

Northwest of Syria Cholera Outbreak

Situation Report No.51

Epidemiological Week - 38 (17 - 23 / Sep / 2023)

Date of Onset of Outbreak: 16 September 2022

Reporting Date of outbreak: 17 September 2022

Confirmation Date: 19 September 2022

Suspected Cases: 148037

Confirmed Cases: 1085

Cholera Deaths : 24

Case Fatality Rate: 0.02%

NWS Attack Rate: 3.2%

Key Highlights

Cumulatively, a total of **148037 suspected** cases (**65265** in Aleppo governorate, **82772** in Idlib governorate) including **1085 confirmed** have been reported by EWARN team since 16 September, including **24 deaths** case.

The highest number of cases were reported in Harim district (**40472**) and Idlib district (**29848**) in Idlib governorate, then Azaz district (**18268**), and Jebel Saman district (**14106**) in Aleppo governorate.

- **27896** total suspected cases (including **639** new cases in Epi week 38 - 2023) were reported from camps.
- **56.42 %** Of the suspected cases are in the age group <5 years. Males are 50% of the total and females are 50%.
- 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

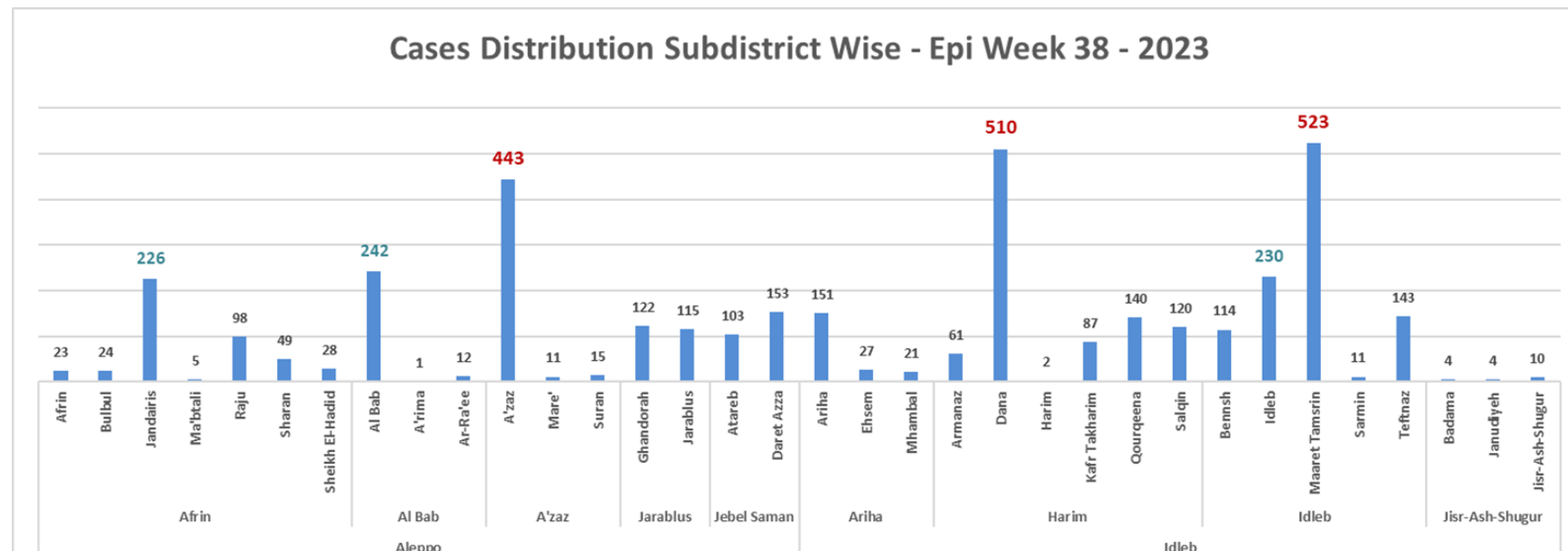
Updated case definition: A resident of outbreak areas with sudden onset of acute watery diarrhea with or without vomiting.

In Epi week 38 - 2023, **3828 suspected cases of cholera were reported**. The affected governorates are Aleppo (1670 suspected cases, 9 confirmed), and Idlib (2158 suspected cases, 6 confirmed). 17% of the total were in the camps

The age group less than 5 reported 54.48 %. Sex distribution of the suspected_cases is 50% Male, and 50% Female

There is no death in epi week 38

Maaret Tamsrin subdistrict in Idlib governorate reported the highest number of cases (523), then Dana subdistrict (510) in contract Azaz subdistrict reported the highest number in Aleppo governorate (443).

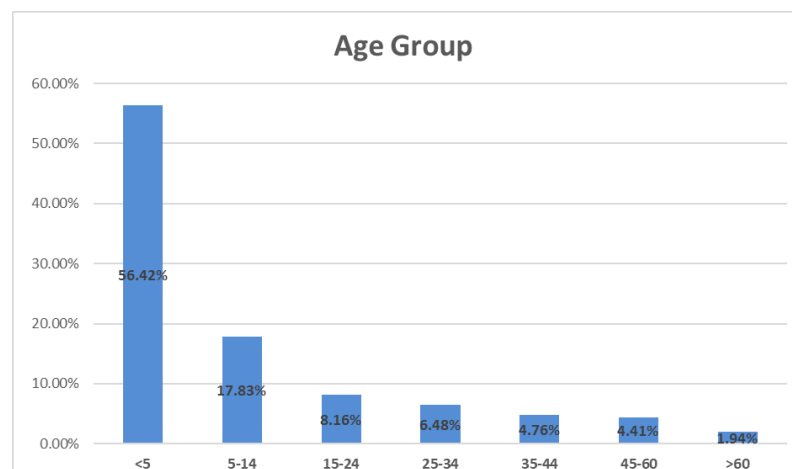
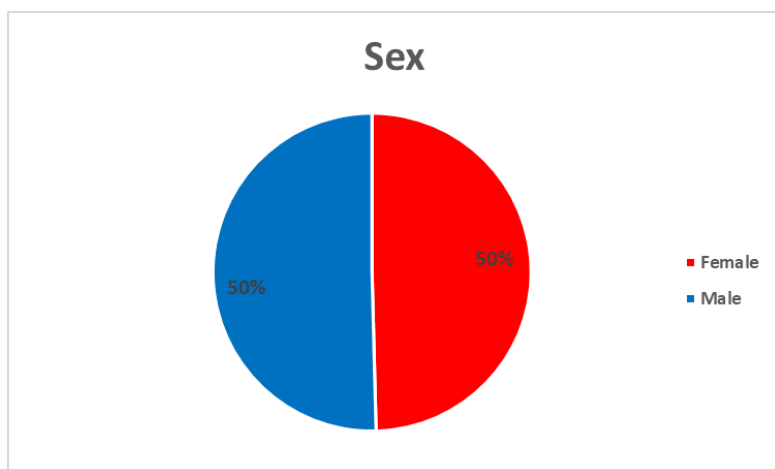


The overall sex distribution of the suspected cases is 50% Male, and 50% Female.

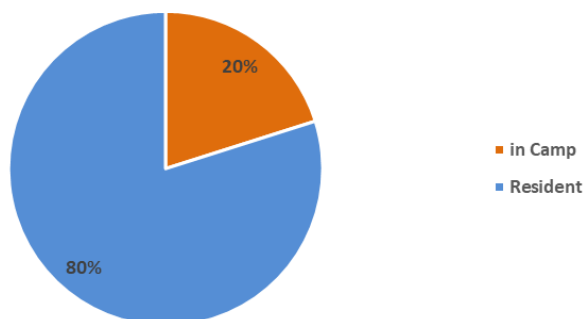
100% of the line listed cases were presented as Acute watery Diarrhea, 20% with vomiting, 5% as rice watery diarrhea, and 9% were dehydrated.

20% of the total cases live in camps (27896), and 80% out of camps (110497). (9643 of the total line listed cases are unknown)

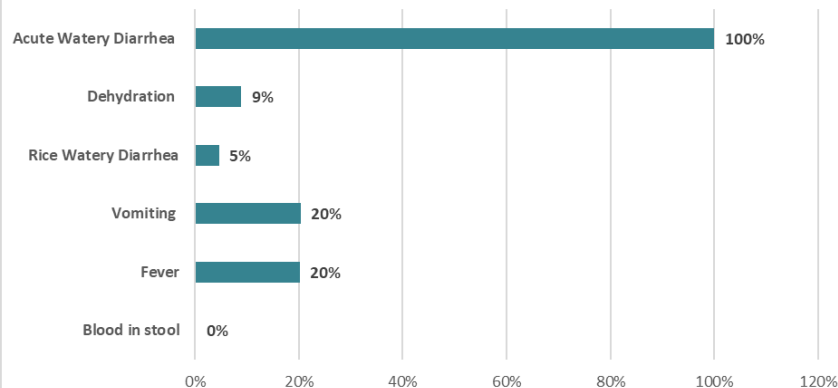
As the outbreak progresses, sensitivity should be increased by including smaller age groups and mild/moderate symptom groups in order to estimate the burden of the outbreak. According to WHO, in areas where a cholera outbreak has been confirmed, any person presenting with or dying from acute watery diarrhea is considered a suspected cholera case. The age group less than 5 years was 56.42%.



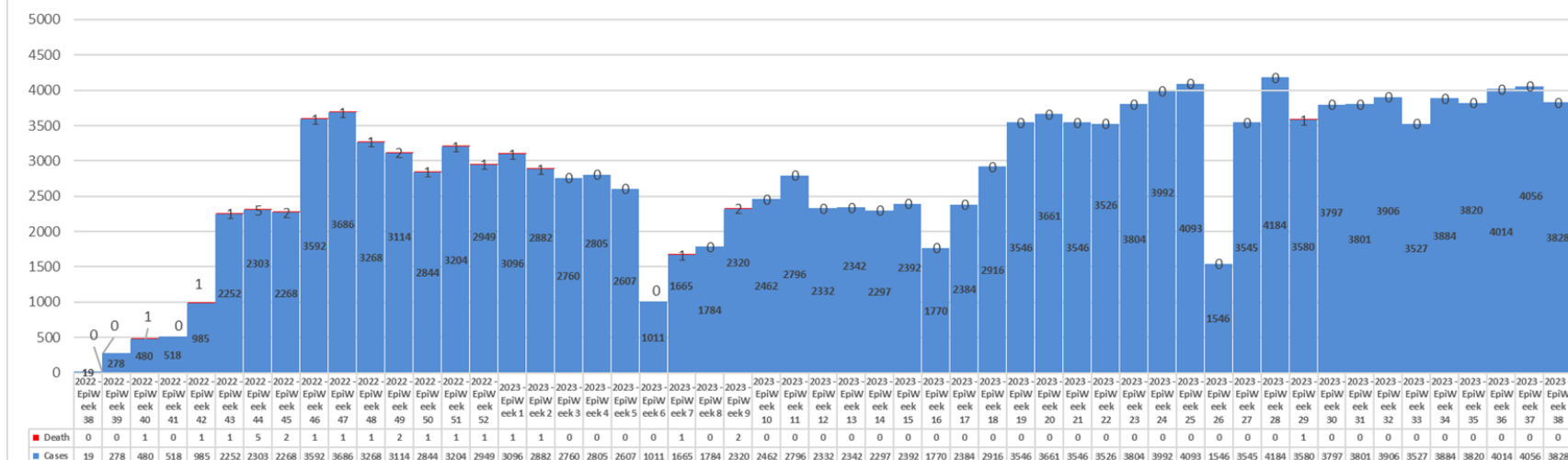
Cholera Cases Residency Distribution



Signs and Symptoms



EPI Curve - Reporting Date - NWS



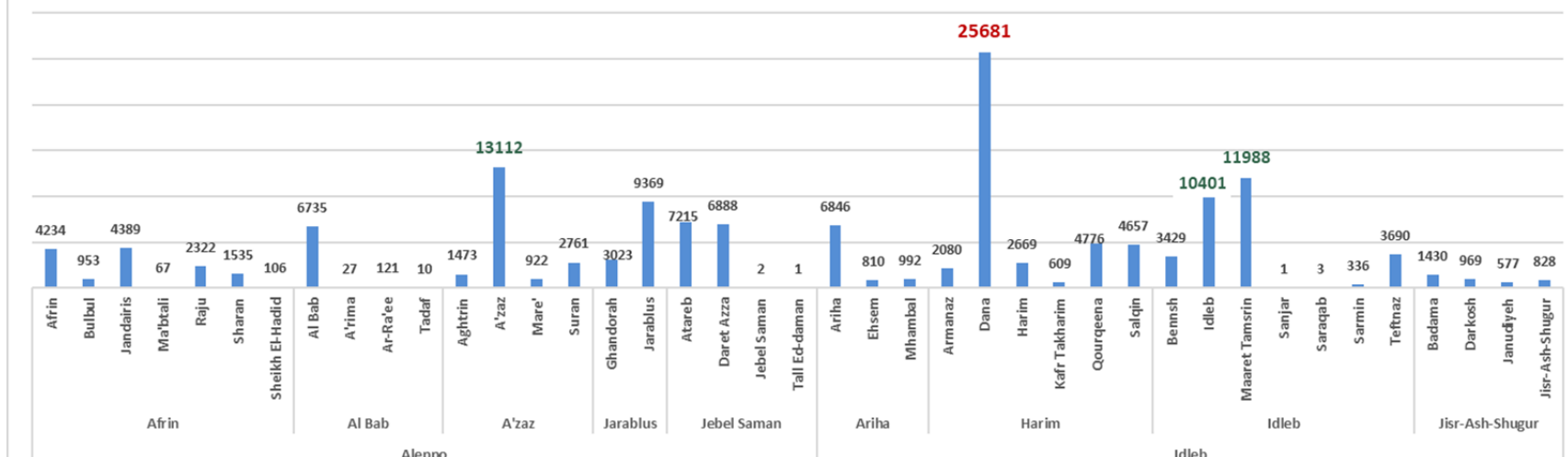
The chart displays the weekly progression of COVID-19 cases and deaths in the Netherlands. The left y-axis measures the number of cases (0 to 5000), while the right y-axis measures the number of deaths (0 to 500). The x-axis represents time in weekly intervals from 2022 EpiW week 38 to 2023 EpiW week 38. Blue bars indicate the number of cases per week, and red bars indicate the number of deaths per week. A legend at the bottom left identifies the series: a blue square for 'Cases' and a red square for 'Death'.

Week	Cases	Deaths
2022 EpiW week 38	18	0
2022 EpiW week 39	217	0
2022 EpiW week 40	451	0
2022 EpiW week 41	450	0
2022 EpiW week 42	618	0
2022 EpiW week 43	910	1
2022 EpiW week 44	866	0
2022 EpiW week 45	733	1
2022 EpiW week 46	1087	0
2022 EpiW week 47	1159	0
2022 EpiW week 48	1030	0
2022 EpiW week 49	1087	1
2022 EpiW week 50	1110	0
2022 EpiW week 51	1291	0
2022 EpiW week 52	1260	1
2023 EpiW week 1	1540	1
2023 EpiW week 2	1307	1
2023 EpiW week 3	1244	0
2023 EpiW week 4	1173	0
2023 EpiW week 5	1093	0
2023 EpiW week 6	418	0
2023 EpiW week 7	645	1
2023 EpiW week 8	764	0
2023 EpiW week 9	1065	2
2023 EpiW week 10	1056	0
2023 EpiW week 11	1301	0
2023 EpiW week 12	1098	0
2023 EpiW week 13	1091	0
2023 EpiW week 14	1087	0
2023 EpiW week 15	1051	0
2023 EpiW week 16	890	0
2023 EpiW week 17	1205	0
2023 EpiW week 18	1396	0
2023 EpiW week 19	1820	0
2023 EpiW week 20	1780	0
2023 EpiW week 21	1783	0
2023 EpiW week 22	1804	0
2023 EpiW week 23	1825	0
2023 EpiW week 24	1965	0
2023 EpiW week 25	1875	0
2023 EpiW week 26	690	0
2023 EpiW week 27	1678	0
2023 EpiW week 28	1766	0
2023 EpiW week 29	1588	0
2023 EpiW week 30	1662	0
2023 EpiW week 31	1663	0
2023 EpiW week 32	1793	0
2023 EpiW week 33	1511	0
2023 EpiW week 34	1706	0
2023 EpiW week 35	1552	0
2023 EpiW week 36	1690	0
2023 EpiW week 37	1733	0
2023 EpiW week 38	1670	0

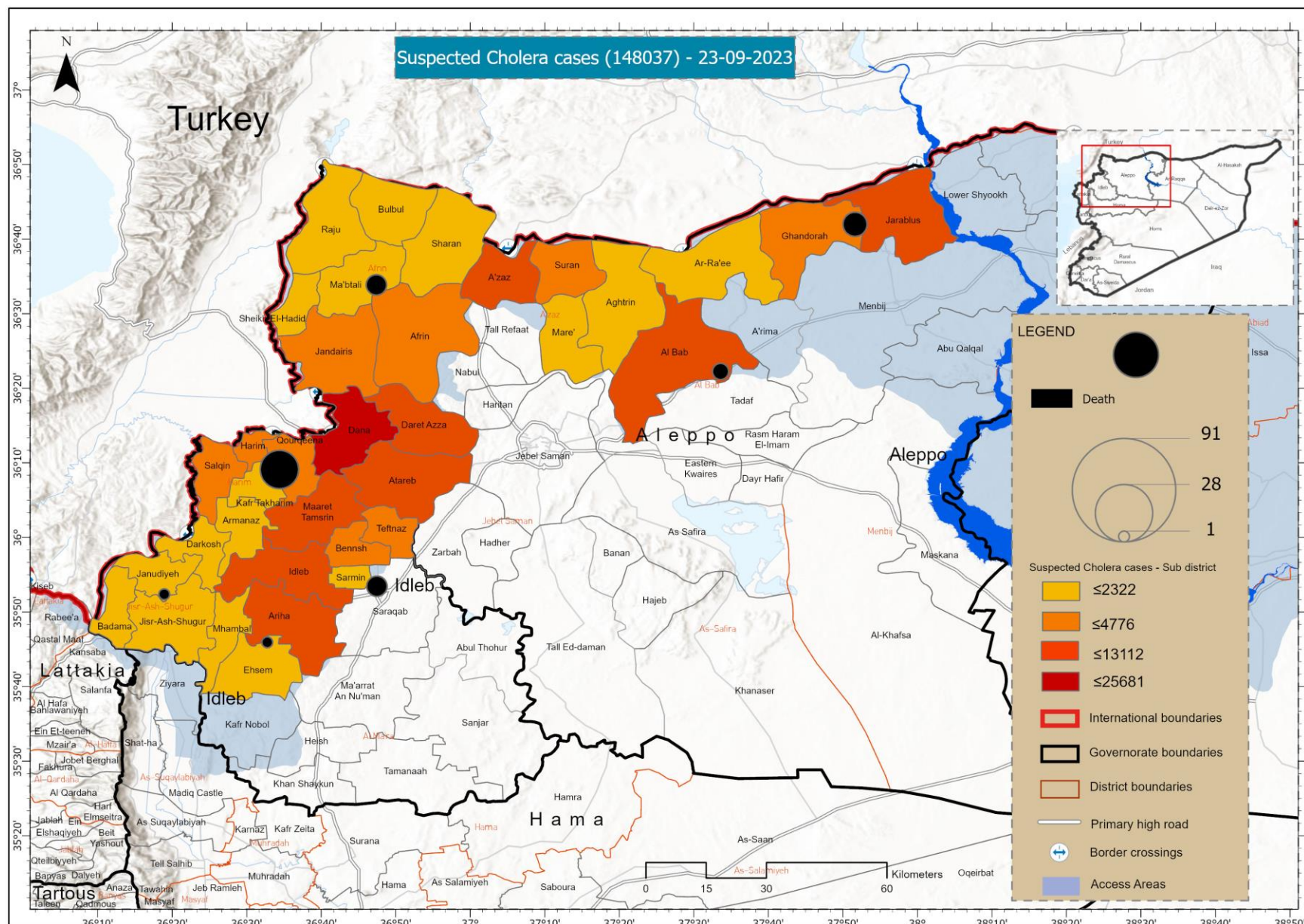
The chart displays the weekly number of COVID-19 cases (blue bars) and deaths (red line) in the Netherlands from 2022 to 2023. The left y-axis represents 'Cases' (0 to 5000) and the right y-axis represents 'Deaths' (0 to 100). The x-axis shows the time period in weeks, labeled as 'EpiW' (Epidemiological Week) for each year. The data shows a significant peak in cases in early 2023, reaching nearly 2500 cases per week, followed by a decline and then a resurgence in late 2023. Deaths also show a corresponding trend, with a peak in early 2023 and a decline thereafter.

Year	Week	Cases	Deaths
2022	38	1	0
2022	39	61	0
2022	40	29	1
2022	41	68	0
2022	42	367	1
2022	43	1342	0
2022	44	1437	5
2022	45	1535	1
2022	46	2505	1
2022	47	2527	1
2022	48	2238	1
2022	49	2027	2
2022	50	1734	0
2022	51	1913	1
2022	52	1689	0
2023	1	1556	0
2023	2	1575	0
2023	3	1516	0
2023	4	1632	0
2023	5	1514	0
2023	6	593	0
2023	7	1020	0
2023	8	1020	0
2023	9	1255	0
2023	10	1406	0
2023	11	1495	0
2023	12	1234	0
2023	13	1251	0
2023	14	1210	0
2023	15	1341	0
2023	16	880	0
2023	17	1179	0
2023	18	1520	0
2023	19	1726	0
2023	20	1881	0
2023	21	1763	0
2023	22	1722	0
2023	23	1979	0
2023	24	2027	0
2023	25	2218	0
2023	26	856	0
2023	27	1867	0
2023	28	2418	0
2023	29	1992	1
2023	30	2135	0
2023	31	2138	0
2023	32	2113	0
2023	33	2016	0
2023	34	2178	0
2023	35	2268	0
2023	36	2324	0
2023	37	2323	0
2023	38	2158	0

Cases Distribution Subdistrict Wise - up to Epi Week 38 - 2023

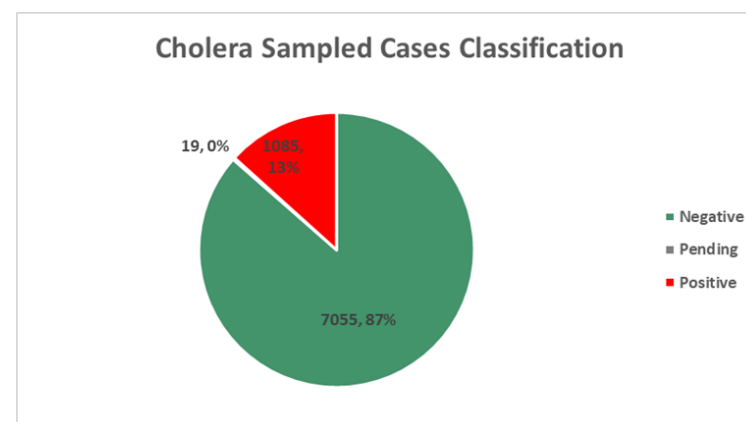
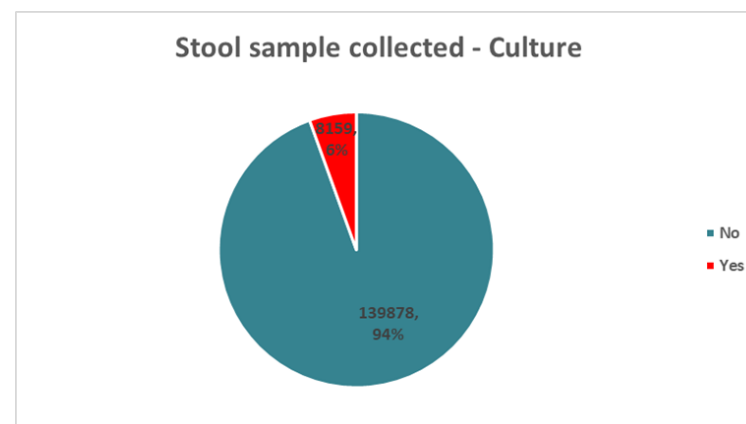


Week	Governorate	District	Date of Onset	Population	New cases	Cumulative Cases	New Death	Cumulative Deaths	Case Fatality Rate	Incidence Rate	Attack Rate
Up to W38 - 2023	Idleb	Ariha	20-Sep	185,668	199	8648	0	1	0.01%	107.2	4.66%
		Harim	6-Sep	1,586,820	920	40472	0	10	0.02%	58.0	2.55%
		Idleb	14-Sep	713,933	1021	29848	0	3	0.01%	143.0	4.18%
		Jisr-Ash-Shugur	25-Sep	310,973	18	3804	0	1	0.03%	5.8	1.22%
	Aleppo	A'zaz	9-Sep	648,600	469	18268	0	0	0.00%	72.3	2.82%
		Afrin	21-Sep	467,090	453	13606	0	3	0.02%	97.0	2.91%
		Al Bab	17-Sep	339,812	255	6893	0	2	0.03%	75.0	2.03%
		Jarablus	12-Sep	121,938	237	12392	0	4	0.03%	194.4	10.16%
		Jebel Saman	10-Sep	251,785	256	14106	0	0	0.00%	101.7	5.60%
	Total			4,626,619	3828	148037	0	24	0.02%	82.7	3.20%



Laboratory:

- In Epi week 38- 2023, the total number of stool specimens or rectal swabs is 158, (62 in Aleppo –9 confirmed), (96 in Idleb – 6 confirmed).
- A cumulative of 8159 samples were collected since the start of the outbreak (6 % of overall line listed cases), of which 1085 have tested positive by stool culture. The total positivity rate in NWS is 13.3 %
- The Total number of negative cases by stool culture is 7055, and the remaining 19 are still pending.

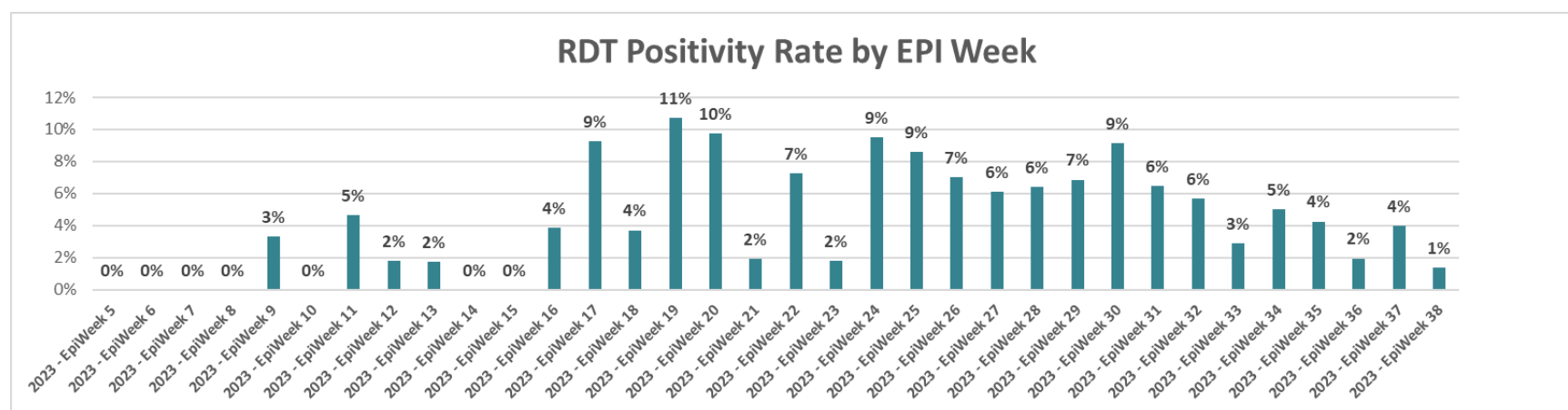
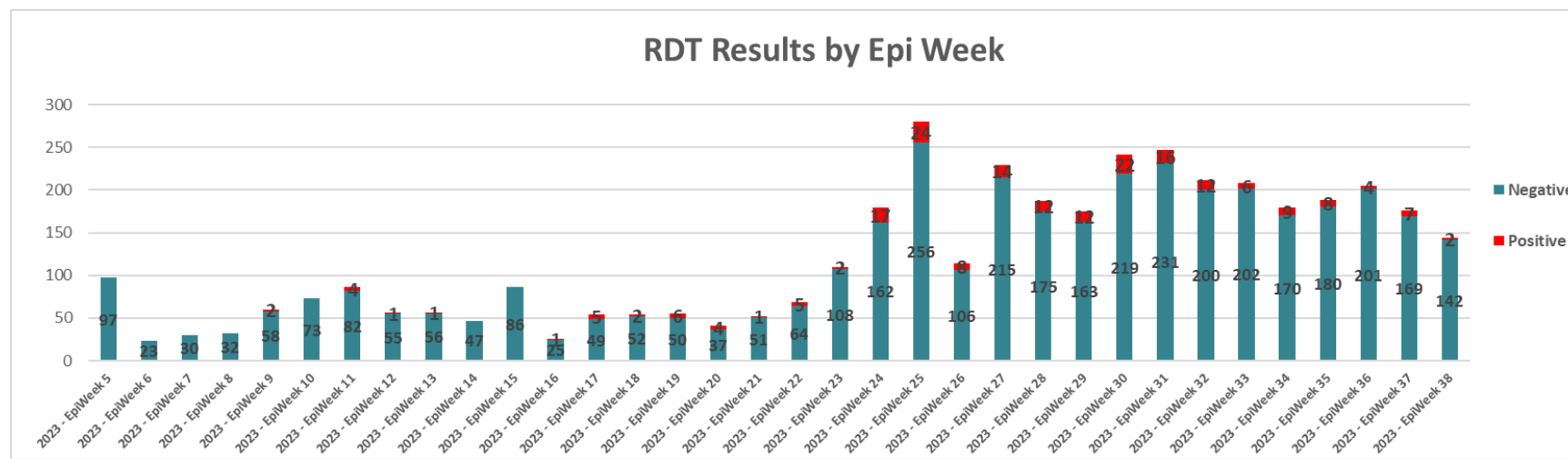


- Isolation and identification of V. cholera serogroup O1 or O139 by a culture of a stool specimen remain the gold standard for laboratory diagnosis.
- Currently, at EWARN laboratories (Idleb, Afrin, Jarablus, and Tal-Abiad) Fecal specimens are subcultured onto selective and nonselective media, including 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, Ciprofloxacin, and Norfloxacin.
- The resistance is to Tetracycline, Doxycycline, Chloramphenicol, 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.

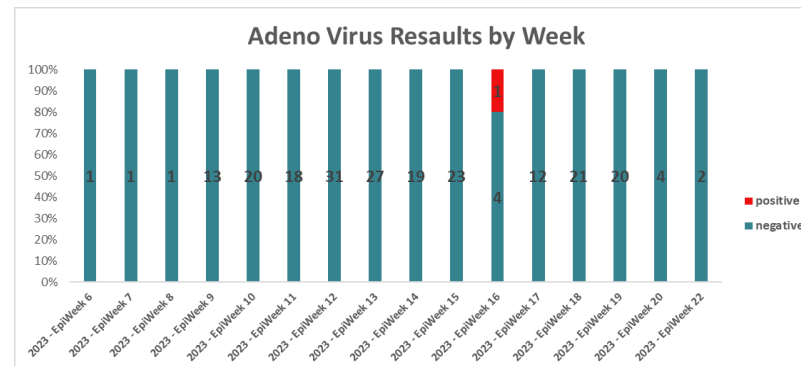
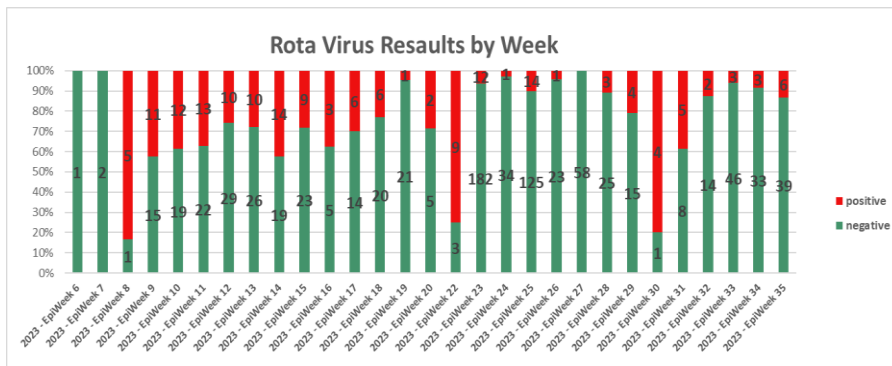
During epi week 37, EWARN received 176 RDT results from the CTC/CTUs and some HFs, 7 of them were positive for Cholera.

The total of RDT tests between epi weeks (5 - 37) reached 3929, and the total positive is 205.

The positivity rate of RDTs, from epi week 5 – 2023 up to epi week 37 – 2023 is 5.21 %. But the positivity rate since the beginning of cholera outbreak up to epi week 37 – 2023 is 5.7 %.

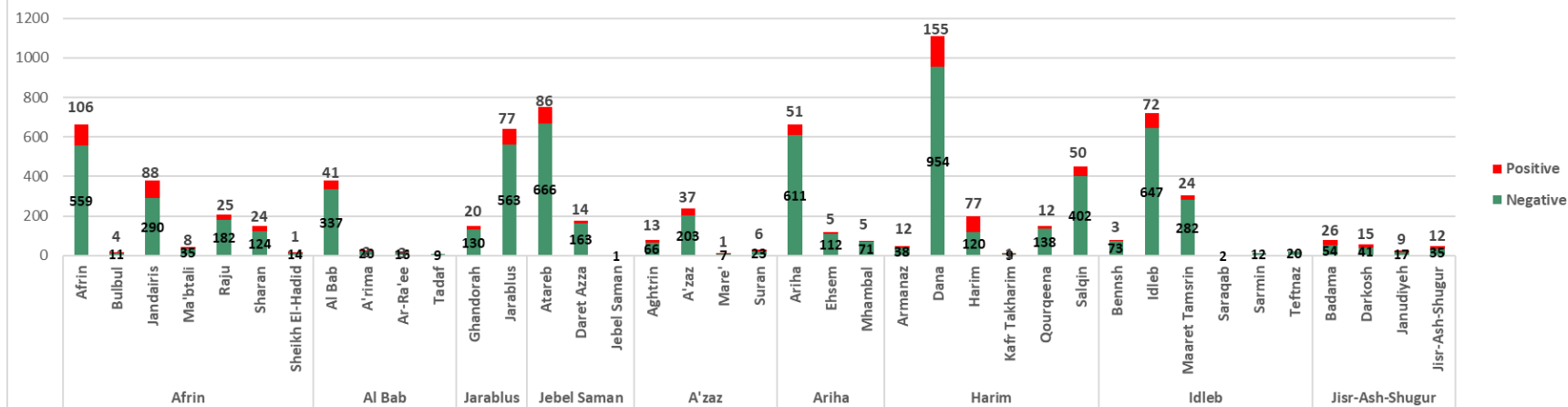


- For children under 5 years of age with a stool culture negative for cholera:
The total samples collected between (epi week 6 and epi week 35) for Rotavirus reached 997 (169 were positive), while the total samples for Adenovirus were 218 (one positive)
The EWARN labs ran out of Rotavirus tests in epi week 36.

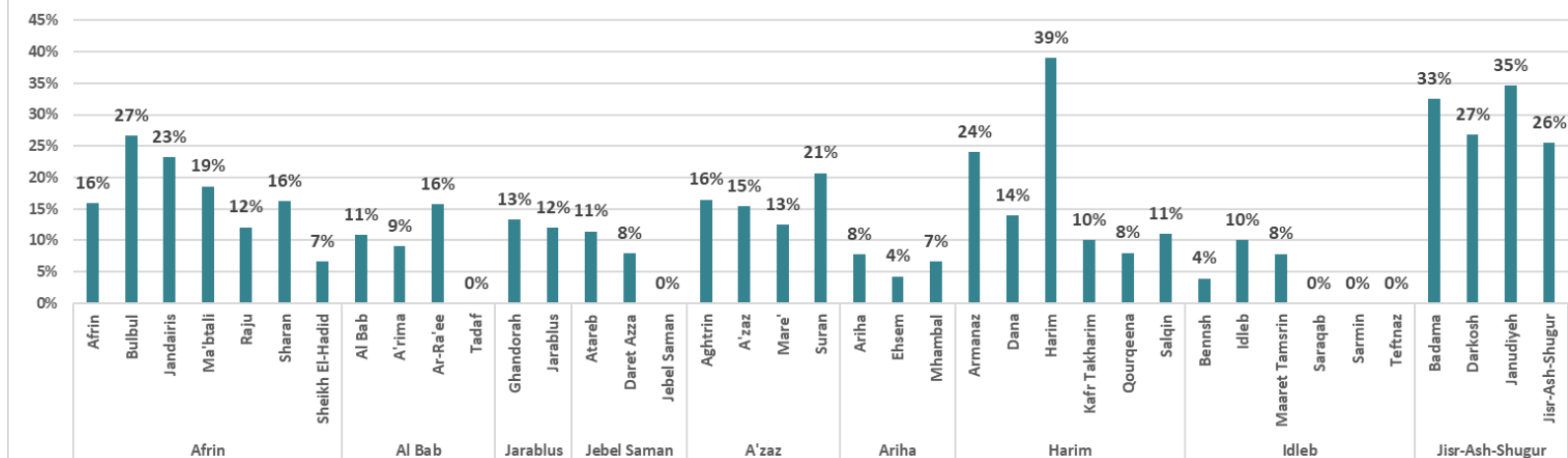


Epi Week	Governorate	District	RDT+	RDT-	Postivity Rate for RDT	Stool Culture Positive	Stool Culture Negative	Postivity Rate for Culture
Up to W38 - 2023	Aleppo	Afrin	66	614	9.7%	256	1215	17.4%
		Al Bab	12	153	7.3%	46	382	10.7%
		A'zaz	28	205	12.0%	57	299	16.0%
		Jarablus	14	230	5.7%	97	693	12.3%
		Jebel Saman	14	277	4.8%	100	830	10.8%
	Idleb	Ariha	4	240	1.6%	61	794	7.1%
		Harim	82	1199	6.4%	307	1661	15.6%
		Idleb	19	842	2.2%	99	1036	8.7%
		Jisr-Ash-Shugur	4	376	1.1%	62	147	29.7%
	Total		243	4136	5.5%	1085	7057	13.3%

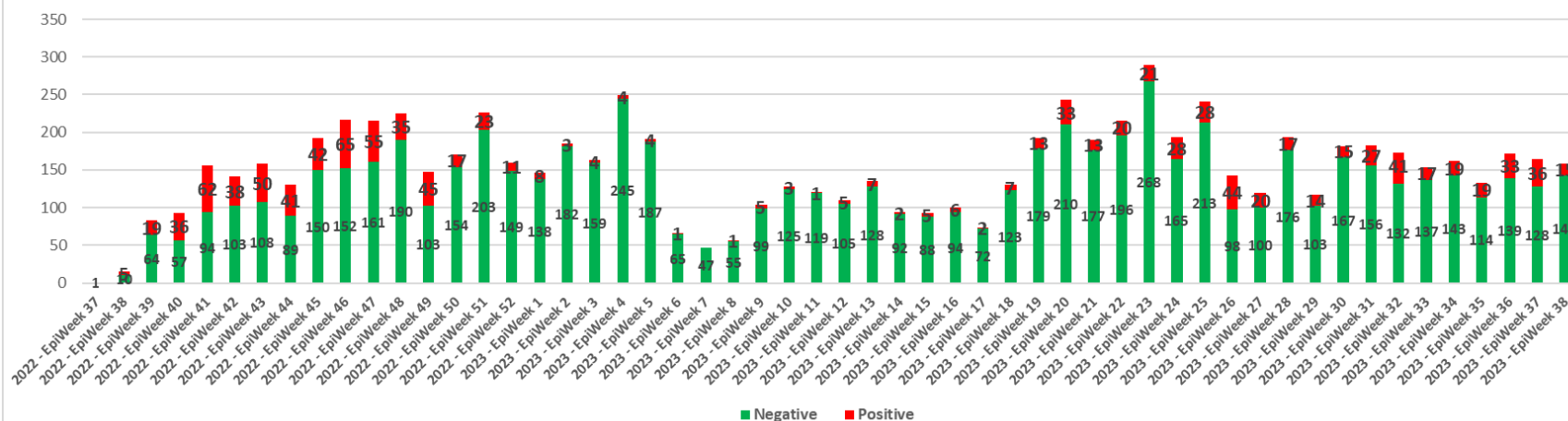
Classification of Cholera Cases by Sub-district



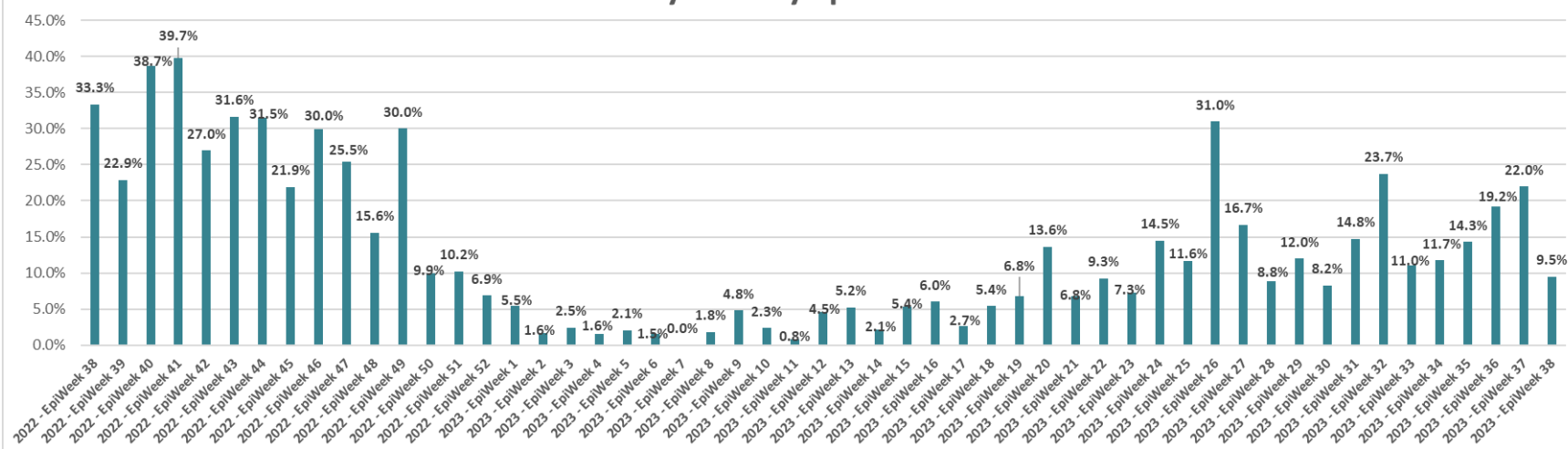
Positivity Rate by Subdistrict



Sample Collected by Epi Week - Culture



Positivity Rate by Epi Week - Culture



2. WASH:

Reporting period: (9 -15) - September

Since 12 of August, ACU in consultation with WHO team has shifted the regular approach of WASH investigation to a new approach focused on water quality monitoring in hotspot communities across NWS.

The monitoring of the quality includes taking samples at different levels to test FRC values, as follows:

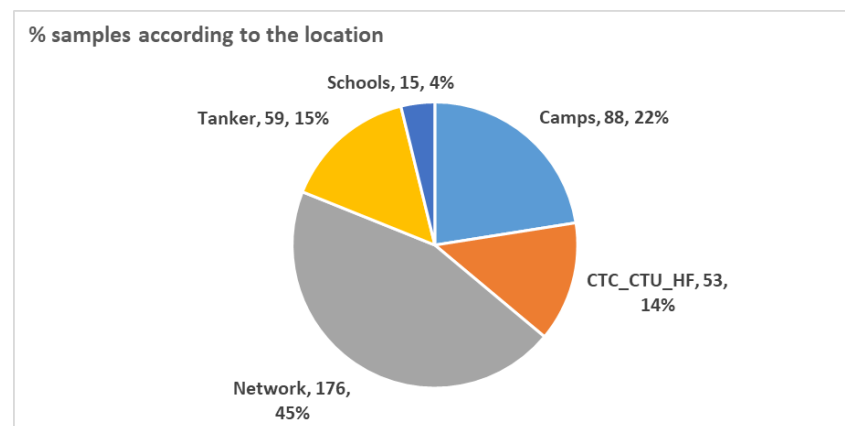
1. Samples at HH level from water taps connected to network (water pumped through water stations).
2. Camps exist inside or near the hotspot communities.
3. Schools.
4. Tankers.
5. HFs (including CTUs and CTCs)

This new approach aims at tracking whether the water supplied at different levels in these areas is safe to drink or not according to standard, through collection samples 3 times or more a week.

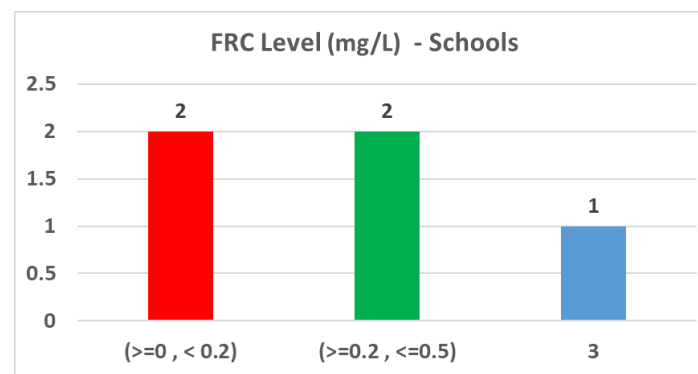
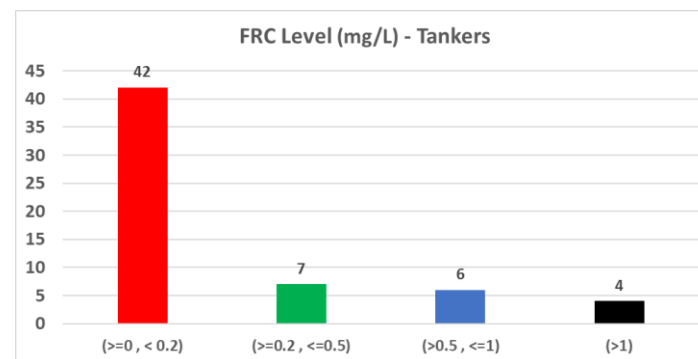
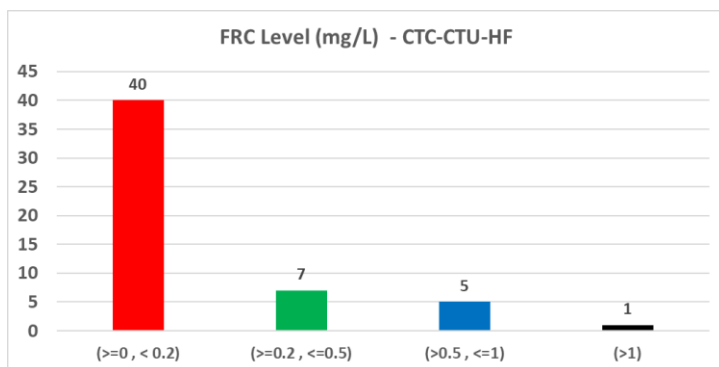
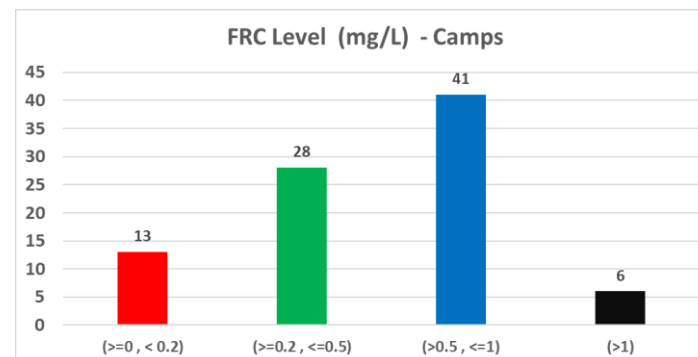
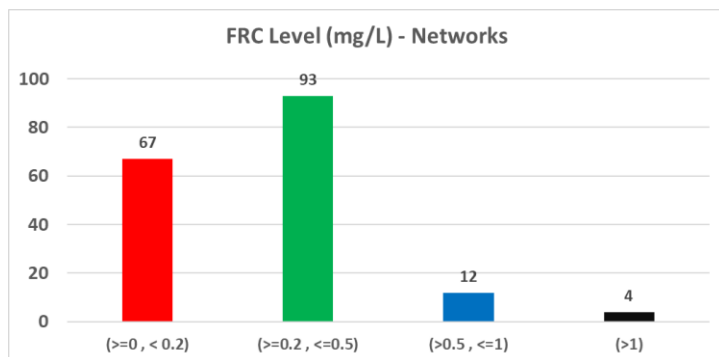
This facilitates the intervention that might be made by organizations to ensure that the drinking water is potable and decrease the WBDs particularly AWD/Cholera.

Monitoring Results:

Number of samples collected was 391 ones, as follows:



FRC values at different level of sampling:



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 rapid diagnostic tests (RDTs).
- The response teams conducted an expanded investigation of the deaths that occurred since the beginning of the outbreak (24 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

- The stock of Rotavirus tests in EWARN labs ran out in week 36.