

Current major event

Typhoid fever surveillance and vaccine use

The WHO Regional Office for the Eastern Mediterranean and the US Centers for Disease Control and Prevention (CDC) are reviewing information on the status of typhoid surveillance and vaccination programmes in the Region to understand the status of the current surveillance systems for typhoid and the current country-specific typhoid vaccine recommendations.

Editorial note

The WHO Regional Office for the Eastern Mediterranean and US CDC are conducting a survey to compile information on the current status of national typhoid surveillance systems and on typhoid vaccine use and recommendations in countries throughout the Eastern Mediterranean Region. The results of this survey will be shared across the different levels of WHO (headquarters, regional office, and country offices), ministries of health in the Region, and Gavi, the vaccine alliance, to inform and improve typhoid surveillance and control in the Region.

Typhoid and paratyphoid fever, also known as enteric fever, is a systemic febrile illness caused by ingesting food or water contaminated by salmonella enterica serotypes typhi or paratyphi. Large outbreaks sometimes with strains resistant to multiple antimicrobials have occurred and these outbreaks are associated with poor sanitation and unsafe food and water in both rural and urban settings. Multidrug-resistant (MDR) strains, defined as resistant to the three former first-line antimicrobial agents, are increasingly posing a major challenge to patient management.

Up-to-date information on typhoid surveillance and vaccination programmes is lacking in the Region where the burden of typhoid is largely unknown. Pakistan has continued to experience a surge in extensively drug-resistant (XDR) salmonella cases since November 2016, and WHO has extended support for laboratory confirmation of suspected cases and the preparation of case management guidelines for those confirmed. Pakistan also became the first country to introduce the WHO-approved

Currently available typhoid fever vaccines

Vaccine type	Route of administration	Composition	Recommended for
Typhoid conjugate vaccine (Vi-TT)	Parenteral	Consisting of the Vi antigen linked to tetanus toxoid protein	Children and adults from 6 months up to 45 years of age
ViCPS vaccine	Parenteral	Based on the purified antigen	People over 2 years of age
Ty21a vaccine	Oral	Live attenuated mutant strain of <i>S. typhi</i> Ty21a in capsule formulation	People over 6 years of age

Information to be obtained from the surveys

- From national surveillance programmes**
 - Status of national typhoid surveillance, data elements collected, laboratory confirmation, and reporting
- From vaccination programmes**
 - Current typhoid vaccination recommendations and target populations
 - Recent typhoid vaccination campaigns
 - Plans for future introduction of new typhoid vaccines and/or expansion of current typhoid vaccine recommendations

typhoid conjugate vaccine (TCV) through its expanded programme on immunization in 2019 when more than 9.5 million children aged 9 months to 15 years were vaccinated.

National multi-sectoral approaches covering surveillance, appropriate data collection, enhanced laboratory diagnosis, case management, community engagement as well as robust water, sanitation and hygiene (WASH) interventions are required to prevent and control outbreaks of XDR typhoid fever. WHO recommends typhoid fever vaccination as a control strategy for both endemic and epidemic disease along with other measures including health education, water quality and sanitation improvements, and the training of health professionals in diagnosis and treatment.

Typhoid burden and severity data are therefore necessary to inform national, regional and global policy decisions, while the rollout of TCV is preferred for all ages as part of routine programmes due to its improved immunological properties. Understanding the burden of typhoid in the Region is also relevant to high-income countries with lower typhoid risk due to regional migration and travel-associated risks.

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	[56 717 (2508), 4.4%]
Bahrain	[147 770 (531), 0.4%]
Djibouti	[8509 (72), 0.8%]
Egypt	[204 256 (12 123), 5.9%]
Iran (Islamic Republic of)	[1 920 394 (62 999), 3.3%]
Iraq	[868 200 (14 430), 1.7%]
Jordan	[626 875 (7130), 1.1%]
Kuwait	[235 989 (1339), 0.6%]
Lebanon	[477 113 (6379), 1.3%]
Libya	[162 294 (2737), 1.7%]
Morocco	[497 832 (8842), 1.8%]
occupied Palestinian territory (oPt)	[277 130 (2941), 1.1%]
Oman	[160 018 (1681), 1.1%]
Pakistan	[687 908 (14 778), 2.1%]
Qatar	[182 548 (301), 0.2%]
Saudi Arabia	[392 009 (6690), 1.7%]
Somalia	[11 623 (546), 4.7%]
Sudan	[32 331 (2125), 6.6%]
Syrian Arab Republic	[19 284 (1299), 6.7%]
Tunisia	[260 044 (8965), 3.4%]
United Arab Emirates	[468 023 (1504), 0.3%]
Yemen	[4701 (933), 19.8%]