



CAMEROON EPIDEMIOLOGICAL BULLETIN

January - December 2021
From epidemiological week 1-52

No.04/21

Highlights

1. Ongoing cholera epidemic since October 29, 2021, in the South West, then the Centre, South and the Littoral region
2. Measles outbreak with local responses in 30 health districts across the country
3. The 2nd and 3rd wave of the COVID-19 epidemic and introduction of vaccination in the national response strategy
4. Resurgence in confirmed cases of yellow fever
5. Adoption of the 3rd Edition of the IDSR Technical Guide and the National Multi-Risk Preparedness Plan and Response to Public Health Emergencies
6. The first evaluation of the continuity of essential services in the COVID-19 context.

Summary

- I. Epidemiological situation of Epidemic-Prone Diseases and other public health events P1-P9
- II. Surveillance of maternal and perinatal deaths and response P9
- III. Surveillance of chronic, non-communicable diseases P9-P10
- IV. Surveillance of STIs, viral hepatitis P11-P12
- V. Preparation and Event response Activities P12-P13.

I- Epidemiological Situation of Epidemic-Prone Diseases and Other Public Health Events

Completeness and timeliness of reports transmission

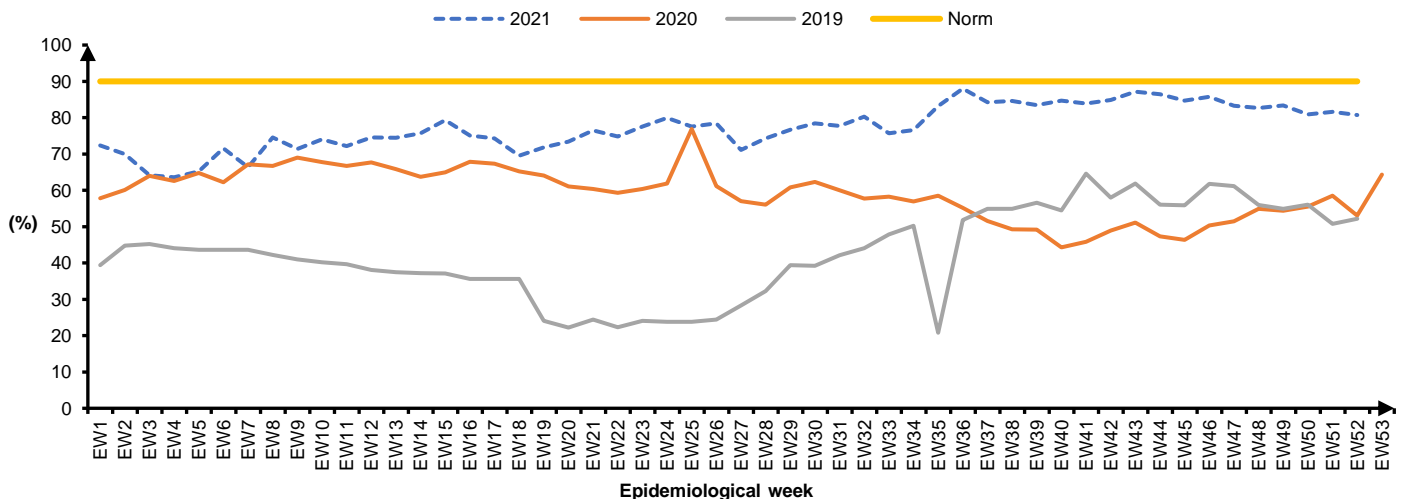


Figure 1: Comparative evolution of the completeness of EPD reports by epidemiological week, 2019-2021, Cameroon

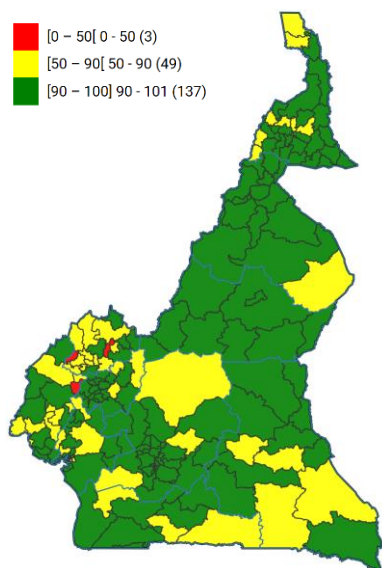


Figure 2: Aggregated completeness of HF reports, October to December, 2021, Cameroon.

Source: DHIS2, 2021

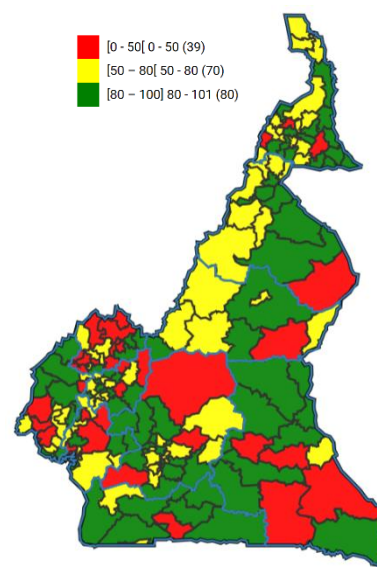


Figure 3: Aggregated timeliness of HF reports, October to December, 2021, Cameroon.

Source: DHIS2, 2021

There is an improvement in the completeness of health facilities reports in DHIS2 in 2021. Compared to the previous two years, with an average of 80%. The implementation of coaching of IDSR actors in regions has probably contributed to the achieving of this result, although this performance remains below the standard 90% (figures 1 and 2). Coaching must be sustained and extended to the Health Districts. Efforts must be made to sensitize the various actors on the importance of transmitting data on time as performance remains low for many districts as illustrated in Figure 3.

Event-Based Surveillance (EBS)

Table I: Completeness and timeliness of EBS reports from the regional level, EW 1 – 52, 2021, Cameroon

Regions	Total expected	Total received	% received	Received on time	% on time
EAST	52	52	100%	43	83%
LITTORAL	52	52	100%	36	69%
SOUTH	52	52	100%	41	79%
NORTH	52	50	96%	11	21%

Completeness standard:

Bad < 50%

Average : 50 – 90%

Good : 90%-100%

Timeliness standard :

Bad < 50%

Average : 50 – 80%

Good : 80%-100%

Table II: Number of signals transformed into events, EW 1 – 52, 2021, Cameroon

Regions	Number of signals	Number of signals transformed into events (%)	Signals integrated in DHIS2 (%)
EAST	1093	971 (88.8)	646 (59.1)
LITTORAL	414	346 (83.6)	211 (51)
NORTH	535	526 (98.3)	356 (66.5)
SOUTH	244	227 (93)	94 (38.5)
Total	2286	2070 (90.6)	1307 (57.2)

Category of the person who notified signals

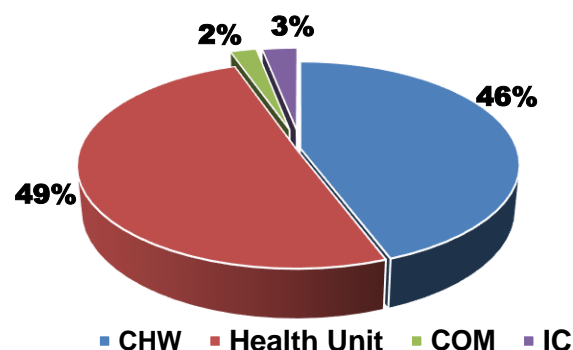


Figure 4: Category of EBS informants, EW 1 - 52, Cameroon
 HF: Health facility
 COM: Community
 IC: Key Informants
 CHW: Community Health Worker

In 2021, 2286 signals were captured, of which 90.6% of them were converted into events (Table II). The great majority of these signals (95%) were notified by the HFs (49%) and CHWs (46%), as shown in figure 4.

To strengthen the EBS, the Adamawa and Far North regions were trained and integrated into the implementation of the EBS through the EWARS platform (Early Warning And Response System) which

has been effective since the 10th Epi Week. In the figure below, we notice a drop in detection during the 3rd quarter. The enrollment of new districts has enabled a relaunch of activities. Nevertheless, only 10% of health districts are trained in EBS, and the lack of sustainable funding (communication credits, internet connection) remains an obstacle to the optimal implementation of this activity.

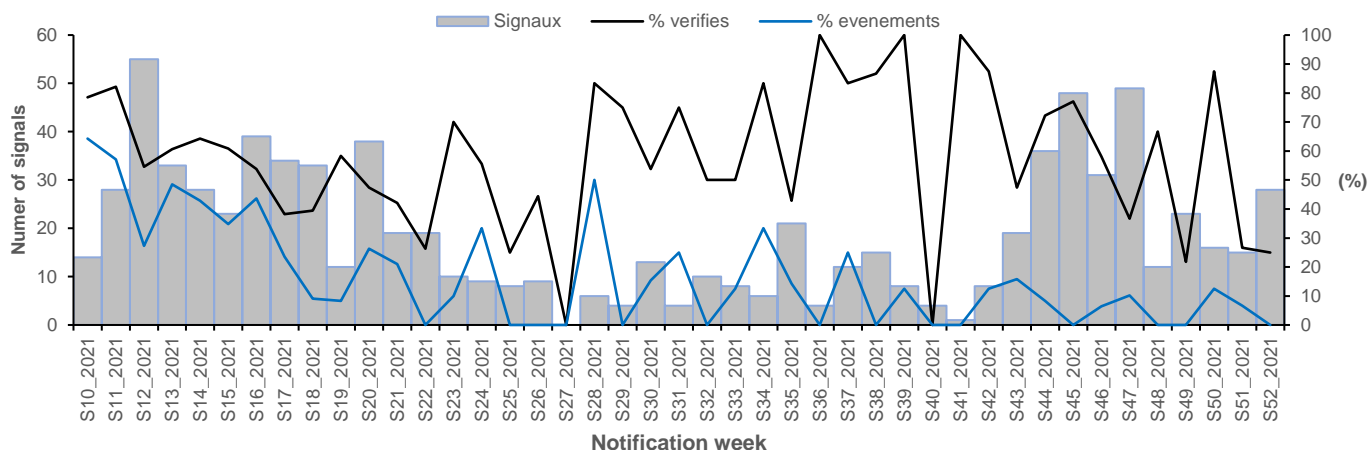


figure5: Evolution of verified signals and events recorded in the EWARS platform, 2021, Cameroon

Table III: Summary of signals / events recorded through the EWARS platform, EW 10 – 52, 2021, Cameroon

Regions	# signals detected	# signals detected within 24 hours	# signals sorted and verified within 24 hours	# events having benefited from the risk assessment within 72 hours
Adamawa	14	6 (42.9)	1 (7.1)	0 (0)
Centre	52	33 (63.5)	22 (42.3)	5 (9.6)
East	43	26 (60.5)	17 (39.5)	3 (7)
Far North	203	135 (66.5)	44 (21.7)	4 (2)
West	40	33 (82.5)	12 (30)	1 (2.5)
North West	292	222 (76)	84 (28.8)	104 (35.6)
South West	373	294 (78.8)	152 (40.8)	145 (38.9)
Total	1017	749 (73.6)	332 (32.6)	262 (25.8)

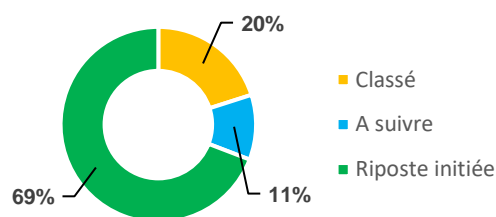


Figure 6: Outcome of events detected, 2021, Cameroon

Out of 1017 signals captured, 73.6% were detected within 24 hours. However, only 32.6% of signals were sorted and verified within 24 hours of submission in the EWARS platform. These indicators reveal not only the involvement of key informants (Community Health Workers and other members of the community) in the early detection of possible public health emergencies, but also the poor follow-up of the implementation of the EBS by health area and district officials after notification of signals.

Indicator-Based Monitoring (IBS)

Table IV: Situation of Epidemic-Prone Diseases and Priority Conditions (EPD), EW 1 to 52, 2021, Cameroon

EPD, PC	Adamawa		Centre		East		Far North		Littoral		North		North West		West		South		South West		Cameroon		
	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	Case	Death	
Anthrax fever	0	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	0
Cholera	0	0	1	0	0	0	9	0	25	1	0	0	0	0	0	0	28	1	465	31	528	33	
Dengue fever	0	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 (less than 5 years old)	768	0	7 426	18	4 303	17	6 549	20	2 449	13	2 181	10	1 861	4	2 402	2	467	2	1 693	0	30 099	86	
Bloody diarrhea	355	0	3 509	9	874	0	2 831	20	995	13	2 164	4	1 216	3	295	9	420	1	903	1	13 562	87	
Dracunculiasis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Poisoning	872	31	3 277	28	253	1	668	6	1 250	20	625	3	2 242	25	262	27	326	2	127	18	9 902	161	
VHF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Typhoid fever	35 010	39	173 846	38	54 962	7	59 183	1	130 208	89	56 420	8	30 672	21	95 109	52	15 316	19	44 227	47	694 953	321	
Meningitis	23	1	461	29	103	6	85	2	156	3	27	3	146	10	111	21	35	2	46	0	1 193	77	
Dog bites	425	0	1 785	18	561	9	1 074	13	935	9	644	3	470	0	703	9	289	9	257	9	7 143	79	
Snake bites	509	7	1 778	2	1 391	4	1 874	28	1 163	0	1 815	30	450	11	876	5	307	1	275	11	10 438	99	
Malaria	188 977	234	609 843	261	204 728	175	562 628	1 115	365 661	243	318 478	633	127 457	104	224 294	241	70 459	59	189 279	91	2 861 804	3 156	
Plague	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rabies	0	0	10	0	9	0	18	7	0	0	1	0	1	0	0	0	0	0	0	0	39	7	
COVID/SARS	1 982	22	4 893	131	1 191	9	819	10	4 771	190	433	7	2 645	51	4 952	117	2 120	25	3 285	101	27 091	663	
Flu syndrome	19 732	21	57 673	11	33 468	18	40 994	22	37 551	7	30 443	15	2 831	0	13 036	11	10 046	0	7 902	11	253 676	116	
Smallpox	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Monkey pox	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

The most notified diseases in 2021 are malaria (73%), typhoid fever (18%) and flu-like illness (7%). Furthermore, no cases were recorded for diseases such as anthrax, Chikungunya and dengue despite the circulation of vectors on the national territory. The surveillance of these diseases needs to be strengthened to improve their early detection.

Meningitis Surveillance

Concerning meningitis surveillance, 1,053 suspected cases, including 35 deaths, were recorded in 2021. The alert threshold was crossed at least once in 27 HDs (14%) in different regions: Centre (07), East (06), North-West (06), Far North (03), Littoral (03), North (01), South (01). Samples collected from only 25 of the suspected cases (2.4%) were analyzed at the reference laboratories with a positivity rate of 20%. The germs identified were *Neisseria meningitidis* W135 and *Escherichia coli*. Surveillance of meningitis must be reinforced because the standard of at least 50% of samples analyzed is far from being reached.

COVID-19 epidemiological situation

Key figures as of 29/12/2021 in Cameroon

- 109,666 confirmed cases
- 1,853 deaths
- 106,108 recoveries (96.8%)
- 660,451 people completely vaccinated (4.7% of the target population)
- 3,756 health care workers infected with 57 deaths
- 580 pregnant women infected with 7 deaths
- 1,705 active cases
- 118 in-patients with 26 (22.0%) on oxygen
- Severity rate: 1.5%

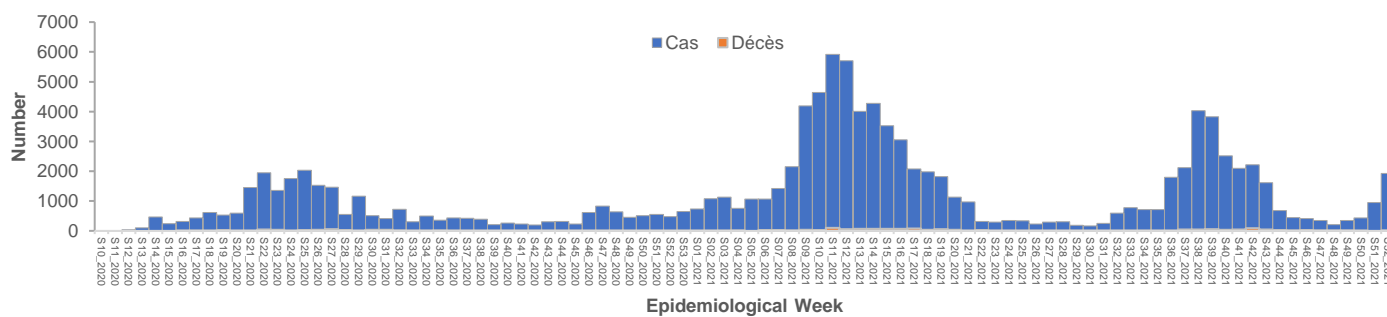


Figure 7: Evolution of COVID-19 cases and deaths, EW10,2020 to EW52,2021, Cameroon

The year 2021 was marked by the occurrence of the second and third waves of the epidemic, with peaks at epi week 11 and epi week 38, respectively.

Table V: Vaccination coverage by region as of 29/12/2021

Regions	Eligible people (+18)	Multiple dose vaccines (Astra Zeneca, Sinopharm and Pfizer)		Single-dose vaccine	Coverage	
		1 st Dose	2 nd Dose	J&J Dose	1 st Dose (%)	2 nd Dose (%)
Adamawa	781 867	28,486	17,801	64,722	11.9	10.5
Centre	2,557,419	47,297	24,983	50,756	3.8	3.0
East	700 632	33,787	15,135	32,825	9.5	6.8
Far North	2,558,411	102,840	50,421	104,863	8.1	6.1
Littoral	2,202,894	25,512	15,758	38,089	2.9	2.4
North	1,543,080	41,928	17,973	78 104	7.8	6.2
North West	962,036	24,916	14,081	46,065	7.4	6.3
West	1,198,821	29,458	16,092	30,551	5.0	3.9
South	460 862	14,663	8,322	16,993	6.9	5.5
South West	978 469	11,810	5,893	11,024	2.3	1.7
TOTAL	13,944,491	360,697	186,459	473,992	6.0	4.7

Vaccination was introduced in the response strategy on April 12, 2021 with the reception of the first doses of the Sinopharm vaccine. Since then, the vaccines available in the country are; Sinopharm, Astra Zeneca, Jansen and Pfizer. Despite the availability of doses of vaccines throughout the national territory and intensified campaigns conducted to improve vaccination coverage, the latter remains at 6.0% for the first doses after eight months of implementation. The percentage of the target population completely vaccinated is 4,7%.

Epidemiological situation of cholera

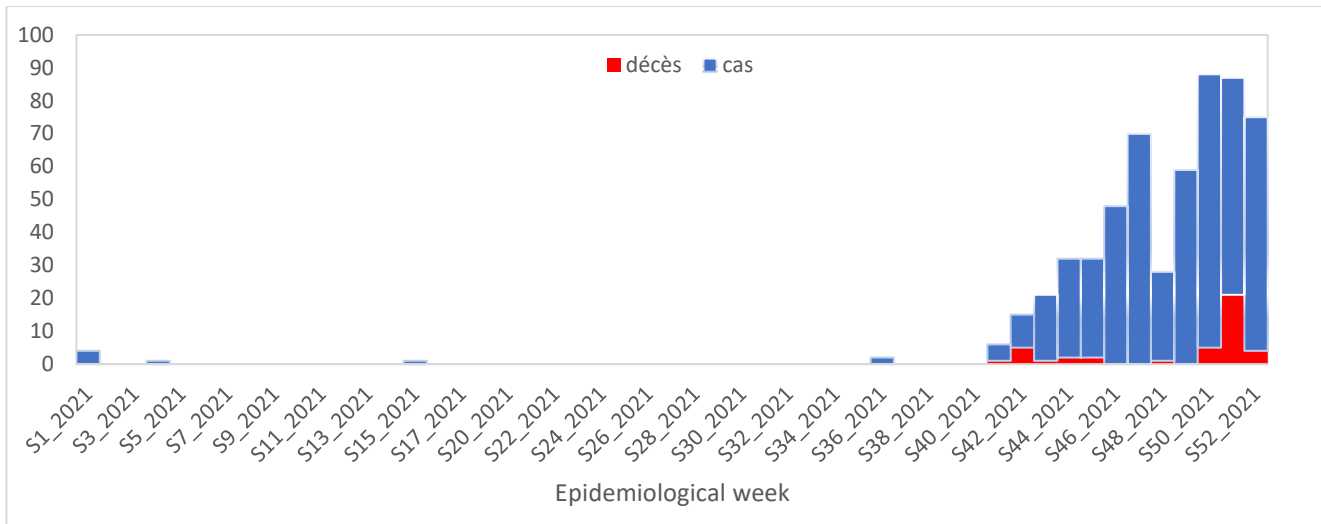


Figure 8: Cholera epidemic curve, EW1-EW52 2021

From October 29 to December 31, 2021, 499 cases of cholera were recorded in the country, including 18 deaths with a case fatality rate of 3.6%. The four active regions for this epidemic are Littoral, South, South-West and Centre, with ten health districts affected. Response activities are carried out locally in the said regions with the support of technical and financial partners. Coordination of the response is done at Public Health Emergency Operations Centre. The incident management system has been activated for this purpose.

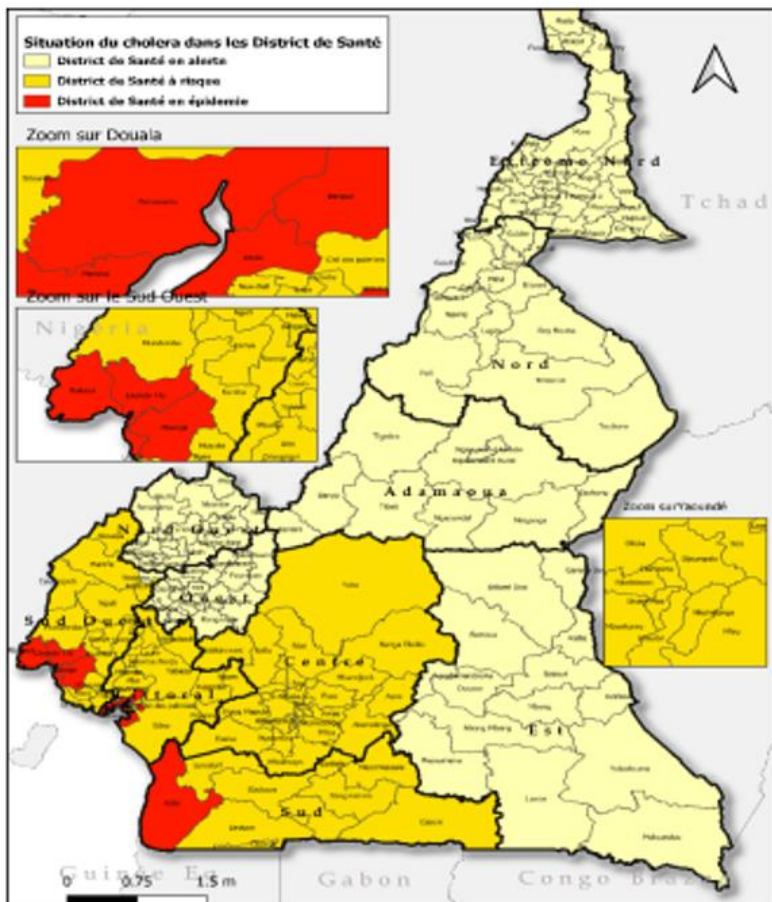


Figure 9: Map of health districts in cholera outbreak, 2021



Picture 1: Reception and delivery of cholera kits by WHO and MSF



Picture 2: Evacuation of patients with cholera



Picture 3: Example of dwelling on stilts houses without a source of potable water

Situation of Vaccine Preventable Diseases (VPDs)

Poliomyelitis situation from epidemiological week 1-52, 2021

Table VI: AFP Surveillance Performance, Epi weeks 1-52 2021, Cameroon

Regions	AFP cases < 15 years investigated		Cases under 15 investigated within 14 days		% of adequate stool (≥90%)		TPFANPA (≥3)		Quality index (≥2)		% of validated cases (≥80%)		% of Samples that arrive at the lab within 03 days (≥80%)		%NPENT (≥10%)		2021 results			Proportion of geolocalized AFP cases (100%)
	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	Compatible	PVS	cVDPV	
Adamawa	51	36	44	31	86.3	86.1	7.4	5.9	6.4	5.1	74.5	94.7	66.7	69.4	5.9	8.3	0	0	0	74.5
Centre	102	88	79	63	77.5	71.6	5.2	4.8	4.1	3.4	92.2	83.3	97.1	93.2	6.9	3.4	0	0	0	81.6
East	51	35	46	29	90.2	82.9	8.4	6.3	7.6	5.2	94.2	83.3	94.1	82.9	9.8	5.7	0	0	0	73.1
Far North	206	166	168	119	81.6	71.7	8.1	6.7	6.6	4.8	86.6	94.6	64.6	59.0	12.1	6.6	0	0	3	65.6
Littoral	79	52	69	41	87.3	78.8	5.0	3.6	4.4	2.8	96.3	94.2	92.4	82.7	7.6	1.9	0	0	0	77.8
North	67	51	58	41	86.6	80.4	4.7	3.6	4.1	2.9	77.6	90.4	86.6	72.5	6.0	0.0	0	0	0	77.6
North West	37	26	30	22	81.1	84.6	4.6	2.7	3.7	2.3	97.3	100.0	45.9	50.0	2.7	0.0	0	0	0	29.7
West	81	78	76	72	93.8	92.3	6.9	7.2	6.5	6.6	96.3	97.5	87.7	67.9	0.0	5.1	0	0	0	89.0
South	32	26	24	20	75.0	76.9	8.5	7.9	6.4	6.1	97.0	81.5	78.1	92.3	3.1	0.0	0	0	0	42.4
South West	17	34	13	21	76.5	61.8	2.4	4.9	1.8	3.0	94.4	94.1	88.2	70.6	11.8	2.9	0	0	0	72.2
CAMEROON	723	592	607	459	84.0	77.5	6.1	5.2	5.1	4.0	89.6	91.9	79.3	72.3	7.5	4.2	0	0	3	71.4

% des selles prélevées dans les 14 jours			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 723 against 592. The annual rate of Non-Polio AFP is 6.1 against 5.2 (norm: ≥3) in 2020. The percentage of adequate stool is 84.0% (below 90% standard) against 77.5% observed in 2020. In the 4th quarter of 2021, 04 cases of Vaccine-Derived Poliovirus type 2 (cVDPV2) was notified, out of which 03 humans sample in the HDs of Goulfey (2) and of Fotokol (1), and 01 environmental sample in the Kousséri HD, all in the Far North region.

Yellow Fever situation from epidemiological week 1-52, 2021

Table VII: Result of Yellow Fever surveillance performance, EW 01-52 2021, Cameroon

Regions	Suspected cases of Yellow Fever investigated and positive cases						% Districts having investigated at least one suspected case (≥80%)		Investigation rate (≥2 cases per 100,000)		Seroneutralization Positive + PCR positive (confirmed case(s))	
	#suspected cases investigated		#Positive Cases (IgM+)		#Positive Cases (PCR+)		2021	2020	2021	2020	2021	2020
	2021	2020	2021	2020	2021	2020						
Adamawa	136	106	5	1	1	0	100.0	88.9	8.9	7.8	5	1
Centre	196	191	3	0	0	0	100.0	83.3	3.9	3.9	3	0
East	68	59	1	0	0	0	92.9	92.9	4.9	5.1	1	0
Far North	238	154	17	0	2	0	100.0	100.0	4.7	3.1	12	0
Littoral	174	128	4	0	1	0	95.8	87.5	4.1	3.2	4	0
North	141	131	4	0	0	0	93.3	100.0	4.6	4.4	4	0
North West	86	68	6	1	0	0	89.5	68.4	4.5	3.0	3	1
West	153	96	3	0	0	0	95.0	95.0	6.5	4.4	3	0
South	93	109	5	0	0	0	100.0	100.0	10.4	13.3	3	0
South West	106	125	1	1	0	0	61.1	66.7	5.6	6.6	0	3
CAMEROON	1391	1167	49	3	4	0	93.1	87.8	5.1	4.4	38	5

% des DS ayant investigué au moins un cas suspect			Taux d'investigation		
[0-50%]	[50% - 80%]	[80% - 100%]	[0-1]	[1-2]	[2 et +]

Overall, Yellow Fever surveillance performance is good throughout the national territory. A total of 38 cases of yellow fever were confirmed, including 34 by seroneutralization and 04 by PCR. Positive cases are distributed in all the regions except for the South West; Far North (12), Adamawa (5), Littoral (4), North (4), Centre (3), North West (3), West (3) South (3) and East (1). In-depth investigations are in progress. Also, there is an urgent need to finalize the preparedness and response plan and implement activities for the elimination of yellow fever by 2030.

Measles situation from epidemiological week 1-52, 2021

Table VIII: Measles surveillance performance results, Cameroon, EW 01-52, 2021.

Regions	Suspected measles cases investigated and positive cases				% Districts having investigated 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)		#Rubella Positive Cases		#Confirmed cases by epidemiological link (Line List)		#Clinically Compatible Case		Measles	
	#Suspected cases investigated		#Laboratory confirmed cases (IgM+)		2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020	2021	2020
	2021	2020	2021	2020																
Adamawa	179	79	25	41	88.9	100.0	11.5	5.8	2.5	0.5	90.2	52.8	1	2	107	29	2	1	134	71
Centre	205	355	42	161	90.0	100.0	4.1	7.3	3.2	2.4	9.3	48.9	5	3	0	66	4	11	46	238
East	156	160	34	78	92.9	85.7	11.5	13.9	3.7	2.7	77.2	112.5	0	1	0	42	73	9	107	129
Far North	351	443	71	83	83.3	90.0	7.0	9.2	2.1	1.4	49.5	77.7	5	4	176	286	4	6	251	375
Littoral	146	204	32	76	83.3	83.3	3.3	5.1	2.5	1.2	8.2	38.6	6	1	0	78	7	1	39	155
North	31	275	6	129	60.0	93.3	1.0	9.3	0.8	2.0	2.3	73.2	0	3	0	79	0	9	6	217
North West	117	59	15	5	89.5	68.4	6.2	2.5	4.4	2.2	18.2	3.1	6	3	14	0	1	2	30	7
West	121	148	32	61	80.0	85.0	5.2	7.0	3.6	2.5	15.9	45.4	6	4	0	32	3	3	35	96
South	122	178	24	23	100.0	100.0	13.3	21.6	10.5	4.0	27.9	176.0	3	2	0	119	5	2	29	144
South West	58	71	10	12	61.1	61.1	3.1	3.8	2.5	3.0	5.3	8.1	2	0	0	1	2	3	12	16
CAMEROON	1486	1972	291	669	82.5	86.2	5.4	7.5	2.9	2.0	25.2	55.2	34	23	297	732	101	47	689	1448

The proportion of HDs investigated at least 01 suspected case of Measles is 82.5%. A total of 31 HDs were declared in the measles epidemic. They are distributed in the Far North (10), East (05), West (04), Adamawa (03), Centre (03), Littoral (02), South (02), North West (01) and South West (1) regions. Of the 31 HDs concerned, 22 (71%) led a local response.

Neonatal Tetanus situation from epidemiological week 1-52, 2021

Table IX: Performance of Neonatal Tetanus surveillance of EW 01-52 2021, Cameroon

REGION	Investigations: EPI database		In-depth Investigation reports	True case of NNT (cases meeting the definition)		HDs haven crossed the threshold	HDs haven led a local response around the case	% HDs HAVEN INVESTIGATED AT LEAST 01 CASE OF NNT
	Cases	Deaths		Cases	Deaths			
Adamawa	1	1	1	1	0	0	1	11.1
Centre	11	1	1	11	1	1	1	33.3
East	8	3	2	8	1	1	0	21.4
Far North	2	0	0	2	0	0	0	6.5
Littoral	2	1	1	2	0	0	0	8.3
North	0	0	0	0	0	0	0	0.0
North West	0	0	0	0	0	0	0	0.0
West	0	0	0	0	0	0	0	0.0
South	5	1	1	5	1	1	2	20.0
South West	2	0	0	2	0	0	0	11.1
Cameroon	31	7	6	31	7	3	4	11.6

In 2021, 31 cases were investigated with 7 deaths. The HD of Esse in the Centre region, Moloundou in the East region and Lolodorf in the South region have crossed the elimination threshold (less than one case per 1000 live births) and 11.6% of HDs have investigated at least 1 case.

II- Surveillance of maternal and perinatal deaths and response

Tale X: Surveillance of maternal and perinatal deaths and response in Cameroon

Regions	Pregnant women expected by trimester 2021	HF births	Proportion of births assisted (%)	Community births	HF Maternal deaths	Community maternal deaths	Reviewed Maternal deaths	HF Still births	Newborn Deaths in the First 24 Hours	Neonatal deaths occurring between 0 and 28 days
Adamawa	62,907	36,730	58.39	3171	47	20	38	762	102	132
Centre	150,437	93,628	62.24	6,104	129	50	96	1,193	343	517
East	48,801	30,430	62.36	5,612	41	38	43	523	112	128
Far North	236,616	82,391	34.82	20,841	166	90	70	1,368	169	141
Littoral	114,075	67,337	59.03	3,971	182	44	67	791	211	358
North	136 152	58 133	42.70	11,357	92	22	62	824	121	108
North West	64,552	34,812	53.93	2,063	39	25	48	534	159	273
West	95,798	65,075	67.93	1997	61	8	87	800	165	279
South	28,647	12,800	44.68	2017	27	5	18	306	48	110
South West	61,831	25,162	40.69	2005	36	24	24	450	82	192
NATIONAL	999 817	506 498	50.66	59 138	820	326	553	7,551	1,512	2,238

Nationwide, the proportion of assisted births was 50.66% in 2021. The Far North region had the lowest proportion of assisted births (34.82%). Stillbirths, which provide information on the quality of prenatal and intrapartum care, are five times higher than newborn deaths within the first 24 hours and three times higher than neonatal deaths between 0 and 28 days. Maternal deaths remained alarming and under-reported. The incident management system has been activated to improve the interventions of the surveillance of maternal, perinatal deaths and response (SDMPR).

III- Situation of Non-Communicable Diseases (NCDs)

Table XI: Situation of sickle cell disease and epilepsy, 4th quarter and cumulative 2021, Cameroon

Regions	SICKLE CELL ANAEMIA					EPILEPSY				
	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)
Adamawa	13	0	44	0	0.0	53	0	220	2	0.9
Centre	288	3	1,304	20	1.5	147	0	917	108	11.8
East	34	0	178	5	2.8	1,099	0	1,646	1	0.1
Far North	85	0	371	18	4.9	184	1	933	10	1.1
Littoral	119	0	556	18	3.2	222	0	689	1	0.1
North	12	0	40	0	0.0	59	0	274	0	0.0
North West	240	1	790	21	2.7	345	0	1,619	0	0.0
West	98	12	427	13	3.0	237	1	953	2	0.2
South	26	0	130	2	1.5	29	0	136	2	1.5
South West	52	3	236	5	2.1	178	2	813	4	0.5
NATIONAL	967	19	4,076	102	2.5	2,553	4	8,200	130	1.6

Source: DHIS 2, 2021

Case fatality rate due to sickle cell disease is very high in the West Region (12.2%) during the fourth quarter of 2021. The Centre and East regions are those which reported the most cases of sickle cell disease (1304) and epilepsy (1646) respectively same year.

Table XII: Situation of hypertension and diabetes, 4th quarter and cumulative, 2021, Cameroon

Regions	HYPERTENSION					DIABETES				
	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)
Adamawa	707	2	3,171	13	0.4	396	4	1,744	21	1.2
Centre	3,103	3	13,780	44	0.3	2,256	21	9,603	103	1.1
East	613	3	2,242	16	0.7	325	5	1,350	26	1.9
Far North	994	8	4,585	32	0.7	1,346	9	5,677	48	0.8
Littoral	2,300	1	10,126	32	0.3	2,029	28	8,779	107	1.2
North	619	14	2,739	46	1.7	357	6	1,839	35	1.9
North West	668	4	2,779	25	0.9	1,009	6	4,567	48	1.1
West	1,735	5	6,633	39	0.6	1,555	25	6,062	287	4.7
South	366	0	1,534	8	0.5	211	4	942	25	2.7
South West	557	9	2,329	30	1.3	720	7	2,991	43	1.4
NATIONAL	11,662	49	49,918	285	0.6	10,204	115	43,554	743	1.7

Source: DHIS 2, 2021

In general as shown in table XII, the case fatality of hypertension hovers around 1% with the North and South-West regions having the highest rates.

Table XIII: Situation of drug addiction and alcoholism, 4th quarter and cumulative, 2021, Cameroon

Regions	SUBSTANCE ADDICTION					ALCOHOLISM				
	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)	Incident cases	Incident deaths	Cumulative cases	Cumulative deaths	Case fatality rate (%)
Adamawa	2	0	12	0	0.0	5	0	30	0	0.0
Centre	181	1	814	2	0.2	64	0	487	4	0.8
East	27	20	114	21	18.4	69	1	290	3	1.0
Far North	31	0	186	1	0.5	41	2	335	8	2.4
Littoral	49	1	140	7	5.0	143	0	249	19	7.6
North	16	0	70	0	0.0	14	0	117	1	0.9
North West	48	0	274	8	2.9	126	1	466	3	0.6
West	79	1	258	95	36.8	19	9	85	9	10.6
South	11	0	47	0	0.0	40	0	126	0	0.0
South West	23	0	75	1	1.3	25	0	179	0	0.0
NATIONAL	467	23	1990	135	6.8	546	13	2,364	47	2.0

Source: DHIS 2, 2021

During the 4th quarter, there was a very high case fatality rate of drug addiction in the East Region (74.1%) and a high case fatality of alcoholism in the West Region (47.4%). In 2021, the West Region recorded the highest case fatality rate due to drug addiction and alcoholism.

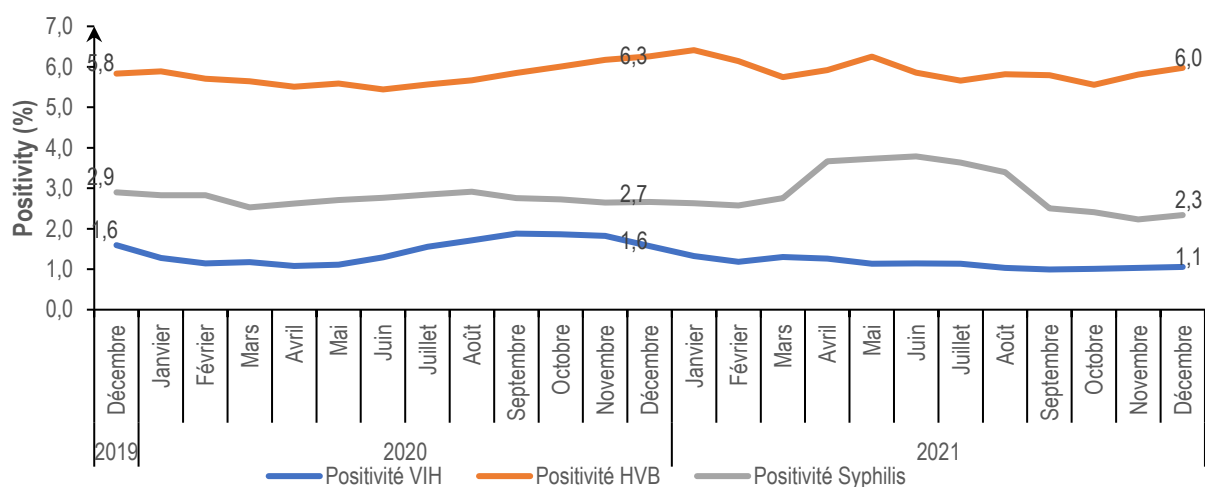
Table XIV: Cancer situation, cumulative 2021, Cameroon

Regions	Suspicious cases			Confirmed cases		Case management		
	Breast	cervix	Prostate	Breast	cervix	Breast	cervix	Prostate
Adamawa	706	84	22	5	11	2	2	0
Centre	111529	551	172	41	28	34	16	0
East	475	25	22	0	0	0	0	0
Far North	2541	94	146	2	1	1	2	0
Littoral	921	701	77	73	48	170	83	20
North	1151	98	87	0	0	0	0	0
North West	888	225	533	2	5	106	20	174
West	566156	242	284	0	2	0	2	0
South	95	24	4	1	5	0	0	1
South West	3467	406	23	21	9	0	0	0
NATIONAL	687 929	2,450	1,370	145	109	313	125	195

Cancer surveillance suffers from a lack of data regarding samples collected and confirmed cases of prostate cancer.

Breast cancer is the most frequently diagnosed cancer, however management of breast, cervical and prostate cancers are not reported in all regions. The number of diagnosed breast cancer shows an increase during the 4th quarter.

IV- Sexually Transmitted Infections (STI) surveillance and viral Hepatitis



Picture 10. Positivity rate of the main STIs among blood donors; December 2019 to December 2021, Cameroon.

There was an upward trend in the VHB positivity rate among blood donors in the fourth quarter of 2021. That of Syphilis was low and that of HIV was a plateau. Overall, VHB remains a major concern among blood donors.

Table XV: Screening for chronic viral hepatitis in health facilities, 2020-2021, Cameroon.

Regions	People screened for VHB 2021	Positivity (%) HVB in 2021	Evolution compared to 2020	People screened for VHC 2021	Positivity (%) VHC in 2021	Evolution compared to 2020
Adamawa	14342	4.9	-16.9	5056	5.8	212.8
Centre	36097	5.9	-15.0			
East	13095	7.1	-4.3	7863	5.7	35.5
Far North	25029	11.1	-5.3	8595	3.0	-1.0
Littoral	34538	6.2	-13.1	18518	5.4	-25.5
North	15283	7.8	-16.2	5077	4.6	91.3
North West	22331	5.5	0.3	8884	2.4	-65.3
West	31501	4.5	-15.1	17176	3.5	-15.2
South	3831	5.6	-26.3	1917	2.5	-28.8
South West	18968	6.1	-20.5	6130	4.9	21.0
National	215015	6.5	-11.9			

Red ≥ National rate

The Far North, North and East regions recorded the highest positivity rates for VHB and the Adamaoua, East and Littoral regions for VHC compared to the national rate. There is an increase in the VHC positivity rate compared to 2020 in the Adamaoua, North, East and South West Regions.

Table XVI: Immunization against viral hepatitis B among exposed children, 2020-2021, Cameroon.

Regions	Children born to VHB+ mothers in the HF 2021	Children exposed per 1000 live births in the HF 2021	Evolution compared to 2020	Exposed children who received HepB0 vaccination within 24 hours after delivery 2021	Hep0 vaccine coverage in exposed children	Evolution compared to 2020
Adamawa	276	8	-20.0	152	55.1	82.0
Centre	786	8	57.5	578	73.5	6.7
East	143	5	118.9	55	38.5	-36.7
Far North	458	6	125.4	346	75.5	14.0
Littoral	718	10	55.7	602	83.8	11.7
North	367	6	40.9	272	74.1	48.9
North West	316	9	19.0	230	72.8	13.2
West	501	8	62.9	438	87.4	11.4
South	130	10	59.5	93	71.5	-20.0
South West	297	11	65.0	240	80.8	-6.2
National	3992	8	48.8	3006	75.3	15.2

Red < 50 Yellow = 50 – 89.9 Green: ≥ 90

The South West, South and Littoral regions recorded the highest number of exposed children of HBsAg+ mothers per 1000 live births. All the regions recorded an increase compared to 2020, except for the Adamawa region. No region reached the standard of Hep0 vaccination coverage in exposed children. However, there is an increase of 15% in the coverage rate compared to 2020, with the East region recording the lowest coverage with a decrease of about 37% compared to 2020.

V- Preparedness and response activities

- Adoption of the 3rd Edition of the IDSR Technical Guide and the Multi-Risk Plan for Preparedness and Response to Health Emergencies (MRP)
- Evaluation of the continuity of essential services in the COVID-19 context
- Incident Management System activated for Polio and Cholera;
- Training of surveillance actors from the Far North and Centre regions on EBS/EWARS
- Elaboration of the preparedness and response plan for meningitis epidemics in Cameroon for the year 2021-2022
- Elaboration of the action plan for the response to cholera
- Pre-positioning of cholera kits in epidemic regions
- Capacity building of health personnel on good practices for the collection, storage and transfer/transport of cholera samples in the South West region
- Elaboration of the response plan against yellow fever epidemics
- Elaboration of the response plan against the cVDPV2 epidemic in the Far North region
- Response in the HDs during a measles epidemic



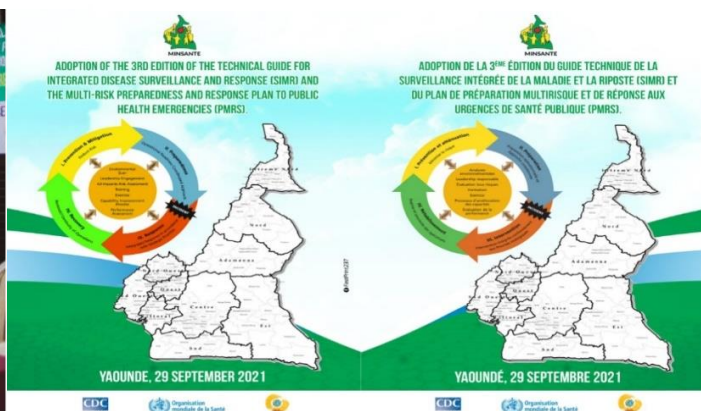
Picture 4: Launch of vaccination against COVID-19 in Cameroon by the Minister of Public Health, April 2021



Picture 5 : Workshop to finalize the Evaluation report for continuity of essential services, Douala, July 2021



Photo6: IDSR technical guide and MRP adoption ceremony, September 2021



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