

Current major event

Yemen OCV risk assessment

The Ministry of Public Health and Population (MoHP), Yemen, WHO and other partners conducted assessment to determine risk profile of governorates and districts for occurrence and spread of cholera in order to prioritize the high risk districts for use of oral cholera vaccine (OCV) as a preventive measure for prevention and control of cholera.

Editorial note

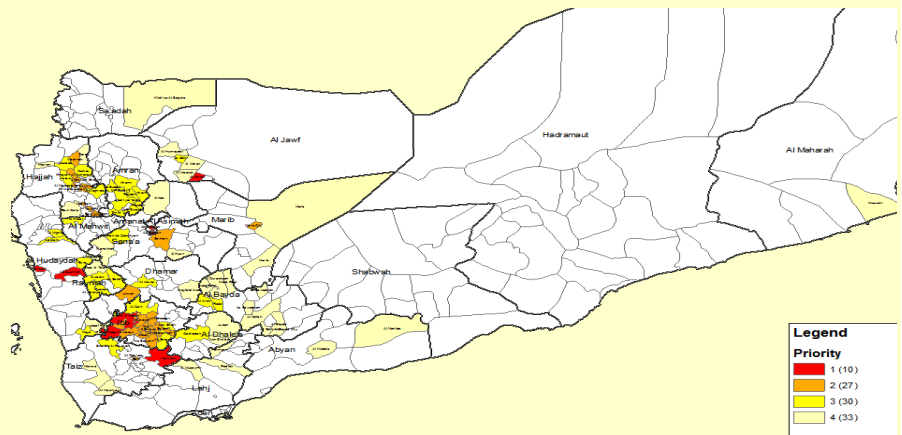
Since October 2016, Yemen has been experiencing one of the worst cholera epidemics in recent history. A second wave of the outbreak started on 27 April 2017, and still continuing. During this period, a total of 1,086,105 suspected cases including 2,271 associated deaths were reported throughout the country. Among these cases a total of 1,113 stool samples were laboratory confirmed with *Vibrio cholerae* serotype Ogawa through culture. The second wave of the outbreak contributed 98% of the total cases of cholera that have been reported so far.

Though in the past, Yemen experienced epidemics of cholera in localized areas, this is the first time that such a large scale outbreak occurred and persisted for more than 2 years in the country. All governorates, majority of the districts, and all population age groups in the country are affected. The key contributing factors include protracted conflict, the deteriorating humanitarian situation, water shortage, poor solid waste management, poor sanitation, food insecurity, malnutrition, population movements, a weak health system and others.

Even though recent surveillance data have shown a slight decline in number of new cases reported on a weekly basis, the risk of upsurge or recurrence of the outbreak remains high as rainy season is about to start and the risk of water contamination and deteriorating environmental health conditions is high.

The aim of this risk assessment was therefore to identify areas/districts at risk of recurrence of cholera outbreak in order to prioritize these district for preventive measures including OCV campaign (see map).

Districts prioritized for oral cholera vaccination campaign in Yemen in 2018



Priority population strata for operational purpose, OCV campaign

1. Districts with ongoing transmission
2. Districts with population density ≥ 500 inhabitants/Km²
3. Districts with population density between $<500 \geq 200$ inhabitants/Km²
4. Districts with population density <200 inhabitants/Km²

Key considerations during the OCV risk assessment included local epidemiology of the cholera outbreak; vulnerability factors of the affected population such as population density; and environmental risk factors including levels of rainfall, access to safe water, and access to sanitation facilities. Findings showed strong correlation between these factors and high cholera transmission. Based on these factors, prioritization of high risk districts for OCV campaigns identified four priority target population strata (see table). The OCV campaign is planned initially in two phases covering 38% of the target population between first and second rainy seasons. The MoHP of Yemen submitted formal request for release of Oral Cholera Vaccine (OCV) to the Global Task Force for Cholera Control (GTFCC) secretariat and a total of 4,581,836 doses of OCV were approved to be released from the global stockpiles.

Overall, effective control of the cholera outbreak in Yemen will continue to require multipronged approach and the planned OCV preventive campaign and its early implementation in the targeted areas will remain a critical component of the cholera outbreak prevention and response strategy in Yemen.

Update on outbreaks in the Eastern Mediterranean Region

MERS in Saudi Arabia; **cholera** in Somalia; **cholera** in Yemen; **dengue** in Sudan.

Current public health events of international concern [cumulative N° of cases (deaths), CFR %]

Avian influenza: 2006-2017

Egypt (A/H5N1)	[359 (122), 34%]
Egypt (A/H9N2)	[4 (0)]

Avian influenza A (H7N9): 2013-2017

China	[1,565 (612), 39.1%]
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Chikungunya: 2016-2018

Pakistan	[8,521 (0)]
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Cholera: 2017-2018

Somalia	[1,876 (9), 0.4%]
Yemen	[1,086,105 (2,271), 0.2%]

Diphtheria: 2018

Yemen	[1,525 (85), 5.5%]
Bangladesh	[6,460 (40), 0.6%]

Dengue fever: 2017-2018

Sudan	[233 (3), 1.2%]
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MERS: 2012-2018

Saudi Arabia	[1,823 (709), 38.9%]
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Wild poliovirus: 2018

Afghanistan	[7 (0)]
Pakistan	[1 (0)]

Yellow Fever: 2017-2018

Brazil	[1,127 (328)] 32.7 %
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