

**Situation Report on Cholera Outbreak in Northern Iraq**

**Sitrep number: 4; Date of Reporting: 9<sup>th</sup> of September 2007**

**1. OVERVIEW**

As of 8<sup>th</sup> of September 2007, twelve districts of Northern Iraq have reported laboratory-confirmed cases of cholera putting over 2.8 million people exposed to public health risk from this current outbreak. Five out of eleven districts of Sulaymaniyah province, all five districts of Kirkuk province and two out of seven districts of Erbil province are now affected by this cholera outbreak in Northern Iraq. This outbreak has, so far, claimed 10 lives in Northern Iraq

So far between 23 August and 07 September 2007 in Sulaymaniyah province, the cumulative number of cases of acute watery diarrhoea reported from five out of eleven districts stands at 4840<sup>1</sup> including 9 deaths with an overall case fatality rate of 0.18%. In Sulaymaniyah province, *Vibrio cholerae* has been laboratory confirmed in 315 stool specimens out of 1,629 specimens (19%) collected so far.

While during the period from 29 July to 2 September 2007, the health authority of Kirkuk province reported a total of 3,728 cases of acute diarrhoeal disease including 1 death (CFR: 0.026%). The first index case of cholera, confirmed by laboratory test, was reported from Kirkuk province on 14 August 2007. So far, from the Kirkuk province, a total of 291 stool specimens out of 5,610 samples collected so far have tested positive for *Vibrio cholerae*. Out of these, 116 stool specimens out of 3,207 samples (4%) collected tested positive in the month of August and 175 stool specimens out of 2,403 stool specimens (7%) tested positive in the first week of September so far.

On 6<sup>th</sup> of September, the first laboratory-confirmed case of cholera was reported for the first time from one of the districts (Erbil centre) of Erbil province. Later on, laboratory confirmed case was also reported from Koisnajaq district. So far 21 stool specimens from these two districts of Erbil province have tested positive for *Vibrio cholerae* serogroup 01 Inaba signifying that cholera has now spread to three provinces of Northern Iraq (Sulaymaniyah, Kirkuk and Erbil). Consolidated figure on cumulative number of cases of acute watery diarrhea since the first index case of *Vibrio cholerae* was laboratory confirmed are still not available.



<sup>1</sup> The cumulative number is updated following receipt, today, of official report on cholera outbreak in Sulaymaniyah province from the Communicable Disease Surveillance Officer of MOH, Iraq.

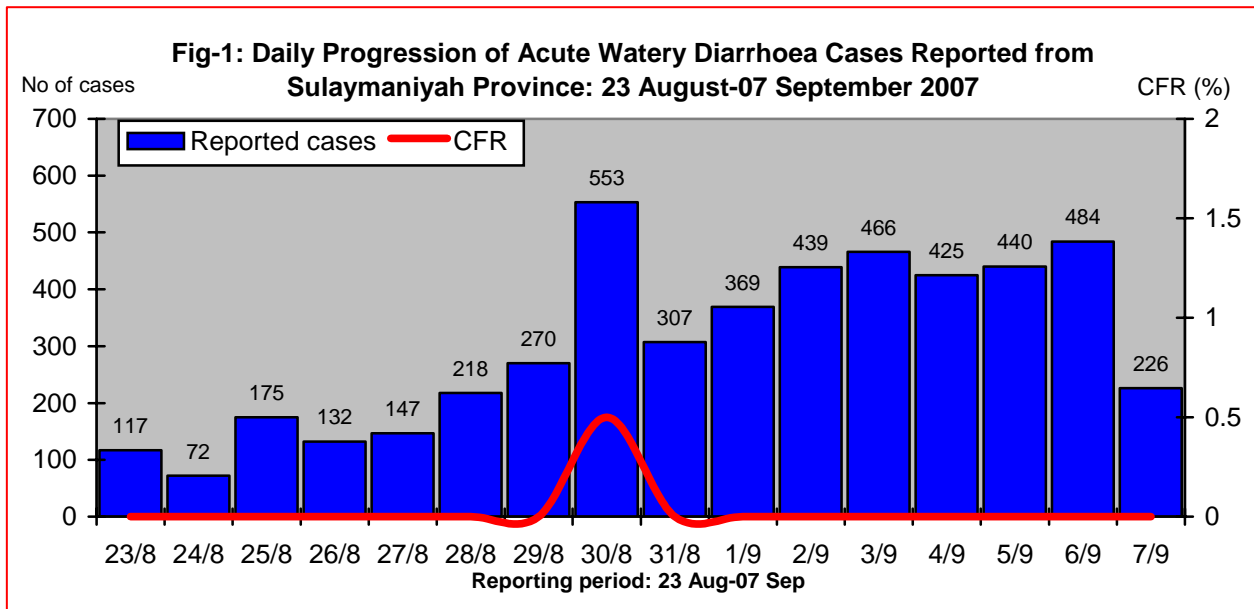
## 2. PATTERN OF TRANSMISSION IN SULAYMANIYAH PROVINCE

As of 8<sup>th</sup> of September, the outbreak, since reported for the first time on 23 August, has spread to five out of eleven districts in the province (Please see the map above) exposing over 1.1 million people living in this province to this epidemic risk. As accumulation of surveillance data from the field shows signs of improvement, the epidemiological trend of the outbreak becomes more conspicuous.

The daily progression of cases, as shown in figure-1, shows that barring some inadequacy and incompleteness in reporting, the number of cases reported from Sulaymaniyah province has been progressively increasing since the outbreak unfolded on 23 August 2007. The reported number of cases is still fluctuating from one reporting period to another and no particular trend (whether upward or downward) is evident from the epi curve. Nonetheless, improvement in reporting cases from the field in consistent manner is noticeable in recent time compared to the beginning of the outbreak.

It is also unclear (because of lack of representative data) whether the cases are increasing or declining in any particular district compared to other affected districts in the province. The epidemiological trend of the outbreak, therefore, needs to be monitored closely in order to follow its progression over time and to assess the effectiveness of specific control measures undertaken in the field for its containment. As has been reported in sitrep-3, recent information received from the field suggests that number of severe cases of dehydration reporting to health centres and hospitals are decreasing with mainly cases of mild dehydration are currently reporting to the health centres for treatment. Nevertheless, due to lack of comparable data, the epidemiological trend of the prevailing situation needs to be interpreted with caution.

The majority of cases reported from Sulaymaniyah province belong to the over 5 year age group. Comparable data on distribution of reported cases by two broad age groups (Under 5 and over 5 year age group), available since 29<sup>th</sup> of August, reveals that between 29 August and 7 September 2007, a total of 3,509 cases of acute watery diarrhoea were reported in the above 5 year age group from Sulaymaniyah province compared to only 470 cases reported during the same period in the below 5 year age group.



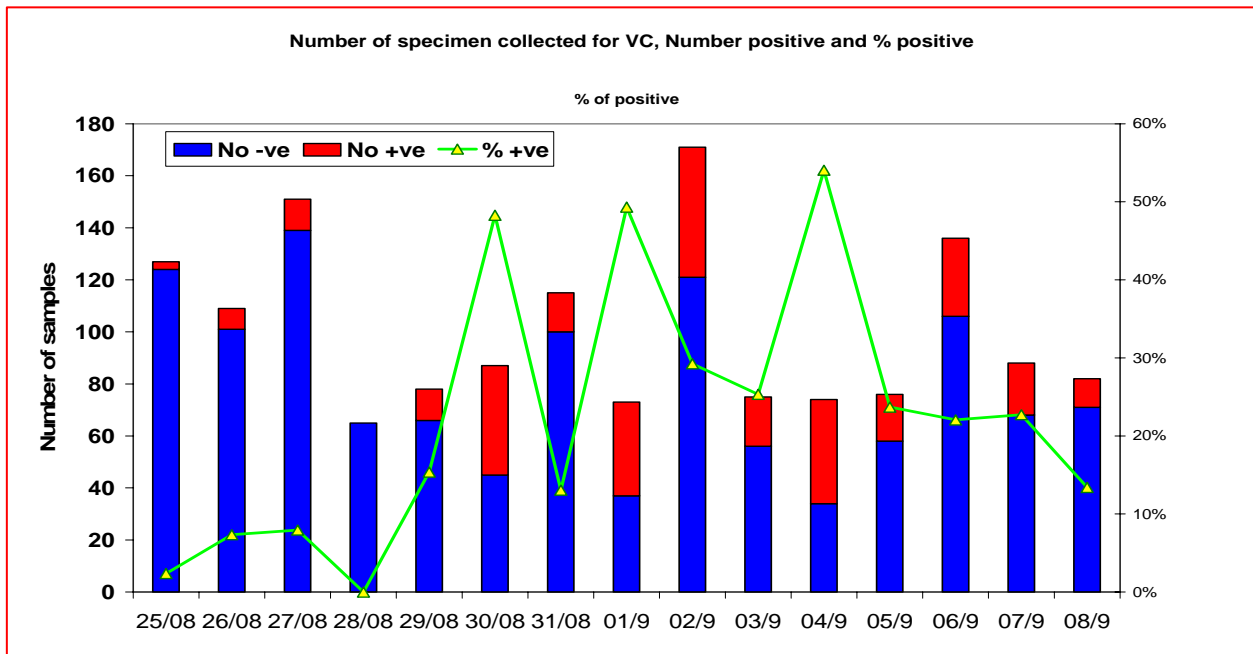
Note: The epi curve for acute watery diarrhoea reported from Sulaymaniah province has been updated following receipt of official figure (by reporting dates) from the Ministry of Health, Baghdad. Therefore, the data presented in sitrep-1 on daily progression of cases stands corrected.

All evidence suggests that the transmission of *Vibrio cholerae* is still circulating in the province and it spread to another new district (Garmian) in the province last week. A recent observation report from the field has also indicated that higher incidence of acute watery diarrhoea cases is reported amongst the people using the well water (without treatment) than either the tap water or from the well water after treatment.

### 3. POSITIVITY TREND OF *VIBRIO CHOLERAE* IN SULAYMANIYAH PROVINCE

Since the outbreak was confirmed by laboratory test, adequate number of stools samples are still being collected from the suspected cases as part of laboratory based surveillance to monitor the microbial sensitivity pattern. The strain of *Vibrio cholerae* serogroup 01 Inaba isolated from Sulaymaniyah province is shown to be sensitive to all commonly used antibiotics except Cotrimoxazole to which the strain has been found to be resistant.

Both the number and the ratio of positive samples to the total number of stool samples collected from the suspected cases are gradually decreasing in recent time (as shown in the figure below). For example, during the initial period of the outbreak (25th to 28<sup>th</sup> of August), the positivity rate of detection of *Vibrio cholerae* from the stool samples was in the range of 2 to 8 percent which increased to 25 to 50 percent during the period from 01 to 05 September and thereafter, from 06 September onwards, the positivity rate has decreased to a level between 15 to 25 percent again.



### 3. PATTERN OF TRANSMISSION IN KIRKUK PROVINCE

Data from Kirkuk province are still awaiting

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Data from Erbil province are still awaiting

### 5. URGENT NEEDS

While surveillance system for acute watery diarrhea/cholera is showing signs of improvement in general, there is an urgent need to improve it further in order to obtain better quality data for continuous risk assessment and assess the effectiveness of the control measures real time. In order to strengthen the surveillance system for acute watery diarrhea/cholera in the affected districts of Northern Iraq, two international qualified epidemiologists needs to be deployed temporarily (One in Sulaymaniyah province and the other in Kirkuk province) to assist the local health authority in improving surveillance, conducting case investigation, imparting training to the rapid response team members for outbreak verification etc.

In terms of medical and laboratory supplies, the current need is to expedite the shipment of 10 Inter Agency Diarrhoeal Disease Kits to Erbil and 5000 rapid diagnostic kits (SMART kits) to Northern Iraq

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