



WHO Representative's Office in Iraq

Daily Situation Report on Cholera in Iraq

Sitrep number: 24; Date of Reporting: 6th of October 2007

1. New Developments:

- a. **Baghdad :** The total number of laboratory confirmed cholera cases jumped to 4 including one death. The 4 cases were reported from Al- Madain district in Baghdad Resafa. A team from CDC/Baghdad; Baghdad-Resafa DoH and WHO visited the 2 hospitals in Madain districts and came to the conclusion that much need to be done in terms of surveillance and environmental sanitation.
- b. **Basra:** A second cholera case was confirmed on 04/10, bringing the number of cholera cases to 2 from 2 different districts.
- c. **Dahuk:** On 23rd of September; Duhok health authority reported the first laboratory confirmed cholera in a 5 year old female child from Bardarash district in Dahuk governorate. It is important to note that the first index case for 1999 out break (over 900 cases) started in the same area which the WHO requested to visit during her last mission to north Iraq, however, the request was denied. The case was detected during the routine testing of cases presenting to health facilities with watery diarrhea. Further investigation of contacts and water supply was negative for V cholera organism.
- d. **Diala:** On the 4th of October MoH reported 2 laboratory confirmed cholera cases among 2 adults, from 2 different districts (Baquba and Khalis district), both were admitted to Baquba general hospital suffering from acute watery diarrhea and extreme dehydration. During the period (15/09 to 04/10); 44 suspect cholera cases were reported from Baladruz, salahaddin, Hibhib, Al-Udhem and Baquba hospitals and PHCs suffering from extreme dehydration with renal shut down in one of them. Since the remaining 42 cases were clinically diagnosed as cholera and epidemiologically linked (in time and place to the confirmed cases) then these 42 cases can safely be classified on epidemiological and clinical basis as confirmed cholera cases; brining the total cholera cases in this province to 44.
- e. **Tikrit:** During the period 11/09 to 03 October; 2012 diarrhea cases were reported; 1408 stool specimens collected, 8 of them were positive for 01 vibrio cholera, 5 were for cases and 3 for healthy carriers.
- f. **Mosul :** Nothing to add to yesterday's report..
- g. **Wassit:** one cholera case was confirmed in Wassit on 25th of September.

2. OVERVIEW

As of 2nd of October 2007, 25 districts of Northern Iraq and 14 districts in the south and center have reported laboratory-confirmed cases of cholera. In north Iraq; 13 out of the 14 districts of Sulymania governorate, all five districts of Kirkuk governorate, 6 out of the seven districts of Erbil governorate, one district in Dahuk. As for the center and south; the affected districts are: 3 districts in each of Tikrit; Mosul and Diala, 2 districts

in Basra as well as one district in each of Wassit, Mosul, Baghdad and Anbar . The results of the samples of vibrio cholera isolates from Sulymania were received from US Navy Advanced Research Unit Laboratory in Cairo. NAMRU 3 results confirmed Sulymania and CPHL results. Another 54 cholera isolates (some dating back to the 2000 out break) sent by the Central Public health Laboratory in Baghdad were received in NAMRU3 in Cairo.

96% of Iraq's cholera 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 147 laboratory confirmed cases in Erbil and 44 cases from Diala 3 laboratory confirmed and the remaining 41 diagnosed on clinical and epidemiological grounds.

Sporadic cases with definite history of travel and food consumption in Kirkuk were reported from Tikrit provinces; however, isolated cases with no epidemiological link to north Iraq were also confirmed in Mosul, Wassit, Baghdad, Anbar 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 3770 laboratory confirmed cholera cases; only 16 death were reported, most of the deceased have another serious underlying cause.

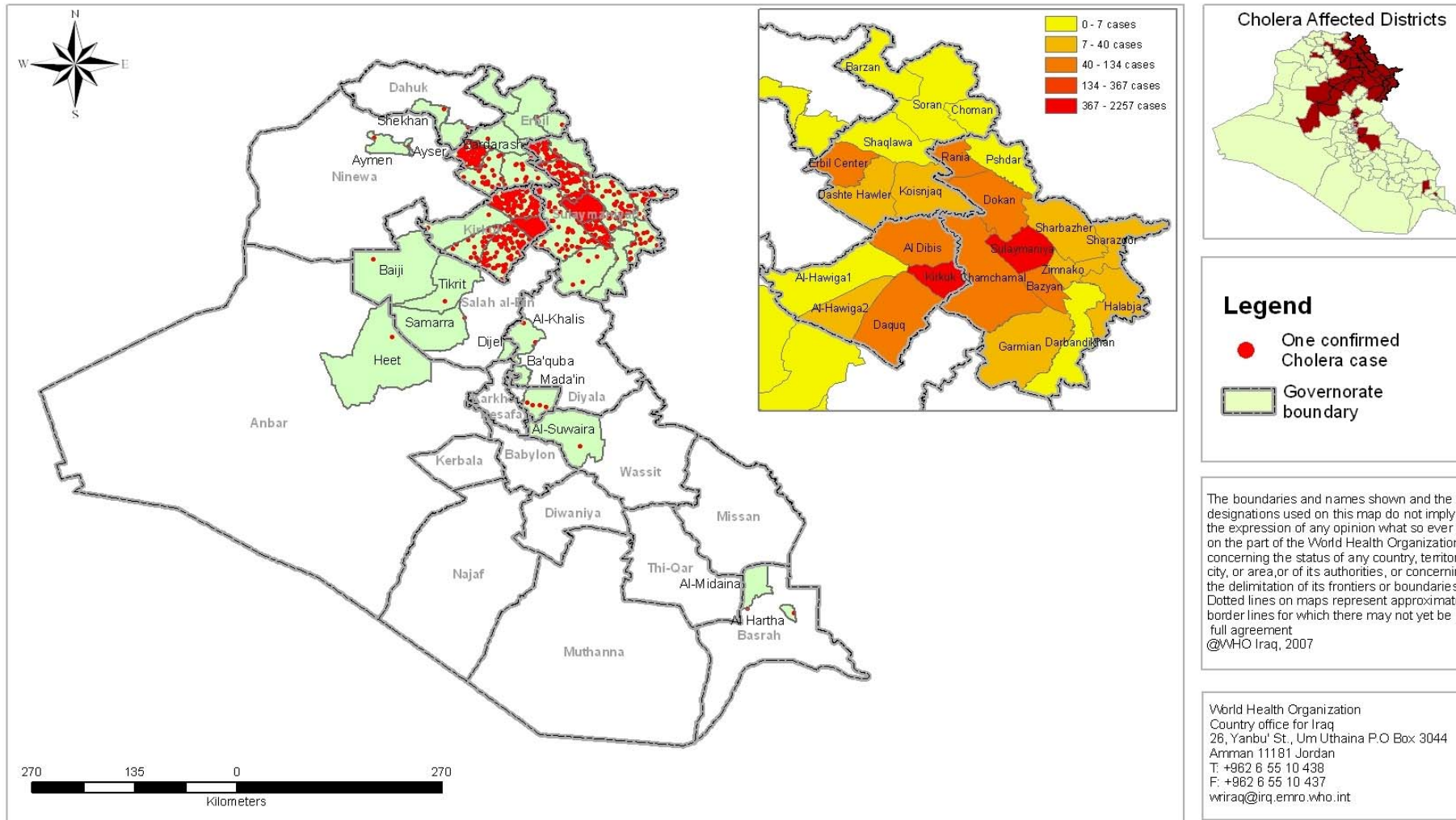
Specific control measures to contain this ongoing outbreak and limit its spread to other areas have been reinforced by the concerned governmental departments of the affected provinces with technical support from WHO. The below table-1 and maps show the distribution of confirmed cholera case by district in Iraq.

Table-1: Reported laboratory confirmed cholera Cases, Iraq, 23/08-30/10/2007

| Province | No of districts affected | Date first case reported | No of deaths reported | laboratory- confirmed case of cholera |
|-----------------|---------------------------------|---------------------------------|------------------------------|--|
| Kirkuk | 5 | 14/08/07 | 3 | 2635 |
| Sulaymaniyah | 13 | 23/08/07 | 11 | 968 |
| Erbil | 6 | 06/09/07 | 0 | 147 |
| Dahuk | 1 | 07/09/07 | 0 | 1 |
| Tikrit | 3 | 12/09/07 | 0 | 5 |
| Mosul | 3 | 15/09/07 | 0 | 3 |
| Baghdad-Resafa | 1 | 19/09/07 | 1 | 4 |
| Basra | 2 | 19/09/07 | 0 | 2 |
| Wasit | 1 | 20/09/07 | 0 | 1 |
| Anbar | 1 | 03/10/07 | 1 | 1 |
| Diala | 3 | 03/10/07 | 0 | 3 |
| Total | 39 | | 16 | 3770 |

*219 cases included in previous reports as confirmed cholera were for found to be carriers; therefore ;subtracted from the previous total for Kirkuk

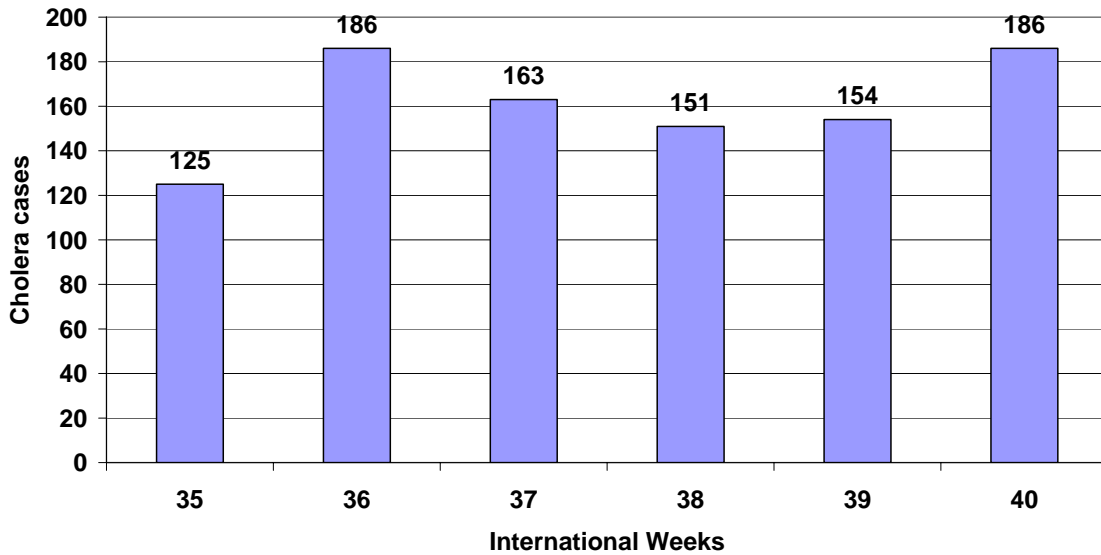
Map showing Cholera affected Districts of Iraq, as of 7 October 2007



3. PATTERN OF TRANSMISSION IN SULAYMANIYAH PROVINCE

Figure 1

Laboratory confirmed cholera by international weeks, Sulymania, 25 Aug to 06 Oct. 2007



The total number of laboratory confirmed cases up to the 6th of October reached 968. Fig 1; shows that confirmed cases peaked in week 36 and then showed a slight down trend and leveled during weeks 37 to 39 however; an increase is seen in week 40 indicating another wave of cases. The increase seen in week 40 seems to be related to reporting of more and more cases from out side Sulymania city, during the early phase of the out break (week 35) , 90% of cases were reported from Sulymania city, by week 40 only 39% of cases were reported from within the city, indicating either improved surveillance out side Sulymania city or spread of the disease to other districts out side Sulymania city with relative control inside the city.

Figure 2

Changing proportion of confirmed Cholera cases, between Sulymania city and areas outside the city by week of onset, Sulymania governorate, 26 Aug. to 6 Oct.

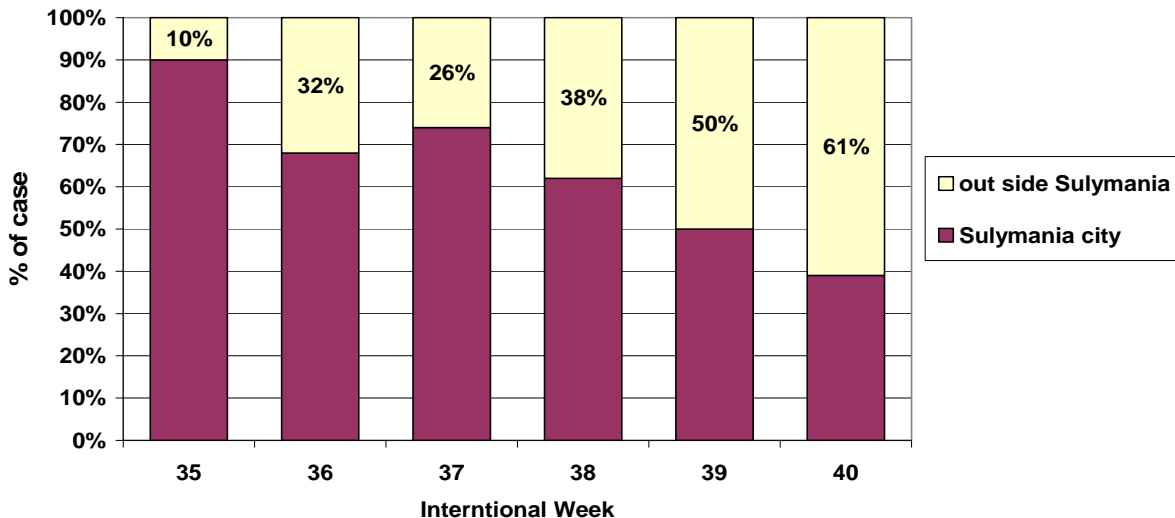


Figure 4

Diarrhoea cases admitted to the 2 main hospitals in Sulymania town by date of onset, September and October 2007

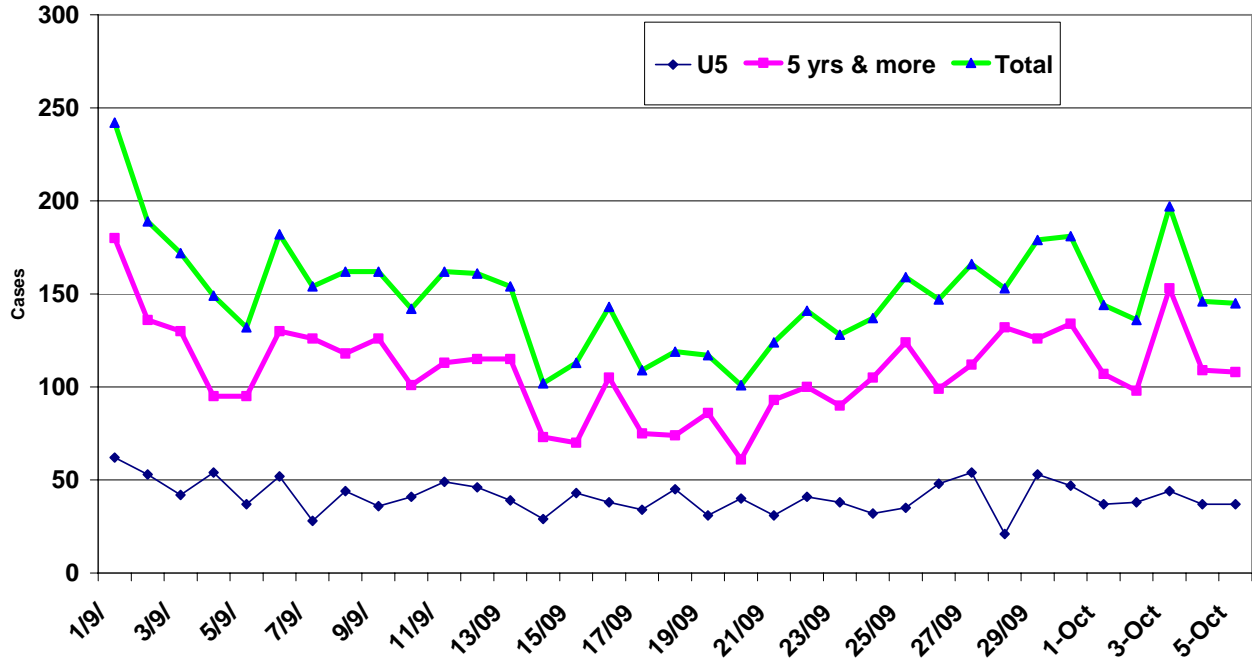


Fig 4 shows admitted diarrhea cases to the pediatric and teaching hospitals in Sulymania during the period 01/09 to 05/10/2007. It is clear that there is slight down trend the number of admitted of below 5 and above 5 in the last 3 days.

PATTERN OF TRANSMISSION IN KIRKUK PROVINCE

Figure 5

Reported diarrhoea for the period 13/08 to 30/09 by age group and international weeks, Kirkuk province

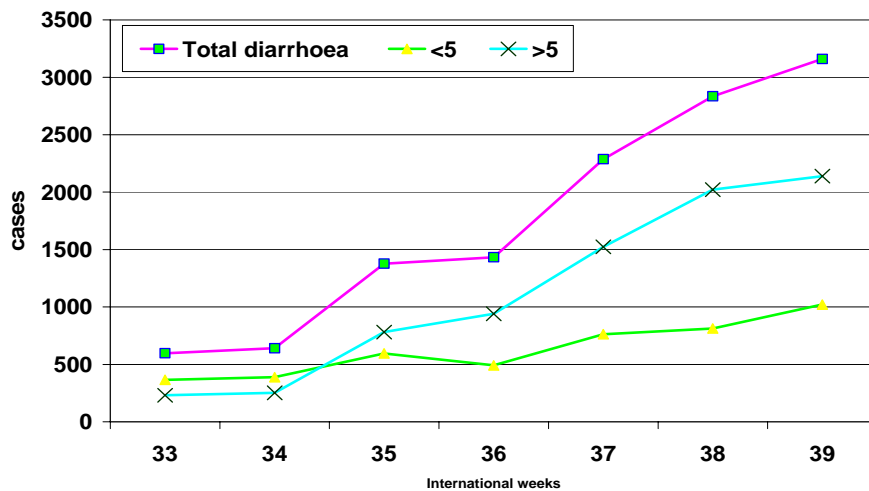


Fig. 5 shows 4 fold increases in the number of diarrhea cases among adults between week 33 and week 39 ending 30 October. As for below 5 children a 2 fold increase -in diarrhea cases- is noted during the same period. This increase which is most probably a real increase in diarrhea cases, can also be partly explained by better reporting and better community treatment seeking behavior; however, there are indications that some patients may be seeking treatment in more than one health facility and the same patient is reported as a new

case from 2 or more health facilities. We are not sure whether this sustained increase in reported diarrhea will continue during the upcoming weeks.

Figure 6

Daily confirmed cholera cases, Kirkuk province, 20/08-03/10/2007

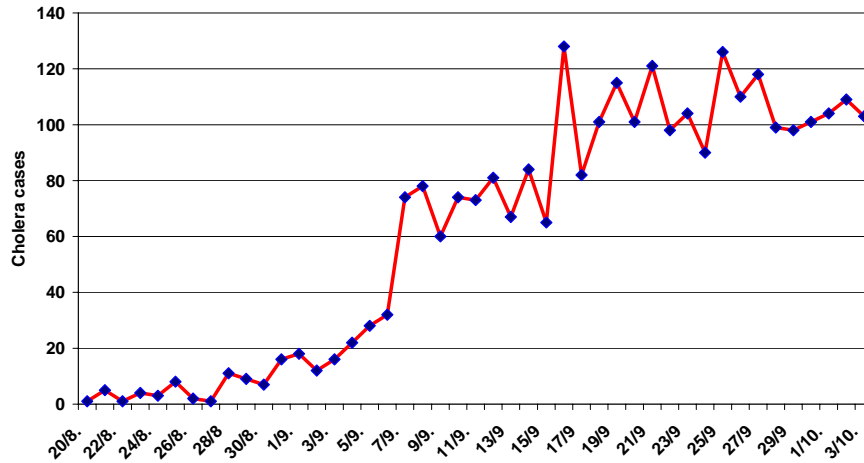


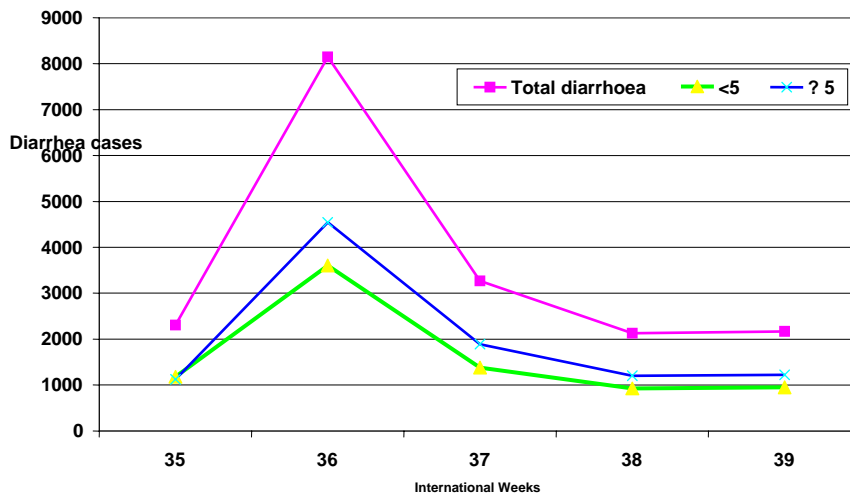
Figure 6 shows that laboratory confirmed cholera cases have peaked at the level of 120 case per day during the period 16-27/09 and then decreased and leveled at 100 cases per day during the period 28/09 to 03/10/2007.

68% of the total confirmed cholera cases reported from Iraq, are from Kirkuk province. 91% of Kirkuk province cases are from Kirkuk district. Despite DoH authority’s efforts; the daily reported diarrhea cases, confirmed cholera cases and severity of the disease seems to be on the increase. In order to coordinate the efforts of the different actors, enhance control and case ascertainment, case management and laboratory performance; HE acting Minister of Health sent MoH deputy minister Dr. Isam Mamiq and CDC/Baghdad and Central Public Health laboratory staff on a mission lead the cholera containment activities in Kirkuk.

4. PATTERN OF TRANSMISSION IN ERBIL PROVINCE

Figure 7

Diarrhoea cases by age group & international weeks, Erbil 03/09 to 30/09/2007



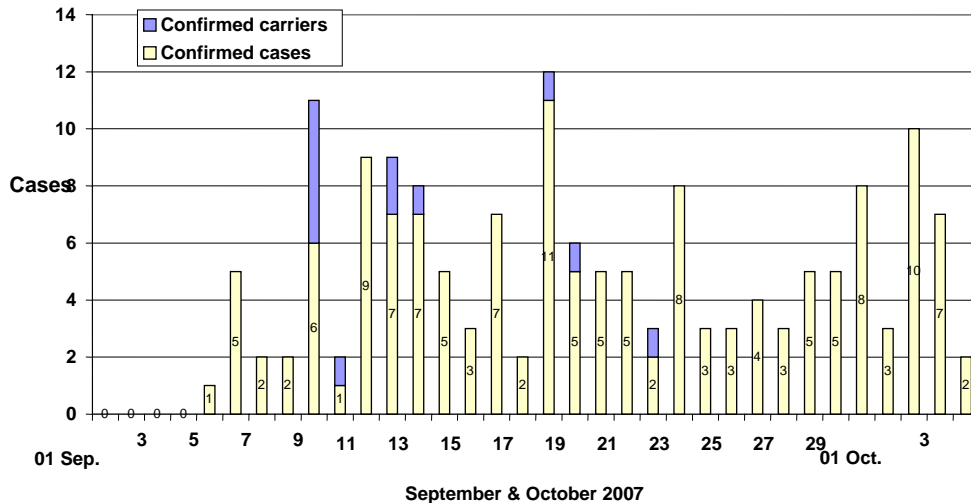
Unlike the situation in both Kirkuk and Sullymania, figure 7 above shows a definite down ward trend in reported diarrhea cases. The number of cases in week 38 and 39 is almost the same as the pre-out break figure. The very high number of cases in week 36 is most likely due to the feeling of panic following the

declaration by MoH of the occurrence of cholera in Kirkuk and Sulymania. This success in Erbil is mainly due to the fact that key departments (water and sanitation) are have recognized their important and vital role in the fight against cholera unlike the situation in Kirkuk where key departments are just watching with minimal or contribution.

Figure 8 below; show the number of confirmed V cholera by date of onset for the period 05 September to 5th of October 2007. Although it is too early to detect any pattern but the general trend shows slight down trend in the number of the daily confirmed cases.

Figure 8

Confirmed cholera cases and contacts, by date of onset, Erbil Governorate, Sep. & Oct. 2007



The infected 6 districts in Erbil governorate have reported up 5th of October 147 laboratory-confirmed case of *O1 El Tor Inaba*. The total number of cases of diarrhoeal disease reported from this province from 1st of September to 5th of October stands at 19,677 with no death; 516 stool samples were collected out of which 159 were positive; 147 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 Kirkuk, Baghdad, Basra, DIALA; Anbar, Tikrit Wassit 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 possible 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. During the period 01 to 04 October 10778 diarrhea cases were reported from the 16 no-epidemic Directorates of health; 9067 stool samples were collected from these diarrhea cases and 19 cases were found positive for vibrio cholera.

In addition to the national operational room; operation rooms have been set up in all provinces to gear up and monitor cholera preparedness activities, particularly the trend of reported diarrhoea cases; the quantity and quality of water supply, public awareness the stock position of emergency drugs and medical supplies.