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# Weekly Influenza and Respiratory Syncytial Surveillance Report

## Programme Descriptions

Programme	ILI	Viral Watch	National syndromic surveillance for pneumonia	Private hospital consultations
<b>Start year</b>	2012	1984	2009	2002
<b>Provinces*</b>	KZ NW MP	EC FS GP LP MP NC NW WC	GP KZ MP NW WC	EC FS GP LP MP NW WC
<b>Type of site</b>	Primary health care clinics	General practitioners	Public hospitals	Private hospitals
<b>Case definition</b>	An acute respiratory illness with a temperature ( $\geq 38^{\circ}\text{C}$ ) and cough, & onset $\leq 10$ days	An acute respiratory illness with a temperature ( $\geq 38^{\circ}\text{C}$ ) and cough, & onset $\leq 10$ days	Acute or chronic lower respiratory tract infection	ICD codes J10-J18
<b>Specimens collected</b>	$\geq 5$ years of age: oropharyngeal/nasopharyngeal swabs <5 years of age: nasopharyngeal aspirates	Throat and/or nasal swabs or Nasopharyngeal swabs	$\geq 5$ years of age: oropharyngeal/nasopharyngeal swabs <5 years of age: nasopharyngeal aspirates Induced/expectorated sputum	Not applicable
<b>Main pathogens tested**</b>	INF RSV BP	INF RSV BP	INF RSV SP BP	Not applicable

### Epidemic Threshold

Thresholds are 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 available years of historical data to calculate thresholds of activity. Thresholds of activity for influenza and RSV are defined as follows: Below seasonal threshold, Low activity, Moderate activity, High activity, Very high activity. For influenza, thresholds from outpatient influenza like illness (Viral Watch Programme) are used as an indicator of disease transmission in the community and thresholds from pneumonia surveillance are used as an indicator of impact of disease.

\* EC: Eastern Cape; FS: Free State; GP: Gauteng; KZ: KwaZulu-Natal; LP: Limpopo; MP: Mpumalanga; NC: Northern Cape; NW: North West; WC: Western Cape

\*\*INF: Influenza; RSV: respiratory syncytial virus; BP: Bordetella pertussis; SP: Streptococcus pneumoniae

# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

## Comments:

### Influenza

The 2018 influenza season continues. The season started in week 18 (first week of May), when influenza detections in the Viral Watch programme rose above the seasonal threshold, as determined by the Moving Epidemic Method. Thresholds of activity for influenza transmission and severity are currently moderate.

ILI programme: In 2018 to date, specimens from 564 patients were received from 3 ILI sites. Influenza was detected in 60 specimens, all identified as influenza A(H1N1)pdm09.

Viral Watch programme: During the same period, specimens from 670 patients were received from Viral Watch sites. Since April, when the number of specimens received started to increase, influenza has been detected in 279 specimens, 273 of which were identified as influenza A(H1N1)pdm09, one influenza A(H3N2), four as influenza B and one influenza A not typed.

In addition, before the start of this year's influenza season: influenza A(H1N1)pdm09 was detected in four, A(H3N2) in three, and influenza B in 14 patients, most of whom had a history of travel or contact with tourists.

Pneumonia surveillance: In this time period, specimens from 2455 patients with severe respiratory illness (SRI) were received from the 6 sentinel sites. Influenza was detected in 121 specimens, all identified as A(H1N1)pdm09.

### Respiratory syncytial virus

The 2018 RSV season started in week 9 (week starting 26 February) when RSV detections in pneumonia surveillance rose above the seasonal threshold as determined by the Moving Epidemic Method, and is ongoing. However, the RSV detection rate is going down.

In 2018 to date, RSV has been detected in the specimens of 87 patients in the ILI programme, and 740 from patients in the pneumonia surveillance programme.

During the same period, 35 specimens from viral watch surveillance programme sites tested positive for RSV.

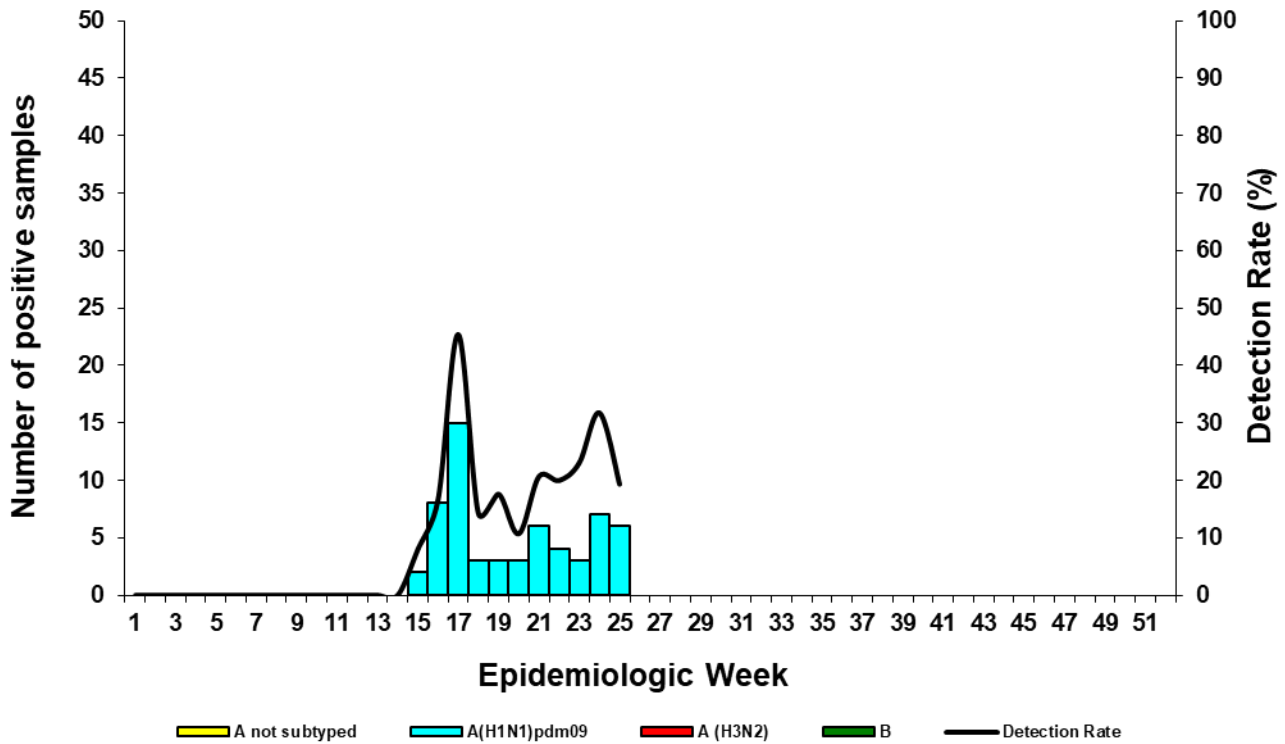
# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

## Influenza-like illness (ILI) surveillance primary health care clinics

Figure 1. Number of positive samples\* by influenza types and subtypes and detection rate\*\* by week



\*Specimens from patients with influenza-like illnesses at 3 sentinel sites in 3 provinces

\*\*Only reported for weeks with >10 specimens submitted

Table 1. Cumulative number of influenza type and subtype and total number of samples tested by clinic and province

Clinic (Province)	A not typed as yet	A(H1N1)pdm09	A(H3N2)	B	Total samples
Agincourt Clinic (MP)		3			141
Edendale Gateway Clinic (KZ)		40			246
Jouberton Clinic (NW)		17			177
<b>Total:</b>		<b>60</b>			<b>564</b>

KZ: KwaZulu-Natal; NW: North West, MP: Mpumalanga

# Weekly Influenza and Respiratory Syncytial Surveillance Report

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Results until end of epidemiologic week 25(2018)

## Influenza-like illness (ILI) surveillance primary health care clinics

Figure 2. Number of samples testing positive for respiratory syncytial virus and detection rate by week

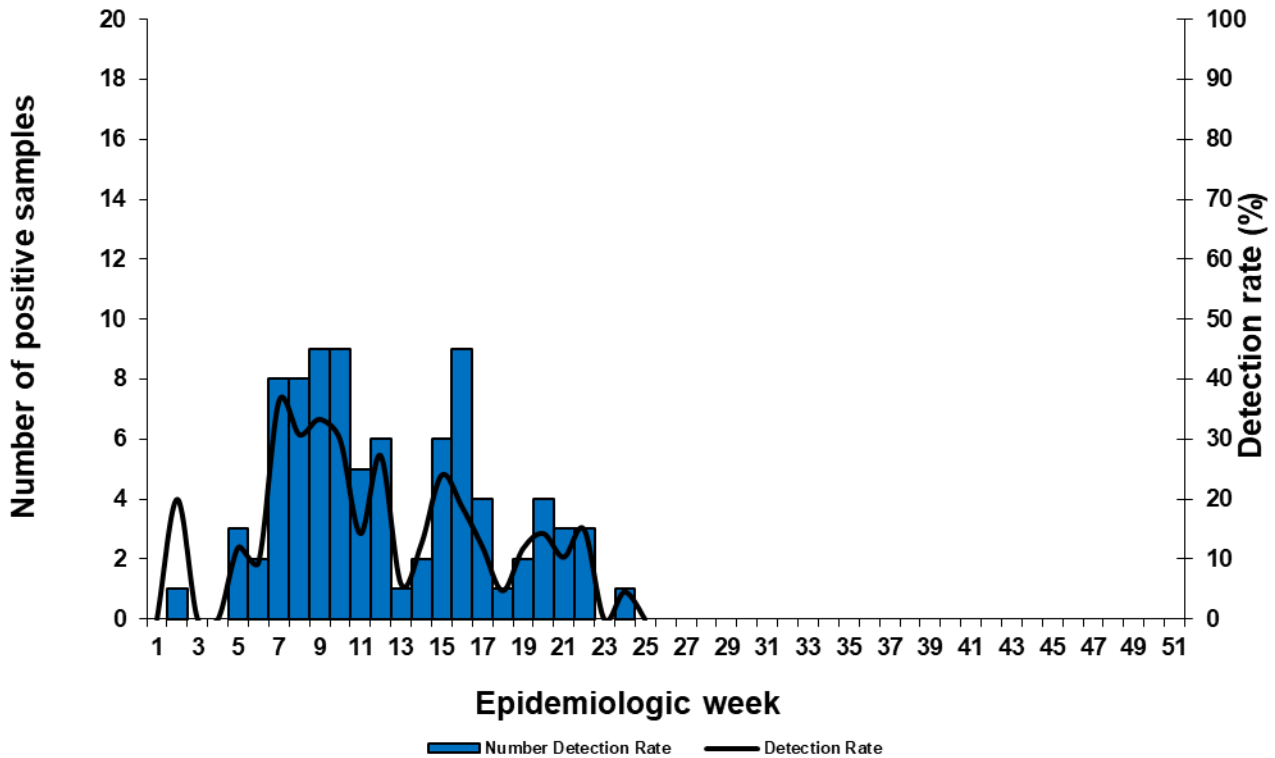


Table 2. Cumulative number of respiratory syncytial virus identified and total number of samples tested by clinic and province

Clinic (Province)	RSV Positive	Total samples
Agincourt Clinic (MP)	38	141
Edendale Gateway Clinic (KZ)	27	246
Jouberton Clinic (NWP)	22	177
<b>Total:</b>	<b>87</b>	<b>564</b>

KZ: KwaZulu-Natal; NW: North West, MP: Mpumalanga

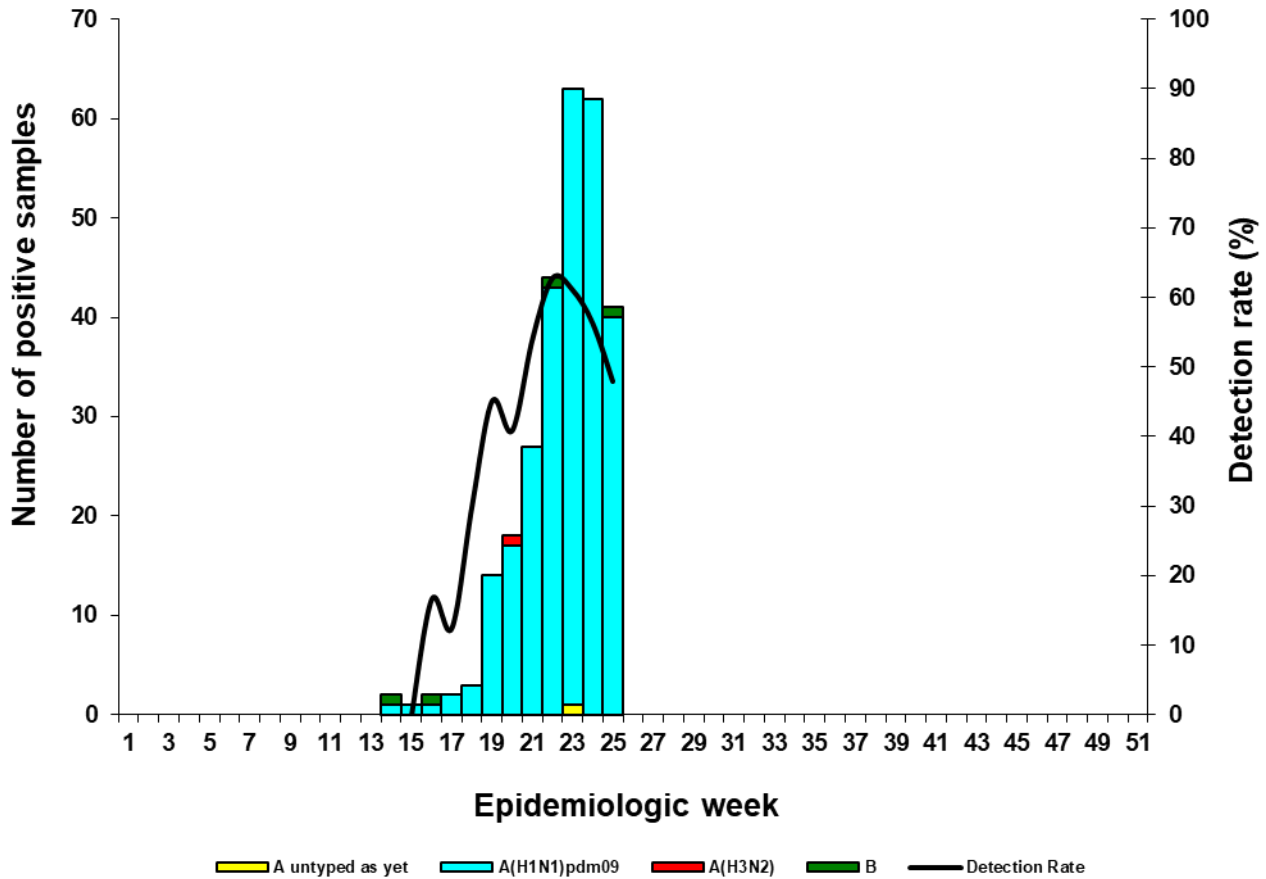
# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

## Influenza-like illness (ILI) surveillance Viral Watch

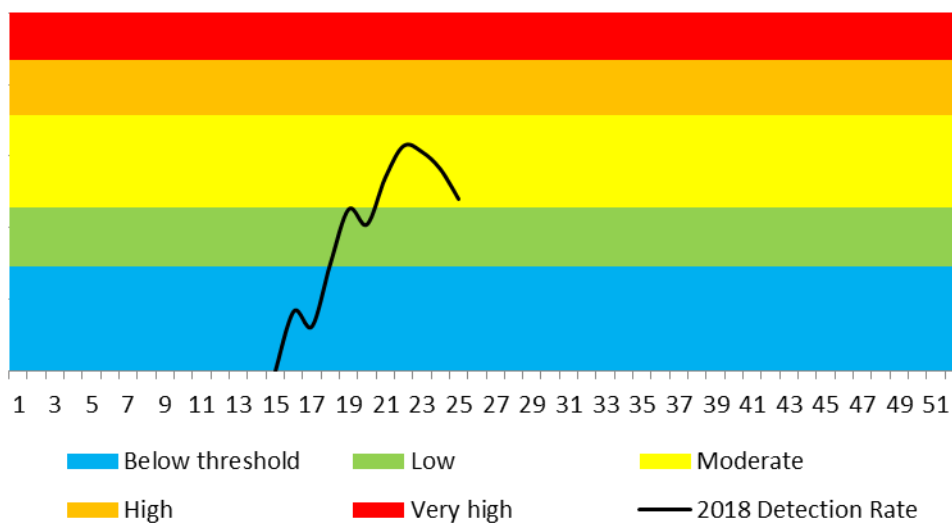
Figure 4. Number of positive samples\* by influenza types and A not typed as yet and detection rate\*\* by week



\*Specimens from patients with Influenza-like illnesses at 90 sentinel sites in 8 provinces

\*\* Only reported for weeks with >10 specimens submitted.

Figure 5. ILI surveillance Viral Watch percentage influenza detections and epidemic thresholds\*



\*Thresholds based on 2007-2017 data (Excluding 2009)

# Weekly Influenza and Respiratory Syncytial Surveillance Report

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Results until end of epidemiologic week 25(2018)

**Table 4. Cumulative number of influenza type and subtype and total number of samples tested by province**

Province	A not typed as yet	A(H1N1)pdm09	A(H3N2)	B	Total samples
Eastern Cape		40			59
Free State					4
Gauteng		154	1	3	369
Limpopo		14			19
Mpumalanga	1	15			60
North West		1			2
Northern Cape		2			10
Western Cape		47		1	149
<b>Total:</b>	<b>1</b>	<b>273</b>	<b>1</b>	<b>4</b>	<b>672</b>

To date in 2018, 74 patients have been tested for influenza at the time of entry into South Africa following travel abroad and 24 have tested influenza positive.

Patients known to have acquired influenza abroad are not included in the table or epidemiological curve.

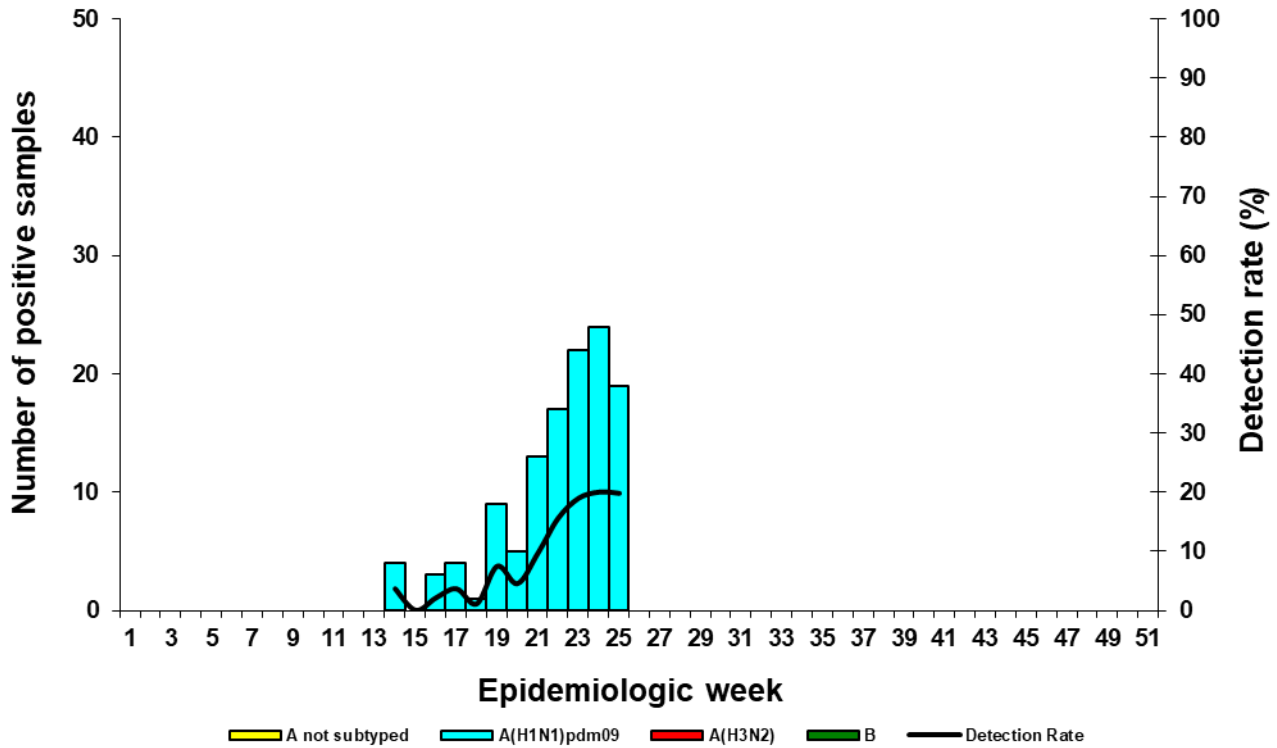
# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

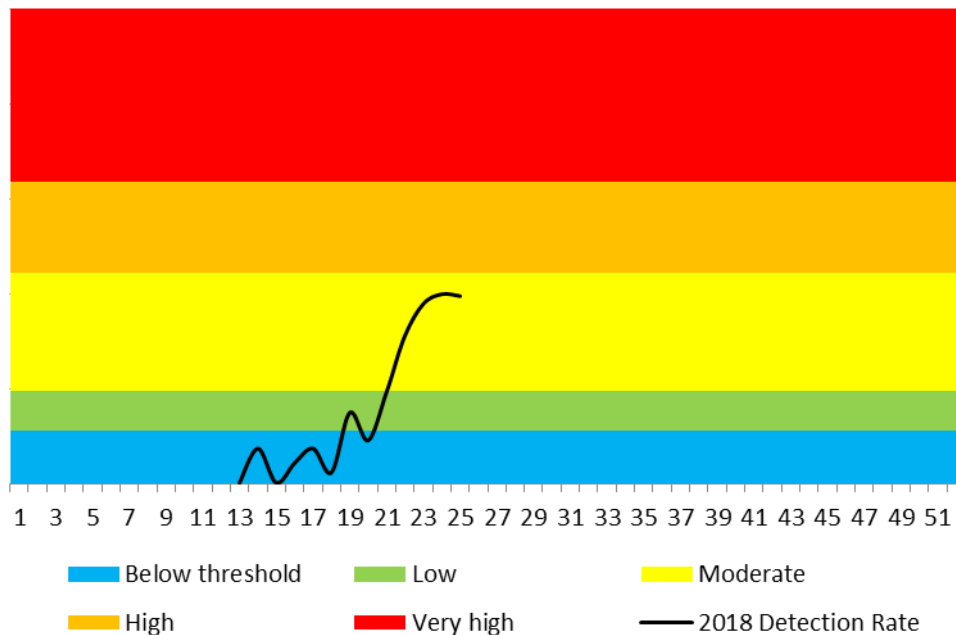
## National syndromic surveillance for pneumonia

**Figure 6. Number of positive samples\* by influenza types and A not typed as yet and detection rate\*\* by week**



\*Specimens from patients hospitalised with pneumonia at 6 sentinel sites in 5 provinces  
 \*\*Only reported for weeks with >10 specimens submitted

**Figure 7. National syndromic surveillance for pneumonia percentage influenza detections and epidemic thresholds\***



\*Thresholds based on 2010-2017 data



# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

**Table 5. Cumulative number of identified influenza types and subtypes and total number of samples tested by hospital**

Hospital (Province)	A not typed as yet	A(H1N1)pdm09	A(H3N2)	B	Total samples
Edendale (KZ)		29			403
Helen Joseph-Rahima Moosa (GP)		33			581
Klerksdorp-Tshepong (NW)		5			344
Mapulaneng-Matikwana (MP)		15			132
Red Cross (WC)		24			649
Mitchell's Plain (WC)		15			346
<b>Total:</b>		<b>121</b>			<b>2455</b>

GP: Gauteng; KZ: KwaZulu-Natal; NW: North West; MP: Mpumalanga; WC: Western Cape

In addition 34 specimens have been tested from pregnant women in Groote Schuur Hospital and Mowbray Maternity Hospital, two of whom were positive for Influenza A(H1N1)pdm09.

# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 24/06/2018

Results until end of epidemiologic week 25(2018)

## National syndromic surveillance for pneumonia

Figure 8. Number of samples testing positive for respiratory syncytial virus and detection rate by week

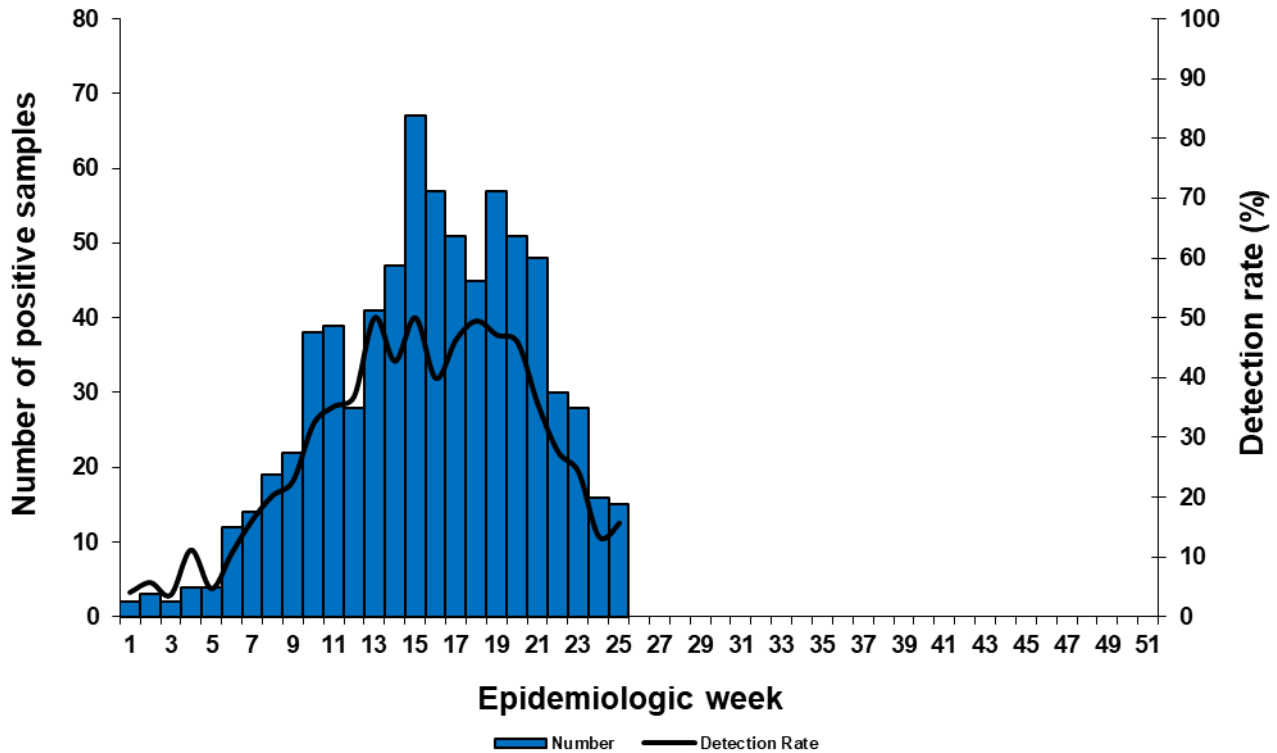


Table 6: Cumulative number of respiratory syncytial virus identified and total number of samples tested by hospital

Hospital (Province)	RSV Positive	Total samples
Edendale (KZ)	76	403
Helen Joseph-Rahima Moosa (GP)	158	581
Klerksdorp-Tshepong (NW)	40	344
Mapulaneng-Matikwana (MP)	45	132
Red Cross (WC)	291	649
Mitchel's Plain (WC)	130	346
<b>Total:</b>	<b>740</b>	<b>2455</b>

GP: Gauteng; KZ: KwaZulu-Natal; NW: North West; MP: Mpumalanga; WC: Western Cape

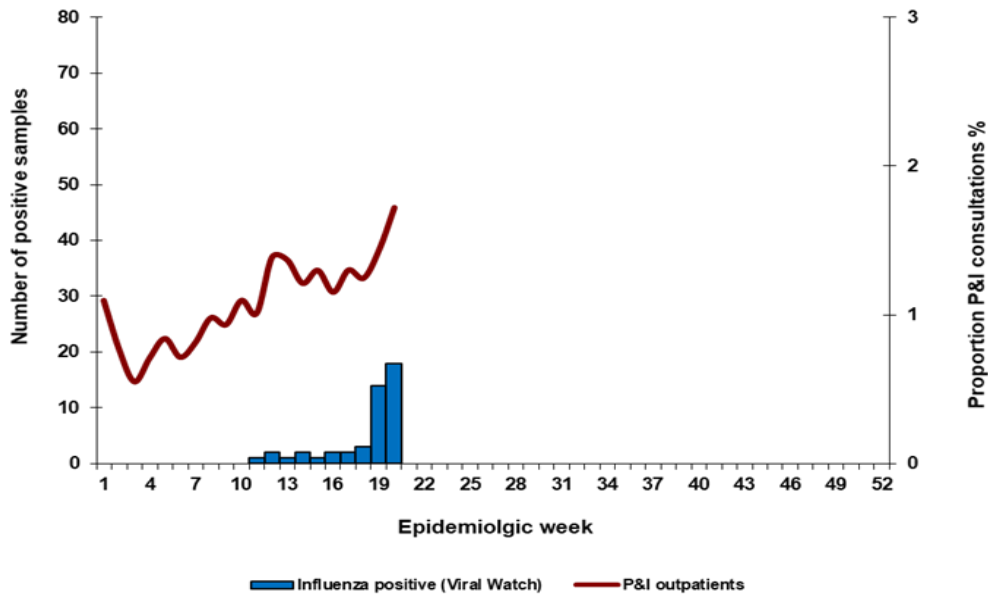
# Weekly Influenza and Respiratory Syncytial Surveillance Report

Reporting period 01/01/2018 to 20/05/2018

Results until end of epidemiologic week 20(2018)

## Private hospital consultations

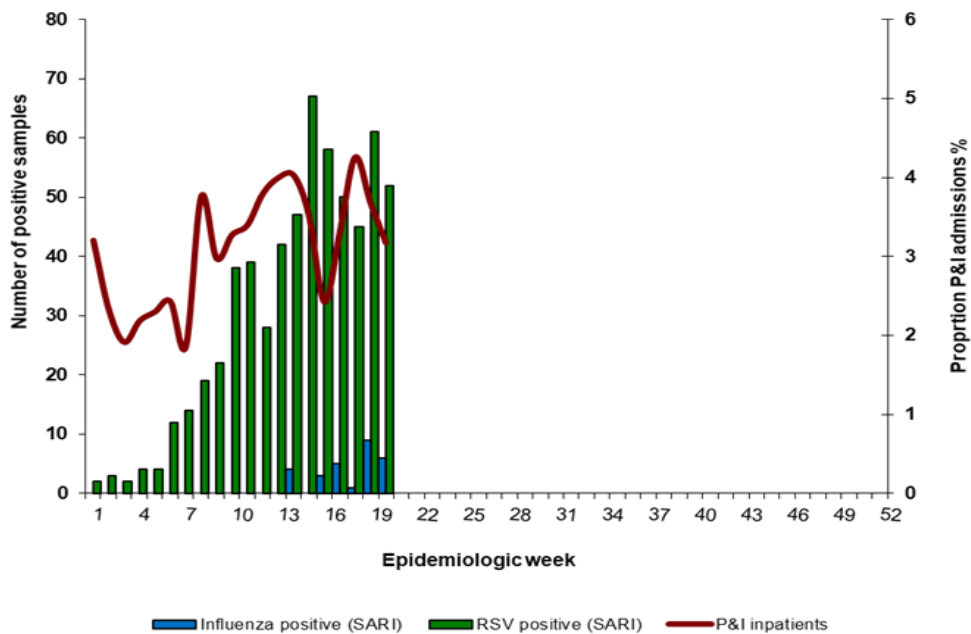
**Figure 9. Number of private hospital outpatient consultations\* with a diagnosis of pneumonia and influenza (P&I) and viral isolates\*\***



\* Hospital outpatient data from weekly reports of consultations to the Netcare hospital group. Discharge diagnosis is according to International Statistical Classification of Diseases and Related Health Problems coding by clinicians and does not represent laboratory confirmation of aetiology

\*\* Influenza positive specimens from the Viral Watch surveillance programme

**Figure 10. Number of private hospital admissions\* with a discharge diagnosis of pneumonia and influenza (P&I) and viral isolates\*\***



\*Hospitalisation admission data from weekly reports of consultations to the Netcare hospital group. Discharge diagnosis is according to International Statistical Classification of diseases and Related Health Problems/ ICD by clinicians and does not represent laboratory confirmation of aetiology \*\* Influenza positive specimens from the national syndromic surveillance for pneumonia.