

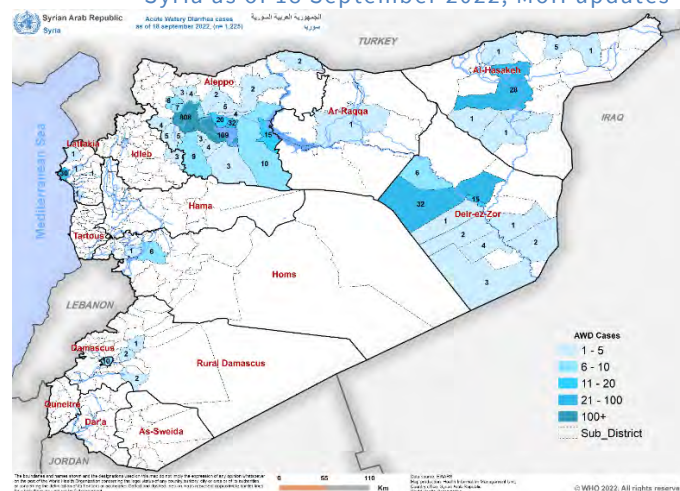


Total AWD cases	Total positive cholera cases/ RDTs	Total confirmed cholera cases/ culture	Total AWD deaths
1,227	201	15	14

Background and situation overview

- On the 22nd of August, a notification about a suspected cholera case in Aleppo city was reported, the case was a male child, 9 years old, who had severe watery diarrhoea with dehydration, the case was admitted to the hospital. A stool sample was collected from the case and sent to the reference lab in Damascus, the results were positive for cholera by the culture test and the rapid diagnostic test. DoH immediately started the investigation of contacts and diarrhoea cases in the area. Investigations by RRT found that 6 contacts had also diarrhoea, and one contact had severe diarrhoea (12 years old male) and was also admitted to the hospital. The culture test of index case contact was also positive for cholera.
- The initial investigation by RRTs indicated an increase of acute watery diarrhoea (AWD) cases in Aleppo city, in addition to an increase of severe cases of diarrhoea admitted to Aleppo university hospital, Zahi Azrak hospital since 15 August 2022
- On 10 September 2022, the Syrian Ministry of Health declared 15 Cholera laboratory-confirmed cases in Aleppo governorate and one death.
- By the end of August, AWD was extended to other governorates; Ar-Raqqa, and Deir-Ez-Zor. Later in September, AWD cases were reported from new governorates in Hassakeh, Lattakia, Damascus, Hama, Homs, and Rural Damascus
- Between 25 August and 18 September 2022, MoH reported an increase in AWD cases as follows: A total of 1 227 cases in Aleppo, Deir Ez-Zor, Hassakeh, Lattakia, Damascus, Homs, Hama, and Rural Damascus.
- On 18 September 2022 MoH confirmed a cholera outbreak in 6 governorates: Aleppo, Hassakeh, Deir Ez-Zor, Lattakia, Damascus, and Homs with a total of 201 cases confirmed by RDTs and 15 by culture. 14 deaths were associated with acute watery diarrhoea were reported.
- Laboratory results of drinking water samples tested at CPHL were positive for cholera (3 samples in Deir Ez-Zor and 2 samples in Ar-Raqqa). Also, one sample from an ice factory in Aleppo was positive, in addition to an environmental sample from the sewage network in Aleppo.
- As of 18 September, cases of AWD were also reported by health partners in NES, and through the EWARS teams. The total number was 1 551 AWD cases and 63 laboratory-confirmed cases in Deir Ez-Zor, Ar-Raqqa, and Hassakeh.

Figure 1: Map Distribution of acute watery diarrhoea in Syria as of 18 September 2022, MoH updates



MoH standard Case Definitions

- Acute watery diarrhoea**
Acute watery diarrhoea is an illness characterized by three or more loose or watery (non-bloody) stools within 24 hours.
- Suspected cholera case**
– In areas where a cholera outbreak has not yet been declared, any person aged 2 years or older presenting with acute watery diarrhoea and

severe dehydration or dying from acute watery diarrhoea.

- In areas where a cholera outbreak has been declared, any person presenting with or dying from acute watery diarrhoea.
- Confirmed cholera case: a suspected case with V. Cholerae O1 or O139, confirmed by culture or PCR.

▪ Cholera alert

A cholera alert (suspected cholera outbreak) is defined by the detection of at least one of the following:

- two or more people aged 2 years or older with acute watery diarrhoea and severe dehydration, or dying from acute watery diarrhoea, from the same area, within 1 week of one another.
- one death from severe acute watery diarrhoea in a person aged 5 years or older, and/or one case of acute watery diarrhoea testing positive for cholera by rapid diagnostic test (RDT) in an area that has not yet detected a confirmed case of cholera (including areas at risk for extension from a current outbreak).

▪ Cholera outbreak

a cholera outbreak is defined by the occurrence of at least one confirmed case of cholera and evidence of local transmission.

Description of the outbreak

The situation of AWD cases is evolving alarmingly in the affected governorates and expanded to new governorates (in 8 governorates) figure 1 shows the surge of AWD cases since 25 August 2022.

- Between 25 August and 18 September 2022, MoH reported an increase in acute watery diarrhoea cases as follows:
- A total of 1,227 acute watery diarrhoea cases were reported in Syria.
- The distribution by place: most of the cases were reported from Aleppo (87 %, 1,067 cases), Deir-ez-Zor (5.4%, 66 cases), Hassakeh (3%, 37 cases), Lattakia (2.7%, 33 cases), Damascus 1%, 12 cases) Homs (0.6%, 7 cases), Rural Damascus (0.2%, 3 case) and Hama (0.2%, 2 cases), figure 3.
- Distribution of cases by age groups: ages range from 1 to 90 years (median 40), while 9.25% of cases were children (n= 112) under 5 years and 0 deaths. 67% of cases were above 25 years, fig 4.
- The distribution of AWD by sex: 665 female, and 516 male cases have been reported (ratio 0.8 M:

F). figure 5 indicates a clear preponderance of females which might conclude an increased exposure of females to a suspected source of the outbreak.

- 14 deaths were reported (11 from Aleppo, 2 from Deir-ez-Zor, and 1 from Hassaka). Deaths range from 30 to 80 years, (CFR 1.2 %).
- The current differential diagnosis of acute watery diarrhoea cases is infection with vibrio cholera.
- The source of infection could be linked to people drinking water from untreated sources or the Euphrates River in Deir Deir-ez-Zor and Ar-Raqqa governorates. While in other governorates, it could be linked to food contamination due to irrigating plants with contaminated water.

Figure 2: Epidemic curve of Acute watery Diarrhoea in Syria, MoH, as of 18 September 2022

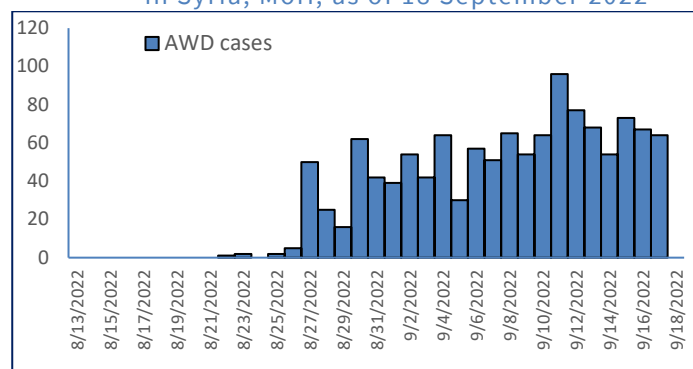


Figure 3: Distribution of AWD by governorate as of 18 September 2022, MoH

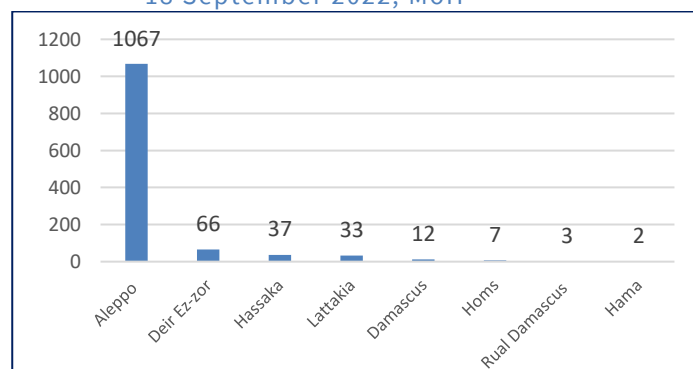


Figure 4: Distribution of AWD cases by age groups

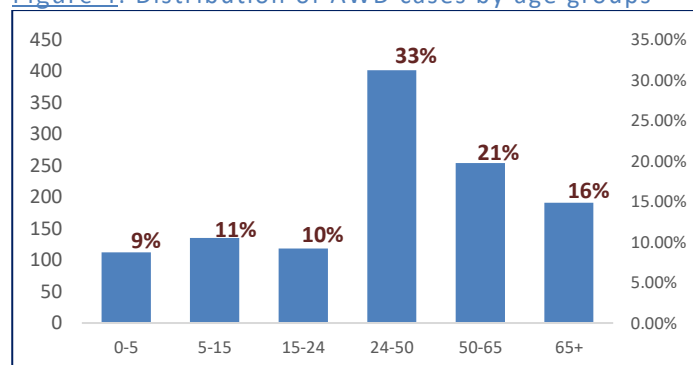
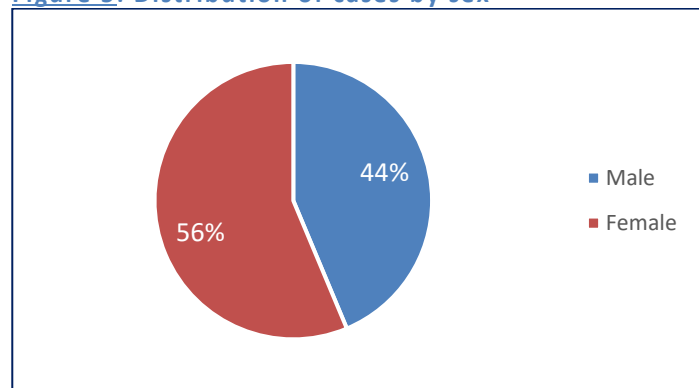


Figure 5: Distribution of cases by sex



Laboratory confirmation

- A total of 201 cases were tested with RDTs of which 201 cases were positive by RDTs for cholera (153 in Aleppo, 14 in Deir-ez-Zor, 21 in Hassakeh, 10 in Lattakia, 2 in Damascus, and 1 in Homs).
- The results of culture tests were positive for 15 patient samples in Aleppo
- Results of water samples and environment samples found the following results:
 - Aleppo: one positive sample from the sewage network, and one positive sample from an ice factory
 - Deir-Ez-Zor: three samples from drinking water (Tanks) were positive in the east of Deir-Ez-Zor.
 - Ar-Raqqa: two positive samples, one from a tank, and one from the Euphrates River
 - The results of antibiotics susceptibility tests show resistance for Ampicillin, Furazolidone, and Nalidixic acid. And a sensitivity for Ciprofloxacin,

Azithromycin, and Trimethoprim+ sulfamethoxazole

AWD reports by health partners in NES:

- Reports of AWD from health partners in NES also reported an increase in AWD cases and confirmation of Cholera as follows:
 - A total of 1,551 AWD cases were reported as follows: 1,140 in Deir Ez-Zor, 290 in Hassaka, and 121 in Raqqa.
 - The number of deaths related to acute watery diarrhoea is 8: 4 in Deir Ezzor and 4 in Raqqa.
 - The number of confirmed cholera cases by RDTs is 22; 17 in Deir Ez-Zor, and 5 in Raqqa.
 - The number of confirmed cases by culture is 63 of which 43 in Deir Ezzor, and 20 in Raqqa.

Figure 6: Map Distribution of acute watery diarrhoea in NES as of 18 September 2022, health partners updates

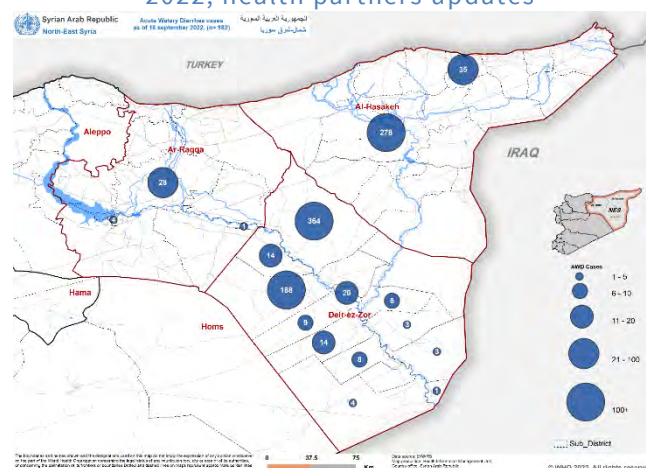


Table of acute watery diarrhoea cases and deaths, confirmed cholera cases by RDTs and culture:

Governorate	AWD	RDTs	RDT +	Culture +	Deaths	Source of Reporting
Aleppo	1,067	185	153	15	11	MoH
Deir Ez-Zor	66	58	14	0	2	MoH
Hassaka	37	37	21	0	1	MoH
Lattakia	33	13	10	0	0	MoH
Damascus	12	4	2	0	0	MoH
Homs	7	7	1	0		MoH
Rural Damascus	3	0	0	0	0	MoH
Hama	2	0	0	0	0	MoH
Total	1,227	304	201	15	14	MoH
Health Partners updates						
Deir Ez-Zor	1,140	50	17	43	4	Health Partners
Hassaka	290	4	0	0	0	Health Partners
Raqqa	121	48	5	20	4	Health Partners
Total	1,551	102	22	63	8	Health Partners

WHO Response

WHO is working to respond to the outbreak by scaling up surveillance and testing capacity, training health care workers, and delivering IV fluids and ORS, in addition to adopting the multisectoral approach to control the outbreak.

Pillar 1: Coordination and leadership

- Daily contacts are established with the MoH and DoHs on operational and technical issues of the response.
- A meeting is organized between UNCT and the technical team of the MoH in Damascus on the epidemiological situation and levels of ongoing response.
- The in-country inter-agency and WoS Incident Management structures were set up for the response, including WHO, UNICEF and engaged sectors.
- WHO/WHE (Health Emergency) WoS weekly 3LC (level call) took place to address the situation in the country via all operational hubs.
- WHO EMRO Regional Director visited Syria. Among other advocacy issues, a joint coordinated response to AWD/cholera is on the agenda.
- A joint WHO and UNICEF response plan was finalized illustrating key priority activities and funding requirements against all defined pillars/strategic objectives. A total of XXX million USD has been identified as a gap at this stage.
- The health sector Syria AWD/cholera response plan (9 pillars) is under finalization (COB: 21 September). It will be further consolidated at WoS AWD/Cholera Outbreak Integrated Health and WASH Preparedness and Response Plan (September – November 2022) and serve advocacy purposes for required resource mobilization among the donors.
- Respective AWD/Cholera Taskforce groups are established in respective hubs led by MoH and WHO.
- Situation updates are produced twice a week for the health sector. 4 internal situation reports are produced.
- A donor briefing (virtual) on the cholera response has been organized.
- All sub-national health sector coordination groups in Aleppo, Lattakia, Homs, Qamishli and Deir-ez-Zor conduct health sector meetings on the ongoing response and plans. Sub-sector working groups, such as Reproductive Health WG, MHPSS WG, RCCE and Education Sector integrate AWD/Cholera issues into their programming.

- Regular updates provided to HCT Syria.
- Weekly joint WoS Health/WASH Clusters take place. Damascus and Gaziantep cluster lead agencies, WoS team, NES health sector, OCHA, and NES Forum provide the necessary updates.
- The United Nations Resident and Humanitarian Coordinator in Syria, Imran Riza, issued a statement on the outbreak of cholera in Syria.
- Conducted a grading call (L2) on the emergency event for Syria at 3 levels (HQ, EMRO, WCO) of WHO.
- Operational exchange of information is established via the WoS Health Cluster team to coordinate information on needed supplies for AWD/Cholera response, especially coming from various XB operational health partners and facilities in NES.
- IHR (International Health Regulations) team in WHO Regional Office and Syria Country Support Team are fully engaged for timely response and technical assistance.
- Available guidelines, materials, and protocols on AWD/Cholera response are shared with the partners.

Pillar 2: Disease surveillance

WHO case definition of AWD was printed and distributed to all MoH health facilities and RRTs.

- Intensify surveillance activities and conduct active case finding especially in high-risk areas in Aleppo, Deir Ez-Zor, Ar-Raqqa, and Hassaka.
- Supported RRTs in all governorates with 3,000 rapid diagnostic tests. A new shipment of 4000 tests will be available in the country this week.
- Supported the operational costs of 101 rapid response teams at central and governorate levels (transportation, samples shipping, and communications).
- Developed testing strategy for testing suspected cases.

Pillar 3: Laboratory diagnostics

CPHL has the capacity for confirmation of cholera cases in addition to antibiotics sensitivity tests.

- 4 public laboratories in Lattakia, Homs, and Hama have the capacity for culture confirmation
- Enhance lab capacity for confirmation of disease aetiology through the provision of lab supplies.
- In process of scaling up the capacity of the public health laboratory at the governorate level.

Pillar 4: Case Management

- Shipment of 60 tons of cholera kits and supplies arriving in the country this week (1st charter flight received on 19th September):
- 20 cholera central kits (drug module), 20 community kits (drug module) 100 cholera kit periphery module (renewable supplies), and ORS 1,338,400 sachet, those quantities will provide treatment for 2000 cholera cases with severe dehydration and about 190,000 mild diarrhoea cases.
- 266,000 sachets of ORS from our stock in addition to medical supplies sufficient to manage about 3300 cases locally procured and distributed partially to CTC in Aleppo and Lattakia
- The case management treatment protocol is updated accordingly to WHO recommendations and sensitivity results.
- Training on the updated treatment protocol, case definition, and IPC at CTC and CTU in Aleppo (three training, 75 health workers from Aleppo hospitals and DoH) and in Al Hassakeh (two training, 60 health workers).
- Supported establishing CTC in Aleppo with 30 patients' beds and furniture.
- Supported health facilities with IV fluids, and ORS, and the procurement of additional emergency quantities is in process.
- Coordination with other health partners and INGOs for the provision of health care services and proper case management.
- Supported MoH cholera treatment center and RRTs with PPEs.

Pillar 6: Water sanitation and hygiene (WASH)

Samples are being collected from different water sources (main network, wells, tanks, ice factories), and environment samples from the sewage system, Euphrates River. All samples are tested at CPHL. Actions were immediately taken by Water and local authorities



- In process of supporting high-risk areas in Deir Ez-Zor with chlorine tablets to be distributed to households in high-risk areas.
- Supported activities of water quality monitoring in

Aleppo, Hassaka, and Deir Ez-Zor.

- Coordination with the WASH sector to undertake WASH interventions and improve the water quality through chlorination of drinking water in Deir Ez-Zor.
- supported DoH in Aleppo with 250,000 chlorine tablets. And in process of shipping new quantities of chlorine for water purification.

Pillar 7: RCCE

- WHO is co-leading the RCCE efforts against the Cholera outbreak through close coordination with UNICEF, as RCCE lead, as well as other UN agencies and INGOs. The 1st of a series of meetings was held on 20 September 2022 to discuss strategies and approaches by different health partners to mitigate the risks of cholera and stop its spread.
- Distributed 10,000 brochures on how to prevent and treat acute summer diarrhoea.
- Distributed 1,000 flyers with key messages on how to protect against food- and waterborne diseases.
- Conducted a kick-off meeting before the month-long cholera awareness-raising campaign in Aleppo governorate. The meeting was supported by WHO, with the participation of the Aleppo Directorate of Health and 20 community initiatives (100 volunteers). Training included messages on infection prevention and control, as well as identifying and managing simple cholera cases within the community.
- Developed 3 flyers on cholera sources of infection, as well as information for healthcare workers and food handlers. 600,000 flyers are being printed and will be distributed to MOH, NGOs and other health partners.
- Disseminated key messages, addressed to the public and healthcare workers, to health partners and RCCE national coordination team members.
- Developed 9 social media cards on cholera prevention to be disseminated on WHO social media platforms.

Challenges

- The unavailability of microbiology labs in some governorates for the culture tests.
- Poor WASH situation due to the high price of treated water, people are getting drinking water directly from the Euphrates River.
- The fragile health system affects health services and reporting quality.
- Difficulties in accessing some areas in NES.
- Implementing WASH interventions in NE