



Malaria and VHF Outbreak in Darfur, Sudan
Situation Report No 07, covering the period 16 to 20 November 2015
Federal Ministry of Health | World Health Organization



Highlights

- In the period of 29th August to 20th November, 2015 a total of 428 suspected VHF cases including 119 deaths were reported in South, East, Central, West and North Darfur. 36 cases and 6 deaths have been added to the line list including 25 cases and 4 deaths re-classified to the previous weeks, and 11 new cases and 2 deaths for the present reporting period.
- Laboratory analysis of 84 samples collected from cases, revealed 6 positives for Dengue fever (DF) in Central Darfur, 10 positive for DF in West Darfur and 1 positive for DF in North Darfur; 8 positive for West Nile virus and 1 positive for Chikungunya. All the samples tested negative for Yellow fever, Crimean Congo Haemorrhagic Fever (CCHF), and Rift Valley Fever.
- From 108 samples collected from contacts, 24 tested positive for DF (2 in Central Darfur, 20 in West Darfur, and 1 in each of North and East Darfur) using ELISA IgM. Laboratory analysis also showed 1 positive for West Nile, and 3 positive for Chikungunya. Since the last reporting period, one new sample from Central Darfur tested positive for DF. All the samples tested negative for Yellow fever, CCHF, and Rift Valley Fever.
- Initial results of samples sent to the Institute Pasteur in Dakar showed that all were NEGATIVE by RT-PCR for Ebola Sudan, Ebola Zaire, Marburg virus, Rift Valley Fever, CCHF, West Nile, Chikungunya, Yellow Fever, and Zika viruses.
- Some of the samples were inconclusively positive by RT-PCR for Dengue fever and some inconclusive for Yellow fever. This was mainly due to inadequate volume of sera.
- Further confirmatory tests are underway by Institute Pasteur, Dakar.
- On 19th November 23 samples were sent to the Robert Koch Institute in Germany.

Epidemiology

- 23 localities in Greater Darfur are currently affected by the outbreak (Zalingei, Azoom, Mukjer, Nertity, Wadi Salih, Bendecy, Keraink, Genaina, Habila, Beida, Sirba, Alseraif, Saraf Omra, Aliaat, Elfashir, Kubum, Belail, Kass, Eddaein, Asslaya, Adeela Alsalam and Bahr Alarab localities).
- Additional two localities are now affected by the outbreak: Alsalam (in South Darfur) and Bahar Alarab (in East Darfur).
- About 67.3% of the reported cases are from West Darfur, 13.8% from Central Darfur, 14% from North Darfur, 3% from East Darfur and 1.9% are from South Darfur.
- 53% of all reported cases are males and 47% are females.
- Age distribution of the cases: 4.9% in the age group 0-1.9 years, 13.8% in the age group 2-4.9 years, 45.8% in the age group 5-14.9 years, 21% in the age group 15-29.9 years, 7.8% in the age group 30-44.9 years and 6.7% in the age group ≥45 years.
- No evidence of person to person transmission, as well as no reported cases among medical staff
- No neurological or ocular signs were reported among affected cases
- Ongoing veterinary surveys show no evidence of infection and no reports of perished animals or abortions.

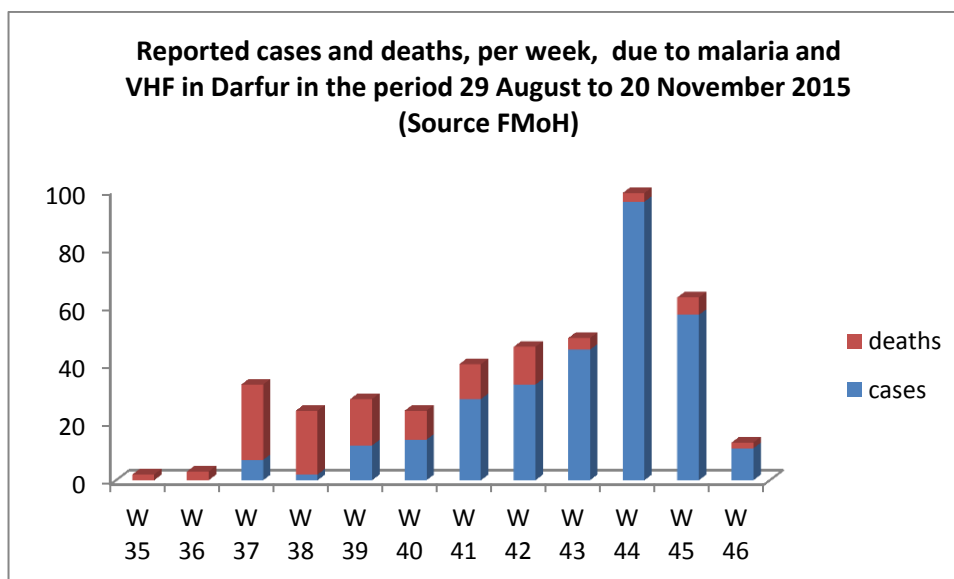
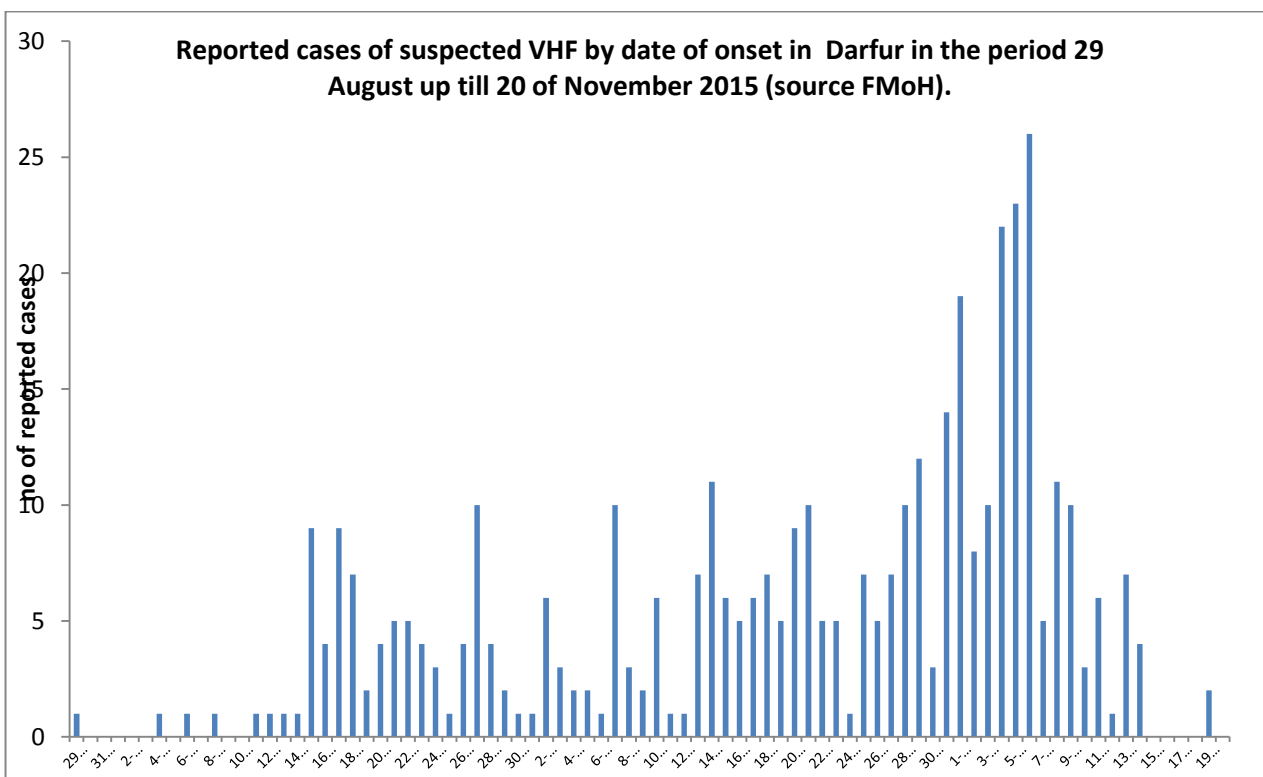
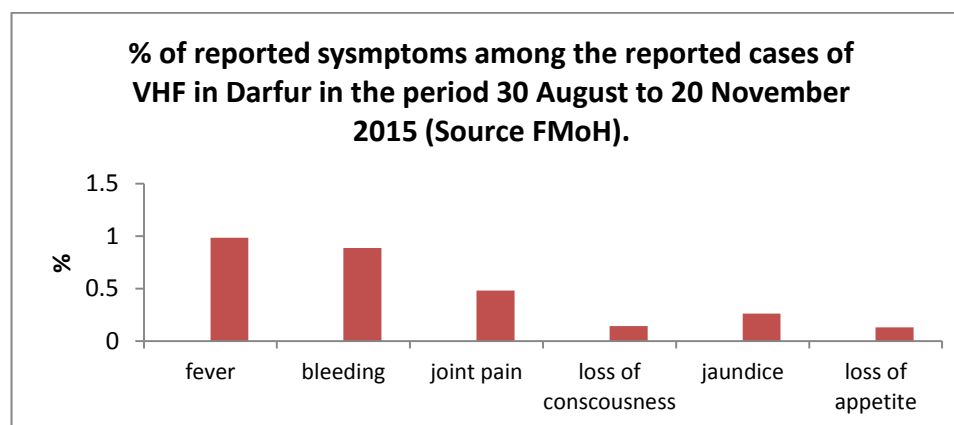


Table below shows attack rate (AR); case fatality rate (CFR); and date of last reported case, per locality, in Darfur in the period 29th August up to 20 November 2015.

State	Locality	No. of Cases	No. of Deaths	CFR	AR/10000	Date of Last Case Admitted	Date of Last Case Reported
Central Darfur	Zalingei	35	5	14	1.32	20-Nov-15	21-Nov-15
	Azoom	5	5	100	0.82	15-Nov-15	16-Nov-15
	Mukjer	8	1	13	1.17	12-Nov-15	14-Nov-15
	Nertity	6	1	17	0.36	16-Nov-15	17-Nov-15
	Wadi Salih	3	0	0	0.13	2-Nov-15	3-Nov-15

	Bendecy	2	0	0	0.29	17-Nov-15	18-Nov-15
	Total	59	12	20.3	0.69		
West Darfur	Keraink	221	77	35	6.77	19-Nov-15	18-Nov-15
	Genaina	64	11	17	2.12	18-Nov-15	18-Nov-15
	Habela	1	1	100	0.12	31-Oct-15	31-Oct-15
	Beida	1	0	0	0.07	1-Nov-15	4-Nov-15
	Sirba	1	0	0	0.09	5-Nov-15	6-Nov-15
	Total	288	89	30.9	2.96		
North Darfur	Alseraif	55	14	25	8.32	18-Nov-15	19-Nov-15
	Saraf Omra	1	1	100	0.12	7-Oct-15	8-Oct-15
	Aliaat	2	1	50	0.24	5-Nov-15	8-Nov-15
	El Fashir	2	0	0	0.03	14-Nov-15	16-Nov-15
	Total	60	16	26.7	0.63		
South Darfur	Kubum	2	0	0	0.06	5-Nov-15	8-Nov-15
	Belail	2	0	0	0.11	18-Nov-15	18-Nov-15
	Kass	3	0	0	0.03	13-Nov-15	14-Nov-15
	Alsalam	1	0	0	0.09	17-Nov-15	18-Nov-15
	Total	8	0	0	0.05		
East Darfur	Eddaein	7	2	29	0.43	13-Nov-15	15-Nov-15
	Asalaya	4	0	0	0.28	14-Nov-15	15-Nov-15
	Adeela	1	0	0	0.08	1-Nov-15	1-Nov-15
	Bahar Arab	1	0	0	0.06	18-Nov-15	19-Nov-15
	Total	13	2	15.4	0.22		
Total		428	119	27.8	0.87		

The most frequent symptoms are fever (98.4%), bleeding (88.6%), joint pain (48.1%) and jaundice (26.2%), please see below.



Actions taken

- 2nd batch of 23 blood samples mostly from Keraink locality were sent on 19th November to

Robert Koch Institute in Germany

- WHO continued to support the vector control activities with additional 6268 households (40,800 individuals) covered by larvicide in Eddaein, Tulus, Kass, Edelfursan, Buram and Elserief, and Um Jawa. WHO and MOH implemented integrated vector control activities in South Darfur, Tulus town and Kass (IDP) with almost 30,000 HHs (195,000 individuals and 95% coverage of the target) covered. These activities are now ongoing in Buram, Ed Fursan and Nyala localities. In addition WHO supported the larvicide fogging and spraying of more than 1300 households (around 8500 individuals) in Sereif town. The planning for the expansion of the integrated vector control in Billel, parts of East Jabal Mara Geraida almost finalized and about to start.
- WHO and MSF Spain conducted health education reaching 23,000 people in Sereif and Um Jawa, and jointly with MOH covered 7,000 households in Tulus and Edelfursan with health messages on prevention and management of VHF. The plan for a large scale risk communication and health education in 8 localities in West Darfur and 8 localities in Central Darfur finalized by WHO jointly with SMOHs and partners and includes; printing of communication materials, regular radio messages for 2 weeks, media interviews, press conferences and sessions in mosques, schools and markets.
- MSF in West Darfur continues to support the treatment centre and running of 2 mobile clinics one in Kerindang IDP camp and Kernik
- MSF in El Sereif beside the support of treatment centre expanded the health promotion activities jointly with WHO
- Save the children continues the health promotion in Kerenik and Morni
- WR conducts active case finding (one mobile clinic) and health education in Umtojock areas
- IMC supported with vehicles and CHW the vector control activities in Kernik, Geneina and Beida, and continue to provide services at PHC level (WHO provided additional medicines to fill in the gaps)
- UNICEF supported health promotion activities in four localities of West Darfur (Geneina, Kreneik, Sirba, Habilla) and reached 7,350 individuals through household visits, school awareness sessions and community religious leaders, donated five PHC kits, antimalarial drugs, RDTs and released 20,000 LLINs (long life insecticide treated nets) for central and west Darfur. With support from UNICEF four national organizations; NADA, SIBRA, RCDO, and ASSEST have started the health education in Geneina and Kernik. UNICEF also supported health promotion activities in 5 localities of Central Darfur (Zalingi, Azoom, Bindis, West jabal Mara and Wadi Salih),
- The health sector partners are actively participating in state task force meetings and contributing to the response in areas of surveillance, active case finding, case management and community awareness.

Recommendations

- Additional blood samples collected from patients to be sent to Dakar collaborative centre
- WHO to deploy additional expert technical team, especially expatriate epidemiologists and laboratory experts, including the deployment of field laboratory (mini-laboratory); awaiting visa processes.
- Expand the engagement of families and communities in prevention activities including:

elimination of adult mosquitoes by indoor spraying, search for and destroy larva breeding sites in and surrounding household, to prevent mosquito egg-laying, sleep under impregnated mosquito bed nets (protect against malaria and reduce the mosquito population), wear protective clothing and use mosquito repellents.

- Strengthening of the surveillance: FMOH, international agencies and NGOs to expand the existing surveillance system by adding more sentinel site in Keraink and deploy team to operate the closed clinic. To maintain steady record of entomological indices in order to guide vector control.

Status of Viral Hemorrhagic Fever (VHF) and Malaria in Darfur States as of 20 November, 2015

