

Northwest of Syria Cholera Outbreak

Situation Report No.53

Epidemiological Week - 40 (1 - 7 / Oct / 2023)

Date of Onset of Outbreak: 16 September 2022

Reporting Date of outbreak: 17 September 2022

Confirmation Date: 19 September 2022

Suspected Cases: 156122

Confirmed Cases: 1107

Cholera Deaths : 24

Case Fatality Rate: 0.02%

NWS Attack Rate: 3.37%

Key Highlights

Cumulatively, a total of **156122 suspected** cases (**69061** in Aleppo governorate, **87060** in Idlib governorate) including **1107 confirmed** have been reported by EWARN team since 16 September, including **24 deaths** case.

The highest number of cases were reported in Harim district (**42279**) and Idlib district (**31813**) in Idlib governorate, then Azaz district (**19176**), and Jebel Saman district (**14751**) in Aleppo governorate.

29440 total suspected cases (including **748** new cases in Epi week 40 - 2023) were reported from camps.

56.63 % 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

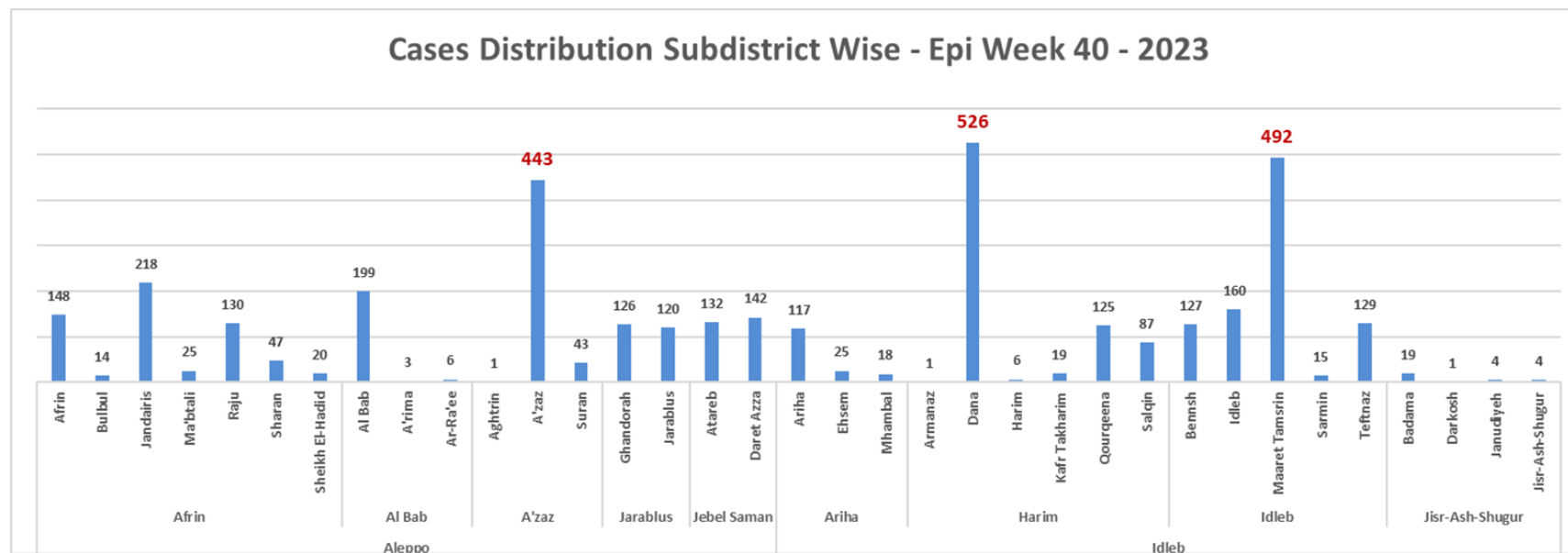
Updated case definition: A resident of outbreak areas with sudden onset of acute watery diarrhea with or without vomiting.

In Epi week 40 - 2023, **3692 suspected cases of cholera were reported**. The affected governorates are Aleppo (1817 suspected cases, 4 confirmed), and Idlib (1875 suspected cases, 4 confirmed). 21% of the total were in the camps

The age group less than 5 reported 62.93 %. Sex distribution of the suspected_cases is 54% Male, and 46% Female

There is no death in epi week 40

Dana subdistrict in Idlib governorate reported the highest number of cases (526), then Maaret Tamsrin subdistrict (492) in contract Azaz subdistrict reported the highest number in Aleppo governorate (443).

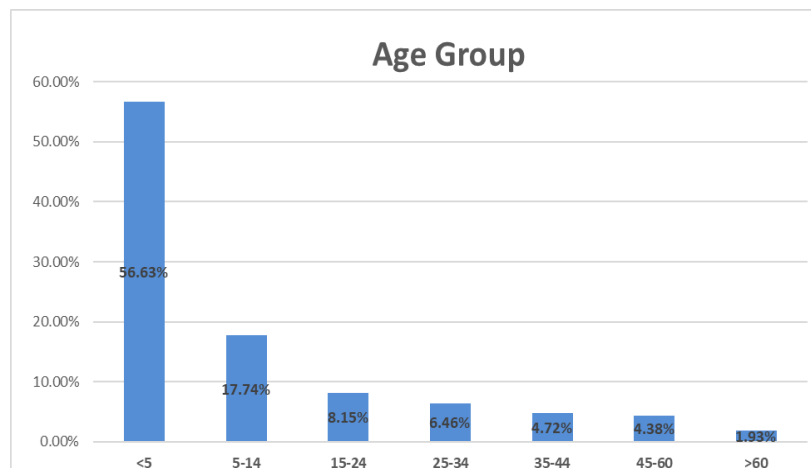
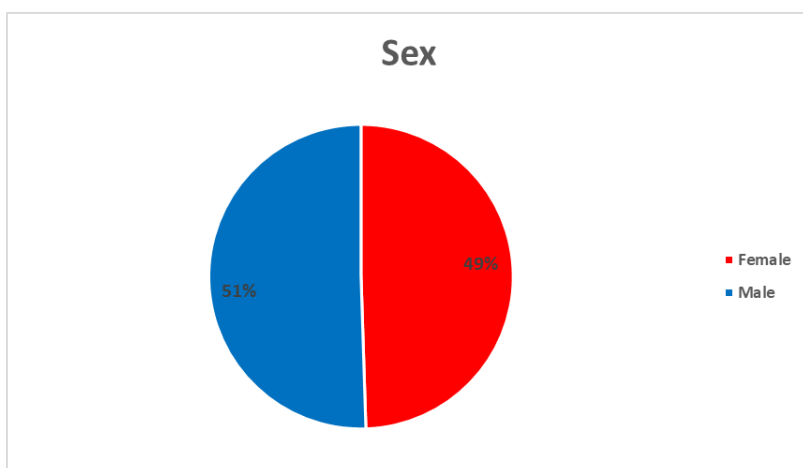


The overall sex distribution of the suspected cases is 51% Male, and 49% Female.

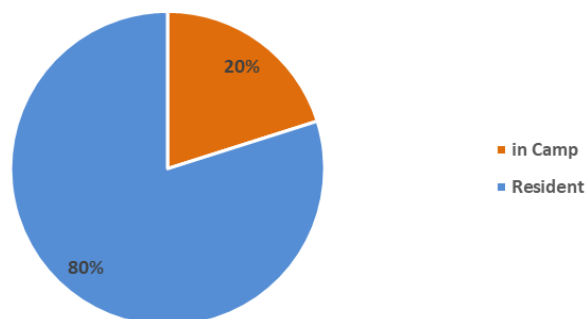
100% of the line listed cases were presented as Acute watery Diarrhea, 20% with vomiting, 5% as rice watery diarrhea, and 9% were dehydrated.

20% of the total cases live in camps (49440), and 80% out of camps (116773). (9908 of the total line listed cases are unknown)

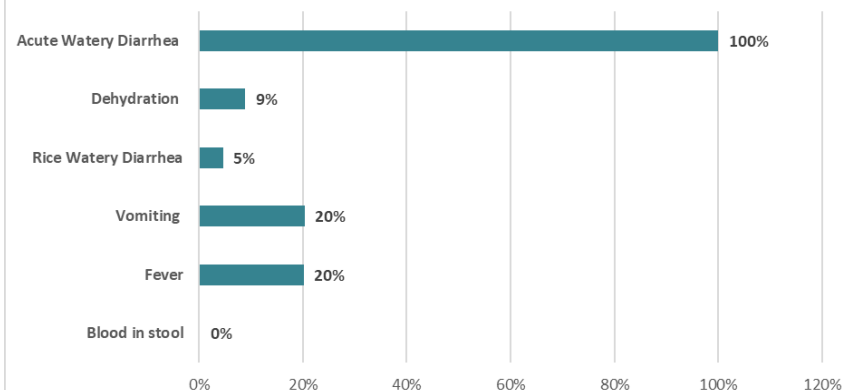
As the outbreak progresses, sensitivity should be increased by including smaller age groups and mild/moderate symptom groups in order to estimate the burden of the outbreak. According to WHO, in areas where a cholera outbreak has been confirmed, any person presenting with or dying from acute watery diarrhea is considered a suspected cholera case. The age group less than 5 years was 56.63%.



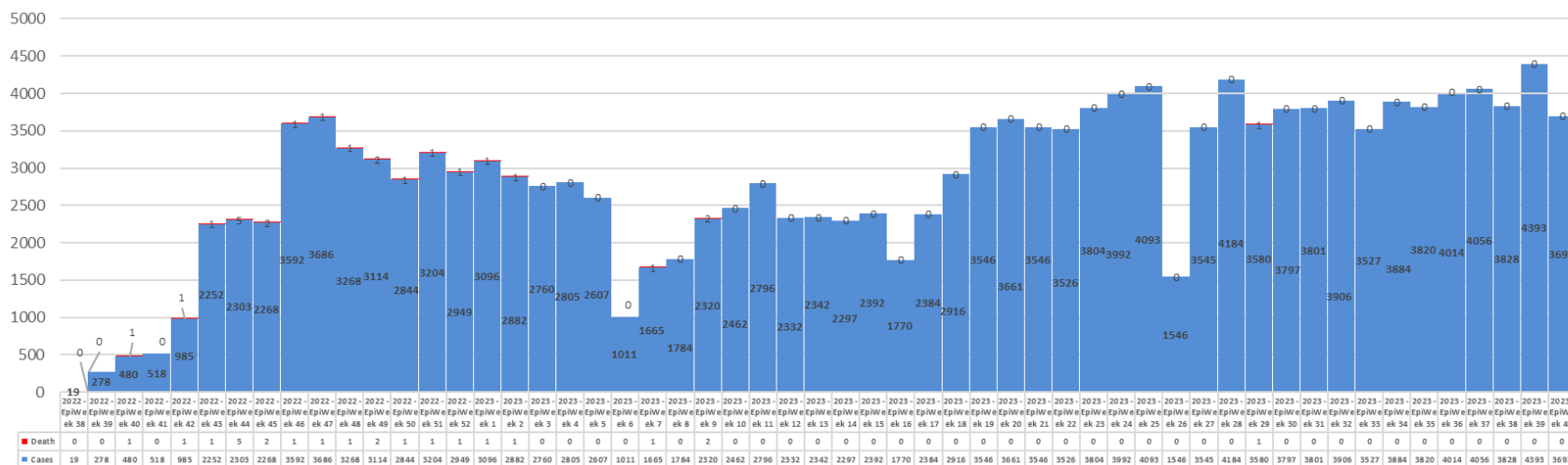
Cholera Cases Residency Distribution



Signs and Symptoms



EPI Curve - Reporting Date - NWS



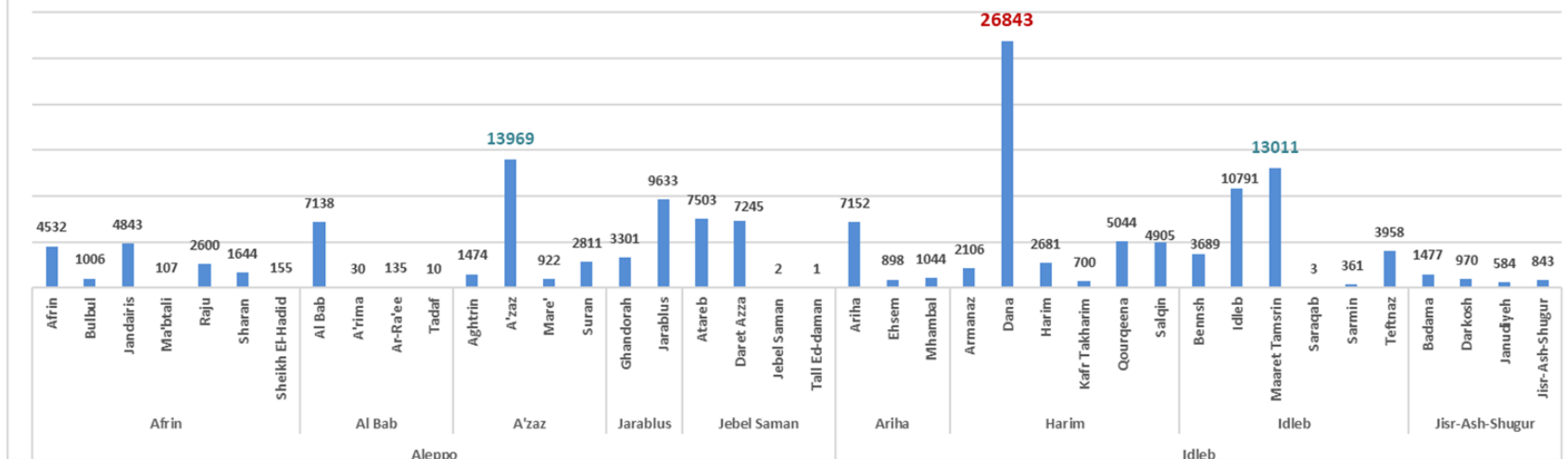
The chart displays the number of COVID-19 cases and deaths in the Netherlands from 2020 to 2024. The top chart shows cases (blue bars) and the bottom chart shows deaths (red bars). The x-axis represents dates from 2020 to 2024. The y-axis represents the number of cases and deaths, ranging from 0 to 5000. The chart shows a significant increase in cases starting in late 2023, peaking in early 2024, and then declining. Deaths also show a corresponding increase during the same period.

Date	Cases	Deaths
2020-01-18	18	0
2020-02-21	217	0
2020-03-45	451	0
2020-04-40	450	0
2020-05-18	618	0
2020-06-10	910	1
2020-07-06	866	0
2020-08-23	733	1
2020-09-08	1087	0
2020-10-11	1159	0
2020-11-10	1030	0
2020-12-08	1087	0
2021-01-11	1110	1
2021-02-01	1291	0
2021-03-01	1260	1
2021-04-01	1540	1
2021-05-01	1307	1
2021-06-01	1244	0
2021-07-01	1173	0
2021-08-01	1093	0
2021-09-01	418	0
2021-10-01	645	1
2021-11-01	764	0
2021-12-01	1065	2
2022-01-01	1056	0
2022-02-01	1301	0
2022-03-01	1098	0
2022-04-01	1091	0
2022-05-01	1087	0
2022-06-01	1051	0
2022-07-01	890	0
2022-08-01	1205	0
2022-09-01	1396	0
2022-10-01	1820	0
2022-11-01	1780	0
2022-12-01	1783	0
2023-01-01	1804	0
2023-02-01	1825	0
2023-03-01	1965	0
2023-04-01	1875	0
2023-05-01	690	0
2023-06-01	1678	0
2023-07-01	1766	0
2023-08-01	1588	0
2023-09-01	1662	0
2023-10-01	1663	0
2023-11-01	1793	0
2023-12-01	1511	0
2024-01-01	1706	0
2024-02-01	1552	0
2024-03-01	1690	0
2024-04-01	1733	0
2024-05-01	1670	0
2024-06-01	1979	0
2024-07-01	1811	0

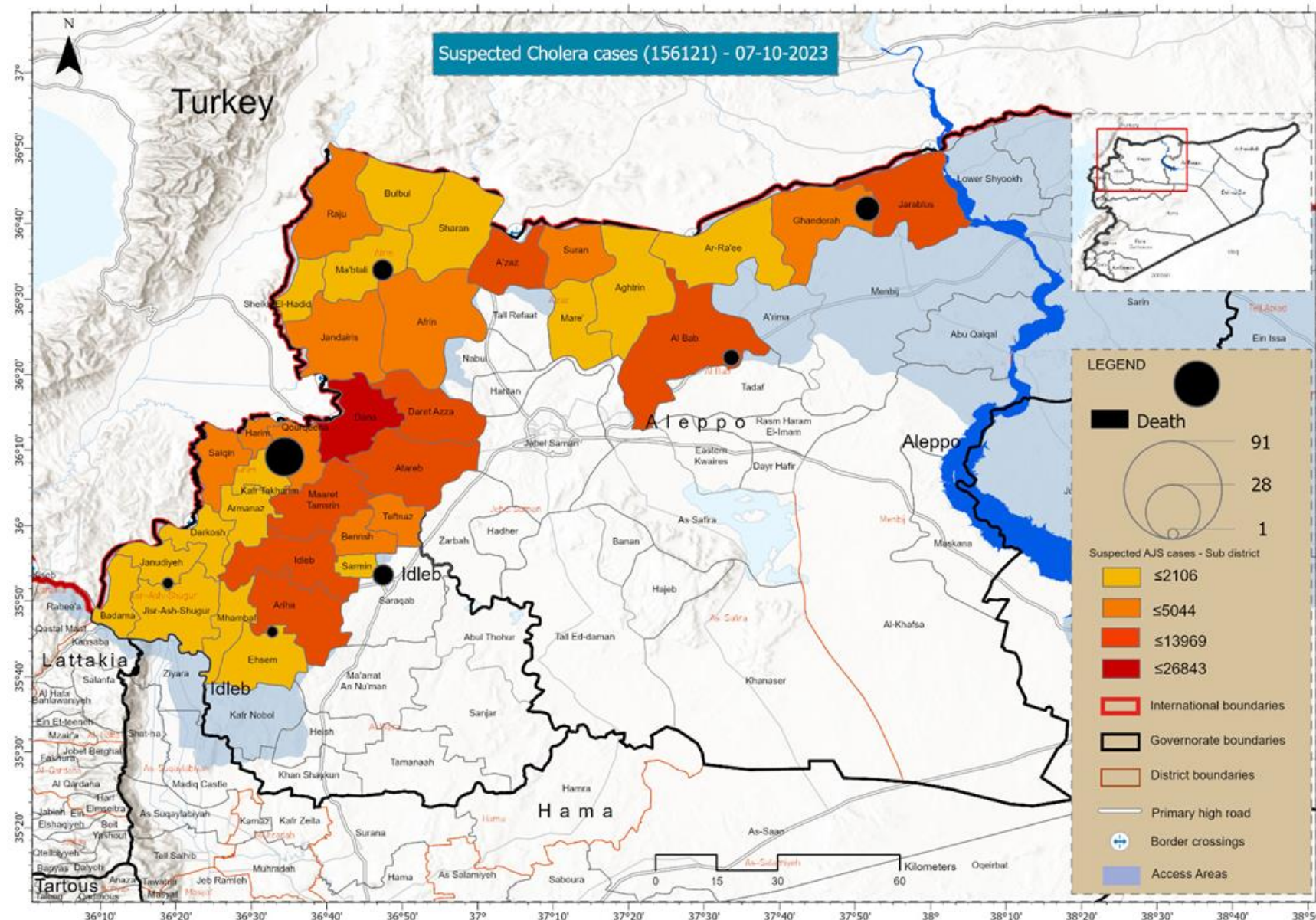
The chart displays the daily number of COVID-19 cases and deaths in the Netherlands from January 1, 2020, to December 31, 2023. The top section is a bar chart where blue bars represent daily cases and red bars represent daily deaths. Each bar is labeled with its corresponding value. The bottom section is a line chart showing the 7-day moving average for both cases (blue line) and deaths (red line). The y-axis ranges from 0 to 5000. The x-axis shows dates from 2020-01-01 to 2023-12-31. The chart illustrates a major wave of cases in early 2022, peaking at over 2500 cases per day, followed by a period of lower activity and then a resurgence in late 2022 and early 2023.

Date	Cases	Deaths
2020-01-01	1	0
2020-01-02	61	0
2020-01-03	29	0
2020-01-04	68	0
2020-01-05	367	0
2020-01-06	1342	0
2020-01-07	1437	0
2020-01-08	1535	1
2020-01-09	2505	0
2020-01-10	2527	0
2020-01-11	2238	0
2020-01-12	2027	0
2020-01-13	1734	0
2020-01-14	1913	0
2020-01-15	1689	0
2020-01-16	1556	0
2020-01-17	1575	0
2020-01-18	1516	0
2020-01-19	1632	0
2020-01-20	1514	0
2020-01-21	593	0
2020-01-22	1020	0
2020-01-23	1020	0
2020-01-24	1255	0
2020-01-25	1406	0
2020-01-26	1495	0
2020-01-27	1234	0
2020-01-28	1251	0
2020-01-29	1210	0
2020-01-30	1341	0
2020-01-31	880	0
2020-02-01	1179	0
2020-02-02	1520	0
2020-02-03	1726	0
2020-02-04	1881	0
2020-02-05	1763	0
2020-02-06	1722	0
2020-02-07	1979	0
2020-02-08	2027	0
2020-02-09	2218	0
2020-02-10	856	0
2020-02-11	1867	0
2020-02-12	2418	0
2020-02-13	1992	0
2020-02-14	2135	0
2020-02-15	2138	0
2020-02-16	2113	0
2020-02-17	2016	0
2020-02-18	2178	0
2020-02-19	2268	0
2020-02-20	2324	0
2020-02-21	2323	0
2020-02-22	2158	0
2020-02-23	2414	0
2020-02-24	1879	0

Cases Distribution Subdistrict Wise - up to Epi Week 40 - 2023



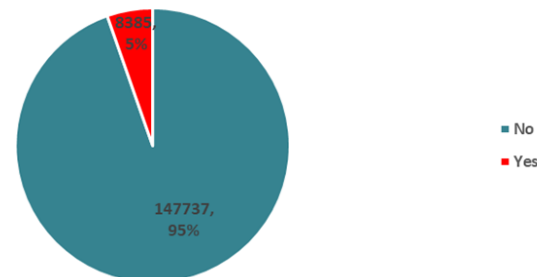
Epi Week	Governorate	District	Date of Onset	Population	New cases	Cumulative Cases	New Death	Cumulative Deaths	Case Fatality Rate	Incidence Rate	Attack Rate
Up to W40 - 2023	Idleb	Ariha	20-Sep	185,668	160	9094	0	1	0.01%	86.2	4.90%
		Harim	6-Sep	1,586,820	764	42279	0	10	0.02%	48.1	2.66%
		Idleb	14-Sep	713,933	923	31814	0	3	0.01%	129.3	4.46%
		Jisr-Ash-Shugur	25-Sep	310,973	28	3874	0	1	0.03%	9.0	1.25%
	Aleppo	A'zaz	9-Sep	648,600	487	19176	0	0	0.00%	75.1	2.96%
		Afrin	21-Sep	467,090	602	14887	0	3	0.02%	128.9	3.19%
		Al Bab	17-Sep	339,812	208	7313	0	2	0.03%	61.2	2.15%
		Jarablus	12-Sep	121,938	246	12934	0	4	0.03%	201.7	10.61%
		Jebel Saman	10-Sep	251,785	274	14751	0	0	0.00%	108.8	5.86%
	Total			4,626,619	3692	156122	0	24	0.02%	79.8	3.37%



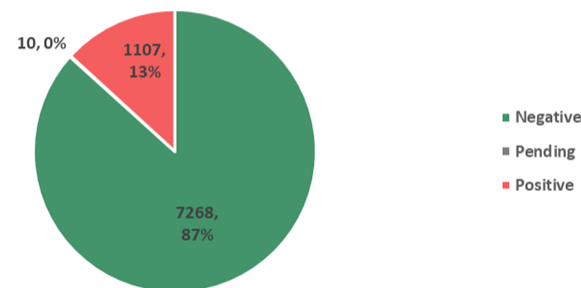
Laboratory:

- In Epi week 40- 2023, the total number of stool specimens or rectal swabs is **104**, (34 in Aleppo –4 confirmed), (70 in Idleb – 4 confirmed).
- A **cumulative of 8385 samples were collected** since the start of the outbreak (5 % of overall line listed cases), **of which 1107 have tested positive by stool culture. The total positivity rate in NWS is 13.2 %**
- The Total number of negative cases by stool culture is 7268, and the remaining 10 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.

Stool Sample Collected - Culture



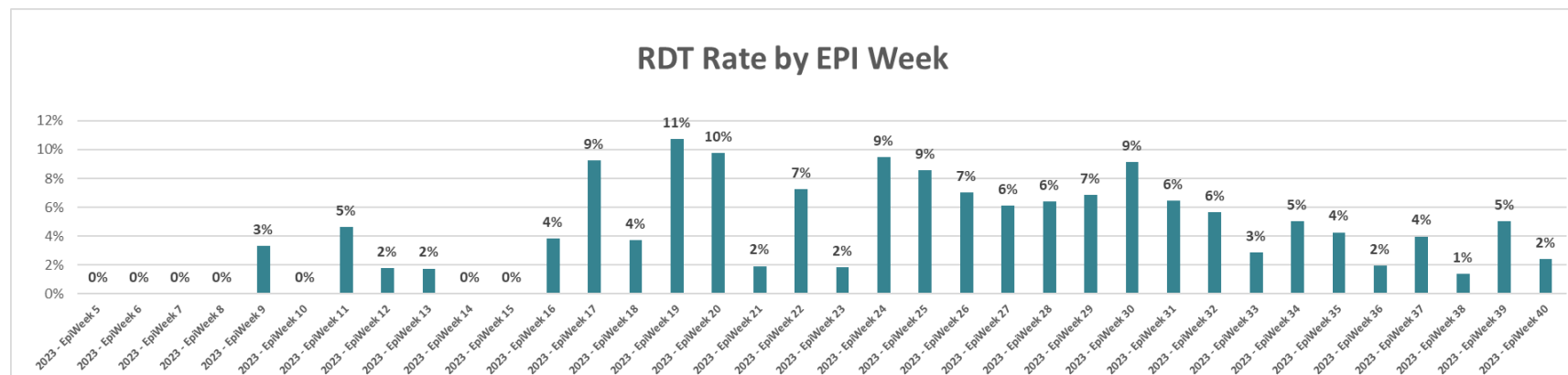
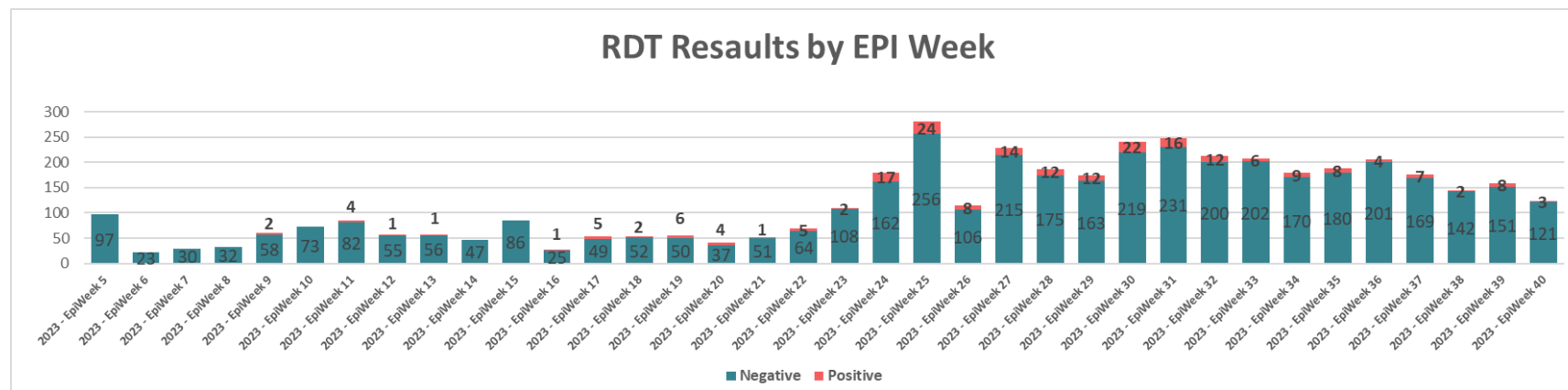
Cholera Sampled Cases Classification



During epi week 40, EWARN received 124 RDT results from the CTC/CTUs and some HFs, 3 of them were positive for Cholera.

The total of RDT tests between epi weeks (5 - 40) reached 4356, and the total positive is 218.

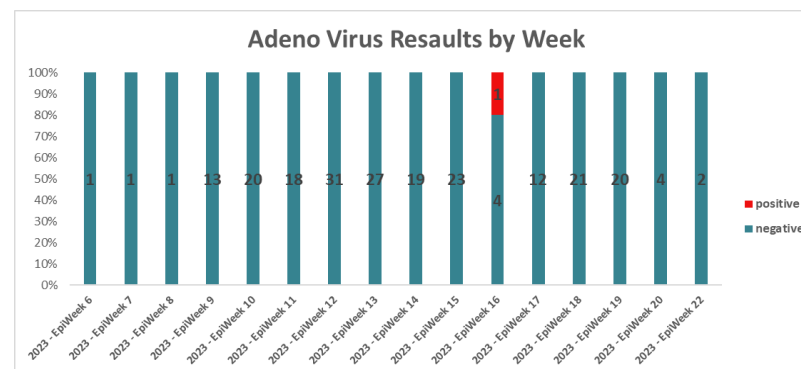
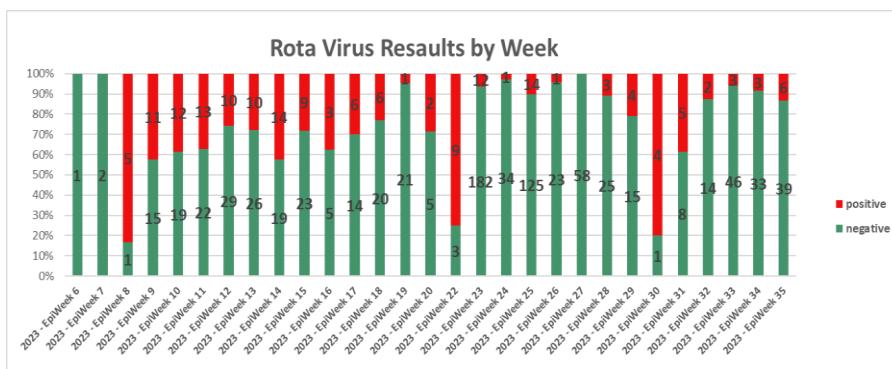
The positivity rate of RDTs, from epi week 5 – 2023 up to epi week 40 – 2023 is 5 %. But the positivity rate since the beginning of cholera outbreak up to epi week 40 – 2023 is 5.4 %.



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

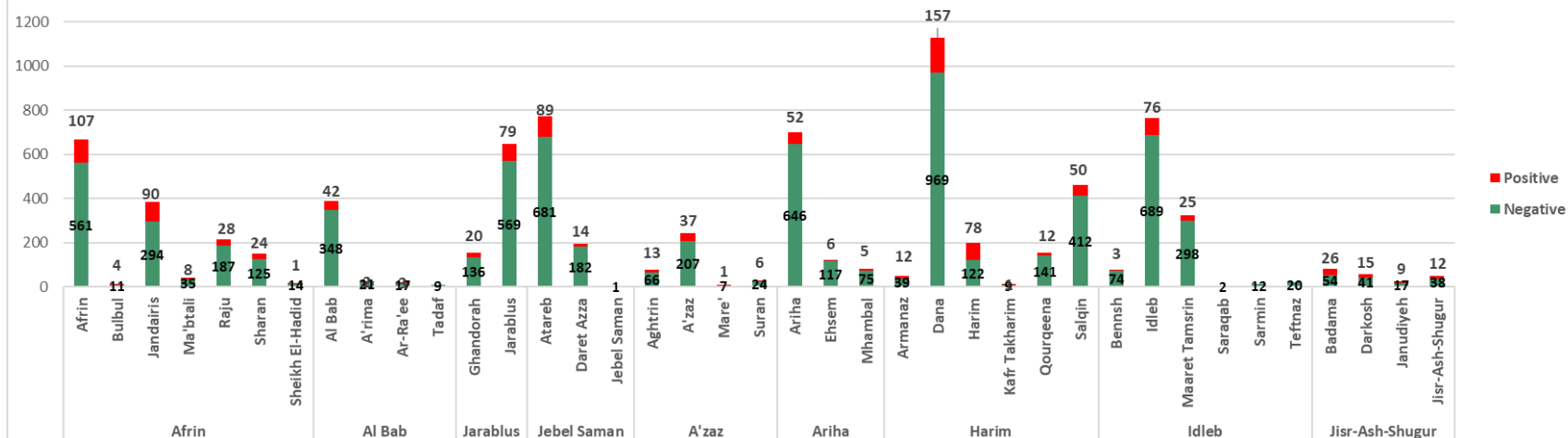
The total samples collected between (epi week 6 and epi week 35) for Rotavirus reached 997 (169 were positive), while the total samples for Adenovirus were 218 (one positive)

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

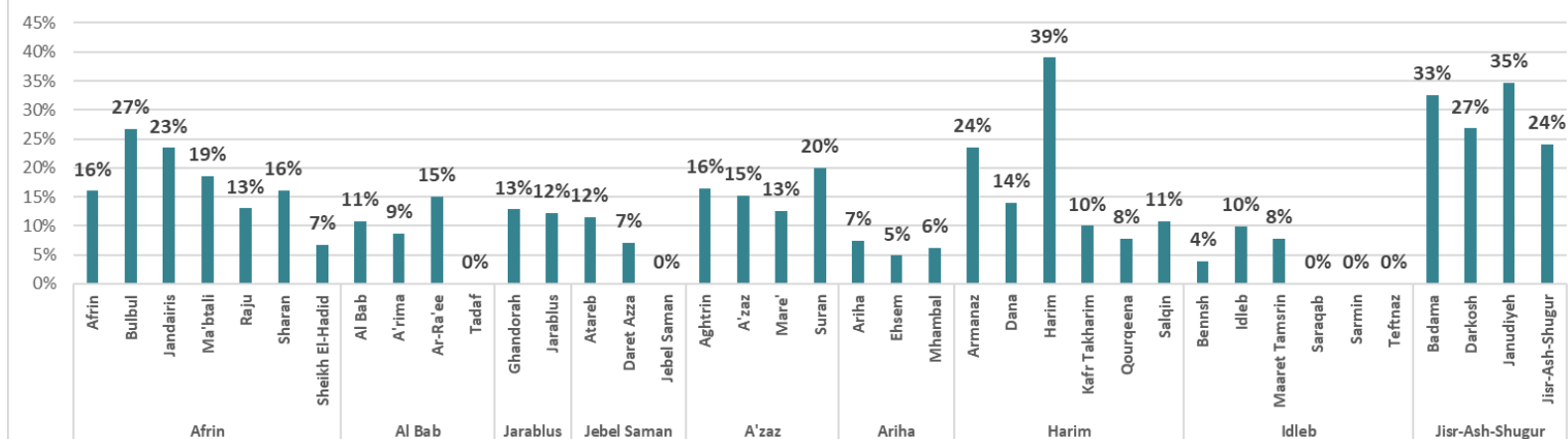


Epi Week	Governorate	District	RDT+	RDT-	Postivity Rate for RDT	Stool Culture Positive	Stool Culture Negative	Postivity Rate for Culture
Up to W39 - 2023	Aleppo	Afrin	72	643	10.1%	262	1227	17.6%
		Al Bab	13	168	7.2%	47	395	10.6%
		A'zaz	28	205	12.0%	57	304	15.8%
		Jarablus	14	242	5.5%	99	705	12.3%
		Jebel Saman	14	285	4.7%	103	864	10.7%
	Idleb	Ariha	4	263	1.5%	63	838	7.0%
		Harim	84	1231	6.4%	310	1692	15.5%
		Idleb	21	925	2.2%	104	1095	8.7%
		Jisr-Ash-Shugur	4	446	0.9%	62	150	29.2%
	Total		254	4408	5.4%	1107	7270	13.2%

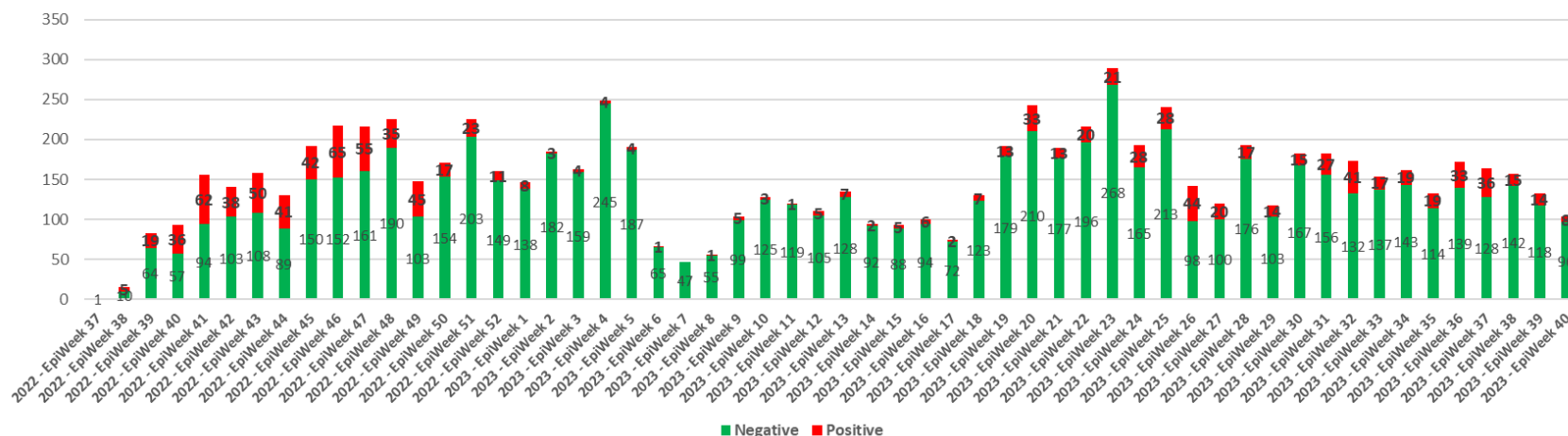
Classification of Cholera Cases by Sub-district



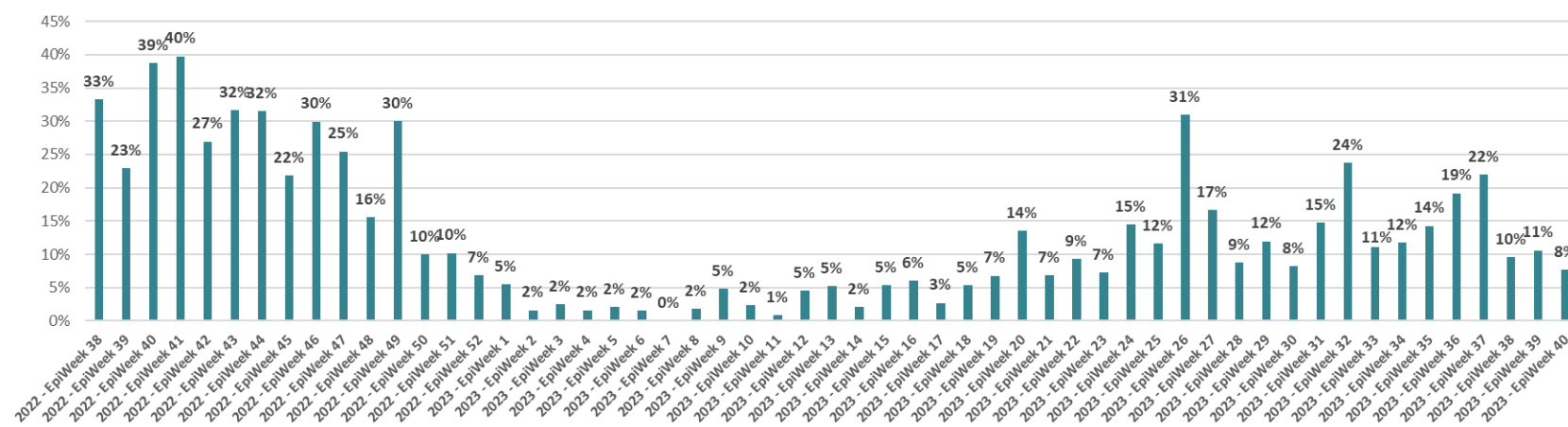
Positivity Rate by Subdistrict



Sample Collected by Ep Week



Positivity Rate by Week - Culture



2. WASH:

Reporting period: (30 Sep – 6 Oct)

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:

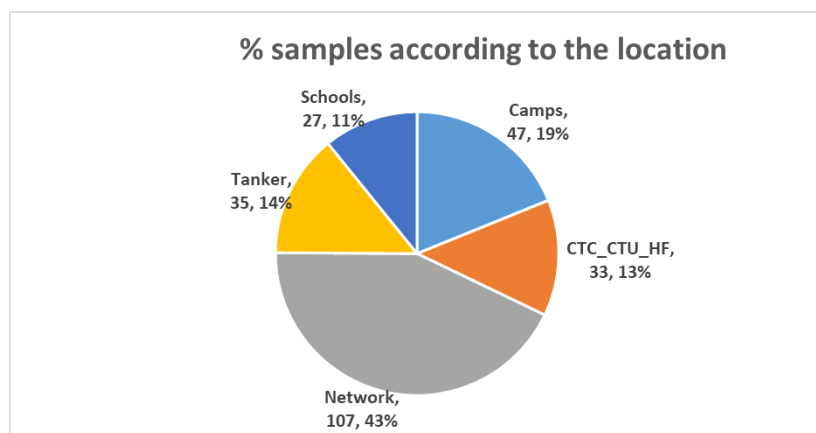
1. Samples at HH level from water taps connected to network (water pumped through water stations).
2. Camps exist inside or near the hotspot communities.
3. Schools.
4. Tankers.
5. HFs (including CTUs and CTCs)

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 1 time a week, reducing the frequency due to the lack of fund.

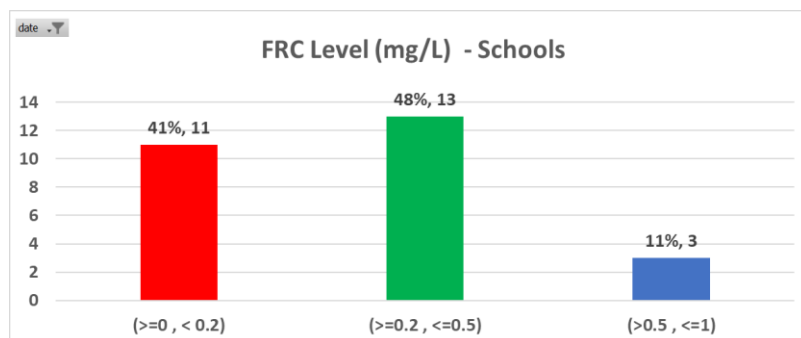
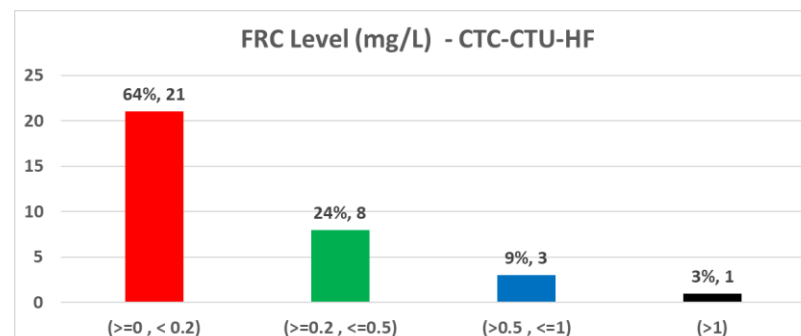
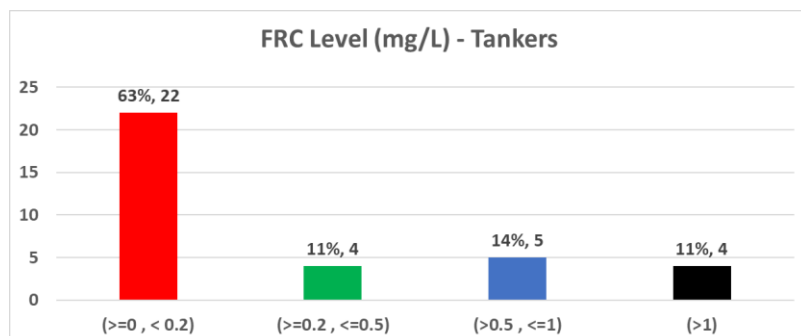
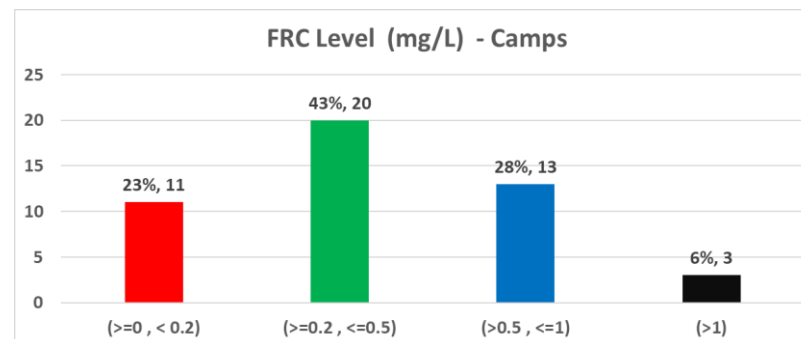
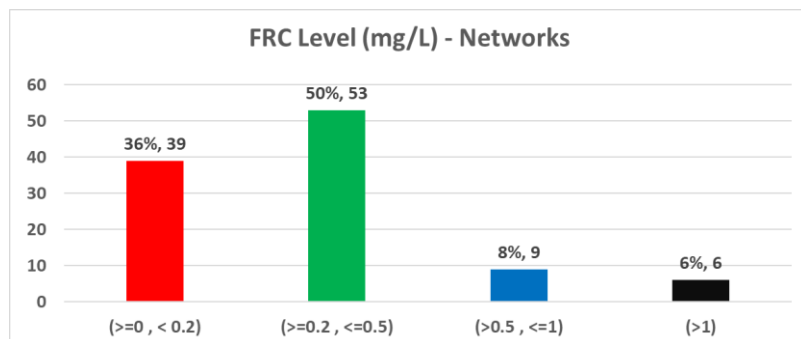
This facilitates the intervention that might be made by organizations to ensure that the drinking water is potable and decrease the WBDs particularly AWD/Cholera.

Monitoring Results:

Number of samples collected was 249 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.
- 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.