

Division of the National Health Laboratory Service

SOUTH AFRICA

WEEK **22** 2020

CONTENTS

Programme descriptions

| Interpretation of data presented | 3 |
|----------------------------------|----|
| Data from virologic | |
| surveillance programmes | 4 |
| to aid in interpretation of | |
| consultation trends | |
| Number of consultations | 5 |
| - all respiratory including | |
| confirmed or suspected | |
| COVID-19 and other by week | |
| week | |
| All ages | 6 |
| 0-4 years of age | 7 |
| 5-19 years of age | 8 |
| 20-49 years of age | 9 |
| ≥50 years of age | 10 |
| Eastern Cape Province | 11 |
| Gauteng Province | 12 |
| KwaZulu-Natal Province | 13 |
| Western Cape Province | 14 |

HIGHLIGHTS: WEEK 22

- Change to reported data due to strengthened data cleaning and deduplication processes which have been implemented
- Reduction in total admissions since week
 13 likely related to national lockdown
- Increase in proportion of respiratory hospitalisations among 20-49 and ≥50 years may reflect increasing respiratory cases (including possible COVID-19 cases), changes in health-seeking behaviours and/or effects of lockdown-relation reductions.
- Differences by province and age group should be interpreted with caution due to low numbers in some groups.



WEEK 22 2020

PROGRAMME DESCRIPTIONS

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.

WEEK 22 2020

INTERPRETATION OF DATA PRESENTED

This week there are some changes to reported data due to strengthened data cleaning and de-duplication processes which have been implemented.

Total admissions reduced from week13 when lockdown was implemented. After week 18, when restrictions moved to level 4, there was a modest increase in total admissions.

Total outpatient consultations reduced slightly from week 13 but rapidly recovered to levels similar to those preceding the lockdown.

Proportion of admissions respiratory or suspected COVID-19 overall has remained below threshold throughout the period. By age group, percent admissions respiratory or suspected COVID remained below threshold for 0-4 years and showed similar trends at lower level for 5-19 years. Among 20-49 years and \geq 50 years, percent respiratory admissions has continuously increased since week 13, reaching moderate level in 20-49 years and high level in \geq 50 years at the peak and remaining above threshold to date.

Proportion of outpatient consultations respiratory or suspected COVID-19 overall increased from week 17, peaking in week 13 and dropping well below the threshold in recent weeks. By age group, percent outpatient visits showed similar trends for all age groups.

Trends in proportion of admissions and outpatient consultations respiratory or COVID varied by **province.**

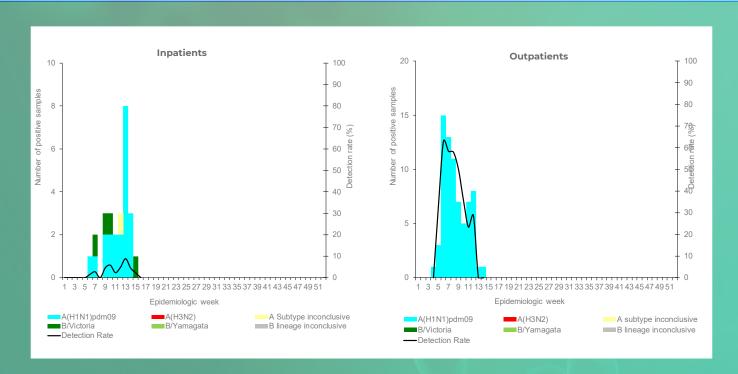
Assessment

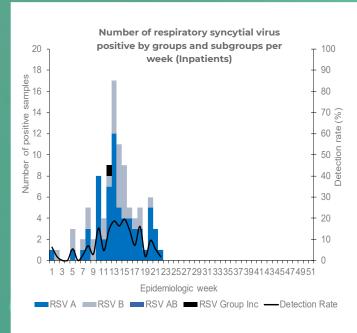
Decreases in numbers of admissions in recent weeks after adjustment, likely reflect the effects of the lockdown. The increase in proportion of respiratory hospitalisations among 20-49 and ≥50 years may reflect increasing respiratory cases (including possible COVID-19 cases), changes in health-seeking behaviours and/or effects of lockdown-related reductions. Differences by province and age group should be interpreted with caution due to low numbers in some groups.

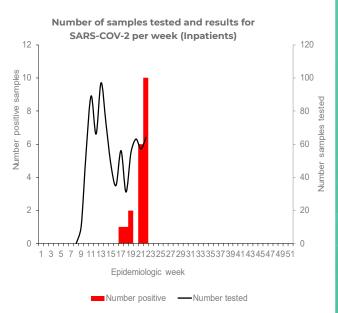
WEEK 22 2020

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



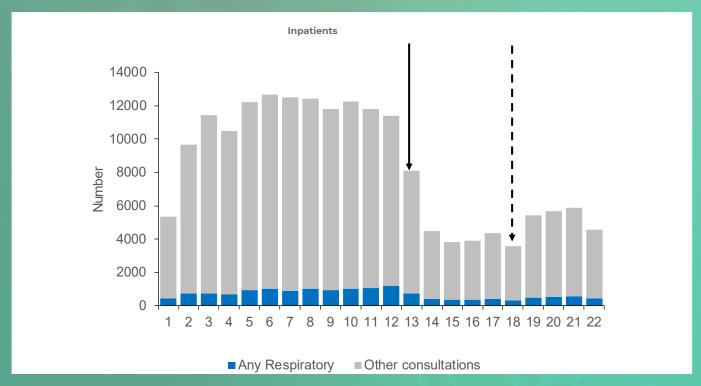


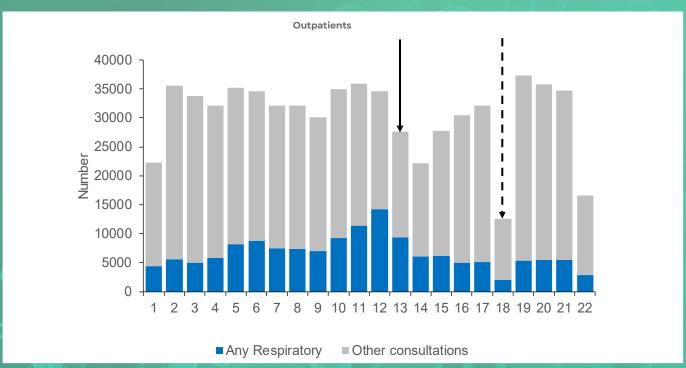


WEEK 22 2020

NUMBER OF CONSULTATIONS - ALL RESPIRATORY INCLUDING CONFIRMED OR SUSPECTED COVID-19 AND OTHER BY WEEK

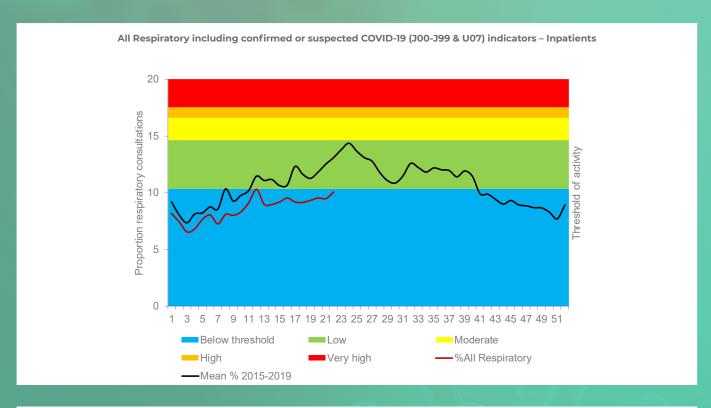
(SOLID ARROW INDICATES FIRST WEEK OF LOCKDOWN, DASHED ARROW FIRST WEEK OF LEVEL 4)

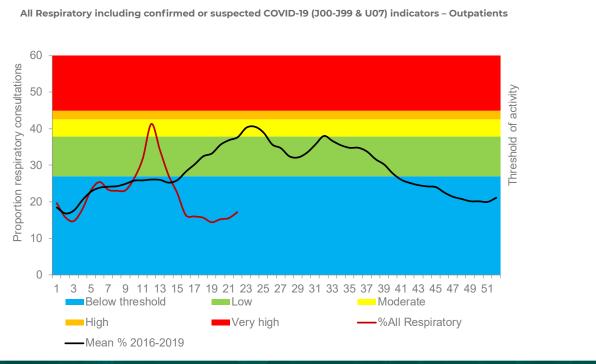




WEEK 22 2020

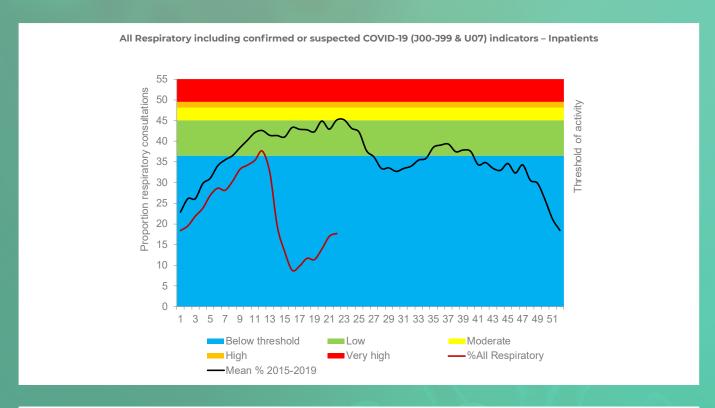
ALL AGES

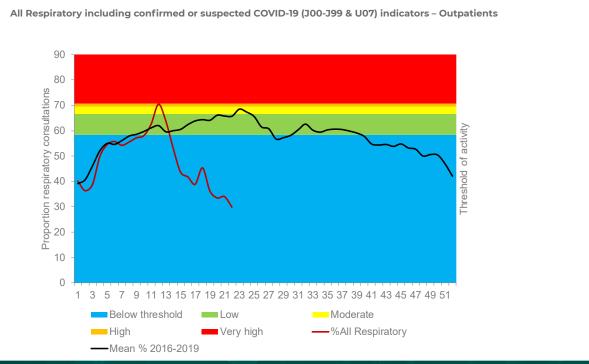




WEEK 22 2020

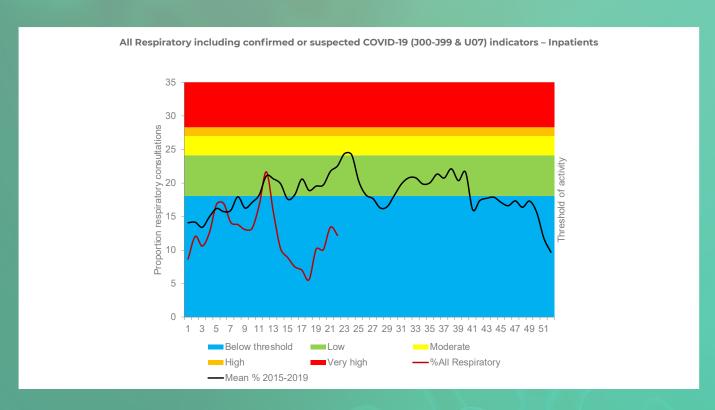
0-4 YEARS OF AGE

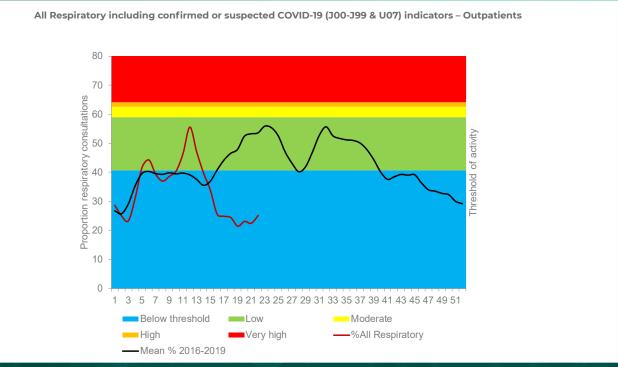




WEEK 22 2020

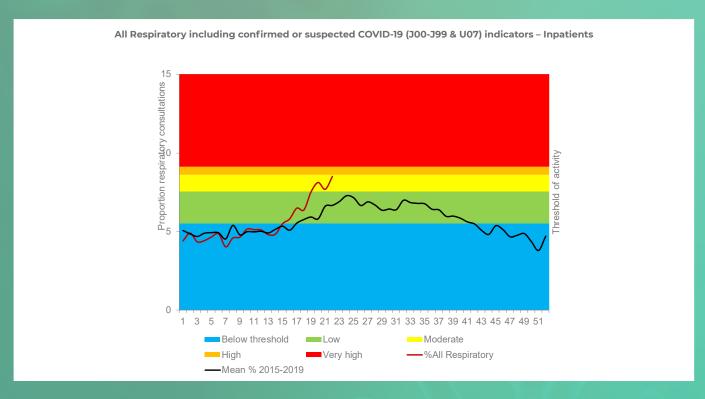
5-19 YEARS OF AGE

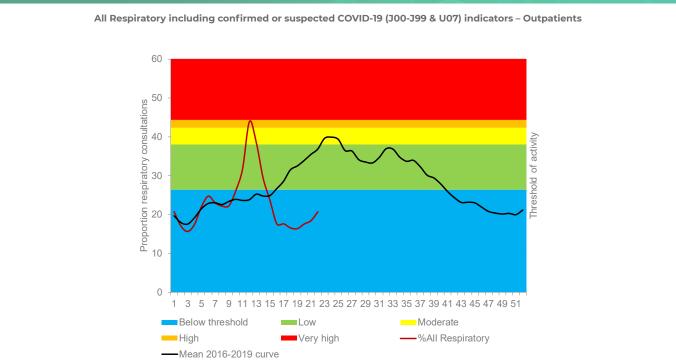




WEEK 22 2020

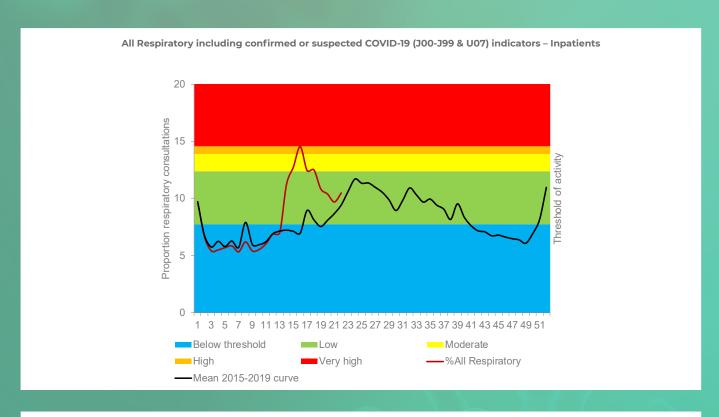
20-49 YEARS OF AGE

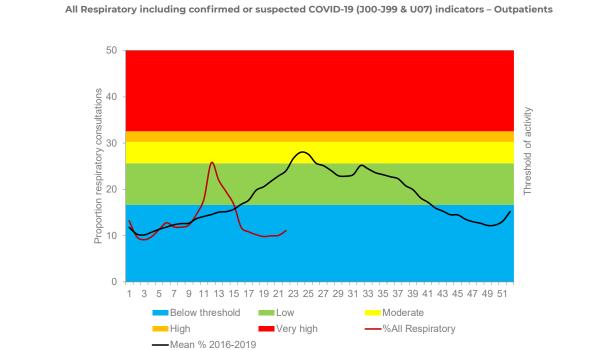




WEEK 22 2020

≥50 YEARS OF AGE





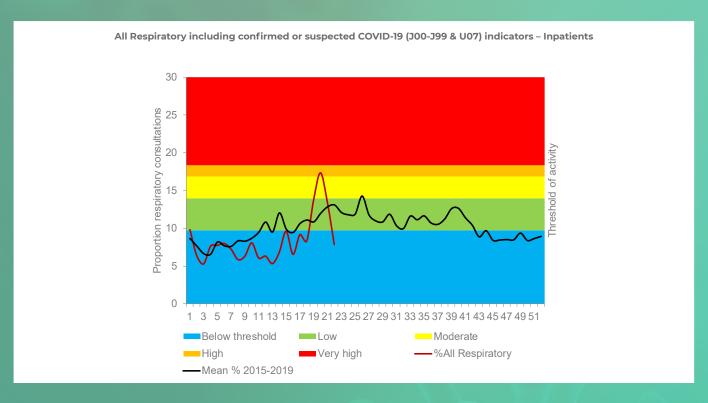
www.nicd.ac.za

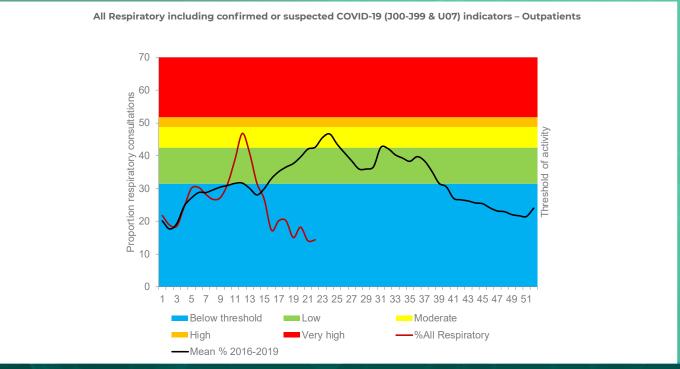
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PAGE **10**

WEEK 22 2020

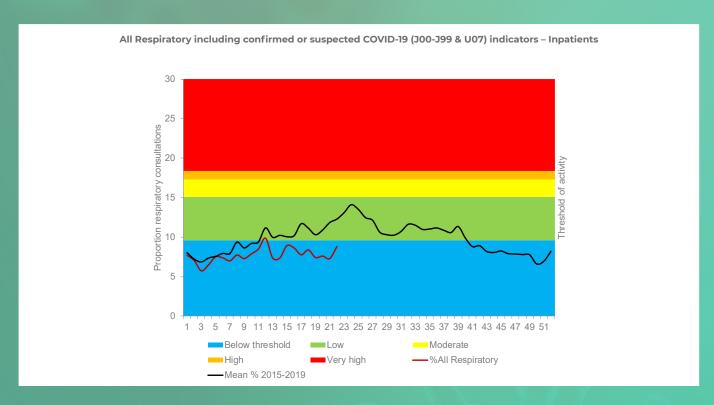
EASTERN CAPE PROVINCE

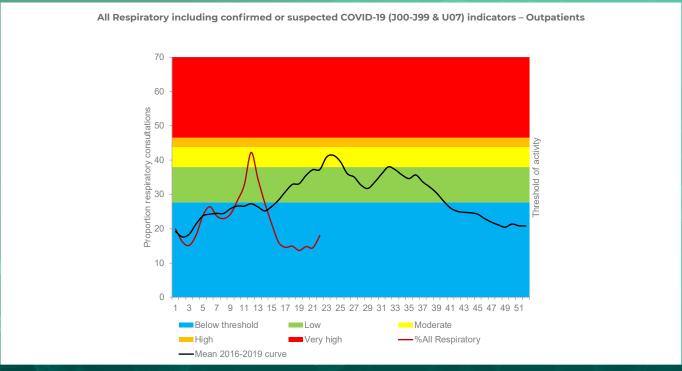




WEEK 22 2020

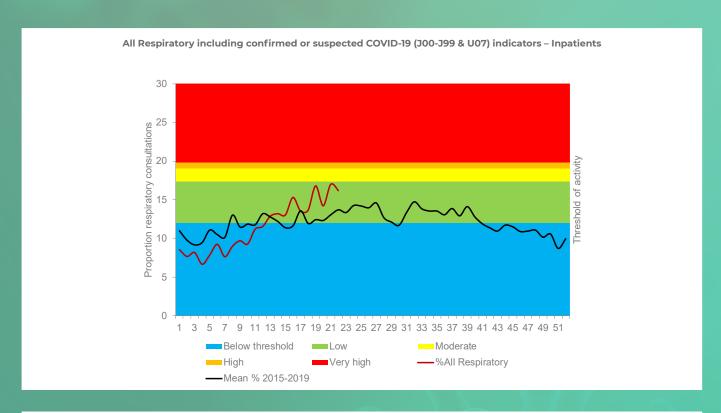
GAUTENG PROVINCE

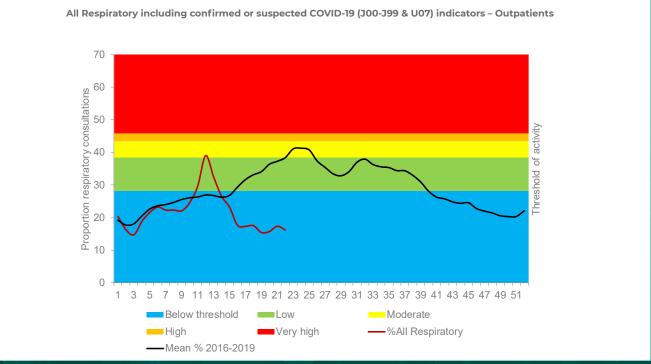




WEEK 22 2020

KWAZULU-NATAL PROVINCE





WEEK 22 2020

WESTERN CAPE PROVINCE

