

Current major event

Measles Outbreak in Tunisia

On 10 April 2019, the Ministry of Health of Tunisia declared an outbreak of measles. Between January 1 and 13 June, a total of 3644 suspected measles cases and 34 associated deaths were reported from all governorates. Majority of cases were reported from Kasserin, Kairouan, and Sfax governorates. The most affected age groups were children <1 year of age (34%), followed by adults >30 years of age (26%). Moreover, 48% of cases identified were unvaccinated.

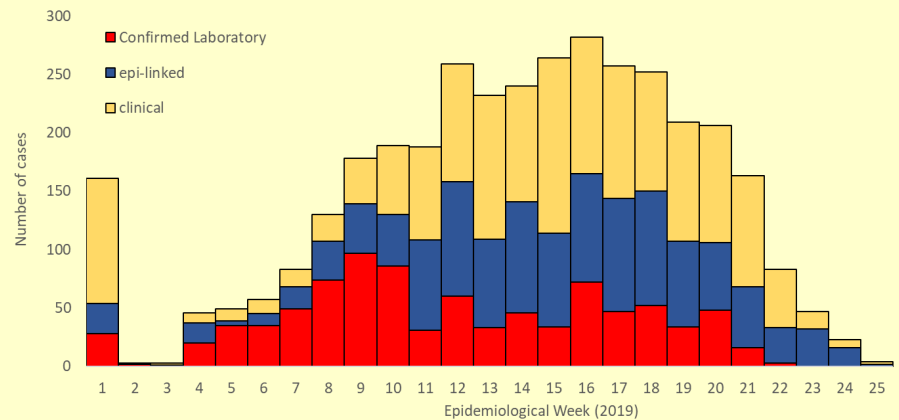
Editorial note

Prior to introduction of measles vaccine in the national immunization programme, measles was the second leading cause of infant mortality in Tunisia. The vaccine was introduced into the national immunization programme in 1979. From 1983 to 1998, a monovalent vaccine was administered in a two-dose schedule at 9 months and 15 months. The vaccination schedule was changed in 1999 to administration at 15 months and 6 years (i.e. at school entry). Since then, excellent efforts were made to increase the coverage of the two doses.

Tunisia has successfully achieved high immunization coverage (exceeding 90%) over the past 10 years. This has resulted in significant reduction of measles deaths and interruption of indigenous measles transmission in the country. However, due to accumulation of unvaccinated susceptible cohorts, Tunisia continues to experience small-scale outbreaks of measles, for example in 2002 (72 cases) and in 2012 (48 cases). These outbreaks have been associated with imported cases of measles and the current outbreak is no exception, as it is believed to have started from a case imported from Algeria. The protracted humanitarian crisis and collapse of the health system in Libya has also led to large measles outbreaks in the country; and so, Libya is also believed to be a likely source of importation of measles to Tunisia.

The current outbreak is considered the largest measles outbreak in Tunisia to date. It started in January 11, 2019, when the first case (one-month-old in-patient) was reported from Sfax governorate. The case developed fever and rash after 20 days of treatment for meningococcal meningitis. Due to poor infection prevention and control measures in the hospital, nosocomial transmission occurred and resulted in the transmission of the outbreak into the communi-

Weekly distribution of measles cases, Tunisia, 11 January -13 June, 2019 (N=3644)



Geographical distribution of suspected measles cases, Tunisia, 2019

Governorate	Cases	Percentage
Kasserine	1654	45.39%
Kairouan	517	14.19%
Sfax	275	7.55%
Sidi Bouzid	201	5.52%
Gabes	165	4.53%
Gafsa	143	3.92%
Others	689	18.91%
Total	3644	100%

ty. As of epi week 24, a total of 3644 cases of measles cases and 34 associated deaths were reported from all governorates in the country. Of those cases, 903 are laboratory confirmed cases, 1172 are epidemiologically linked cases, and 1533 are clinically compatible cases of measles infection (*see graph*).

Majority of cases were reported from Kasserin (45.4%), Kairouan (14.2%), and Sfax (7.5%) governorates (*see table*). The most affected age groups were infants <1 year of age (34%) and adults >30 years of age (26%). Moreover, 48% of the cases were unvaccinated; this includes infants <1 year of age, who were not eligible for vaccination under the current schedule (since first dose is administered at 15 months of age).

MoH and WHO deployed a team of experts to support the outbreak investigation and response. The team recommended conducting urgent nation-wide supplementary immunization campaigns to address immunity gaps and interrupt transmission in addition to increasing social mobilization activities to enhance acceptance and participation of the local communities in the campaigns. MoH is continuing its great efforts to control the outbreak, whilst strengthening national capacities to prevent future outbreaks.

Update on outbreaks

in the Eastern Mediterranean Region

MERS in Saudi Arabia; **MERS** in Oman; **cholera** in Somalia; **cholera** in Yemen; **Multidrug-resistant typhoid fever** in Pakistan.

Current public health events of concern

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

Avian influenza: 2006-2017

Egypt (A/H5N1)	[359 (122), 33.98%]
Egypt (A/H9N2)	[4 (0)]

Ebola virus disease (EVD): 2018-2019

Democratic Republic of Congo (DRC)	[2 145 (1 437), 66.99%]
Uganda	3 (3), 100%

Cholera: 2017-2019

Somalia	[7 650 (46), 0.60%]
Yemen	[1 764 006 (3 390), 0.19%]

Diphtheria: 2018-2019

Yemen	[3 524 (203), 5.76%]
Bangladesh	[8 641 (45), 0.52%]

MERS: 2012-2019

Saudi Arabia	[2 055 (766), 37.27%]
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Multidrug-resistant typhoid fever: 2016-2019

Pakistan	[8 546 (0)]
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