

## Current major event

### Diphtheria outbreak in South Darfur, Sudan

On 16 February 2021, surveillance officers in South Darfur state reported five probable diphtheria cases among nomads to the expanded programme on immunization at the federal level. A joint outbreak investigation team from the state Ministry of Health, the federal Ministry of Health and WHO was deployed to investigate this alert and implement appropriate control and prevention measures.

#### Editorial note

During the investigation of the said diphtheria alert the team found 14 probable cases and 11 deaths among children under 15 years of age reported from Buram locality with clinical manifestations similar to diphtheria. Samples were collected from three probable cases and sent to the national public health laboratory. One case was confirmed by culture on 25 February while the other two cases were confirmed by PCR test on 28 February. A joint mission was deployed to investigate the outbreak. Through active case finding, cases were detected, tested and managed clinically. The availability of drugs and diphtheria anti-toxins at Buram hospital were ensured. A coverage survey for 90 houses around the cases was conducted to identify the vaccination status in the affected locality (*see table*). A limited campaign was conducted to vaccinate total of 772 children (399 with the pentavalent vaccine and 373 with the Tetanus-Diphtheria vaccine). A community awareness campaign on immunization was conducted to enhanced health-seeking behaviour.

The extended armed conflict in Darfur, a region in western Sudan, has severely affected the health and nutrition indicators aggravated by poor coverage of primary health centre facilities, limited accessibility to these services, and low vaccination coverage particularly in rural areas. Routine immunization services are covering less than 25% of the target population nationwide. Service provision depends mainly on accelerated campaigns that are conducted in rounds. Since 2011, the re-emergence of vaccine-preventable diseases has been reported in Darfur, including diphtheria, measles and whooping cough. The last outbreak of diphtheria was reported in 2019-2020 where 87 suspected cases were reported including 12 deaths from 7 localities and 6 states in Sudan including in Darfur.

In 2021, a strategic risk assessment was conducted to guide the development of a national multi-hazard health emergency preparedness plan. Diphtheria was one of the high-risk hazards identified in Sudan based on

## All hazards risk matrix, Sudan, 2021

Impact	Critical		Ebola			
	Severe			Measles Diphtheria Drought Industrial Hazards Rift Valley Fever Yellow Fever	Armed Conflict Cholera Economic Crisis	Floods Malaria COVID-19
	Moderate			Chikungunya Meningitis Polio	Dengue Fever	
	Minor					
	Negligible					
		Very unlikely	Unlikely	Likely	Very likely	Almost certain
Likelihood						

### Vaccination coverage survey for targeted age group, South Darfur, Sudan, 2021

Age group	Not vaccinated	Partially vaccinated
< 1 year	40	8
1-7 years	96	9
8-15 years	57	10

its health consequences, likelihood, high severity, and increased vulnerability, with a lower copying capacity, and sever impact in terms of high morbidity and mortality levels especially among children (*see above*).

In Sudan, 34 localities in 11 states were identified as a priority for implementing the 2021 plan to prevent and control diphtheria where 251 646 children (90% of those under the age of 1 year) living in at-risk localities were targeted for full immunization. The main objective is to prevent the occurrence of outbreaks and reduce morbidity and mortality due to vaccine preventable diseases (VPD) in high risk localities of Sudan by the end of 2021.

The health emergency preparedness plan and its key interventions and strategies help strengthen the capacities of local health systems to rapidly detect and respond appropriately to VPD outbreaks; adopt and expand on the three vaccination strategies to boost immunization coverage; support diphtheria campaigns as a response to outbreaks; improve cold-chain systems in order to ensure immunization safety; ensure proper case management and access to free-of-charge services to all patients; enhance social mobilization and public awareness to increase uptake of vaccines focusing on hard-to-reach and vulnerable populations; advocate for the timely use of vaccines in response to outbreaks and humanitarian emergencies; and support outbreak response campaigns for diphtheria in localities with confirmed outbreaks as resources permit.

### Update on outbreaks

in the Eastern Mediterranean Region

#### COVID-19 in 22 EMR countries

#### Current public health events of concern

[cumulative N° of cases (deaths), CFR %]

#### Coronavirus disease 2019 (COVID-19): 2019-2021

Afghanistan	[57 898 (2546), 4.4%]
Bahrain	[163 113 (588), 0.4%]
Djibouti	[10 412 (114), 1.1%]
Egypt	[215 484 (12 694), 5.9%]
Iran (Islamic Republic of)	[2 215 445 (66 327), 3%]
Iraq	[970 987 (14 948), 1.5%]
Jordan	[683 466 (8187), 1.2%]
Kuwait	[255 860 (1440), 0.6%]
Lebanon	[508 503 (6886), 1.4%]
Libya	[171 880 (2869), 1.7%]
Morocco	[505 447 (8944), 1.8%]
occupied Palestinian territory (oPt)	[308 579 (3251), 1.1%]
Oman	[176 668 (1821), 1%]
Pakistan	[756 285 (16 243), 2.1%]
Qatar	[195 757 (376), 0.2%]
Saudi Arabia	[404 054 (6810), 1.7%]
Somalia	[12 837 (656), 5.1%]
Sudan	[33 022 (2208), 6.7%]
Syrian Arab Republic	[21 004 (1437), 6.8%]
Tunisia	[283 976 (9717), 3.4%]
United Arab Emirates	[495 224 (1550), 0.3%]
Yemen	[5774 (1120), 19.4%]