

Epidemiological Overview

Between 25 August 2022 and 20 May 2023, 132,782 suspected cases have been reported from all 14 governorates, including 104 associated deaths to date at a case fatality rate of 0.08%. **Since the last SITREP was issued on 8th May, 21,698 new suspected cases (Idleb- 10,086, Aleppo - 9,596, Ar-Raqqa - 1,715, and Al-Hasakeh - 273) have been reported. No new death cases were reported. The number of newly reported suspected cases is almost 4 times that which was reported in March and February 2023.**

The most affected governorates to date are Idleb (46,629 suspected cases, 35.1%), Aleppo (38,755 suspected cases, 29.1%), Ar-Raqqa (21,538 suspected cases, 16.2%), and Deir Ez-Zor (20,694 suspected cases, 15.5%).

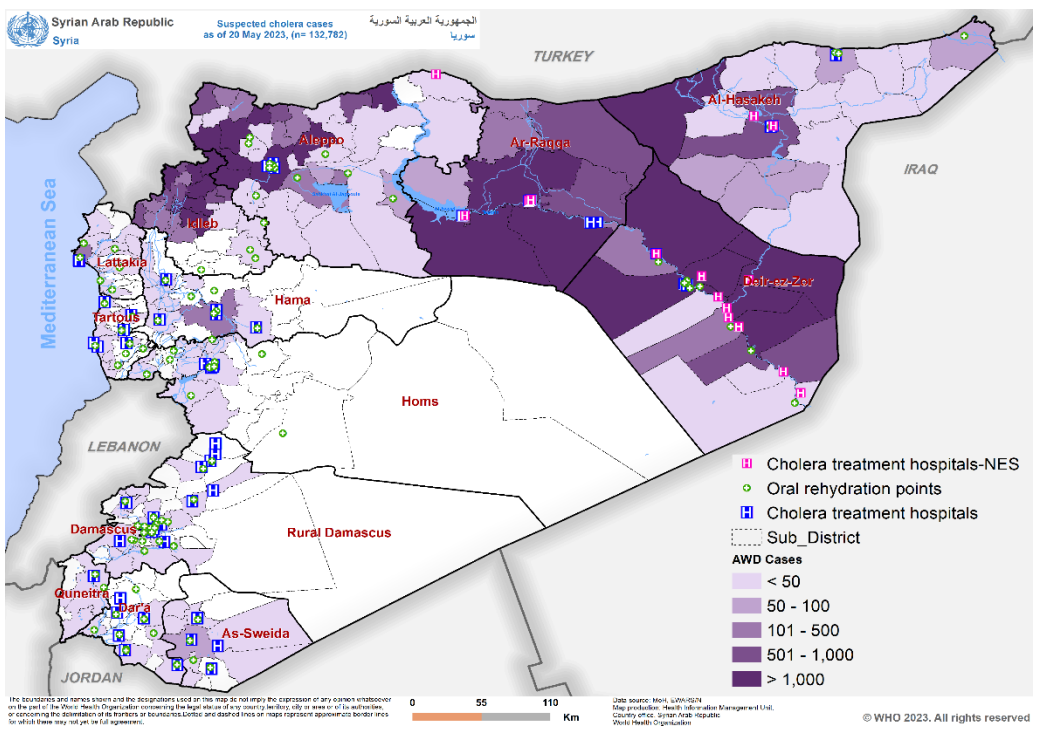
To date, a total of 5,540 samples were tested with rapid diagnostic tests (RDTs), with 1,940 of them testing positive. The overall proportion of RDT-positive cases is 35%. Additionally, 5,832 stool samples have been cultured, of which 1,042 have tested positive for Vibrio Cholera. The positivity rate is 17.8%.

The number of acute watery diarrhea (AWD) cases reported at the internally displaced persons (IDP) camps is 13,665, of which 172 cases were cholera positive. The last positive case reported within camps in northeast Syria (NES) was detected on the 8th of May 2023.

The risk of an increase in waterborne diseases, including cholera, remains extremely high due to the ongoing water crisis, displacement/overcrowded settings, and recent extensive damage to water and sanitation infrastructure due to recent earthquake. Additionally, the summer months and accompanying dry conditions have historically triggered seasonal increases in waterborne illness.

- Suspected Cases**
132,782
- RDT Positive Cases**
1,940
- Culture Positive Cases**
1,042
- Cholera Sus. Deaths**
104
- Case Fatality (CFR)**
0.08%
- Overall Attack Rate**
0.63%
- Affected Governorates**
14
- Grade**
2

Figure 1 Distribution of suspected cholera cases by date of onset as of 20 May 2023



Epidemiological Data

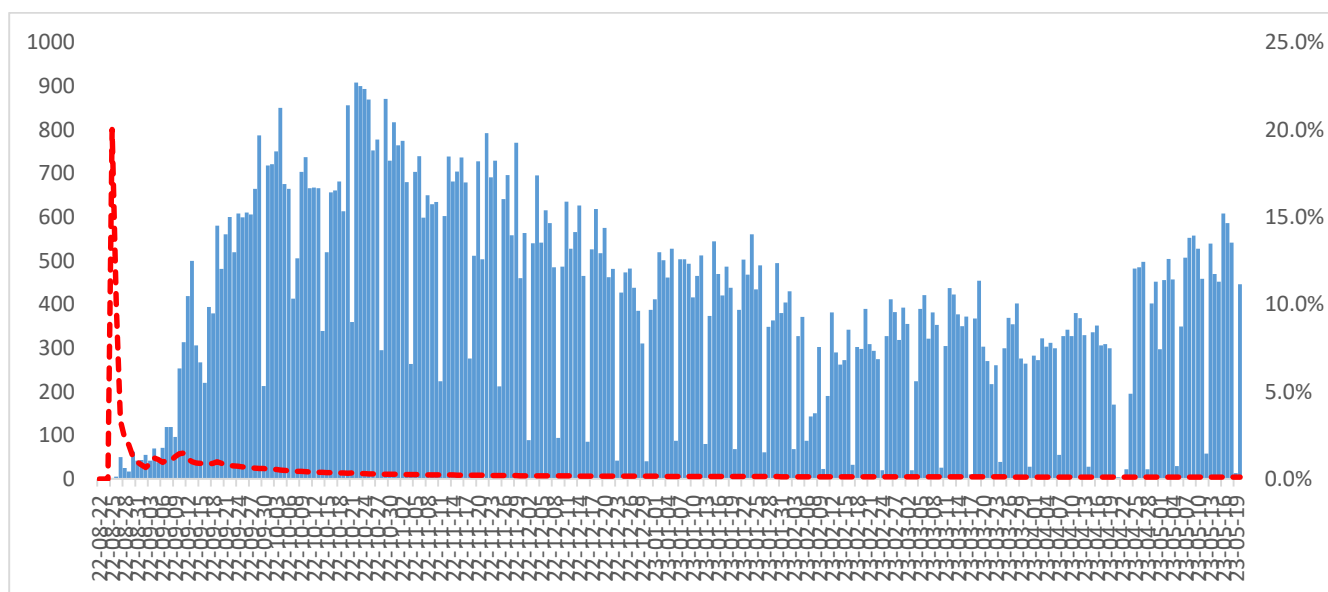
Table 1 provides a breakdown of reported suspected cholera cases and deaths, as well as the number and type of tests performed in Syria's governorates.

Table 1: Epidemiological data, as of 20 May 2023

| Governorate | Suspected Cases (AWD) | Population | Attack Rate (%) | RDTs | Positive RDTs | Culture + Tests | Attributed Deaths* | CFR% |
|----------------|-----------------------|-------------------|-----------------|--------------|---------------|-----------------|--------------------|--------------|
| Aleppo | 38,755 | 4,170,826 | 0.93 | 2,181 | 1,037 | 334 | 59 | 0.1% |
| Al-Hasakeh | 4,417 | 1,160,335 | 0.38 | 656 | 116 | 25 | 9 | 0.1% |
| Ar-Raqqa | 21,538 | 767,956 | 2.80 | 354 | 74 | 101 | 10 | 0.0% |
| 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 | 20,694 | 779,283 | 2.66 | 757 | 421 | 100 | 11 | 0.1% |
| Hama | 195 | 1,344,853 | 0.01 | 193 | 52 | 55 | 1 | 0.5% |
| Homs | 67 | 1,520,283 | 0.00 | 66 | 31 | 25 | 1 | 0.0% |
| Idleb | 46,629 | 2,826,874 | 1.65 | 874 | 29 | 353 | 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 | 132,782 | 21,181,130 | 0.63 | 5,540 | 1,940 | 1,042 | 104 | 0.08% |

*Changes in attributed deaths across governorates reflects reclassification of patients according to their community

Figure 2 Distribution of suspected cholera cases by date of onset, as of 20 May 2023



Cholera Outbreak Response

Leadership and Coordination

- Joint WoS health and WASH coordination continues at the Whole of Syria (WoS) level and also across different response areas. WHO, UNICEF and OCHA are working together to ensure the leadership of the different response pillars.
- A two-day WoS joint Health and WASH cholera operational review meeting was held in Amman 15-16 May 2023. Over 55 participants from health and WASH coordination teams and information management officers from WHO Syria Country Office/Gazientep (GZT) Field Office, WHO Eastern Mediterranean Regional Office (EMRO), UNICEF Syria/Gazientep, UNICEF MENA Regional Office, select response partners and OCHA WoS attended the cholera operational review.
- The participants reviewed the ongoing cholera outbreak and discussed actions taken to date, identified key challenges, and proposed recommended corrective actions moving forward. A report is being drafted and will be shared once finalized.

Surveillance and Laboratory

- WHO expanded the capacity of the Early Warning, Alert, and Response System (EWARS) in northeast Syria by recruiting two new EWARS focal points in Al-Hasakeh and Ar-Raqqa starting in May to help strengthen the surveillance system and enable a timely response to any potential outbreak.
- WHO conducted a field mission to Al-Hasakeh by the surveillance team to assess preparedness measures for cholera, identify the gaps, and provide technical assistance to address them.
- WHO supported supervisory visits by the central laboratory staff to microbiology labs in Tartous, Lattakia, Hama, and Homs to assess their readiness for a potential cholera outbreak, identify gaps, provide technical assistance, and ensure that the labs are equipped to respond to any potential outbreak.
- The microbiology lab in Deir Ez-Zor (DEZ) has been activated and has begun culture tests of collected samples from the governorate.
- WHO continued support the operations of 117 RRTs in 14 governorates. Additionally, WHO supported RRTs with 16,250 rapid tests of cholera. This would help to strengthen the response capacity and enable a timely response to any potential outbreak.
- Testing strategy of cholera-suspected cases continues to be reinforced through official communication with Ministry of Health (MoH), training, and supervisory field visits.
- In northwest Syria (NWS), antimicrobial-sensitivity testing has been performed to detect resistance to the most used antibiotics. The culture sensitivity results came sensitive for azithromycin, imipenem, chloramphenicol, ciprofloxacin, and norfloxacin and revealed resistance to tetracycline, doxycycline, and sulfamethoxazole-trimethoprim.
- RRTs were supported with 10 cholera investigation kits, including the cholera RDTs

Case Management

- The Cholera Task Force in NWS is working with partners to increase the number of treatment centers by establishing three additional cholera treatment centers/cholera treatment units (CTCs/CTUs) and nine oral rehydration points (ORPs). Health information from the treatment centers is being reported through the health information system (HIS).
- As of the end of Epi Week 20 (May 14-20, 2023), 5,220 cholera cases had been admitted to CTCs/CTUs in NWS, with another 5,290 cases reported from ORPs.
- Health partners in NWS continue to support case management and referrals. Additional information on case management and referrals can be found in the cholera dashboard [Microsoft Power BI](#).

Oral Cholera Vaccine (OCV)

In NWS, the next OCV phase is scheduled for June 10th, 2023, with a target population of 1,119,000 people in the targeted subdistricts of Albab, Afrin, Jendairis, Alatareb, Salqin, Armanaz, Bdama, and Janudieh.

The Syria MOH is in discussion with GAVI regarding a preventive campaign for cholera provisionally planned to take place next year.

Water Sanitation and Hygiene (WASH)

WASH Rapid Response

- In NES, 33 cases of cholera were investigated with full response including hygiene sessions and WASH cholera kit provision.
- 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).

Access to Safe Water

Safe water and NFI provision

- Water provision support from HCT WASH partners to the water establishment is on-going.
- 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.
- Through partners, free residual chlorine (FRC) level has been tested at household level where the kits have been distributed to make sure the correct use of water purification tablets.
- WASH partners in northwest of Syria (NWS) continue to invest in dosing pumps, chlorine, and training on the use and monitoring of free residual chlorine (FRC) in public water stations and trucked water.
- Distribution of additional 3,000 WASH cholera kits in the western countryside of Deir Ez-Zor (DEZ).
- The EQ-affected areas were prioritized by NWS health and WASH partners for distribution of hygiene kits, WASH cholera kits, soap, and IEC materials.

- In NWS, Health and WASH clusters exchange daily case rates to facilitate the case area targeted interventions (CATI) approach.

Water Quality Monitoring

- In coordination with the Ministry of Water Resources (MoWR), WHO supports water quality monitoring activities in Aleppo, Lattakia, Tartous, and Homs/Hama.
- WHO supported the testing of 7,129 samples from different sources. Overall, 6% (437 samples) were found to be contaminated:
 - Health facilities: 8 of 31 water samples (26%) tested from 24 health facilities in Rural Damascus (4 of 8 samples), Hama (2 of 7 samples) Deir ez-Zor (2 of 2 samples).
 - IDP shelters and camps: A total of 5,881 samples from shelters and camps were collected and tested of which 76 (1.3 %) were biologically contaminated, the majority from jerrycans at household level.
 - In NES, during the month of May, WHO supported the testing of 6232 samples, of which 1.8 percent (115 samples) were contaminated with bacteria.
- In response, 3900 water purification tablets WHO distributed in Aleppo and Deir ez-Zor to host communities, IDP shelters and scattered areas in the governorates, as well as to health centers. Water reservoirs were also disinfected.
- In NWS, following up with water chlorination activities and FRC monitoring control at IDPs camp level, RC level, and Community level (schools, health facility, water supply system):
 - In camps:
 - 22% of the samples were tested at 0 FRC.
 - 5 % of the samples are identified with over-chlorination.
 - 5% declared that they are purchasing water from unidentified private vendors to cope with water shortage.
 - WASH cluster field facilitators chlorinated 761 water storage tanks during their visits.
 - In communities:
 - 74% of the samples were tested at 0 FRC.
 - 35% declared that they are purchasing water from unidentified private vendors to cope with water shortage.
 - The WASH cluster field facilitators were able to chlorinate 1,940 water storage tanks during their visits.
 - Regular follow-up/investigation on cholera-based activities in major hotspot
 - In NES, three organizations and UN are completing monitoring of water quality at 41 water stations, also targeted 620 HHs with water tests to assess the quality of water at communities.
 - Monitoring of water quality at filling points: two NGOs are completing the monitoring of water quality at 18 filling points by providing of chlorine.
- The WASH team in WHO GZT, in collaboration with the Rapid Response Teams (RRT), assessed the quality of WASH services in the field in hotspot areas or when an alert is received.
- WASH field workers in NWS have been able to conduct surveillance activities in 483 communities and 648 camps since January 2023.
- WASH teams were able to assess 92 Reception Centers (RCs) that housed 73,038 IDPs.

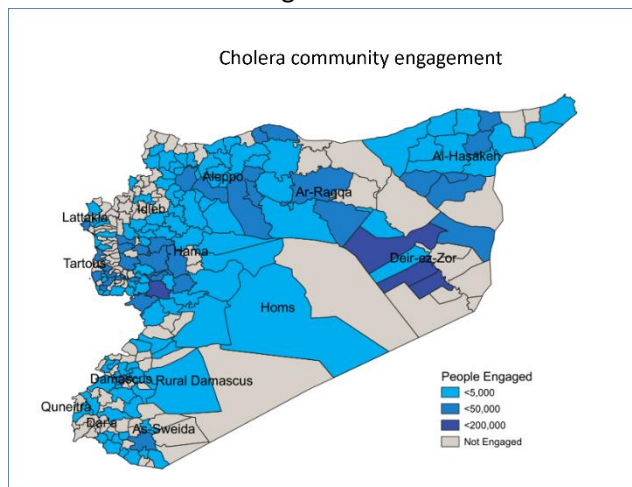
- Investigations by Assistance Coordination Unit (ACU) and its partners' show that the majority of samples collected from community locations (schools, health facilities, and public water supply sources) show no chlorination, with FRC values recorded at 0.

Sanitation

- The sanitation network is in major need of reconstruction/rehabilitation and is the leading cause of continued outbreaks of waterborne illness – including AWD and cholera cases. Rehabilitation/repair is currently planned in order to address a small percentage of the need.
- A few partners are working to restore sanitation systems in high-risk areas of Al-Hasakeh and Aleppo governorates. The earthquake exacerbated the damage to Aleppo's sanitation systems, with various points of the sewage network collapsing due to the network's old underground canals. This, in the context of a cholera outbreak, poses significant health risks to the local population in those areas.

Risk Communication and Community Engagement (RCCE)

- A cholera framework was developed and discussed within the RCCE working group as part of coordination in Syria, and updates on cholera activities are a fixed agenda item.
- UNICEF Syria CO reviewed existing data and prioritized high-risk groups in previously impacted areas, as well as those living near the Euphrates River or working in agriculture. Because of the low quality of water used for all purposes, including drinking and irrigation, these groups are at a higher risk than others.
- Cholera messages that promote protective practices have been updated and integrated into active health and WASH activities such as community dialogues and edutainment, in addition to the ongoing UNICEF-supported EQ RCCE activities.
- Social and Behavior Change (SBC) interventions have reached 688,330 people and engaged 1,097,332. The map shows the partners and intensity of activities, as well as coverage as of the end of May.
- In NWS, RCCE activities -- included providing cholera and other communicable disease awareness sessions, with a special focus on those affected by the earthquake – covered 30 subdistricts, benefiting 85% of the target population. The activities were conducted by 683 CHWs, social mobilizers (SMs), and other mobile teams. Interventions also focused on producing communication materials in accessible formats to reach people with disabilities with life saving messages in NWS.



Logistics, Equipment, and Supplies

- Cholera supplies continue to flow from WHO Syria and WHO GZT to their respective operational areas. This includes lab kits, treatment kits, and RDTs.
- Using the cholera case forecast, WHO and UNICEF have been prepositioning supplies to support the detection and treatment of suspect cholera cases, particularly in hotspot areas and earthquake-affected governorates

Challenges / Gaps

- Across Syria, partners are facing a severe reduction in funding to continue supporting ongoing response operations.
- Surveillance and lab capacities in NES remain limited.
- The Allouk Water Pumping station has been inoperable since August 2022, leaving 460,000 people without a safe source of water. Given the unique circumstances surrounding that specific water trucking operation, funding to maintain continuous water trucking is urgently required.
- Despite ongoing efforts to support water treatment in 30 pumping stations along the Euphrates River, treatment interventions are being hampered by a lack of electricity and supplies, including disinfection supplies.
- Furthermore, the people who live along the river get their water from water truckers who get it directly from the river without treatment, which increases the risk.
- Water supply coverage at the community level remains limited, forcing communities to drink water from irrigation systems.
- Many cholera-affected areas continue to rely on unregulated private water trucking and private wells for water supply.
- Limited availability of water purification tablets.
- Sanitation is a major concern due to the absence of proper waste-water management systems, including sludge management and drainage. This poses a high risk of water contamination, as wastewater and drainage waters are often used for irrigation within the community.

Key Priorities

- Considering the significant increase in suspected cases, there is an urgent need to scale up preparedness and response measures across Syria.
- Continue scale up of surveillance, lab capacities, and case management across the most affected areas.
- Advocacy for funding to support the implementation of the cholera response plan, particularly scaling up services in the hotspots.
- Revise and update the WoS joint health and WASH cholera response plan for July-December 2023.
- In NWS, continue the work on the establishment of a Cholera Treatment Initiative-Community Outreach Response Team (CATI-CORT) for community cholera response.
- Organize a 2nd cholera training with a focus on the CATI-CORT approach for RRTs (CORT Teams on the field).

- Advocate for increased sewer network connectivity and sanitation solutions at the camp and community levels.
- Advocate for a political solution to the Allouk Water Pumping station.
- In NES, resource mobilization is needed to expand monitoring of water quality at stations and to follow up on the response at private filling points in order to avoid a new wave of cholera.
- Provision of chlorine supplies to water stations with chlorine.
- In NWS, increase chlorination and FRC control/investigation at the community level, and scale-up community-level cholera response activities.
- Across all areas of Syria, additional rehabilitations of sanitation systems are required, which are heavily impacted in areas where the risk of AWD/Cholera is high. These interventions are long-term and one of the most effective ways to reduce disease transmission pathways.

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