

## Northwest of Syria Cholera Outbreak

### Situation Report No.35

#### Epidemiological Week - 21 (21 April – 27 May 2023)

**Suspected Cases: 85042**

**Confirmed Cases: 671**

**Cholera Deaths : 23**

**Case Fatality Rate: 0.03%**

**NWS Attack Rate: 1.84%**

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 **85042 suspected** cases (**37095** in Aleppo governorate, **47947** in Idleb governorate) including **671 confirmed** have been reported by EWARN team since 16 September, including **23 deaths** case.

- The highest number of cases were reported in Harim district (25031) and Idleb district (14052) in Idleb governorate, then Azaz district (9477), Jebel Saman district (8742) in Aleppo governorate.
- 15308 total suspected cases (including 671 new cases in Epi week 21 - 2023) were reported from camps.
- 57.75 % 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

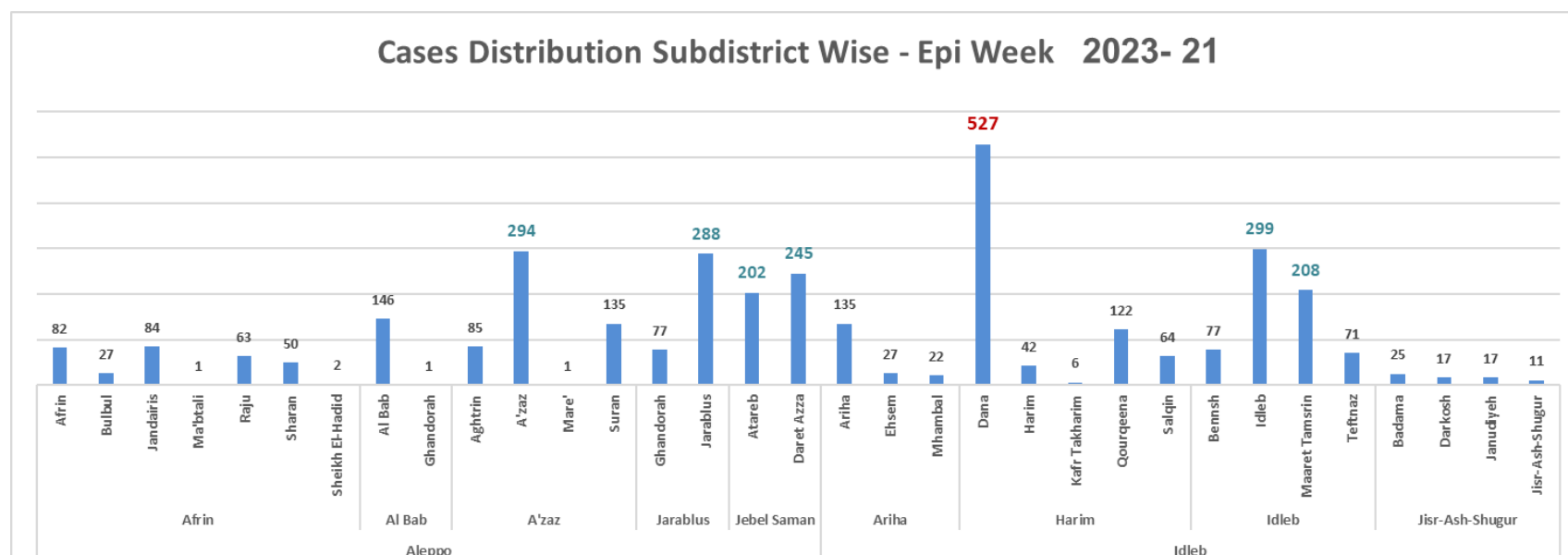
Updated case definition: A resident of outbreak areas with sudden onset of acute watery diarrhea with or without vomiting.

In Epi week 21 - 2023, **3453 suspected cases of cholera were reported**. The affected governorates are Aleppo (1783 suspected cases, 9 confirmed), and Idlib (1670 suspected cases, 4 confirmed).

The age group less than 5 reported 57.94 %.

There were no death cases in the epi week 21

Dana subdistrict in Idlib governorate reported the highest number of cases (527), in contract Azaz subdistrict reported the highest number in Aleppo governorate (294).

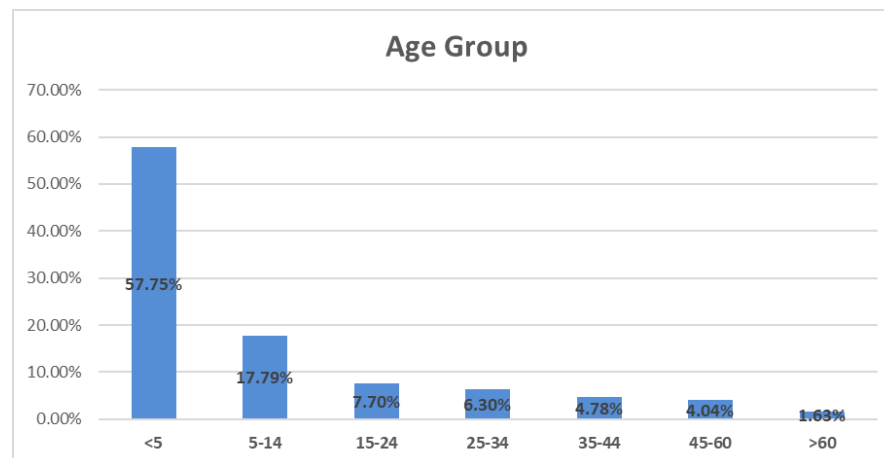
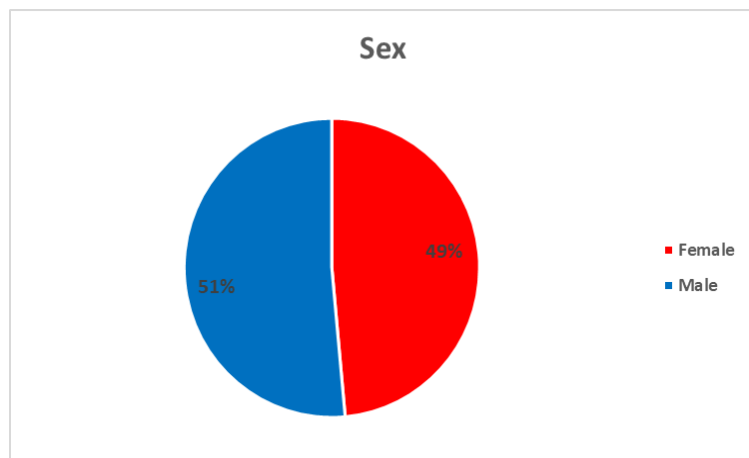


The overall sex distribution of the suspected cases is 51% Male, and 49% Female.

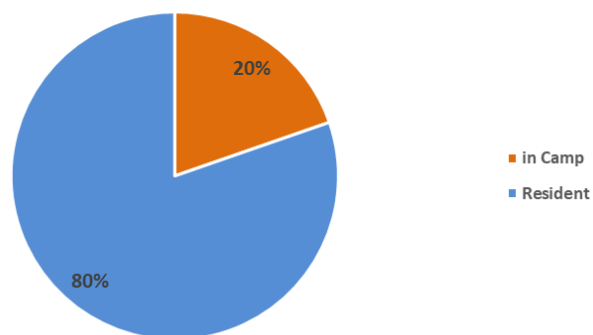
100% of the line listed cases were presented as Acute watery Diarrhea, 20% with vomiting, 4% as rice watery diarrhea, and 8% were dehydrated.

20 % of the total cases live in camps (15308), and 80% out of camps (61615). (8118 of the total line listed cases are unknown)

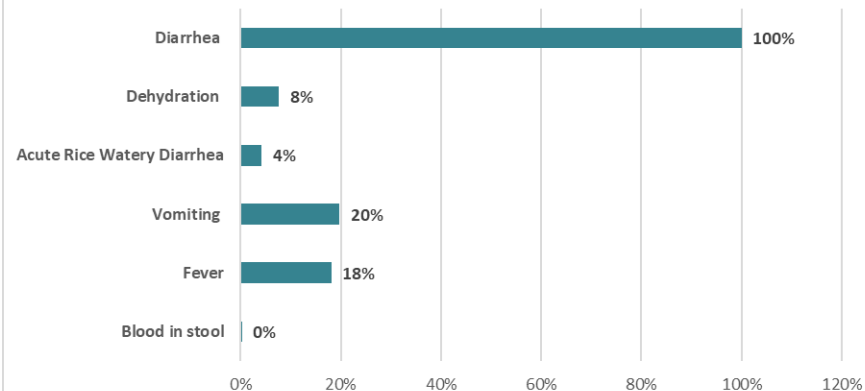
As the outbreak progresses, sensitivity should be increased by including smaller age groups and mild/moderate symptom groups in order to estimate the burden of the outbreak. According to WHO, in areas where a cholera outbreak has been confirmed, any person presenting with or dying from acute watery diarrhea is considered a suspected cholera case. The age group less than 5 years was 57.75%.



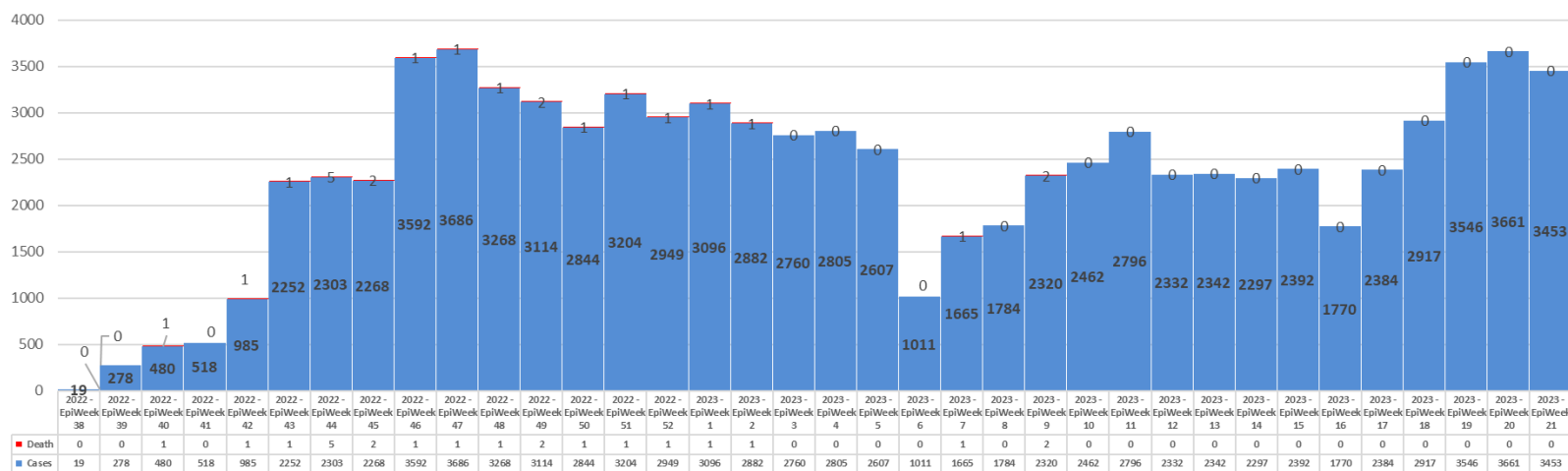
### Cholera Cases Residency Distribution



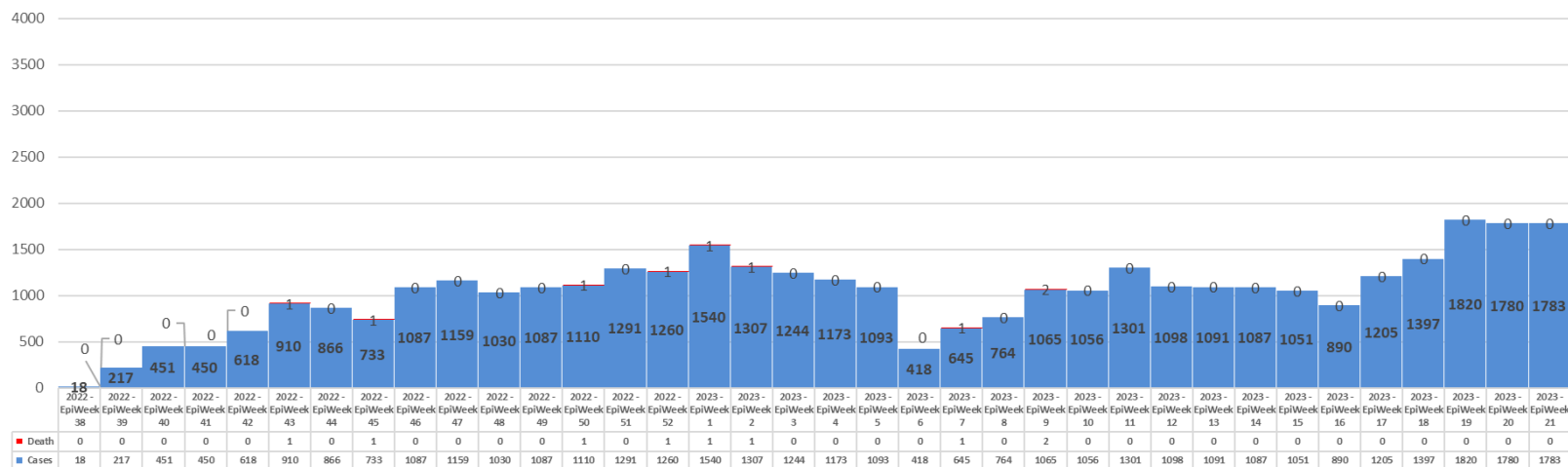
### Signs and Symptoms



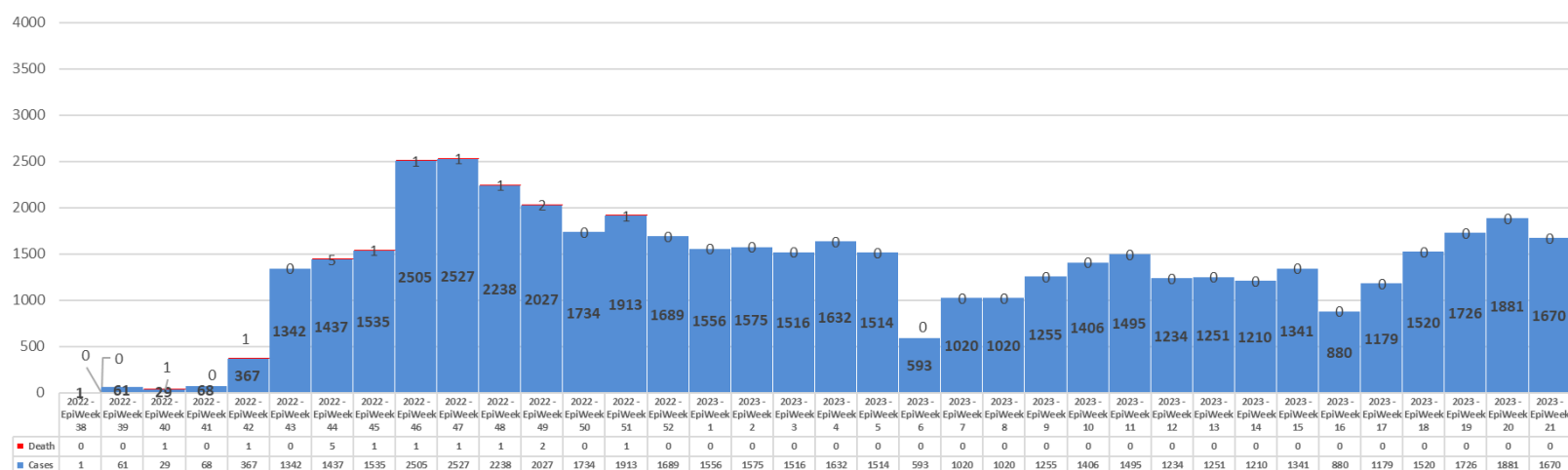
### EPI Curve - Reporting Date - NWS



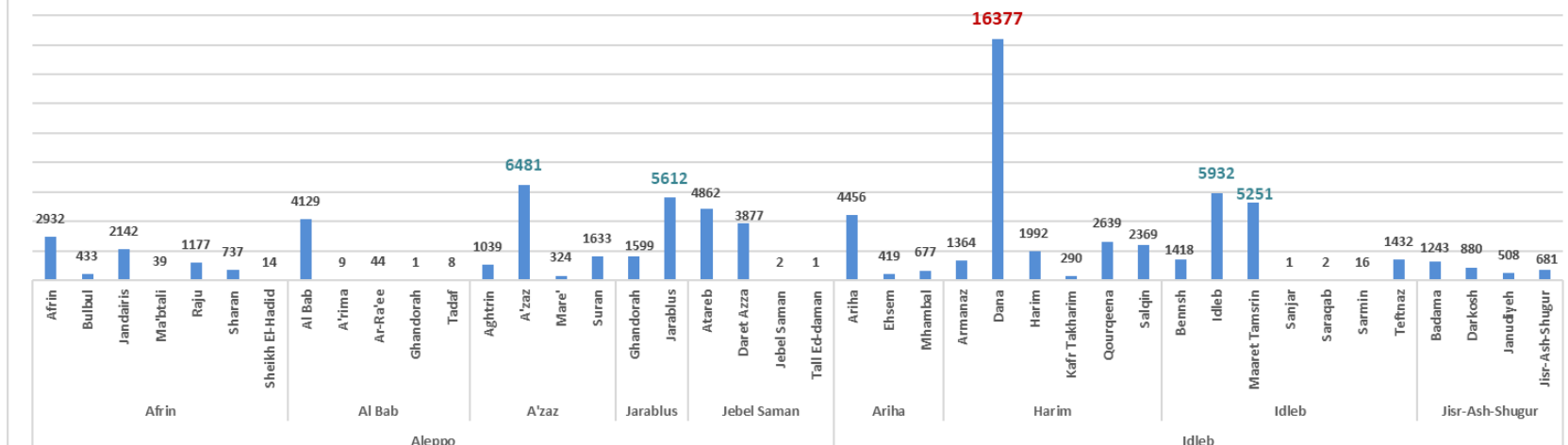
### EPI Curve - Reporting Date - Aleppo Governorate



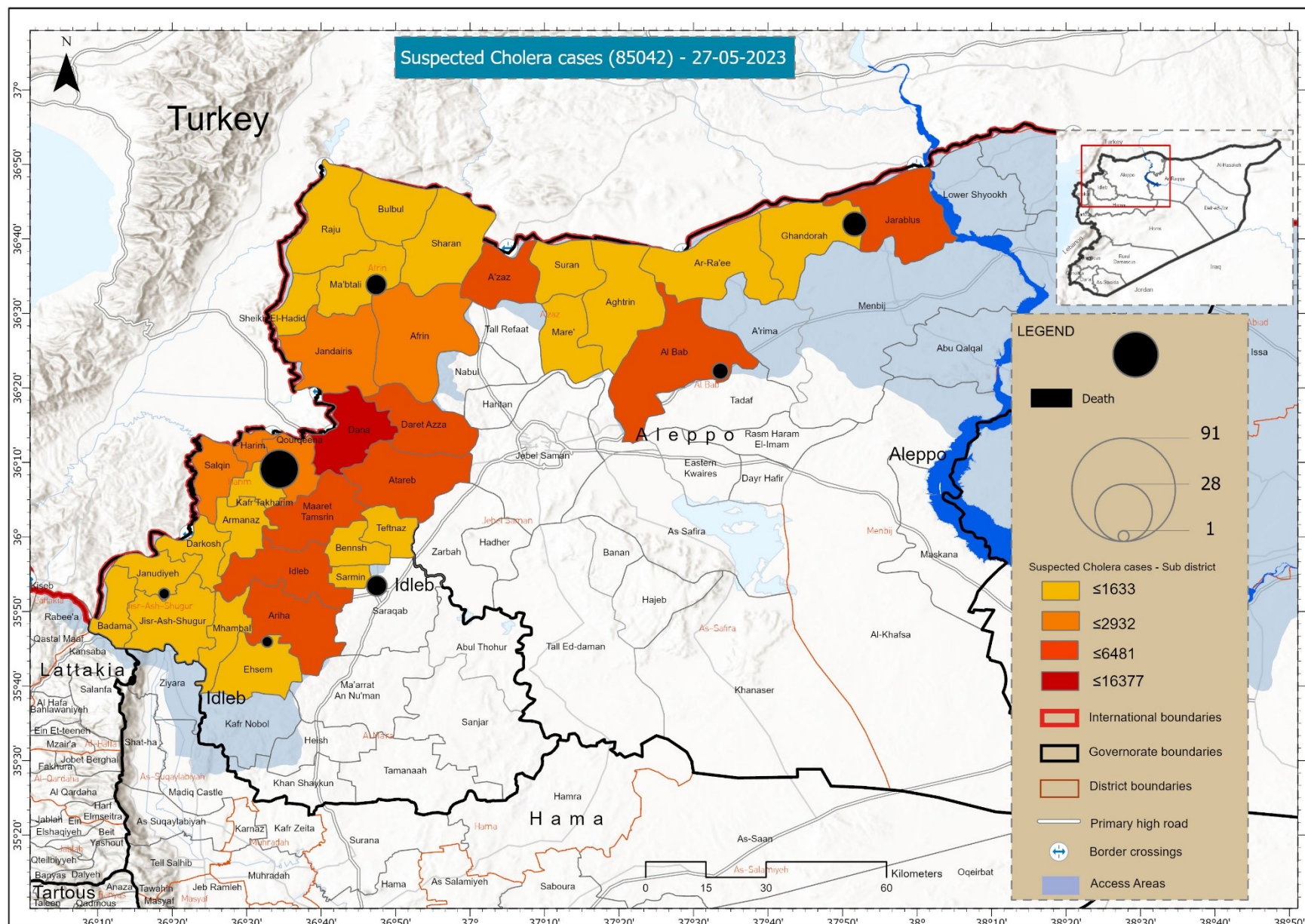
### EPI Curve - Reporting Date - Idleb Governorate



### Cases Distribution Subdistrict Wise



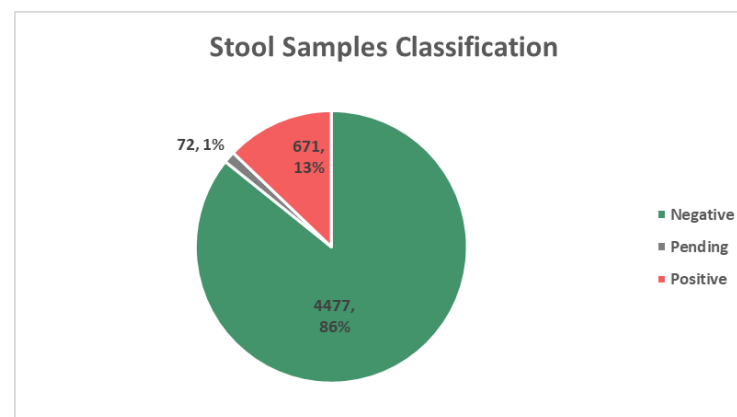
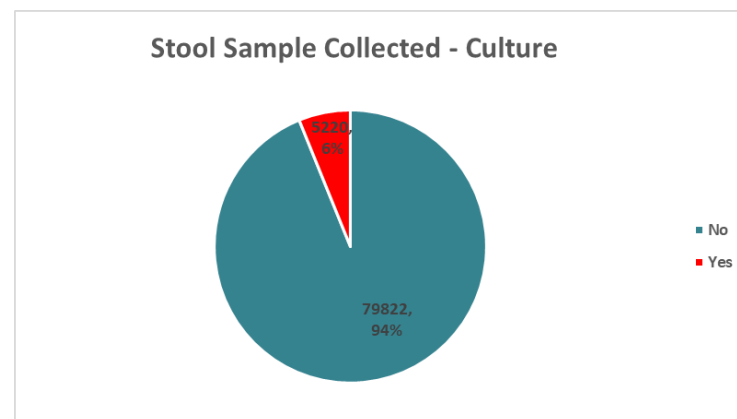
Week	Governorate	District	Date of Onset	Population	New cases	Cumulative Cases	New Death	Cumulative Deaths	Case Fatality Rate	Incidence Rate	Attack Rate
Up to W21 - 2023	Idleb	Ariha	20-Sep	185,668	184	5552	0	1	0.02%	99.1	2.99%
		Harim	6-Sep	1,586,820	761	25031	0	9	0.04%	48.0	1.58%
		Idleb	14-Sep	713,933	655	14052	0	3	0.02%	91.7	1.97%
		Jisr-Ash-Shugur	25-Sep	310,973	70	3312	0	1	0.03%	22.5	1.07%
	Aleppo	A'zaz	9-Sep	648,600	515	9477	0	0	0.00%	79.4	1.46%
		Afrin	21-Sep	467,090	309	7474	0	3	0.04%	66.2	1.60%
		Al Bab	17-Sep	339,812	147	4191	0	2	0.05%	43.3	1.23%
		Jarablus	12-Sep	121,938	365	7211	0	4	0.06%	299.3	5.91%
		Jebel Saman	10-Sep	251,785	447	8742	0	0	0.00%	177.5	3.47%
	Total			4,626,619	3453	85042	0	23	0.03%	74.6	1.84%





### Laboratory:

- In Epi week 21- 2023, the total number of stool specimens or rectal swabs is **187**, (109 in Aleppo –9 confirmed), (78 in Idlib – 4 confirmed).
- A **cumulative of 5220 samples were collected** since the start of the outbreak (6 % of overall line listed cases), **of which 658 have tested positive by stool culture. The total positivity rate in NWS is 13 %.**
- The Total number of negative cases by stool culture is 4477, and the remaining 72 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 (Idlib, 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 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.

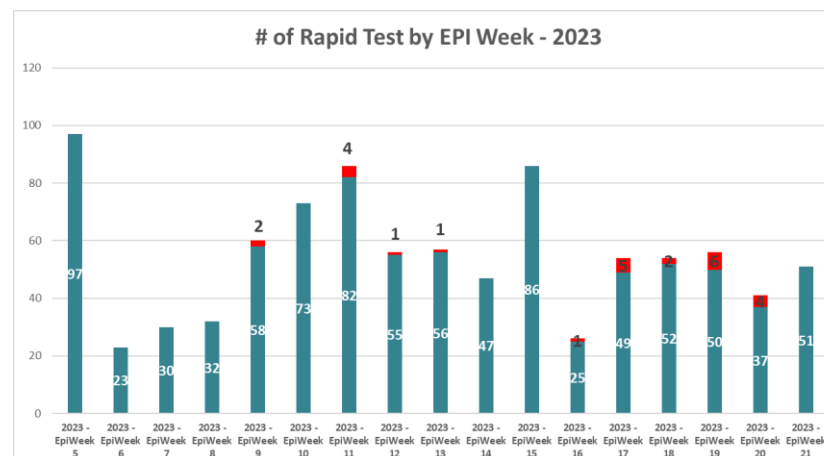




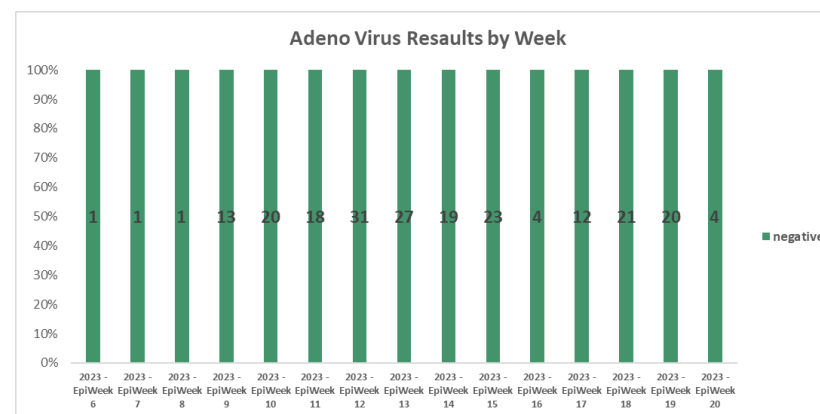
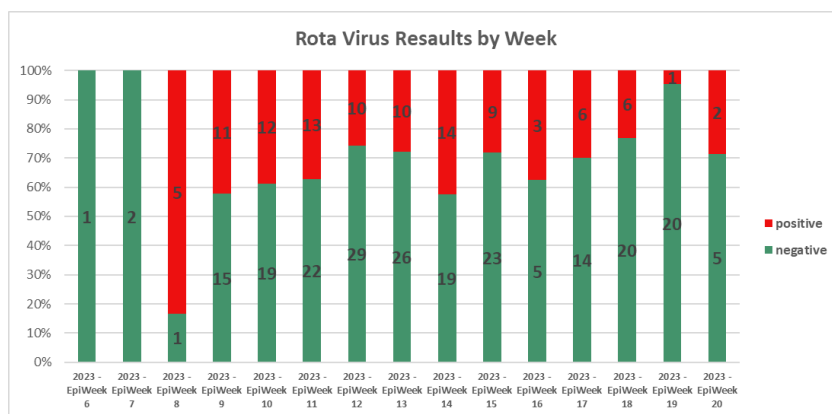
During epi week 21, EWARN received 51 RDT results from the CTC/CTUs, all of them were negative for Cholera.

The total of RDT tests starting from epi week 5 reached 929, and the total positive is 26.

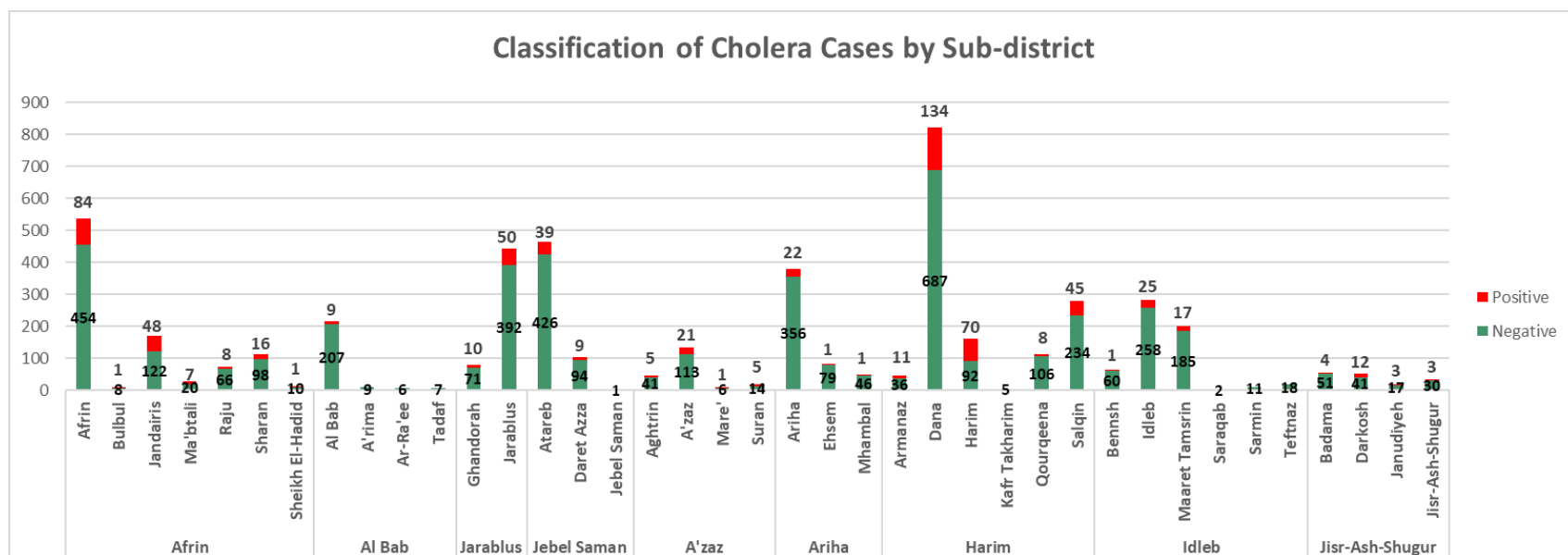
The positivity rate of RDTs, from epi week 5 – 2023 up to epi week 21 – 2023 is 2.79 %. But the positivity rate from the beginning of cholera outbreak up to epi week 18 – 2023 is 5 %.



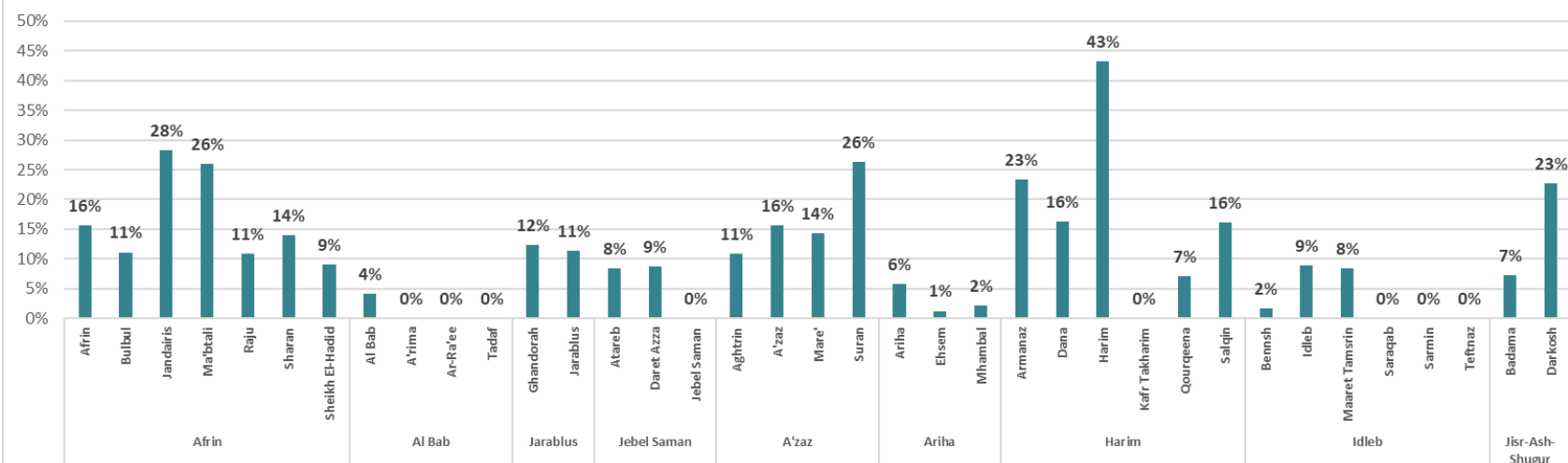
- For children under 5 years of age with a stool culture negative for cholera:  
In epi week 21, there are no tests for Rotavirus and Adenovirus
- The total samples collected for Rotavirus reached 323 (102 were positive), while all of the samples for Adenovirus (215) were negative.



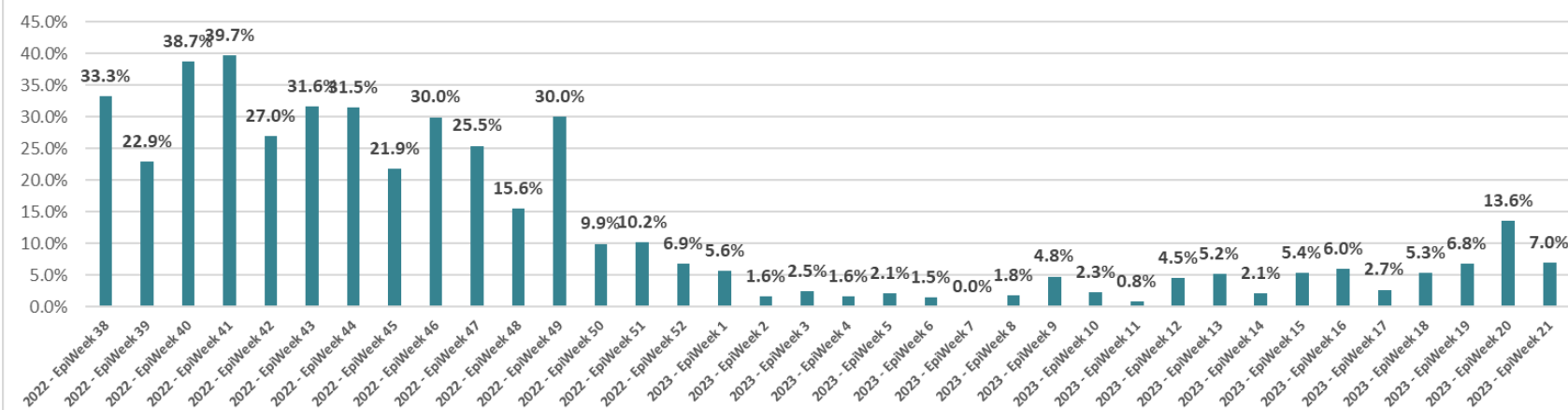
Epi Week	Governorate	District	RDT+	RDT-	Postivity Rate for RDT	Stool Culture Positive	Stool Culture Negative	Postivity Rate for Culture
Up to W21 - 2023	Aleppo	Afrin	25	74	25.3%	165	778	17.5%
		Al Bab	0	6	0.0%	9	229	3.8%
		A'zaz	1	38	2.6%	32	174	15.5%
		Jarablus	2	41	4.7%	60	463	11.5%
		Jebel Saman	5	153	3.2%	48	521	8.4%
	Idleb	Ariha	0	65	0.0%	24	481	4.8%
		Harim	24	616	3.8%	268	1160	18.8%
		Idleb	5	152	3.2%	43	534	7.5%
		Jisr-Ash-Shugur	0	28	0.0%	22	139	13.7%
	Total		62	1173	5.0%	671	4479	13.0%



### Positivity Rate by Subdistrict



### Positivity Rate 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.

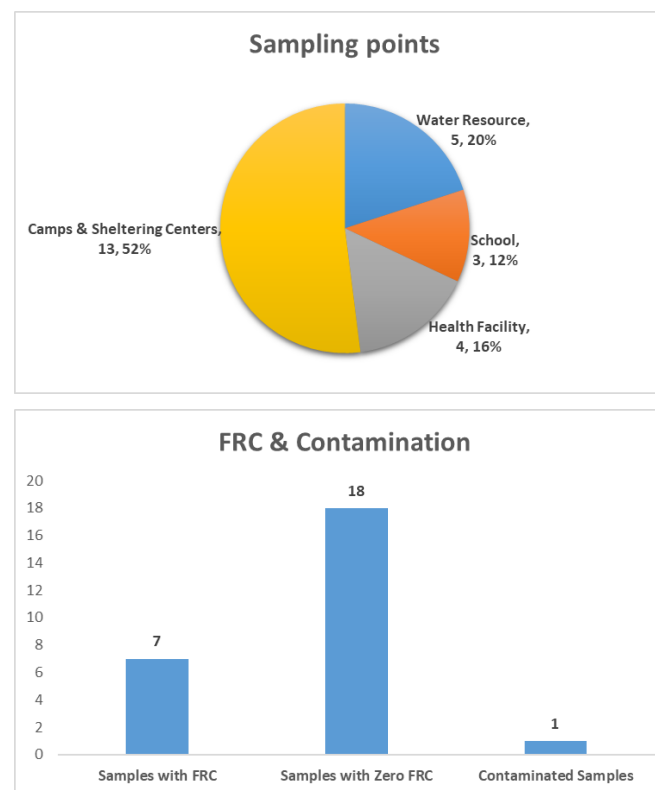
The investigation includes:

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 4 investigations included taking 25 samples from different points:

- **Jalma camp - Jalama community / Jandairis sub-district / Afrin District / Aleppo governorate:**  
5 samples were taken; one of sample was contaminated (private well).
- **Maydan Afrin community / Sharan sub-district / Afrin district / Aleppo governorate:**  
8 samples were taken; 1 of which was contaminated (Medanki Lake)
- **Zayzafun – Ekdeh Community / Suran sub-district / A'zaz district / Aleppo governorate:** 6 samples were taken; no sample was contaminated.
- **Shamarin community (Qatari camp) / A'zaz sub-district / A'zaz district / Aleppo governorate:**  
6 samples were taken; no sample was 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). 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 receiving the RDT results from 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.

## Recommendations

- Take effective measures to limit the spread of rotavirus, especially among children under five years of age