



NOTIFIABLE MEDICAL CONDITIONS SURVEILLANCE SYSTEM

Issued by the National Institute for Communicable Diseases

Introduction

This report summarises data from the National Notifiable Medical Conditions Surveillance System (NMCSS) on cases notified during **November 2023**. Additionally, this report includes information on the distribution of case notifications by sources, such as clinical or laboratory notifications, merged cases (**see Appendix no. 3**), and the number of reported deaths. It monitors the use of the electronic NMC Reporting Application (App) for notification, data quality, specifically the completeness and timeliness of clinical diagnosis and notifications over time, and back-captured cases notified in November 2023 (**see Appendix nos. 1 and 3**). Category 4 NMCs, COVID-19, and multi-system inflammatory syndrome (MIS-C) have been excluded from this report.

Highlights

- A total of 11 642 cases were notified in November 2023 and the majority were category 2 conditions.
- There were 445 average active users of the NMC App in November 2023
- Category 1 cases were reported in a median (IQR) of zero (0, 1) days.

NMC Reporting Application

- [NMC Reporting App](#) is available on both web and mobile platforms
- Use recommended browsers to access the NMC reporting App for notifications, and 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 for over 12 months

NOTES: For any additional information contact the NMC national technical team: NMCAppSupport@nicd.ac.za or NMC hotline 072 621 3805. Please refer to Appendices for NMC data flow, definitions and interpretation of epidemiology data in this report.

DATA IS CONTINUOUSLY CLEANED, DE-DUPPLICATED, AND UPDATED, HENCE IS SUBJECT TO CHANGE. ALL NUMBERS REPORTED ARE PRELIMINARY UNLESS OTHERWISE STATED. DATE OF DIAGNOSIS IS USED FOR REPORTING.

Category 1 Conditions at a glance

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

Condition	Suspected, N = 1262 ¹	Confirmed, N = 639 ¹
Acute Flaccid Paralysis	23	0
Acute rheumatic fever	1	0
Cholera	1	0
Congenital rubella syndrome	1	32
Diphtheria	23	6
Enteric fever (typhoid or paratyphoid fever)	1	12
Foodborne illness outbreak	292	0
Listeriosis	4	5
Malaria	59	183
Measles	492	47
Meningococcal Disease	30	4
Pertussis	105	64
Rabies	3	1
Rubella	227	285

¹n

NMC data summary, November 2023

A total of n=12756 cases were notified to the NMCSS in November 2023 (**See Appendix No. 3 for definitions**). There were 11642 current notifications; the majority (n=9 613, 83%) were category 2 conditions. The provinces with the highest number of notifications were KZN (2 672, 23%), GP (2 558, 22%), and WC (2 532, 22%). The provinces with the least number of notifications were NW (390, 3.4%), and MP (400, 3.4%). (**Figure 1**) There were 1114 back-captured clinical notifications diagnosed between February 2021 and November 2023 and only notified in November 2023. The majority (812, 73%) of those notifications were cases of TB; pulmonary notifications. (**See Appendix no.1**).

Table 2: Description of NMC notifications by case source

NMC Category	Overall, N = 11 642	Clinical notifications, n = 8427	Laboratory notifications, n = 2696	Merged Cases, n = 519
Category 1	1 901 (16%)	1 264 (15%)	377 (14%)	260 (50%)
Category 2	9 613 (83%)	7 163 (85%)	2 210 (82%)	240 (46%)
Category 3	128 (1.1%)	0 (0%)	109 (4.0%)	19 (3.7%)

App use

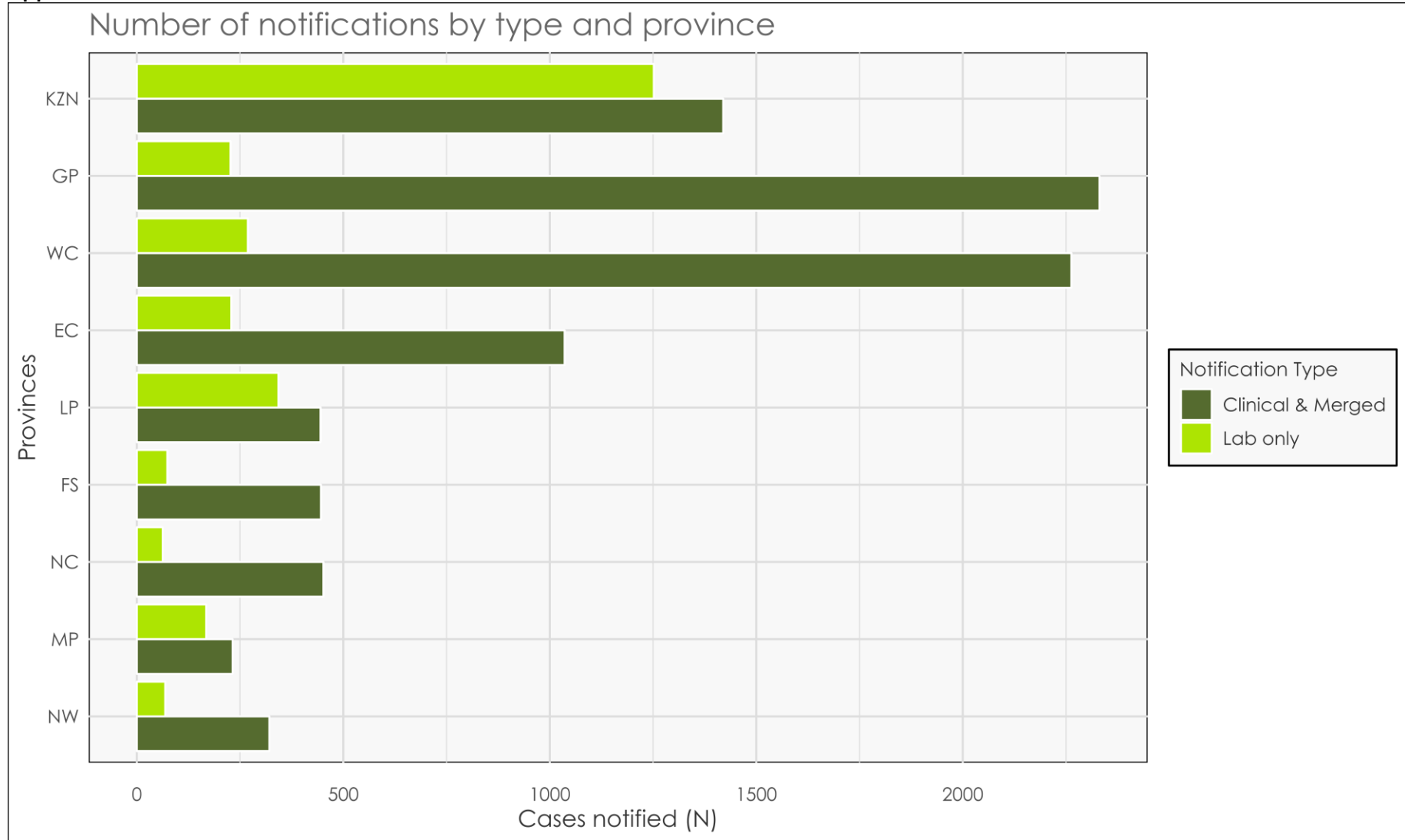


Figure 1: Distribution of notifications by province and notification type

There were 689 (7.7%) Clinical notifications from the private sector (i.e. private hospitals, private practice and the mining industry) compared to 8 253 (92%) in the public sector. Clinical notifications using the NMC Reporting Application made up 8452 (99%) (see Table 3).

Table 3: Clinical notifications notified by provinces, reporting platform, and sector

Province	Overall, N = 8 578	App - Private, n = 684	App - Public, n = 7768	Paper-based - Private, n = 4	Paper-based - Public, n = 122
GP	2 257 (100%)	234 (10%)	2 021 (90%)	2 (<0.1%)	0 (0%)
WC	2 174 (100%)	96 (4.4%)	1 982 (91%)	0 (0%)	96 (4.4%)
KZN	1 307 (100%)	139 (11%)	1 165 (89%)	0 (0%)	3 (0.2%)
EC	1 026 (100%)	53 (5.2%)	966 (94%)	1 (<0.1%)	6 (0.6%)
FS	442 (100%)	41 (9.3%)	401 (91%)	0 (0%)	0 (0%)
LP	416 (100%)	18 (4.3%)	397 (95%)	0 (0%)	1 (0.2%)
NC	415 (100%)	22 (5.3%)	393 (95%)	0 (0%)	0 (0%)
NW	321 (100%)	60 (19%)	244 (76%)	1 (0.3%)	16 (5.0%)
MP	220 (100%)	21 (9.5%)	199 (90%)	0 (0%)	0 (0%)

The majority of the notified cases were Males n (%) 6 917 (59%). Individuals in the 35–39-year age group represented the majority (1 211 (10%)) of notified cases (Table 3). At the time of notification, approximately 2 602 (22%) of the notified cases were hospitalised, while 75 (0.6%) were transferred to another healthcare facility. There were 74 deaths notified during the reporting period with a case fatality rate of 0.6%.

Hospital Form Completeness

Table 4: 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 = 27 (7.3%)	Incomplete, n = 86 (23%)	Only Symptoms completed, n = 169 (46%)	Not Attempted, n = 88 (24%)
Acute Flaccid Paralysis	3 (11%)	4 (4.7%)	12 (7.1%)	1 (1.1%)
Congenital rubella syndrome	0 (0%)	0 (0%)	1 (0.6%)	0 (0%)
Diphtheria	1 (3.7%)	3 (3.5%)	6 (3.6%)	0 (0%)
Enteric fever (typhoid or paratyphoid fever)	0 (0%)	1 (1.2%)	2 (1.2%)	1 (1.1%)
Foodborne illness outbreak	6 (22%)	19 (22%)	40 (24%)	33 (38%)
Listeriosis	1 (3.7%)	1 (1.2%)	2 (1.2%)	2 (2.3%)
Malaria	5 (19%)	18 (21%)	45 (27%)	21 (24%)
Measles	0 (0%)	4 (4.7%)	9 (5.3%)	7 (8.0%)
Meningococcal Disease	2 (7.4%)	5 (5.8%)	13 (7.7%)	4 (4.5%)
Pertussis	8 (30%)	29 (34%)	36 (21%)	18 (20%)
Rabies	0 (0%)	0 (0%)	2 (1.2%)	0 (0%)
Rubella	1 (3.7%)	2 (2.3%)	1 (0.6%)	1 (1.1%)

Distribution of Category 1 NMCs by province and case definition

The majority of category 1 notifications were for Measles n (%) 539 (28%). The majority of Measles cases were notified in WC n (%) 369(72.4%).

Table 5: The number of notifications by province and the number of notifications by case definition and vital status of category 1 conditions.

Condition	Provinces									Cases		Deaths	
	EC ¹	FS ¹	GP ¹	KZN ¹	LP ¹	MP ¹	NC ¹	NW ¹	WC ¹	Suspected ^{\$}	Confirmed ¹	Suspected ^{\$}	Confirmed ¹
Acute Flaccid Paralysis	0	2	7	8	1	1	0	0	4	23	0		
Acute rheumatic fever	0	0	0	0	1	0	0	0	0	1	0		
Cholera §	0	0	1	0	0	0	0	0	0	1	0		
Congenital rubella syndrome	0	0	0	3	0	0	10	0	20	1	32		
Diphtheria *	0	0	0	1	0	1	0	0	27	23	6		
Enteric fever (typhoid or paratyphoid fever)	2	1	5	2	0	0	0	0	3	1	12		
Foodborne illness outbreak	191	12	27	23	2	32	1	0	4	292	0		
Listeriosis	0	0	3	1	1	0	0	0	4	4	5		
Malaria	2	1	72	13	82	49	3	6	14	59	183	1	3
Measles	5	12	63	32	4	2	51	1	369	492	47		
Meningococcal Disease	3	2	11	2	2	0	1	3	10	30	4	4	0
Pertussis	13	18	64	30	5	10	0	1	27	105	64	1	1
Rabies	3	0	1	0	0	0	0	0	0	3	1	0	1
Rubella	2	6	6	0	2	1	105	0	390	227	285		

¹n(%);

\$ suspected cases are both suspected and probable;

* Toxin-producing results not available on NMC;

§ Serotype information not available on NMC;

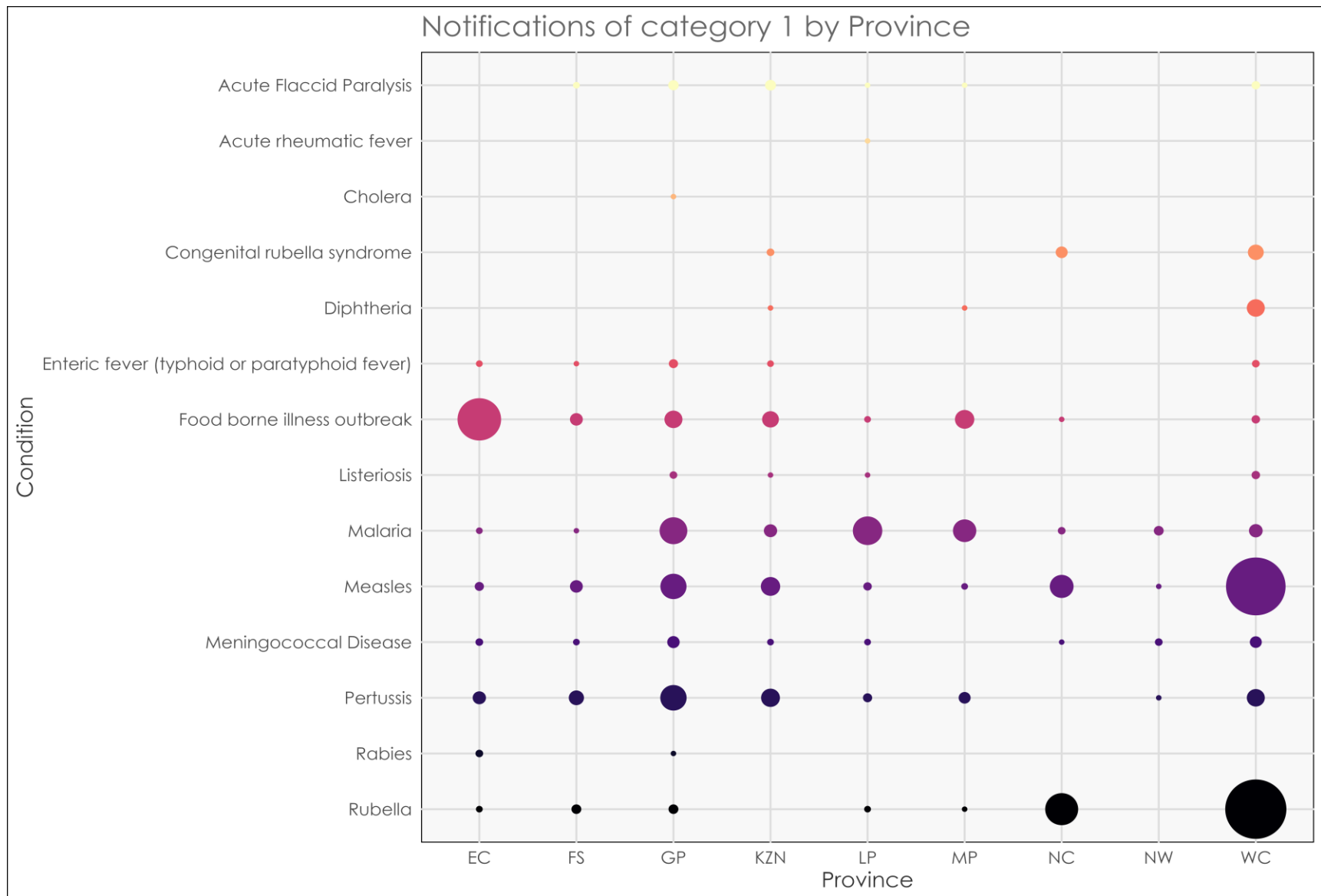


Figure 2: Distribution of Category 1 NMCs by province

Distribution of Category 2 NMCs by province and case definition

Table 6: Distribution of Category 2 NMC by Province

The majority of category 2 notifications were for Tuberculosis: pulmonary n (%) 6 193 (58%). The majority of Tuberculosis: pulmonary cases were notified in GP n (%) 1395(25.6%).

Table 7: The number of notifications by province and the number of notifications by case definition and vital status of category 2 conditions.

Condition	Provinces									Case		Deaths	
	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	3	14	60	1	1	3	1	3	9	95	0	8	0
Bilharzia (schistosomiasis)	71	0	43	468	266	105	1	1	23	47	932	0	1
Brucellosis	0	0	0	0	2	0	1	0	0	3	0		
Congenital syphilis	1	0	4	15	1	4	1	1	13	10	30	0	1
Haemophilus influenzae type B	0	6	1	4	0	0	0	0	0	11	0		
Hepatitis A	47	14	184	150	55	30	17	21	94	93	519		
Hepatitis B	88	42	64	767	8	13	7	48	13	90	960	3	2
Hepatitis C	1	0	7	1	1	1	0	0	2	11	2		
Hepatitis E	0	0	5	0	0	0	0	2	0	0	7		
Legionellosis	1	0	0	0	0	0	0	2	1	2	2	0	1
Maternal death (pregnancy, childbirth and puerperium)	0	0	1	1	3	0	0	0	0	5	0	4	0
Soil-transmitted helminths	0	0	1	0	0	0	0	0	1	2	0		
Tetanus	0	0	0	0	1	0	0	0	0	1	0		
Tuberculosis: extensively drug-resistant (XDR -TB)	1	0	4	0	1	1	1	0	2	10	*		*

Condition	Provinces									Case		Deaths	
	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
Tuberculosis: multidrug-resistant (MDR -TB)	25	5	37	26	4	1	1	5	23	127	*	3	*
Tuberculosis: extra-pulmonary	114	77	485	173	44	30	48	66	236	1 273	*	11	*
Tuberculosis: pulmonary	661	305	1 394	945	300	115	266	230	1 165	5 381	*	27	*

¹n (%);

* The TB module is under development to align with laboratory-confirmed TB cases.

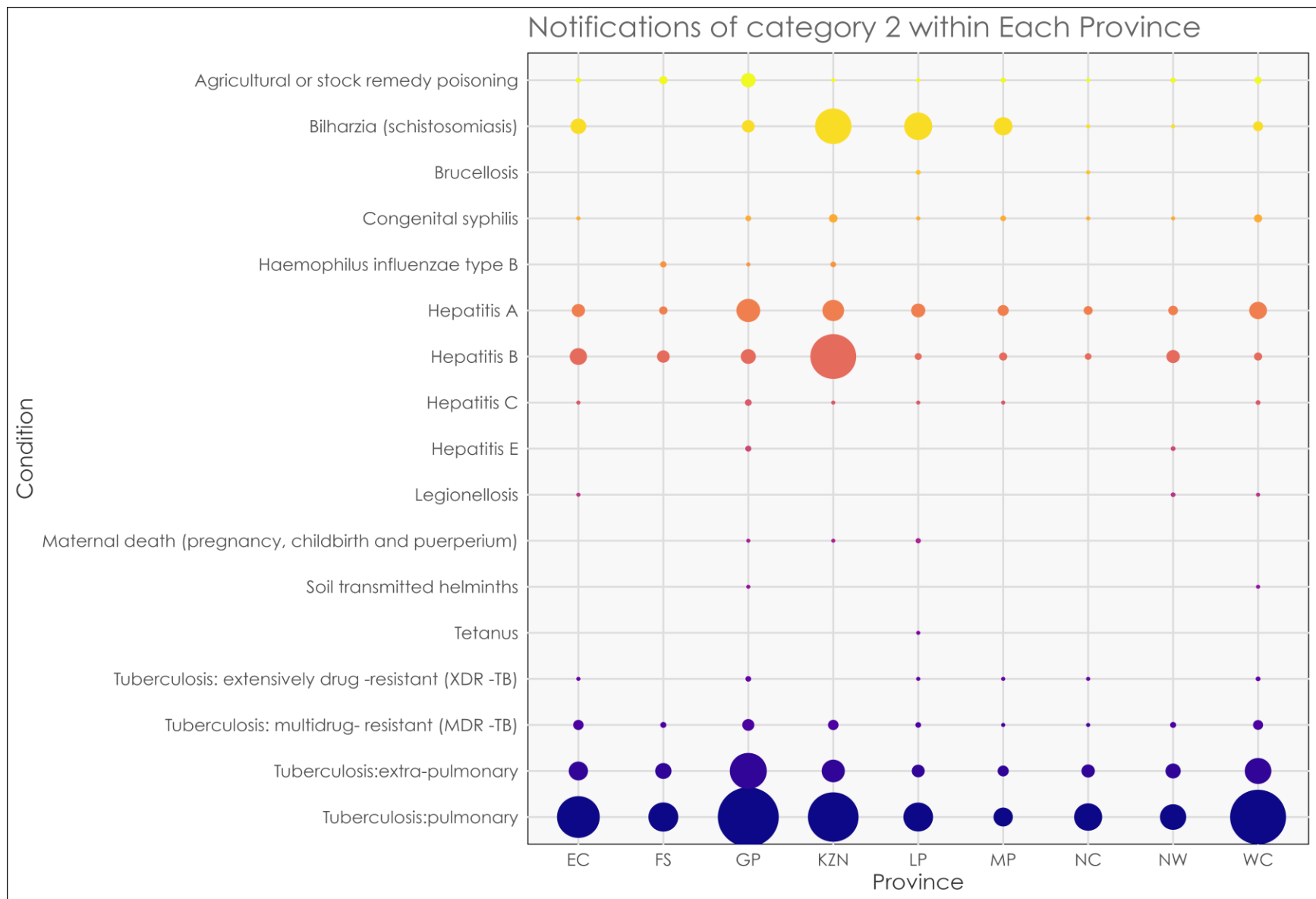
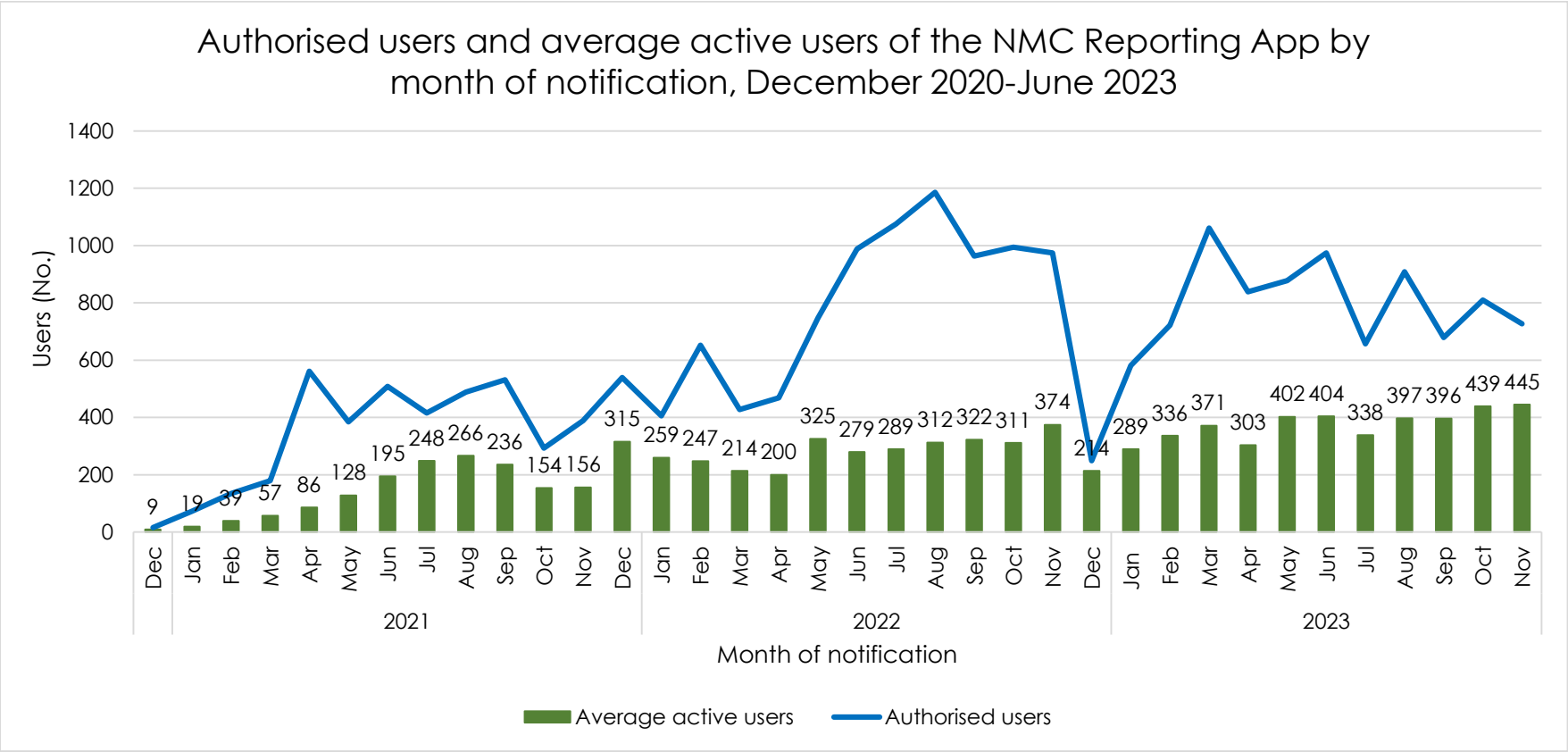


Figure 3: Distribution of Category 2 NMCs by province

The average active users on the NMC App



Data quality

Completeness refers to the proportion of complete data entries per variable in the dataset among clinical and merged notifications. In November 2023, there was an increase in completeness of date of diagnosis and patient folder number, while demographic details and patient vital status remained high.

Timeliness 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 zero (0, 1) days to report category 1 NMCs.

Table 8: NMC data completeness of clinical notifications on both reporting platforms

	App, N = 8 455	Paper-based, N = 127
Folder Number	6 922 (82%)	106 (83%)
First Name	8 455 (100%)	127 (100%)
Surname	8 455 (100%)	127 (100%)
Symptom Onset Date	8 440 (100%)	127 (100%)
Date of Diagnosis	8 454 (100%)	127 (100%)
Outcome	8 455 (100%)	127 (100%)

ID number completeness

Table 9: Length of ID numbers inputted on the NMC system

Length of ID number	Android, N = 2 931 ¹	MicroStrategy/SDW, N = 3 060 ¹	Paper-based, N = 127 ¹	Web, N = 4 884 ¹	iOS, N = 640 ¹
0	1 132 (39%)	2 977 (97%)	93 (73%)	1 724 (35%)	299 (47%)
3	0 (0%)	0 (0%)	0 (0%)	1 (<0.1%)	0 (0%)
5	0 (0%)	0 (0%)	0 (0%)	1 (<0.1%)	0 (0%)
6	3 (0.1%)	16 (0.5%)	0 (0%)	418 (8.6%)	56 (8.8%)
7	0 (0%)	0 (0%)	0 (0%)	11 (0.2%)	1 (0.2%)
8	0 (0%)	0 (0%)	0 (0%)	50 (1.0%)	3 (0.5%)
9	0 (0%)	0 (0%)	0 (0%)	34 (0.7%)	0 (0%)
10	0 (0%)	0 (0%)	0 (0%)	79 (1.6%)	2 (0.3%)
11	0 (0%)	0 (0%)	0 (0%)	3 (<0.1%)	0 (0%)
12	0 (0%)	0 (0%)	0 (0%)	33 (0.7%)	0 (0%)
13	1 796 (61%)	67 (2.2%)	34 (27%)	2 530 (52%)	279 (44%)
Unknown	0	0	0	0	0

¹n (%)

Symptomatology

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

Characteristic	Overall, N = 11 642 ¹	Category 1, N = 1 901 ¹	Category 2, N = 9 613 ¹	Category 3, N = 128 ¹
Cough	4 143 (36%)	274 (14%)	3 869 (40%)	0 (0%)
Loss of weight	2 492 (21%)	0 (0%)	2 491 (26%)	1 (0.8%)
Loss of appetite	1 859 (16%)	15 (0.8%)	1 844 (19%)	0 (0%)
Night Sweats	1 610 (14%)	0 (0%)	1 610 (17%)	0 (0%)
Fever	1 536 (13%)	372 (20%)	1 164 (12%)	0 (0%)
Chest pains	1 230 (11%)	0 (0%)	1 230 (13%)	0 (0%)
Shortness of breath	631 (5.4%)	0 (0%)	631 (6.6%)	0 (0%)
Flu-like symptoms	591 (5.1%)	12 (0.6%)	579 (6.0%)	0 (0%)
Weakness	580 (5.0%)	0 (0%)	580 (6.0%)	0 (0%)
Muscle weakness	541 (4.6%)	21 (1.1%)	520 (5.4%)	0 (0%)
Other	538 (4.6%)	46 (2.4%)	489 (5.1%)	3 (2.3%)
Maculopapular rash	411 (3.5%)	411 (22%)	0 (0%)	0 (0%)
Conjunctivitis	213 (1.8%)	213 (11%)	0 (0%)	0 (0%)
Abdominal pain	163 (1.4%)	163 (8.6%)	0 (0%)	0 (0%)
Vomiting	107 (0.9%)	107 (5.6%)	0 (0%)	0 (0%)
Nausea	56 (0.5%)	56 (2.9%)	0 (0%)	0 (0%)
Paroxysmal coughing	50 (0.4%)	50 (2.6%)	0 (0%)	0 (0%)
Headache	43 (0.4%)	43 (2.3%)	0 (0%)	0 (0%)
Inspirational whoop	34 (0.3%)	34 (1.8%)	0 (0%)	0 (0%)
Vomiting after cough	26 (0.2%)	26 (1.4%)	0 (0%)	0 (0%)
Chills / Shivering	25 (0.2%)	25 (1.3%)	0 (0%)	0 (0%)

Characteristic	Overall, N = 11 642 ¹	Category 1, N = 1 901 ¹	Category 2, N = 9 613 ¹	Category 3, N = 128 ¹
Tiredness / Body malaise	24 (0.2%)	24 (1.3%)	0 (0%)	0 (0%)
Meningitis	22 (0.2%)	22 (1.2%)	0 (0%)	0 (0%)
Acute febrile illness	19 (0.2%)	19 (1.0%)	0 (0%)	0 (0%)
Sore throat	18 (0.2%)	18 (0.9%)	0 (0%)	0 (0%)
Loss of muscle tone	11 (<0.1%)	11 (0.6%)	0 (0%)	0 (0%)
Dizziness	11 (<0.1%)	11 (0.6%)	0 (0%)	0 (0%)
Low-grade fever	10 (<0.1%)	10 (0.5%)	0 (0%)	0 (0%)
Depressed black eschar	9 (<0.1%)	9 (0.5%)	0 (0%)	0 (0%)
Pseudo-membrane	7 (<0.1%)	7 (0.4%)	0 (0%)	0 (0%)
Petechial rash	6 (<0.1%)	6 (0.3%)	0 (0%)	0 (0%)
Culture-positive listeria monocytogens	4 (<0.1%)	4 (0.2%)	0 (0%)	0 (0%)
Slurred speech	3 (<0.1%)	3 (0.2%)	0 (0%)	0 (0%)
Difficulty breathing	3 (<0.1%)	3 (0.2%)	0 (0%)	0 (0%)
Aggressive behaviour	2 (<0.1%)	2 (0.1%)	0 (0%)	0 (0%)
Profuse watery diarrhoea	1 (<0.1%)	1 (<0.1%)	0 (0%)	0 (0%)
Gastrointestinal illness	1 (<0.1%)	1 (<0.1%)	0 (0%)	0 (0%)
Hallucinations	1 (<0.1%)	1 (<0.1%)	0 (0%)	0 (0%)
Muscle weakness or paralysis	1 (<0.1%)	1 (<0.1%)	0 (0%)	0 (0%)
Fever ≥38.5C	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Body pain (abdominal, rigours, joints)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Coryza (running nose)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Convulsions (seizures)	0 (0%)	0 (0%)	0 (0%)	0 (0%)

Characteristic	Overall, N = 11 642 ¹	Category 1, N = 1 901 ¹	Category 2, N = 9 613 ¹	Category 3, N = 128 ¹
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¹n (%)

Conclusion

The majority of notifications were clinical notifications. The increase in average active users and newly registered users over time is an indication of an increase in the acceptance of the NMC App in the provinces. The completeness of patient clinical details and patient demographic details have improved, due to the application of mandatory fields on the NMC App. There was a delay in reporting tuberculosis cases. The data harmonisation processes between the current and improved NMC systems are underway to improve reporting.

Recommendations

- We recommend the expedition of NMC App “whitelisting” on the provincial departmental intranet to make the electronic notification platform more accessible to health facilities.
- We recommend that clinicians should complete all patient clinical and demographic details to improve completeness.
- NMC Trainers to emphasise the importance of timeous reporting of Category 1 and 2 NMCs, to ensure real-time availability of data for public health action.

Appendices

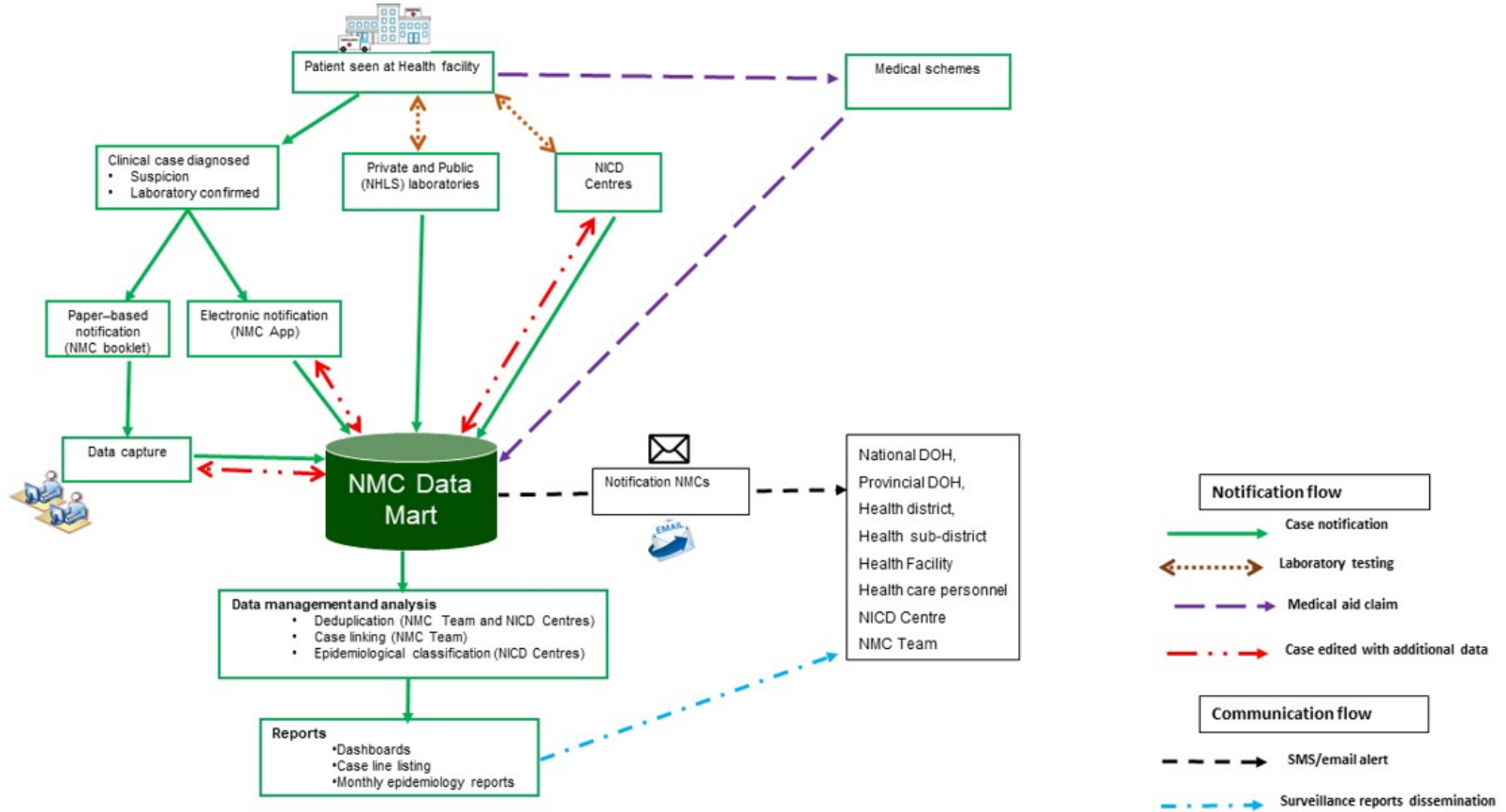
Appendix No. 1: Back-captured clinical notifications

Table 11: Back-captured notifications by reporting province

Condition	Overall	Province									Case Source				
	Overall, n = 1114	EC, n = 220	FS, n = 62	GP, n = 374	KZN, n = 177	LP, n = 18	MP, n = 10	NC, n = 76	NW, n = 31	WC, n = 146	Android, n = 318	SDW, n = 3	Paper- based, n = 4	Web, n = 754	iOS, n = 35
Acute rheumatic fever	1 (<0.1%)	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Bilharzia (schistosomiasis)	2 (0.2%)	0	0	0	1	1	0	0	0	0	0	2	0	0	0
Congenital syphilis	3 (0.3%)	1	0	0	0	0	0	0	0	2	0	0	0	3	0
Foodborne illness outbreak	6 (0.5%)	0	0	6	0	0	0	0	0	0	0	0	0	6	0
Hepatitis B	16 (1.4%)	2	0	10	3	0	0	1	0	0	7	0	0	9	0
Hepatitis C	3 (0.3%)	0	0	3	0	0	0	0	0	0	0	0	0	3	0
Malaria	1 (<0.1%)	0	0	0	0	0	0	0	0	1	0	0	0	1	0
Maternal death (pregnancy, childbirth and puerperium)	2 (0.2%)	0	0	1	0	0	0	1	0	0	0	0	0	2	0
Measles	1 (<0.1%)	0	0	0	0	0	0	0	0	1	0	0	0	0	1
Meningococcal Disease	2 (0.2%)	0	0	1	0	1	0	0	0	0	1	0	0	1	0
Pertussis	1 (<0.1%)	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Tuberculosis: extensively drug-resistant (XDR -TB)	3 (0.3%)	0	0	2	0	0	0	1	0	0	1	0	0	2	0
Tuberculosis: multidrug- resistant (MDR -TB)	19 (1.7%)	2	0	10	3	0	1	0	0	3	7	0	0	11	1
Tuberculosis: extra- pulmonary	242 (22%)	36	4	147	21	2	1	7	6	18	33	0	0	199	10
Tuberculosis: pulmonary	812 (73%)	179	58	194	148	14	8	66	25	120	269	0	4	516	23

SDW – 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 are 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 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 are 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 are 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 cases: are cases reported to the NMC by health care providers at facilities, either through the completion of a paper form that is faxed, emailed to the 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 based on case definitions published on the NICD website.

Laboratory cases: 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 a 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: All cases diagnosed and notified in the current month

Delayed notification: All cases diagnosed in the last 14 days from the previous month

Back capture notification: All cases diagnosed in previous months and before the last 14 days of the previous month.

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 the laboratory notified to the NMC using the IDSR reporting template of under and 5-and-above years by vital status.

Condition	Notified/Suspected				Confirmed
	Under 5 A, N = 319 ¹	5 & over A, N = 923 ¹	5 & over D, N = 4 ¹	Under 5 D, N = 2 ¹	N = 639 ¹
Acute Flaccid Paralysis	13	9	0	0	0
Acute rheumatic fever	0	1	0	0	0
Cholera	1	0	0	0	0
Congenital rubella syndrome	1	0	0	0	32
Diphtheria	1	22	0	0	6
Enteric fever (typhoid or paratyphoid fever)	0	1	0	0	12
Foodborne illness outbreak	7	285	0	0	0
Listeriosis	1	3	0	0	5
Malaria	5	53	1	0	183
Measles	164	324	0	0	47
Meningococcal Disease	3	22	3	1	4
Pertussis	42	59	0	1	64
Rabies	0	3	0	0	1
Rubella	81	141	0	0	285

¹A = Cases who are alive.

D = Cases who are deceased.

End