

NOTIFIABLE MEDICAL CONDITIONS SURVEILLANCE SYSTEM

Issued by the National Institute for Communicable Diseases

Introduction

This report summarizes data from the National Notifiable Medical Conditions Surveillance System (NMCSS) on cases diagnosed and reported in **June 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 June 2023 (**see Appendix nos. 1 and 3**). Category 4 NMCs and multi-system inflammatory syndrome (MIS-C) have been excluded from this report.

Highlights

- A total of 7545 cases were notified in June 2023 and the majority were category 2 conditions.
- There were 404 average active users of the NMC App in June 2023
- Category 1 cases were reported in median of 1 (IQR: 0 – 2) days.

NMC Reporting application

- [NMC Reporting App](#) 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.

NOTES: For any additional information contact the NMC national technical team: NMCAppSupport@nicd.ac.za or NMC hotline [072 621 3805](tel:0726213805). Please refer to Appendices for NMC data flow, definitions and interpretation of epidemiology data in this report.

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

NMC data summary, June 2023

A total of 8 035 cases were diagnosed and notified to the NMCSS in June 2023. There were 7 545 current notifications (**see Appendix no.3 for definitions**). The majority were category 2 conditions (n =6 364 (84%). The provinces with the highest number of notifications were KwaZulu-Natal (n=1994, 24.8%), and Gauteng (n=2 083,25.9%). The provinces with the least number of notifications were Northern Cape (n=379, 4.7%) and North West (n=252, 3.1%) (**Figure 1**). There were 490 back captured clinical notifications diagnosed between December 2019 and June 2023 and only notified in June 2023. The majority of those notifications were (88, 66%) TB cases (**See Appendix no.1**).

Table 1: Description of NMC notifications by case source

NMC Category	Overall, N = 7 545	Clinical notifications, n = 5035	Laboratory notifications, n = 2243	Merged Cases, n = 267
Category 1	1 056 (14%)	438 (8,7%)	464 (21%)	154 (58%)
Category 2	6 364 (84%)	4 597 (91%)	1 666 (74%)	101 (38%)
Category 3	125 (1,7%)	0 (0%)	113 (5,0%)	12 (4,5%)

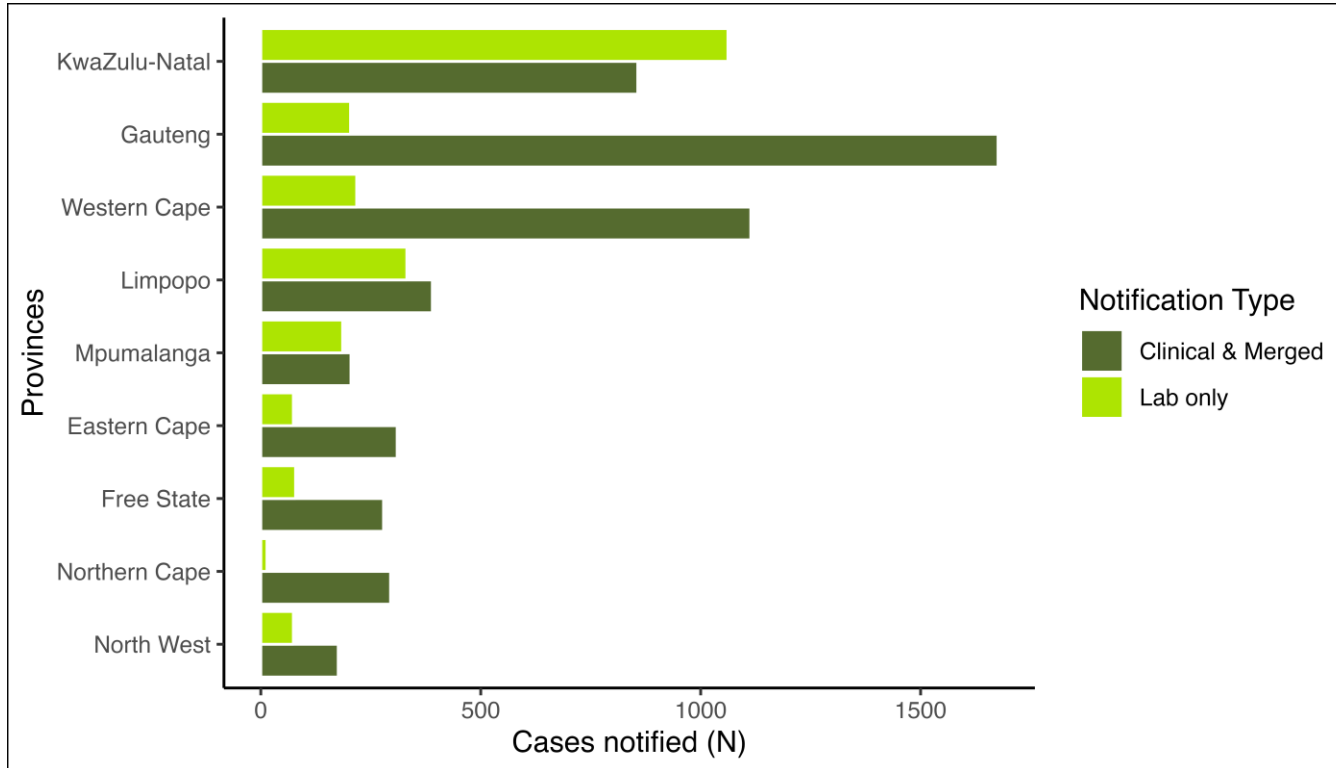


Figure 1: Distribution of notifications by province and notification type

There were 546 (10%) Clinical notifications from the private sector (i.e. private hospitals, private practice and mining industry) compared to 4 756 (90%) in the public sector. The majority (99%) of the clinical notifications were captured using the NMC Reporting Application (**Table 2**).

Table 2: Clinical notifications notified by provinces, reporting platform, and sector

Province	Overall, N = 5 048	App - Private, n = 536	App - Public, n = 4459	Paper-based - Private, n = 10	Paper-based - Public, n = 43
GP	1 579 (100%)	195 (12%)	1 379 (87%)	2 (0,1%)	3 (0,2%)
WC	1 083 (100%)	66 (6,1%)	1 006 (93%)	3 (0,3%)	8 (0,7%)
KZN	789 (100%)	72 (9,1%)	717 (91%)	0 (0%)	0 (0%)
LP	360 (100%)	31 (8,6%)	323 (90%)	1 (0,3%)	5 (1,4%)
EC	302 (100%)	38 (13%)	259 (86%)	0 (0%)	5 (1,7%)
NC	295 (100%)	14 (4,7%)	275 (93%)	0 (0%)	6 (2,0%)
FS	276 (100%)	39 (14%)	233 (84%)	3 (1,1%)	1 (0,4%)
MP	190 (100%)	30 (16%)	152 (80%)	1 (0,5%)	7 (3,7%)
NW	174 (100%)	51 (29%)	115 (66%)	0 (0%)	8 (4,6%)

Table 3: Age distribution by gender, admission status, and patient outcome

Age Category	Gender		Admission Status					Vital Status			Overall
	Female	Male	Discharged	Inpatient	Outpatient	Transferred	Unknown	Alive	Deceased	Unknown	
0-4	941	1 200	89	667	1 244	32	109	1 990	30	121	2 141
5-9	137	205	27	57	47	0	211	129	1	212	342
10-14	108	312	18	32	37	0	333	88	0	332	420
15-19	120	230	10	27	81	1	231	123	1	226	350
20-24	196	196	22	70	118	2	180	213	0	179	392
25-29	220	223	29	118	163	1	132	313	3	127	443
30-34	273	316	34	133	208	2	212	378	3	208	589
35-39	261	382	29	182	198	6	228	410	11	222	643
40-44	237	368	42	160	207	4	192	404	13	188	605
45-49	143	259	18	121	157	7	99	294	7	101	402
50-54	96	182	22	78	106	2	70	208	2	68	278
55-59	89	177	23	93	95	2	53	210	6	50	266
60-64	65	105	14	68	54	1	33	137	1	32	170
65+	106	126	22	101	70	2	37	188	9	35	232
Unknown	120	152	6	27	12	0	227	43	0	229	272
Total	3 112	4 433	405	1 934	2 797	62	2 347	5 128	87	2 330	7 545

The majority of the notified cases were Males (n =4 433, 59%). Individuals in the 0-4 year age group represented the majority (n=2 14, 28%) of notified cases (**Table 3**). At the time of notification, approximately 1 934 (26%) of the notified cases were hospitalized, while 62 (0,8%) were transferred to another healthcare facility. There were 87 deaths notified during the reporting period with case fatality rate of 1,2%.

Distribution of category 1 NMCs by province and number of deaths

Table 5: Distribution of Category 2 NMC by Province

Condition	Provinces									Vital Status	
	EC	FS	GP	KZN	LP	MP	NC	NW	WC	Alive, n(%)	Deceased, n(%)
Acute Flaccid Paralysis	2	0	3	3	1	2	0	0	3	14 (100%)	0 (0%)
Acute rheumatic fever	0	0	0	1	0	0	0	0	0	1 (100%)	0 (0%)
Cholera	0	8	84	0	31	42	0	2	0	161 (96%)	6 (3,6%)
Congenital rubella syndrome	1	1	0	2	0	0	0	0	1	5 (100%)	0 (0%)
Diphtheria	0	3	1	0	0	0	0	0	3	7 (100%)	0 (0%)
Enteric fever (typhoid or paratyphoid fever)	0	0	6	0	0	0	0	0	6	12 (100%)	0 (0%)
Food borne illness outbreak	5	0	0	0	1	0	0	0	1	7 (100%)	0 (0%)
Listeriosis	0	0	0	0	1	0	0	0	5	6 (100%)	0 (0%)
Malaria	6	8	102	33	233	67	5	13	27	490 (99%)	4 (0,8%)
Measles	1	1	8	12	25	8	0	0	4	59 (100%)	0 (0%)
Meningococcal Disease	2	0	6	2	0	0	2	1	14	23 (85%)	4 (15%)
Pertussis	13	34	84	30	15	17	3	14	27	233 (98%)	4 (1,7%)
Rabies	1	0	0	0	2	0	0	0	0	2 (67%)	1 (33%)
Rubella	1	7	4	2	3	0	0	2	1	20 (100%)	0 (0%)
Total	32	62	298	85	312	136	10	32	92	1 040	19 (1.8%)

The majority of category 1 notifications were for Malaria (n=494, 47%). The majority of Malaria cases were notified in LP (n= 233, 47.2%).

Distribution of category 2 NMCs by province and number of deaths

Table 6: Distribution of Category 2 NMC by Province

Condition	Provinces									Vital Status	
	EC	FS	GP	KZN	LP	MP	NC	NW	WC	Alive, n(%)	Deceased n(%)
Agricultural or stock remedy poisoning	1	12	29	0	2	1	0	2	4	47 (92%)	4 (7,8%)
Bilharzia (schistosomiasis)	17	0	30	492	125	112	0	1	27	804 (100%)	0 (0%)
Brucellosis	2	0	0	0	0	0	0	1	1	4 (100%)	0 (0%)
Congenital syphilis	3	1	1	11	0	1	0	1	10	26 (93%)	2 (7,1%)
Haemophilus influenzae type B	1	0	2	1	1	1	2	0	0	8 (100%)	0 (0%)
Hepatitis A	17	15	87	41	29	22	7	9	158	384 (100%)	1 (0,3%)
Hepatitis B	18	37	41	617	8	15	5	51	16	806 (100%)	2 (0,2%)
Hepatitis C	0	1	5	0	0	0	0	0	0	6 (100%)	0 (0%)
Legionellosis	0	0	0	0	0	0	0	0	7	6 (86%)	1 (14%)
Maternal death (pregnancy, childbirth and puerperium)	0	0	1	0	0	0	0	0	0	0 (0%)	1 (100%)
Soil transmitted helminths	0	0	3	0	0	0	0	0	0	3 (100%)	0 (0%)
Tetanus	0	0	0	0	0	0	0	0	1	1 (100%)	0 (0%)
Tuberculosis: extensively drug -resistant (XDR -TB)	1	0	2	2	0	0	1	0	1	7 (100%)	0 (0%)
Tuberculosis: multidrug- resistant (MDR -TB)	9	3	16	45	6	5	2	5	25	114 (98%)	2 (1,7%)
Tuberculosis: extra-pulmonary	35	46	468	135	56	18	39	25	170	974 (98%)	18 (1,8%)
Tuberculosis: pulmonary	251	193	1 079	556	227	91	313	124	796	3 586 (99%)	44 (1,2%)
Total	355	308	1764	1900	454	266	369	219	1216	6 776	75(1.1%)

The majority of category 2 notifications were for Tuberculosis: pulmonary 3 630 (53%). The majority of Tuberculosis: pulmonary cases were notified in GP (n=1079, 29.7%).

The average active users on the NMC App

In June 2023, there were 404 average active users (sum of total access per day/number of days where users were active) (**Figure 2**). There was an increase of new registrations from 878 in May to 974 in June

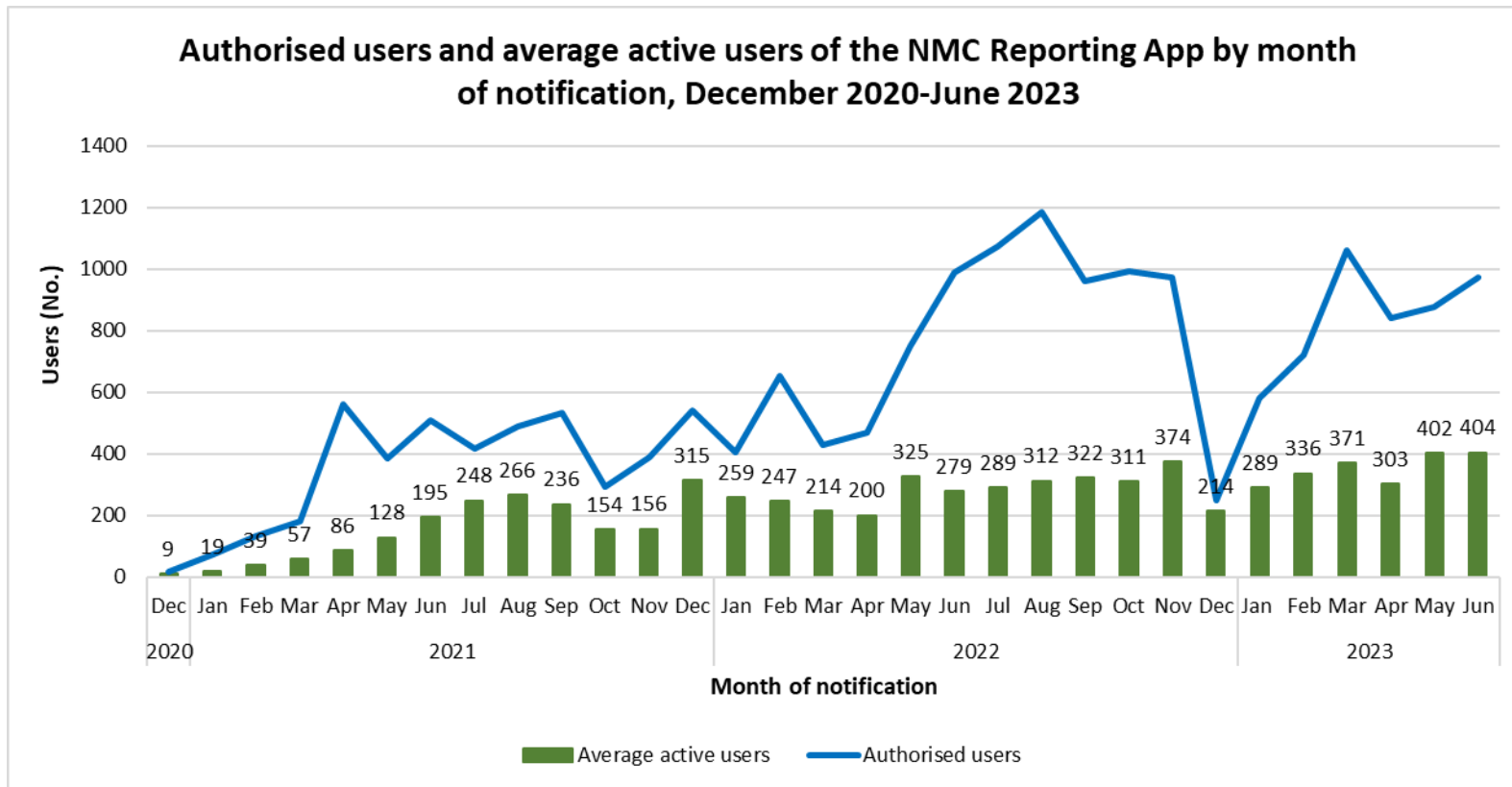


Figure 2: The average active user of the NMC reporting Application, December 2020-June 2023.

Data quality

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

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 1 (0 – 2) days to report category 1 NMCs and a median of 3 days (interquartile range: 0-9 days) for category 2 NMCs.

Table 7: NMC data completeness on both reporting platforms,

Variable	App, N = 4 995	Paper-based, N = 53
Folder Number	4 995 (100%)	53 (100%)
First Name	4 995 (100%)	53 (100%)
Surname	4 995 (100%)	53 (100%)
Symptom Onset Date	4 981 (99%)	53 (100%)
Date of Diagnosis	4 995 (100%)	53 (100%)
Outcome	4 995 (100%)	53 (100%)

Description of cholera cases

The epidemic curve (**Figure 4**) shows low numbers of confirmed cases since epiweek 5 of 2023 (February). The number of cases spiked for three weeks (epiweeks 20-22). Low case numbers have now been sustained. As of 24 July 2023, the confirmed cases were notified in Gauteng (n=176, 89%), Free State (n=11, 5.6%), North West (n=6, 3.0%), Limpopo (n=4, 2.0%), and Mpumalanga (n=1, 0.5%) (**Figure 5**).

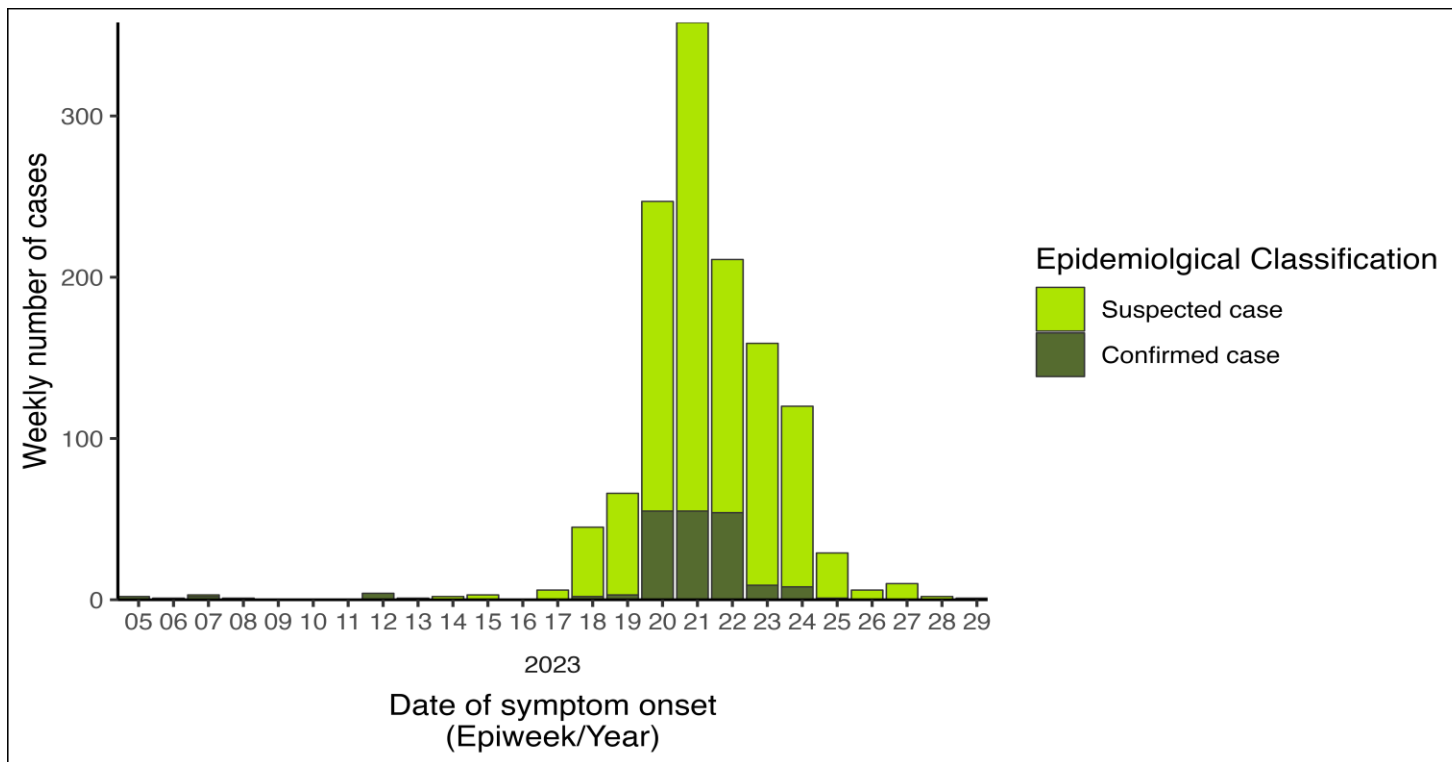


Figure 4: Epi curve for cholera cases from week 5 of 2023

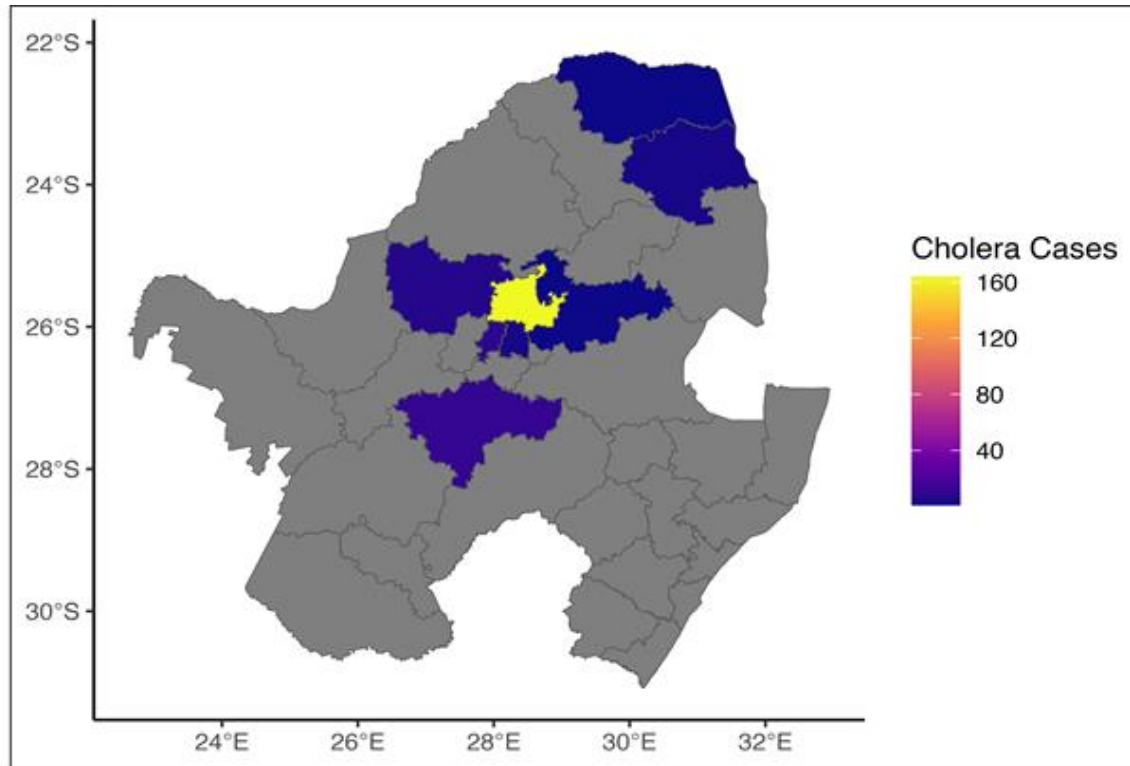


Figure 5: Spatial distribution of cholera cases in South Africa, 2023

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 harmonization processes between the current and improved NMC system 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 emphasize the importance of timeous reporting of Category 1 and 2 NMCs, in order to ensure real-time availability of data for public health action.
- We recommend completion of the hospitalization form for patients who were admitted in hospital.
- We recommend that clinicians edit existing laboratory notifications to improve completeness of notifications

Appendices

Appendix no.1: Back captured clinical notifications

Condition	Overall	Province								
	Overall, n = 133	EC, n = 1	FS, n = 13	GP, n = 45	KZN, n = 21	LP, n = 13	MP, n = 8	NC, n = 10	NW, n = 1	WC, n = 21
Bilharzia (schistosomiasis)	6 (4,5%)	0	0	0	0	5	1	0	0	0
Congenital syphilis	1 (0,8%)	0	0	0	1	0	0	0	0	0
Hepatitis C	1 (0,8%)	0	0	1	0	0	0	0	0	0
Malaria	1 (0,8%)	0	0	0	0	1	0	0	0	0
Pertussis	2 (1,5%)	0	2	0	0	0	0	0	0	0
Tuberculosis: multidrug- resistant (MDR -TB)	6 (4,5%)	0	0	1	3	0	1	0	0	1
Tuberculosis: extra-pulmonary	28 (21%)	0	2	16	4	2	0	1	0	3
Tuberculosis: pulmonary	88 (66%)	1	9	27	13	5	6	9	1	17

Appendix no.2: Summary of NMCSS Data Flow

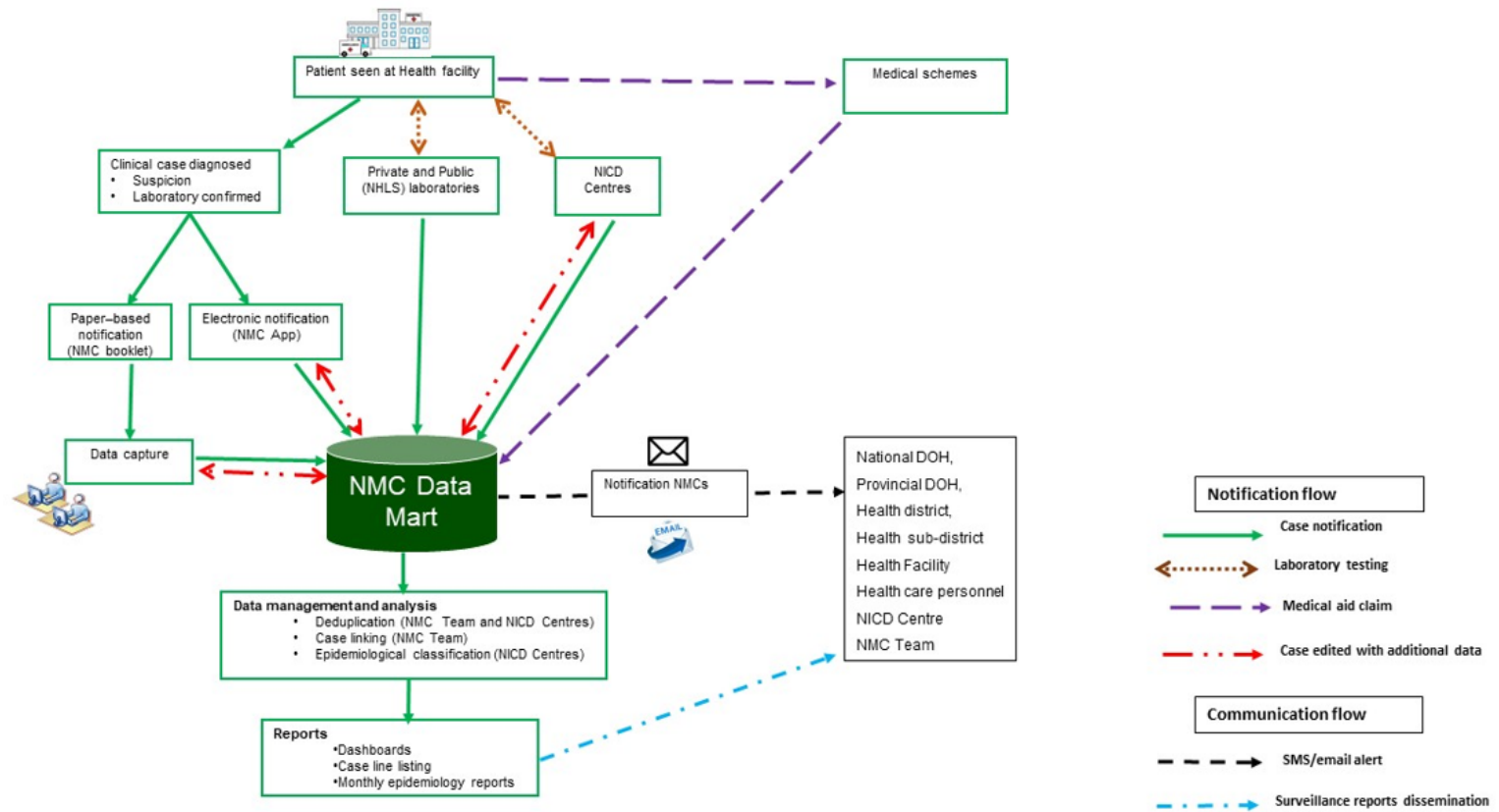


Figure 6: Summary of data flow within the NMC surveillance system

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 Centers 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.