



WHO Representative's Office in Iraq

Daily Situation Report on Cholera Outbreak in Northern Iraq

Sitrep number: 13; Date of Reporting: 8th of September 2007

1. New Developments:

- a. **Baghdad and Basra:** Despite many rumors and media reports about new cholera cases in these 2 governorates no secondary cholera case was reported following yesterday's 2 confirmed case from the 2 governorates.
- b. **Diala:** In addition to the 4 clinically diagnosed cases reported in the previous 3 reports. An additional 4 suspect cholera cases from the same village in Al- Moqdadia district were notified today. All males; 3 adults and a 12 year old child. Patients were admitted to Beladrus district Hospital as suspected Cholera. The 4 patients consulted Beladrus hospital because of deteriorating security condition in the road to Al- Moqdadia hospital . A health team from Beladrus visited that village to investigate the situation and implement preventive measure. The team collected 26 stool samples from the contacts. 2 out of the 5 districts of Diala province, where half a million people live (representing 36% of Diala population) are still beyond the full control of the local health authorities.
The stool samples of 3 out of the 4 patients (reported on sitrep 10) tested negative for cholera organism in Baquba general hospital, however, all patients were on antibiotics before collection of specimens. All are diagnosed by treating doctors as cholera on clinical grounds. The 4th cases is a 9 month child admitted at Al- Batool pediatric hospital in Diala, stool specimen results expected tomorrow.
- c. **Tikrit:** 2 additional cases were confirmed today bringing the total confirmed cases to 3 all are adults, the first was a definite importation while the following 2 cases seems to have acquired the infection from a visiting relative who came from Kirkuk suffering from diarrhea.
- d. **Mosul :** A new cases of V cholera was locally diagnosed today, the case will not be officially notified till confirmation by the Central Public Health Lab in Baghdad; however, CDC Mosul once notified deployed the rapid response team to investigate the case. The visit revealed the followings:
 - i. The new case is a 60 years old female living with a family of 9 in Aymen district of Mosul City.
 - ii. Date of onset of the disease 17th Sep. as abdominal pain, nausea and watery diarrhea. No vomiting, no fever and no blood in stool.
 - iii. No history of diarrhea or vomiting between the nine members of her family in Mosul.
 - iv. The patient traveled to Kirkuk on 11th Sep. and returned to Mosul on 13th Sep. No cases of diarrhea or vomiting among members of the host family.
 - v. Investigation of diarrhea cases in neighborhood families was negative as well.
- e. **Falluja:** For the first time in 2 years, WHO was able to establish daily reports with Falluja general hospital and Falluja district. Daily reports shows that a diarrhoeal disease surveillance has been set and stool samples are collected from 15-19% of admitted diarrhea cases. All specimens collected since the beginning of the month were negative for cholera organism

OVERVIEW

As of 20th of September 2007, 23 districts of Northern Iraq and 4 districts in the south and center have reported laboratory-confirmed cases of cholera. 13 out of the 14 districts of Sulaymaniyah governorate, all five districts of Kirkuk governorate, 4 out of seven districts of Erbil governorate as well as one district in each of Mosul, Tikrit, Baghdad and Basra are now affected by this cholera outbreak. Preparations are being made to send a representative number of vibrio cholera isolates to a reference laboratory for further confirmation and genomic sequencing.

Up to this day 1652 lab confirmed cholera cases (all of the inaba serotype except 8 isolates of the ogawa serotype) were officially reported from Iraq.

99% of cases were reported from Sulymania and Kirkuk in north Iraq, the out break seems to be slowly spreading to the neighboring provinces of Erbil and Diala with 74 cases reported during last week.

Sporadic cases with definite history of travel and food consumption in Kirkuk were reported from Mosul and Tikrit provinces; however, isolated cases with no epidemiological link to north Iraq were also confirmed in Baghdad and Basra.

One of the important features in this out break is that most of the cases seen have mild to moderate signs and symptoms. The traditional signs and symptoms of severe dehydrating diarrhea were seen only very occasionally, out of the 1652 lab confirmed cases; only 10 death were reported, all the deceased have another serious underlying cause.

During the last 72 hours we received reports of a new focus in Diala province which is down to the south of the original focus. In this new focus 6 patients from Al Mogdadiyah district, presented to Baladriz district hospital with severe dehydrating diarrhea with renal shut down in one of them. Unfortunately, specimens collection was done late after patients received antibiotics and culture results -done by inexperienced staff in Baquba general hospital, one of the hottest areas of Iraq- were found negative for V cholera. It is not yet clear whether the organism is becoming more virulent or the population in this new focus is more susceptible to the disease.

WHO is working closely with MoH to send 10% of the positive isolates to the NAMRU3 reference Lab in Cairo for phenotypic characterization. This will consist of antibiotic susceptibility testing, minimal inhibitory concentration testing (E-strips), serotyping, and an API strip confirmation, to better characterize the out break.

Specific control measures to contain this ongoing outbreak and limit its spread to other areas have been reinforced by the health authorities of the affected provinces with technical support from WHO.

Table-1: Cases of laboratory confirmed cholera cases reported from Iraq

Province	No of districts affected	Date outbreak started	No of deaths reported	No of laboratory-confirmed case of cholera
Sulaymaniyah	12	23/08/07	9	556
Kirkuk	5	14/08/07	1	1028
Erbil	4	06/09/07	0	78
Tikrit	1	12/09/07	0	3
Mosul	1	15/09/07	0	1+1*
Baghdad-Resafa	1	19/09/07	0	1
Basra	1	19/09/07	0	1

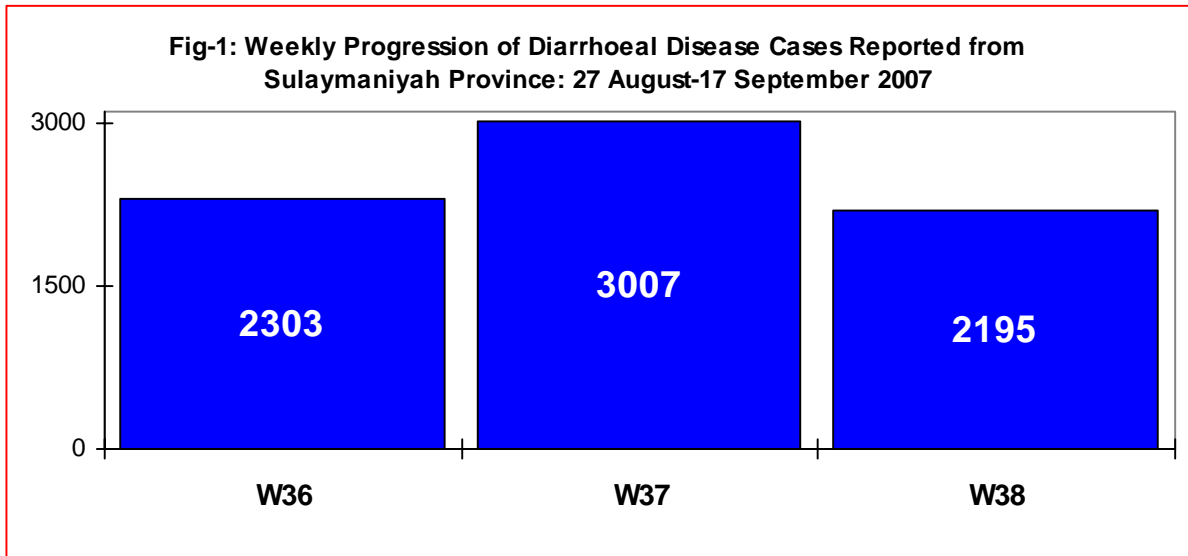
*One case from Mosul is pending central public health lab confirmation

2. PATTERN OF TRANSMISSION IN SULAYMANIYAH PROVINCE

Epidemiological features of the disease: Nothing to add to yesterday's report except that 20 new cases were confirmed.

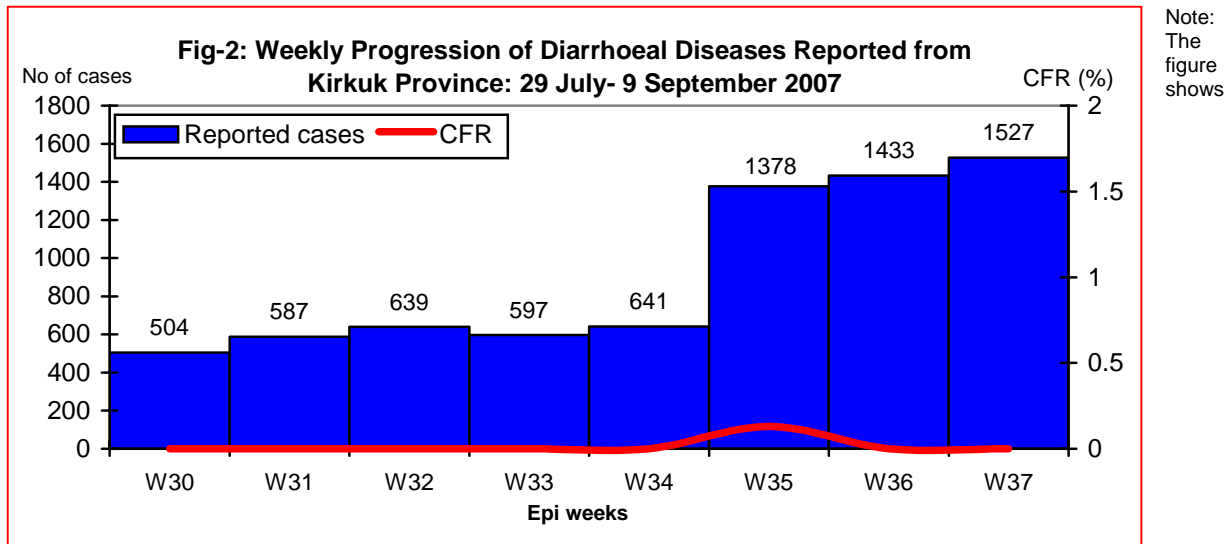
Control measures: The DoH is enhancing food& drink control and food safety measures in public places up to 19th 10184 restaurants, cafes, cafeteria in addition to raw food and vegetable distribution shops

inspected by food control authority, corrective measure together with health education activities were conducted.
 monitoring of hygiene.



3. PATTERN OF TRANSMISSION IN KIRKUK PROVINCE

The weekly progression of diarrhea cases reported from Kirkuk province and as shown in figure-2 clearly indicates an increase of case load in the last 3 weeks compared to the preceding weeks. This increased number could be due to improved reporting, increased public awareness resulting in more cases seeking consultation in health centres. As the surveillance systems for diarrhoea improves throughout the province with more comprehensive data available from the field, the real extent of the burden of disease in the province could be better recognized. The mapping of positive cholera cases have shown that majority of cases are localized in kirkuk city (Over 90%) itself.



Note: The figure shows

weekly progression of cases of diarrhoeal diseases from epidemiological week no 30 to 37 (Reporting period: 29 July to 09 September 2007)

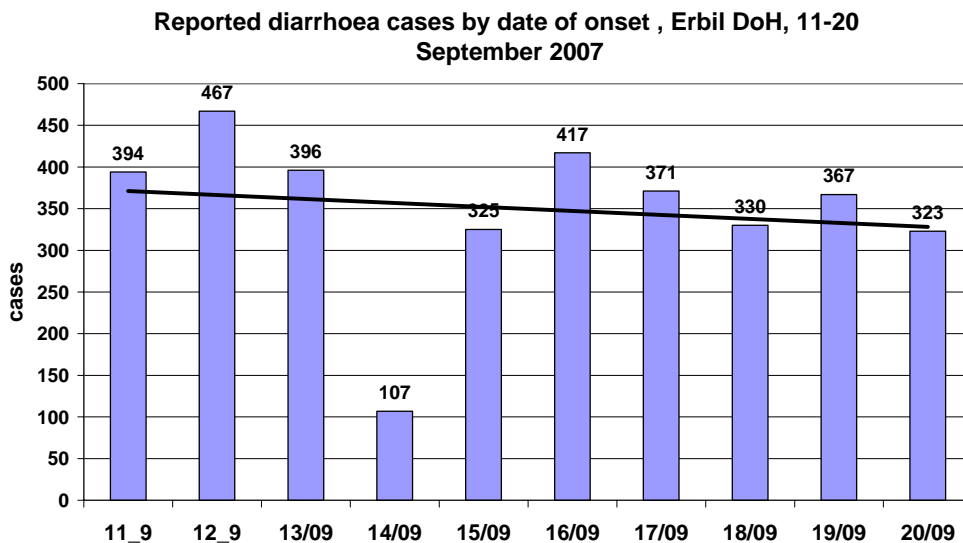
The number of diarrhea diseases reported in 2007 between epidemiological weeks no 30 and 37 shows an overall increase of 17% compared with the number of diarrhea disease cases reported from Kirkuk during the same period in 2006. While the increase in cases reported in the under 5 year age group is less (6%),

there is an overall increase of 30% between the cases reported in the above 5 year age group between the comparable periods of 2006 and 2007.

There is some evidence that the high rate of positive stool culture for vibrio cholera in Azadi hospital (over 30%) may be due to contamination. All stool specimens are collected in a single, blocked and flooded toilet in the out patient department.

4. PATTERN OF TRANSMISSION IN ERBIL PROVINCE

The below figure; show the number of Diarrhea by date of onset for the period 11-20 September 2007. Although it is too early to detect any pattern but the general trend show slight decrease in the daily reported cases, the low number of cases reported on 14 September reflects the Friday holiday effect.



4 out of the 7 districts in Erbil governorate have reported 78 laboratory-confirmed case of *Vibrio cholerae*. The total number of cases of diarrhoeal disease reported from this province from 1st of September to 20th of September stands at 15134 with no death; 2728 stool samples were collected out of which 90 were positive; 78 for cases and 12 from contacts. Erbil seems to have a fairly sensitive diarrhea disease surveillance system that was able to pick up cholera cases very early and swiftly responded and seems to have succeeded in halting and limiting the spread and magnitude of the out break.

5. SITUATION IN REST OF IRAQ

Apart from three affected provinces of Northern Iraq, in addition to Baghdad, Basra, Diala and Mosul; there is no sign that the disease has spread to any other part of Iraq. However, as the weather cools and become more favorable for transmission, the organism is expected to spread to other provinces.

All preventive measures have been taken to reduce the risk of transmission of cholera to other high risk areas. Epidemic preparedness for cholera has been geared up in all provinces. Surveillance system for diarrhoeal disease has been intensified in all provinces.

Operations rooms have also been set up in all these potentially high risk provinces and the prevailing situation, particularly the stock position of emergency drugs and medical supplies are being reviewed regularly by the local coordination committees.