

**Weekly Situation Report on Diarrhoea and Cholera in Iraq**

Sitrep no. 110 for international week 41 ending 12 October 2009

**1. SUMMARY:**

- 6 cholera Laboratory confirmed cases were reported from Iraq since the beginning of 2009. 3 out of the 6 were reported from Babel, 2 from Muthana and one from Basra.
- During week 41, 19 DOHs reported cases on timely basis. 1,066 surveillance sites out of 1,113 sent the weekly diarrhoea disease report on time i.e. 96% completeness and timeliness.
- 11,547 diarrhoea cases were reported this week; 4613 (40%) stool samples were cultured for cholera organism. however none were found to be positive.
- Out of 9,709 stool specimens cultured, none ( one ) sample were positive for cholera organism.
- **2493** water samples were tested for bacteriological contamination, 337 (14%) of them were contaminated.

**2. TABLE (1) NUMBER OF DIARRHOEA CASES REPORTED, STOOL SAMPLES TESTED AND % OF DIARRHOEA SPECIMENS CULTURED FOR CHOLERA BY INTERNATIONAL WEEK**

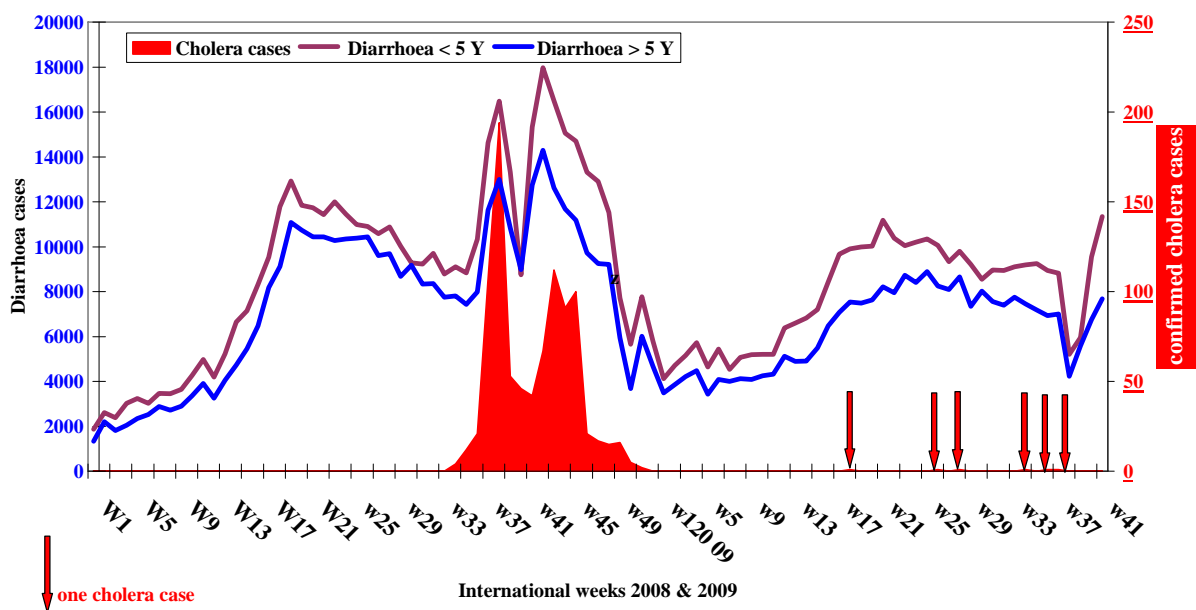
International Week	Total Diarrhea cases	Stool samples tested for cholera	% of Diarrhea cultured for VC
<b>Total for the first 21weeks</b>	<b>251205</b>	<b>150641</b>	<b>59.97%</b>
Week 22 ending 31/05/09	18339	10999	60%
Week 23 ending 07/06/09	18768	10595	56%
Week 24 ending 14/06/09	18614	10707	58%
Week 25 ending 21/06/09	19234	10299	57%
Week 26 ending 28/06/09	18316	9392	51%
Week 27 ending 05/07/09	17415	8988	52%
Week 28 ending 12/07/09	18454	8955	49%
Week 29 ending 19/07/09	16543	8884	54%
Week 30 ending 26/07/09	16561	9639	58%
Week 31 ending 02/08/09	16503	9142	55%
Week 32 ending 09/08/09	16329	8665	53%
Week 33 ending 16/08/09	16858	9336	55%
Week 34 ending 23/08/09	16631	9262	56%
Week 35 ending 30/08/09	16340	9213	56%
Week 36 ending 07/09/09	15872	9056	55%
Week 37 ending 14/09/09	15835	8634	55%
Week 38 ending 21/09/09	9438	4701	50%
Week 39 ending 28/09/09	11547	4613	40%
Week 40 ending 05/10/09	<b>16288</b>	8485	52%
Week 41 ending 12/10/09	<b>19026</b>	9709	51%
Total 2009	<b>584204</b>	<b>330241</b>	<b>57%</b>

**3. DIARRHOEA BY WEEKS AND CONFIRMED CHOLERA:**

Fig 1 Shows, Diarrhoea seems to have peaked in week 19(2008) and then started a very slow and gradual down trend up to week 33, the reason for this slow down trend is not clear (may be reporting fatigue), however, coinciding with the reporting of the first suspect cholera case in Missan, the number of reported DIARRHOEA started shooting up. This sudden increase in DIARRHEA that came in 2 waves peaking in weeks 38 and 42 coincided perfectly with the cholera epidemic curve. In week 44 a steep drop in the number of reported diarrhoea and cholera is noted which may be due to drop in atmospheric temperature and

improvement of power and water supplies. Cholera cases started being reported in week 33 and increased to reach the first peak of 96 cases in week 38 this was followed by slight drop in week 39, another wave of cases mainly from Diwanya resulted in another peak (161 cases) in week 42. The last cholera cases were reported in week 51. in 2009 only six sporadic cholera cases were reported up to now; at the rate of one case; in weeks 18, 26, 28, 34, 36 and 37 of the year 2009. Since the beginning of 2009 the weekly reported diarrhea cases among below 5 and above 5 populations returned to the weekly average reported during the first week 24 weeks of 2008... The weekly reported diarrhea cases seems to be a sensitive indicator of cholera outbreaks which have proved valuable in detecting sporadic cholera cases. Since week 7 there is a continuous but gradual increase in the number of diarrhea cases in all age group, the increase seems to follow the rise in atmospheric temperature., in the last 3 weeks ( 37, 38 and 39) there was a sudden drop in diarrhea number of cases; we have no plausible explanation except slowness of reporting. However in the last 2 weeks ( 40 and 41) diarrhea reporting cases went back to the usual average for the season and the trend indicates that the cholera season seems to be over.

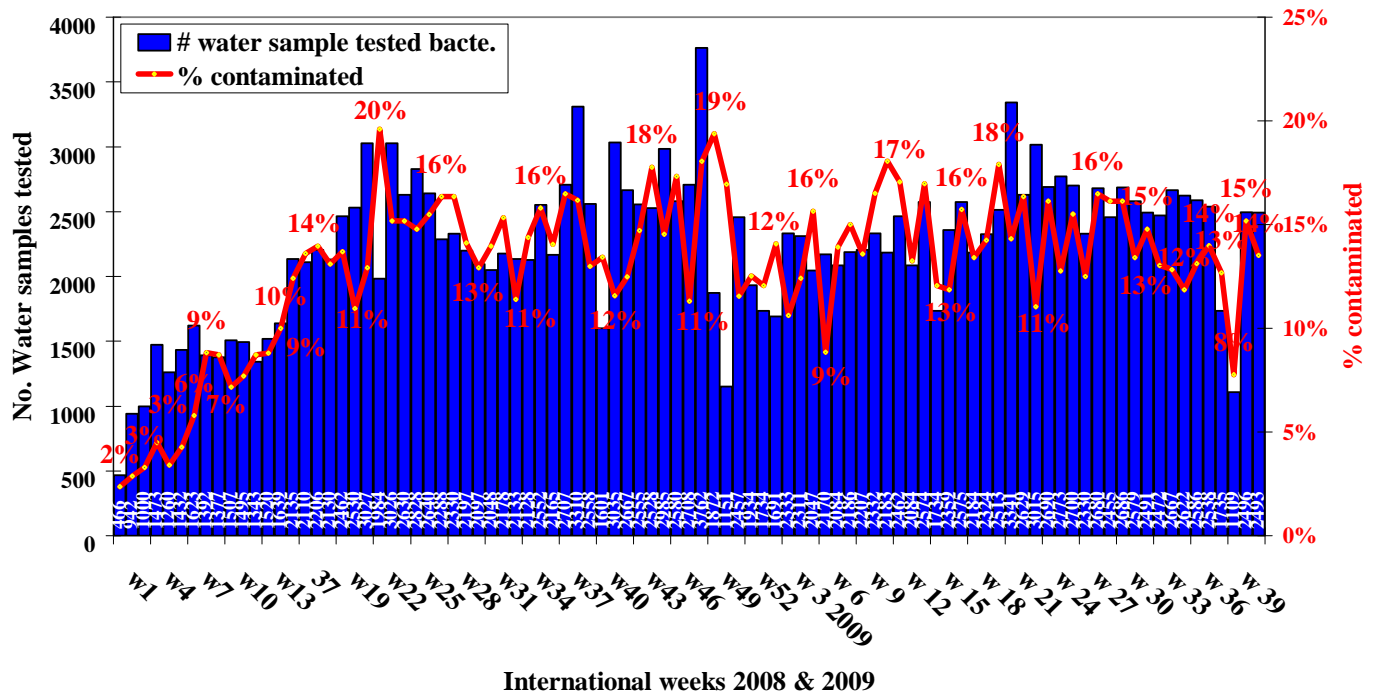
**Fig (1) Diarrhoea and laboratory confirmed cholera by international week, 2008, and up to week 41, 2009, Iraq**



#### 4.CUMULATIVE SITUATION FOR THE YEAR 2009:

- 19 Directorates of Health reported 584,204 cases of Diarrhoea during the first 41 weeks of this year. Only 6 cholera cases were isolated and tested from 330,241 stool samples tested.
- 98089 water samples have been tested for the presence of faecal contaminants and 14,043 water samples (14%) were found to be contaminated with coliform bacteria.
- As shown in fig. (2) The percentage of contaminated water samples during the first 41 weeks of 2009 is still alarming and ranges between 8 to 18%. The methods for water collection and testing needs to be standardized and a system for laboratory quality control should be established within MoH and between other line ministries.

**Fig. 2 Number of water samples tested for fecal coliforms, % that failed the test, Iraq, 2008 and first 41 weeks of 2009**



### 5. WATER CONTAMINATION

Fig (3) shows the percentage of water samples contaminated by coliform bacteria during the first 41 weeks of 2009. It is clear that the contamination is above average in the provinces of, Ninewa, Erbil, Thi-Qar, Anbar, Salahadin, Kirkuk, and Basra. The water contamination by coliform bacteria in Diyala may not reflect the reality, thus CPHL and NRI should immediately review the situation to understand the reason for this growth under estimation of water contamination. As mentioned earlier the method for water collection and testing needs to be standardized and a system for laboratory quality control in laboratories needs to be established within MoH and between other line ministries

Fig (3) % water samples contaminated by coliform bacteria, Iraq, by province, first 41 weeks of 2009

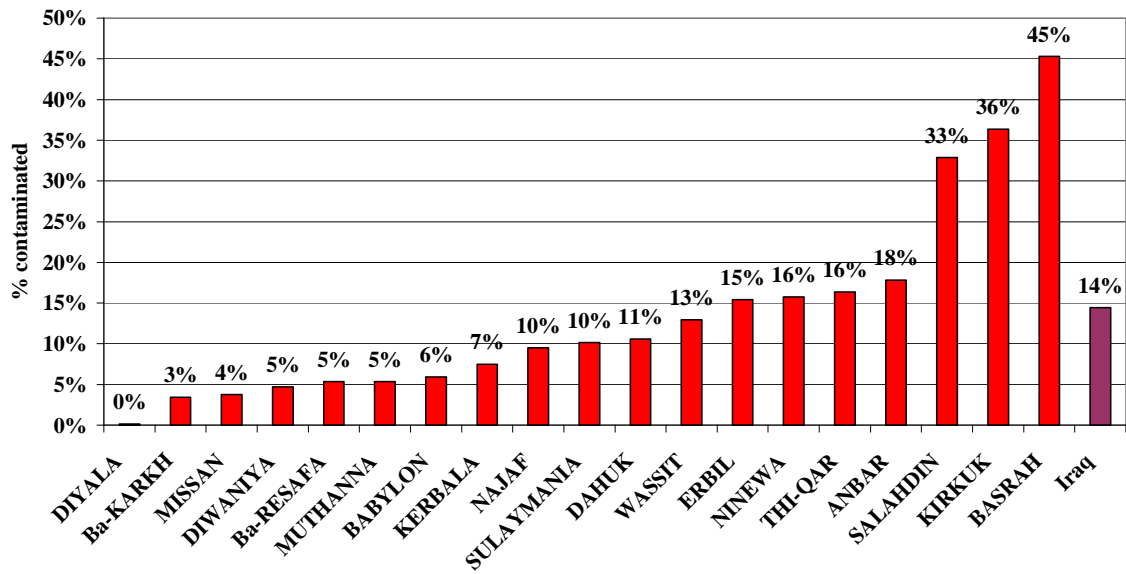


chart 4 Reported Diarrhoea cases, first 41 weeks, Iraq, 2008 & 2009

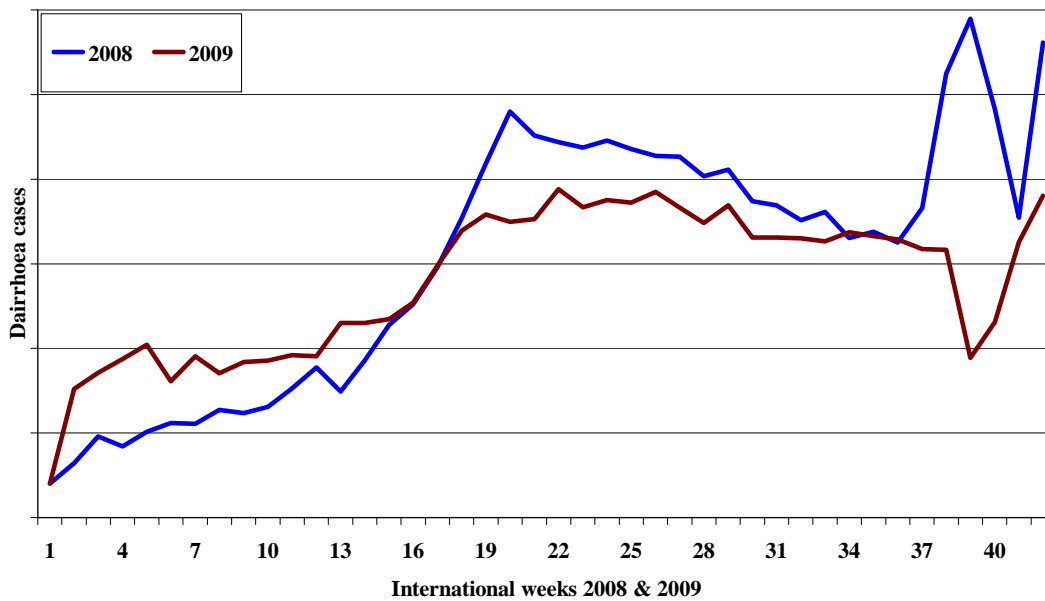


Fig. 4 indicates clearly better reporting of diarrhoea during 2009 compared to 2008. However, as of week 14 diarrhoea cases for 2008, started to rise sharply and crossed over 2009 line; this steep increase may reflect and increase in diarrhoea due to cholera cases that were missed. Weeks 36-39 show a sudden sharp increase in diarrhoea cases for 2008 and a sudden sharp decrease in diarrhoea cases for the same period in 2009. The sharp increase in 2008 coincides with the first peak of cholera shown in fig (1). But the sudden sharp drop in diarrhoea cases in weeks 36-39 needs a more careful look but may reflect reporting fatigue or diarrhoea surveillance relaxation following what seems to be the end of the cholera season. In the last 2 weeks reported diarrhoea cases went suddenly back to the average for the season.