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Programme Description

Inpatient data from a large national private hospital group and outpatient data from a general practitioner network linked to the same hospital group were received for the last week. Data were obtained from eight provinces (**Eastern Cape**, Free State, **Gauteng**, Limpopo, **KwaZulu-Natal**, Mpumalanga, North West, **Western Cape**). Sufficient numbers for province-level reporting were available for four of these (bold).

Consultations and admissions were coded based on discharge diagnosis using the International Classification of Diseases and Related Health Problems, 10th revision (ICD-10). Data were analysed using the indicator: All respiratory and confirmed or suspected COVID-19 (J00-J99 & U07.1 & U07.2)/Total consultations. Data on the indicator Pneumonia and Influenza (J10-J18)/Total consultations are available on request but were not included in this report.

Data were categorised in the following age groups: All ages, <5 years, 5-19 years, 20-49 years, ≥50 years

Epidemic Threshold

Thresholds were calculated using the Moving Epidemic Method (MEM), a sequential analysis using the R Language, available from: <http://CRAN.R-project.org/web/package=mem>, designed to calculate the duration, start and end of the annual influenza epidemic. MEM uses the 40th, 90th and 97.5th percentiles established from historical data (2015-2019 for inpatients, 2016-2019 for outpatients) to calculate thresholds of activity, defined as follows:

- Epidemic threshold: Median of weekly values for all baseline years
- Low activity: Between epidemic threshold including 40th percentile
- Moderate activity: Between 40th and 90th percentile
- High activity: Between 90th and 97.5th percentile
- Very high activity: 97.5th percentile and above

Hospitalization data for recent weeks are adjusted for delayed reporting (diagnosis codes assigned on discharge delayed for prolonged hospitalisations). Adjustment accounts for the probability of being admitted, but not yet discharged at the time of data drawdown using the age- and syndrome-specific probability distribution of duration of admission obtained from all hospitalizations that occurred during 2015-2019 and applied to the most recent weeks in 2020.

Interpretation of data presented in this report

This week we have changed the indicator for reporting epidemic thresholds this week from (All respiratory (J00-J99)/Total consultations) to (All respiratory and confirmed/suspected COVID-19 (J00-J99 & U07.1 & U07.2)/Total consultations). This is because we noted that there has been a shift in coding practice of respiratory illness to the suspected COVID-19 codes

Inpatient admissions

Total admissions and proportion respiratory/suspected COVID-19 reduced since week 13 among individuals aged <5 years and 5-19 years, increasing from about week 17. Among individuals aged 20-49 and ≥50 years, proportion respiratory/suspected COVID-19 began to increase from week 13, breaching the moderate threshold in week 20 for 20-49 year olds and the high level for ≥50 year olds in week 16.

Outpatient consultations

Total outpatient visits initially increased but then reduced since week 13, but began to increase again since week 19. The proportion of outpatient consultations respiratory/suspected COVID-19 exceeds reported weekly numbers for previous years from week 10 (week ending 8 March), peaking in week 13 (ending 29 March) and decreased from week 14.

Provincial data

Among inpatients, proportion respiratory/suspected COVID-19 in Eastern Cape increased from week 19, reaching moderate level in week 20, with proportions similar to previous years in other provinces. Trends in outpatient consultations were similar to the national picture in all four provinces with available data.

Assessment

Decreases in numbers of admissions in recent weeks after adjustment, likely reflect the effects of the lockdown. The increase in outpatient consultations for respiratory symptoms without a corresponding increase in hospitalisations probably reflects increases in awareness of respiratory illness related to COVID-19, leading to increased healthcare-seeking. Reductions in respiratory outpatient consultations since week 13, are likely related to the national lockdown (implemented 27 March). Influenza activity in the Western Cape Province, now reduced, may have contributed. The increase in proportion of respiratory hospitalisations among 20-49 and ≥50 years may reflect increasing respiratory cases (including possible COVID-19 cases) and/or relaxing of lockdown-related reductions. Differences by province and age group should be interpreted with caution due to low numbers in some groups.

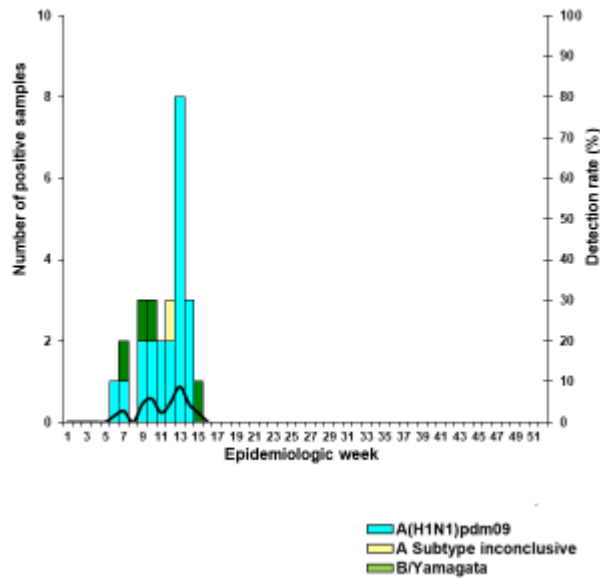
Summary bullets

- Change in reporting epidemic thresholds this week from All respiratory (J00-J99)/Total consultations to All respiratory (J00-J99 & U07.1 & U07.2)/Total consultations
- Marked reduction in total admissions and outpatient visits since week 13 likely related to national lockdown
- Proportion of respiratory outpatient consultations increased from week 10-12 (likely increased health seeking behaviour related to anxiety about COVID-19) and dropped from week 13 (likely related to lockdown)
- Proportion of respiratory hospitalisations dropped since week 13 likely related to lockdown
- Increase in proportion of inpatient respiratory consultations among among 20-49 and ≥ 50 years may reflect increasing respiratory cases (including possible COVID-19 cases) and/or relaxing of lockdown-relation reductions.

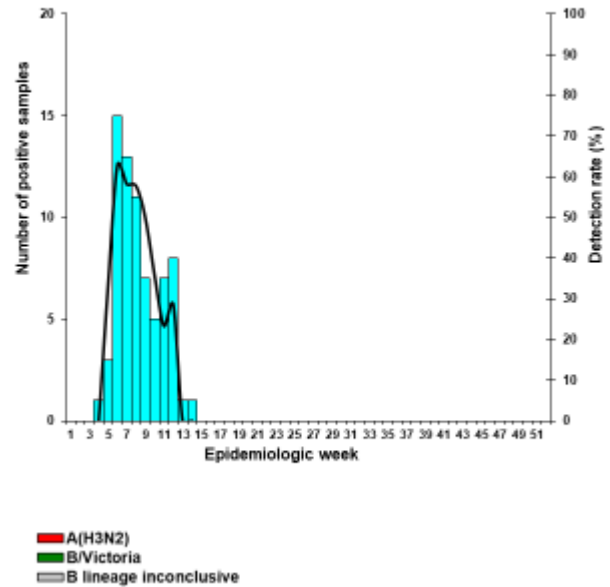
Data from virologic surveillance programmes to aid in interpretation of consultation trends

Number of influenza positive samples by subtype/lineage and detection rate by week

Inpatients



Outpatients

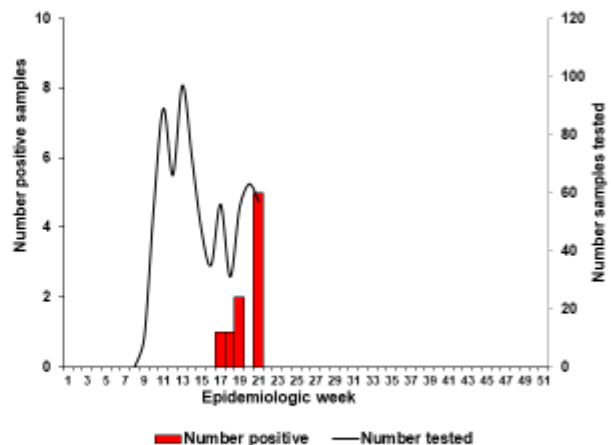
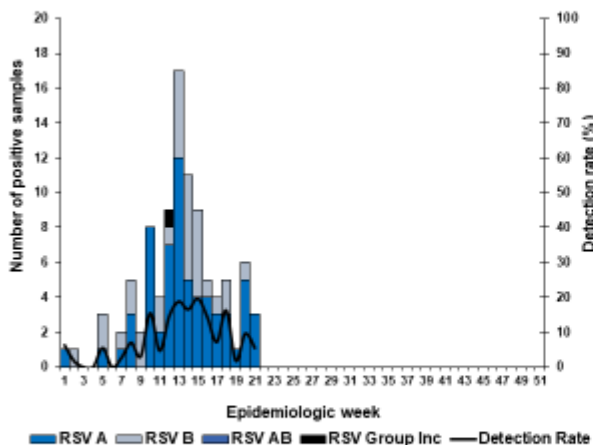


Number of respiratory syncytial virus positive

Number of samples tested and results for

by groups and subgroups per week (Inpatients)

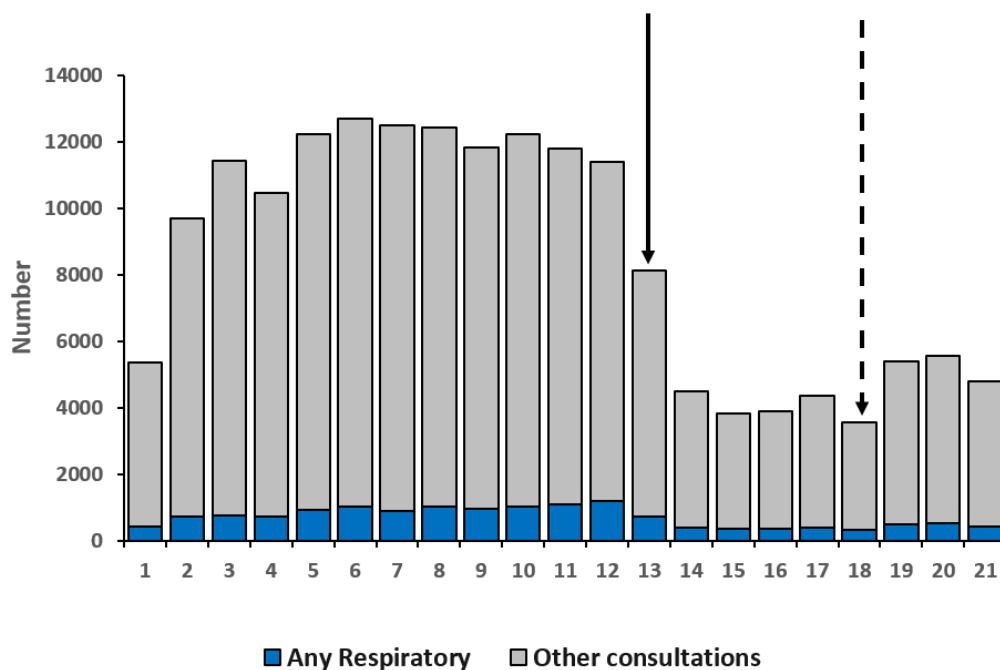
SARS-COV-2 per week (Inpatients)



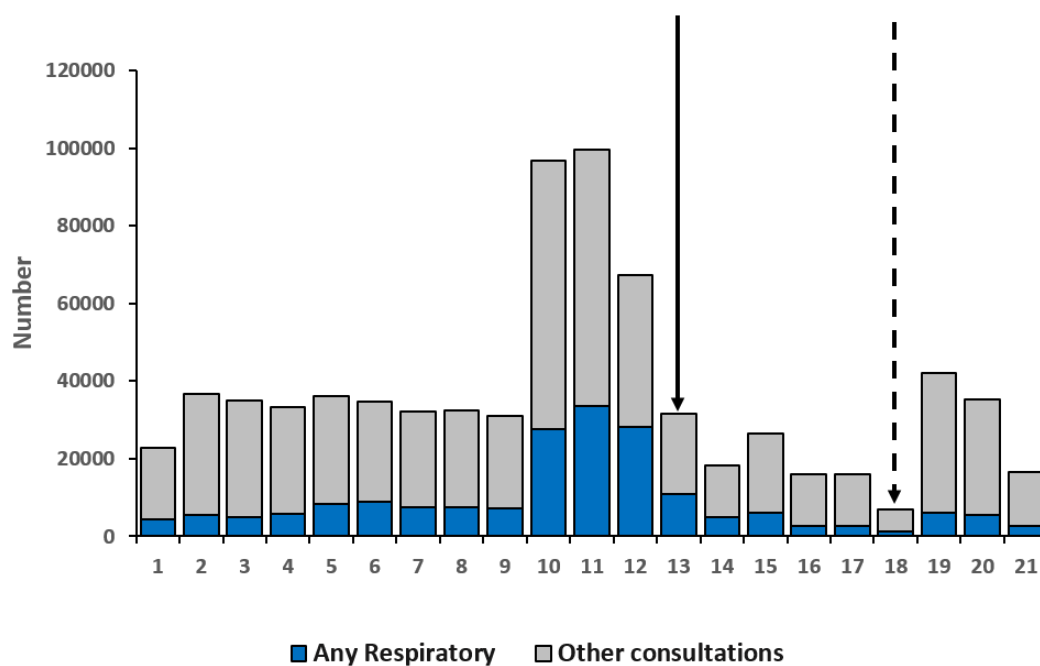
Private Consultations Surveillance

Number of consultations - all respiratory including confirmed or suspected COVID-19 and other by week
(Solid arrow indicates first week of lockdown, dashed arrow first week of level 4)

Inpatients



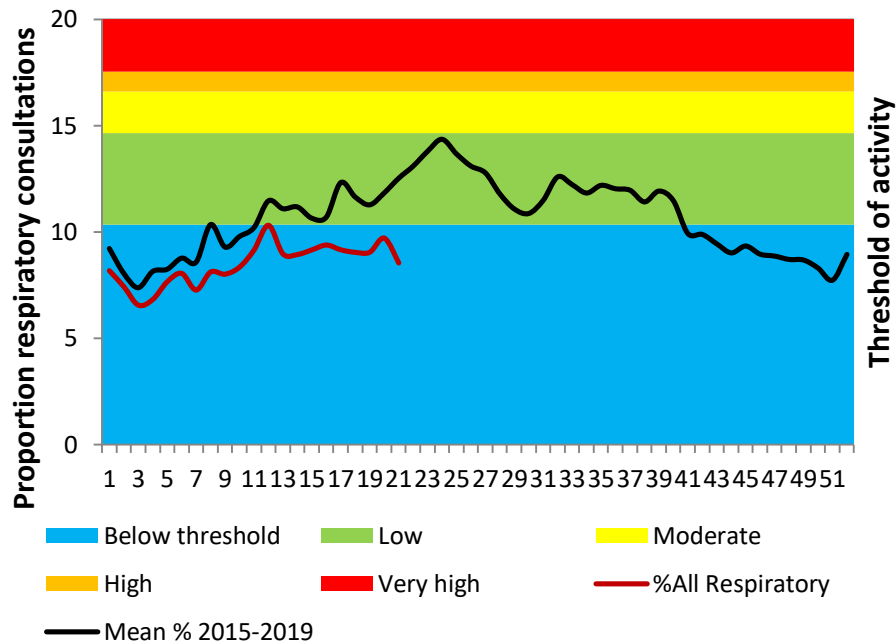
Outpatients



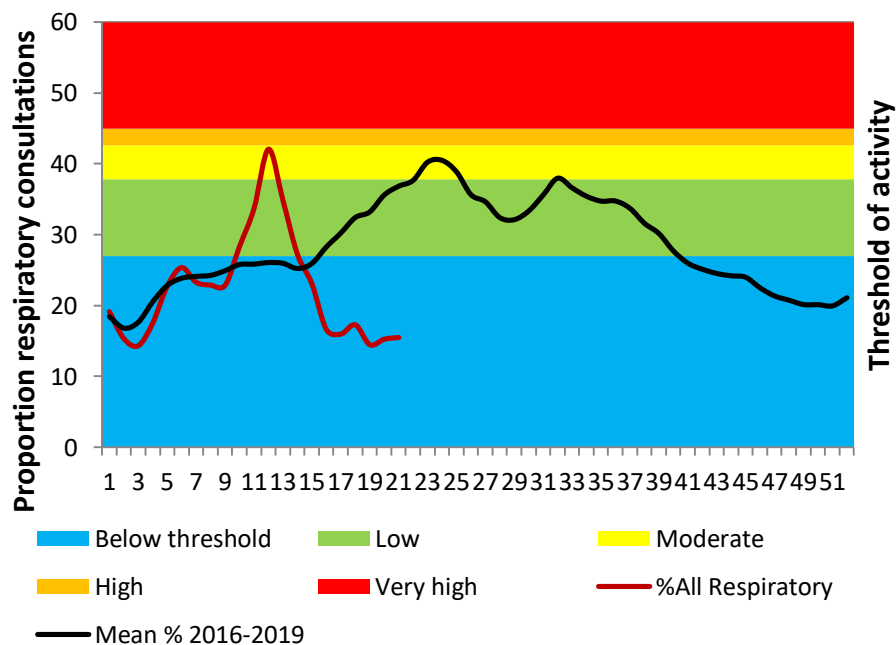
Private Consultations Surveillance

All ages

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



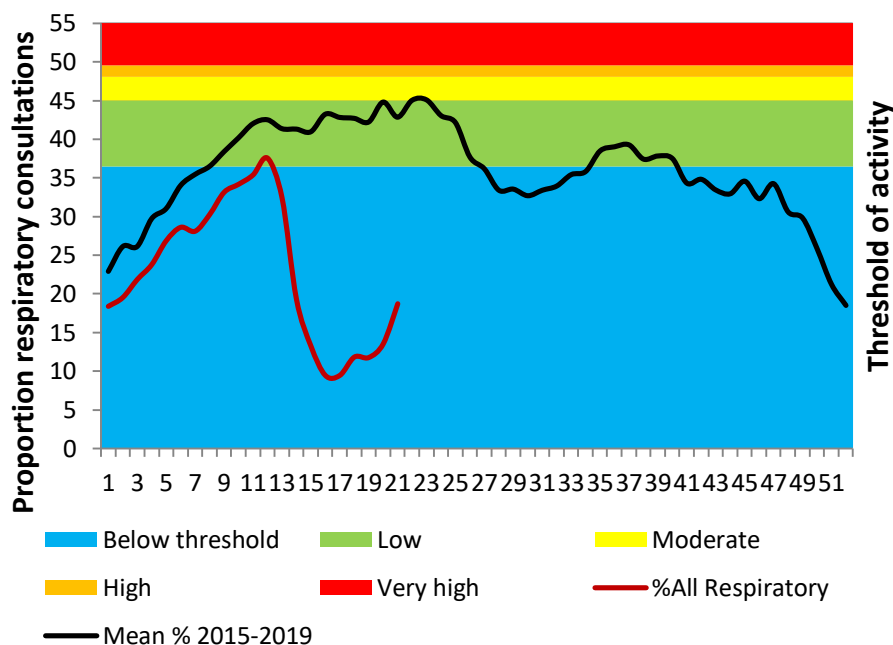
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



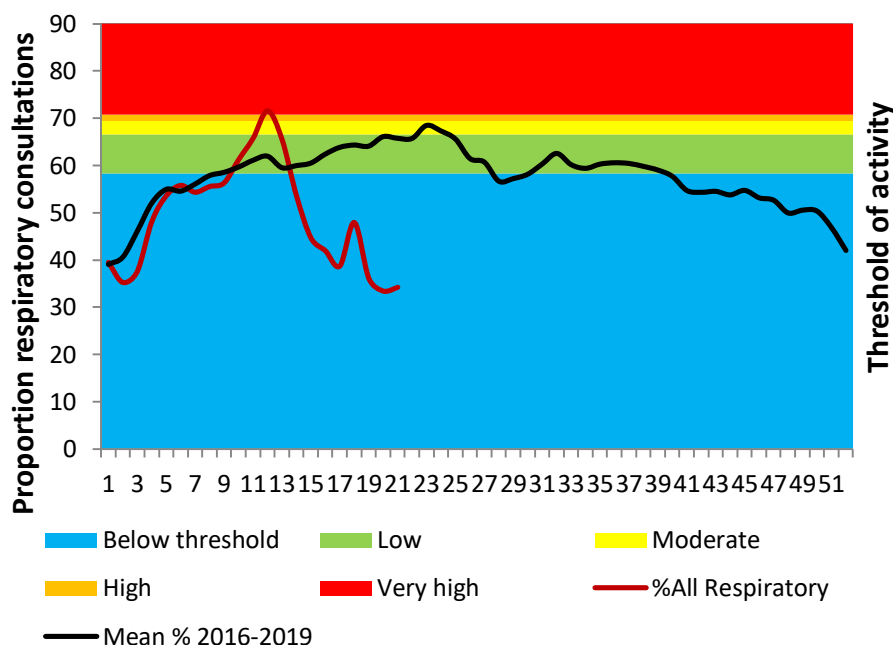
Private Consultations Surveillance

0-4 years of age

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



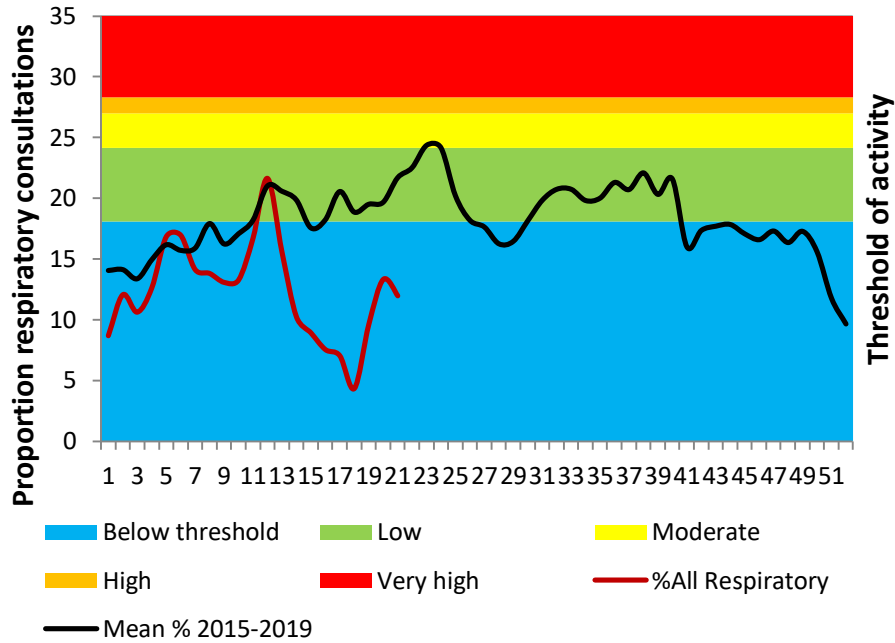
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



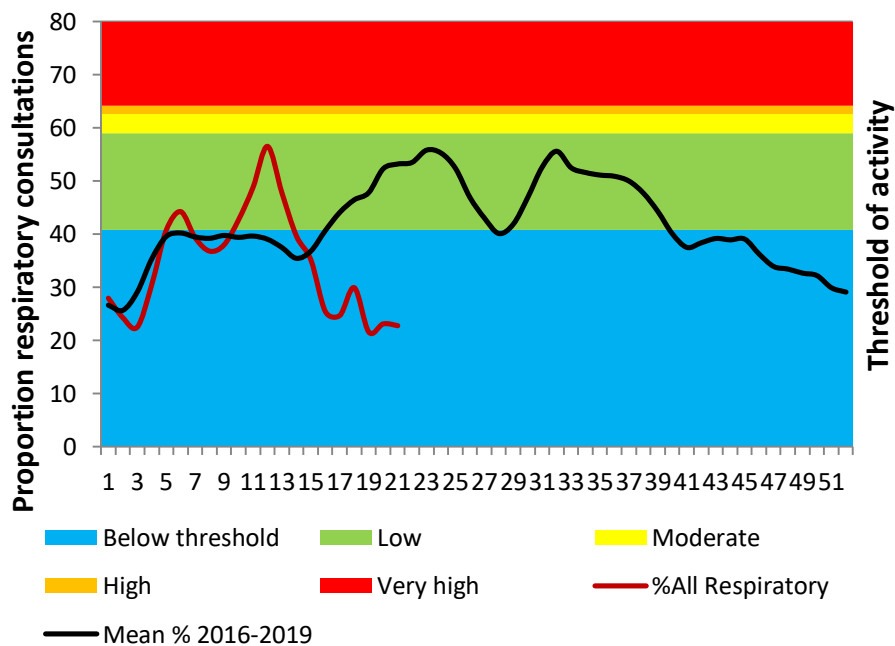
Private Consultations Surveillance

5-19 years of age

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



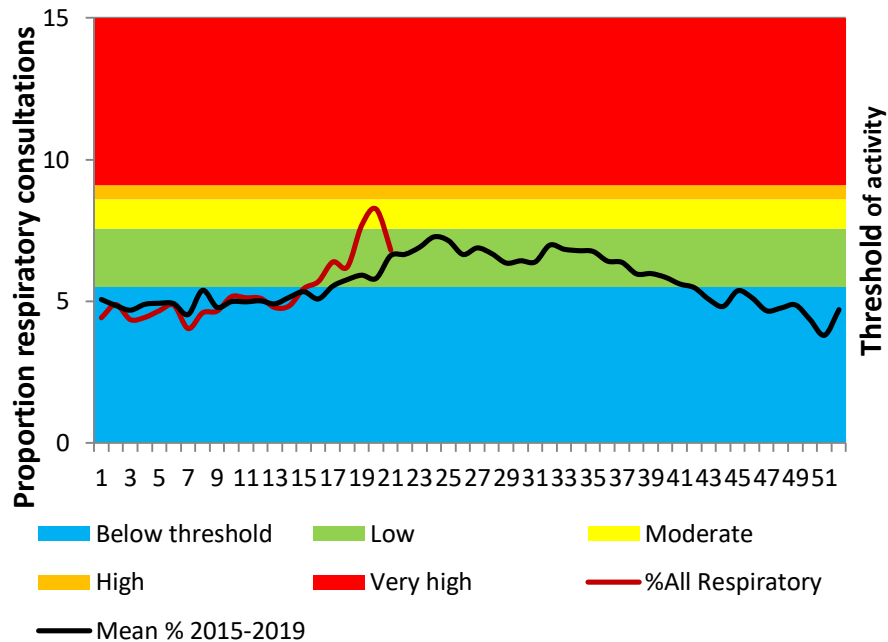
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



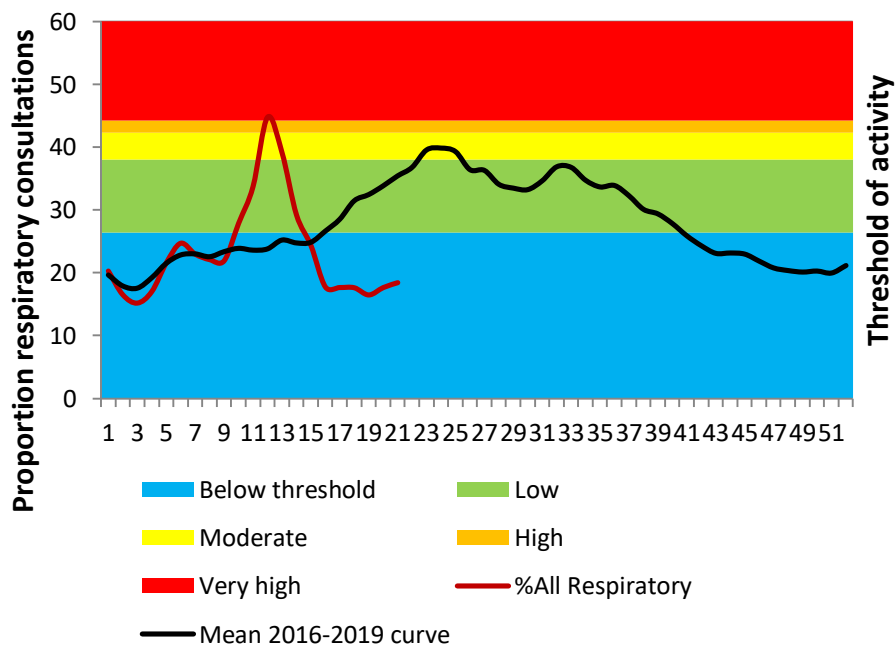
Private Consultations Surveillance

20-49 years of age

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



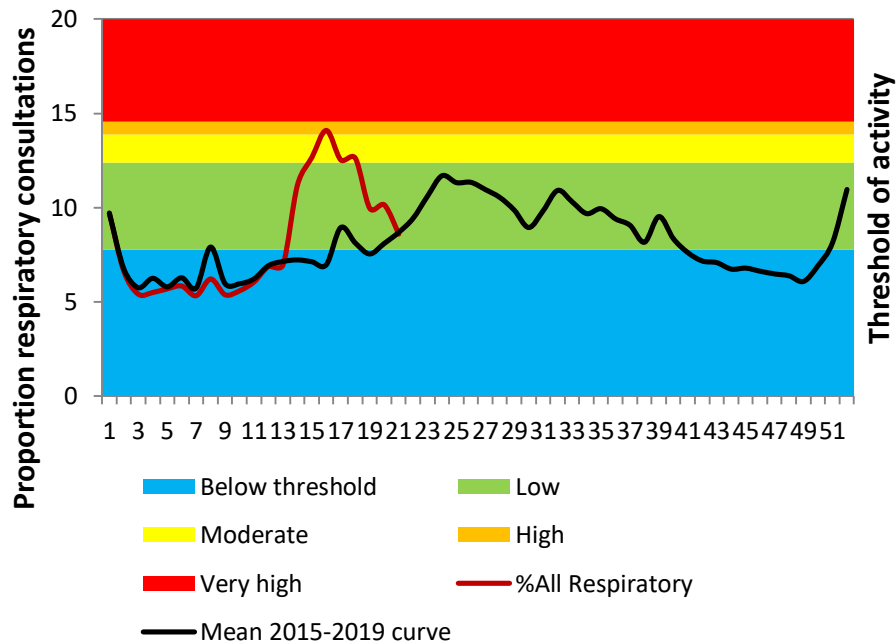
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



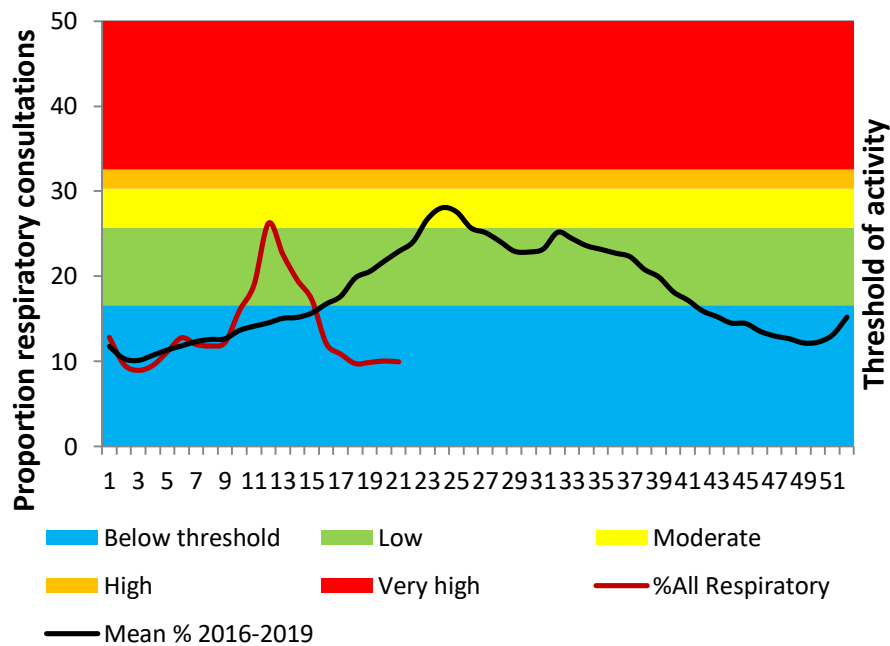
Private Consultations Surveillance

≥50 years of age

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients

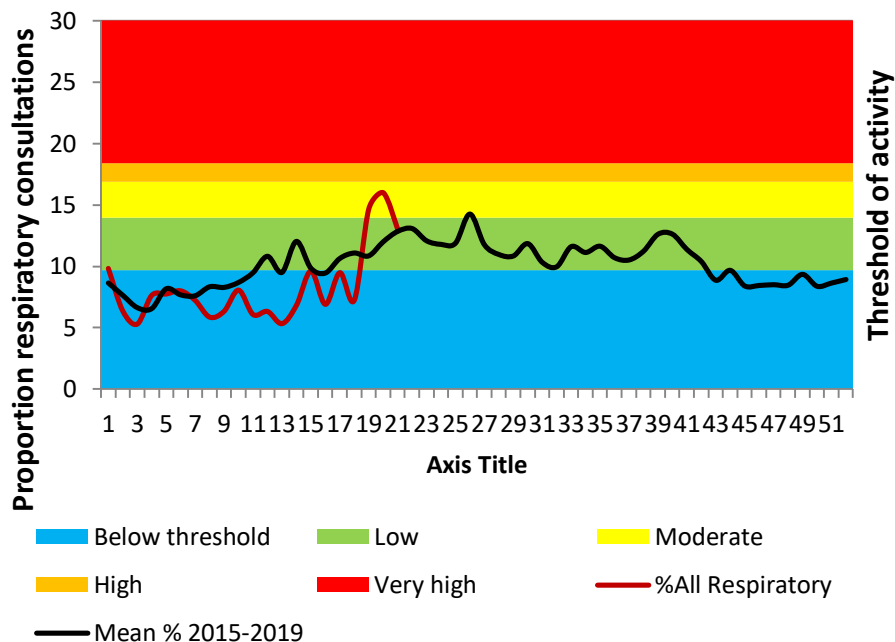


All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients

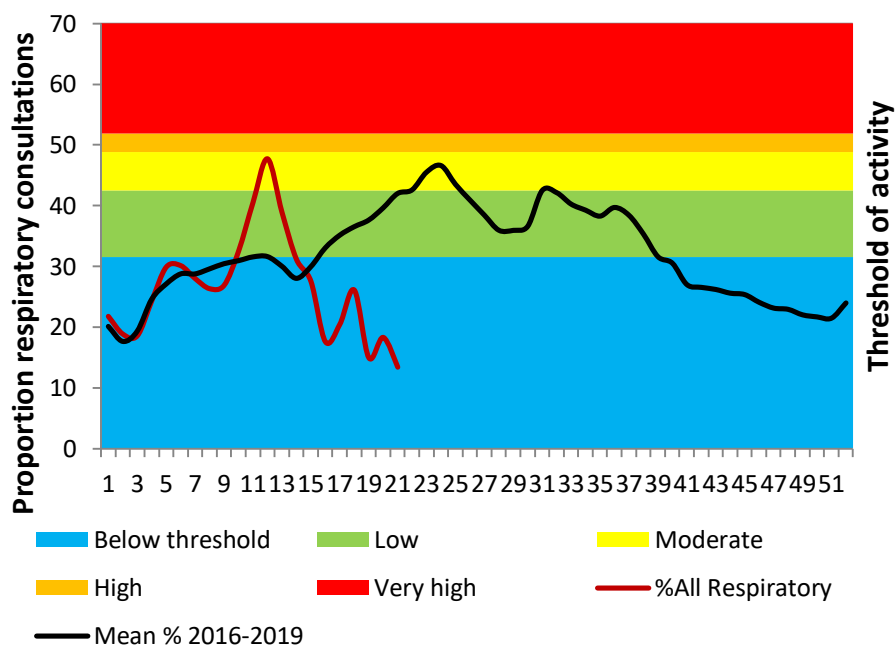


Eastern Cape Province

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



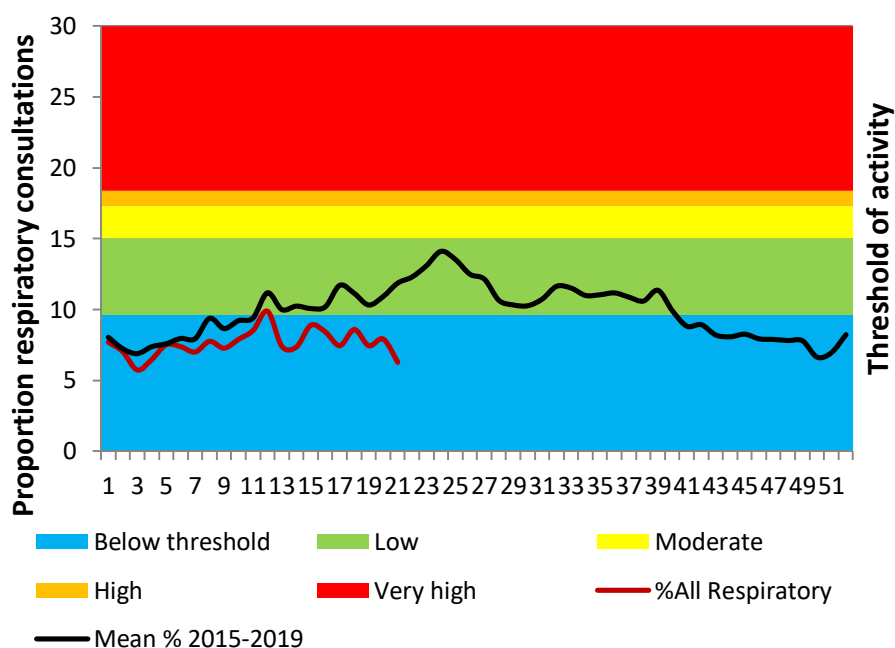
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



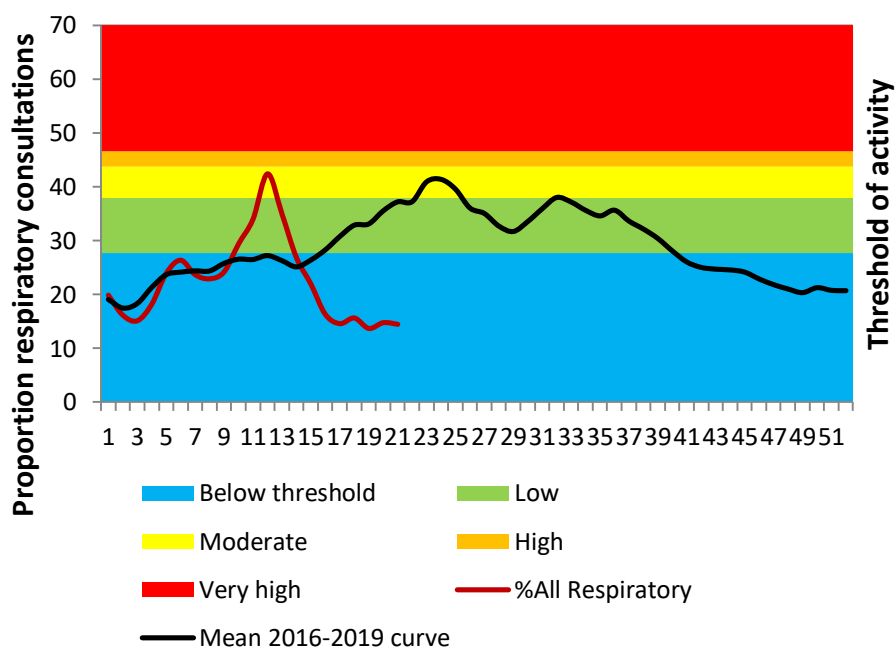
Private Consultations Surveillance

Gauteng

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



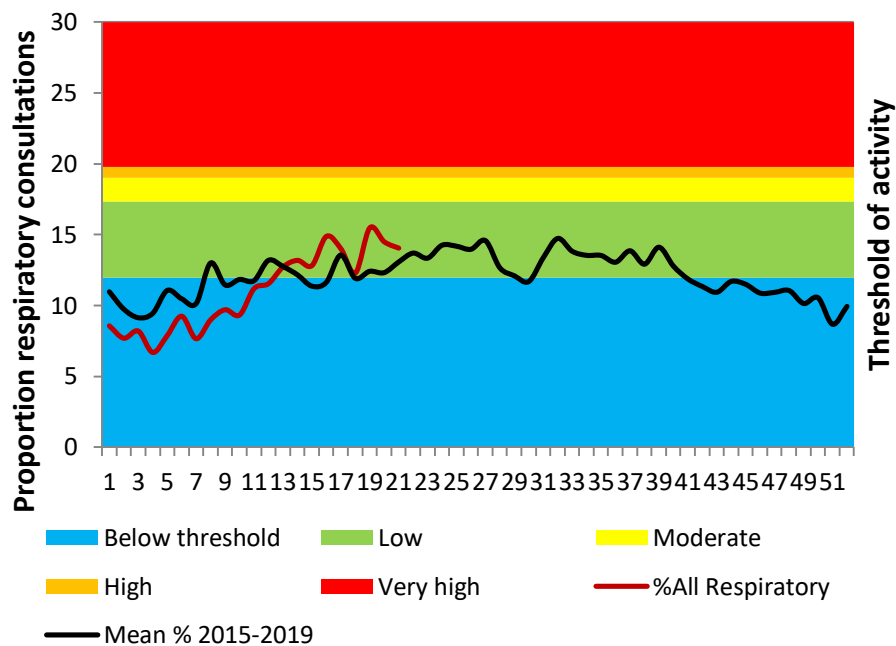
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



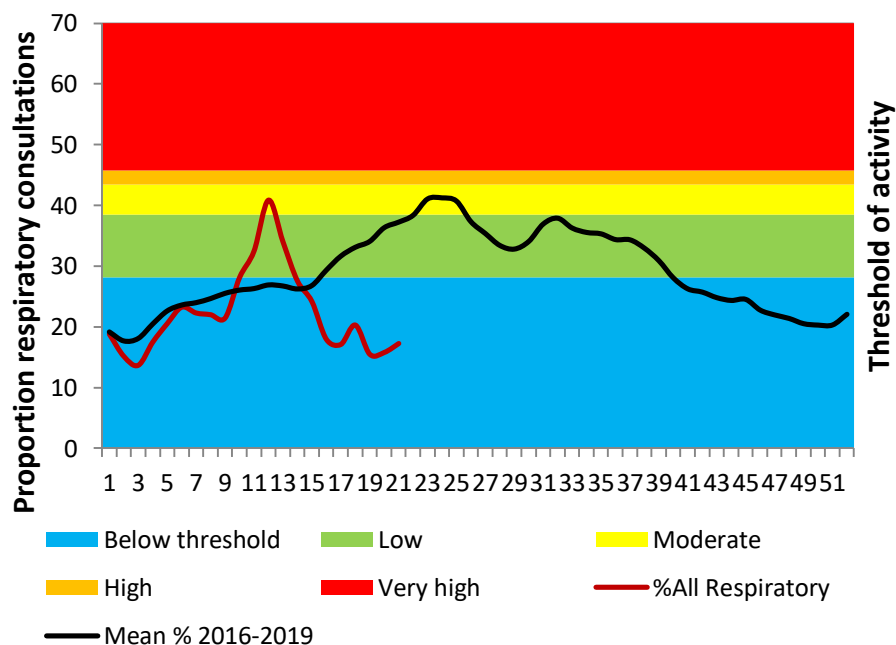
Private Consultations Surveillance

KwaZulu-Natal

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



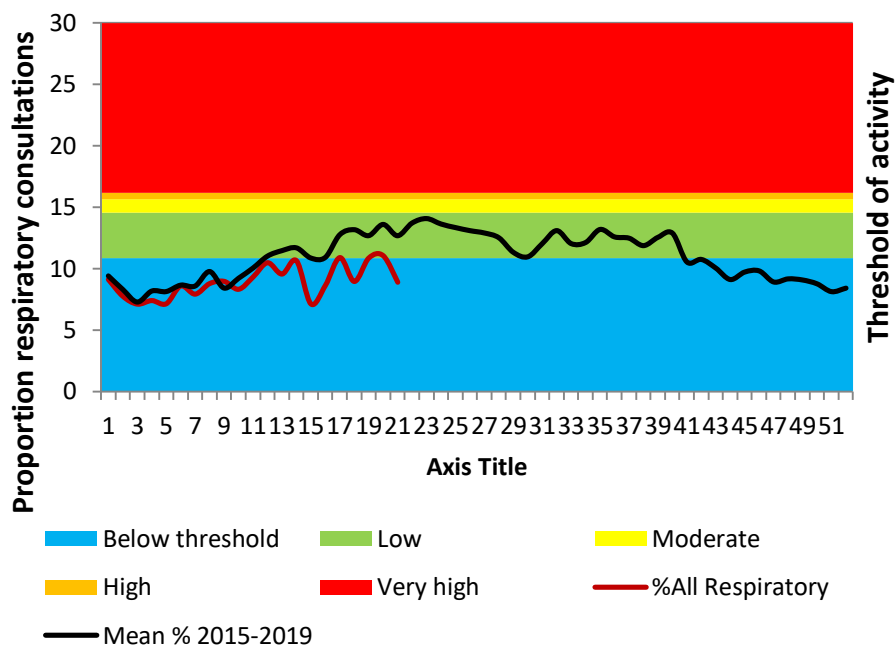
All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients



Private Consultations Surveillance

Western Cape Province

All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Inpatients



All Respiratory including confirmed or suspected COVID-19 (J00-J99 & U07) indicators – Outpatients

