

Epidemiological Overview

Between 25 August and 19 March, 105,959 suspected cases have been reported from all 14 governorates, including 104 associated deaths to date at a case fatality rate of 0.1%. Since the last SITREP 14 was issued, 5,361 new suspected cases were reported of which 4 new cases were confirmed by culture, and three by rapid diagnostic tests (RDTs) during this period. No new deaths were reported.

The most affected governorates to date are Idleb (34,058 cases, 32.1%), Aleppo (26,954 cases, 25.4%), Deir Ez-Zor (20,673 cases, 19.5%), and Ar-Raqqa (19,485 cases, 18.4%).

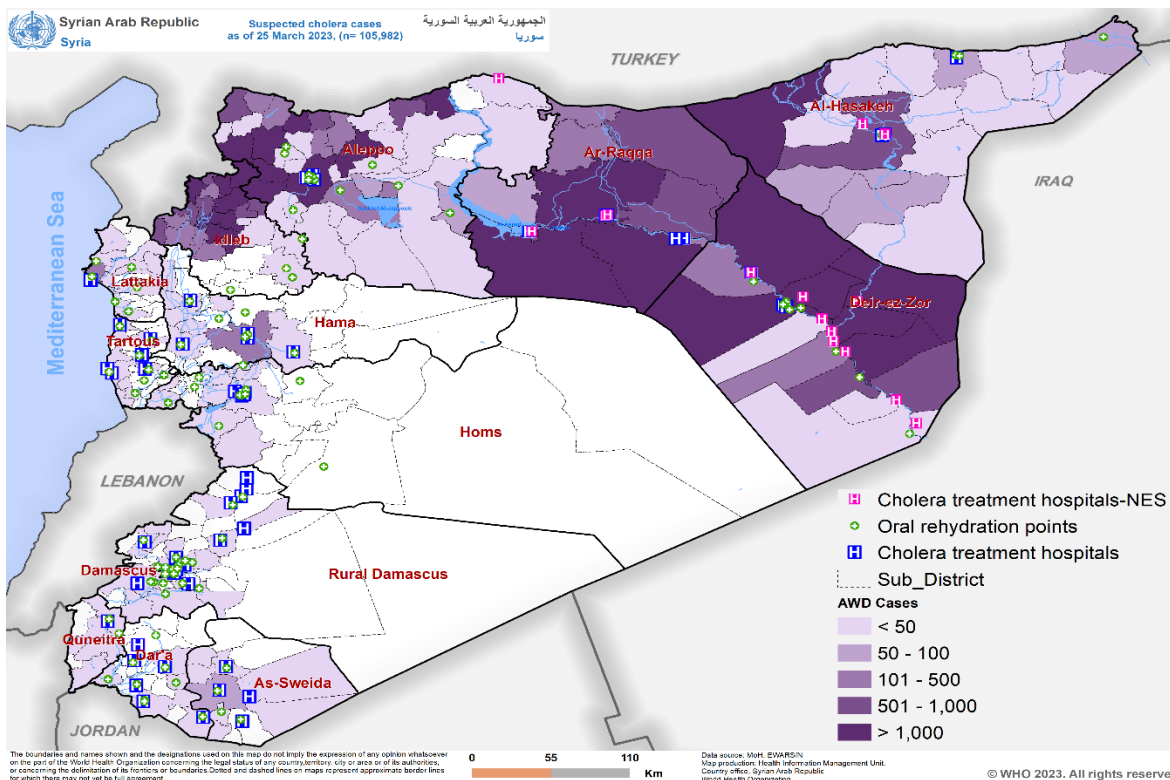
To date, 5,056 stool samples have been cultured, of which 960 have been tested positive for Vibrio Cholera. The positivity rate is 18.9%. Further to that, a total of 4,984 samples were tested with RDTs, with 1,916 of them testing positive. The overall proportion of RDT-positive cases is 38.4%.

Since the catastrophic earthquake that had a huge impact on the cholera response efforts two months ago, there are still thousands of people living in overcrowded emergency shelters, many of whom do not have enough access to safe water, sanitary facilities, or hygiene practices.

Despite the fact that the number of displaced people in emergency shelters is decreasing, the risk of an increase in waterborne diseases, such as cholera, remains extremely high due to overcrowding, extensive damage to water and sanitation infrastructure, and damage and disruption to cholera treatment infrastructure.

- Suspected Cases**
105,959
- RDTs Positive Cases**
1,916
- Culture Positive Cases**
960
- Cholera Sus. Deaths**
104
- Case Fatality (CFR)**
0.1%
- Overall Attack Rate**
0.5%
- Affected Governorates**
14
- Grade**
2

Figure 1: Distribution of suspected cholera cases by date of onset as of 25 March 2023



Epidemiological Data

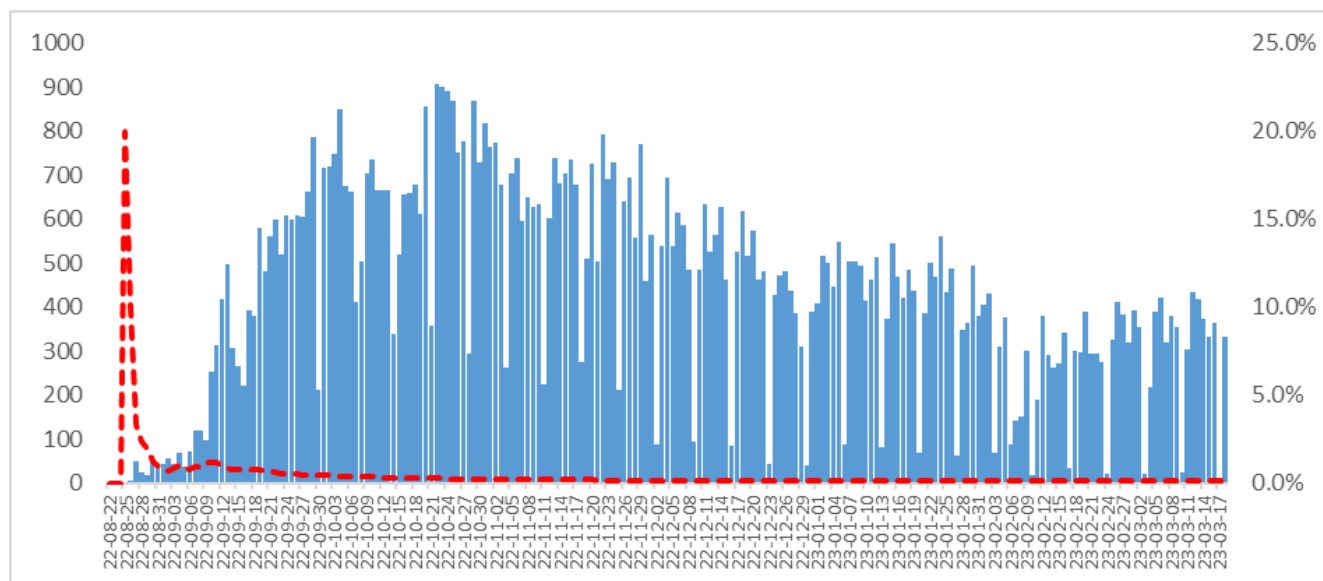
Table 1 provides a breakdown of reported suspected cholera cases and deaths, as well as the number and type of tests performed in Syria’s governorates.

Table 1: Epidemiological data, as of 19 March 2023

Governorate	Suspected Cases (AWD)	Population	Attack Rate (%)	RDTs	Positive RDTs	Culture + Tests	Attributed Deaths	CFR%
Aleppo	26,954	4,170,826	0.65	2,034	1,024	151	59	0.2%
Al-Hasakeh	4,050	1,160,335	0.35	638	114	18	9	0.2%
Ar-Raqqa	19,485	767,956	2.54	458	70	165	10	0.1%
As-Sweida	81	380,118	0.02	81	26	2	0	0.0%
Damascus	43	1,829,796	0.00	40	20	10	1	0.0%
Dar'a	22	1,037,690	0.00	22	5	0	0	0.0%
Deir Ez-Zor	20,673	779,283	2.65	972	433	336	11	0.1%
Hama	193*	1,344,853	0.01	188	52	55	1	0.5%
Homs	59*	1,520,283	0.00	59	31	25	1	0.0%
Idlib	34,058	2,826,874	1.20	176	12	161	12	0.0%
Lattakia	184	1,274,118	0.01	161	98	31	0	0.0%
Quneitra	17	113,254	0.02	17	4	1	0	0.0%
Rural Damascus	112	3,032,345	0.00	111	17	3	0	0.0%
Tartous	28	943,399	0.00	27	10	2	0	0.0%
Total	105,959	21,181,130	0.50	4,984	1,916	960	104	0.10%

*decrease in suspected cases reflects reclassification of patients according to their community.

Figure 2: Distribution of suspected cholera cases by date of onset, as of 24 March 2023



Overview of Cholera Surveillance and Testing Across Syria

Cholera case definition: both hubs use the standard case definition. Strict adherence remains critical.

Reporting: Within areas covered by the Ministry of Health (MoH) and EWARS surveillance, most suspected cholera cases were reported from hospitals' CTUs (severe cases). In contrast, within areas covered by EWARN surveillance, reporting of moderate-to-severe suspect cholera cases comes from PHCs, CTC/, CTUs, and hospitals. Neither hub is capturing the mild cases in the community.

Testing strategy:

- In Northwest Syria (NWS) since the start of the outbreak, 3,822 samples were collected (7% of overall line listed cases), of which 578 tested positive by laboratory stool culture; 3,210 tested negative and 34 are pending. The total positivity rate in NWS is 15.3 %. In epidemiological Week 5 of 2023, the testing strategy was scaled up to include the use of rapid diagnostic tests (RDTs). In line with guidance from the Global Task Force on Cholera Control (GTFCC), 3 samples per day per health facility are tested by RDT and among positive RDTs, 3 are cultured per week.
- According to the MoH testing strategy, every suspected case is tested by RDT, and every 20th RDT positive sample is tested by culture. Further, for every 30 culture-positive cases, 10 samples undergo antibiogram testing. Since the start of the outbreak, 4,201 cases were tested by RDT of which 1847 were positive. Of these, 164 samples were cultured, of which 49 were found positive for cholera. In light of reduced cases, WHO has recommended that all suspected cases are tested by RDT and culture.

Acute Watery Diarrhea in Children Under 5 (U5): Recently, within EWARN surveillance areas, adeno, and rotavirus rapid testing has been introduced for analyzing acute watery diarrhea cases in children U5 who currently make up 44.6% of confirmed cholera cases in NWS. 87 samples were collected for rotavirus and 37 samples were found positive (42.5%). All 43 collected samples tested for Adenovirus were negative (100%).

Trends analysis: As differences in data collection and testing strategies have persisted throughout the cholera outbreak, overall analysis of disease trends is not affected.

Key Messages: WHO notes that despite declines in cases, **the cholera outbreak is still ongoing, and, with summer months looming, ensuring preparedness and response capacity is critical.** Additionally, since syndromic surveillance is utilized, **strict implementation of and adherence to the standard case definition is key:** consistency will provide a clear picture of disease trends and enable accurate comparison across to compare governorates, districts, and subdistricts.

Cholera Outbreak Response

Leadership and Coordination

- Joint WoS health and WASH coordination continues at the whole of Syria level and also across different response areas. WHO, UNICEF and OCHA are working together to ensure the leadership of the different response pillars.

- Cholera forecasting was revised to reflect an elevated 2% attack rate in earthquake-affected areas, while other areas remained unchanged.

Surveillance and Laboratory

- Active case search and operational updates continue by WHO Syria.
- WHO Syria conducted reorientation sessions for the EWARS assistants on acute watery diarrhea (AWD) reporting.
- The surveillance has been also expanded to cover all emergency shelters across earthquake (EQ)-affected areas of Syria. Sample collection, testing, and reporting are constantly being strengthened to meet the population's needs after the earthquake.
- Rapid Response Teams (RRTs) are being established and trained in all reception centers by WHO Gaziantep (GZT).

Case Management

- 7 functional cholera treatment centers/cholera treatment units (CTCs/CTUs) and 20 oral rehydration points (ORPs) are supported by WHO GZT and cholera task force partners, in addition, 3 functional CTCs/CTUs and 9 ORPs have been newly established in the EQ affected areas.
- Moreover, health partners continue to support the referrals. Additional information on case management and referrals can be found in the cholera dashboard [Microsoft Power BI](#).
- WHO GZT and partners have launched a new infection prevention and control (IPC) project to train more frontline staff as well as psychosocial workers (PSWs). The trained PSWs will remain at CTCs/CTUs to support patients and families and guide them on the next step in their treatment plan, as well as assist patients with mental health conditions.
- In northwest Syria (NWS), training and scale-up activities will be phased and will include ORPs, Primary Health Care Facilities (PHCs), Secondary Health Care Facilities (SHCs), and reception centers.

Oral Cholera Vaccine (OCV)

- The OCV campaign in NWS ran from 7 – 18 March 2023, with a target population of 1,762,386 people over the age of one year. A total of 1,669,298 people (95% administrative coverage) received one OCV dose.
- As part of the response to the earthquake in NWS (two weeks after the EQ), OCV was delivered at reception centers in Harem, Salqin, Jindaires, and Afrin, vaccinating 20,095 Syrians above one year of age in 45 centers.
- As a result of EQ's catastrophic impact, a new OCV request was made due to the elevated risk of a cholera outbreak in NWS. The risk/likelihood of a cholera outbreak in NWS has been assessed using a variety of indicators.
- According to the risk assessment, ten sub-districts in Idlib and Aleppo will be targeted for the OCV campaign, with a total population of 1.12 million people.

Water Sanitation and Hygiene (WASH)

WASH Rapid Response

- NWS partners are utilizing the case-area targeted intervention (CATI) approach to respond to cases, most significantly in Al Bab Sub District where cases have recently increased sharply.
- In order to respond to alerts from WASH hotspots, WASH teams in NWS continue to collect samples from drinking water sources like main stations, wells, water trucks, and taps; investigate septic tanks, sewage networks, and other sanitation services; review and catalog hygienic procedures; and investigate the agricultural market (sources of irrigation of agricultural products if applicable).
- Rapid response in NES is no longer taking place due to competing priorities: limited funds and capacity have been repurposed to earthquake, flood, and general WASH programming.
- Through a partnership with UNICEF, SARC teams are ready for deployment using a case cluster approach for new outbreaks.

Access to Safe Water

Safe water and NFI provision

- Water trucking continues to be provided by partners to rural communities in northern and eastern rural Deir Ez-Zor, Rural Damascus, Al-Hasakeh City, and IDP camps.
- NWS WASH partners continue to invest in dosing pumps, chlorine, and training in the use and monitoring of free residual chlorine (FRC) in public water stations and trucked water.
- The EQ-affected areas were prioritized by NWS health and WASH partners for hygiene kits, WASH cholera kits, soap, and IEC materials distribution.
- In NWS, Health and WASH clusters have daily exchanges of case rates to facilitate the CATI approach.

Water Quality Monitoring

- WHO Syria continues to monitor water quality in emergency shelters, including those in Aleppo and Hama, where 158 water samples were collected from 17 shelters. Water purification tablets were also distributed to the shelters (550) and host communities (3600).
- In coordination with the Ministry of Water Resources (MoWR), water quality monitoring activities are provided to Aleppo, Lattakia, Tartous, and Homs/Hama.
- Across Idlib and northern Aleppo, 421 camps were monitored with 24% showing no FRC. In the same area, 390 communities were monitored no FRC was found in 72% of locations.
- Moreover, the WASH cluster field facilitators assessed the EQ reception centers (RCs) in NWS. In total, 109 RCs hosting 74,480 internally displaced persons (IDPs) were assessed, and the following are the key findings:
 - 7 RCs hosting 3,280 IDPs need urgent water delivery.
 - 32 RCs hosting 24,887 IDPs need urgent emergency latrines.
 - 59 RCs hosting 38,823 IDPs need hygiene items and promotions.
 - 26 RCs hosting 14,637 IDPs require Solid waste management.
 - 9 RCs hosting 3,855 IDPs with no declared WASH actor.

Sanitation

- The sanitation network is in major need of reconstruction/rehabilitation and is the leading cause of continued AWD and cholera cases. Rehabilitation/repair is currently planned in order to address a small percentage of the need. The procurement phase has been initiated, in conjunction with the earthquake response. However, these works have not been forthcoming through cholera funding mechanisms.

Risk Communication and Community Engagement (RCCE)

- RCCE Technical WG in Syria was briefed on the epidemiological situation; the importance of continued efforts regarding community awareness was highlighted.
- WHO facilitated the training of 30 community health workers from the Syrian Arab Red Crescent (SARC) in their role in the prevention and response to cholera. Methods and approaches for relaying preventive messages, as well as types of messages, were discussed.
- In Latakia, 10 mobile medical teams were supplied with information, education, and communication (IEC) materials on the prevention, identification, and response of suspected cholera cases.
- RCCE activities continue in NWS, with 253 community health workers (CHWs) and other mobile teams focusing on face-to-face, visiting reception centers and households to provide RCCE activities and messages, including psychological first aid (PFA) and cholera and communicable disease awareness.
- 29 reception centers and 2921 households of 12634 beneficiaries, referring 50 suspected cholera cases to the nearest CTCs/CTUs have been covered by RCCE in NWS.
- The RCCE teams visited the RCs and used projectors to present videos and other IEC materials to affected people living in RCs.

Logistics, Equipment, and Supplies

- Cholera supplies continue to flow from WHO Syria and GZT to their respective operational areas. This includes lab kits, treatment kits, and RDTs.

Challenges / Gaps

(a) In EQ-affected areas

- The earthquake had a devastating impact on overall cholera response operations. In earthquake-affected areas, water networks have been disrupted, displaced populations live in overcrowded conditions with poor WASH services thereby increasing the overall risk of disease outbreaks.
- High risk of spread of water and food-borne diseases due to disturbed water supplies, including exacerbation of ongoing cholera and hepatitis A.
- Across EQ-affected areas, emergency shelters pose the greatest risk to outbreak and spread of cholera, with WASH facilities insufficient for population.
- Women, girls, and boys face protection risks in WASH facilities that lack locks, lights, and gender segregation in emergency shelters.

- Frequent population movement in the aftermath of the earthquake is a barrier to achieving proper targeting, outreach, and intervention.

(b) Across Syria

- The water crisis in northern Syria, including the disruption of the Alouk water station (for over 7 months) and extremely low water levels on the Euphrates River and its linked dams, will continue to pose a significant risk of increasing AWD, including cholera.
- Projects' short duration makes it difficult to sustain activities, particularly treatment facilities support.
- Low level of population interest and awareness about cholera in many affected areas, such as NES and Aleppo, due to declining cases in these areas.
- Urgent need to scale up preparedness measures ahead of the coming months at a time when dedicated cholera resources are declining.

Key Priorities

- Urgent advocacy for funding to support the implementation of the cholera response plan, particularly given the EQ's devastating impact.
- Enhance and scale up a surveillance system and lab capacities to all affected areas to ensure timely reporting, detection, and response, active case search in EQ-affected areas, and hot spots in particular.
- Advocacy on preparedness and alert activities to MoH.
- Intensify behavior change/risk communication and community engagement actions, particularly community healthcare workers' orientations on cholera preparedness and prevention messages.
- Conduct KAP studies in the response areas to inform any potential change in the current RCCE strategies.
- Ensure inter-cluster coordination for cholera response as part of the earthquake response.
- In NWS, enhance the early warning alert and response network (EWARN) and integrate reception centers into the surveillance system
- Prioritize a community-based response approach.
- Advocate for a political solution to the Alouk Water Pumping station.

Funding

- An estimated total of USD 55,490,944 million is required under the AWD/Cholera Response Plan for the coming six months (Jan – June 2023).

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