NOTIFIABLE MEDICAL CONDITIONS SURVEILLANCE SYSTEM

the National Institute for Communicable Diseases

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# Introduction

The purpose of this report is to describe the number of notifications received by the Notifiable Medical Conditions Surveillance System (NMCSS). The report is publicly available and can be used by health professionals, researchers, the general public, or any other stakeholder. The purpose of disseminating this information is to inform any public health action - NMCSS data has limitations, listed elsewhere, but serves as a public health signal that may warrant further investigation.

This report also monitors some surveillance system attributes. Including average notifications by facilities, data quality and timeliness of clinical diagnosis and notifications over time. (**see Appendix nos. 1 and 3**).

While this is information is also publicly available, we aim this section of the report at those involved in the notifications. These include Infection Prevention Control practitioners at facilities, Nurses, Doctors, pathologists and laboratory staff.

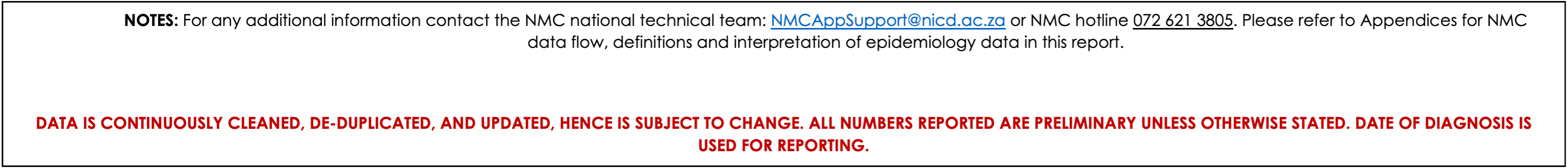
Category 4 NMCs, COVID-19, and multi-system inflammatory syndrome (MIS-C) have been excluded from this report. For more notes on data interpretation please see [NMCSS interpretation](https://www.nicd.ac.za/wp-content/uploads/2022/09/NMCSS-Data-Interpretation-Infographic-final2.pdf). Where weeks are used, the epiweek accoring to the CDC guideline is used.

## Highlights

* A total of 11 739 cases were notified in January 2024 and most were category 2 conditions.
* There were x average active users of the NMC App in January 2024
* Category 1 cases were reported in median (IQR) of 1 (0, 2) days.

## NMC Reporting application

* [NMC Reporting App](https://nmc.nicd.ac.za/Account/Login). is available on both web and mobile platforms
* Use recommended browsers in order to access NMC reporting App for notifications, searching of cases and reports.
* Register if you have no NMC account and you can reset the password if you have not used the application over 12 months.



## Current notification trends

Trends of notifications that have had recent increases are presented below. First confimred notifications are shown. Confimred notifiaitons are verified and confirmed by the relevant centre at the NICD and can be considered a confirmed cases.

All notifications include suspected notifications. These are presented to show the sensitivity of the surveillance system in recognising disease signals.

### Confirmed Notificaitons

#### Epitable

Table 1: Number of confirmed notifications on NMCSS per epiweek in 2024. The Average notifications are calculated based on notificaitons received in 2022 and 2023 with a confidence interval.

|  | Average Notifications | | Epiweeks | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** |  | **95% CI**1 | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| Acute flaccid paralysis | 0.0092 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cholera | 0.97 | 2.0, 14 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 2 | 0 |
| Congenital rubella syndrome | 0.0138 | 1.5, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diphtheria | 0.11 | 1.0, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enteric fever (typhoid or paratyphoid fever) | 0.82 | 2.0, 2.5 | 2 | 0 | 2 | 5 | 3 | 1 | 2 | 2 | 1 |
| Listeriosis | 0.27 | 1.5, 1.5 | 0 | 1 | 1 | 0 | 2 | 1 | 1 | 2 | 0 |
| Malaria | 2.5 | 2.5, 3.5 | 4 | 12 | 11 | 10 | 4 | 8 | 3 | 5 | 3 |
| Measles | 0.50 | 1.5, 2.0 | 2 | 2 | 1 | 0 | 0 | 0 | 1 | 3 | 0 |
| Meningococcal disease | 0.85 | 1.5, 2.0 | 1 | 3 | 4 | 5 | 1 | 0 | 2 | 2 | 1 |
| Pertussis | 10 | 14, 20 | 6 | 24 | 21 | 6 | 15 | 6 | 3 | 6 | 0 |
| Rabies | 0.06 | 1.0, 1.0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Respiratory disease caused by a novel respiratory pathogen | 0.0183 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Crimean-congo viral haemorrhagic fever (human) | 0.0092 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Covid-19 | 431 | 156, 680 | 0 | 0 | 3 | 2 | 1 | 2 | 1 | 0 | 2 |
| Food borne illness outbreak | 0.0642 | 2.0, 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubella | 0.70 | 2.0, 11 | 1 | 3 | 3 | 2 | 2 | 4 | 0 | 1 | 1 |
| 1CI = Confidence Interval | | | | | | | | | | | |

#### Plot

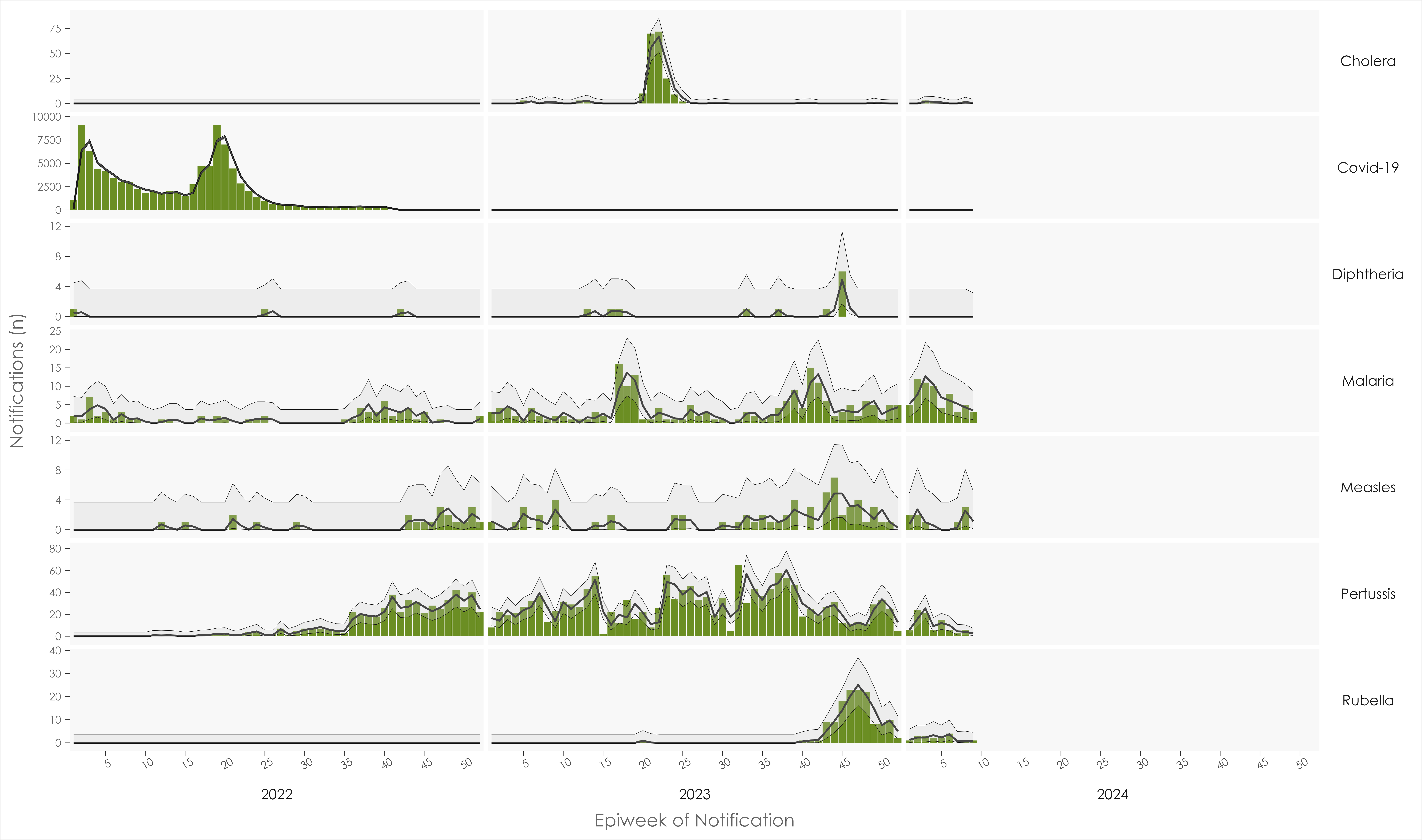


Figure 1: Trend of weekly number of confirmed notifications for topical conditions reported to the NMC, in South Africa, 2022-2024

### All Notifications

#### Epitable

Table 2: Number of notifications on NMCSS per epiweek in 2024. The Average notifications are calculated based on notificaitons received in 2022 and 2023 with a confidence interval.

|  | Average Notifications | | Epiweeks | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** |  | **95% CI**1 | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** |
| Acute flaccid paralysis | 4.4 | 4.0, 5.0 | 2 | 9 | 6 | 6 | 7 | 1 | 8 | 4 | 0 |
| Acute rheumatic fever | 0.32 | 1.0, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Botulism | 0.0780 | 1.0, 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cholera | 6.7 | 3.0, 9.0 | 0 | 2 | 12 | 8 | 48 | 12 | 12 | 11 | 8 |
| Congenital rubella syndrome | 2.22 | 2.5, 3.0 | 0 | 3 | 2 | 2 | 5 | 3 | 2 | 6 | 2 |
| Crimean-congo viral haemorrhagic fever (human) | 0.13 | 1.0, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diphtheria | 0.60 | 1.5, 2.0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 | 1 | 1 |
| Enteric fever (typhoid or paratyphoid fever) | 3.83 | 4.0, 5.0 | 3 | 2 | 2 | 8 | 4 | 3 | 2 | 4 | 2 |
| Food borne illness outbreak | 10 | 7.0, 11 | 30 | 10 | 18 | 11 | 24 | 27 | 36 | 48 | 11 |
| Haemolytic uraemic syndrome (HUS) | 0.0505 | 1.0, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Listeriosis | 2.12 | 2.0, 2.5 | 0 | 1 | 1 | 5 | 2 | 1 | 1 | 6 | 2 |
| Malaria | 114 | 77, 101 | 35 | 120 | 217 | 187 | 109 | 116 | 61 | 48 | 45 |
| Measles | 24 | 18, 28 | 40 | 49 | 44 | 35 | 35 | 42 | 45 | 61 | 36 |
| Meningococcal disease | 2.22 | 2.5, 3.0 | 3 | 3 | 4 | 5 | 4 | 0 | 3 | 2 | 2 |
| Pertussis | 19 | 21, 29 | 21 | 50 | 47 | 27 | 30 | 29 | 18 | 18 | 10 |
| Plague | 0.0092 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Poliomyelitis | 0.0138 | 1.5, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rabies | 0.70 | 1.5, 2.0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 |
| Respiratory disease caused by a novel respiratory pathogen | 11 | 3.0, 11 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 |
| Rubella | 9 | 5.0, 6.0 | 6 | 34 | 16 | 28 | 15 | 13 | 10 | 18 | 7 |
| Smallpox | 0.0550 | 1.0, 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Waterborne illness outbreak - undefined | 0.25 | 1.0, 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Yellow fever | 0.0780 | 1.0, 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anthrax | 0.0092 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Mpox | 0.0459 | 1.0, 1.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Covid-19 | 1 256 | 633, 1 180 | 129 | 118 | 130 | 126 | 107 | 130 | 112 | 143 | 82 |
| Marburg virus (VHF) | 0.0046 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ebola virus (VHF) | 0.0046 | NA, NA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1CI = Confidence Interval | | | | | | | | | | | |

#### Plot

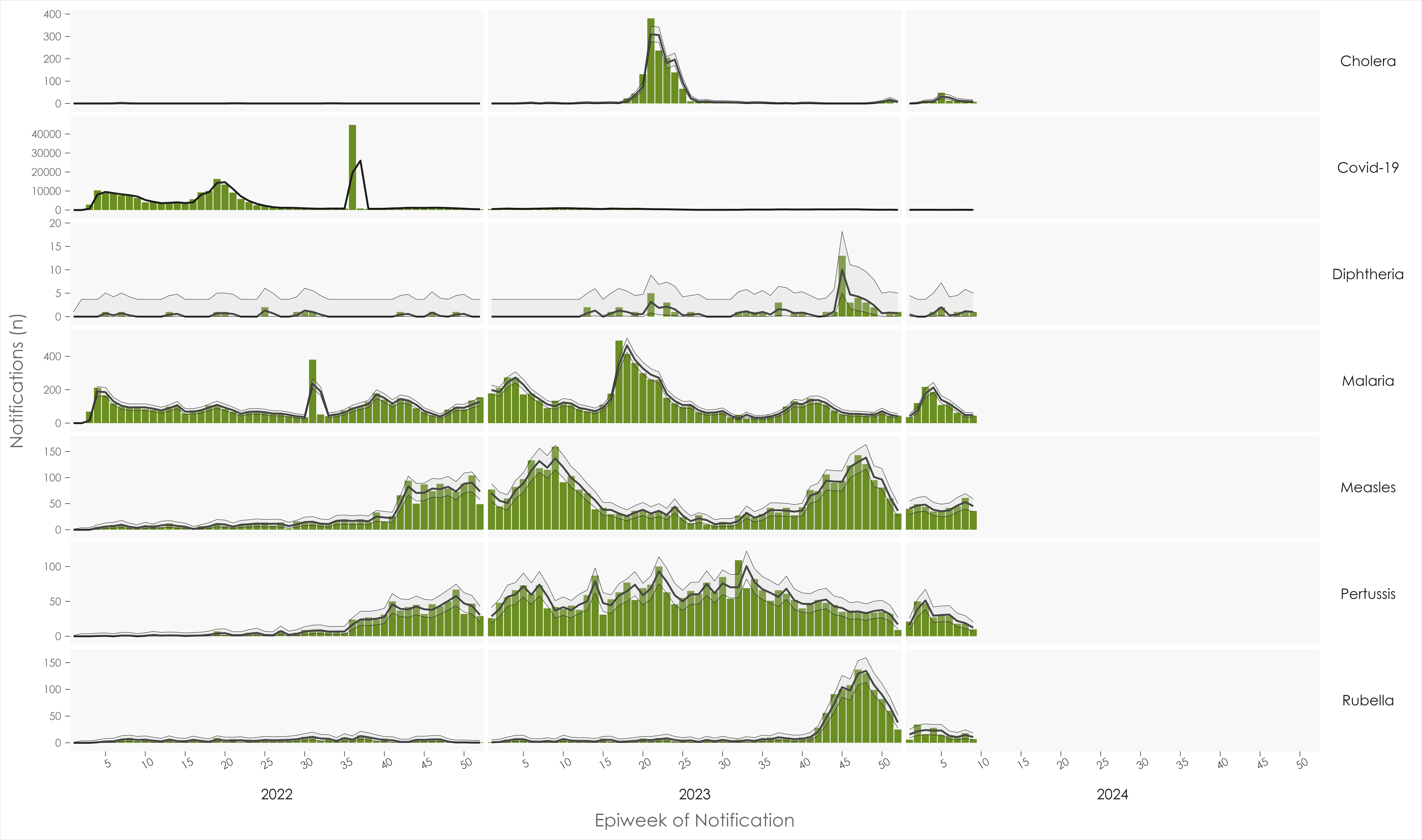


Figure 2: Trend of weekly number of notifications for topical conditions reported to the NMC, in South Africa, 2022-2024

## All Category 1 Conditions at a glance

Table 3: The number of notifications that are suspected and confirmed for category 1 conditions.

| **Condition** | **Overall**,  N = 1 3551 | **Suspected**,  N = 9811 | **Confirmed**,  N = 3741 |
| --- | --- | --- | --- |
| Acute flaccid paralysis | 14 | 14 | 0 |
| Acute rheumatic fever | 0 | 0 | 0 |
| Anthrax | 0 | 0 | 0 |
| Botulism | 0 | 0 | 0 |
| Cholera | 67 | 65 | **2** |
| Congenital rubella syndrome | 13 | 13 | 0 |
| Covid-19 | 489 | 475 | **14** |
| Crimean-congo viral haemorrhagic fever (human) | 0 | 0 | 0 |
| Diphtheria | 3 | 3 | 0 |
| Ebola virus (VHF) | 0 | 0 | 0 |
| Enteric fever (typhoid or paratyphoid fever) | 9 | 3 | **6** |
| Food borne illness outbreak | 123 | 123 | 0 |
| Haemolytic uraemic syndrome (HUS) | 0 | 0 | 0 |
| Listeriosis | 8 | 5 | **3** |
| Malaria | 309 | 0 | **309** |
| Marburg virus (VHF) | 0 | 0 | 0 |
| Measles | 181 | 176 | **5** |
| Meningococcal disease | 8 | 2 | **6** |
| Mpox | 0 | 0 | 0 |
| Pertussis | 81 | 63 | **18** |
| Plague | 0 | 0 | 0 |
| Poliomyelitis | 0 | 0 | 0 |
| Rabies | 4 | 3 | **1** |
| Respiratory disease caused by a novel respiratory pathogen | 1 | 1 | 0 |
| Rift valley fever (human) | 0 | 0 | 0 |
| Rubella | 43 | 33 | **10** |
| Smallpox | 0 | 0 | 0 |
| Waterborne illness outbreak - undefined | 2 | 2 | 0 |
| Yellow fever | 0 | 0 | 0 |
| 1Suspected and confirmed cases are independent and are not totalled - suspected and confirmed cases are distinct. | | | |

# NMC data summary, January 2024

A total of 11 815 cases were notified to the NMCSS in January 2024 **(See Appendix no.3 for definitions)**. There were 11 739 current notifications; the majority (10 251, 87%) were category 2 conditions. The provinces with the highest number of notifications were GP (3 004, 26%), KZN (2 956, 25%), and WC (1 913, 16%). The provinces with the least number of notifications were NW (412, 3.5%), and NC (426, 3.6%). (**Figure 1**) There were 76 back captured clinical notifications diagnosed between February, 2023 and January 2024 and only notified in January 2024. The majority () of those notifications were "Pulmonary TB". (**See Appendix no.1**).

Most of the notified cases were males (6 873, 59%). Individuals in the 35-39 year age group represented the majority (1 231, 11%) of notified cases. At the time of notification, 2 282 (19%) of the notified cases were hospitalized, while 106 (0.9%) were transferred to another healthcare facility. There were 95 deaths notified during the reporting period with case fatality rate of 0.8%.

## Distribution of Category 1 NMCs by province and case definition

**Covid-19** was the most common (489, 36%) category 1 notification. The province with the highest number of notifications for Covid-19 was GP (160 ,32.7%).

Table 4: The number of notifications by province and number of notifications that are suspected and confirmed by vital status.

|  | **Provinces** | | | | | | | | | **Case** | | **Deaths** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Condition | **EC**1 | **FS**1 | **GP**1 | **KZN**1 | **LP**1 | **MP**1 | **NC**1 | **NW**1 | **WC**1 | **Suspected**1 | **Confirmed**1 | **Suspected**1 | **Confirmed**1 |
| Acute flaccid paralysis | 3 | 1 | 2 | 4 | 0 | 1 | 1 | 1 | 1 | 14 | 0 | 0 | 0 |
| Acute rheumatic fever | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Anthrax | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Botulism | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Cholera § | 0 | 0 | 13 | 2 | 46 | 2 | 0 | 4 | 0 | 65 | 2 | 4 | 0 |
| Congenital rubella syndrome | 2 | 2 | 1 | 3 | 0 | 1 | 0 | 0 | 3 | 13 | 0 | 0 | 0 |
| Covid-19 | 75 | 6 | 160 | 92 | 10 | 6 | 3 | 4 | 133 | 475 | 14 | 1 | 0 |
| Crimean-congo viral haemorrhagic fever (human) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diphtheria \* | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 0 |
| Ebola virus (VHF) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Enteric fever (typhoid or paratyphoid fever) | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 6 | 0 | 0 |
| Food borne illness outbreak | 9 | 2 | 40 | 43 | 18 | 0 | 0 | 2 | 9 | 123 | 0 | 0 | 0 |
| Haemolytic uraemic syndrome (HUS) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Listeriosis | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 0 | 2 | 5 | 3 | 1 | 1 |
| Malaria | 6 | 12 | 119 | 52 | 33 | 43 | 1 | 10 | 33 | 0 | 309 | 0 | 3 |
| Marburg virus (VHF) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Measles | 8 | 3 | 41 | 16 | 6 | 13 | 30 | 1 | 63 | 176 | 5 | 0 | 0 |
| Meningococcal disease | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 2 | 6 | 0 | 0 |
| Mpox | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pertussis | 7 | 4 | 35 | 12 | 3 | 3 | 0 | 1 | 16 | 63 | 18 | 1 | 0 |
| Plague | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Poliomyelitis | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rabies | 1 | 0 | 0 | 2 | 0 | 0 | 1 | 0 | 0 | 3 | 1 | 2 | 1 |
| Respiratory disease caused by a novel respiratory pathogen | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Rift valley fever (human) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rubella | 2 | 6 | 3 | 6 | 1 | 0 | 4 | 0 | 21 | 33 | 10 | 0 | 0 |
| Smallpox | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Waterborne illness outbreak - undefined | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |
| Yellow fever | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1n(%);  \* Toxin producing results not available on NMC;  § Serotype information not available on NMC;  \*\* Merged case represents a clinical and laboratory notification of the same person and was successfully linked and made into a single notification | | | | | | | | | | | | | |

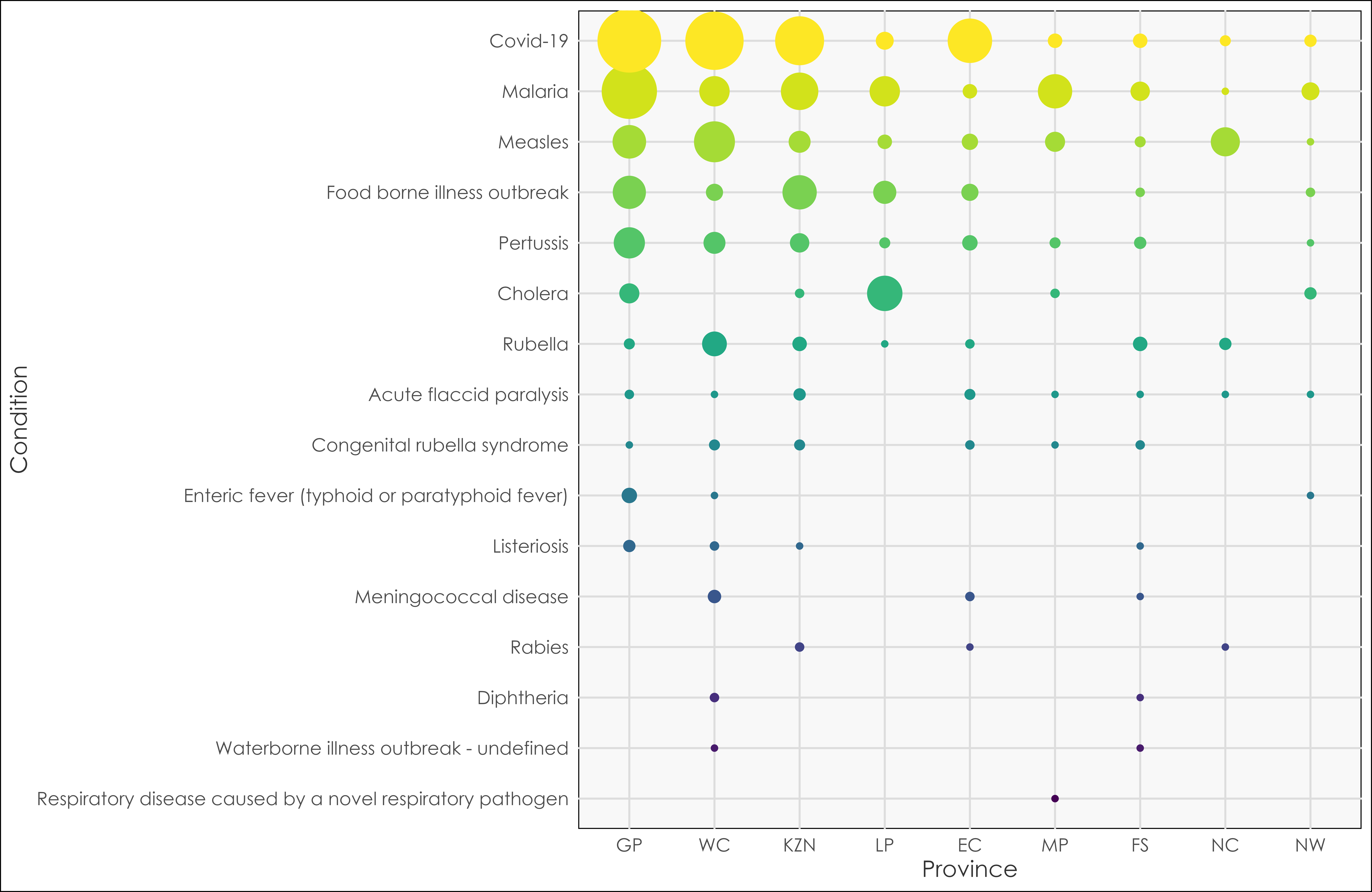


Figure 3: Distribution of Category 1 NMC notifcations by province. \*Notificaitosn include both suspected and confiremd cases

## Distribution of Category 2 NMCs by province and case definition

**Pulmonary TB** was the most common (5 402, 53%) category 2 notification. The province with the highest number of notifications for Pulmonary TB was GP (1436, 14%).

Table 5: The number of notifications by province and number of notifications that are suspected and confirmed by vital status.

|  | **Provinces** | | | | | | | | | **Case** | | **Deaths** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Condition | **EC**1 | **FS**1 | **GP**1 | **KZN**1 | **LP**1 | **MP**1 | **NC**1 | **NW**1 | **WC**1 | **Suspected**1 | **Confirmed**1 | **Suspected**1 | **Confirmed**1 |
| Agricultural or stock remedy poisoning | 5 | 6 | 64 | 6 | 3 | 2 | 0 | 0 | 7 | 93 | 0 | 6 | 0 |
| Bilharzia (schistosomiasis) | 49 | 1 | 23 | 390 | 219 | 109 | 0 | 3 | 16 | 729 | 81 | 1 | 0 |
| Brucellosis | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| Congenital syphilis | 58 | 11 | 55 | 253 | 8 | 32 | 18 | 7 | 58 | 427 | 73 | 1 | 1 |
| Haemophilus influenzae type B | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 2 | 3 | 0 | 0 |
| Hepatitis A | 70 | 36 | 295 | 223 | 60 | 59 | 29 | 31 | 163 | 721 | 245 | 0 | 0 |
| Hepatitis B | 118 | 44 | 72 | 683 | 8 | 16 | 7 | 69 | 21 | 985 | 53 | 3 | 0 |
| Hepatitis C | 1 | 1 | 11 | 3 | 0 | 0 | 0 | 0 | 3 | 19 | 0 | 0 | 0 |
| Hepatitis E | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 |
| Lead poisoning | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| Legionellosis | 2 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 6 | 0 | 0 |
| Leprosy | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Maternal death (pregnancy, childbirth and puerperium) | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 |
| Mercury poisoning | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Soil transmitted helminths | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Tetanus | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| Tuberculosis: extensively drug -resistant (XDR -TB) | 0 | 0 | 3 | 1 | 0 | 0 | 1 | 0 | 2 | 7 | | 0 | |
| Tuberculosis: multidrug- resistant (MDR -TB) | 29 | 2 | 38 | 29 | 4 | 3 | 1 | 3 | 31 | 140 | | 4 | |
| Tuberculosis:extra-pulmonary | 100 | 60 | 552 | 188 | 32 | 34 | 33 | 58 | 193 | 1 250 | | 11 | |
| Tuberculosis:pulmonary | 800 | 262 | 1 436 | 934 | 256 | 152 | 295 | 215 | 1 052 | 5 402 | | 50 | |
| 1n;  \* TB module is under development to align with laboratory confirmed TB cases. | | | | | | | | | | | | | |

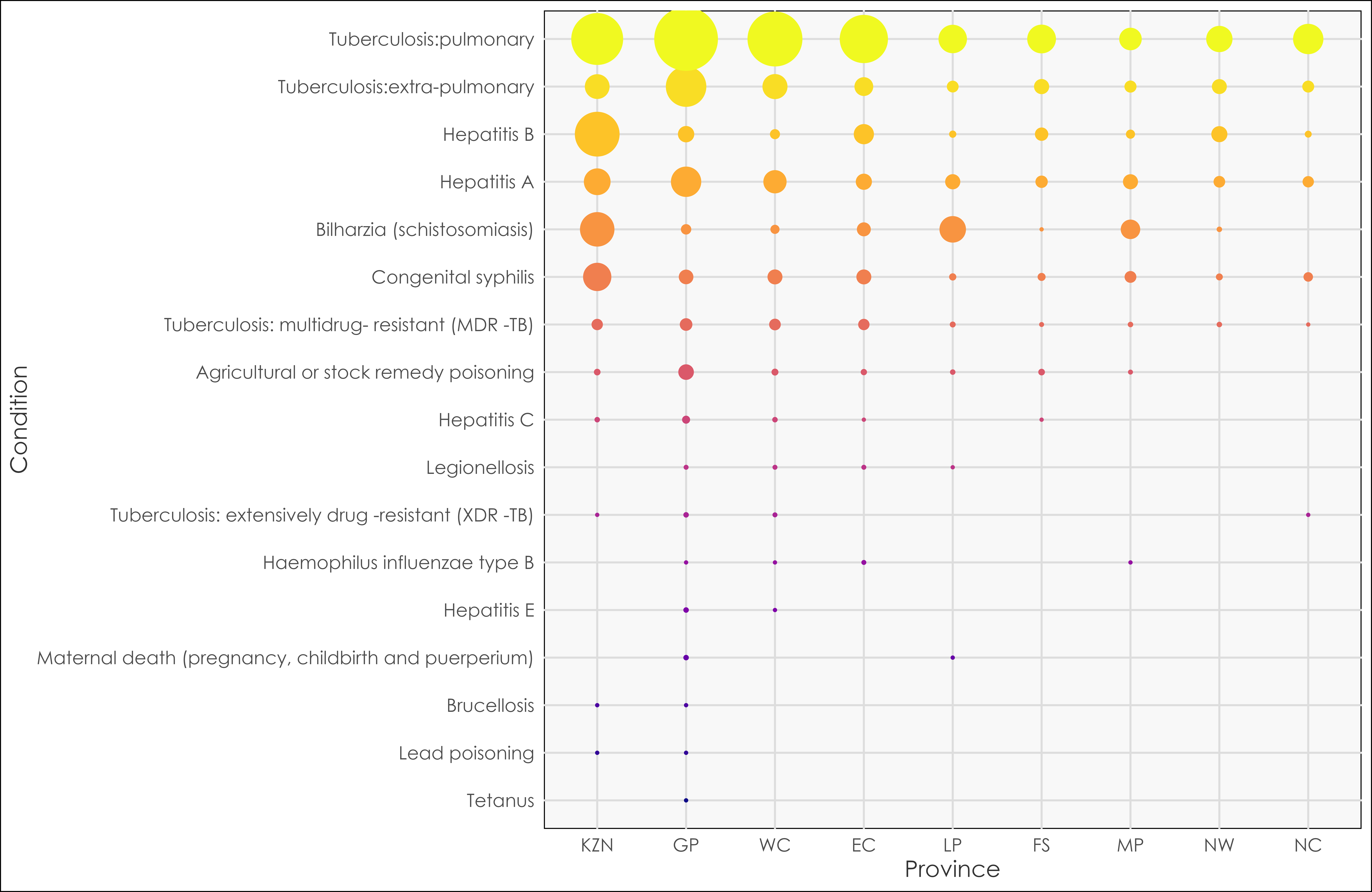


Figure 4: Distribution of Category 2 NMCs by province

# NMC app use statistics

Table 6: Description of NMC notifications by case source

| **NMC Category** | **Overall**, N = 11 739 | **Clinical notifications**,  n = 8 241 | **Laboratory notifications**,  n = 2 889 | **Merged Cases**,  n = 609 |
| --- | --- | --- | --- | --- |
| Category 1 | 1 355 (12%) | 946 (11%) | 267 (9.2%) | 142 (23%) |
| Category 2 | 10 251 (87%) | 7 295 (89%) | 2 501 (87%) | 455 (75%) |
| Category 3 | 133 (1.1%) | 0 (0%) | 121 (4.2%) | 12 (2.0%) |

## Notification types and merging

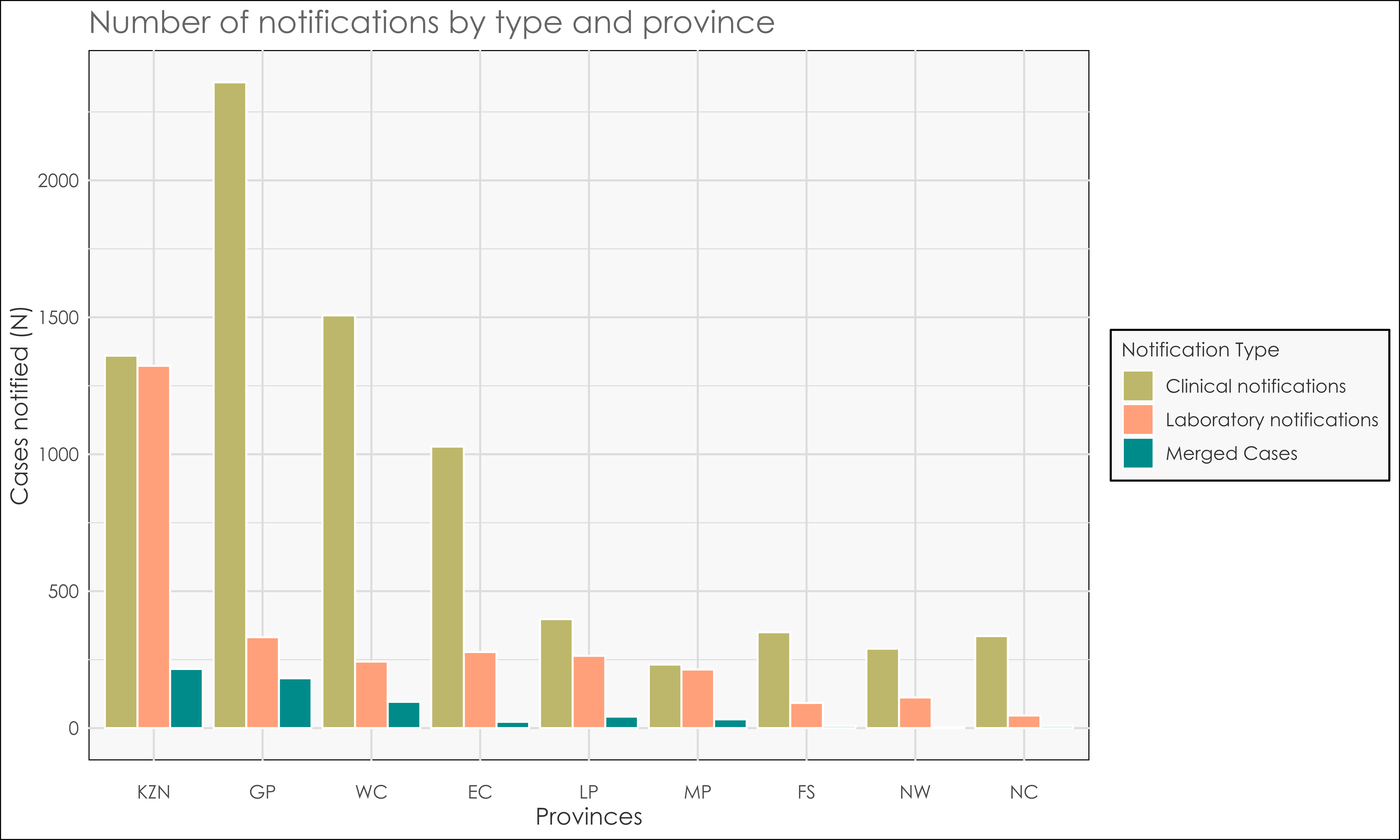


Figure 5: Distribution of notifications by province and notification type

There were 1 029 (12%) clinical notifications from the private sector (i.e. private hospitals, private practice and mining industry) compared to 7 818 (88%) in the public sector. Clinical notifications using the NMC Reporting Application made up 11544 (98%) (more details in Table 7 ).

Table 7: Clinical notifications notified by provinces, reporting platform, and sector

| **Province** | **Overall**, N = 11 736 | **App - Private**,  n = 1 034 | **App - Public**,  n = 10 510 | **Paper-based - Private**,  n = 8 | **Paper-based - Public**,  n = 184 |
| --- | --- | --- | --- | --- | --- |
| GP | 3 003 (100%) | 326 (11%) | 2 672 (89%) | 2 (<0.1%) | 3 (<0.1%) |
| KZN | 2 956 (100%) | 206 (7.0%) | 2 735 (93%) | 1 (<0.1%) | 14 (0.5%) |
| WC | 1 912 (100%) | 210 (11%) | 1 644 (86%) | 2 (0.1%) | 56 (2.9%) |
| EC | 1 369 (100%) | 144 (11%) | 1 172 (86%) | 2 (0.1%) | 51 (3.7%) |
| LP | 710 (100%) | 38 (5.4%) | 670 (94%) | 0 (0%) | 2 (0.3%) |
| MP | 479 (100%) | 21 (4.4%) | 431 (90%) | 0 (0%) | 27 (5.6%) |
| FS | 467 (100%) | 45 (9.6%) | 420 (90%) | 1 (0.2%) | 1 (0.2%) |
| NC | 426 (100%) | 16 (3.8%) | 404 (95%) | 0 (0%) | 6 (1.4%) |
| NW | 412 (100%) | 28 (6.8%) | 360 (87%) | 0 (0%) | 24 (5.8%) |
| Unknown | 2 | 0 | 2 | 0 | 0 |

## The average active users on the NMC App

*Insert chart from excel*

## Data quality

## Completeness

Completeness refers to the proportion of complete data entries per variable in the dataset among clinical and merged notifications. In January 2024, there was an increase in completeness of date of diagnosis and patient folder number, while demographic details and patient vital status remain unchanged captured compared to x 2023.

## ID number completeness

Table 8: Length of ID numbers inputted on NMC system

| **Length of ID number** | **Android**, N = 2 7551 | **Microstrategy/SDW**, N = 3 4531 | **Paper-based**, N = 1931 | **Web**, N = 4 8131 | **iOS**, N = 5251 |
| --- | --- | --- | --- | --- | --- |
| Not complete | 1 075 (39%) | 3 348 (97%) | 102 (53%) | 1 399 (29%) | 211 (40%) |
| 2 | 0 (0%) | 0 (0%) | 0 (0%) | 1 (<0.1%) | 0 (0%) |
| 4 | 0 (0%) | 1 (<0.1%) | 0 (0%) | 0 (0%) | 0 (0%) |
| 6 | 3 (0.1%) | 11 (0.3%) | 0 (0%) | 391 (8.1%) | 50 (9.5%) |
| 7 | 0 (0%) | 0 (0%) | 0 (0%) | 4 (<0.1%) | 2 (0.4%) |
| 8 | 0 (0%) | 2 (<0.1%) | 0 (0%) | 47 (1.0%) | 1 (0.2%) |
| 9 | 0 (0%) | 0 (0%) | 0 (0%) | 12 (0.2%) | 0 (0%) |
| 10 | 0 (0%) | 5 (0.1%) | 0 (0%) | 117 (2.4%) | 5 (1.0%) |
| 11 | 0 (0%) | 0 (0%) | 0 (0%) | 3 (<0.1%) | 0 (0%) |
| 12 | 0 (0%) | 0 (0%) | 0 (0%) | 27 (0.6%) | 1 (0.2%) |
| 13 | 1 677 (61%) | 86 (2.5%) | 91 (47%) | 2 812 (58%) | 255 (49%) |
| 1n (%) | | | | | |

## Hospital Form Completeness

Table 9: Completion of hospitalisation form for notifications reported as inpatients with category 1 conditions. Complete refers to >80% of variables completed.

| **Hospital Form Completed** | **Complete**,  n = 43 (17%) | **Incomplete**,  n = 41 (16%) | **Only Symptoms completed**,  n = 103 (41%) | **Not Attempted**,  n = 67 (26%) |
| --- | --- | --- | --- | --- |
| Waterborne illness outbreak - undefined | 1 (2.3%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Tuberculosis:pulmonary | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Tuberculosis:extra-pulmonary | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Tuberculosis: multidrug- resistant (MDR -TB) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Tuberculosis: extensively drug -resistant (XDR -TB) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Tetanus | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Shigellosis | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Rubella | 1 (2.3%) | 0 (0%) | 0 (0%) | 4 (6.0%) |
| Respiratory disease caused by a novel respiratory pathogen | 0 (0%) | 0 (0%) | 0 (0%) | 1 (1.5%) |
| Rabies | 1 (2.3%) | 0 (0%) | 0 (0%) | 1 (1.5%) |
| Pertussis | 10 (23%) | 14 (34%) | 21 (20%) | 8 (12%) |
| Non-typhoidal salmonellosis | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Meningococcal disease | 1 (2.3%) | 0 (0%) | 0 (0%) | 5 (7.5%) |
| Measles | 0 (0%) | 4 (9.8%) | 6 (5.8%) | 2 (3.0%) |
| Maternal death (pregnancy, childbirth and puerperium) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Malaria | 14 (33%) | 10 (24%) | 42 (41%) | 27 (40%) |
| Listeriosis | 1 (2.3%) | 0 (0%) | 0 (0%) | 3 (4.5%) |
| Legionellosis | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Lead poisoning | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Hepatitis E | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Hepatitis C | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Hepatitis B | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Hepatitis A | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Haemophilus influenzae type B | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Food borne illness outbreak | 6 (14%) | 7 (17%) | 18 (17%) | 7 (10%) |
| Enteric fever (typhoid or paratyphoid fever) | 0 (0%) | 0 (0%) | 0 (0%) | 1 (1.5%) |
| Diphtheria | 1 (2.3%) | 1 (2.4%) | 0 (0%) | 0 (0%) |
| Congenital syphilis | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Congenital rubella syndrome | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Cholera | 3 (7.0%) | 3 (7.3%) | 10 (9.7%) | 5 (7.5%) |
| Covid-19 | 0 (0%) | 1 (2.4%) | 1 (1.0%) | 1 (1.5%) |
| Brucellosis | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Bilharzia (schistosomiasis) | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Agricultural or stock remedy poisoning | 0 (0%) | 0 (0%) | 0 (0%) | 0 (0%) |
| Acute flaccid paralysis | 4 (9.3%) | 1 (2.4%) | 5 (4.9%) | 2 (3.0%) |

## Timeliness

**Time to notification** is measured by the number of days from the time of diagnosis of the NMC to the time of notification. Overall, it took a median (IQR) of 1 (0, 2) days to report category 1 NMCs.

Table 10: Symptoms of patients clinically notified and merged with lab notifications to the NMC

| **Characteristic** | **Catgegory 1**,  n = 1 431 | **Catgegory 2**,  n = 10 251 | **Catgegory 3**,  n = 133 |
| --- | --- | --- | --- |
| Time to Notification | 1 (0, 3) | 2 (0, 7) | 4 (3, 6) |
| Unknown | 151 | 1 061 | 0 |
| Back Capture Classification |  |  |  |
| Back capture | 76 (5%) | 0 (0%) | 0 (0%) |
| Current | 1 110 (78%) | 8 183 (80%) | 116 (87%) |
| Delayed | 245 (17%) | 2 068 (20%) | 17 (13%) |

# Conclusion

The majority of notifications were clinical notifications. Patients who are hospitalized with a category 1 condition and notified still have poor completeness of the hospital form with the majority of notifications only having symptom completed. ID numbers are poorly completed in notifications from SDW.

# Recommendations

* We recommend that clinicians should complete all patient clinical and demographic details to improve hosptial form completeness.
* We strongly recommend complete ID number capture in the SDW system to improve data quality and the ability for the NMCSS to merge clinical and laboratory notifications.
* • We welcome stakeholders to send feedback and suggestions for the report. We also encourage reaching out for ingestion of data from data from data sources that existed prior to the launch of the NMCSS. Feel free to reach out to [**brianb@nicd.ac.za**](mailto:brianb@nicd.ac.za) .

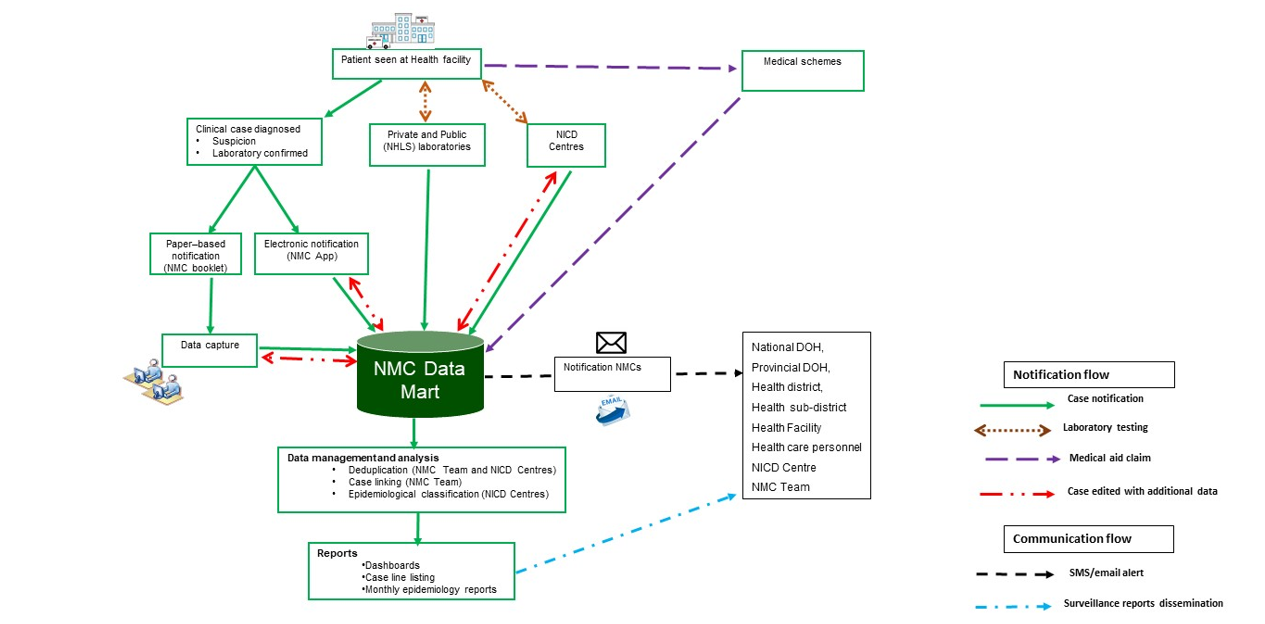
# Appendices

## Appendix no.1: Back captured clinical notifications

Table 11: Back captured notifications by reporting province

|  | **Overall** | **Province** | | | | | | | | | **Case Source** | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Condition** | **Overall**,  (76) | **EC**,  (17) | **FS**,  (4) | **GP**,  (22) | **KZN**,  (6) | **LP**,  (2) | **MP**,  (8) | **NC**,  (1) | **NW**,  (3) | **WC**,  (13) | **Android**,  (5)1 | **Paper-based**,  (2)1 | **SDW**,  (19)1 | **Web**,  (48)1 | **iOS**,  (2)1 |
| Covid-19 | 17 (22%) | 2 | 0 | 6 | 4 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 1 | 15 | 0 |
| Food borne illness outbreak | 15 (20%) | 12 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 14 | 1 |
| Measles | 12 (16%) | 1 | 0 | 2 | 0 | 0 | 6 | 1 | 0 | 2 | 1 | 1 | 2 | 8 | 0 |
| Pertussis | 8 (11%) | 1 | 0 | 2 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 1 | 6 | 1 | 0 |
| Malaria | 7 (9.2%) | 0 | 2 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 5 | 0 |
| Rubella | 7 (9.2%) | 1 | 0 | 3 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 5 | 1 | 0 |
| Acute flaccid paralysis | 3 (3.9%) | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 1 |
| Congenital rubella syndrome | 2 (2.6%) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 |
| Enteric fever (typhoid or paratyphoid fever) | 2 (2.6%) | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| Listeriosis | 2 (2.6%) | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 |
| Cholera | 1 (1.3%) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| 1SDW – Surveillance data warehouse/ Microstrategy | | | | | | | | | | | | | | | |

## Appendix no.2: Summary of NMCSS Data Flow



## Appendix no.3: NMC Categories, and Case Classification definitions

**NMC categories**

**Category 1**: NMCs notified by the most rapid means available upon diagnosis, followed by a written or electronic notification to the Department of Health within 24 hours of diagnosis by healthcare providers, private health laboratories or public health laboratories. These conditions must be notified based on clinical suspicion irrespective of laboratory confirmation.

**Category 2**: NMCs notified through a written or an electronic notification to the Department of Health of clinical or laboratory diagnosis within 7 days by healthcare providers, private health laboratories or public health laboratories.

**Category 3**: NMCs notified through a written or electronic notification to the Department of Health within 7 days of diagnosis by public and private health laboratories.

**Category 4**: NMCs notified through a written or electronic notification to the Department of Health within 1 month of diagnosis by public and private health laboratories.

**Case Classification definitions**

**Clinical case**: are cases reported to the NMC by health care providers at facilities, either through completion of a paper form that is faxed, emailed to National Institute of Communicable Diseases (NICD), or by direct data entry into the NMC application on a PC, laptop or mobile device. The diagnosis is made by the clinician on the basis of case definitions published on the NICD website.

**Laboratory case**: are cases that are downloaded into the NMC database directly from the National Health Laboratory Services (NHLS) laboratory information system. The NMC application applies the case definitions that are published on the NICD website. Private sector data is being sourced.

**Merged cases**: are cases where a case was notified by health care provider at the facility (a ‘clinical case’) AND the laboratory issued a report with a positive result for the same case (a ’laboratory case). The NMC App is set up to automatically detect and link clinical and laboratory case notifications. The NICD specialist Centres and NMC data team review all cases and manually link any remaining clinical and laboratory cases

**Notification capture times definitions**

**Current notification**: Category 1 conditions notified within 2 days of diagnosis date. Category 2 and 3 conditions notified within 7 days of diagnosis. All lab notifications without diagnosis date are classified as current.

**Delayed notification**: Category 1 conditions notified within between 3 and 7 days of diagnosis date. Category 2 and 3 conditions notified between 8 and 30 days of diagnosis.

**Back capture notification**: Category 1 conditions notified more than 7 days of diagnosis date. Catgeory 2 and 3 conditions notified more than 30 days of diagnosis date.

**Epiweeks**: Epiweeks used the CDC definition of a week starting on a Sunday and ending on a Saturday. The first epiweek of the year is the week that contains the first Saturday of January. Epiweek 1 of 2024 started on 31 December 2023 and ended on 6 January 2024.

## Appendix no.4: IDSR reporting template for IDSR conditions existing on NMC by under-5 and 5-and-over years and vital status.

Table 12: The number of IDSR conditions laboratory notified to the NMC using the IDSR reporting template of under and 5-and-above years by vital status.

|  | Notified/Suspected | | | | Confirmed |
| --- | --- | --- | --- | --- | --- |
| Condition | **Under 5 A**,  N = 2631 | **5 & over A**,  N = 7001 | **5 & over D**,  N = 61 | **Under 5 D**,  N = 31 | **N = 374**1 |
| Acute flaccid paralysis | 6 | 8 | 0 | 0 | 0 |
| Acute rheumatic fever | 0 | 0 | 0 | 0 | 0 |
| Anthrax | 0 | 0 | 0 | 0 | 0 |
| Botulism | 0 | 0 | 0 | 0 | 0 |
| Cholera | 6 | 55 | 3 | 1 | 2 |
| Congenital rubella syndrome | 11 | 0 | 0 | 0 | 0 |
| Covid-19 | 119 | 351 | 1 | 0 | 14 |
| Crimean-congo viral haemorrhagic fever (human) | 0 | 0 | 0 | 0 | 0 |
| Diphtheria | 1 | 2 | 0 | 0 | 0 |
| Ebola virus (VHF) | 0 | 0 | 0 | 0 | 0 |
| Enteric fever (typhoid or paratyphoid fever) | 0 | 3 | 0 | 0 | 6 |
| Food borne illness outbreak | 9 | 114 | 0 | 0 | 0 |
| Haemolytic uraemic syndrome (HUS) | 0 | 0 | 0 | 0 | 0 |
| Listeriosis | 1 | 2 | 1 | 0 | 3 |
| Malaria | 0 | 0 | 0 | 0 | 309 |
| Marburg virus (VHF) | 0 | 0 | 0 | 0 | 0 |
| Measles | 64 | 111 | 0 | 0 | 5 |
| Meningococcal disease | 1 | 1 | 0 | 0 | 6 |
| Mpox | 0 | 0 | 0 | 0 | 0 |
| Pertussis | 41 | 21 | 0 | 1 | 18 |
| Plague | 0 | 0 | 0 | 0 | 0 |
| Poliomyelitis | 0 | 0 | 0 | 0 | 0 |
| Rabies | 0 | 1 | 1 | 1 | 1 |
| Respiratory disease caused by a novel respiratory pathogen | 1 | 0 | 0 | 0 | 0 |
| Rift valley fever (human) | 0 | 0 | 0 | 0 | 0 |
| Rubella | 3 | 29 | 0 | 0 | 10 |
| Smallpox | 0 | 0 | 0 | 0 | 0 |
| Waterborne illness outbreak - undefined | 0 | 2 | 0 | 0 | 0 |
| Yellow fever | 0 | 0 | 0 | 0 | 0 |
| 1A = Cases who are alive.  D = Cases who are deceased. | | | | | |

**END**