Highlights

- In the period of 29th August to 27th November, 2015 a total of 469 suspected VHF cases including 120 deaths were reported in South, East, Central, West and North Darfur. 41 cases and 1 death have been added to the line list including; 32 cases and 1 death were re-classified and referred back to the previous weeks. 9 new cases and 0 death were reported during week no 47 (ending on 27th of November 2015).
- Laboratory analysis of 84 samples collected from cases, revealed 6 positives for Dengue fever in Central Darfur, 10 positive in West Darfur and 1 positive in North Darfur; 8 positive for West Nile virus and 1 positive for Chikungunya. All the samples tested negative for Yellow fever, Crimean Congo Hemorrhagic Fever (CCHF), and Rift Valley Fever.
- From 108 samples collected from contacts, 24 tested positive 24 Dengue (2 in Central Darfur, 20 in West Darfur, and 1 positive 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.
- Final results of samples sent to Pasteur Institute in Dakar showed inconclusive positive results, by RT-PCR, for Dengue fever (1 sample) and Yellow fever (4 samples). The rest of samples were negative, by RT-PCR, for Ebola Sudan, Ebola Zaire, Marburg virus, Rift Valley Fever, CCHF, West Nile, Chikungunya, Yellow Fever, and Zika viruses.

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Epidemiology

- 27 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 4 localities are now affected by the outbreak: Um Dukhun (in Central Darfur), Nyala Shimal and Sharq Algabal in South Darfur) and Alfirdos in East Darfur.
- About 63.1% of the reported cases are from West Darfur, 14.5% from Central Darfur, 14.5% from North Darfur, 3% from East Darfur and 4.9% are from South Darfur.
- 53% of all reported cases are males and 47% are females.
- Age distribution of the cases: 4.7% in the age group 0-1.9 years, 13.2% in the age group 2-4.9 years, 45.7% in the age group 5-14.9 years, 21.7% in the age group 15-29.9 years, 8.1% in the age group 30-44.9 years and 6.6% 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,
- No neurological or ocular signs were reported among affected cases.

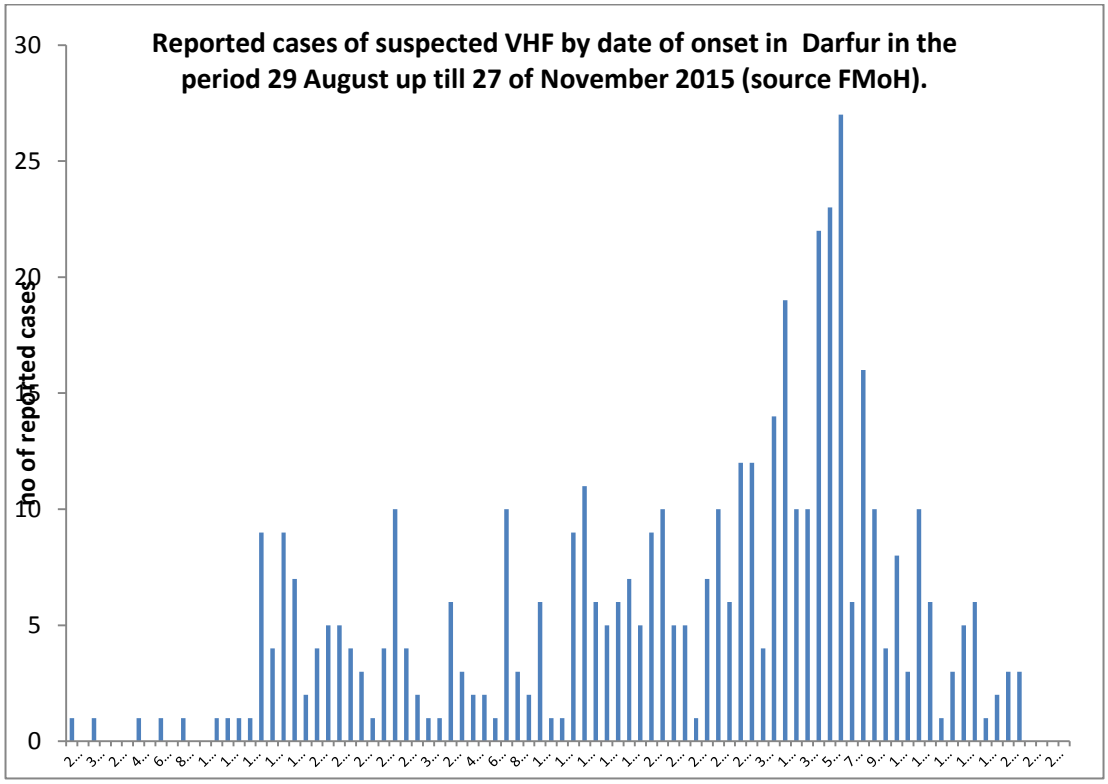


Fig below shows the weekly reported cases and deaths in Darfur in the period W 35 to W 47, 2015 (ending on 27th of November, 2015).

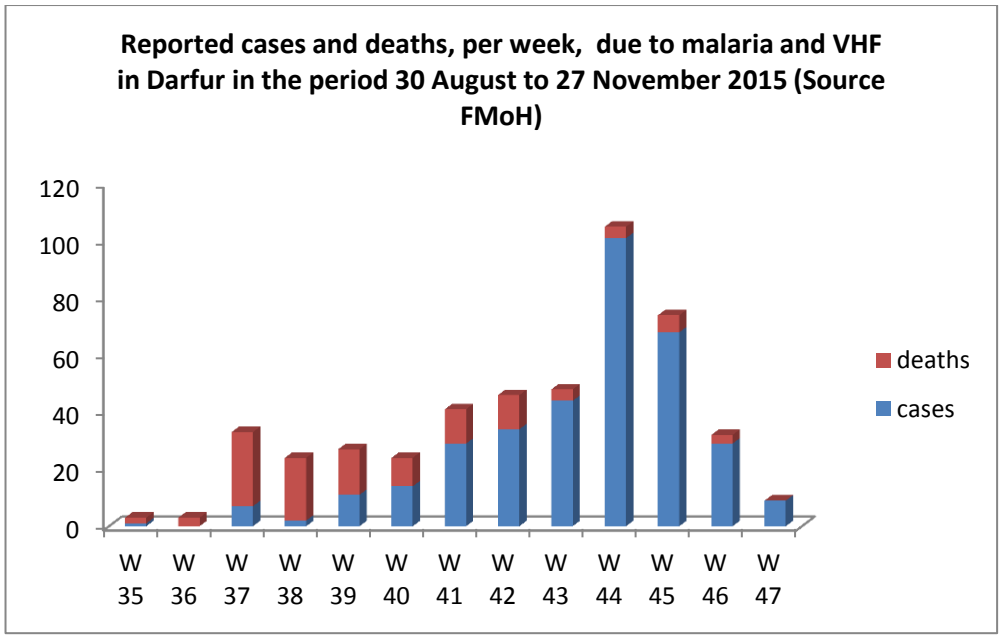
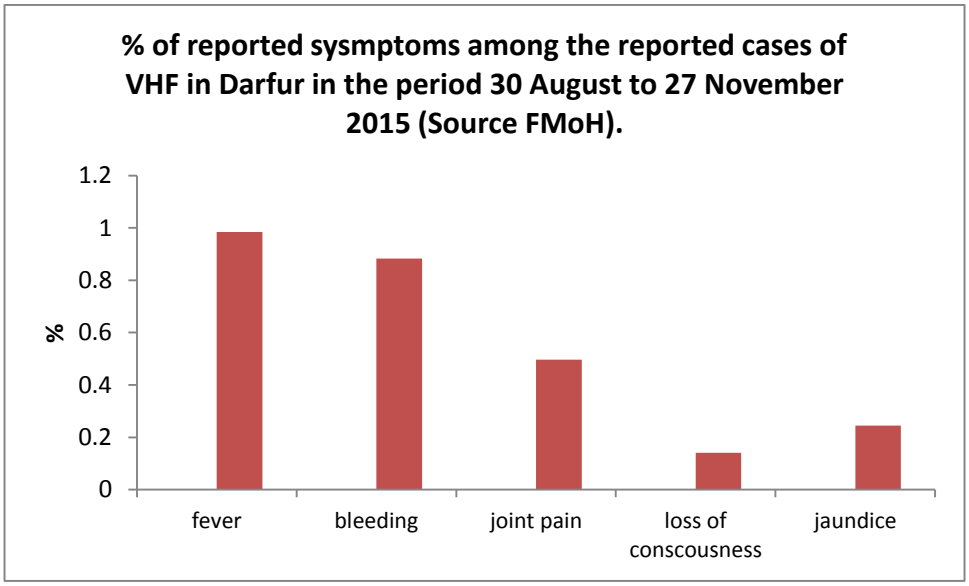


Table below shows attack rate (AR); case fatality rate (CFR); and date of last reported case, per locality, in Darfur in the period 29th August up to 27 November 2015.

State	Locality	No. of Cases	No. of Deaths	CFR	AR/10000	Date of Last Case Admitted	Date of Last Case Reported
Central Darfur	Zalingei	43	6	14	1.62	25-Nov-15	25-Nov-15
	Azoom	4	4	100	0.66	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
	Um Dukhun	2	0	0	0.25	24-Nov-15	24-Nov-15
	Total	68	12	20.3	0.72		
West Darfur	Keraink	225	78	35	6.89	26-Nov-15	27-Nov-15
	Genaina	68	11	16	2.25	24-Nov-15	25-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	296	90	30.4	3.05		
North Darfur	Alseraif	63	13	21	9.53	25-Nov-15	26-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	68	15	22.1	0.71		
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	6	0	0	0.07	15-Nov-15	22-Nov-15
	Alsalam	1	0	0	0.09	17-Nov-15	18-Nov-15
	Sharq Algabal	11	1	9.1	2.11	21-Nov-15	24-Nov-15
	Nyala Shimal	1	0	0	0.01	21-Nov-15	23-Nov-15
	Total	23	1	4.3	0.10		
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
	Alfirdos	1	0	0	0.09	27-Nov-15	27-Nov-15
	Total	14	2	14.3	0.20		
Total		469	120	25.6	0.78		

The most frequent symptoms are fever (98.5%), bleeding (88.3%), and joint pain (49.7%) and jaundice (24.5%), please see below.



Actions taken

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- WHO is deploying mini lab to support filed diagnosis and strengthen capacity of Central Public Laboratory to diagnose the current outbreak. The mini-lab will be assembled from IP, Dakar are expected to arrive Sudan shortly. Expatriate epidemiologist is expected to arrive to Sudan 29th November, 2015.
- WHO deployed expert to support blood transfusion facility at field hospitals in Darfur. This deployment was preceded by comprehensive field assessment regarding blood ttransusion facilities in Darfur.
- 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 Elsereif, 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 larivicide 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.
- MSF-E is providing support to Elseref Rural hospital to ensure proper case management while there is need for active case finding in the villages in Elseref locality through mobile clinics.
- With WHO support, SMoH trained 30 health staff working in Elseref town on “case definition and management “and “infection prevention and universal precautions.”
- UNICEF supported SMoH in conducting local radio discussions on VHF prevention practices targeting 385,700 persons in West Darfur state. And has supported broadcasting of 12 radio drama spots on VHF through the radio channel FM90. These drama spots used to be broadcasted three times per day. In Krenik locality hygiene promotion materials have been distributed to 35,796 population through conduction of a total of 11,767 home visits. Also 3,165 of nomads have been covered with health promotion messages through 633 households’ visits. Awareness sessions have been also conducted in 29 primary and secondary schools covering 15,695 students. Through market awareness raising sessions 90 persons have been reached. A

total of 236 persons received health promotion messages in awareness session conducted in Krenik hospital. In Geneina, 46,072 persons (including IDPs in camps) have been covered by health promotion messages. A total of 5,061 households' visits have been implemented. 5,746 students received VHF messages in 9 primary and secondary schools. 301 persons were reached with VHF messages in Durti clinic, Ardamata clinic, and Durti water yard through awareness raising sessions. Market sessions have covered 3,980 individual from Ardamata area with VHF messages.

- 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 Center
- 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.