

## Health Cluster Bulletin September- October 2019

### Context and timeline:

- 8th of September, the federal ministry of health declares a cholera outbreak in Blue Nile state.
- 13th of September, the first case of Cholera reported from Sennar state.
- 4th of October, the FMOH notifies WHO with a Rift Valley outbreak in Rad Sea State.
- 7th of October, the FMOH notifies WHO with a Dengue outbreak in Kassala state.
- 11-17 of October, first phase of the OCV campaign in Sennar and Blue Nile states.
- 19th of October the first case of cholera reported in Khartoum state.
- 7th of November, first case of suspected Cholera in Gazeira State.
- 16- 21 of November, second phase of OCV campaign in Sennar and Blue Nile states.

### Cholera outbreak:

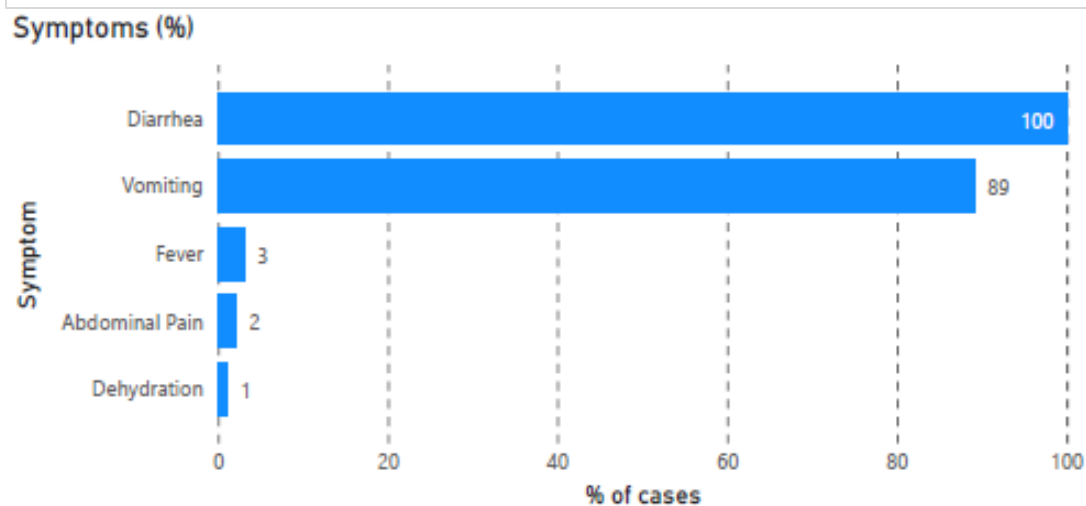
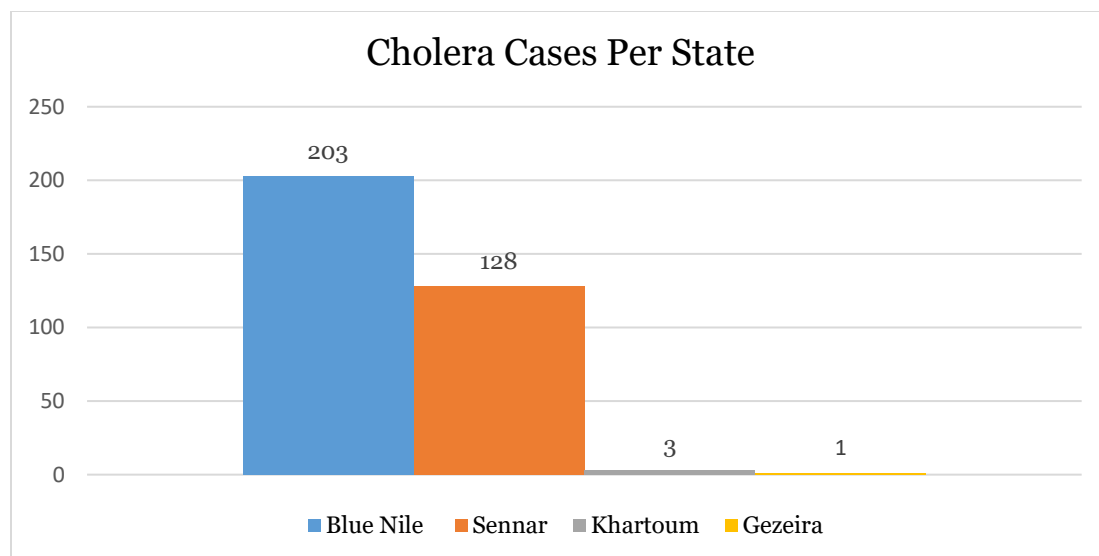
The first cases were reported from Blue Nile State on 2 September 2019. The case finding mission found that the first 4 cases originated from one place, a Funeral house in ELrosieris locality the ( Quneis east), and contracted the infection after being in contact with the body of the deceased index case on the 28<sup>th</sup> of August ( 84 years old ).

On 13 September Sennar State reported six cases from Abu Hugar locality. Case finding mission concluded that the infection was transmitted by 2 of the patients who traveled recently to Blue Nile state. On 19 October the first case in Khartoum was reported from Um Bada. On the 7<sup>th</sup> of November the first laboratory confirmed case was reported from Wad Madni locality, Geizera state.

By the 10<sup>th</sup> of November the total number of reported suspected cholera cases came to 335 cases across all 4 affected states.

State	Total Cases	Attack Rate AR <sup>1</sup>	Case Fatality Ratio
Blue Nile	203	2.5	3.9
Sennar	128	0.7	2.3
Khartoum	3	0.02	0
Gezeira	1	0.018	0
<b>Total</b>	<b>335</b>	<b>0.8</b>	<b>3.3</b>

<sup>1</sup> <https://www.cdc.gov/csels/dsepd/ss1978/lesson3/section2.html>.



Response:

#### Coordination:

Emergency Operation Centre (EOC) activated and daily meetings at FMOH where epidemiologic situation and response updates are presented and discussed. Similar operation centers have been activated across affected states with daily health partner meetings chaired by the state ministries enabling information sharing and daily updates from the field at real time.

The inter sector cluster group ISCG facilitated by OCHA conducted weekly inter-sectorial meetings to discuss readiness and response in affected and high risk states. A comprehensive readiness and response plan has been developed detailing health, WASH, and nutrition activities in support to the ongoing response.

### Case management:

In Blue Nile a total of 7 cholera treatment centers CTCs and cholera treatment units CTUs have been supported by health partners ( WHO,MSF-Spain, IMC, WVI, Pancare), 8 centers and units in Sinnar state ( WHO, MSF-Swiss, SCI), 2 in Khartoum ( MSF-Swiss, and SCI), one in Gazeria with further 5 sites identified to be activated (WHO)

WHO trained/refreshed of training 49 rapid response teams RRTs (9 in Blue Nile and 7 in Sinnar, 5 in Khartoum, 9 West Darfur, 14 North Darfur, 5 Central Darfur) and ongoing for other high risk states. Over 270 health staff were trained on case definition and infection prevention and control by WHO. In addition, 25 cholera kits were provided by WHO enough for 2500 severe cases, 4000 rapid cholera tests were distributed to the states. UNICEF provided 11 AWD kits and established 5 Oral Rehydration points in each of Blue Nile and Sinnar states.

### Surveillance and laboratory support:

An international laboratory consultant brought by WHO conducted a rapid assessment of capacities and readiness of National Public Health Lab (NPHL) in Khartoum and 23 peripheral laboratories in Sinnar and Blue Nile states during 6-24 October 2019. In addition, WHO procured and supported the NPHL and State PHL with supplies, reagents and equipment including Personal Protection Equipment PPEs.

The surveillance system in affected states was fully activated, 150 health facilities out of 152 in Blue Nile (99%), and 361 facilities out of 378 ( 95%) in Sinnar reported suspected cases on daily bases . in addition, WHO activated 17 community based surveillance CBS sites (14 Blue Nile and 3 Sinnar) through training of 120 volunteers.

### Water, Sanitation and Hygiene WASH:

In Blue Nile state, the chlorination coverage in urban network system reached 68.0%, however, the water quality monitoring showed 24.3% standard levels of free residual chlorine FRC in tested sites (standard FRC is 0.2-0.5 mg/L at consumption point). Similarly, the standard chlorination coverage outside of the network reached 46.0% and the water quality monitoring for standard FRC was 13.4%. About 34.0% of water donkey carts, 19.0% of Jarcants, 100% of khoruj, 100.0% of Storage tank, and 100% of installed water bladders were chlorinated particularly in area with unprotected water supply. In Sinnar state, the levels of standard FRC in 1086 tested samples from inside and outside the network reached 42%.

#### Partner's contribution to WASH activities in Blue Nile state.

Partner	Contributions
SWC	Chlorination of water network
UNICEF	Two Oxfam tanks units, 4 bladders, rent water tanker, chlorine tablet, chlorine tablet & powder, pool testers, H <sub>2</sub> S and DPD <sub>1</sub> , chlorination cost (both inside network and identified open sources) for six localities namely Roseries, Damazine, Tadamon, Geissan, Bau and Kurmuk. UNICEF also provide soap, family hygiene kits, Jerricans and IEC materials. Hygiene awareness campaigns in all cholera affected localities including the training of volunteers for health promotion activities and water chlorination. UNICEF also provided drugs (diarrhea kits, ringer lactate and ORS for cholera treatment at CTCs including nutrition supplies). In addition UNICEF rented 6 vehicles to SMOH for case management, health promotion and water chlorination activities.
WHO	5 mine water kits, 200 box of DPD <sub>1</sub> & Phenol red, 300 bottle of H <sub>2</sub> S, 100 PPE, operation cost for Water quality mentoring cover all localities, chlorination's for Roseires, disinfection, training of community volunteers, and five days hygiene awareness campaign, incentives for Damazin & El Roseires CTCs' staff, provision of cleaning & electricity materials to El Roseires CTC, provision of furniture, drugs & operation to Goni CTU.
CORD/PA	Full component for WASH activities in Wad Almahi locality
Pancare/ WVI	Full component for WASH & CTUs activities in four villages in Kurmuk locality
Pancare	Full component of CTUs & hygiene promotion in two villages (Abego & Gamberda) in Kurmuk locality
SRCS/ UNICEF	Chlorination in Geissan & Bau localities. Participation of volunteers in hygiene promotion, awareness campaigns & CTCs activities in six localities (volunteers of SRCS)
IRW	Full package of hygiene & awareness campaigns in three localities (Damazine, El Roseires & Geissan)
ICRC	Liquid Chlorine 100 L 200 sets of PPEs 5 water bladders 2000 ORS sachets

#### Oral Cholera vaccine campaign:

On 23 October 2019, the World Health Organization announced the successful completion of the first round of the oral cholera vaccination (OCV) campaign in eight high-risk localities in Blue Nile and Sennar states. The oral cholera vaccines have been mobilized by the World Health Organization (WHO), UNICEF and FMOH through coordination with the International Cholera Coordination Group (ICG). The first round of the campaign was launched by the Federal Ministry of Health (FMoH), WHO, and partners on 11 October 2019. The vaccine was administered to above one year of age population through fixed sites and mobile teams in the targeted areas. The campaign targeted an estimated 1.65 million people (1 year and older) with 3.3 million doses of oral cholera vaccine (two doses each). As of the fifth day of the first phase of the campaign, the cumulative coverage reached was 97.4 per cent in Sennar and 78 per cent in Blue Nile. The campaign was extended for an additional two days to reach people missed in targeted localities in both states. The second phase is planned for the period of 17-21 of September 2019 to administer the second dose necessary to achieve the required protection.

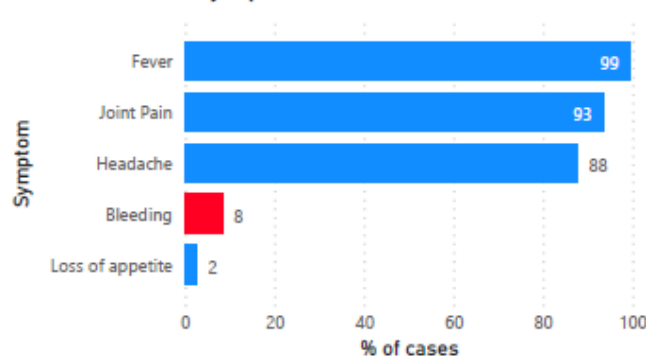
## Dengue outbreak:

While 9 states are affected by the Dengue outbreak, Kassala was the most affected with 1685 cases reported by the 11<sup>th</sup> of November. The total number of cases reached 1793 cases with attach rate AR of 2.76/10,000 and case fatality ratio CFR of 0.3 %. Symptoms included fever (99%), joint pain (93%), headache (88%), and bleeding (8%).

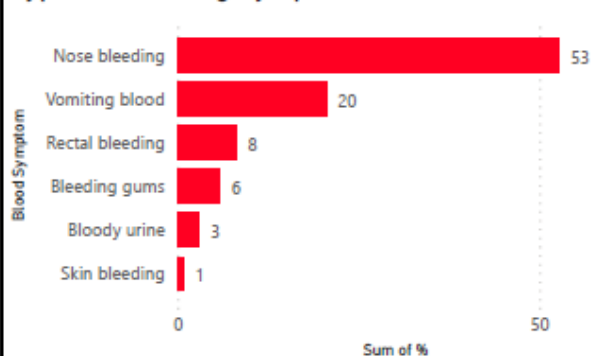
### Distribution of Dengue cases by locality (FMOH)

State	Localities	Dengue fever cases on 11 Nov 2019				Cumulative Dengue fever cases up to 11 Nov 2019			
		Cases	Death	CFR	AR/10000	Cases	Death	CFR	AR/10000
Kassala	Kassala	97	0	-	2.03	1487	1	0.1	31.10
	West Kassala	2	0	-	0.1	79	0	0.0	4.24
	Refy Kassala	5	0	-	0.0	115	2	0.0	5.45
	Halfa Aljadedda	0	0	-	0.0	2	0	0.0	0.09
	Algerba	0	0	-	0.0	2	0	0.0	0.09
Total		104	0	-	0.77	1685	3	0.2	12.93
North Darfur	Melet	0	0	-	0.0	2	0	0.0	0.02
	Alfasher	0	0	-	0.0	25	0	0.0	0.98
	kalamindo	0	0	-	0.0	1	1	100.0	0.08
	Alkooma	0	0	-	0.0	1	0	0.0	0.28
	Om Kadadh	0	0	-	0.0	2	0	0.0	0.17
	Allaet	0	0	-	0.0	1	0	0.0	0.08
Total		0	0	-	0.00	32	1	3.1	0.20
Red Sea	Portsudan	0	0	-	0.0	9	0	0.0	0.17
Total		0	0	-	0	9	0	0.0	0.17
South Darfur	Alradom	0	0	-	0.0	3	0	0.0	0.14
Total		0	0	-	0	3	0	0.0	0.14
West Darfur	Krinek	1	0	-	0.0	40	1	0.0	0.70
	Algnina	0	0	-	0.0	4	0	0.0	0.10
	Serba	0	0	-	0.0	4	0	0.0	0.32
	Habela	2	0	-	0.0	6	0	0.0	0.49
Total		3	0	-	0	54	1	1.9	0.44
Algdaref	Arahed	0	0	-	0.0	1	0	0.0	0.04
	Alglabat Alshreya	0	0	-	0.0	1	0	0.0	0.06
Total		0	0	-	0	2	0	0.0	0.05
North Kordofan	Om Rwaba	0	0	-	0.0	1	0	0.0	0.02
Total		0	0	-	0	1	0	0.0	0.02
Sennar	Aldender	0	0	-	0.0	2	1	0.0	0.06
Total		0	0	-	0	2	1	50.0	0.06
East Darfur	Baher Alarab	0	0	-	0.0	2	0	0.0	0.11
	Aldeaan	0	0	-	0.0	2	0	0.0	0.08
	Adeela	0	0	-	0.0	1	0	0.0	0.05
Total		0	0	-	0	5	0	0.0	0.12
Total		107	0	0	0.16	1793	6	0.3	2.76

### Distribution of Symptoms



### Types of Bleeding Symptom



Response:

40 rapid response kits RRKs (to cover the health needs of 160,000 people for 3 month) distributed by WHO in the targeted states to support the response to DF and other outbreaks. Further 114 Supplementary IEHK are in pipeline. West Darfur, WHO in September trained 48 officers from the localities on surveillance and EWARN and currently is planning to enhance the surveillance via orientations and on-job training for surveillance officers and supporting the rehabilitation of isolation center in Kirinik locality. In addition, WHO with UNICEF and FMOH printed and distributed 50,000 DF posters and 100,000 leaflets.

In North Darfur, SMOH distributed long lasting insecticide treated bed nets (LLITN) in all nine affected localities. Information, education and communication (IEC) materials have been distributed and 36,540 houses in El Fasher, Tawila, El Koma and Shangil Tobaya localities have been reached with awareness sessions. In addition, 141,246 people have benefited from integrated vector control interventions.

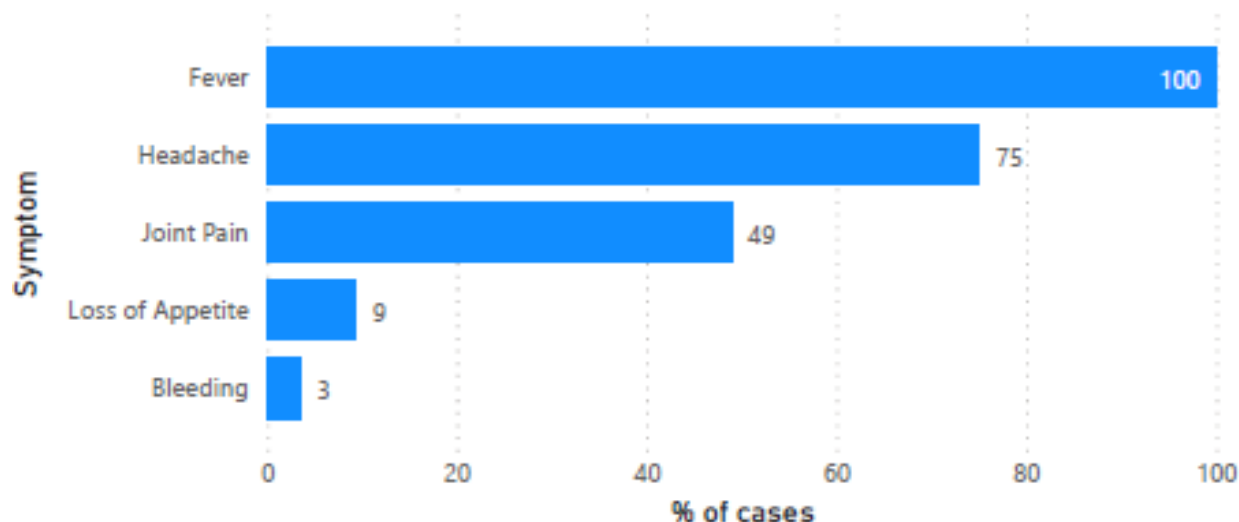
### Rift Valley fever outbreak (as of the 11<sup>th</sup> of November):

RVF is endemic in Sudan. Although most RVF infections are subclinical or mild, up to 10% of the cases may develop severe symptoms including ocular disease, or encephalitis. The CFR is high among patients who develop hemorrhagic fever. On 10 October 2019, WHO was notified through IHR of cases of human RVF cases in the Arb'at are, Towashan Village, in El Ganeb locality within the State of Red Sea. The first cases of RVF presented to the health facilities in Red Sea State on 19 September 2019. Blood samples were taken from five cases and sent to the National Public Health Laboratory in Khartoum for RVF confirmation. All tested positive by IgM ELISA and RT-PCR. The cases presented with high grade fever, headache, joint pain, with or without vomiting. On 13 October 2019, WHO was notified of 10 suspected human RVF cases in Barbar and Abu Hamed localities in River Nile State. Five samples were tested for RVF by PCR and four showed a positive result.

### Distribution of Rift Valley Fever cases (FMOH)

State	localities	Rift Valley fever cases on 11 Nov 2019				Cumulative Rift Valley fever cases up to 11 Nov 2019			
		Cases	Death	CFR	AR/10000	Cases	Death	CFR	AR/10000
Red Sea	Alganab wa Alawieb	0	0	-	0.00	120	2	1.7	35.00
Total		0	0	-	0.00	120	2	1.7	35.00
River Nile	Barbar	0	0	-	0.0	152	1	0.7	7.82
	Abu Hamed	0	0	-	0.0	4	3	75	0.21
	Atbara	0	0	-	0.0	3	0	0	0.20
	Aldamar	2	0	-	0.0	8	2	25	0.22
	Almatama	0	0	-	0.0	1	1	100	0.05
Total		2	0	-	0	168	7	4.2	1.53
Khartoum	East Nile	0	0	-	0.0	1	1	0.0	0.01
Total		0	0	-	0	1	1	100.0	0.01
White Nile	Aljablen	0	0	-	0.0	1	0	0.0	0.03
Total		0	0	-	0	1	0	0.0	0.01
Kassala	Kassala	0	0	-	0.0	1	0	0.0	0.02
	Wad Alhlew	0	0	-	0.0	1	1	0.0	0.07
Total		0	0	-	0	2	1	50.0	0.03
Algdaref	Algdaref	0	0	-	0.0	1	0	0.0	0.03
Total		0	0	-	0	1	0	0.0	0.03
Total		2	0	-	0.01	293	11	3.8	0.74

## Distribution of Symptoms



Response:

### Red Sea State

- Activation of an RVF task force committee
- Printing and distribution of 100 copies of RVF guidelines
- Deployment of surveillance teams for daily reporting and active case finding in the affected areas
- Establishment of 2 health centres and 1 dispensary with a capacity of 11 beds; provision of laboratory, drugs, and other supplies to health services in the affected villages
- 131 medical staff were trained on viral hemorrhagic fevers (VHF) case definitions and case management in Haya and Port Sudan
- An isolation center has been established in Tagadom hospital
- Implementation of household inspection and fogging: In Arbaat, out of 452 households inspected, 30 were found positive (2%) for the presence of a competent vector; fogging was provided to 1,053 households and 15 farms; In Port Sudan, out of 1,225 households inspected, 29 were found positive (2%) for the competent vector, and fogging was provided to 1,949 households
- Inspection of 1,549 potential outdoor breeding sites of which 18 (1%) were positive for vector larvae
- The Veterinary Epidemiology Department of the Ministry of Animal resources conducted vector control in 4 animal enclosures and in the affected villages.

### River Nile State

- A joint investigation conducted by the State Ministry of Health (SMOH) and WHO
- Development of an RVF Action plan by the SMOH and the WHO has been initiated
- UNICEF supported Integrated Vector Management (IVM), case management, surveillance; health promotion campaign reached 13,600 people

### CERF Allocations to Cholera Response in Sudan 2019

Agency	Agency Project	Sector	Window	Approved Amount
United Nations Children's Fund	Integrated three-months response to the cholera epidemic	Water and Sanitation	Rapid Response	\$1,450,006
World Health Organization	Integrated response to cholera outbreak in the Republic of Sudan	Health	Rapid Response	\$1,150,000
United Nations High Commissioner for Refugees	Cholera prevention through strengthening community health and hygiene practices in White Nile refugee camps and Khartoum Open areas	Water and Sanitation	Rapid Response	\$399,883
<b>Total</b>				<b>\$2,999,889</b>

### SHF Allocations to Cholera Response in Sudan 2019

AORD (Alsalam Organization for Rehabilitation and Development)	Response to Cholera Outbreak in Blue Nile state	Cholera response	8 Months	\$249,998.01
IRW (Islamic Relief Worldwide)	Public Awareness Campaign in Cholera-Affected Populations in Sinnar and Blue Nile States	Cholera response	6 Months	\$312,438.72
UNICEF (United Nations Children's Fund)	Lifesaving supplies and interventions for AWD/cholera and floods-affected children and communities.	Floods & Cholera response	6 Months	\$2,406,915.80
WHO (World Health Organization)	Access to life-saving health services and response to, and prevention of cholera outbreak for the communities affected by floods and other vulnerabilities in 17 states of Sudan.	Floods & Cholera response	6 Months	\$2,999,999.66
<b>Total</b>				<b>\$5,969,352.19</b>

### Contacts:

Dr. Kais AL Dairi  
Health Cluster Coordinator  
[aldairik@who.int](mailto:aldairik@who.int)

Dr. Babiker Ahmed Ali Magboul.  
Federal Ministry of Health  
[babkerali@yahoo.com](mailto:babkerali@yahoo.com)

Mr. SALIH, Muhyeldeem Abdalla Mohammadi  
IMO  
[msalih@who.int](mailto:msalih@who.int)