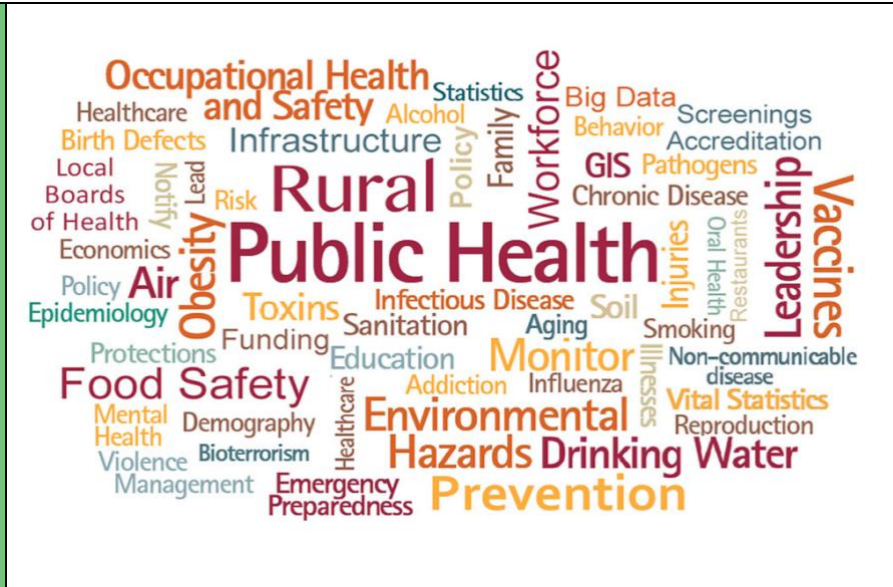
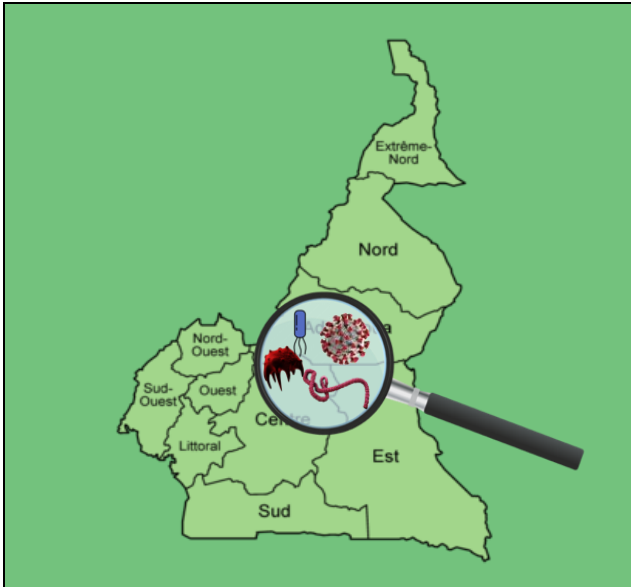


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# CAMEROON ANNUAL EPIDEMIOLOGICAL NEWSLETTER

**Epidemiological weeks 01 to 52, 2022**



# MINISTRY OF PUBLIC HEALTH

## CAMEROON EPIDEMIOLOGICAL NEWSLETTER

January - December 2022  
(Epidemiological weeks 01 to 52, 2022)

N°04/22

### Highlights

- **From 10 to 14 October 2022** : Official launch of activities in 3 new sentinel sites for influenza surveillance to cover all 10 regions of the country
- **From October 31 to November 11, 2022** : The month of Management of Public Health Emergencies and Events in Cameroon
- **From 09 to 10 November, 2022** : Country's commitment to the process of eliminating cholera by 2030
- **From 09 to 11 November 2022** : the 4th International Forum on the Management of Public Health Emergencies and Events in Cameroon

### Summary

- I. Epidemiological situation of Epidemic Prone Diseases and other public health events P2-P12
- II. Surveillance of maternal and perinatal deaths and response P12-P13
- III. Surveillance of chronic non-communicable diseases P13-P14
- IV. Situation of STIs and hepatitis P14-P15
- V. Preparedness and Response Activities to Events P16-P17.
- VI. Success story P17-P18

## I- Epidemiological situation of Epidemic Prone Diseases and other public health events

### Completeness and timeliness in weekly report transmission

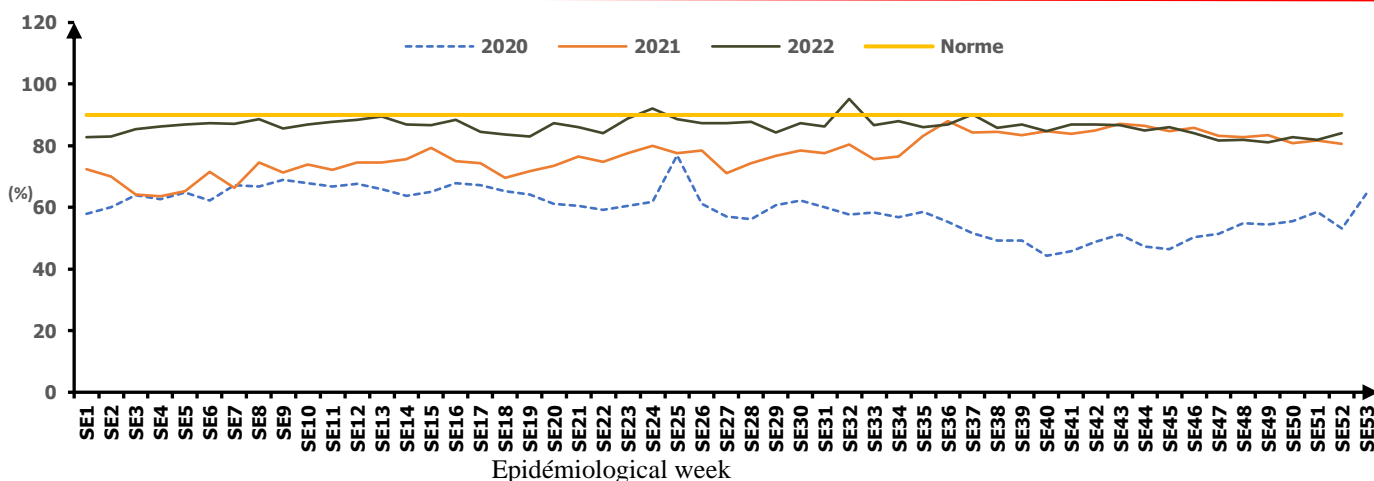
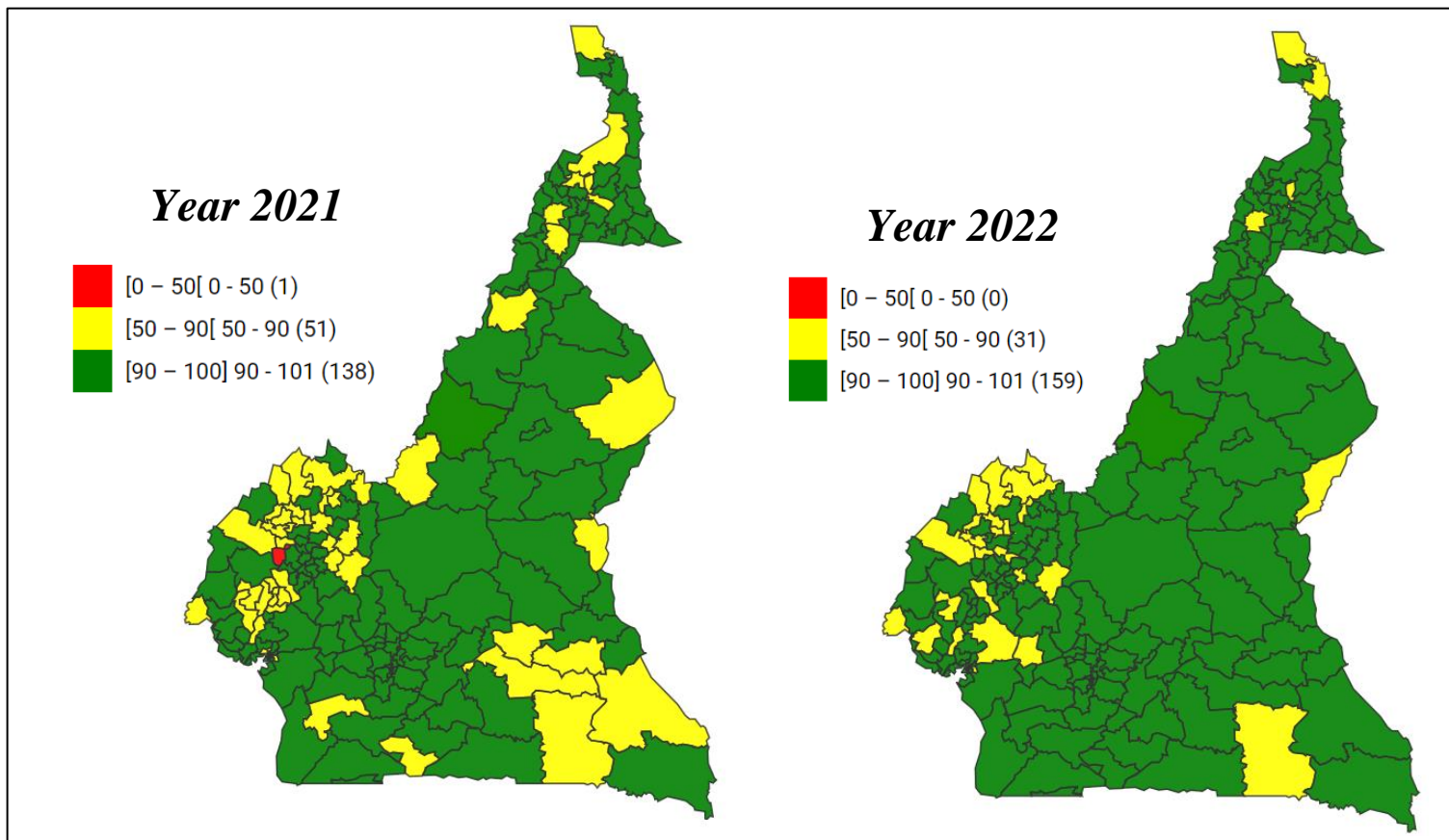
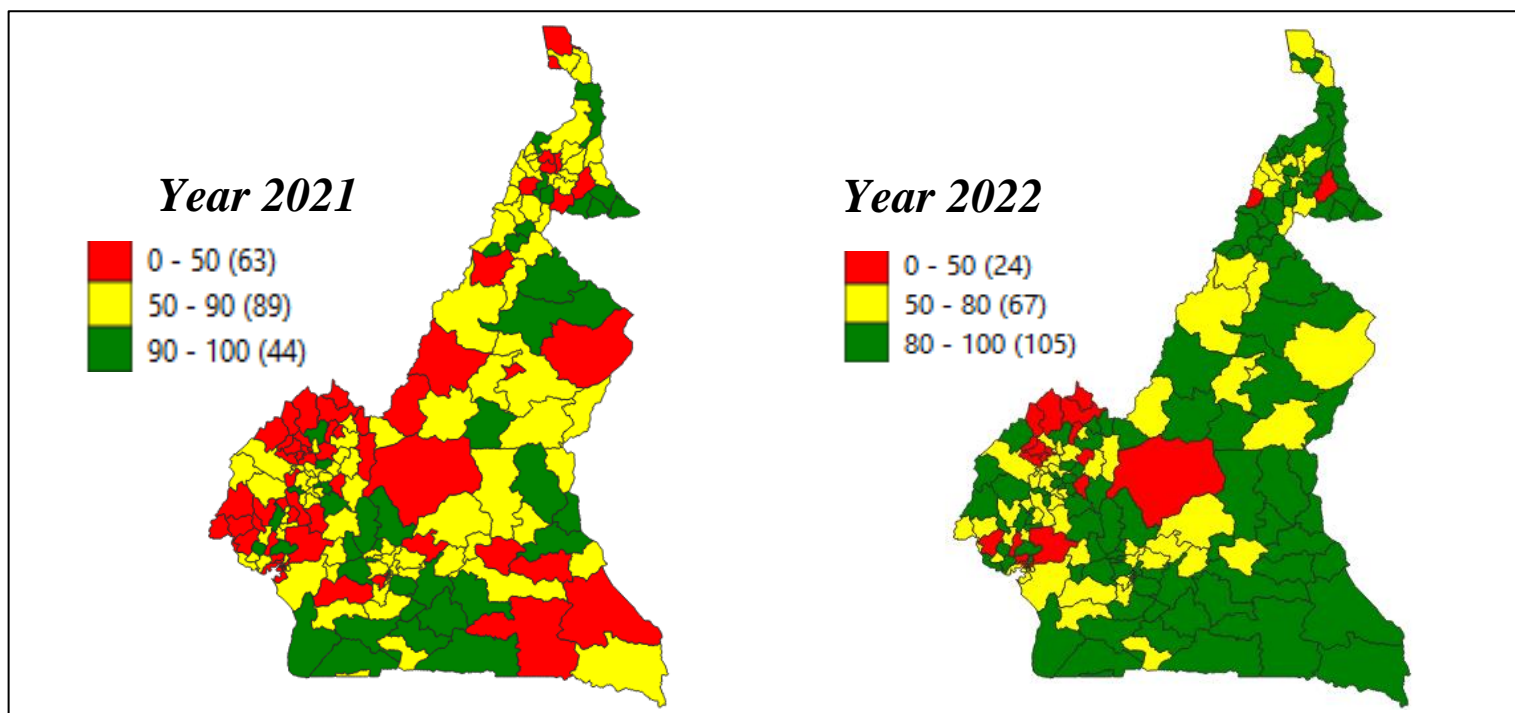


Figure 1 : Comparative evolution of the completeness of EPD reporting by epidemiological week, 2020-2022 Cameroon



**Figure 2:** Cumulative completeness of HF reports, January to December, 2021 and 2022 in Cameroon.  
Source : DHIS2, 2013/01/16



**Figure 3:** Cumulative timeliness of FOSA reports, January to December, 2021 and 2022 in Cameroon.  
Source: DHIS2, 2013/01/16

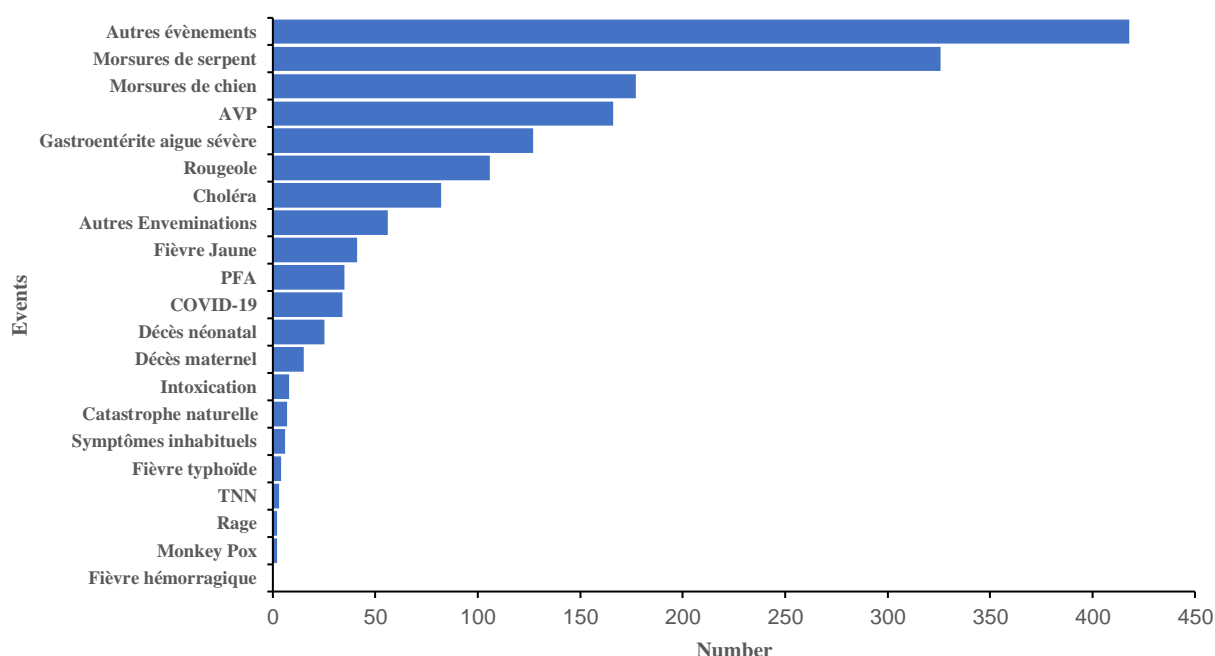
There has been a clear improvement in the cumulative completeness and timeliness of health facility reports in DHIS2 compared to the year 2021, i.e. 86.25% and 76.6% respectively, compared to 77.37% and 62.1% in 2021. In addition, for the year 2022, the standard of 90% completeness was reached by 83.7% of health districts, while the standard of 80% timeliness was only reached by 53.6 % of health districts. Coaching of IDSR actors must be maintained at all levels and data reviews organized to improve the quality of said data.

## Event-Based Surveillance (EFS)

**Table I:** Distribution of detected signals and their processing (except the EWARS platform), SE 01 to 52.2022

Regions	# health districts reporting	# signals detected	# signals detected within 24 hours	# Signals transformed into events	# events having benefited from the risk assessment	Signals integrated in DHIS2 (%)
East	14	790	711 (90.0)	746 (94.4)	734 (98.4)	734 (98.4)
Littoral	7	227	199 (87.7)	224 (98.7)	56 (25.0)	154 (68.8)
North	1	327	323 (98.8)	327 (100.0)	225 (68.8)	314 (96.0)
South	10	343	320 (93.3)	343 (100.0)	343 (100.0)	340 (99.1)
<b>TOTAL</b>	<b>32</b>	<b>1,687</b>	<b>1,553 (92.1)</b>	<b>1640 (97.2)</b>	<b>1,358 (82.8)</b>	<b>1542 (94.0)</b>

During the year 2022, out of 49 districts that were to implement the EWS, 17 health districts were silent and did not report any signals throughout the year, all of them in the Littoral Region. The implementation of this surveillance in these four regions made it possible to detect 1,687 signals of which **92.1%** were detected within 24 hours and **97.2%** were transformed into events. As for the sources of signals, it should be noted that **49.2%** of signals were reported by Community Health Workers (CHWs), **48.8%** by health facility managers, **1.7%** by key informants and **0.8%** by the community.



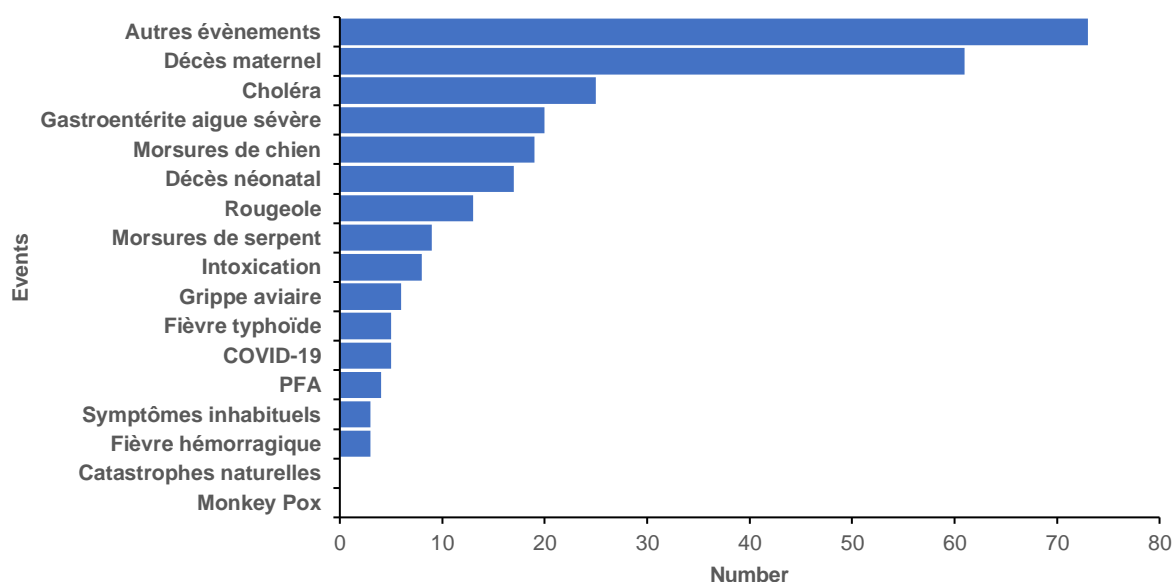
**Figure 4:** Events detected by routine SFE in Cameroon, EW 01 to EW 52, 2022

The diseases or public health events under surveillance most frequently reported by the SFE are snake bites (326), dog bites (177) and public road accidents (166). Among the other events detected, parasitic diseases and cases of influenza syndrome are more common.

**Table II:** Distribution of detected signals and their processing through the EWARS platform, SE01-S52,2022

Regions	# health districts reporting	# signals detected	# signals detected within 24 hours	# Signals transformed into events	# events having benefited from a risk assessment
Adamaoua	3	12	7 (58,3)	1 (8,3)	1 (100,0)
Centre	1	909	614 (67,5)	29 (3,2)	29 (100,0)
Est	2	13	9 (69,2)	0 (0,0)	-
Extrême Nord	22	532	313 (58,8)	103 (19,4)	85 (82,5)
Ouest	1	4	4 (100,0)	0 (0,0)	-
Nord-Ouest	11	602	344 (57,1)	160 (26,6)	155 (96,9)
Sud-Ouest	5	37	32 (86,5)	2 (5,4)	2 (100,0)
<b>Total</b>	<b>45</b>	<b>2 109</b>	<b>1 323 (62,7)</b>	<b>295 (14,0)</b>	<b>272 (92,2)</b>

In 2022, 19 new health districts in the Far North Region joined the health districts implementing EWS with the EWARS platform, bringing the cumulative number of these districts to 50. Of these 50 districts, 45 reported at least one signal during the year 2022. The silent districts were distributed in the Centre (Efoulan and Obala), Far North (Gazawa), West (Mbouda) and North West (Bali) regions. The Sa'a health district in the Central Region reported 43.1% (909) of all signals in the country.



**Figure 5 :** Events detected by the SFE through the EWARS platform in Cameroon, S01 to S52, 2022

The diseases or public health events under surveillance most frequently reported through the EWARS platform are maternal deaths (61), cholera (25) and severe acute gastroenteritis (20). Other events detected include accidents and influenza-like illnesses.

## Influenza Sentinel Surveillance

Throughout 2022, 888 samples were analyzed, of which 142 were positive, i.e. 103 type A (100 A/H3N2 and 03 A/H1N1pdm09) and 31 type B/victoria.

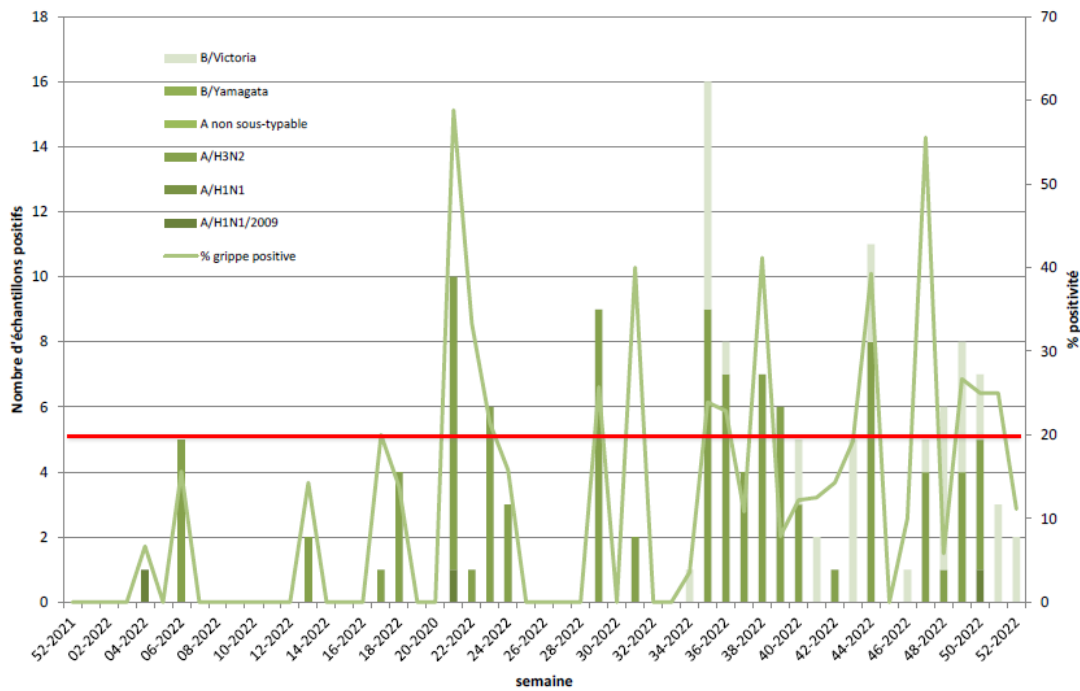


Figure 6: Total number of samples analyzed and detected and influenza positivity rate per week, year 2022, Cameroon

## Mapping of epidemics in Cameroon in 2022

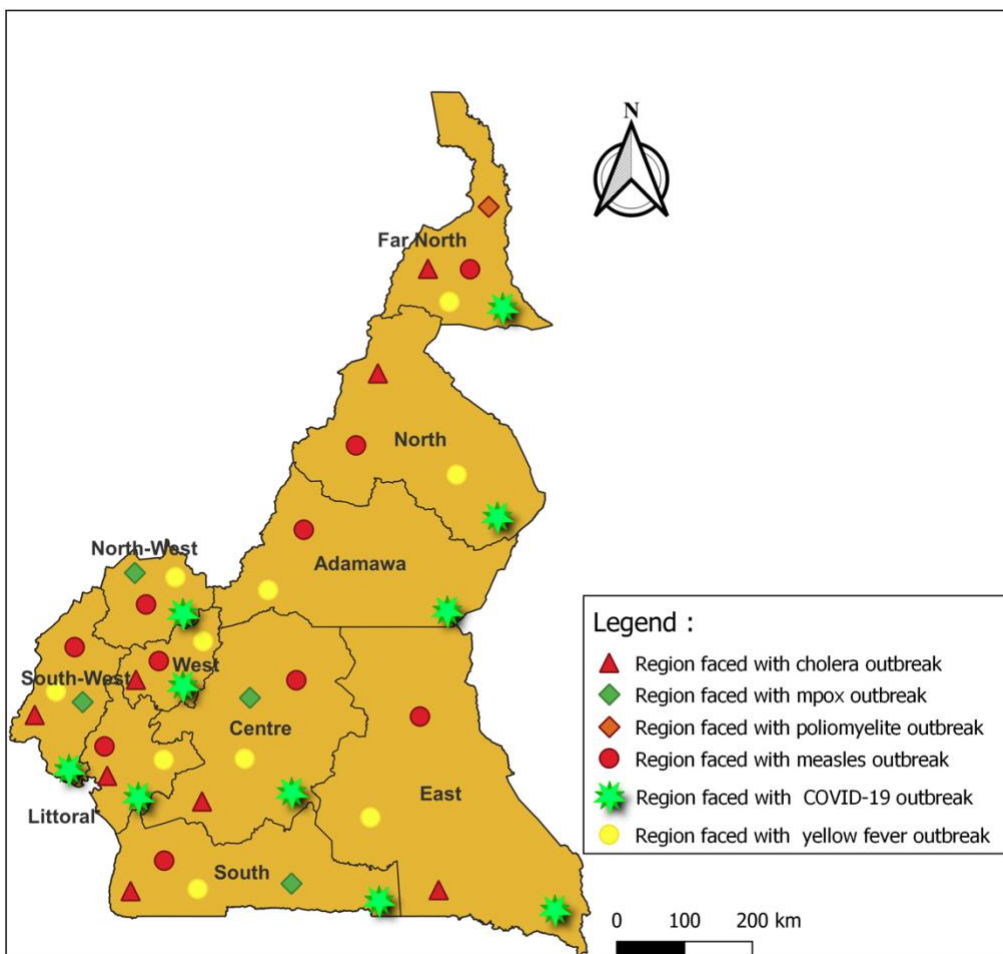


Figure 7: Mapping of epidemics in Cameroon in 2022

All regions had at least one outbreak of measles, yellow fever and COVID-19 during the year 2022. In addition, 80% of regions were affected by at least one cholera outbreak except Adamawa and North-West regions.

## Indicator-Based Surveillance (IBS)

**Table III:** Situation of some epidemic-prone diseases and priority conditions, EW01 to EW52, 2022, Cameroon.

**Source:** DLMEP/SDLEP, 2022

MAPE, AP	Adamawa		Centre		East		Far North		Littoral		North		North West		West		South		South West		Cameroon	
	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths	Cases	Deaths
Anthrax	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chikungunya	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dengue fever	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Diarrhea with dehydration in children under five	797	1	7392	23	5137	10	6881	15	2682	4	2091	12	2823	1	2018	5	572	1	1457	0	31850	72
bloody diarrhea	248	0	3017	0	842	9	3302	1	941	0	1548	2	1090	1	364	2	458	0	836	0	12646	15
Dracunculiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Poisoning	259	0	1928	4	254	3	669	1	709	7	446	6	1237	1	342	2	381	1	24	0	6249	25
VHF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Typhoid fevers	147	3	187	0	78	0	208	1	206	0	156	1	134	0	141	2	98	0	117	2	1472	9
Malaria	40383	16	160962	82	56822	18	61542	46	123085	98	55527	24	33949	19	89169	22	14493	4	41240	17	677172	346
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
dog bites	342	0	1804	1	496	0	1009	1	657	4	547	0	445	0	713	1	295	0	197	0	6505	7
Snake bites	474	10	1669	5	1118	7	1923	23	670	6	1612	21	426	1	849	1	363	2	126	1	9230	77
Rabies	0	0	0	0	0	0	5	2	0	0	0	0	0	0	9	0	0	0	9	0	23	2
SARS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Flu syndrome	18314	11	53703	10	32435	16	40483	3	34794	14	26719	39	2530	1	10448	10	9400	2	2966	0	231792	106
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

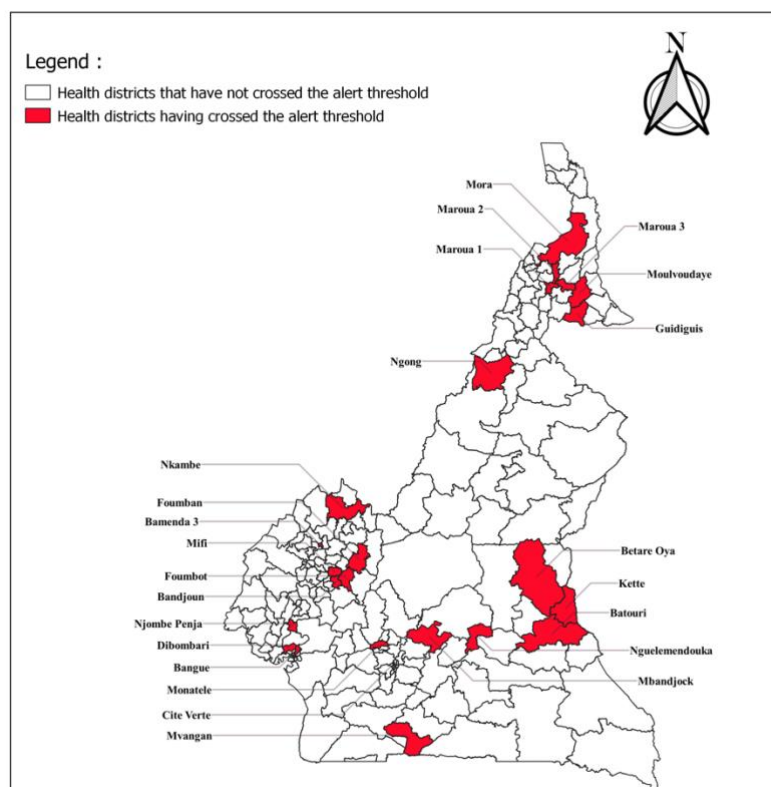
The most reported pathologies were malaria, typhoid fever, flu syndrome and diarrhea with dehydration in children under five.

## Epidemiological situation of meningitis

During the year 2022, Cameroon did not experience a meningitis epidemic, however, 24 health districts crossed the alert threshold at least once as shown in the figure below. In total, as shown in the table below, 1473 suspected cases including 49 deaths were recorded for a case fatality rate of 3.3%. In addition, 199 CSF samples were analysed at the Cameroon Pasteur Centre of which 14 were culture positive. The germs found were: *Neisseria meningitidis* C, *Neisseria meningitidis* W 135, undetermined *Neisseria meningitidis*, *Streptococcus pneumoniae* and *Cryptococcus neoformans*.

**Table IV:** Distribution of meningitis cases and deaths by region, EW01 to EW52, 2022, Cameroon.

Regions	Suspicious cases	Death	Case fatality rate (%)
Adamawa	29	2	6.9
Centre	585	14	2.4
East	73	4	5.5
Far North	215	3	1.4
Littoral	113	4	3.5
North	33	0	0
North West	213	5	2.3
West	142	12	8.5
South	43	3	6.9
South West	27	2	7.4
<b>Total</b>	<b>1473</b>	<b>49</b>	<b>3.3</b>



**Figure 8:** Health districts having crossed the alert threshold at least once during the year 2022

Source : DLMEP/SDLEP, 2022

## Epidemiological situation of MPOX

From W01 to W52, 115 suspected cases of Mpox, including 03 deaths, were recorded for a case-fatality rate of 2.6% and 18 confirmed cases for a positivity rate of 15%. This epidemiological situation shows an increase in Mpox cases compared to 2021.

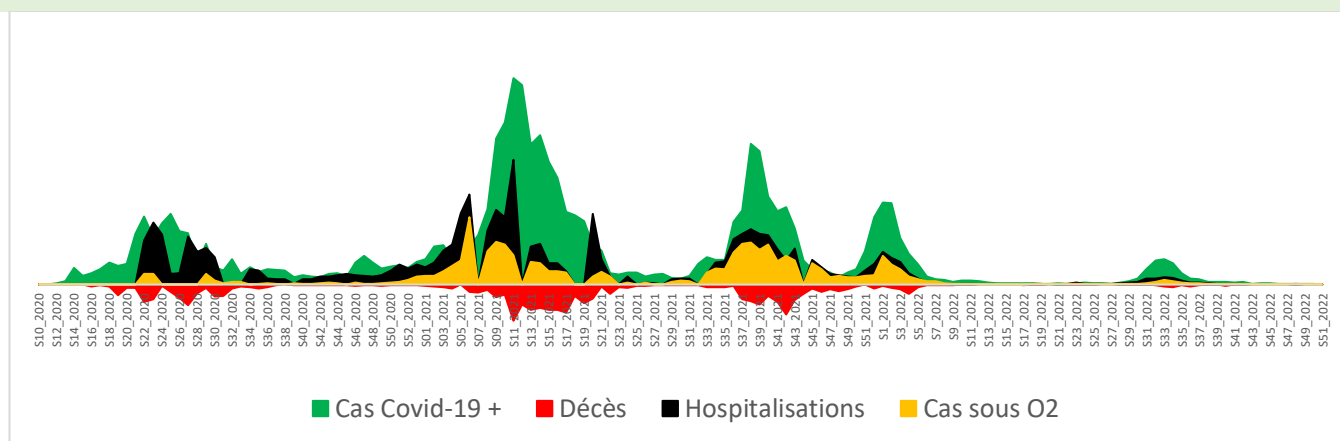
The actions carried out during the year were: the reinforcement of epidemiological surveillance in the community, especially in the risk areas, in order to ensure the detection and in-depth investigation of cases in the affected HDs, the finalisation of the strategic plan for the fight against Mpox, and the development of Mpox surveillance guidelines.

**Table V: Distribution of MPOX cases and deaths by region from EW01 to EW52 of the year 2022**

Regions	Districts	Notified cases	Number of confirmed cases	Notified deaths	Case fatality rate (%)
Centre	Ayos	7	4	0	0.00%
	Eseka	1	0	0	0.00%
	Djungolo	1	0	0	0.00%
	Nkolndongo	1	0	0	0.00%
	Saa	1	0	0	0.00%
East	Batouri	1	0	0	0.00%
	Bertoua	2	0	0	0.00%
Far North	Maroua 2	1	0	0	0.00%
Littoral	Njombe Penja	2	0	0	0.00%
	Loum	1	0	1	100%
	Bonassama	1	0	0	0.00%
North West	Bamenda	10	3	0	0.00%
	Benakuma	22	1	1	4.50%
South	Djoum	5	1	0	0.00%
South West	Bangem	7	3	0	0.00%
	Kumba North	8	1	0	0.00%
	Ekondo Titi	1	0	0	0.00%
	Kumba South	12	2	1	8.30%
	Mamfe	1	0	0	0.00%
	Mbonge	7	2	0	0.00%
	Tombel	21	1	0	0.00%
	Tiko	1	0	0	0.00%
	Limbe	1	0	0	0.00%
<b>Total</b>		<b>115</b>	<b>18</b>	<b>3</b>	<b>2.60%</b>

## Epidemiological situation of COVID-19

- 124,234 confirmed cases
- 1965 death
- 122,230 people cured (98.4%)
- 3,251,175 people having received at least one dose of vaccine, i.e. 23.6% of the target population
- 4,739 health workers infected, including 61 deaths
- 899 pregnant women infected including 8 deaths
- Overall case fatality rate: 1.6%  
Representing :
  - 14 568 new cases
  - 112 new deaths.



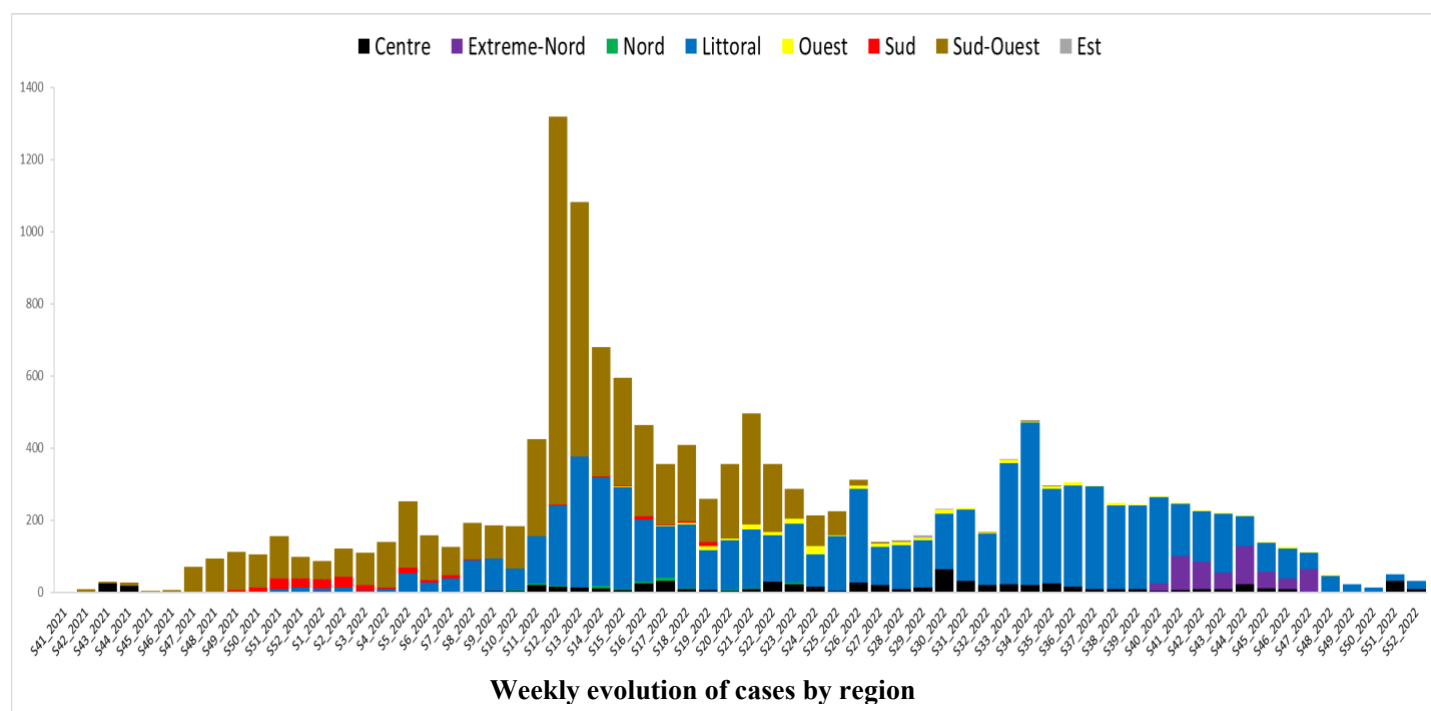
**Figure 9: Epidemic curve of COVID-19 in Cameroon at week 52, 2022**

**Table VI: Vaccination coverage by region at EW 52, 2022**

Regions	Target population	1st dose	2nd dose	Booster doses	# Fully vaccinated	1st dose coverage (%)	Complete vaccination coverage (%)
Adamawa	753 881	239,895	22,218	55,022	210,319	31.8	27.9
Centre	2,568,486	565,895	93,022	86,060	438,731	22.0	17.1
East	689 284	213,753	21,149	41,558	172,342	31.0	25.0
Far North	2,526,584	817,816	56,113	112,720	728,808	32.4	28.8
Littoral	2,166,869	291,345	23,232	14,660	233,878	13.4	10.8
North	1,533,515	475,636	26,195	42,530	382,076	31.0	24.9
North West	936 621	174,769	16,817	39,600	160,072	18.7	17.1
West	1,167,571	206,339	21,571	26,709	161,914	17.7	13.9
South	450,052	103,151	11,644	20,039	87,102	22.9	19.4
South West	966,080	162,576	10,098	15,663	137,516	16.8	14.2
<b>Cameroon</b>	<b>13,758,942</b>	<b>3,251,175</b>	<b>302,059</b>	<b>454,561</b>	<b>2,712,758</b>	<b>23.6</b>	<b>19.7</b>

The epidemic is clearly in a decline regarding the number of cases in all Health Districts. However, given the resurgence of the epidemic in countries such as France, China, Japan; as well as the end-of-year holiday period during which there was a lot of movement across the country's borders, active surveillance of COVID-19 cases must continue with the strengthening of community-based surveillance and systematic screening in health facilities. The 5th vaccination campaign made it possible, throughout the territory, to have an increase in vaccination coverage, which rose from 8.8% of the population fully vaccinated at week 39, 2022 to 19.7% at week 52, 2022.

## Epidemiological situation of cholera



**Figure 10: Epidemic curve of cholera, from October 1, 2022 to January 01, 2023, Cameroon**

As of January 1, 2023, 15,123 cases of cholera have been recorded in the country, including 303 deaths for a case fatality rate of 2%. The fourth quarter of 2022 was marked by the resurgence of cases in the Far North region. As of January 1, 2023, three regions were active: the Centre, the Far North, and the Littoral. The Littoral region remains the epicenter of the epidemic. Coordination of the response continues at the Public Health Emergency Operations Coordination Center through the Incident Management System activated for *Cameroon Epidemiological Newsletter, 2022*

this purpose on January 03, 2022. Response activities are carried out locally in the said regions with the support of technical and financial partners. Among these responses, there was a reactive vaccination campaign which carried out in the Far North region from November 14 to 18, 2022,

**Table VII: Summary of the epidemiological situation of Cholera by region as of January 1, 2023**

Regions	Cumulative cases	Cumulative deaths	Case fatality rate (%)	Cultures carried out	Positive cultures	Culture confirmation rate (%)	Serotypes	
							Ogawa	Inaba
Centre	707	22	3.1	119	73	10.3	73	0
East	12	2	16.7	7	05	41.7	05	0
Far North	486	18	3.7	29	14	2.9	14	0
Littoral	7424	158	2.1	2867	1158	15.6	1137	21
North	50	2	4.0	20	9	18.0	09	0
West	203	7	3.4	33	14	6.9	14	0
South	214	2	0.9	12	1	0.5	01	0
South West	6,027	92	1.5	1356	530	8.8	530	0
<b>Total</b>	<b>15,123</b>	<b>303</b>	<b>2.0</b>	<b>4444</b>	<b>1804</b>	<b>11.9</b>	<b>1783</b>	<b>21</b>

Source: Regional Line lists, 2022

## Poliomyelitis situation from the 1<sup>st</sup> to the 52<sup>nd</sup> epidemiological week, 2022

**Table VIII: AFP Surveillance Performance, Weeks 1-52 2022, Cameroon**

Regions	# Expected cases <15 years in 2022	PFA cases < 15 years investigated		Cases under 15 investigated within 14 days		% adequate stool (≥90%)		TPFANPA (≥3)		Quality index (≥2)		% validated cases (≥80%)		% Samples that arrive at the lab within 03 days (≥80%)		% NPENT (≥10%)		Results 2022			Proportion of geolocated AFP cases (100%)
		2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	Compatible	PVS	cVDPV	
		Adamawa	20	51	54	46	49	88.2	87.0	8.0	8.5	7.1	7.4	88.2	94.4	82.4	68.5	7.8	5.6	0	
Centre	61	125	107	105	89	80.8	75.9	6.2	5.6	5.0	4.2	97.6	95.3	99.2	96.3	5.6	7.5	0	0	0	76.4
East	17	69	53	69	50	98.6	90.6	12.4	9.7	12.2	8.8	97.1	96.2	97.1	94.3	18.8	11.3	0	0	0	89.9
Far North	71	212	213	176	176	82.1	78.5	9.0	9.2	7.4	7.2	98.6	89.2	66.0	64.3	15.6	13.1	0	0	1	88.8
Littoral	53	82	81	72	72	81.7	85.4	4.7	4.9	3.8	4.2	97.6	98.8	93.9	92.6	7.3	7.4	0	0	0	91.5
North	37	69	69	65	63	88.4	87.0	5.6	5.8	5.0	5.0	87.0	92.8	78.3	85.5	10.1	7.2	0	0	0	82.9
North West	33	46	38	37	31	80.4	78.9	4.2	3.6	3.4	2.8	89.1	97.4	69.6	44.7	0.0	2.6	0	0	0	47.8
West	28	63	81	59	77	90.5	91.6	6.9	9.0	6.2	8.2	100.0	98.8	92.1	87.7	4.8	0.0	0	0	0	84.1
South	23	66	32	40	25	59.1	72.7	9.0	4.4	5.3	3.2	100.0	100.0	81.8	78.1	15.2	6.3	0	0	0	84.8
South West	27	37	18	29	15	78.4	73.7	4.2	2.1	3.3	1.6	97.3	100.0	75.7	88.9	5.4	11.1	0	0	0	46.2
<b>CAMEROON</b>	<b>370</b>	<b>820</b>	<b>746</b>	<b>698</b>	<b>647</b>	<b>82.7</b>	<b>82.2</b>	<b>6.8</b>	<b>6.3</b>	<b>5.6</b>	<b>5.2</b>	<b>96.2</b>	<b>94.5</b>	<b>82.4</b>	<b>79.1</b>	<b>10.4</b>	<b>8.2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>80.8</b>

% of stool collected within 14 days	TPFANPA	NPENT
[0-80%] [80%-90%] [90%-100%]	[0-2] [2-3] [3 et +]	[0-7%] [7%-10%] [10%-100%]

Compared to the same period last year, the number of cumulative cases of Acute Flaccid Paralysis (AFP) investigated is 820 against 746. The annual Non-Polio AFP rate is 6.8 against 6.3 (norm: ≥ 3) last year at the same period and the percentage of adequate stool is 82.7% compared to 82.2% (below the standard of 90%). The South and North-West regions are still lagging behind in terms of stool quality. The NPENT rate is 10.4 compared to 8.2 at the same period last year, above the norm of 10. A cVDPV2 was notified on December 27, 2022 in the Health District of Mokolo, of the Far North region. In general, there is an increase in the performance of the major indicators of AFP surveillance during this year compared to last year.

## Measles situation from 1st to 52nd Epidemiological Week

Table IX: Measles surveillance performance results, Cameroon, SE 01-52, 2022.

Regions	Suspected measles cases investigated and positive				% Districts with at least one suspected case (≥80%)		Investigation rate (≥2 cases per 100,000)		Non-measles febrile rash rate (≥2 cases per 100,000)		Incidence (≤5 confirmed cases per 1,000,000)		Positive #Cas Rubella		#Cas confirmed by epidemiological link (Line list)		#Cas Clinically Compatible		Measles			
	#Cas suspects investigated		#Cas confirmed by the laboratory (IgM+)		2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	#Cas confirmed (labo confirmed cases + Line list + Compatible)	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021
Adamawa	188	148	37	25	80,0	80,0	5,7	5,2	3,2	3,0	103,1	75,3	3	1	105	78	2	2	144	105		
Center	818	214	173	46	100,0	84,4	8,6	4,7	4,7	3,5	99,7	12,5	4	6	403	5	16	5	592	56		
East	192	158	38	35	86,7	86,7	7,6	7,3	4,2	3,8	110,8	89,7	1	0	97	2	4	73	139	110		
Extreme Nord	529	325	52	71	96,9	78,1	3,0	3,9	1,8	2,2	95,1	47,9	0	5	386	148	5	5	443	224		
Littoral	515	150	89	34	91,7	83,3	4,0	3,4	2,0	2,4	84,6	10,0	2	6	328	5	9	7	426	46		
North	288	31	62	6	100,0	60,0	4,7	1,2	2,1	0,9	84,4	2,7	0	0	158	1	9	0	229	7		
North West	179	122	29	15	100,0	85,0	7,4	4,5	6,1	3,6	12,8	14,8	4	7	0	18	5	2	34	35		
West	228	183	37	32	100,0	85,0	7,2	6,5	5,1	4,5	70,0	50,4	3	6	91	64	4	3	132	99		
South	347	230	40	25	100,0	100,0	6,0	8,0	3,2	6,0	191,7	78,4	2	3	253	108	5	5	298	138		
South West	189	61	35	12	94,7	57,9	7,8	3,7	5,4	2,8	55,0	8,4	6	2	52	0	7	2	94	14		
<b>CAMEROON</b>	<b>3473</b>	<b>1622</b>	<b>592</b>	<b>301</b>	<b>95,9</b>	<b>79,7</b>	<b>5,9</b>	<b>4,4</b>	<b>3,5</b>	<b>3,0</b>	<b>88,1</b>	<b>30,8</b>	<b>25</b>	<b>36</b>	<b>1873</b>	<b>429</b>	<b>66</b>	<b>104</b>	<b>2532</b>	<b>834</b>		
% of districts investigated at least once					non-measles febrile rash rate				Investigation rate				incidence (less than 5 confirmed cases per 1,000,000)									
[0-50%]					[0-1]				[0-1]				[0-5]		[5-10]		[10 et +]					
[50%-80%]					[1-2]				[2 et +]													
[80%-100%]																						

The proportion of SDs who have investigated at least 01 suspected cases of Measles is 95.9%.

The investigation rate is 5.9 compared to 4.4 at the same time last year. The incidence of measles is 88.1 per 1,000,000 inhabitants compared to 30.8 at the same time last year. A total of 54 health districts are in epidemic. The health districts in epidemic are distributed as follows: Adamawa (04), Centre (17), East (02), Far North (03), Littoral (10), North (04), North-West (01), West (02), South (07) and South-West (04).

## Yellow Fever Situation from 1st to 52nd Epidemiological Week, 2022

Table X: Performance Results of Yellow Fever Surveillance, SE 01-52, 2022, Cameroon

Regions	Suspected cases of Yellow Fever investigated and positive cases										% Districts with at least one suspected case (≥80%)	Investigation rate (≥2 cases per 100,000)	Percentage of suspected YF cases with sample collection (≥80%)		Percentage of samples received by the laboratory within three days of collection (≥80%)		Seroneutralization Positive + PCR positive (confirmed case(s))	Final classification of cases according to the committee				
	#cas suspects investigated		#Cas positive (IgM+)		#Cas Indeterminate Igm		#Cas positive neutralization		#Cas positive (PCR+)				2022	2021	2022	2021		2022	2021	2022	2021	
	2022	2021	2022	2021	2022	2021	2022	2021	2022	2021			2022	2021	2022	2021		2022	2021	2022	2021	
Adamawa	158	142	4	5	4	0	4	4	1	1	100,0	90,0	11,2	10,0	100,0	100,0	45,5	41,4	5	5	2	2
Center	245	203	1	3	2	0	1	3	0	0	96,9	87,5	5,3	4,5	100,0	100,0	70,2	80,6	1	3	0	1
East	85	70	1	1	1	0	2	1	0	0	93,3	80,0	6,7	5,7	100,0	100,0	52,4	31,4	2	1	1	0
Extreme Nord	213	249	5	15	2	2	2	13	1	1	87,5	93,8	4,4	5,4	100,0	100,0	28,6	23,6	3	14	0	8
Littoral	249	179	2	4	4	0	2	4	0	1	95,8	95,8	5,4	4,0	100,0	100,0	70,1	61,6	2	5	0	3
North	214	142	2	1	3	3	2	4	1	0	100,0	93,3	7,9	5,4	100,0	99,3	43,0	14,8	3	4	1	3
Northwest	129	89	5	4	6	2	7	5	0	0	100,0	85,0	5,2	3,7	99,2	100,0	31,5	20,5	7	5	0	4
West	195	153	7	2	4	0	9	2	0	0	100,0	100,0	10,2	8,2	100,0	100,0	61,1	52,6	9	2	2	2
South	119	98	4	3	2	3	5	4	0	0	100,0	90,0	7,7	6,2	100,0	100,0	52,1	29,5	5	4	2	3
Southwest	159	108	3	1	1	0	1	1	0	0	84,2	89,5	6,6	4,9	100,0	99,1	60,9	65,7	1	1	0	1
<b>CAMEROON</b>	<b>1766</b>	<b>1433</b>	<b>34</b>	<b>39</b>	<b>29</b>	<b>10</b>	<b>35</b>	<b>41</b>	<b>3</b>	<b>3</b>	<b>94,9</b>	<b>90,9</b>	<b>6,4</b>	<b>5,3</b>	<b>99,9</b>	<b>99,9</b>	<b>53,0</b>	<b>44,2</b>	<b>38</b>	<b>44</b>	<b>8</b>	<b>27</b>
% of districts having investigated at least 1 suspected case											Investigation rate											
[0-50%]											[50%-80%]					[80%-100%]						
											[1-2]		[2 et +]			[0-1]						

Since the beginning of 2022, a total of 176 6 suspected cases of yellow fever have been investigated compared to 1,433 at the same time last year. The investigation rate is 6.4 per 100,000 inhabitants, higher than the norm of 2 compared to 5.3 last year during the same period. The proportion of health districts investigating at least one yellow fever case is 9-4.9 percent compared to 90.9 percent at the same time last year. A total of 38 positive cases have been confirmed, including 3 by PCR and 35 by seroneutralization. The positive cases are distributed in the regions of Adamawa (3), Centre (1), East (2), Littoral (2), North (2), North-West (4), West (9), South (4), South-West (1).

## Status of Neonatal Tetanus from 1st to 52nd Epidemiological Week, 2022

**Table XI: Performance of Neonatal Tetanus Surveillance, ES 01-52, 2022, Cameroon**

REGION	Investigations		In-depth investigation reports	True case of NER (case meeting the definition)		DS having crossed the threshold	DS who led a local response to the case	DS having investigated at least 01 cases of NER	% SD who investigated at least 01 NER cases
	Basis of the EPI Case	Death		Case	Death				
Adamawa	5	0	0	5	0	0	0	2	20,0
Center	5	2	5	5	2	0	3	5	15,6
East	4	3	0	4	3	1	0	2	13,3
Far North	6	3	1	6	3	0	1	3	9,4
Littoral	3	0	2	3	0	0	0	3	12,5
North	2	2	0	2	2	0	0	2	13,3
Northwest	0	0	0	0	0	0	0	0	0,0
West	0	0	0	0	0	0	0	0	0,0
South	3	1	1	3	1	0	1	3	20,0
Southwest	11	4	1	11	4	1	0	4	21,1
<b>CAMEROON</b>	<b>39</b>	<b>15</b>	<b>10</b>	<b>39</b>	<b>15</b>	<b>2</b>	<b>5</b>	<b>23</b>	<b>11,7</b>

During 2022, 39 cases of NNT were investigated, including 15 deaths. A total of 11.7% of districts investigated at least 1 case of NER. The districts of Moloundou and Kumba crossed the elimination threshold this year.

## II- Maternal, perinatal death surveillance and response

**Table XII: Surveillance of maternal, perinatal deaths and response, EH 01-52 2022, Cameroon.**

Regions	Pregnant women expected for the year 2022	Assisted Childbirth (FOSA)	Proportion of assisted deliveries (%)	Community -based births	FOSA Maternal Deaths	Community-based maternal deaths	Maternal deaths reviewed	NV	FOSA stillborn	Newborn deaths within the first 24 hours	Neonatal deaths occurring between 0 and 28 days
Adamawa	63106	37981	60,2	2336	30	11	29	37869	835	131	109
Center	156770	97569	62,2	6430	133	112	105	96607	1317	273	475
East	49951	33105	66,3	4942	58	12	64	33299	512	110	144
Far North	243114	91215	37,5	20248	149	246	114	89063	1492	186	158
Littoral	116634	66880	57,3	3229	95	38	61	68128	642	264	377
North	140775	66724	47,4	9016	107	159	75	65718	981	119	159
North West	65386	35471	54,2	1671	37	5	29	35422	465	136	312
West	97071	61008	62,8	1144	60	6	46	61650	684	119	294
South	29105	14521	49,9	2264	23	4	19	14308	208	50	103
Southwest	63515	25439	40,1	1908	36	4	28	25100	351	48	136
<b>NATIONAL</b>	<b>1025427</b>	<b>529913</b>	<b>51,7</b>	<b>53188</b>	<b>728</b>	<b>597</b>	<b>570</b>	<b>527164</b>	<b>7487</b>	<b>1436</b>	<b>2267</b>

Source : DHIS2, 2022

Maternal and perinatal mortality remains high. The performance of assisted deliveries throughout the national territory remains low at 52% (the standard is 80%), Regions with a good performance are: The East (66,3%), The West (62,8%), the Center (62,2%), Adamawa (60,2%) and the Littoral (57,3%). The high number of community births 53188 (10%) could be responsible for this decline from performance. Maternal deaths  
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within hospitals remain high in all regions (between 23 and 149) as well as community deaths, with stillbirths also high (7487). Data validation at all levels would allow confirm whether the notification has improved and therefore guide actions to be taken to improve indicators.

### III- Status of Noncommunicable Diseases (NCDs)

**Table XIII: Status of sickle cell disease, epilepsy and drug abuse, ES 01-52, 2022, Cameroon**

Region	DREPANOCYTOSIS					EPILEPSY					DRUG ADDICTION				
	Case		Death		Case fatality rate (%)	Case		Death		Case fatality rate (%)	Case		Death		Case fatality rate (%)
	Nvx	Accumulation	Nvx	Accumulation		Nvx	Accumulation	Nvx	Accumulation		Nvx	Accumulation	Nvx	Accumulation	
Adamawa	13	53	0	0	0	100	371	0	0	0	1	21	0	0	0
Center	419	1337	4	30	2,24	296	1120	2	11	1	308	1058	0	22	2,1
East	119	218	1	23	10,5	218	905	0	0	0	39	161	1	2	1,2
Far North	110	305	1	4	1,31	187	6568	0	16	0	35	225	0	1	0,4
Littoral	481	793	0	23	3	166	862	0	15	2	16	61	0	12	20
North	3	24	0	0	0	27	208	0	13	0	4	42	0	0	0
Northwest	186	911	5	19	2,1	441	2575	8	54	6,3	65	340	1	1	0
West	96	382	3	43	11	180	650	2	13	2	66	223	0	18	8,1
South	63	190	3	89	47	36	147	0	0	0	15	29	0	0	0
Southwest	54	206	2	3	1	211	952	2	3	0	16	68	0	2	3
<b>National</b>	<b>1544</b>	<b>4419</b>	<b>19</b>	<b>235</b>	<b>5,3</b>	<b>1,862</b>	<b>14358</b>	<b>14</b>	<b>125</b>	<b>1</b>	<b>589</b>	<b>1154</b>	<b>2</b>	<b>58</b>	<b>5,1</b>

Source: DHIS 2, 2022

The regions with a high case fatality rate due to sickle cell disease are: East (10.5%) and South (47%). Also, there is a high case fatality related to drug addiction in the Littoral (20%) and Western (8.1%) regions.

**Table XIV: Situation of hypertension, Diabetes and Alcoholism, year 2022, Cameroon**

Regions	HTA					DIABETES					ALCOHOLISM				
	Case		Death		Case fatality rate (%)	Case		Death		Case fatality rate (%)	Case		Death		Case fatality rate (%)
	Nvx	Accumulation	Nvx	Accumulation		Nvx	Accumulation	Nvx	Accumulation		Nvx	Accumulation	Nvx	Accumulation	
Adamawa	516	2 688	2	9	0,3	361	958	4	14	1	9	22	0	0	0
Center	3152	16 737	10	66	0,4	2850	6 669	56	96	1	72	441	1	0	0
East	513	2 492	3	8	0,3	362	882	10	34	4	154	476	2	14	2,9
Far North	1105	5 598	3	21	0,4	1413	3 898	7	35	1	71	355	0	3	1
Littoral	2351	12 305	3	13	0,1	2561	6 856	12	65	1	32	155	0	1	0,6
North	491	2 806	0	26	0,9	339	1299	2	114	9	17	54	0	9	16
Northwest	483	8 962	0	31	0,3	1027	3 774	5	30	1	203	590	9	0	0
West	1475	4 462	3	11	0,2	1365	3 681	52	99	3	30	60	10	11	18
South	440	11 302	1	45	0,4	246	698	7	24	3	42	113	0	1	1
Southwest	481	2 344	0	4	0,2	693	1 822	4	29	2	58	286	0	3	1
<b>National</b>	<b>11007</b>	<b>69696</b>	<b>25</b>	<b>234</b>	<b>0,3</b>	<b>11217</b>	<b>30 537</b>	<b>159</b>	<b>441</b>	<b>1,4</b>	<b>688</b>	<b>2552</b>	<b>22</b>	<b>52</b>	<b>2</b>

Source: DLMEP/SDLMCNT, 2022

In all regions, the average case fatality is less than 1% for hypertension. The regions with the highest case fatality rates related to alcoholism are: Nord (16%) and West (18%).

**Table XV: Cancer situation, year 2022, Cameroon**

Regions	Suspected cases			Confirmed cases		Supported cases		
	Breast	Cervix	Prostate	Breast	Cervix	Breast	Cervix	Prostate
Adamawa	91	17	8	0	0	0	0	0
Center	11823	158	13	2	4	0	0	0
East	117	0	1	0	0	0	0	0
Far North	541	238	9	1	0	0	0	0
Littoral	299	175	21	2	3	2	0	5
North	433	17	16	0	4	0	4	0
Northwest	276	165	126	0	1	0	0	22
West	393	176	65	18	40	0	11	0
South	29	5	2	1	0	0	0	0
Southwest	139	18	6	0	0	0	0	0
<b>NATIONAL</b>	<b>14 141</b>	<b>969</b>	<b>267</b>	<b>24</b>	<b>52</b>	<b>2</b>	<b>15</b>	<b>27</b>

Source: DLMEP/SDLMCNT, 2022

Breast cancer is the most commonly diagnosed cancer, however management of breast, cervical and prostate cancers is not reported in all regions.

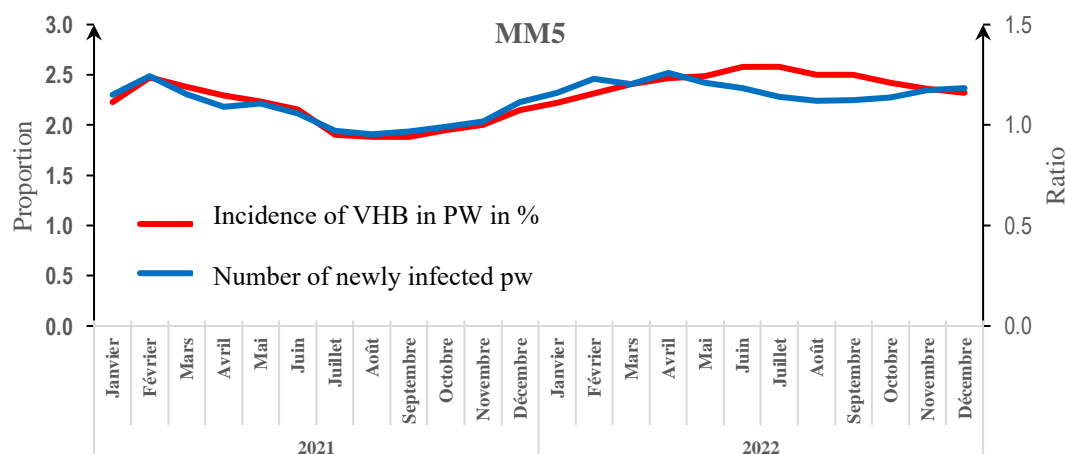
## IV- Status of STIs and hepatitis

**Table XVI: Screening for viral hepatitis B in pregnant women in PNC, 2022**

Regions	FEC registered as CPN1	FEC screened	HIV-positive ECFs	ECFs already known to be HIV positive on first contact	Screening rate %	Evolution compared to 2021		
						Positivity %	Incidence %	%
Adamawa	56987	34954	1442	1000	61,3	4,1	2,5	-5,9
Center	127874	51707	2439	2459	40,4	4,7	1,9	-8,5
East	59848	16756	778	2345	28,0	4,6	1,3	-17,6
Far North	163585	55390	4462	1683	33,9	8,1	2,7	51,0
Littoral	91009	38574	1641	1598	42,4	4,3	1,8	-32,1
North	105083	57925	3935	2320	55,1	6,8	3,7	128,4
Northwest	38268	34449	815	1025	90,0	2,4	2,1	-0,5
West	71115	44982	1528	1536	63,3	3,4	2,1	-7,8
South	19394	8030	423	495	41,4	5,3	2,2	12,1
Southwest	30825	24859	995	1472	80,6	4,0	3,2	-14,1
<b>TOTAL</b>	<b>763988</b>	<b>367626</b>	<b>18458</b>	<b>15933</b>	<b>48,1</b>	<b>5,0</b>	<b>2,4</b>	<b>13,7</b>

Source: DLMEP/SDLVIH, 2022

We recorded 2.4 new HBV infections per 100 pregnant women who came to CPN1, an increase in incidence of 13.7% compared to 2021, with 50.2% (383559/763988) pregnant women received in CPN knowing their HBV status. The highest screening performance was recorded in the North-West and South-West Regions. The Northern and Far North Regions record the most cases with poor screening performance; the regions with the weakest performances being the East, the Far North and the Centre.



**Figure 11: Trend in HBV incidence among pregnant women in PNC by month, 2022**

Throughout the first half of 2022, the trend in the incidence of HBV continued to increase among pregnant women coming to NPC and then gradually decreased throughout the second half of the year. The number of newly infected pregnant women always exceeds that of known pregnant women already infected at their first contact with NPC. However, there is a phase shift between the trend in this ratio and the incidence between May and November 2022, which can be explained by a decline in screening performance during this period.

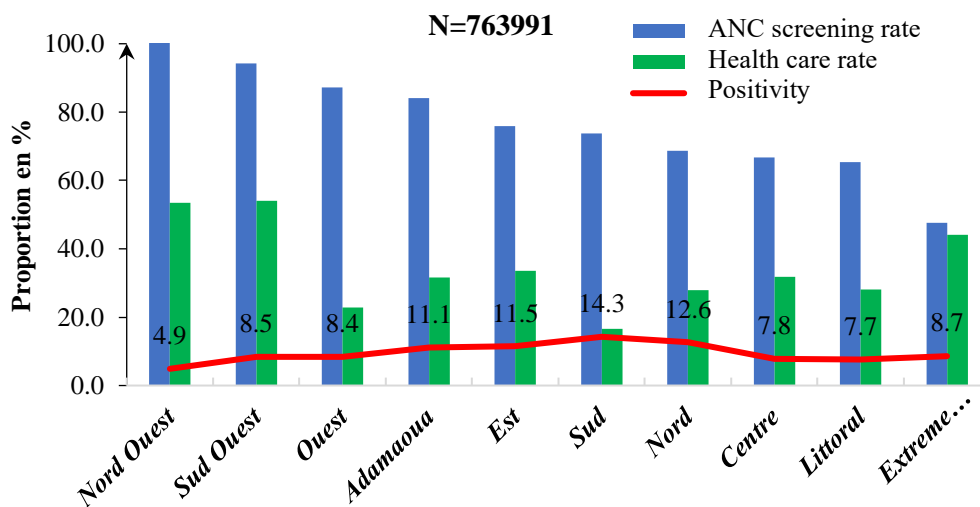


Figure 12: Diagnosis and treatment of syphilis among pregnant women in PNC, 2022

Of the 763,991 pregnant women received CPN1 in 2022, 69.7% (532,627) were tested for syphilis with a positivity rate of 9.2% (49,254). Of the pregnant women diagnosed, only 33.0% or 16,230 were treated with NPC. The Southern Region has the highest positivity rate but with the lowest treatment rate, somewhat similar in the Western Region. The North-West and South-West regions have the highest rates of testing and treatment.

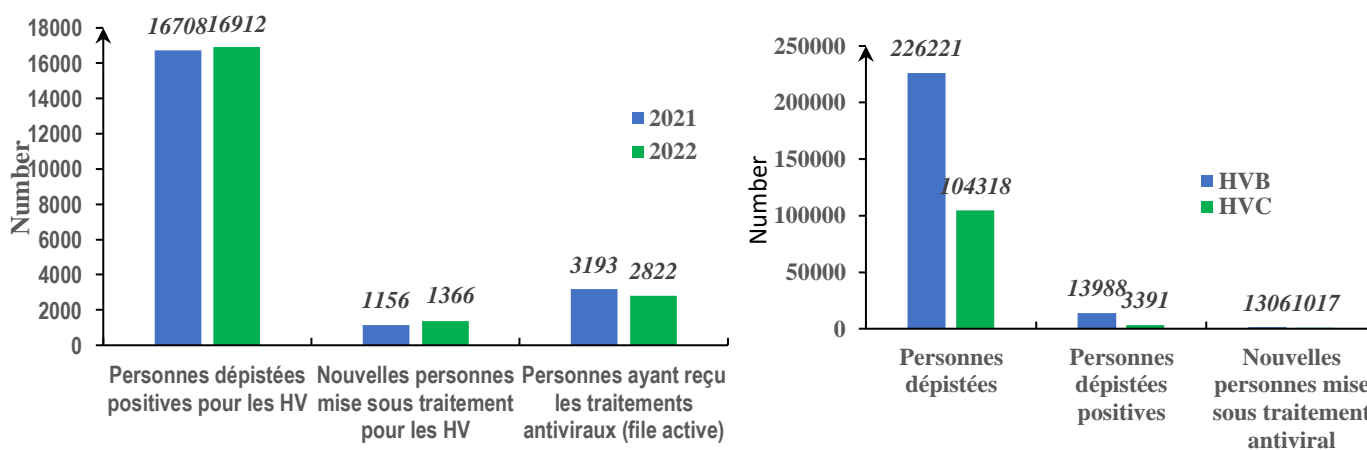


Figure 13: Viral hepatitis management cascade in the general population, 2022

Overall, the number of new people tested positive for viral hepatitis B and C has increased compared to 2021, as has the number of new people put on antiviral treatment. However, the active queue of patients under treatment decreased by 11% compared to 2021. A positivity rate of 6.2% for HBV and 3.3% for HCV was recorded during screening in FOSA, with a treatment linkage rate of 9.3% (1306/13988) and 30.0% (1017/3391) for HBV and HCV respectively.

## V- Preparedness and response activities

### **Measles response**

- In-depth investigations in Mbandjock and Dibombari HDs in December 2022
- Response in 25 HDs faced with outbreaks with the support of MRI, UNICEF and CHAI from October 5 to 9, 2022.

### **Polio response**

- Preparation for the in-depth investigation of the cVDPV2 case in the Mokolo Health District.

### **NNT response**

- Mission for assessing the maintenance of the elimination status of Maternal and Neonatal Tetanus from November 8 to 17, 2022.

### **Response to Covid-19**

- Conduction of the second national seroprevalence survey
- Insertion of Covid-19 data into DHIS2
- Review and update of the quantification of health products for the Covid-19 response.

### **Response to Cholera**

- Support to Regions and Health Districts in the cholera outbreak
- Support in the implementation of the cholera vaccination campaign in the Centre, Littoral, North, West and South-West regions
- Organization of preparatory activities for the implementation of the CATI strategy in the Centre, Far North, East and South West regions
- Training of actors on the Logistics Management of Cholera.

### **Response to mpox**

- Development of monitoring guidelines against mpox
- Finalization of the strategic plan for the prevention and control of mpox.

### **Response to meningitis**

- Supervision and evaluation of the meningitis surveillance system in the ten regions of the country

### **Response to maternal and perinatal deaths**

- Development of a response plan for maternal and perinatal deaths
- Revised technical guidelines for maternal, perinatal death surveillance and response
- National Maternal and Perinatal Death Monitoring and Response Committee.

### **Coaching activities**

- Coaching evaluation for the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> quarters
- Fix outliers and inconsistencies in DHIS2.

### **Viral Hepatitis Response Activity**

- Development of the study protocol and implementation of the STAR project on self-screening for viral hepatitis C in the populations most at risk.
- Participation in the collaborative technical visit for the establishment of a continental program for the prevention and control of Viral Hepatitis in Africa organized by Africa CDC in Cairo, Egypt
- Update and validation of the national guide for the management of sexually transmitted infections with the support of the WHO and national experts.
- Organization and delivery of the technical, organizational and financial audit of the management of viral hepatitis in Cameroon in 2019 which made it possible to reorganize the management of the revolving account for viral hepatitis through.
- Participation in the evaluation of the National Strategic Plan for the fight against HIV, with the aim of taking into consideration the triple elimination of the transmission of HIV, syphilis and viral hepatitis B from mother to child and the management of HIV comorbidities, in particular viral hepatitis, in the financing of the Global Fund for the fight against HIV.

### Emergency Management Month and Public Health Events at Cameroon

The Ministry of Public Health of Cameroon, in collaboration with other sectors and technical and financial partners, has undertaken to organize international meetings on the sharing of experience in the Management of Emergencies and Public Health Events (MEPH). The first three editions of the International Forum on MEPH took place successively in September 2017 and 2018 and in November 2019. The fourth edition took place during the "month of management of emergencies and public health events" held from 31 October to November 11, 2022 in Cameroon under the theme "COVID-19: opportunity to strengthen health systems and control other epidemics". The general objective was to get engaged in the elimination of major public health emergencies in Africa and in Cameroon in particular.

The following activities were carried out during the said month:

- Capacity building seminars on: Integrated Disease Surveillance and Response, the Health and Geographic Information System, First Aid, the Incident Management System, Simulation Exercises and After Actions Reviews;
- A Sub-Regional Tabletop Simulation Exercise on Managing a Monkeypox Outbreak;
- The 4th International Forum on the Management of Public Health Emergencies.

At the end of this important activity, several recommendations emerged, amongst which:

- To establish a continuous training program for those involved in the management of emergencies and public health events;
- To establish a simulation exercises program with capacity building and empowerment of the regions;
- Encourage multisectoral and inter-country collaboration to deal with public health emergencies and events;
- Sustain this experience-sharing initiative in Africa on the management of public health emergencies and events.



Family photo of the international forum on the Management of Public Health Emergencies and Events in Cameroon, Hilton Hotel Yaounde



Opening ceremony chaired by the State Minister, Minister of Higher Education, Representative of the Prime Minister, Head of Government

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