

Epidemiological Overview

Between 25th of August 2022 and 21st of October 2023 (epi-week 42), **217,512 suspected Acute watery Diarrhea (AWD)/cholera cases** have been reported from all 14 governorates of Syria, with 106 associated deaths at a **case fatality rate of 0.05%**.

During this reporting period, epiweeks 36-42, **28,138 new suspected cases** were detected. **One new death** was reported from Al Bab, northern Aleppo, of one-year-old female with negative culture result of cholera and positive RDT.

The most affected governorates to date are Idleb (90,768 cases, 41.7%), Aleppo (75,332 cases, 34.6%), Ar-Raqqa (23,869 cases, 11%), Deir-Ez-Zor (20,809 cases, 9.6%), and Al-Hasakeh (5,890 cases, 2.7%).

Since the beginning of the outbreak, 33,261 suspected cases and 10 AWD related deaths were reported from internally displaced persons (IDP) camps across Syria.

To date, 9,335 samples have been tested with rapid diagnostic tests (RDTs), with 2,145 testing positive; the overall proportion of RDT-positive cases is 23%. Additionally, 9,528 cases have been tested by culture, out of which 1,498 tested positive for Vibrio Cholera; the cumulative positivity rate by culture is 16%. During this reporting period, 873 samples were tested by culture with 112 cases testing positive with a positivity rate of 12.8%.

Suspected Cases
217,512

RDT Positive Cases
2,145

Culture Positive Cases
1,498

Cholera related Deaths
106

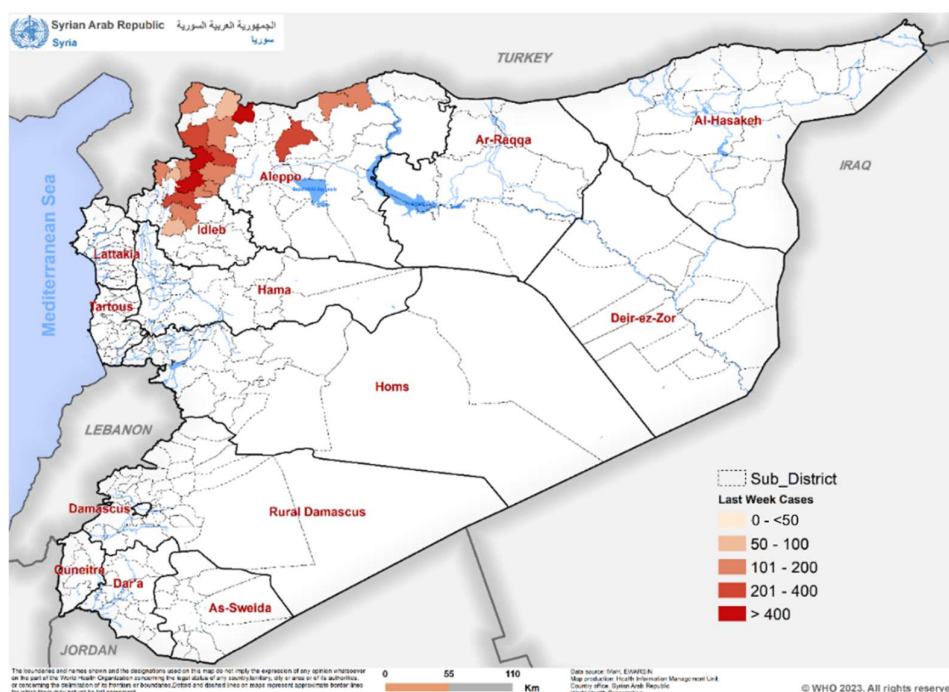
Case Fatality (CFR)
0.05%

Overall Attack Rate
1.03%

Affected Governorates
14

Grade
2

Figure 1: Subdistricts actively reporting suspected cholera cases on epiweek 42.



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. Governorates with highest attack rates (ARs) to date are Ar-Raqqa with an AR of 3.1%, Deir-ez-Zor - 2.67%, Idleb - 3.21%, Aleppo - 1.81%, and Al-Hasakeh - 0.51%.

Table 1: Epidemiological data, as of epiweek 42, 21 October 2023

| Governorate | Suspected Cases (AWD) | Population | Attack Rate (%) | RDTs | Positive RDTs | Culture + Tests | Attributed Deaths | CFR% |
|----------------|-----------------------|-------------------|-----------------|--------------|---------------|-----------------|-------------------|--------------|
| Aleppo | 75,332 | 4,170,826 | 1.81 | 3,610 | 1,155 | 600 | 50 | 0.07% |
| Al-Hasakeh | 5,890 | 1,160,335 | 0.51 | 760 | 116 | 27 | 4 | 0.07% |
| Ar-Raqqa | 23,869 | 767,956 | 3.11 | 355 | 74 | 102 | 10 | 0.04% |
| As-Sweida | 81 | 380,118 | 0.02 | 81 | 26 | 2 | 0 | 0.00% |
| Damascus | 43 | 1,829,796 | 0.00 | 40 | 20 | 10 | 1 | 2.33% |
| Dar'a | 25 | 1,037,690 | 0.00 | 22 | 5 | 0 | 0 | 0.00% |
| Deir-Ez-Zor | 20,809 | 779,283 | 2.67 | 787 | 423 | 100 | 24 | 0.12% |
| Hama | 260 | 1,344,853 | 0.02 | 188 | 52 | 55 | 1 | 0.38% |
| Homs | 72 | 1,520,283 | 0.00 | 59 | 31 | 25 | 1 | 1.39% |
| Idleb | 90,768 | 2,826,874 | 3.21 | 3,117 | 114 | 540 | 15 | 0.02% |
| Lattakia | 184 | 1,274,118 | 0.01 | 161 | 98 | 31 | 0 | 0.00% |
| Quneitra | 30 | 113,254 | 0.03 | 17 | 4 | 1 | 0 | 0.00% |
| Rural Damascus | 114 | 3,032,345 | 0.00 | 111 | 17 | 3 | 0 | 0.00% |
| Tartous | 35 | 943,399 | 0.00 | 27 | 10 | 2 | 0 | 0.00% |
| Total | 217,512 | 21,181,130 | 1.03 | 9,335 | 2,145 | 1,498 | 106 | 0.05% |

Figure 2: Suspected Acute Watery Diarrhea (AWD)/cholera cases epicurve, as of epiweek 42, 21 October 2023

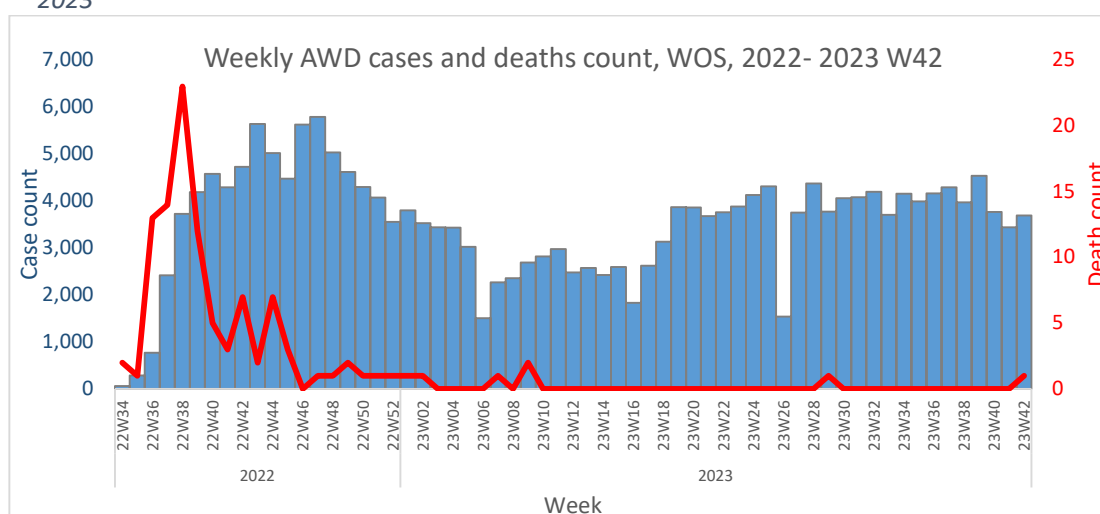
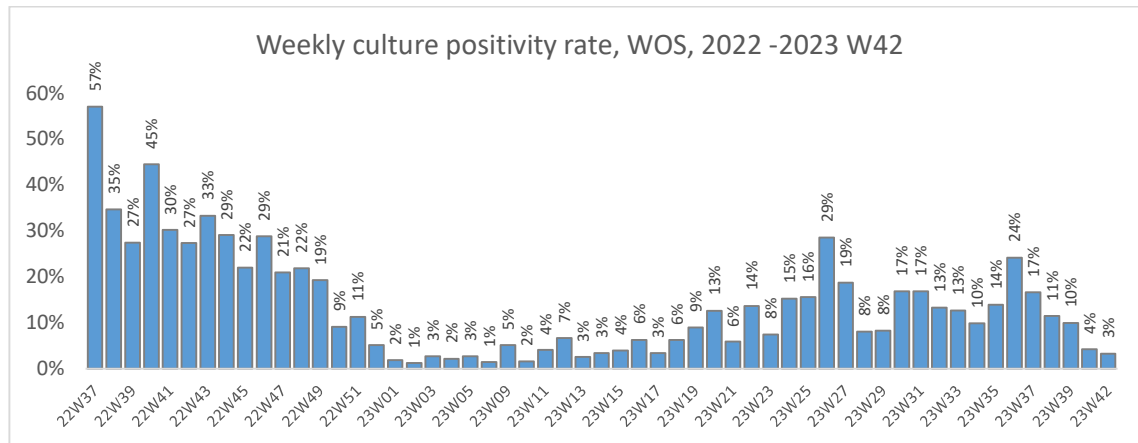


Figure 2 above shows the AWD/cholera outbreak epicurve as of epiweek 42, showing a plateauing phase of suspected AWD/Cholera cases. Figure 3 below shows WoS positivity rate by culture reflecting a decline in case positivity rates reaching 3% on epiweek 42, the lowest positivity rate recorded since epiweek 17 in April 2023. The escalation of the conflict in Northwest Syria since October 5th has caused new internal displacements and further damage to health, water, and sanitation infrastructure - that was already suffering after February earthquake. Teams across Syria will continue monitoring the epidemiological situation throughout the country into the beginning of the winter season, and

surveillance will be strongly integrated in the health facilities in affected areas to allow rapid detection of new suspects in case of resurgence.

Figure 3: WoS Culture Positivity Rate as of epiweek 42, 21 October 2023.



Cholera Outbreak Response

Leadership and Coordination

- Considering the current decline in cholera trends in WoS, moving forward, AWD/cholera reporting will be integrated into a monthly WoS Epi-bulletin, while the AWD/cholera response plan will be integrated into the WoS All-Hazards preparedness and response plan currently under development.
- In NWS, a desk review for cholera and AWD data was conducted by a team, led by WHO, and including representatives from Assistance Coordination Unit (ACU) – the lead partner for the surveillance and lab pillars, Syrian Expatriate Medical Association (SEMA) – the lead partner for the case management pillar, and Health Information System (HIS) Unit – the HIS partner.
 - The review analyzed weekly data collected at the subdistrict level since the beginning of the outbreak, aiming to understand the current cholera epidemiological situation and trends in NWS.
 - The review team discussed integration of both inpatient and outpatient cholera treatment services within existing primary and secondary health care facilities aiming to ensure sustainability and continuity of AWD/cholera treatment service.
 - In light of funding availability and progression of the outbreak, action points were agreed upon to proceed with an exit strategy from a stand-alone Cholera Treatment Centers and Cholera Treatment Units (CTCs/CTUs) model and to move toward the integration of AWD/Cholera surveillance/detection/isolation of suspected cases inside the health facilities in the areas of concern. The integration will involve a preliminary assessment of IPC/Wash components before activation of surveillance/detection/management of suspect cases in those facilities.
 - The desk review report, conclusions, and recommendations will be shared once finalized.

Surveillance and Laboratory

- WHO Syria continues to provide support to 103 rapid response teams (RRTs) for sample collection and transportation to designated laboratories. In September, a total of 23 samples were transported to Central Public Health Laboratories (CPHL) and tested through culture tests.

WHO Syria also supported the following activities:

- A coordination meeting was held for the central and periphery laboratories involved in cholera testing, in addition to communicable diseases departments from the following governorates: Aleppo, Rural Damascus, Hama, Homs, Deir-Ez-Zor, Lattakia, Tartous, As-Sweida, Dar'a, Quneitra, Ar-Raqqa, Al-Hasakeh, and Idleb, with the objectives to:
 - Reinforce testing strategy of suspected cholera cases through coordination between all relevant officers from communicable diseases and RRTs department and the cholera labs;
 - Identify the needs and gaps at cholera periphery laboratories; and
 - Identify the needs to establish cholera laboratory capacity in Dar'a, Quneitra, Ar-Raqqa, and As-Sweida.
- Three training workshops on antibiotic sensitivity testing were conducted to help healthcare professionals make informed decisions regarding the most appropriate and effective antibiotic therapy for infectious diseases, including cholera.
 - Two training workshops were held in Central Public Health Laboratories (CPHL) located in Damascus and one in Deir-Ez-Zor.
 - Sixty personnel from public health laboratories within 13 governorates participated.
- Rehabilitation of the microbiology laboratory in Homs was finalized. This achievement aligns with the broader objective of strengthening the governorate-level capacity for the diagnosis of cholera and diseases and aims to mitigate challenges related to shipping of samples to CPHL.

Case Management

- In NWS, as of October 7th, two CTCs/CTUs (Idleb and Atma) and 22 ORPs are functional. The CTC in Idleb was temporarily closed after the escalation of violence in NWS.
 - The gradual integration of the cholera/AWD management services into existing Primary Health Care (PHC) and Secondary Health Care (SHC) facilities has been initiated in NWS, in coordination with implementing partners.
- In Northeast Syria (NES), 13 CTUs/CTCs are equipped to provide care for cholera cases: 7 in Deir-Ez-Zor, 2 in Al-Hasakeh, 3 in Ar-Raqqa, and 1 in Aleppo. Currently, only 7 facilities in Deir-Ez-Zor and Ar-Raqqa are actively receiving patients, while the rest are suspended due to the current decline in numbers of admitted cases.

Supplies and Medicines

- WHO Syria delivered:
 - Eight hundred bottles of 75% alcohol-based hand rub solution to Aleppo hub, Deir-Ez-Zor Department of Health (DOH), Al Assad hospital in Deir-Ez-Zor, and Lattakia NGOs to support infection prevention and control (IPC) measures.
 - Four cholera kits & forty cholera RDT kits to Tishreen University Hospital in Lattakia & DOH Hama.
 - 26,200 oral rehydration salts (ORS) sachets to health partners in: Homs, Hama, Ar-Raqqa (Tabqqa National Hospital, Ar-Raqqa National Hospital), and Aleppo (Menbij National Hospital, Ain Arab Hospital).
 - Lifesaving medicines to health partners & NGOs in Damascus, Homs, Ham, Aleppo, and the medical point at the Sports city collective shelter in Lattakia.

Water Sanitation and Hygiene (WASH)

Water Quality Monitoring

- In NWS,
 - WASH cluster field facilitators conducted water quality monitoring in 95 communities and 496 camps. In total 6,123 samples were collected with the following key results:
 - In camps:*
 - 19% of tested samples were found to be at 0 Free Residual Chlorine (FRC).
 - 9% of tested samples were found to be between 0 – 0.2 FRC.
 - 64% of tested samples were found to be between 0.2 – 0.5 FRC.
 - 8% of tested samples were found to be overchlorinated.
 - 7% declared that they are purchasing water from unidentified private vendors to cope with water shortage.
 - In communities:*
 - 74% of tested samples were found to be at 0 FRC.
 - 33% declared that they are purchasing water from unidentified private vendors to cope with water shortage.
 - WASH cluster field facilitators were able to chlorinate 2,040 water storage tanks during their visits.
- WHO Syria office,
 - Supported five training workshops on water quality monitoring. A total of 100 participants from Hama, Aleppo, Latakia, Homs, and rural Damascus Governorates working in laboratories and RRTs at directorates of health, environment water resources, as well as drinking water establishments, were trained on how to conduct field tests of drinking water samples, including free residual chlorine test, bacteriological contamination test, and methodology of disinfection of drinking water.
 - Supported the Ministry of Health (MOH), Ministry of Local Administration Environment (MOLAE), and Ministry of Water Resources (MOWR) to conduct water quality monitoring activities in Homs and Hama, in addition to a WHO team operating in Al-Hasakeh and Ar-Raqqa in NES.
 - During the reporting period, the results of testing of 2,498 total samples tested revealed 91 samples (3.6%) were contaminated. The distribution of samples appears below:
 - Homs: 42 of 58 samples tested (72.4%) were bacteriologically contaminated.
 - Hama: 22 of 57 samples tested (38.6%) were contaminated.
 - In NES, three partners are monitoring water quality at 35 water stations at Euphrates River.
 - In NES, 2,383 water samples were collected and tested out of which 27 samples (1.13%) were found to be bacteriologically contaminated mainly from water trucking. High levels of contamination were found in Deir-Ez-Zor governorate as follows: 6 out of 25 samples from water trucks (24%); 9 out of 153 samples (5.9 %) in rural areas. Meanwhile, at 5 camps surveyed, 11 out of 902 (1.2%) samples collected from households jerrycans were found to be contaminated. Camp residents were communicated to raise awareness on proper ways of cleaning and disinfecting jerrycans before filling them with water.

Risk Communication and Community Engagement (RCCE)

- WHO Syria office,
 - Finalized a series of communication products on AWD to include social media tiles, videos, and radio spots. These were developed in line with 10 MoH approved key messages, to be disseminated at health facilities and during community engagement and outreach activities.

- Trained 240 community Health Workers (CHWs) and healthcare workers (HCWs) in Damascus, Al-Hasakeh, and Deir-Ez-Zor governorates on AWD and RCCE approaches.
- Integrated a sensitization session on cholera interventions as part of the induction of members of the RCCE sub-national technical working groups (TWGs) established at governorates' level.
- In NWS,
 - Overall, 11 RCCE partners reported covering thirteen subdistricts in NWS with RCCE activities during the reporting period.
 - Starting week 39, due to escalation of hostilities in NWS, most outreach activities in Daret Azza, Idleb, and Jisr El-Shogour districts were suspended, with only five partners reporting continuity of RCCE activities on weeks 42 and 43, as some of the CHWs have been displaced with their families while electricity and internet were disrupted in some locations, especially in Daret Azza and Idleb.
 - In addition to cholera messages, the RCCE team worked closely with partners on the distribution of key messages in response to the conflict, such as proper behavior during and after incidents of bombardment. CHWs teams visited some of the new reception centers and provided Psychological First Aid (PFA) and information on referral pathways that are available, as well as emergency phone numbers.
 - Cholera RCCE activities continued through 336 CHWs and other mobile teams, focusing on face-to-face activities reaching out to 274,063 beneficiaries with the following results:
 - 188,161 new beneficiaries.
 - 85,553 previously reached beneficiaries.
 - 349 suspected cholera cases referred.
 - The RCCE partners utilized various methods for their interventions, which were categorized as follows:
 - Household Visits: 12,537 households were visited, benefiting a total of 35,563 beneficiaries.
 - Individual Awareness Sessions: 8,364 individual awareness sessions were conducted.
 - Mothers and Caregivers: 4,441 mothers and caregivers of children were engaged and reached.
 - Community and Religious Leaders Reached: 1051 community leaders and 414 religious leaders were engaged and reached through the RCCE interventions.
 - School and Education centers: 575 teachers were engaged in RCCE activities and about 30000 students were reached to awareness messages.
 - Group Awareness Sessions: 159,838 beneficiaries were engaged and reached.

Challenges / Gaps

- The escalation of clashes and bombings in NWS and NES resulted in deaths, injuries, new waves of displacement, and additional destruction to the exhausted WASH and health infrastructure. Collectively, these effects exacerbate the risk of AWD/cholera and other water-borne diseases.
- Limited access to clean water sources continues, with new areas added to previously identified areas with limited access to safe and clean water sources, especially in rural communities.
- Power supply shortages continue to affect the water pumping and supply capacity increasing reliance on unreliable water sources and the risk of water borne diseases transmission.
- In NWS, some of the health facilities designated for the integration of AWD/cholera services are not yet ready regarding space, IPC measures, and staff capacity.

Key Priorities

- Continue enhancing surveillance across WoS and monitor closely the outbreak situation considering the ongoing hostilities in NWS and NES.
- Continue advocating for improving WASH conditions, including expansion and repair of sewage networks in camps and community settings, strengthening community-level wastewater management, improvement of schools WASH facilities, and enhance distribution of water purification tablets and hygiene kits in areas with low water levels and/or contamination.
- Initiate integration of standalone AWD/cholera response operations into existing PHC and SHC services.

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