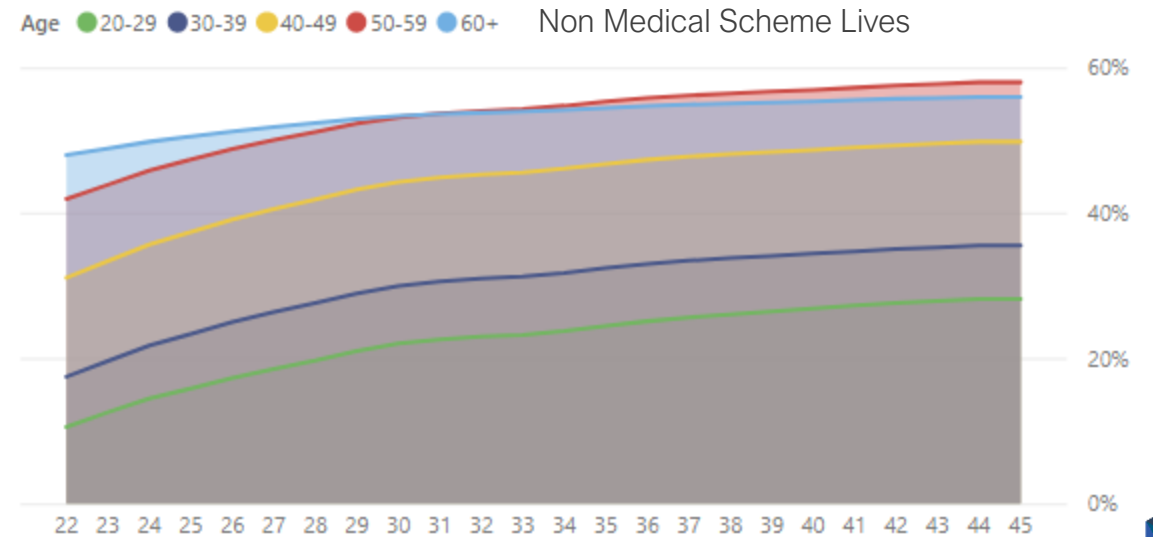
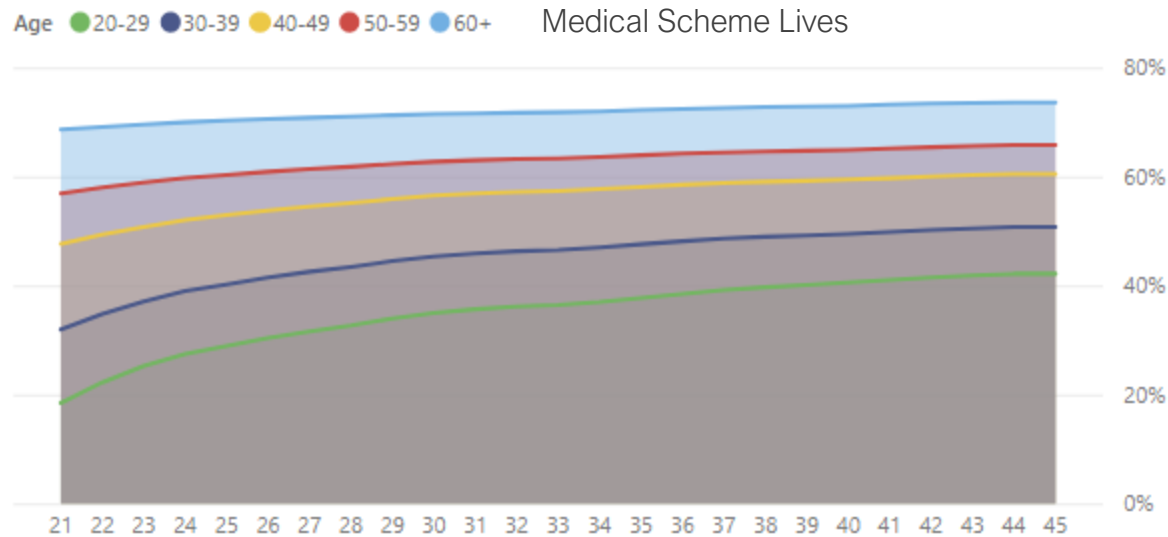
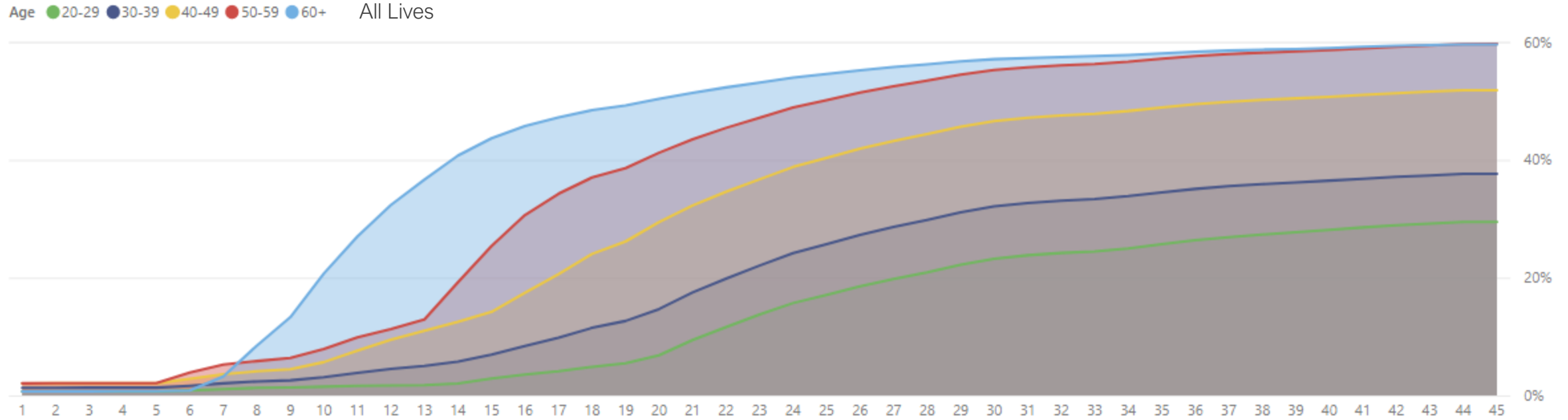
Higher onset of chronic disease is concerning and will need to be monitored

Employers should ensure proper programs in place for support

Life insurers should be concerned about morbidity and disability claims



% Fully Vaccinated over time (end March 2022)



% Fully Vaccinated by Province and Age Band (end March 2022)

All Lives

Province name	20-29	30-39	40-49	50-59	60+	Total
Eastern Cape	32.0%	37.9%	56.0%	68.9%	64.0%	48.9%
Free State	40.8%	48.8%	63.9%	71.8%	67.1%	55.5%
Gauteng	25.7%	36.7%	52.1%	56.3%	53.1%	40.9%
KwaZulu-Natal	21.5%	30.0%	44.5%	53.8%	58.6%	36.8%
Limpopo	36.0%	42.3%	56.8%	70.8%	70.0%	51.0%
Mpumalanga	29.5%	35.9%	44.7%	51.8%	46.6%	39.0%
North West	32.5%	38.3%	50.6%	57.8%	57.4%	44.5%
Northern Cape	36.5%	41.8%	53.9%	60.4%	50.9%	46.7%
Western Cape	37.8%	42.9%	54.2%	59.6%	66.6%	49.8%
Total	29.5%	37.6%	51.8%	59.7%	59.6%	43.9%

Medical Scheme Lives

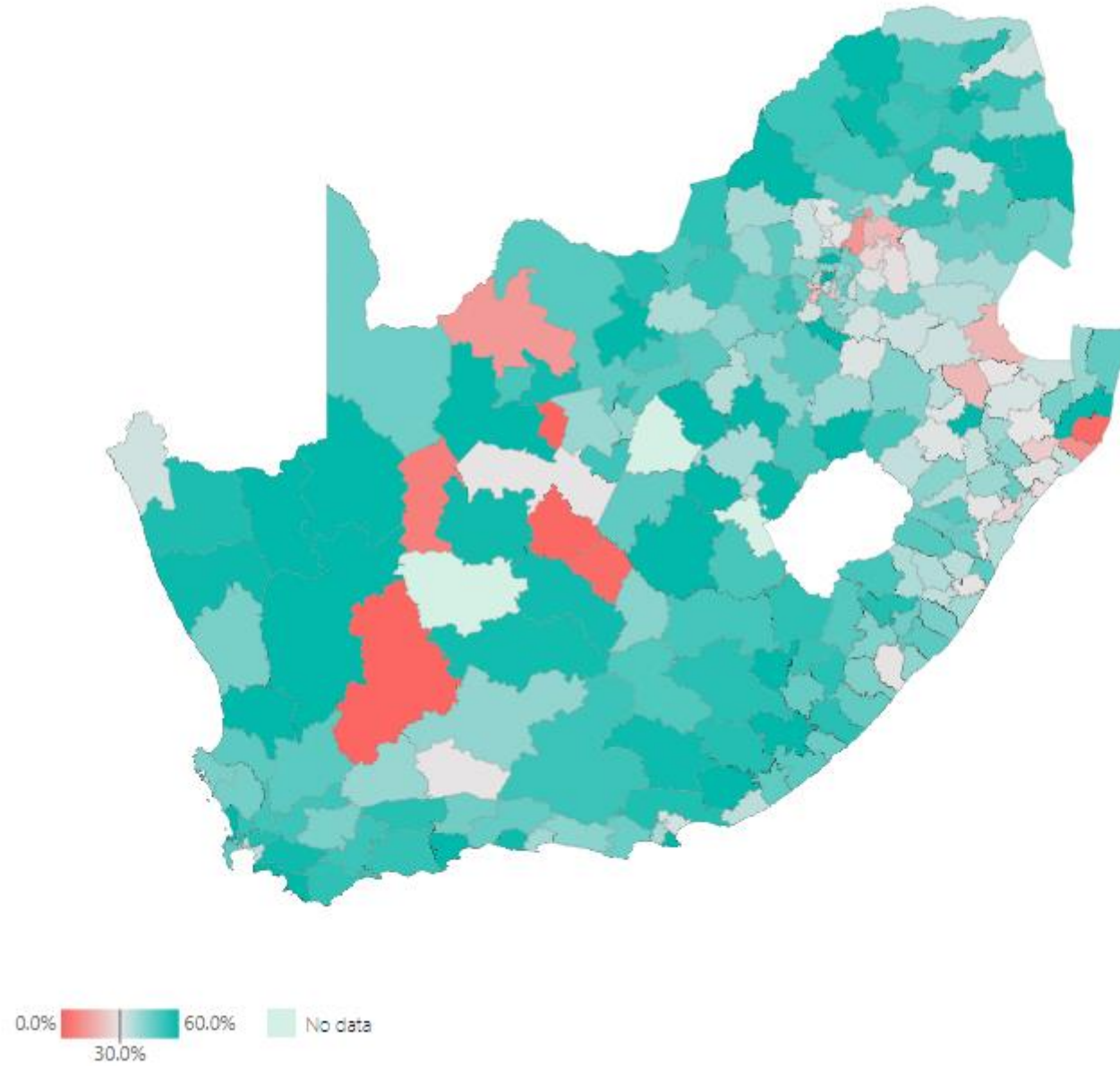
Province name	20-29	30-39	40-49	50-59	60+	Total
Eastern Cape	49.2%	45.4%	65.8%	60.2%	63.4%	57.6%
Free State	48.4%	52.4%	57.2%	82.2%	70.2%	61.7%
Gauteng	36.6%	52.6%	57.3%	58.5%	66.9%	53.9%
KwaZulu-Natal	40.5%	44.4%	57.1%	66.9%	93.0%	59.2%
Limpopo	56.0%	60.2%	61.5%	96.2%	109.1%	72.4%
Mpumalanga	33.6%	35.7%	41.6%	41.8%	56.4%	40.9%
North West	38.6%	49.8%	74.7%	70.9%	50.5%	57.6%
Northern Cape	31.0%	52.0%	50.8%	59.3%	60.8%	51.2%
Western Cape	61.6%	57.9%	76.3%	83.7%	84.2%	73.1%
Total	42.1%	50.7%	60.4%	65.8%	73.6%	58.5%

Non Medical Scheme Lives

Province name	20-29	30-39	40-49	50-59	60+	Total
Eastern Cape	31.1%	37.1%	54.5%	71.0%	64.1%	47.8%
Free State	40.2%	48.4%	65.4%	69.9%	66.5%	54.5%
Gauteng	23.7%	33.1%	50.2%	55.3%	46.7%	37.2%
KwaZulu-Natal	20.1%	28.1%	41.9%	50.6%	52.2%	33.5%
Limpopo	35.4%	40.9%	56.1%	67.5%	67.9%	49.4%
Mpumalanga	29.2%	35.9%	45.3%	54.5%	45.1%	38.7%
North West	32.0%	36.8%	46.7%	55.0%	58.8%	42.6%
Northern Cape	37.0%	40.6%	54.6%	60.6%	49.2%	46.0%
Western Cape	34.7%	39.7%	48.7%	52.6%	57.2%	44.0%
Total	28.1%	35.5%	49.8%	57.9%	55.9%	41.2%



% Adults Fully Vaccinated by Subdistrict (end March 2022)



Covid19 mortality perspectives

1 Official Covid-19 deaths = 100,516 → Population fatality rate = 0.16%
→ Tends to go with lower IFR expectation – some as low as 0.2% → 84% already infected

2 85% of MRC Excess deaths = 264,406 → Population fatality rate = 0.4%
→ Tends to go with higher IFR expectation – around 0.5% → 88% already infected

3 Subset of Medical Scheme Covid19 deaths = 31,000 (population of 7m) → Population fatality rate = 0.49%
→ Correlates more with MRC excess death figure with much better clinical data → ~88% already infected



Infections, Reinfection, Protection

Natural immunity (through infection) is at least as protective against future infection as vaccination, though risks of acquiring immunity this way can be significant and include death, whereas the vaccine is safe.

Severity of future variants is unpredictable but based on experience thus far T-cell based immunity is long-lasting and protective against severe disease even in the face of significant viral evolution and neutralising antibody titre reductions.

Until Omicron, reinfection was relatively infrequent [82-85% protection against symptomatic infection from 90 days]. With Omicron, reinfection became much more common [reducing to 56% protection] though less severe (“uncoupling”) in a context of vaccinated high risk individuals and/or extensive population exposure to previous variants

<https://pubmed.ncbi.nlm.nih.gov/33718968/> (Cleveland)

Reinfections had 90% lower odds of resulting in hospitalization or death than primary infections. For a person who has already had a primary infection, the risk of having a severe reinfection is only approximately 1% of the risk of a previously uninfected person having a severe primary infection. (noting survivorship bias)

Vaccination is not the only effective mitigation. Ventilation and mask wearing indoors are elements of an effective multi-layer strategy that would help prevent transmission of all coronavirus variants as well as other major airborne illness like TB and influenza. <https://www.nature.com/articles/d41586-022-00925-7>



COVID19, the next wave and beyond

Presentation to Life Assurance Sessional

17 May 2022

barryc@insight.co.za
peterc@insight.co.za
<https://www.insight.co.za/covid-19-dashboard/>

