

## Northwest of Syria Cholera Outbreak

### Situation Report No.25

#### Epidemiological Week - 11 (12 March – 18 March 2023)

Suspected Cases: 57947

Confirmed Cases: 578

Cholera Deaths : 23

Case Fatality Rate: 0.04%

NWS Attack Rate: 1.25%

Date of Onset of Outbreak: 16 September 2022

Reporting Date of outbreak: 17 September 2022

Confirmation Date: 19 September 2022

#### Key Highlights

Cumulatively, a total of **57947 suspected** cases (**23893** in Aleppo governorate, **34054** in Idleb governorate) including **578 confirmed** have been reported by EWARN team since 16 September, including **23 deaths** case.

- The highest number of cases were reported in Harim district (17788) and Idleb district (9793) in Idleb governorate, then Azaz district (5708), Jebel Saman district (5651), and Afrin district (5053) in Aleppo governorate.
- 9576 total suspected cases (including 467 new cases in Epi week 11 - 2023) were reported from camps.
- 44.68 % Of the suspected cases are in the age group <5 years. Males are 52% of the total and females are 48%.
- 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

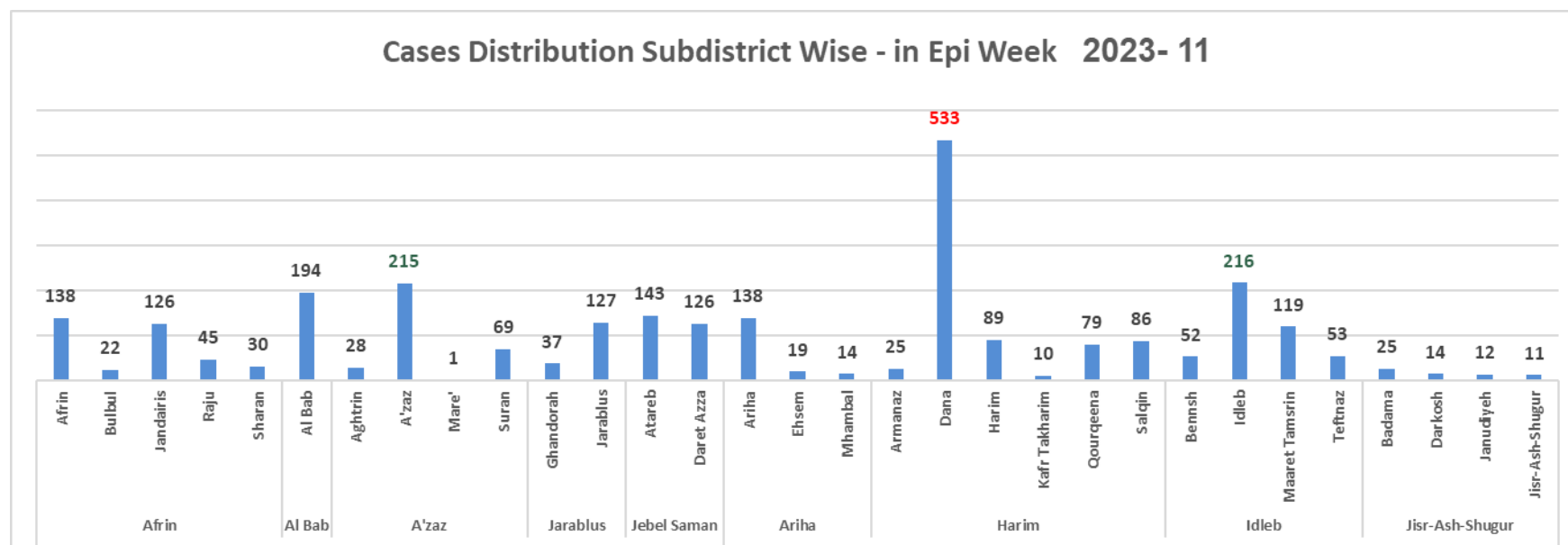
Updated case definition: A resident of outbreak areas with sudden onset of acute watery diarrhea with or without vomiting.

In Epi week 11 - 2023, **2796 suspected cases of cholera were reported**. The affected governorates are Aleppo (1301 suspected cases, 1 confirmed), and Idleb (1495 suspected cases, 0 confirmed).

The age group less than 5 reported 46.49 %, while the age group more than 60 reported 19.7 % of the total.

There were no death cases in the epi week 11

Dana subdistrict in Idled governorate reported the highest number of cases (533), Idleb subdistrict (216), whilst Azaz subdistrict reported the highest number in Aleppo governorate (215).

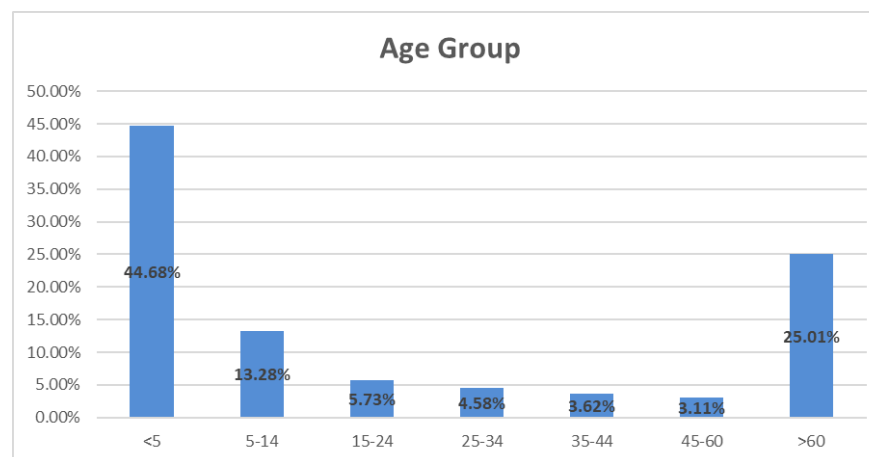
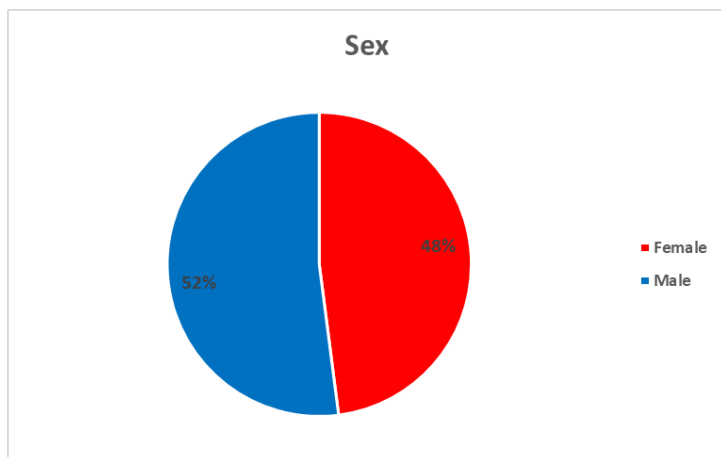


The overall sex distribution of the suspected\_cases is 52% Male, and 48% Female.

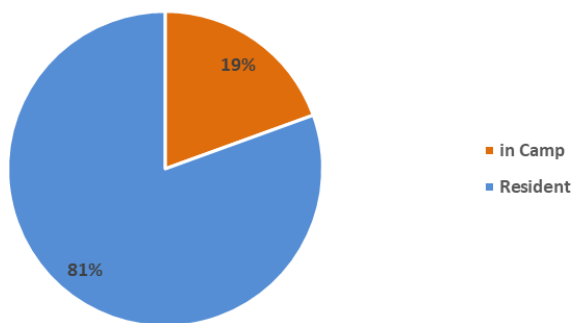
100% of the line listed cases were presented as Acute watery Diarrhea, 20% with vomiting, 5% as rice watery diarrhea, and 7% were dehydrated.

19 % of the total cases live in camps (9976), and 81% out of camps (41279). (6687 of the total line listed cases are unknown)

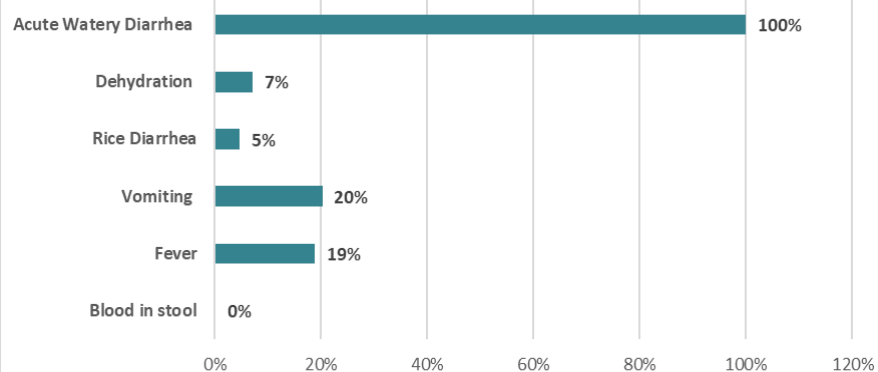
As the outbreak progresses, sensitivity should be increased by including smaller age groups and mild/moderate symptom groups in order to estimate the burden of the outbreak. According to WHO, in areas where a cholera outbreak has been confirmed, any person presenting with or dying from acute watery diarrhea is considered a suspected cholera case. The age group less than 5 years was 44.68%.



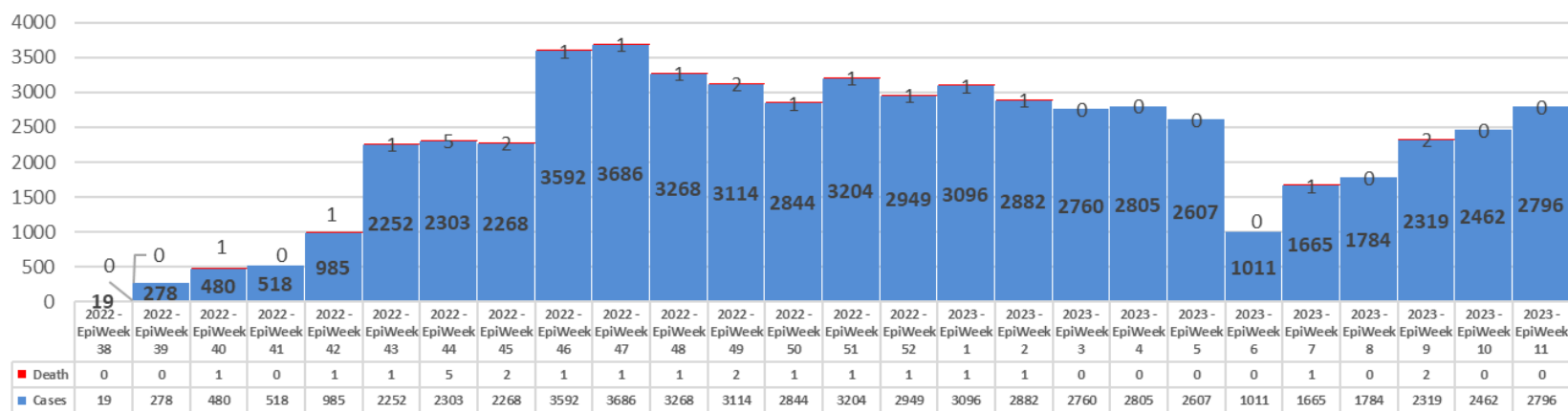
### Cholera Cases Residency Distribution



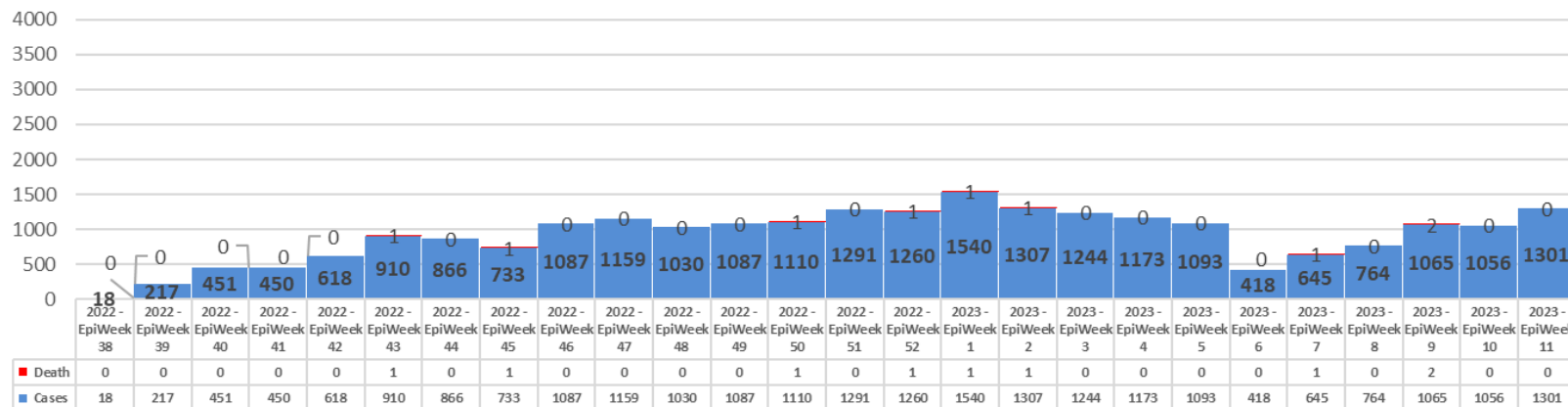
### Signs and Symptoms



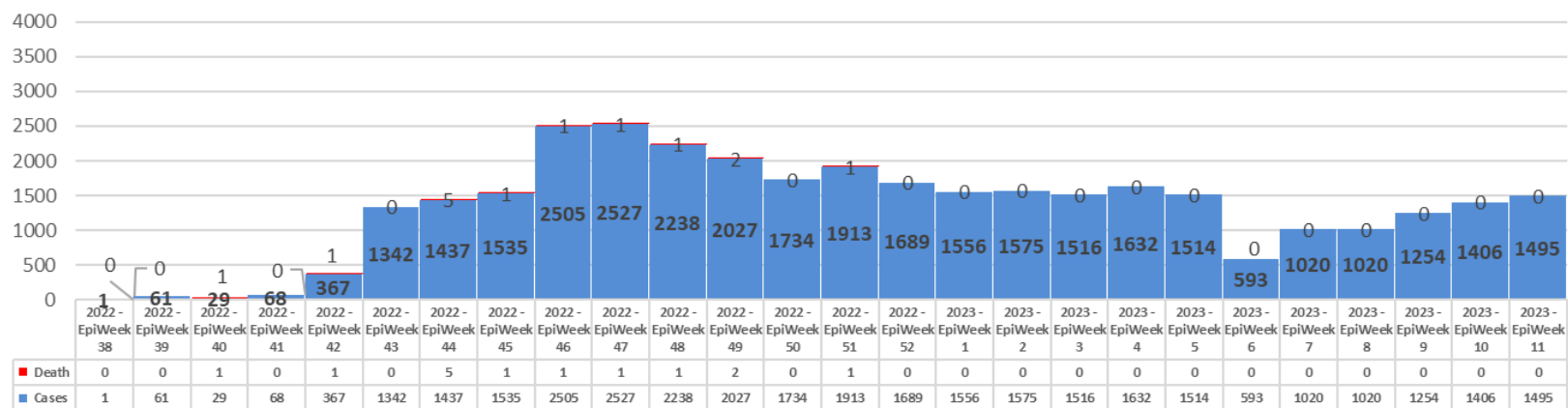
### EPI Curve - Reporting Date - NWS



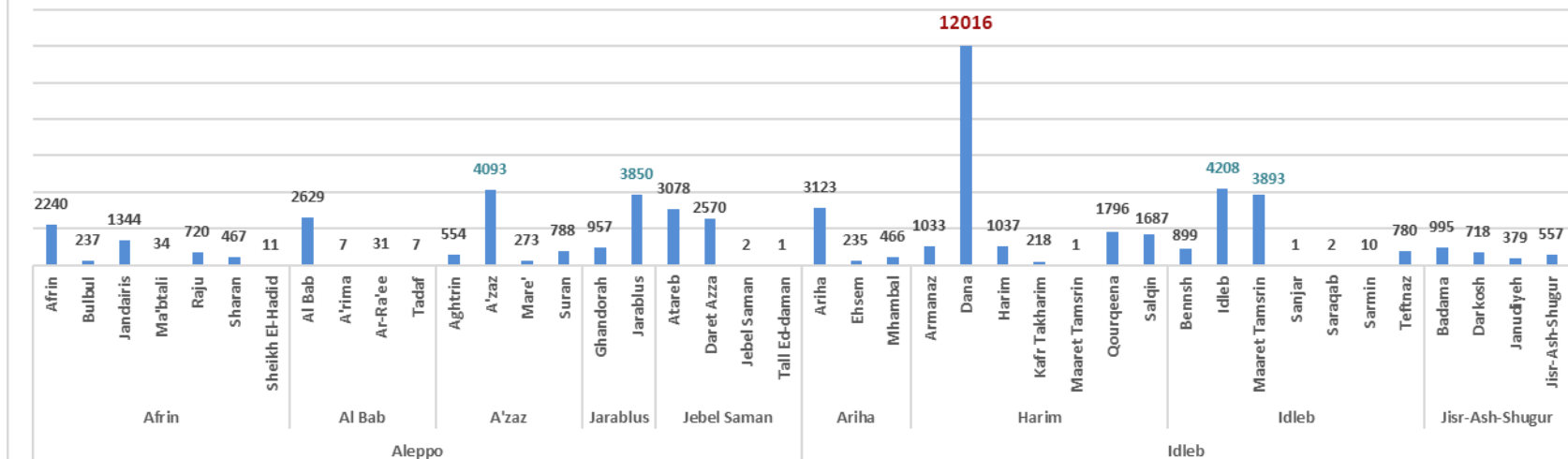
### EPI Curve - Reporting Date - Aleppo Governorate



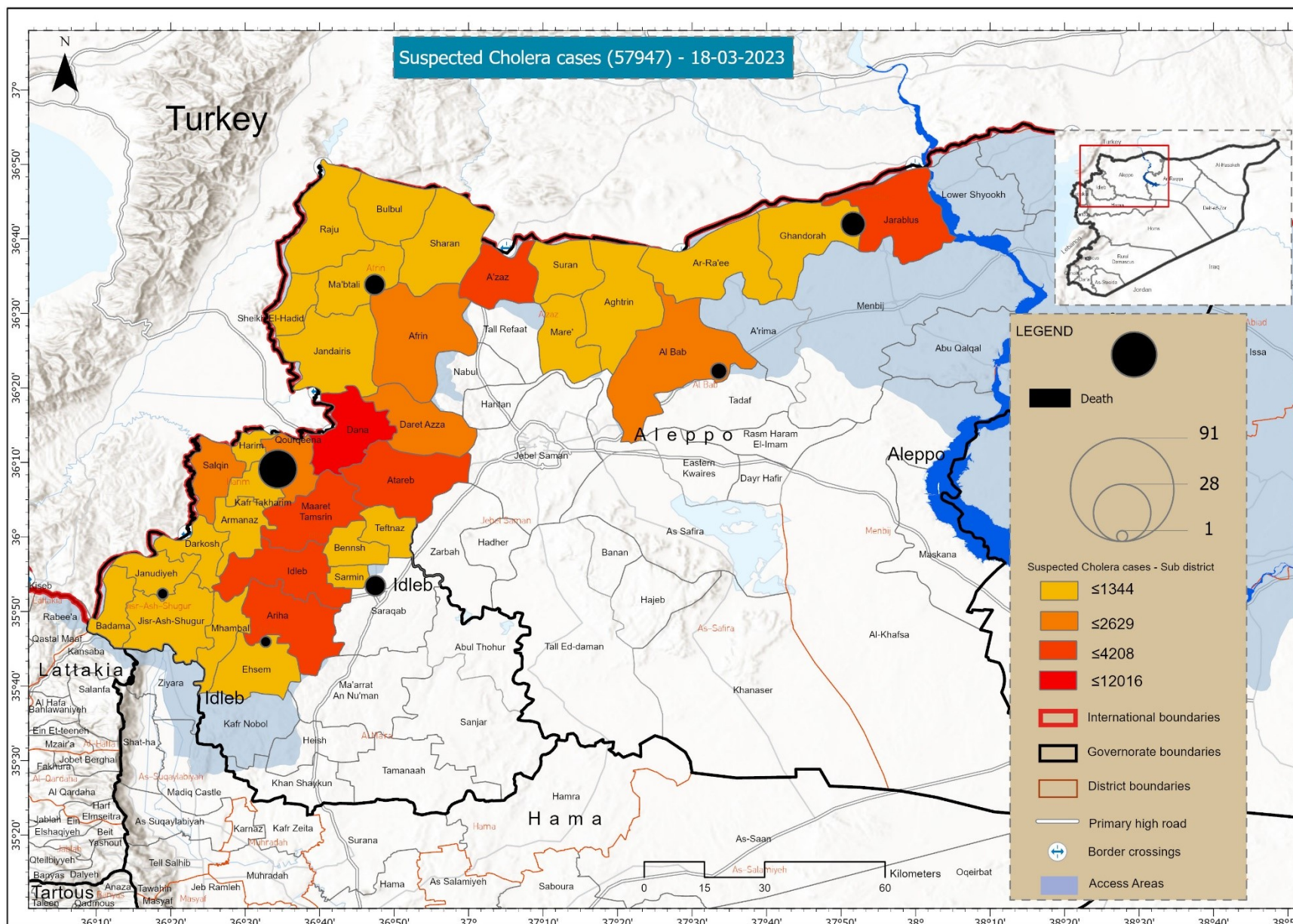
### EPI Curve - Reporting Date - Idleb Governorate



### Cases Distribution Subdistrict Wise - up to Epi Week 2023- 11

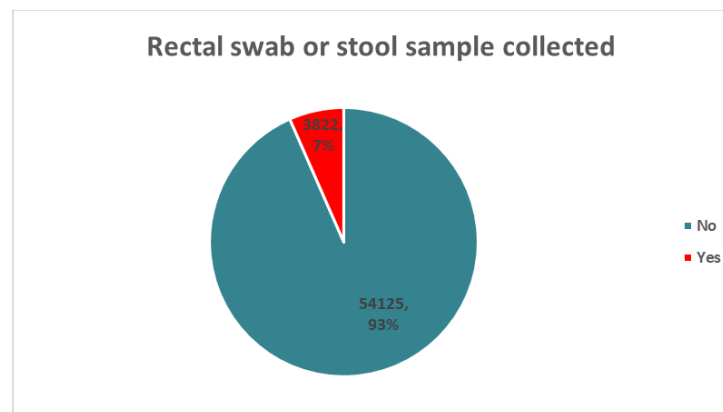


Epi Week	Governorate	District	Date of Onset	Population	New cases	Cumulative Cases	New Death	Cumulative Deaths	Case Fatality Rate	Incidence Rate	Attack Rate
Up to W11 - 2023	Idleb	Ariha	20-Sep	185,668	171	3824	0	1	0.03%	92.1	2.06%
		Harim	6-Sep	1,586,820	822	17788	0	9	0.05%	51.8	1.12%
		Idleb	14-Sep	713,933	440	9793	0	3	0.03%	61.6	1.37%
		Jisr-Ash-Shugur	25-Sep	310,973	62	2649	0	1	0.04%	19.9	0.85%
	Aleppo	A'zaz	9-Sep	648,600	313	5708	0	0	0.00%	48.3	0.88%
		Afrin	21-Sep	467,090	361	5053	0	3	0.06%	77.3	1.08%
		Al Bab	17-Sep	339,812	194	2674	0	2	0.07%	57.1	0.79%
		Jarablus	12-Sep	121,938	164	4807	0	4	0.08%	134.5	3.94%
	Jebel Saman	10-Sep	251,785	269	5651	0	0	0.00%	106.8	2.24%	
	<b>Total</b>				4,626,619	2796	57947	0	23	0.04%	60.4

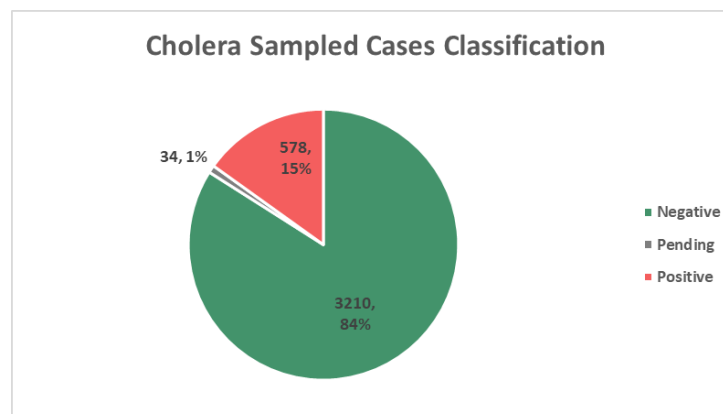


### Laboratory:

- In Epi week 11- 2023, the total number of stool specimens or rectal swabs is **122** (64 in Aleppo – 58 in Idleb), **1 of them was positive for Vibrio Cholera by stool culture (in Afrin district – Aleppo).**
- A **cumulative of 3822 samples were collected** since the start of the outbreak (7 % of overall line listed cases), of which **578 have tested positive by stool culture. The total positivity rate in NWS is 15.3 %.**
- The Total number of negative cases by stool culture is 3210, and the remaining 34 are still pending.



- 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, Raqqa, 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 7% of the total suspected cholera cases per subdistrict and 5 samples from the admitted cholera suspected cases in the CTC /CTU per week.

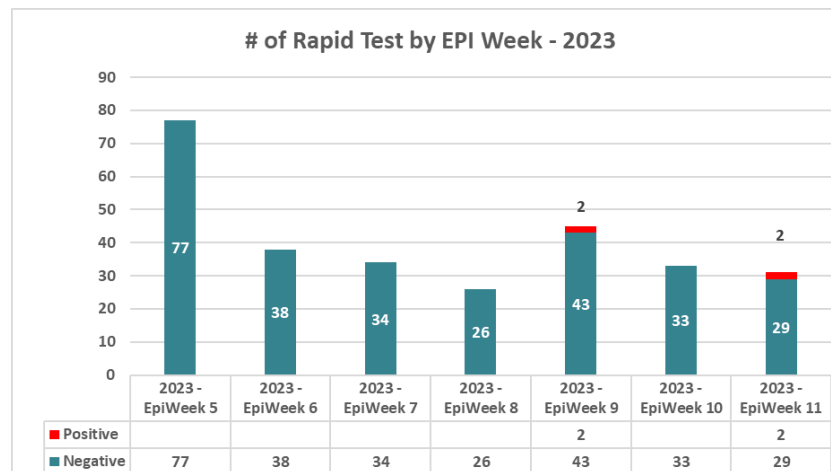




During epi week 11, EWARN received 31 RDT results from the EWARN lab and the CTC/CTUs, 2 of them were positive for Cholera. (the 2 positive cases were negative in culture)

The total of RDT tests starting from epi week 5 reached 284, and the total positive is 4.

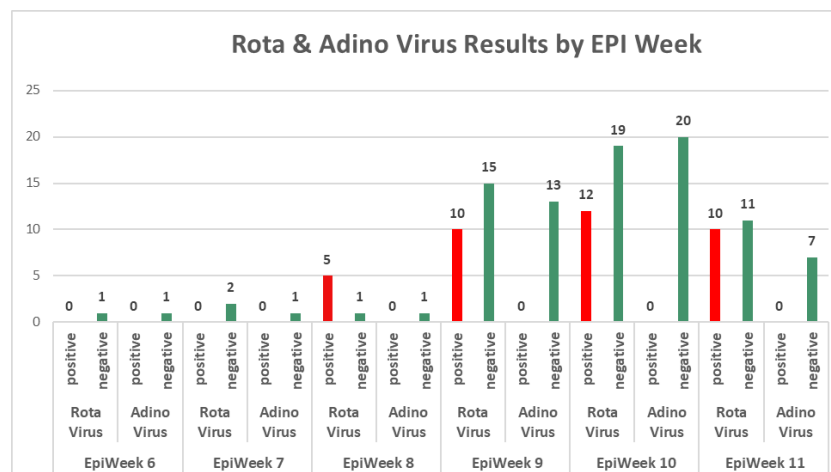
The positivity rate of RDTs, from epi week 5 – 2023 up to epi week 11 – 2023 is 1.4 %. But the positivity rate from the beginning of cholera outbreak up to epi week 11 – 2023 is 5.8 %



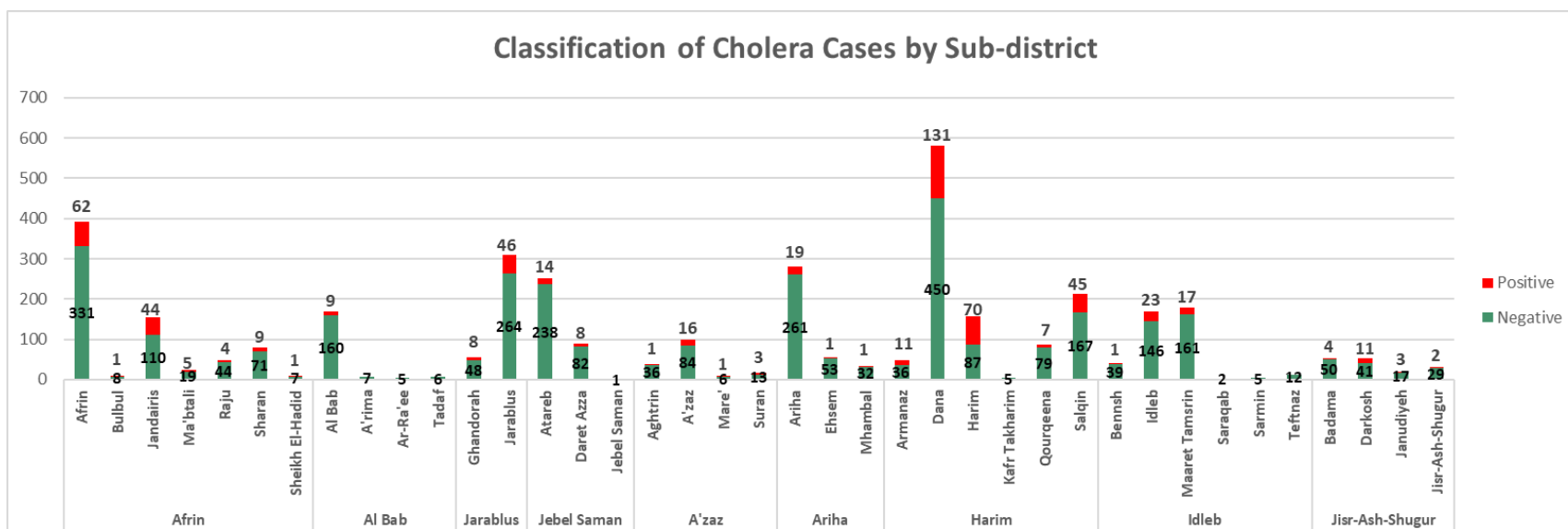
- For children under 5 years of age with a stool culture negative for cholera:

21 tests were carried out to detect Rotavirus and 7 tests to detect Adenovirus in epi week 11 (10 of them were positive for Rotavirus).

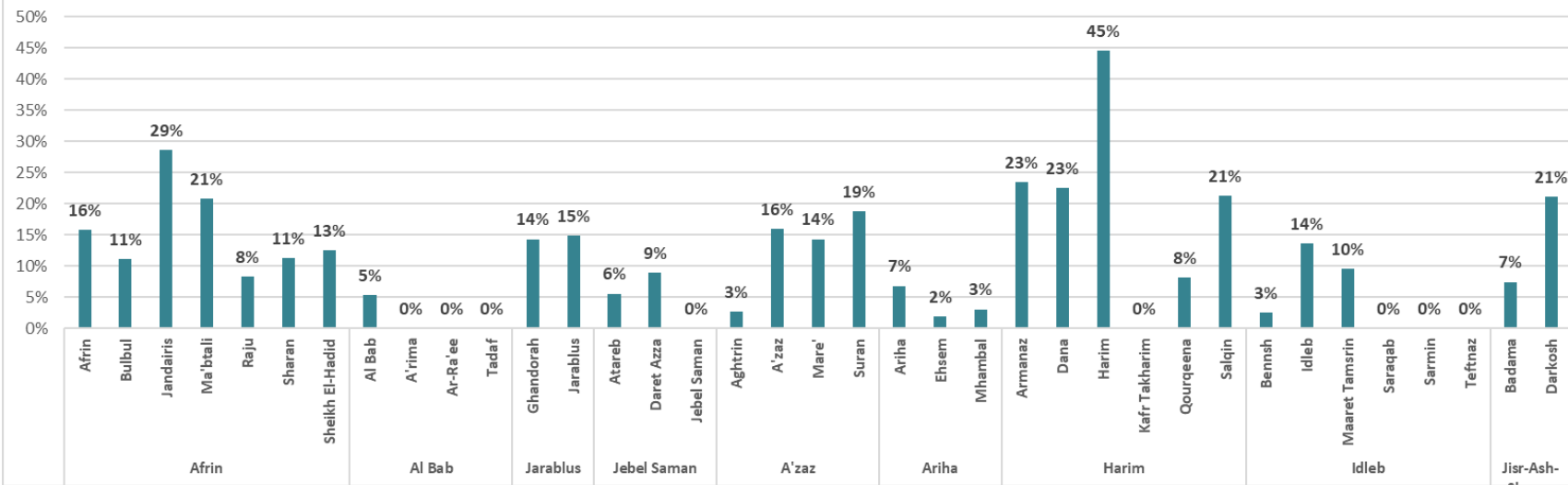
- The total number of collected samples for Rotavirus reached 86, 37 of them were positive, while all of the collected samples for Adenovirus (43) were negative



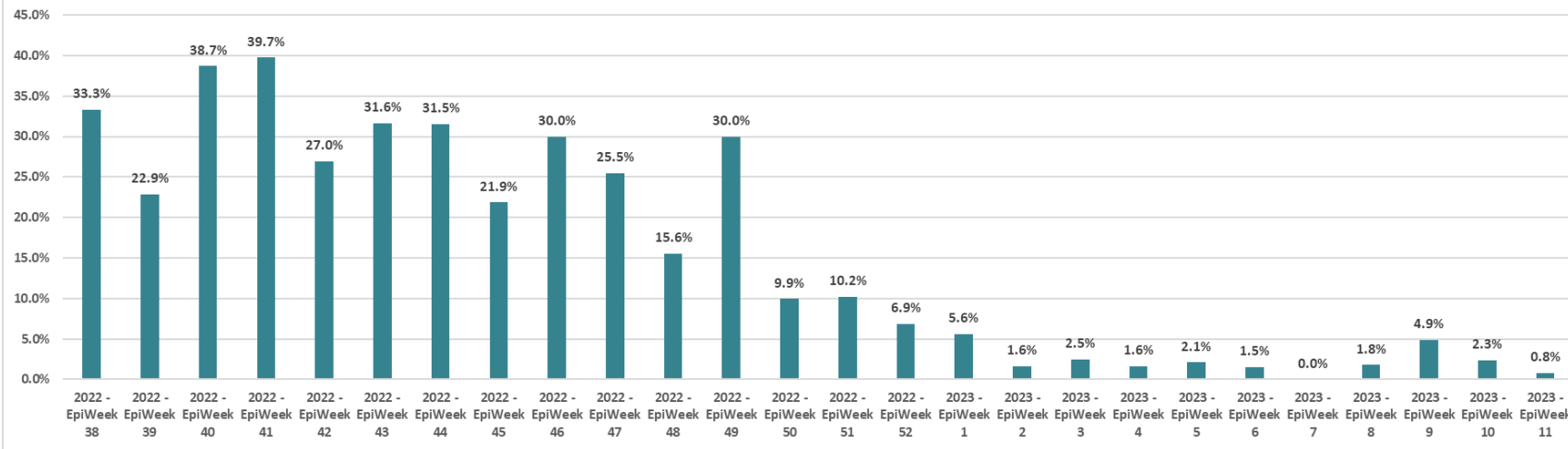
Epi Week	Governorate	District	RDT+	RDT-	Postivity Rate for RDT	Stool Culture Positive	Stool Culture Negative	Postivity Rate for Culture
Up to W11 - 2023	Idleb	Ariha	24	66	26.7%	126	590	17.6%
		Harim	0	6	0.0%	9	178	4.8%
		Idleb	0	15	0.0%	21	139	13.1%
		Jisr-Ash-Shugur	2	41	4.7%	54	312	14.8%
	Aleppo	A'zaz	3	94	3.1%	22	321	6.4%
		Afrin	0	65	0.0%	21	346	5.7%
		Al Bab	10	269	3.6%	264	824	24.3%
		Jarablus	2	76	2.6%	41	365	10.1%
		Jebel Saman	0	28	0.0%	20	137	12.7%
	<b>Total</b>			<b>41</b>	<b>660</b>	<b>5.8%</b>	<b>578</b>	<b>3212</b>



### Positivity Rate (Stool Culture) - by Subdistrict



### Positivity Rate (Stool Culture) - by Week



## 2. WASH:

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

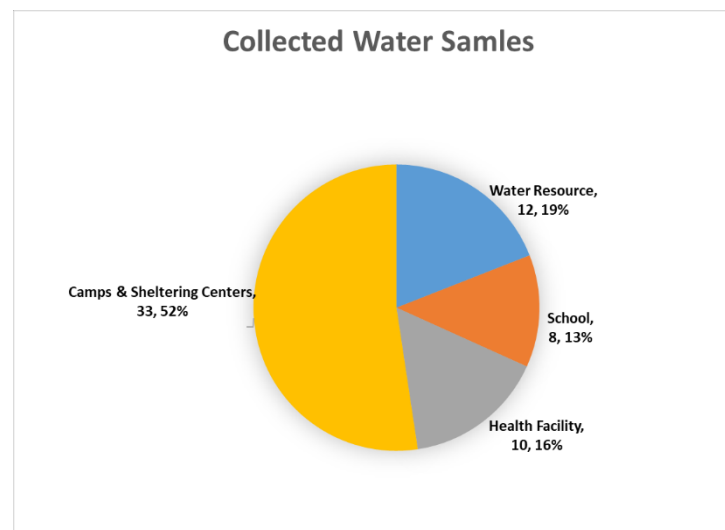
The team, after receiving any alert, focuses on the investigation of WASH services in the hotspot areas.

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 63 samples from different points:

- **Jandairis community / Jandairis subdistrict / Afrin district / Aleppo governorate:**  
24 samples were taken, the results showed that water isn't contaminated.
- **Raju community / Raju subdistrict / Arin district / Aleppo governorate:**  
13 samples were taken, all samples were not contaminated.
- **Beit Addin community /Raju subdistrict /Afrin district/ Aleppo governorate:**  
5 samples were taken, all samples were not contaminated.
- **Salama (Al Salam & Dhahiat Sujjo) community /Azaz subdistrict / Azaz district / Aleppo governorate:**  
13 samples were taken, all samples were not contaminated.
- **Zoghra camp / Jarablus subdistrict / Jarablus district / Aleppo governorate:**  
8 samples were taken, all samples were not contaminated



[Full Investigation Reports](#)

## Actions taken

- The EWARN team is currently conducting active surveillance in the most important health facilities in northwest Syria (25 HFs). In Epi week 11- 2023, **18** field visits were completed. 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 currently training the staff in CTC/CTUs, ORPs, HFs, and hospitals to RDTs and sharing data in the line list.
- To determine the causes of acute watery diarrhea in children under 5 years (the children have a negative cholera result), the EWARN lab started 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.

## Challenges

- Due to the devastating earthquake in northern Syria, there was a significant decrease in the number of reported cholera cases and collected samples, because a large number of health centers went out of service and others were responding to earthquake victims.
- Continuing movements of population.