

Adult Syndromic Surveillance

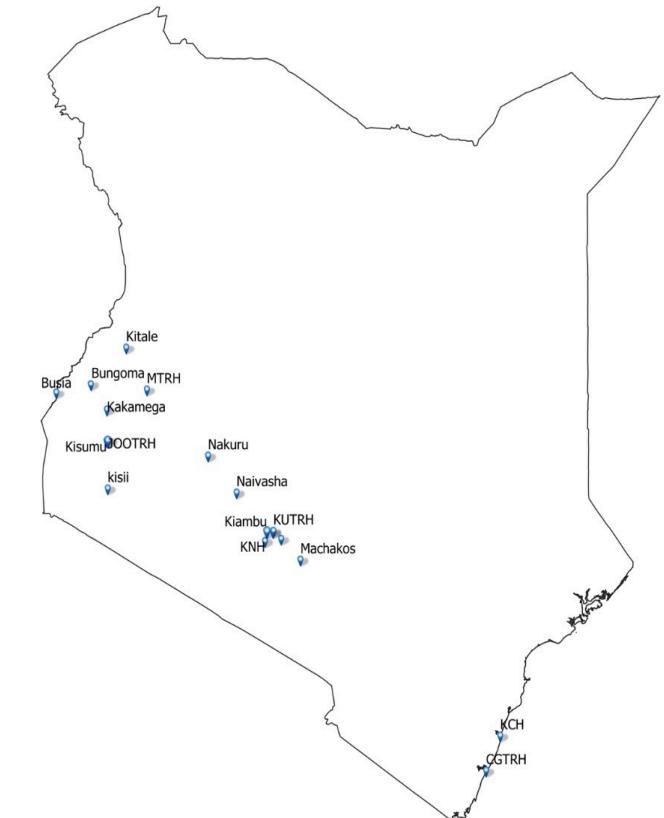
A hospital-based surveillance study nested within the adult medical wards of the Clinical Information Network (CIN).

March 2023 to May 2023 Overall Report.

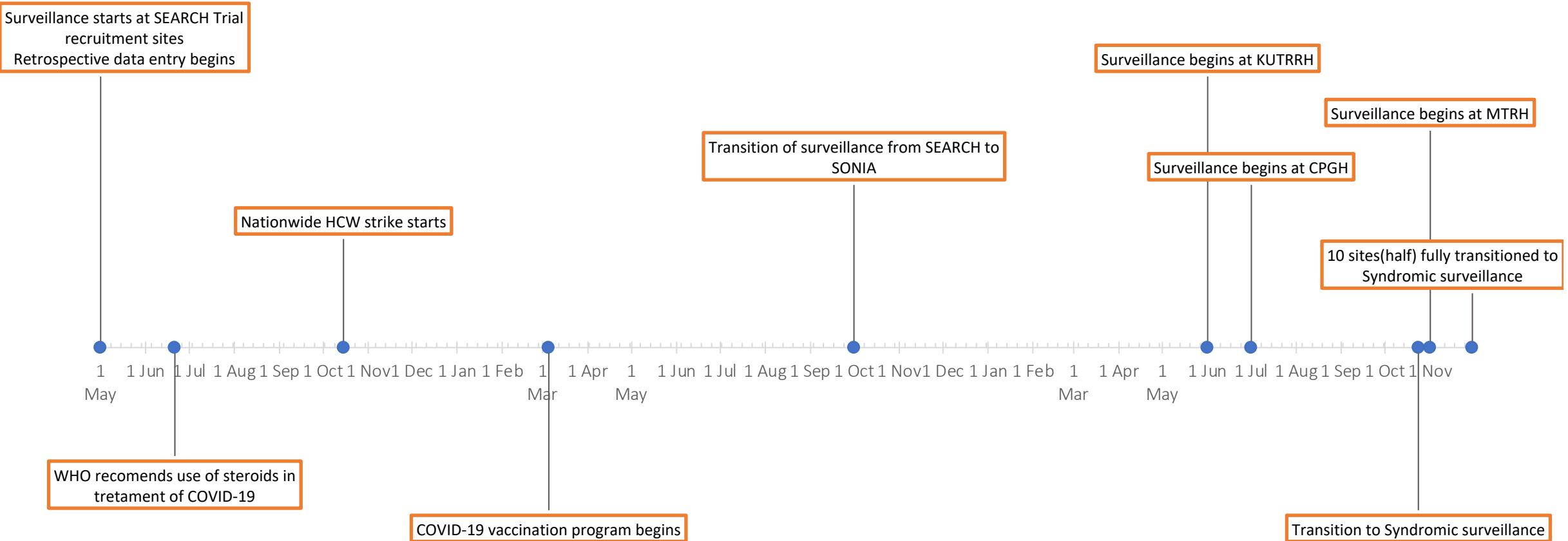


Background

- The Clinical Information Network (CIN) is a technical collaboration between KWTRP, Ministry of Health (MOH), Kenya Paediatric Association, and partner hospitals across the country.
- The hospital-based surveillance(SARI), nested within CIN, was set up as part of the national response to COVID-19 in Kenya.
- It began in May 2020 at 16 hospitals across Kenya and has since contributed useful information to the MOH to allow for monitoring, planning and mobilising resources for the management and control of the spread of COVID-19
- There is a push to increase surveillance for emerging and re-emerging/notifiable infections/diseases through syndromic surveillance as part of the national pandemic preparedness plan
- Leveraging existing systems, the SARI surveillance was transitioned to a Syndromic surveillance in November 2022



Milestones



Syndromic Surveillance Reports

- Clinical data on all adults admitted to the medical wards of partner sites are collected daily and abstracted onto a standard online data collection tool
- Reports are prepared and shared with partner sites monthly. They cover:
 - Participant demographic characteristics, clinical diagnosis and outcome
 - Summaries of key priority measures such as HIV status, COVID-19 testing and COVID-19 vaccination status
 - Documentation completeness
- Recommendations to improve clinical documentation are shared with partner sites
- Additional data requested by partner sites are shared in individual site reports as requested

Syndromic Surveillance Reports

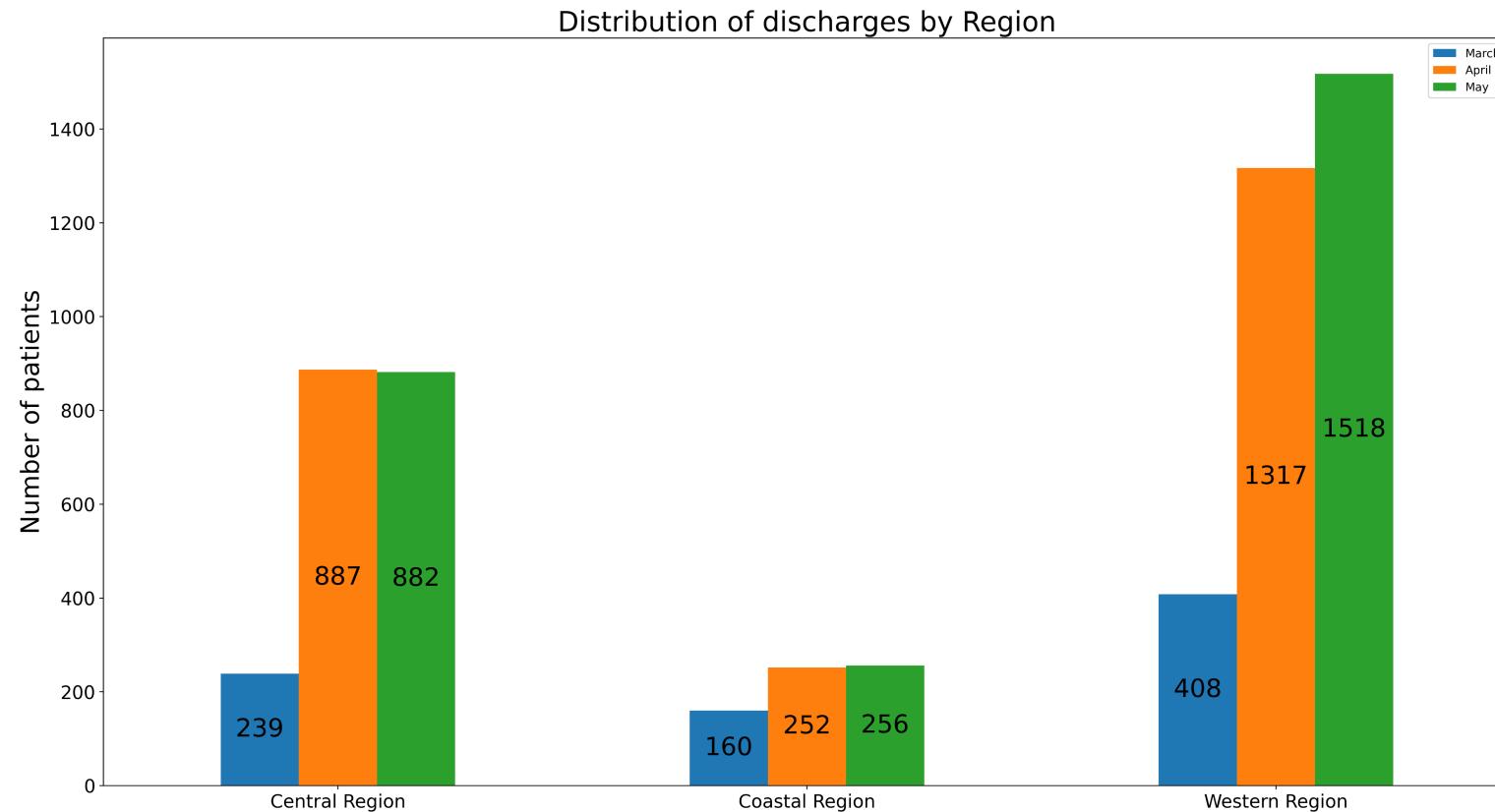
- The hospitals have been aggregated into groups based on their respective geographical locations in Kenya for ease of reporting.
- The groups include:
 1. **Western region** : Busia County Referral Hospital, Kisii County Teaching& Referral Hospital, Kisumu County Hospital, Kitale County Referral Hospital, Kakamega County General Teaching & Referral Hospital, Jaramogi Oginga Odinga Teaching & Referral Hospital and Bungoma County Referral Hospital.
 2. **Central region** : Kiambu County Referral Hospital ,Mama Lucy Kibaki Hospital, Machakos Level 5 Hospital, Mbagathi County Hospital and Naivasha County Referral Hospital.
 3. **Coastal region** : Coast General Teaching and Referral Hospital & Kilifi County Referral Hospital.

1. Discharge Trends by Regions

This figure summarises the patients discharged (dead, referred or alive) by each region in the months of March, April and May 2023.

Discharges, rather than admissions, are considered as they are easy to validate with daily bed returns and allow for outcome recording.

The total number of discharges in March was 807, in April was 2456 and in May 2023 was 2656.



2. Distribution of Patients by Age

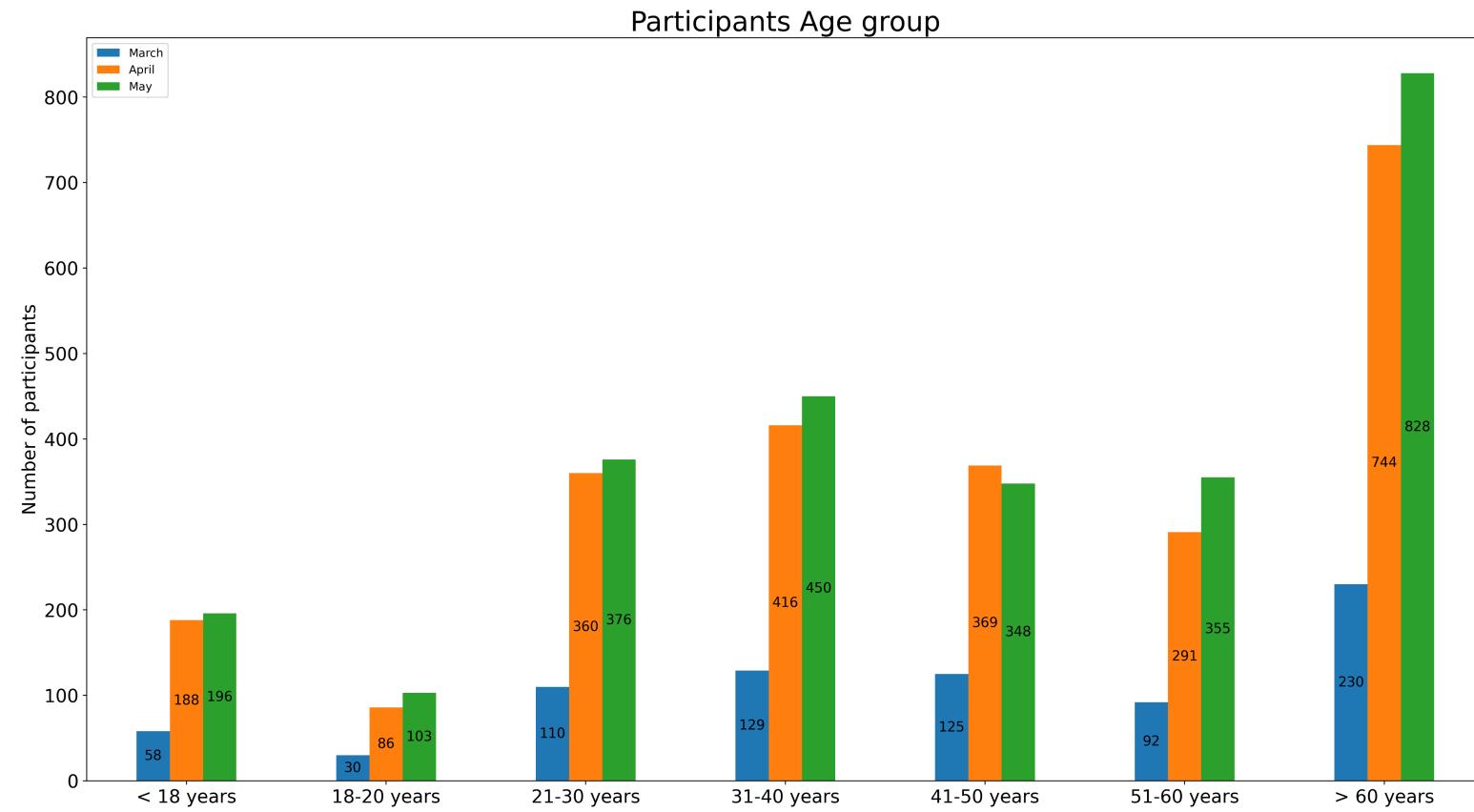
This figure summarizes the distribution of patients discharged in the months of March, April and May 2023 by age in all the regions.

Majority of the discharged patients were above 60 years of age across all the three months.

In some partner hospitals, paediatric patients above certain ages are admitted to the adult medical wards.

Out of all patients discharged from the adult medical wards in the three months period, 442 were aged below 18 years.

The lowest age of patients discharged from the adult medical wards was 13 years.

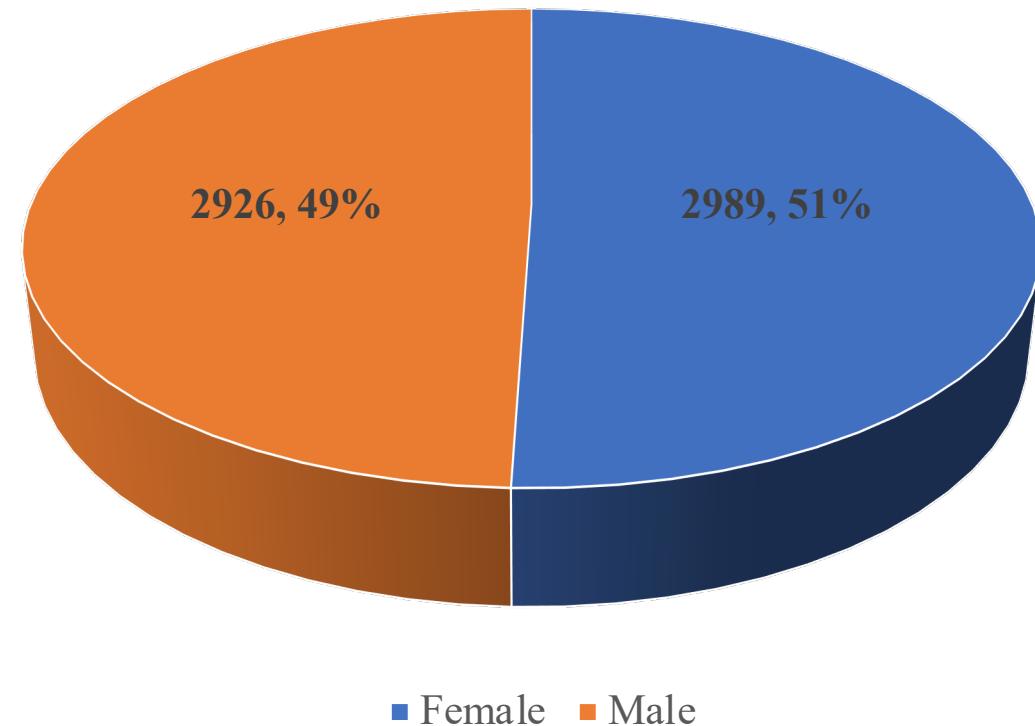


3. Distribution of patients by Gender

This figure shows the distribution of discharged patients by gender in the three months period in all the regions.

Slightly more males than females were discharged.

Distribution of patients by gender



4. Priority Indicator – COVID-19 Vaccination Status

This table summarizes the COVID-19 vaccination status for all patients discharged in the months of March, April and May 2023 across all the regions.

An indeterminate entry refers to patients who were reported to have been vaccinated but the attending clinician was not able to verify the vaccination status through SMS or M-chango portal.

Majority of the discharged patients in the three months period had undocumented vaccination status.

Less than 5% of all the patients had verified vaccination status in the three months period.

COVID-19 Vaccination Status	March (n) (%)	April (n) (%)	May (n) (%)
Indeterminate	42 (5%)	1 (0%)	3 (0%)
No	264 (33%)	258 (11%)	165 (6%)
Undocumented	475 (59%)	2125 (87%)	2443 (92%)
Yes	26 (3%)	72 (3%)	45 (2%)
Total	807 (100%)	2456 (100%)	2656 (100%)

4. Priority Indicator – HIV Status

This table summarizes the HIV status of patients discharged in the months of March, April and May 2023 in all the regions as recorded in their clinical notes for the current admission.

Recording of HIV status of all patients admitted to medical wards is a priority indicator for the Ministry of Health. Patients with an unknown HIV status should be offered free counselling and testing at contact with health services.

The HIV status of majority of the patients was undocumented (was not recorded in the clinical notes) in all the three months.

HIV Status	March (n) (%)	April (n) (%)	May (n) (%)
Negative	89 (11%)	277 (11%)	172 (6%)
Positive	89 (11%)	329 (13%)	313 (12%)
Undocumented	316 (39%)	1538 (63%)	1801 (68%)
Unknown	313 (39%)	312 (13%)	370 (14%)
Total	807 (100%)	2456 (100%)	2656 (100%)

5. Priority Indicator – Comorbidity at Admission

This table summarizes the proportion of patients recorded to have a comorbidity at admission in March, April and May 2023 in all the regions.

The proportion of admitted patients without any comorbidity was higher than those with comorbidities in all the three months.

Comorbidity at Admission	March (n) (%)	April (n) (%)	May (n) (%)
No	415 (51%)	1127 (46%)	1249 (47%)
Undocumented	79 (10%)	393 (16%)	368 (14%)
Yes	313 (39%)	936 (38%)	1039 (39%)
Total	807 (100%)	2456 (100%)	2656 (100%)

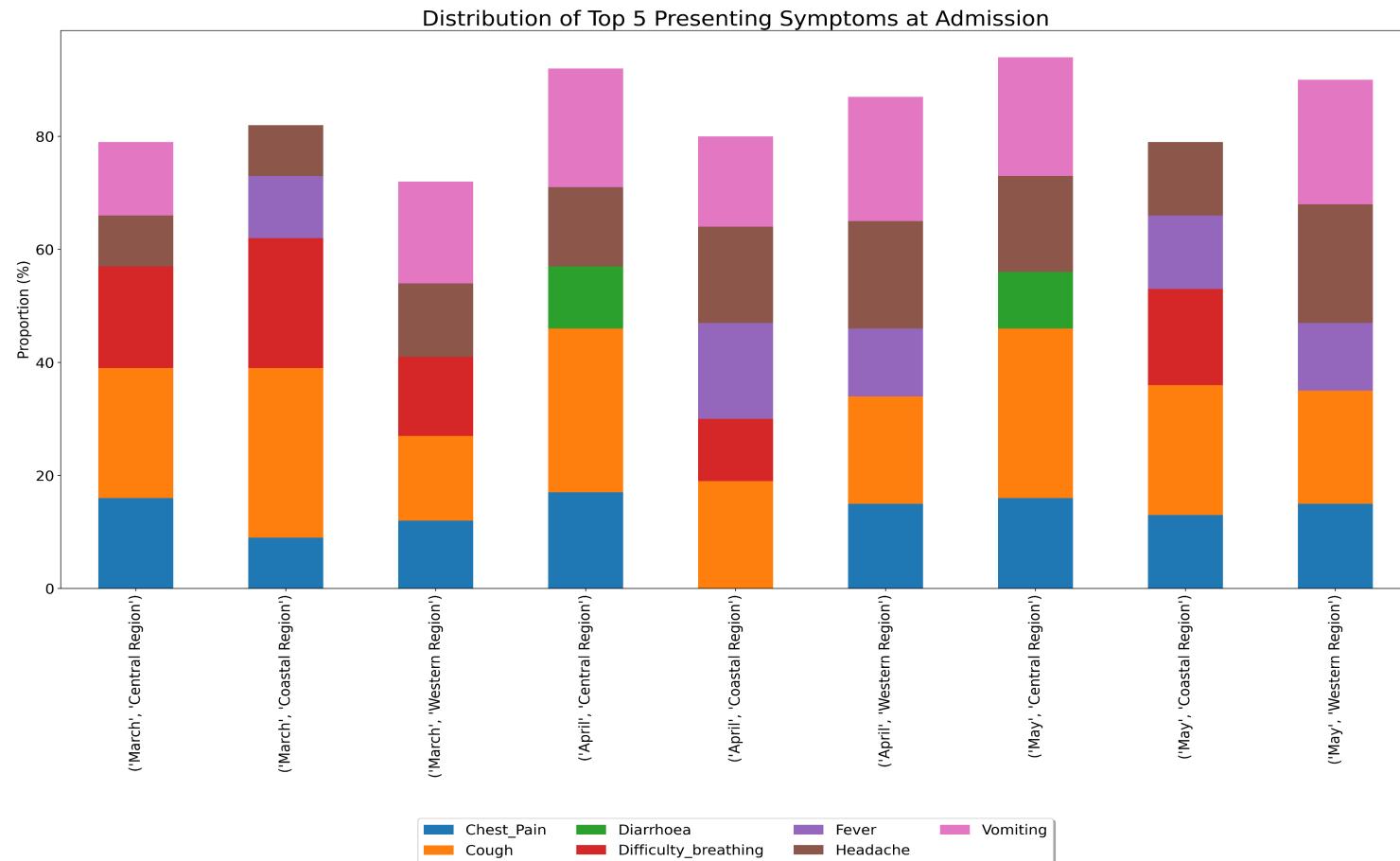
6. Duration of Hospital Stay

Study Region	March			April	May	
	Median Duration of hospital stay	Interquartile Range	Median Duration of hospital stay	Interquartile Range	Median Duration of hospital stay	Interquartile Range
Central Region	6 days	4 - 11 days	6 days	3 - 11 days	7 days	3 - 11 days
Coastal Region	4 days	1 - 8 days	4 days	1 - 9 days	6 days	3 - 11 days
Western Region	5 days	3 - 9 days	4 days	2 - 8 days	4 days	2 - 8 days

This table summarizes the average time spent by patients in the hospitals for the months of March, April and May 2023 in all the regions .ie. from point of admission to discharge.

7. Presenting Symptoms at Admission

This figure represents the distribution of top 5 prevalent presenting symptoms of the disease(s) leading to hospitalization which were captured by the attending clinicians at admission in each of the regions in March, April and May 2023.



8. Completion of Demographic Measures

Study Region	March				April				May			
	Weight	Height	Sex	Age	Weight	Height	Sex	Age	Weight	Height	Sex	Age
Central Region	(239)	(239)	(239)	(239)	(887)	(887)	(887)	(887)	(882)	(882)	(882)	(882)
	3%	3%	99%	98%	11%	11%	100%	100%	15%	14%	100%	100%
Coastal Region	(160)	(160)	(160)	(160)	(408)	(408)	(408)	(408)	(422)	(422)	(422)	(422)
	51%	51%	100%	100%	42%	24%	62%	62%	41%	19%	61%	61%
Western Region	(408)	(408)	(408)	(408)	(1317)	(1317)	(1317)	(1317)	(1518)	(1518)	(1518)	(1518)
	60%	62%	100%	93%	19%	18%	100%	100%	20%	20%	100%	100%

This table summarizes the documentation rate of demographic measures in the medical notes on the date of patient admission.

Weight and height were poorly documented across all the regions in the three months period.

9. Recording of Vital Signs

Study Region	March				April				May							
	Temp.	Resp. rate	Heart rate	SO2	BP	Temp.	Resp. rate	Heart rate	SO2	BP	Temp.	Resp. rate	Heart rate	SO2	BP	
Central Region	(239) 18%	(239) 52%	(239) 94%	(239) 94%	(239) 99%	(887) 15%	(887) 22%	(887) 91%	(887) 64%	(887) 93%	(882) 13%	(882) 23%	(882) 87%	(882) 64%	(882) 89%	
Coastal Region	(160) 88%	(160) 89%	(160) 16%	(160) 99%	(160) 99%	(408) 42%	(408) 43%	(408) 21%	(408) 58%	(408) 59%	(422) 40%	(422) 42%	(422) 18%	(422) 55%	(422) 57%	
Western Region	(408) 87%	(408) 77%	(408) 91%	(408) 87%	(408) 95%	(1317) 45%	(1317) 25%	(1317) 81%	(1317) 51%	(1317) 84%	(1518) 36%	(1518) 26%	(1518) 85%	(1518) 47%	(1518) 84%	

Key = Temp : Temperature , Resp. rate : respiratory rate, SO2 : Oxygen saturation rate, BP: Blood pressure

This table summarizes the documentation rate of vital signs on the date of patient admission in each of the regions in the months of March, April and May 2023.

10. Recording of Key Priority Measures

Study Region	March				April				May			
	HIV status	COVID vac.	COVID tests	Com.	HIV status	COVID vac.	COVID tests	Com.	HIV status	COVID vac.	COVID tests	Com.
Central Region	(239)	(239)	(239)	(239)	(887)	(887)	(887)	(887)	(882)	(882)	(882)	(882)
Central Region	48%	28%	75%	91%	40%	20%	1%	93%	29%	7%	0%	95%
Coastal Region	(160)	(160)	(160)	(160)	(408)	(408)	(408)	(408)	(422)	(422)	(422)	(422)
Coastal Region	24%	40%	17%	98%	24%	26%	4%	59%	22%	26%	0%	55%
Western Region	(408)	(408)	(408)	(408)	(1317)	(1317)	(1317)	(1317)	(1518)	(1518)	(1518)	(1518)
Western Region	83%	50%	83%	87%	35%	4%	1%	76%	34%	3%	0%	80%

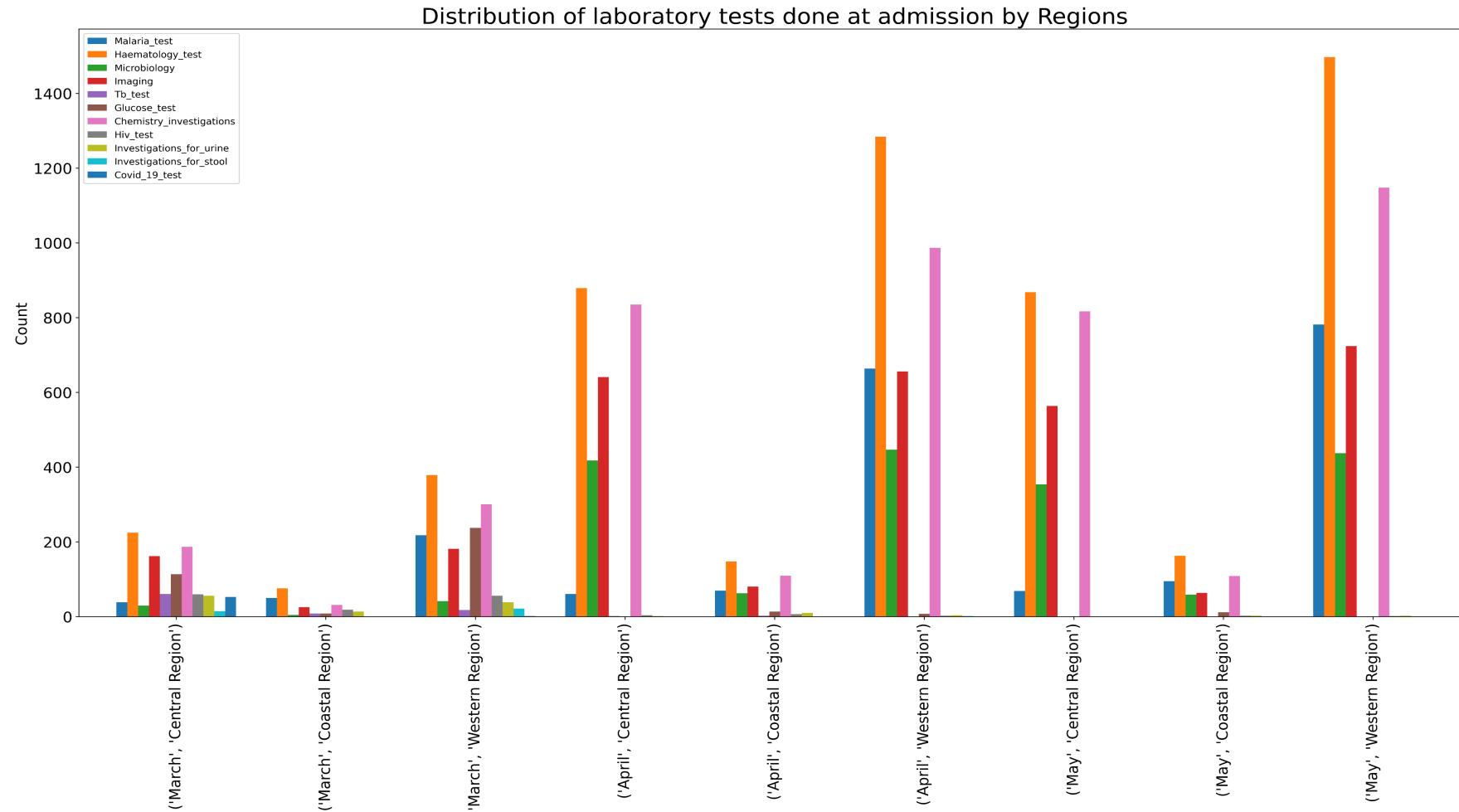
Key = COVID vac : COVID 19 vaccination status, Com. : Comorbidity status.

This table summarizes the documentation rate of key priority measures in each of the regions for the months of March, April and May 2023.

11. Laboratory Tests at Admission

This figure shows the absolute count of laboratory tests done at admission by hospitals in each region in March, April and May 2023.

Haematology test was the most frequently performed test in all the regions.

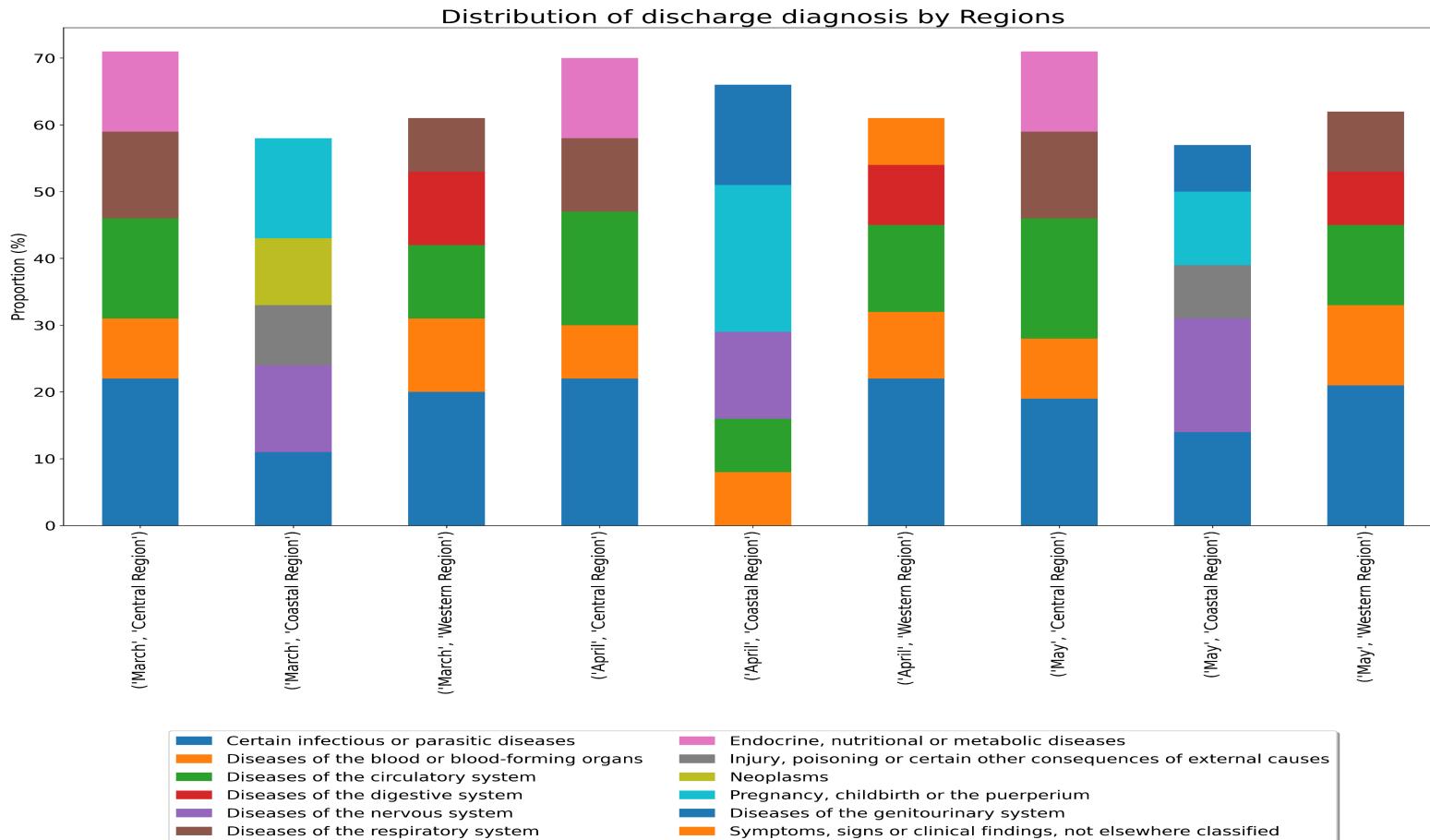


12. Disease patterns at Discharge

This figure shows the distribution of diseases at discharge in the months of March, April and May 2023 in each of the regions.

The diseases were grouped based on International Classification of Diseases 11th Revision (ICD-11).

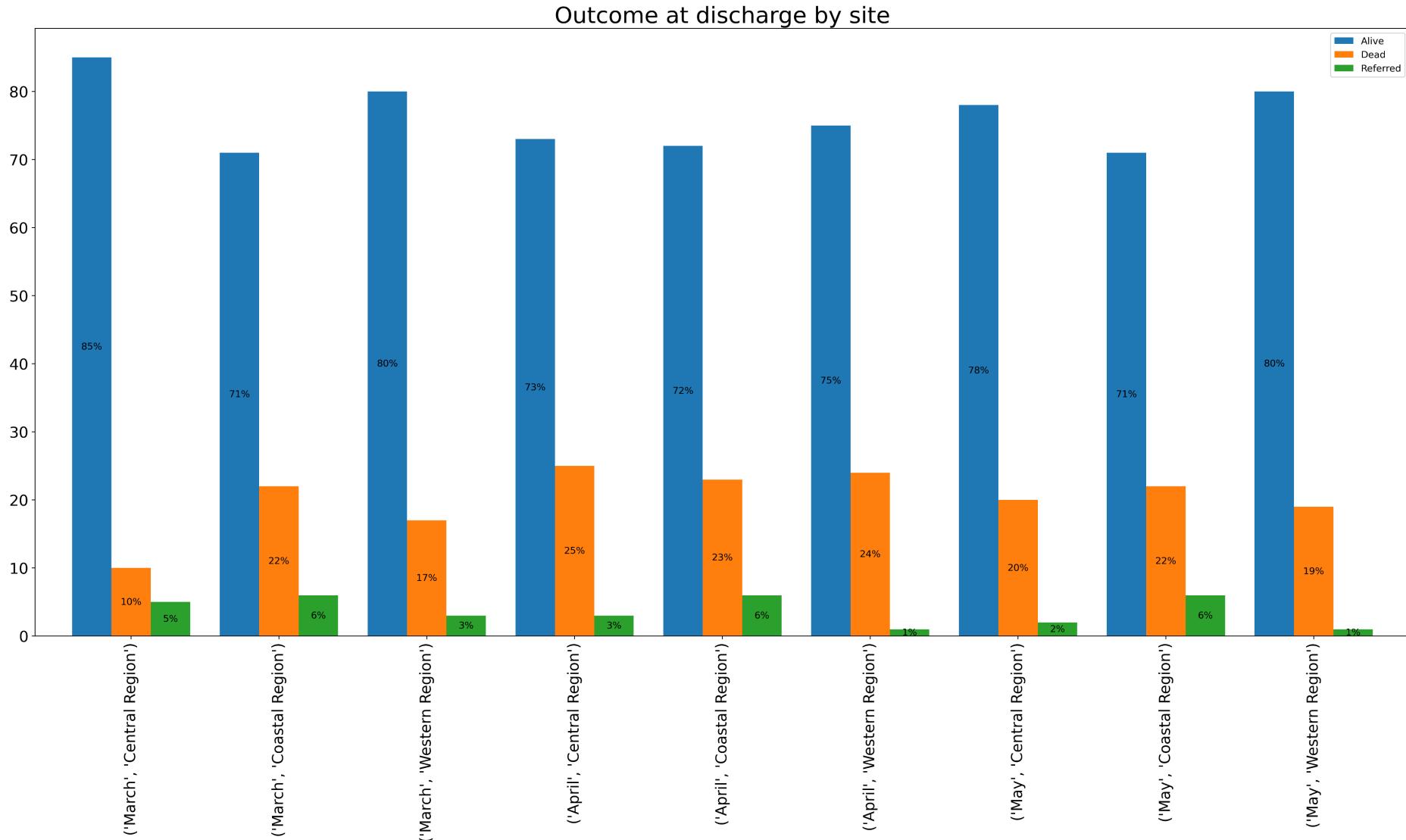
The 5 most prevalent disease groups are shown for each region by month.



13. Outcome at Discharge

This figure shows the distribution of outcome at discharge in the months of March, April and May 2023 in each of the regions.

It indicates whether the admitted patients were discharged alive, referred or died.





Acknowledgements:

- Funders (FCDO, BMGF)
- Partners at MOH and County Governments
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