

Northwest of Syria Cholera Outbreak

Situation Report No.41

Epidemiological Week - 28 (9 July – 15 July 2023)

Date of Onset of Outbreak: 16 September 2022

Reporting Date of outbreak: 17 September 2022

Confirmation Date: 19 September 2022

Suspected Cases: 109816

Confirmed Cases: 849

Cholera Deaths : 23

Case Fatality Rate: 0.02%

NWS Attack Rate: 2.37 %

Key Highlights

Cumulatively, a total of **109816 suspected** cases (**48689** in Aleppo governorate, **61127** in Idleb governorate) including **849 confirmed** have been reported by EWARN team since 16 September, including **23 deaths** case.

- The highest number of cases were reported in Harim district (31465) and Idleb district (19330) in Idleb governorate, then Azaz district (13435), Jebel Saman district (10988) in Aleppo governorate.
- 20453 total suspected cases (including 863 new cases in Epi week 28 - 2023) were reported from camps.
- 57.49 % Of the suspected cases are in the age group <5 years. Males are 51% of the total and females are 49%.
- Since the outbreak started, surveillance and reporting from facilities are being supported and strengthened. For better understanding of the background and context, [please read pervious sitreps.](#)
- Line list is shared with WHO and WASH team to aid Targeted response at a household level being conducted for identified cases.
- Active case search is ongoing, especially in the camps.

Situation Updates

1. Epidemiology

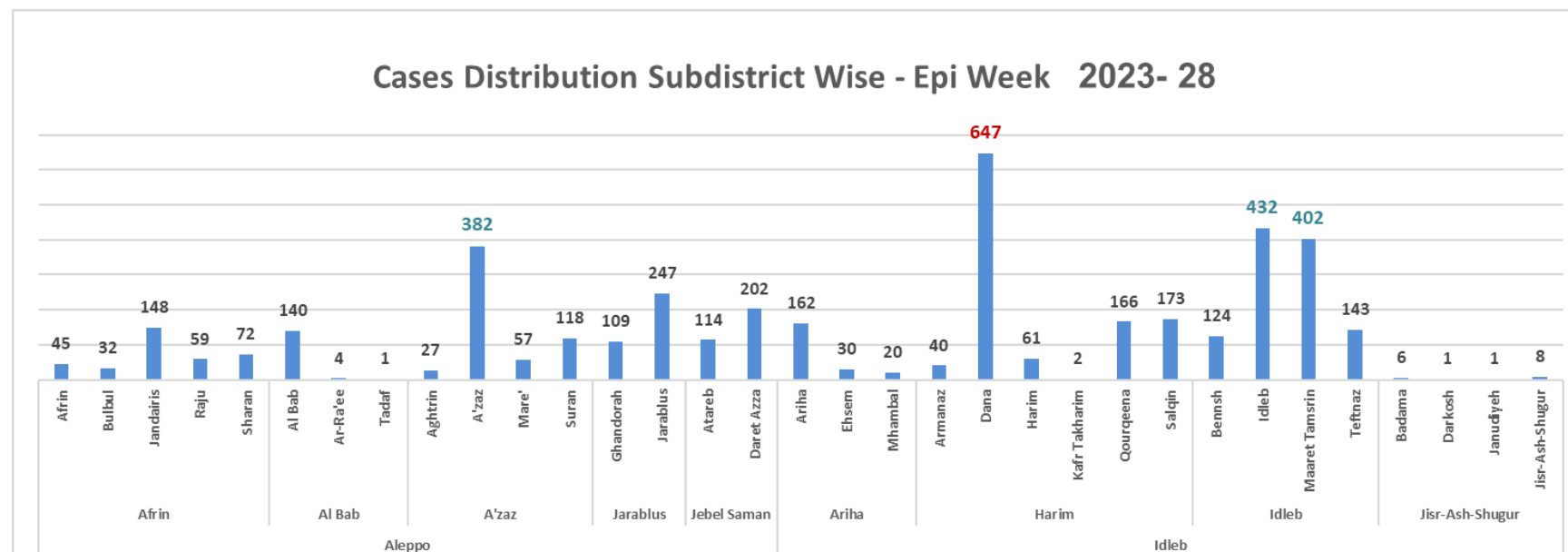
Updated case definition: A resident of outbreak areas with sudden onset of acute watery diarrhea with or without vomiting.

In Epi week 28 - 2023, **4175 suspected cases of cholera were reported**. The affected governorates are Aleppo (1757 suspected cases, 7 confirmed), and Idleb (2418 suspected cases, 10 confirmed). 21% of the total were in the camps

The age group less than 5 reported 51.66 %. Sex distribution of the suspected_cases is 48% Male, and 52% Female

There were no death cases in the epi week 28

Dana subdistrict in Idled governorate reported the highest number of cases (647), in contract Azaz subdistrict reported the highest number in Aleppo governorate (382).

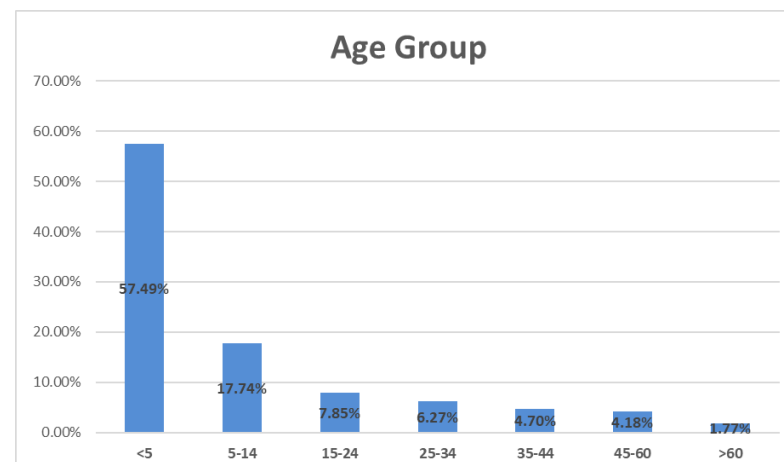
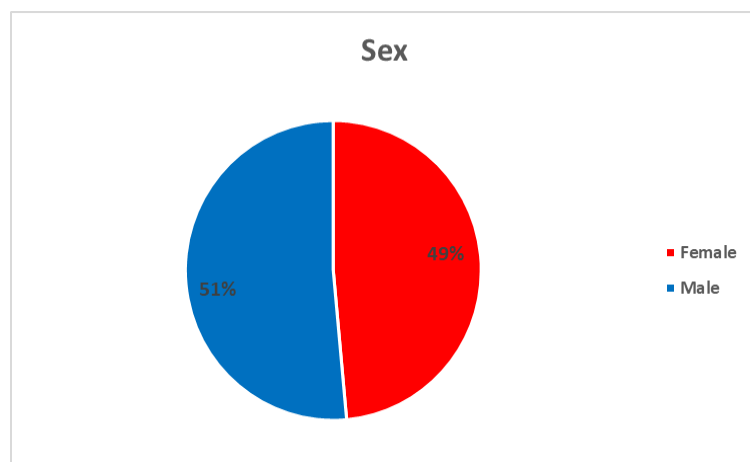


The overall sex distribution of the suspected cases is 51% Male, and 49% Female.

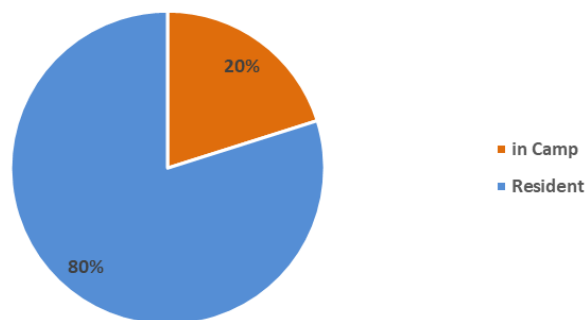
100% of the line listed cases were presented as Acute watery Diarrhea, 20% with vomiting, 4% as rice watery diarrhea, and 8% were dehydrated.

20% of the total cases live in camps (20453), and 80% out of camps (80435). (8927 of the total line listed cases are unknown)

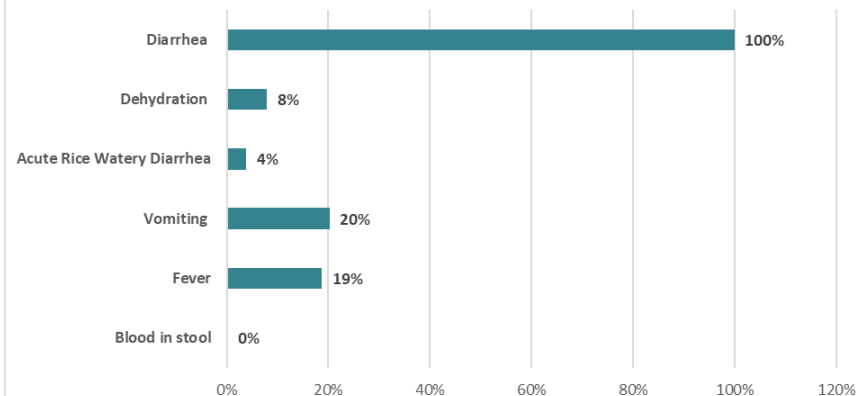
As the outbreak progresses, sensitivity should be increased by including smaller age groups and mild/moderate symptom groups in order to estimate the burden of the outbreak. According to WHO, in areas where a cholera outbreak has been confirmed, any person presenting with or dying from acute watery diarrhea is considered a suspected cholera case. The age group less than 5 years was 57.49%.



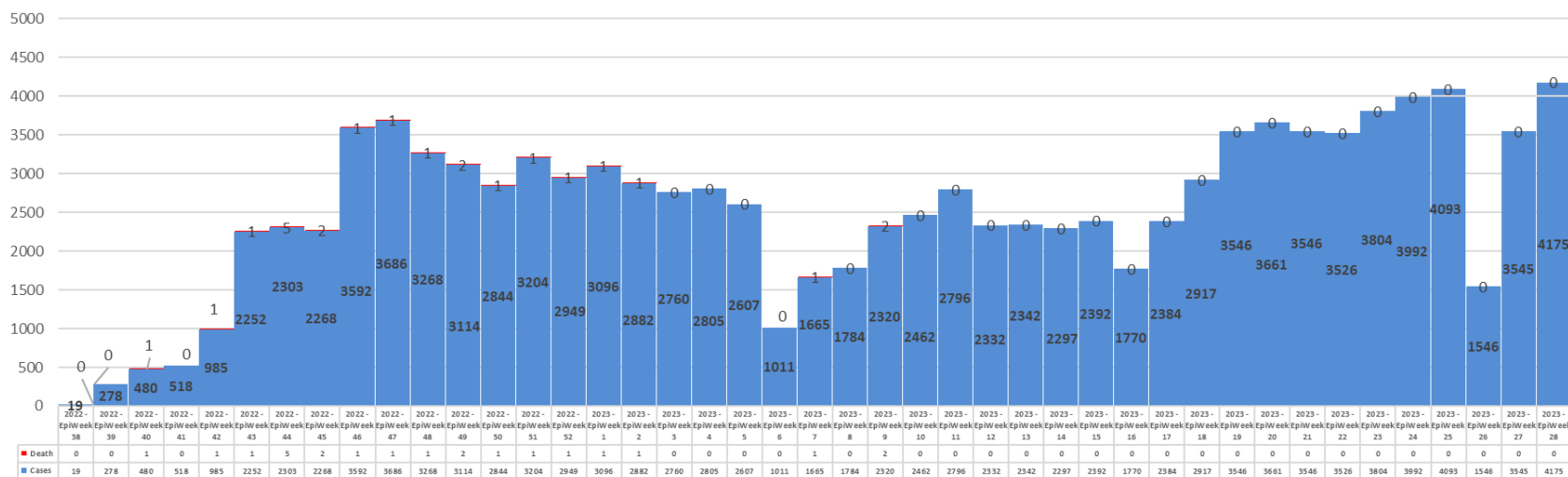
Cholera Cases Residency Distribution



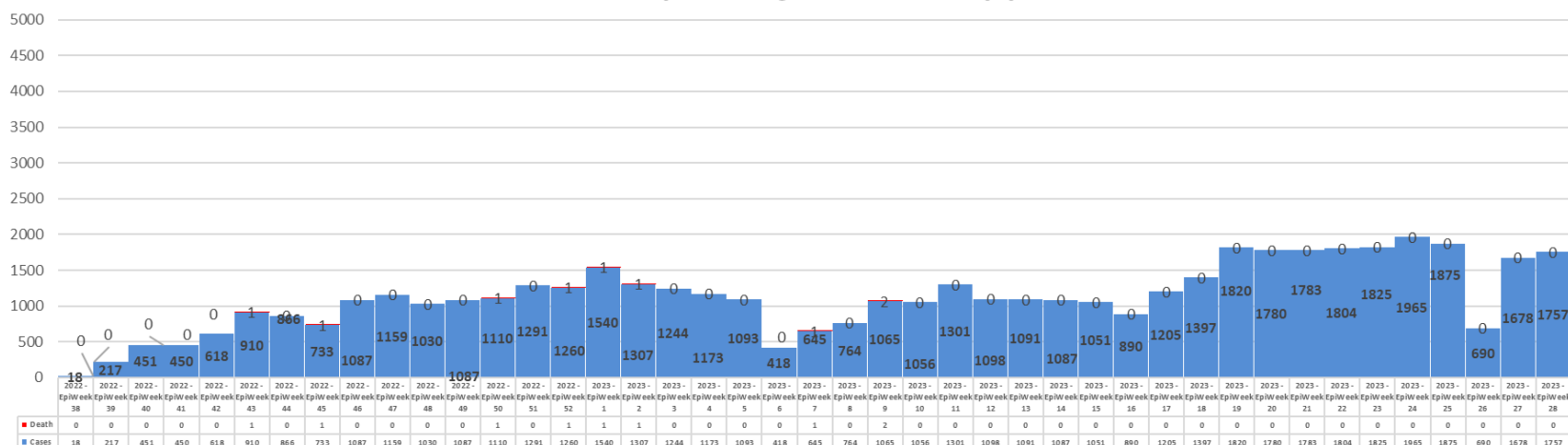
Signs and Symptoms



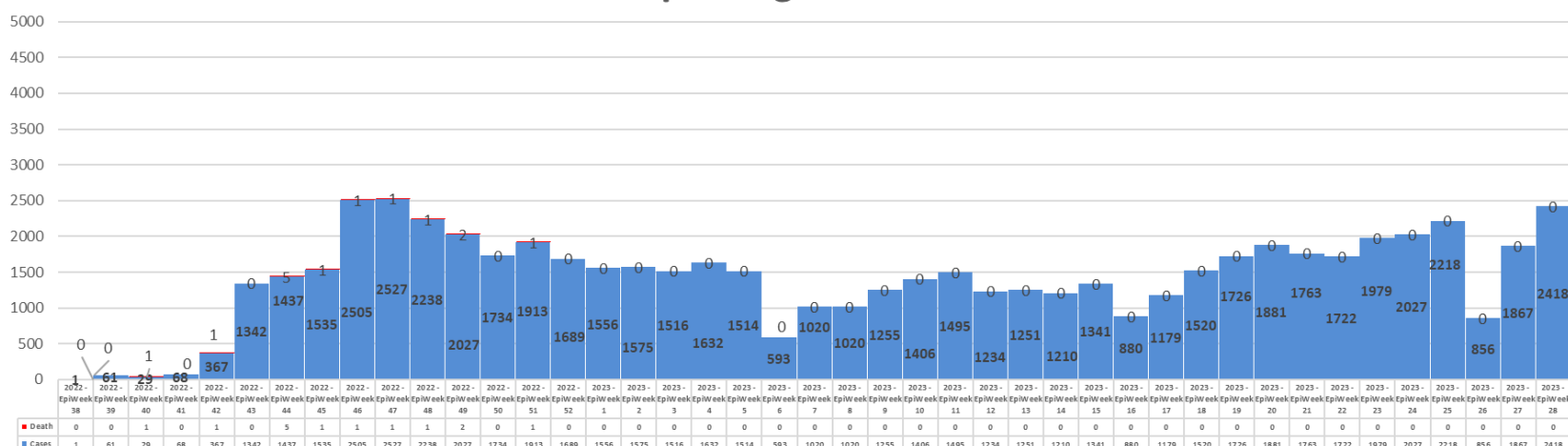
EPI Curve - Reporting Date - NWS



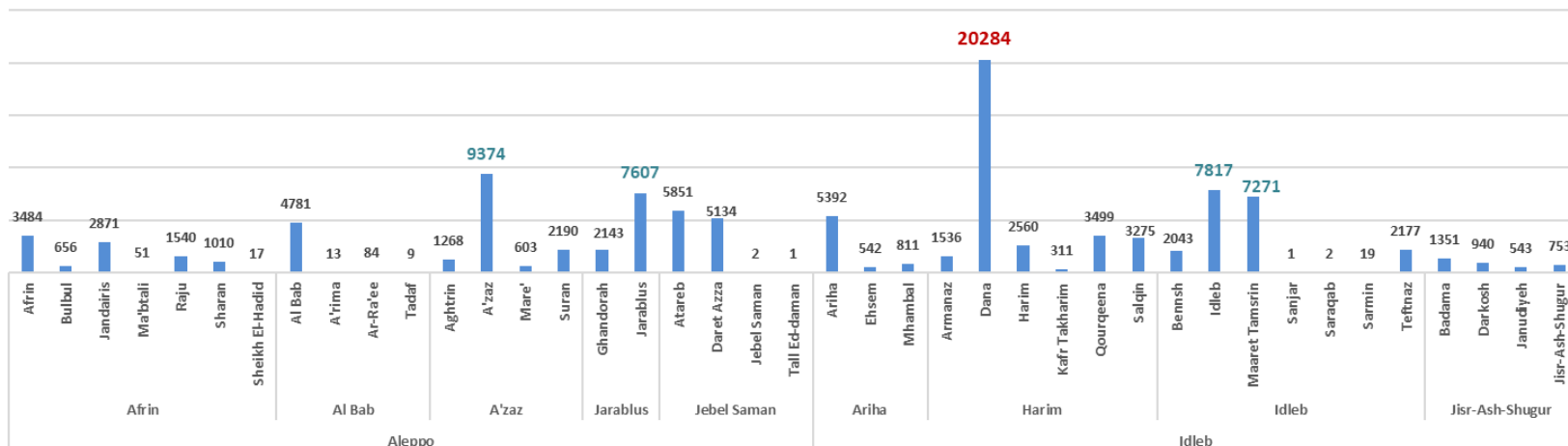
EPI Curve - Reporting Date - Aleppo Governorate



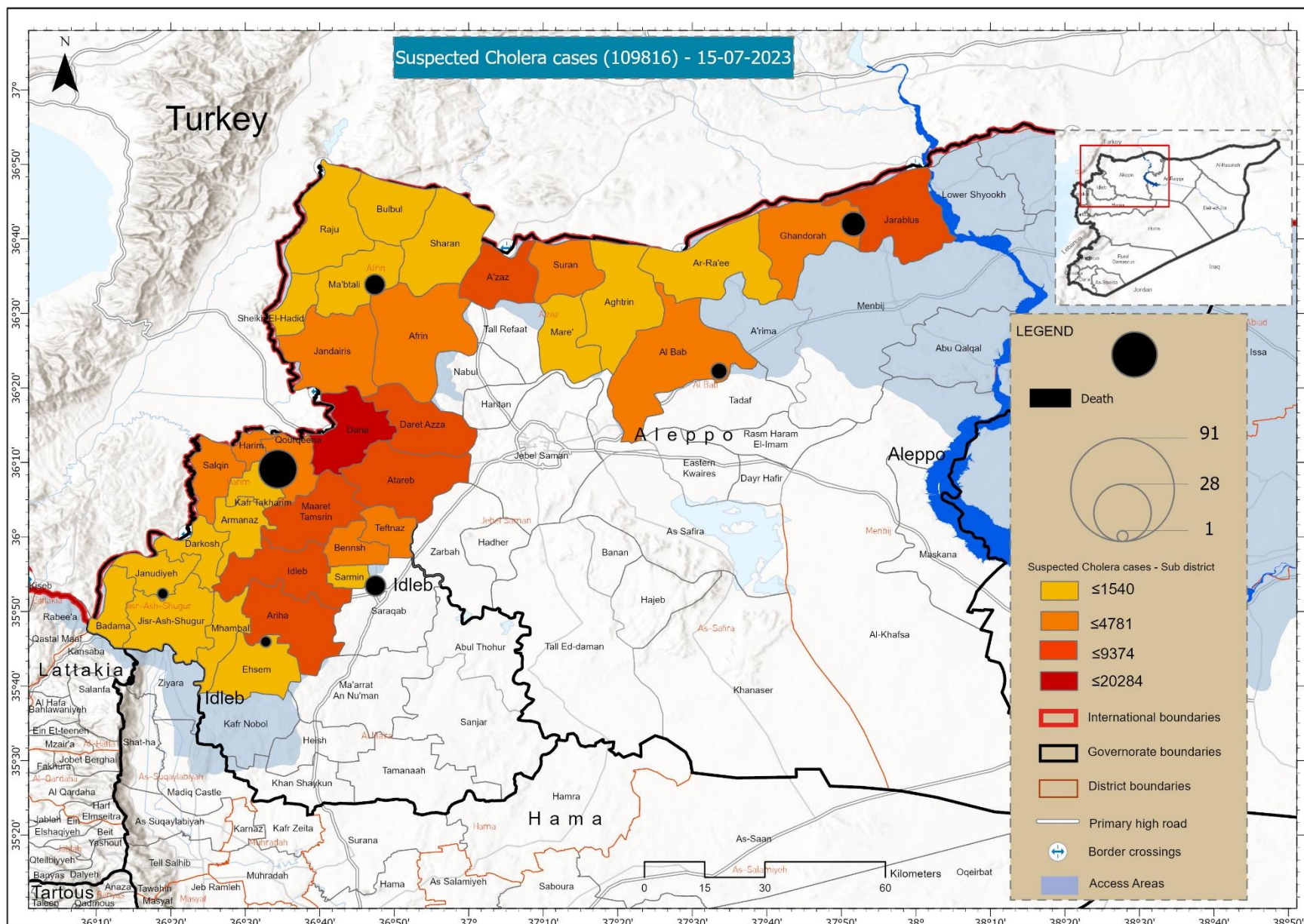
EPI Curve - Reporting Date - Idleb Governorate



Cases Distribution Subdistrict Wise



api Week	Governorate	District	Date of Onset	Population	New cases	Cumulative Cases	New Death	Cumulative Deaths	Case Fatality Rate	Incidence Rate	Attack Rate
Up to W28 - 2023	Idleb	Ariha	20-Sep	185,668	212	6745	0	1	0.01%	114.2	3.63%
		Harim	6-Sep	1,586,820	1089	31465	0	9	0.03%	68.6	1.98%
		Idleb	14-Sep	713,933	1101	19330	0	3	0.02%	154.2	2.71%
		Jisr-Ash-Shugur	25-Sep	310,973	16	3587	0	1	0.03%	5.1	1.15%
	Aleppo	A'zaz	9-Sep	648,600	584	13435	0	0	0.00%	90.0	2.07%
		Afrin	21-Sep	467,090	356	9629	0	3	0.03%	76.2	2.06%
		Al Bab	17-Sep	339,812	145	4887	0	2	0.04%	42.7	1.44%
		Jarablus	12-Sep	121,938	356	9750	0	4	0.04%	292.0	8.00%
		Jebel Saman	10-Sep	251,785	316	10988	0	0	0.00%	125.5	4.36%
	Total			4,626,619	4175	109816	0	23	0.02%	90.2	2.37%



Laboratory:

- In Epi week 28- 2023, the total number of stool specimens or rectal swabs is **195**, (86 in Aleppo –7 confirmed), (109 in Idleb – 10 confirmed).
 - A **cumulative of 6575 samples were collected** since the start of the outbreak (6 % of overall line listed cases), **of which 849 have tested positive by stool culture. The total positivity rate in NWS is 13 %.**
 - The Total number of negative cases by stool culture is 5695, and the remaining 31 are still pending.
- Stool sample collected - Culture**

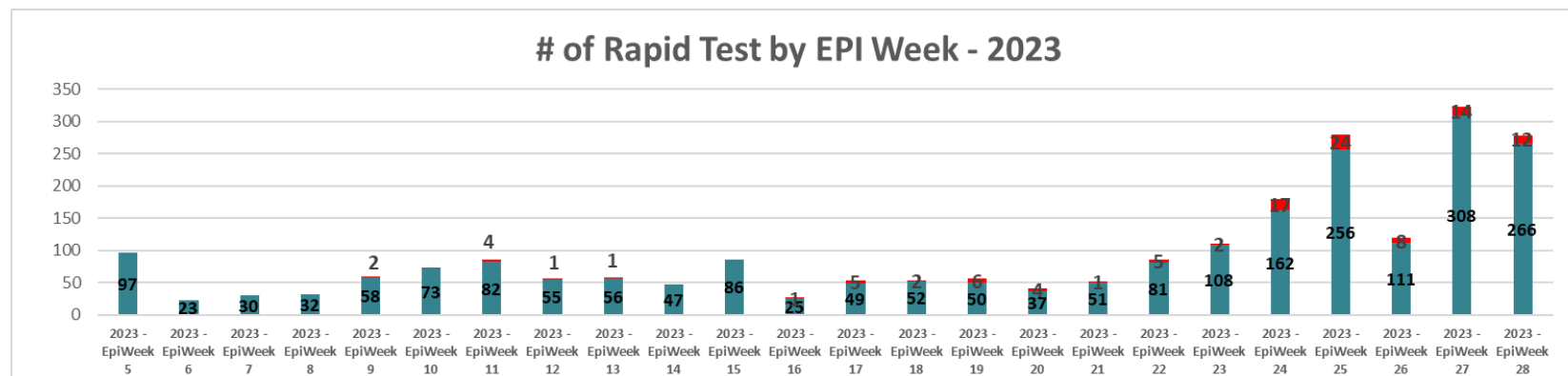
Category	Count	Percentage
No	103241	94%
Yes	849	6%
- Isolation and identification of V. cholera serogroup O1 or O139 by a culture of a stool specimen remain the gold standard for laboratory diagnosis.
 - Currently, at EWARN laboratories (Idleb, Afrin, Jarablus, and Tal-Abiad) Fecal specimens are subcultured onto selective and nonselective media, including Nutrient agar and TCBS agar, for detection of V. cholera O1.
 - Suspicious, oxidase-positive isolates are serotyped in polyvalent antisera raised against the O1 Antigen.
 - Antimicrobial-sensitivity testing is performed to detect resistance.
 - The culture sensitivity results came sensitive for the following antibiotics: Azithromycin, Imipenem, Chloramphenicol, Ciprofloxacin, and Norfloxacin.
 - The resistance is to Tetracycline, Doxycycline, and Sulfamethoxazole Trimethoprim.
 - The laboratory team handles the specimens and waste management according to infection control standards.
 - The sample collection protocol is to collect stool samples in 5-6 % of the total suspected cholera cases per subdistrict and 5 samples from the admitted cholera suspected cases in the CTC /CTU per week.
- Cholera Sampled Cases Classification**

Category	Count	Percentage
Negative	5695	87%
Pending	31	0%
Positive	849	13%

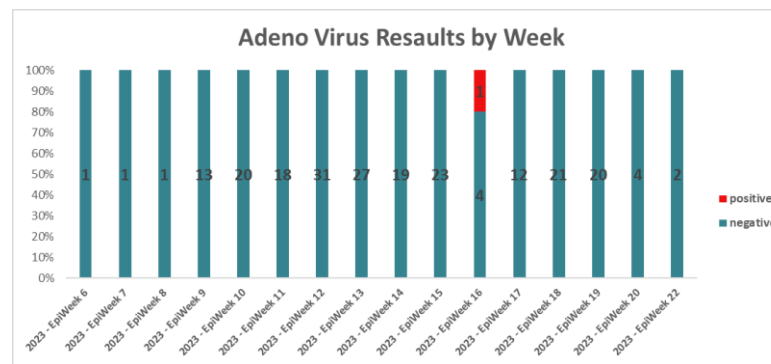
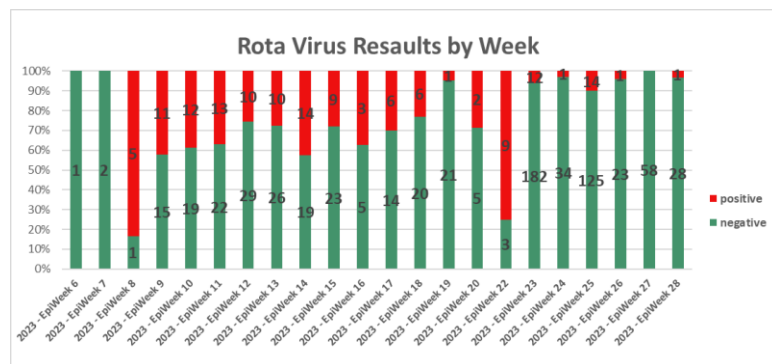
During epi week 28, EWARN received 278 RDT results from the CTC/CTUs and some HFs, 12 of them were positive for Cholera.

The total of RDT tests starting from epi week 5 reached 2304, and the total positive is 109.

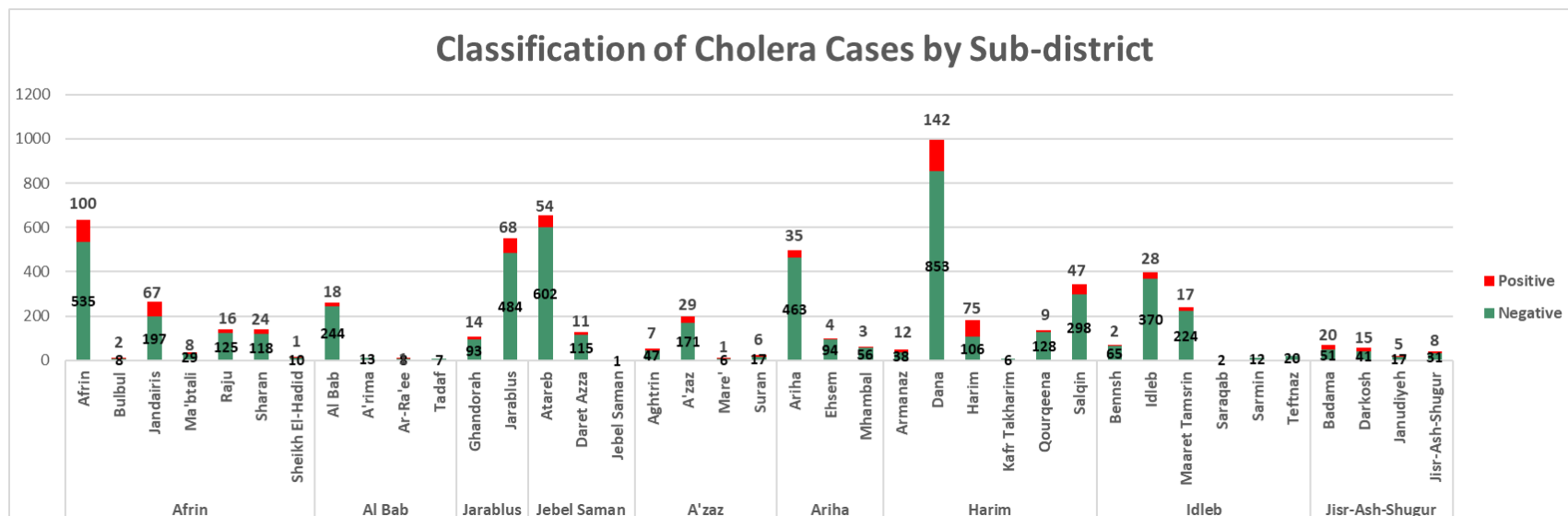
The positivity rate of RDTs, from epi week 5 – 2023 up to epi week 28 – 2023 is 4.73 %. But the positivity rate from the beginning of cholera outbreak up to epi week 28 – 2023 is 5.6 %.



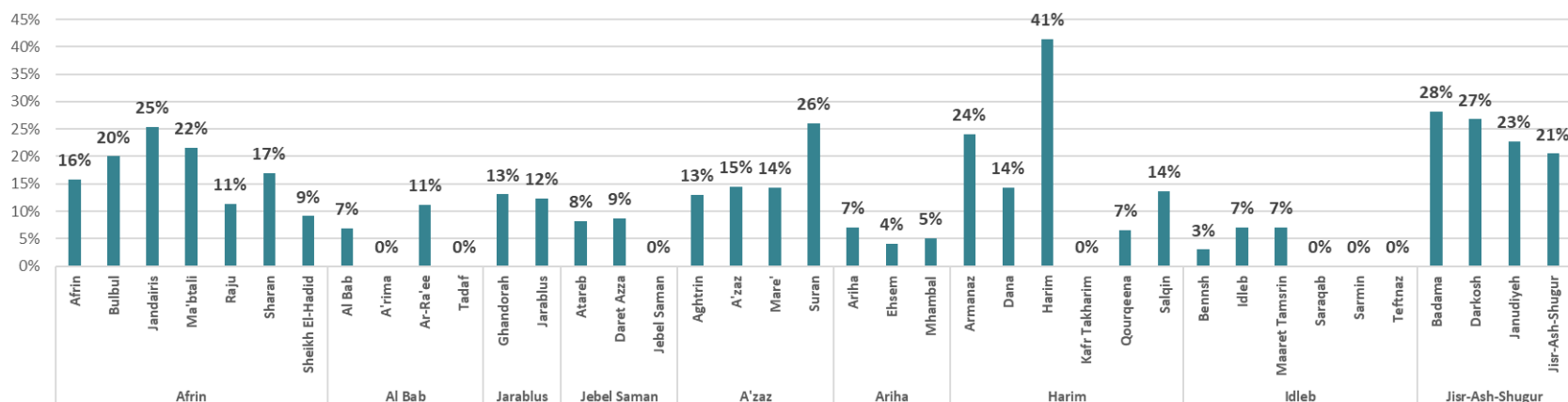
- For children under 5 years of age with a stool culture negative for cholera:
In epi week 28, the lab tested 29 samples to detect Rotavirus, one of them was positive
- The total samples collected for Rotavirus reached 815 (140 were positive), while the total samples for Adenovirus were 218 (one positive)



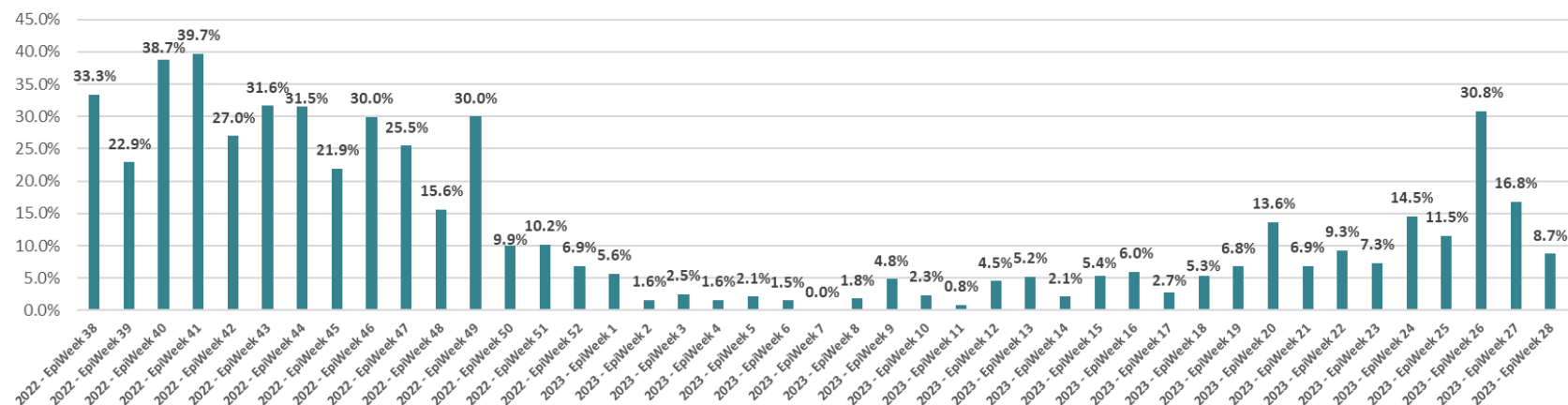
Epi Week	Governorate	District	RDT+	RDT-	Postivity Rate for RDT	Stool Culture Positive	Stool Culture Negative	Postivity Rate for Culture
Up to W26 - 2023	Aleppo	Afrin	46	274	14.4%	218	1022	17.6%
		Al Bab	2	83	2.4%	19	272	6.5%
		A'zaz	15	131	10.3%	43	241	15.1%
		Jarablus	7	161	4.2%	82	577	12.4%
		Jebel Saman	11	203	5.1%	65	718	8.3%
	Idleb	Ariha	3	125	2.3%	42	613	6.4%
		Harim	48	882	5.2%	285	1429	16.6%
		Idleb	10	446	2.2%	47	693	6.4%
		Jisr-Ash-Shugur	3	160	1.8%	48	140	25.5%
	Total		145	2465	5.6%	849	5705	13.0%



Positivity Rate by Subdistrict - Culture



Positivity Rate by Week - Culture



2. WASH:

The WASH team works closely and in high coordination with RRT (Rapid Response Team), formed from staff working in EWARN (DLOs, FLOs...).

The team, after receiving any alert, focuses on the investigation of WASH services in the hotspot areas.

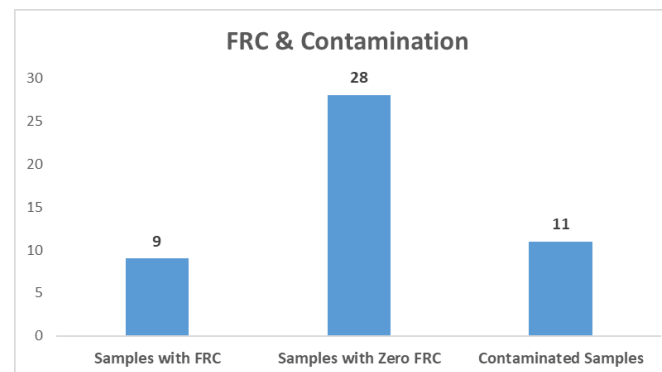
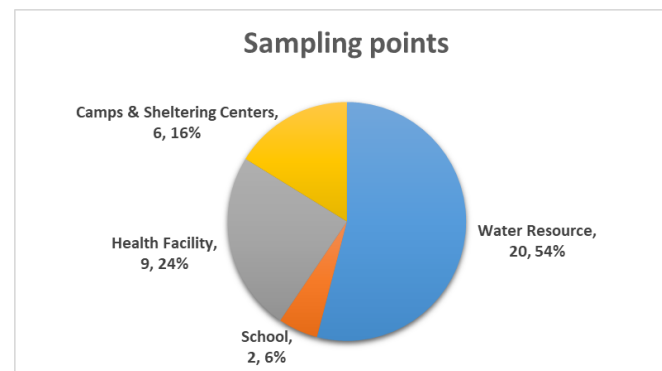
The investigation includes:

1. Taking samples from drinking water resources (main stations, wells, water trucks, water taps.... etc.).
2. Investigate sewage networks and septic tanks' locations and other sanitation services.
3. Identify Hygienic practices.... etc.
4. Assessing agriculture markets (Identify irrigation water and resource of agricultural products if applicable).

ACU team conducted **5** investigations included taking **37** samples from different points:

- **Korin community** / Ariha sub-district / Ariha district/ Idleb governorate:
6 samples were taken, 2 samples were contaminated (taken from tanks situated in a house and mosque).
- **Idleb Community** / Idleb sub-district / Idleb district/ Idleb governorate:
8 samples were taken, no sample was contaminated.
- **Ariha community** / Ariha sub-district / Ariha district/ Idleb governorate:
6 samples were taken, 3 of which were contaminated (taken from a house, public well, and educational Institute).
- **Ghandorah community** / Jarablus district / Aleppo governorate:
6 samples were taken, no sample was contaminated.
- **Bab Al-Salameh community (Old Bab Al Salame camp)** / A'zaz sub-district/ A'zaz District/ Aleppo governorate:
11 samples were taken, 6 of them were contaminated (contaminated water resources are chlorinated before supplying to beneficiaries).

[Full Investigation Reports](#)



Actions taken

- The EWARN team is currently conducting active surveillance in the most important health facilities in northwest Syria (25 HFs). During the visit, the team reviews with the health facility staff the records to ensure the reported cases, also discusses the challenges, and recommendations, and collaborates to treat the problems.
- The EWARN team is receiving the RDT results from health facilities and CTC/CTUs and sharing them.
- To determine the causes of acute watery diarrhea in children under 5 years (the children have a negative cholera result), the EWARN lab is conducting Rotavirus and Adenovirus rapid diagnostic tests (RDTs).
- The response teams conducted an expanded investigation of the deaths that occurred since the beginning of the outbreak (23 deaths), where some possible causes were identified, and the teams made appropriate recommendations.
- ACU teams conduct regular awareness sessions about Cholera, prevention, and control measures for local authorities and affected people during the investigation. Besides, the result of investigations is shared with the WASH cluster and acting organization in the area to take immediate action.