

Progress report on Acute Bloody Diarrhea in Zghir Jazireh village – Deir- ez-Zor (DZ) province. March-May, 2018

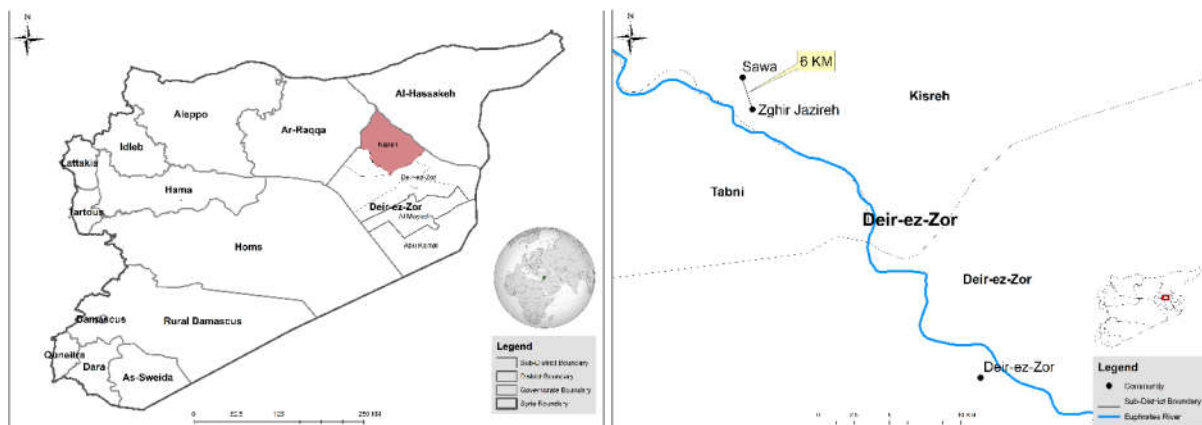
Introduction:

On 13th of March 2018, EPI-week 11, a private physician reported the detection of an increasing number of ABD in **Zghir Jazireh** village – **Kisreh** sub-district, DZ province.

At the same time, DLO DZ, has notified an alert in same sub-district on 12th March, EPI-week 11. The alert was verified on 13th March, where 83 suspected cases were notified. The verification confirmed that all cases reported in the alert meet clinical case definition of ABD. No deaths were reported on verification.

78 cases were classified by age and gender. There was a preponderance of age group above 5 representing 80% of classified cases, and females were 76%. 5 cases were not classified at that time. These cases were detected in two schools and scattered camps (where some people live in).

In EPI-week 19, the number of suspected cases increased to **1319** representing a continued alert in Kisreh sub-district, while the number of classified (line listed) suspected cases was **297**.



Background:

Village **Zghir Jazireh** and adjacent village **Sawa** lie in **Kisreh** sub-district in western rural DZ which is 25 KM from DZ city.

The estimate population of this village and the immediate surroundings is 43000. This population includes IDPs originating mainly from DZ city and eastern rural area of DZ in addition to host community. IDPs live in dispersed vacant governmental buildings and 4 out of 6 schools. The population live in bad environmental conditions with low sanitation and insufficient, un-chlorinated water. There was no information on food gathering during the period of this outbreak.

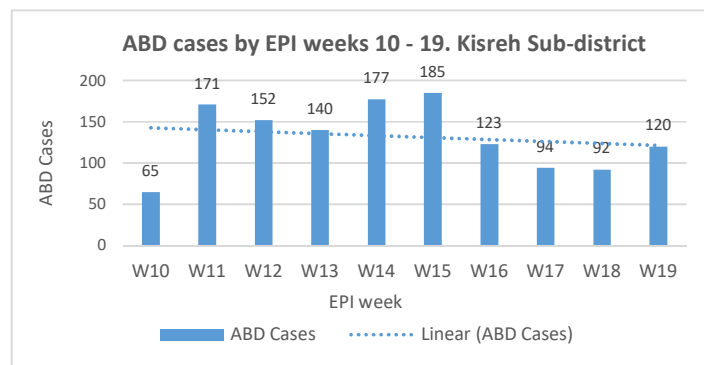
Plan of investigation:

1. Conduct descriptive epidemiological study using available information.
2. Assembling the multi-sectoral response team and assigning roles and responsibilities.
3. Review and advise on case management.
4. Field visits:
 - a. Search for more cases and identify extent of the outbreak through visiting **Kisreh** hospital to review registers searching for missed cases and deaths.
 - b. Search for deaths associated with ABD.
 - c. Interview with families and health care providers to enhance case reporting.
 - d. Update the line list with new variables when needed.
 - e. Expedite the process of samples collection and transport of specimens.
5. Assessment of environmental conditions.
6. Postulate outbreak hypotheses
7. Institute control measures
8. Conduct case-control study to test hypothesis

Findings:

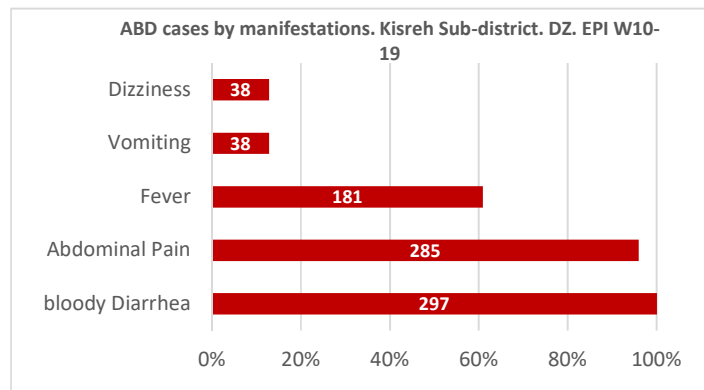
The epicurve shows increasing in suspected caes in week 11, where alert by EWARN staff was communicated to central level followed by verification process. The alert was true and an investigation was triggered.

The cases are distributed in a fairly localized area in **Kisreh** sub-district, however new cases are being detected in new geographical areas. The extent of the outbreak is yet to be determined.

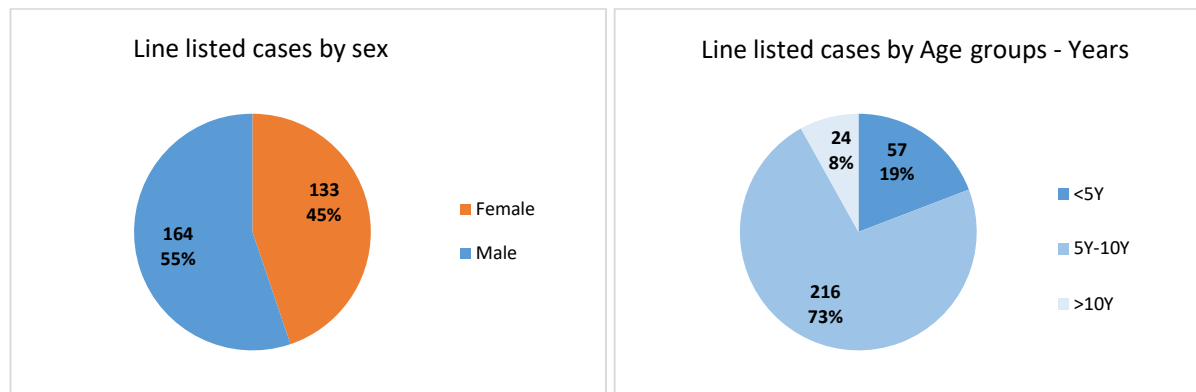


As mentioned before, the sharp rise of number of cases in week 11, gave the impression of a point source outbreak, however as reporting accumulates it is clear that cases continue to rise until week 15 despite the overall decreasing trend. Cases are still being reported and carefully observed.

Among all line listed ABD cases that met clinical case definition, 100% of cases presented with bloody diarrhea, 96% with abdominal colic and 61% of cases had fever.



Line listed cases did not indicate clear preponderance of either sex which might conclude equal exposure of suspected source of outbreak. Age distribution indicate that age group 5-10 years is at highest risk (73%).



Out of 1319 cases, 5 deaths were confirmed to be related to ABD, with case fatality ratio of 0.3%. Ages of dead cases range from 2 months to 48 months. The most recent death was reported on 8 May 2018, another death was reported on 10 May not included in this report.

Multi-sectoral team has been assembled to conduct risk communication to people and convey messages to health care provider. That will be detailed when the outbreak is closed. The major sectors represent epidemiological, WASH, laboratory and communication.

Laboratory findings:

Early laboratory results indicated the presence of cysts of *Entamoeba histolytica*, however, more culture results of more recent cases are underway. There are some laboratory reports of *E.coli*, while other culture results are awaited for shigellosis.



Case management:

Information is being collected on outlines of treatment of cases practiced by physicians in Kisreh. Standardized protocol for treatment will be shared following confirmed laboratory results.

Visiting pediatricians and internists:

Several doctors were visited interviewed in western rural areas of DZ, searching for new un-reported cases of bloody diarrhea and deaths. Doctors agreed to report on any new cases or deaths.

Deaths were in fact reported through a mortality field survey in **Zghir Jazireh** village where deaths were reported by health care providers in different places like Al-Goura village in DZ city and village Awaas in Raqqa, in addition one case was reported dead due to ABD after referral to Damascus.

All morbidity and mortality figures will be updated as the outbreak unfolds.

Line list will be updated with new variables as investigation goes on, of special importance is the source of water. Stool specimens are being collected and sent to EWARN laboratory in Atareb. Results are expected on Monday. Causative organism and antibiotic susceptibility might help in case management and reducing deaths in addition to other preventive and control measures.

Assessment of water sufficiency and safety in Zghir Jazireh:

Water sources identified: Euphrates river is the only source of drinking water in DZ province in general and in Zghir Jazireh village.

Untreated sewage is being drained in the river at different locations.

Zghir Jazireh depends on one water treatment station which operates intermittently about 4 hours per day due to power cuts, diesel and lack of maintenance.

Water is supplied to houses through piped system, however this water is un-chlorinated. The alternative source of drinking water is the water containers (un-chlorinated). The Early Recovery Team (ERT) organization supplies camps and IDP congregation with chlorinated water.

The overall finding is that drinking water in Zghir Jazireh village collected alongside all lines of supply was chemically and biologically heavily contaminated (high ammonia level), and not suitable for human consumption. Reasons were as follows:

1. Shortage of chlorine in all water treatment stations
2. Lack of cadres experienced in chlorination.
3. Bad storage conditions of available chlorine.
4. Water tankers never chlorinate water.

Assessment of water supply in camps:

Water services were not optimal in camps. Water supply was not enough; no water reservoirs especially in schools where some IDPs exist.



Chlorinated water is scarce, majority of people receive water supply from river, untreated

Hypothesis of the outbreak:

This outbreak may have resulted from consumption of unsafe water derived directly from Euphrates without treatment (causative organism is yet to be detected). A case control study will be designed to accept or neglect this hypothesis.

Preventive and control measures:

1. Enhance surveillance to describe current morbidity and mortality and identify risk factors associated with this outbreak.
2. Distribution of chlorine tablets for domestic consumption
3. Put health care provider on the alert to enhance their engagement in reporting.
4. Collaboration with all concerned organizations responsible for water treatment and distribution to provide people at risk with their needs of safe potable water.
5. Health education of the public:
 - a. Communication messages to all communities including IDPs of importance of personal cleanliness and hand washing
 - b. Distribution of IEC material
6. Continued coordination with WASH staff
7. Provision of the antibiotic of choice after receiving laboratory results.