

## Weekly AFP surveillance weekly report Up to week 45 ending 11 November 2007

### 1. Break Through in Anbar DoH:

Next advocacy meeting and training on AFP and measles surveillance will be conducted in Falluja. Dr. Rajeh and Dr. Yosra have completed the coordination meetings and discussions with Falluja district director and hospital director regarding the venue and participants.

2 AFP cases were reported from Ramadi maternity and pediatric hospital, case investigation forms and stools for the first case and for the contacts of the second case (died before collection of stools) arrived to the NPL.

### 2. Table (1) AFP cases with date of onset more than 90 days and still pending follow up:

This week we have 3 cases, 2 from Babil IRQ BA 07009 and IRQ BA 07 010 and one from Tikrit IRQ SL 07 008 that passed 90 days and still pending follow up.

### 3. Non-polio entero-virus isolation rate (Target 10%)

The non-polio entero-viruses were isolated from 13% of specimen which is acceptable compared to previous years where this rate was consistently above 15%.

Fig (1) NPEV isolation rate 1999-2007\*  
for week 45 ending 11 November

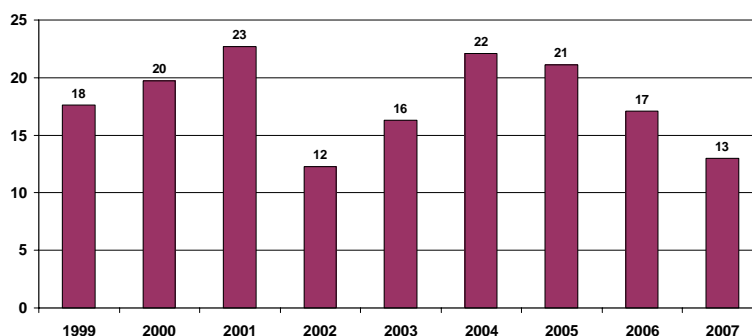


Fig (2) NPEV isolation rate by province, 2007\*  
up to week 45 ending 11 November

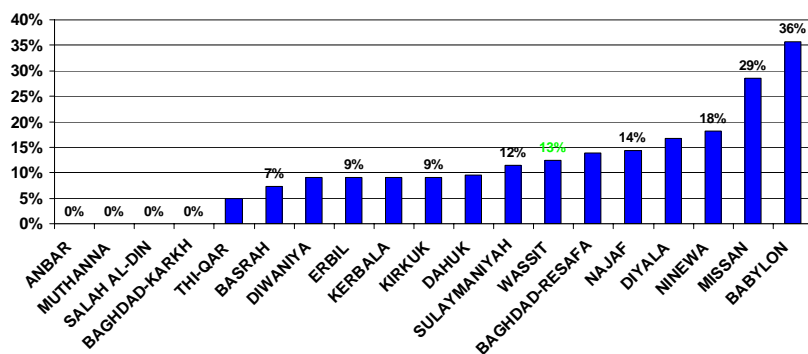
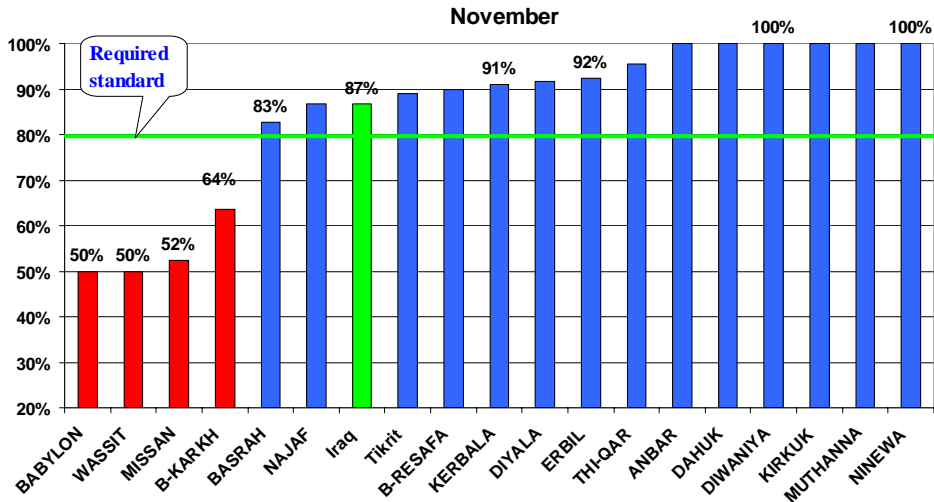


Fig (2) show NPEV isolation rate by province in the first 45 weeks of 2007. Enteroviruses were isolated from stool specimens sent from all DoHs except Muthana, Tikrit and Baghdad-Kerkh. Isolation of enterovirus is an excellent indication that stools are reaching the NPL in a condition that will permit the isolation of poliovirus if it is there. Strange enough That the 3 DoHs with zero enterovirus isolation are the nearest to NPL, I hope Dr. Hashim Jameel will exert some effort in ensuring that the collection, storage and transport is done according to the standard recommendation. A similar problem was noted with cholera isolates recently, it is an indication that both hospital and

public health laboratory staff needs more orientation on collection, storage and transport of specimens.

Fig. (3) AFP cases investigated within 48 hours up to week 45 ending 11



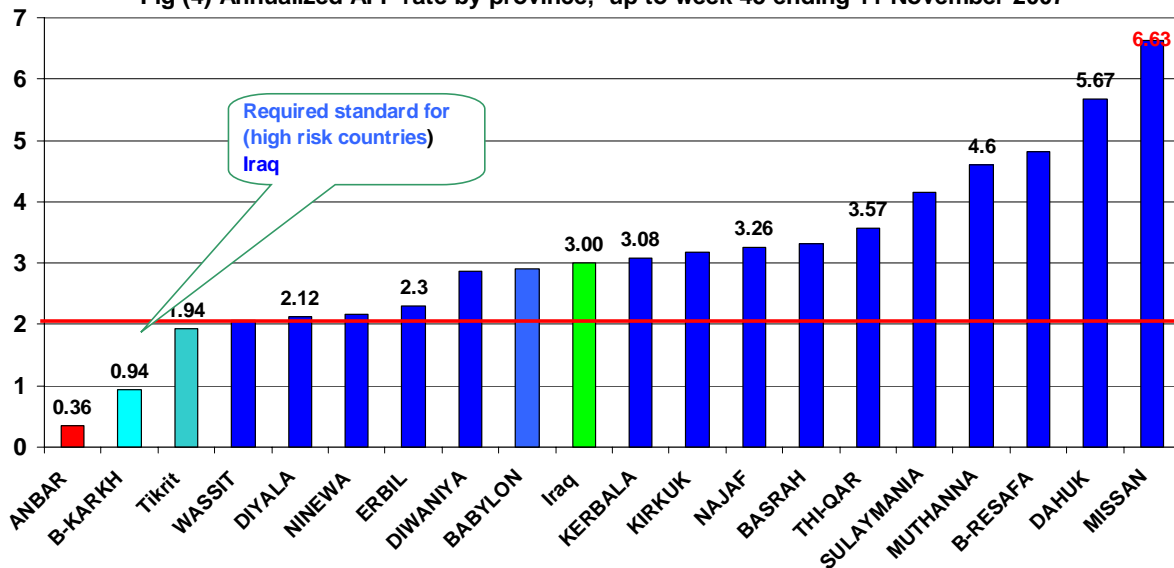
**3. Percent of AFP cases with period between date of notification and date of investigation ≤ 2 days (TARGET = 80%)**

87% of cases were investigated within 48 hours of notification during the first 45 weeks of 2007 compared to 86% last week and 89% in 2006. (Fig 3) above shows the % of cases timely Investigated by province. It is clear that Babil, Wasit, Missan and Baghdad-Kerkh with 50%,50%, 52% and 64% of cases timely investigated need to exert more effort to ensure the timely investigation of cases.

**4. Annualized AFP (Fig. 4):**

During the first 45 weeks of 2007, 345 AFP cases were reported all DoHs. The annualized AFP rate of  $\Rightarrow$  2 per 100,000 under 15 year population {please consult the attached AFP rate, Fig (4)} have been attained for the country as a whole and another 16 DoHs. The most important development in this weeks is that Tikrit crossed below the critical 2/100,000 level. At the same time, Ninewah improved its position above the border line while B. Kerkh need to exert more effort in advocacy and active surveillance to cross the standard 2 cases/100000 population barrier.

Fig (4) Annualized AFP rate by province, up to week 45 ending 11 November 2007



The annualized AFP rate is still below the expected especially in:

- Baghdad Kerkh is expected to report 23 AFP cases but reported only 11 cases.
- Anabar is expected to report 11 and reported only 2

- Tikrit and Wassit reported what is expected, Dr. Hashim need to conduct more advocacy meetings

**Table (2) Expected and reported AFP cases by province up to week 44**

Province	Reported cases	Expected cases
ANBAR	2	11
B-KARKH	11	23
Tikrit	9	9
Wassit	8	8
BABYLON	18	12
NINEWA	25	23
DIYALA	12	11
ERBIL	13	11
BASRAH	29	17
DAHUK	21	7
DIWANIYA	11	8
KERBALA	11	7
KIRKUK	12	7
MISSAN	21	6
MUTHANNA	10	4
NAJAF	15	9
B-RESAFA	69	28
SULAYMANIA	26	12
THI-QAR	22	12
Iraq	345	225

**5. Reported monthly AFP:**

**Table (3) Monthly reported AFP cases, 2004 -2007 up to week 45**

Month	2004	2005	2006	2007
January	25	31	40	26
February	28	21	42	21
March	27	29	24	32
April	25	30	51	50
May	19	28	49	33
June	20	39	27	45
July	36	31	23	32
August	14	25	20	29
September	32	20	22	41
October	19	18	23	31
November	6	3	5	5
Total	251	275	326	345

The number of AFP cases reported up to the end of week 45 year 2007 (345 cases) is more than what was reported in all previous years.

**6. Over due follow up**

**Table (4) OVERDUE FOLLOW-UP RESULTS.**

PROVINCE	Expect FUP	Late FUP
BABYLON	3	2
BAGHDAD-KARKH	3	0
BAGHDAD-RESAFA	3	0
DIYALA	1	0
ERBIL	1	0
KERBALA	1	0

KIRKUK	2	0
MISSAN	1	0
MUTHANNA	1	0
NAJAF	3	0
NINEWA	4	0
SALAH AL-DIN	1	1
SULAYMANIYAH	4	0
THI-QAR	2	0
Grand Total	30	3

Late FUP = 76+ days since onset and no follow-up

3 cases are pending FUP for more than 76 days since DONSET. As reflected in the above table; these cases are from Babil; and Salah Al-Din.

Expect FUP = 55+ days since onset and no follow-up. AFP surveillance officers are expected to arrange for 60 days follow up during this week and make sure that NPL results are received.

#### 7. Stool adequacy,

Chart 5 below show that all DoHs that reported cases during the months of January-October have achieved the standard target of  $\geq 80\%$  except; Anbar (50%) Dahuk (67%) There is good progress in stool adequacy this week in Diala. Please review map at end of document.

**Chart (5) % AFP cases with 2 stool apецimens collected within 14 days of onset and at least 48 hours apart up to week 45**

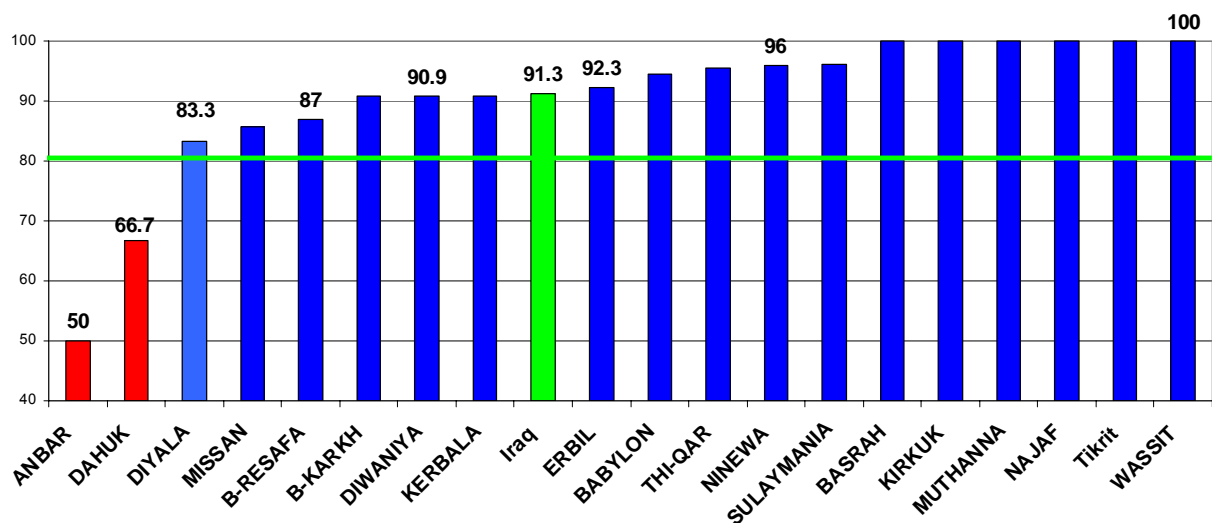
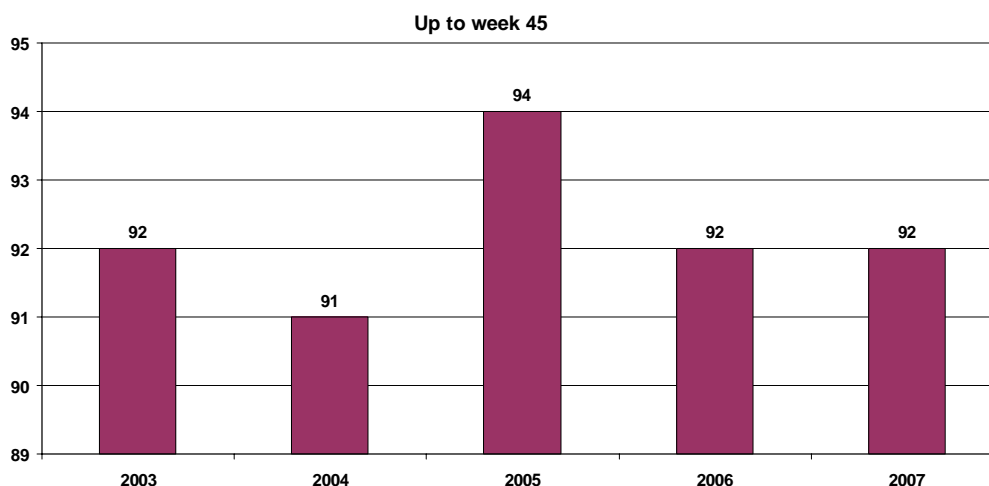


Chart (6) Stool adequacy, Iraq, 2003-2007



### 8. Time between collection of first stool and receipt in the NPL

Table (5) below and chart 7 & 8 show the period in days between receipt of stool specimens in NPL and collection of first stools. As shown in chart 7 only Kerbala, Thi Qar, Erbil and Anbar attained the required standard of sending at least 80% of specimen to the NPL within 3 days of collection of first stool specimens. The distribution of these DoHs ; Erbil in the extreme North, Thi Qar in the south and Karbala in the center clearly indicates that the security is not the only limiting factor. Chart 8 shows that 7 DoHs failed to send their stool specimens to NPL within 7 days of collection of first stools.

### 9. Table (5) Time between receipt of stool specimens in NPL and collection of first stool

PROVINCE	Time in days				Total cases	% reaching NPL within 3	% reaching NPL within 7
	<= 3	>=4 and <=7	>= 8 and <= 14	> 14			
DAHUK	0	6	8	7	21	0%	29%
MUTHANNA	1	4	2	3	10	10%	50%
SALAH AL-DIN	1	4	4	0	9	11%	56%
BABYLON	4	4	8	2	18	22%	44%
WASSIT	2	5	1	0	8	25%	88%
DIYALA	4	4	4	0	12	33%	67%
SULAYMANIYAH	9	16	1	0	26	35%	96%
NINEWA	10	7	7	0	24	42%	71%
MISSAN	9	5	6	1	21	43%	67%
BAGHDAD-KARKH	5	3	2	0	10	50%	80%
<b>Iraq</b>	<b>184</b>	<b>89</b>	<b>53</b>	<b>14</b>	<b>340</b>	<b>54%</b>	<b>80%</b>
DIWANIYA	7	3	0	1	11	64%	91%
KIRKUK	8	3	1	0	12	67%	92%
BAGHDAD-RESAFA	49	17	2	0	68	72%	97%
NAJAF	11	1	2	0	14	79%	86%
BASRAH	23	2	4	0	29	79%	86%
KERBALA	9	2	0	0	11	82%	100%
ERBIL	11	2	0	0	13	85%	100%
THI-QAR	20	1	1	0	22	91%	95%
ANBAR	1	0	0	0	1	100%	100%

Chart (7) % stool specimens received in NPL within 3 days of first stool collection first 45 weeks

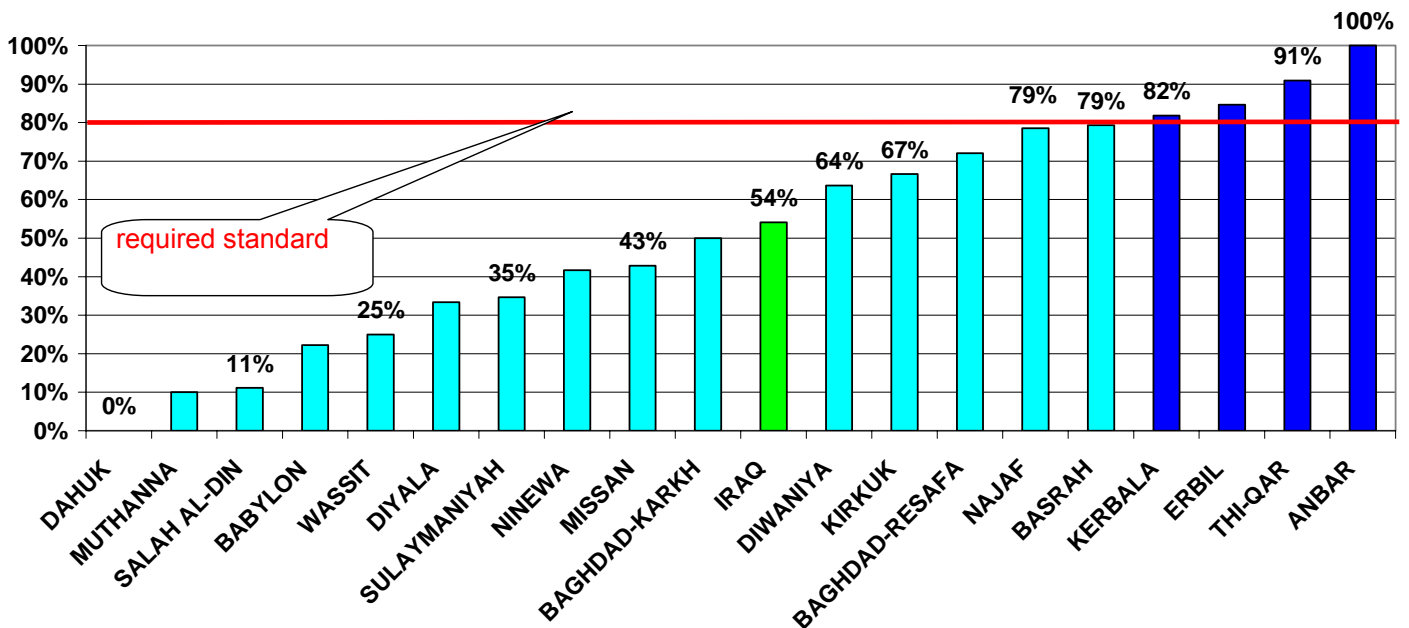
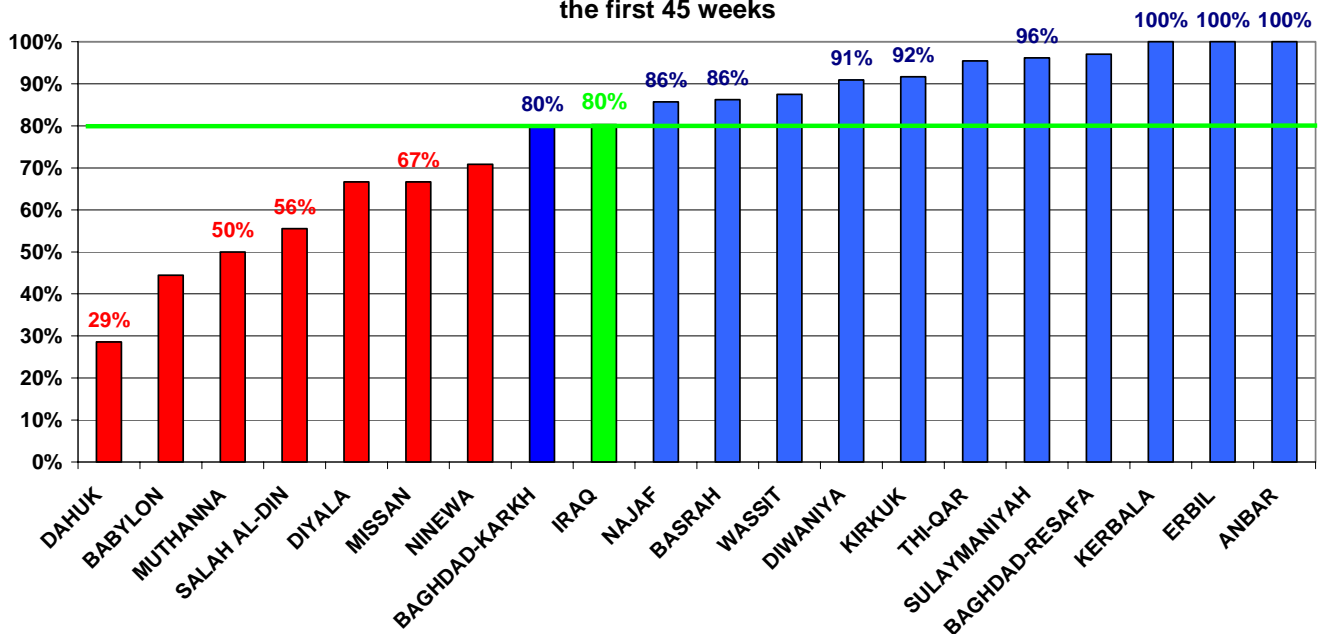


Chart (8) % stool specimens received in NPL within 7 days of first stool collection in the first 45 weeks



## 10. The cholera out break:

### Sitrep no. 35, week 46, 15 November 2007

1. NEW LABORATORY-CONFIRMED CHOLERA CASES REPORTED DURING 12–15 NOVEMBER 2007 (WEEK 46):
  - a. Kirkuk: 1 (of 90 samples tested) 1%
  - b. Sulaymaniyah: 1 ( of 19 samples tested) 5 %
  - c. Erbil: 4 (of 127 samples tested) 3%
  - d. Baghdad: 21 (number of samples tested not reported) 1 death due to confirmed cholera and another due to suspected cholera.
  - e. Ninawa: 1(number of samples tested not reported) %N/A, 1 deathTotal new cases: 28 (75% of new cases are reported from Baghdad)

### 2. OVERVIEW

The most important development during 12-15 November is the cholera out break in Al Hanan Home for the mentally retarded in Baghdad Kerkh. 17 out of the 93 inmates developed severe diarrhea and vomiting one 13 year old child died before reaching hospital and another 12 year old child died after reaching hospital of acute renal failure due to dehydration.

The stool specimen from one of the deceased and another 4 hospitalized inmates was found positive for vibrio cholera organism. All the 17 affected children were using the same toilet which was blocked and under maintenance.

Specimens collected from the healthy inmates and the institution's staff were found negative for cholera organism, except for the stool specimen for one of the female staff directly caring for children; who was found to be a healthy carrier for the cholera organism. It is not clear whether this staff infected the children, or, the children infected her or she got the infection directly from the flooded toilets.

The remaining 76 inmates, age ranging between 5-40 years, were in an acceptable health status, clean new clothes, bed sheets and blankets were provided to the children. The institution is now providing inmates with bottled water for drinking.

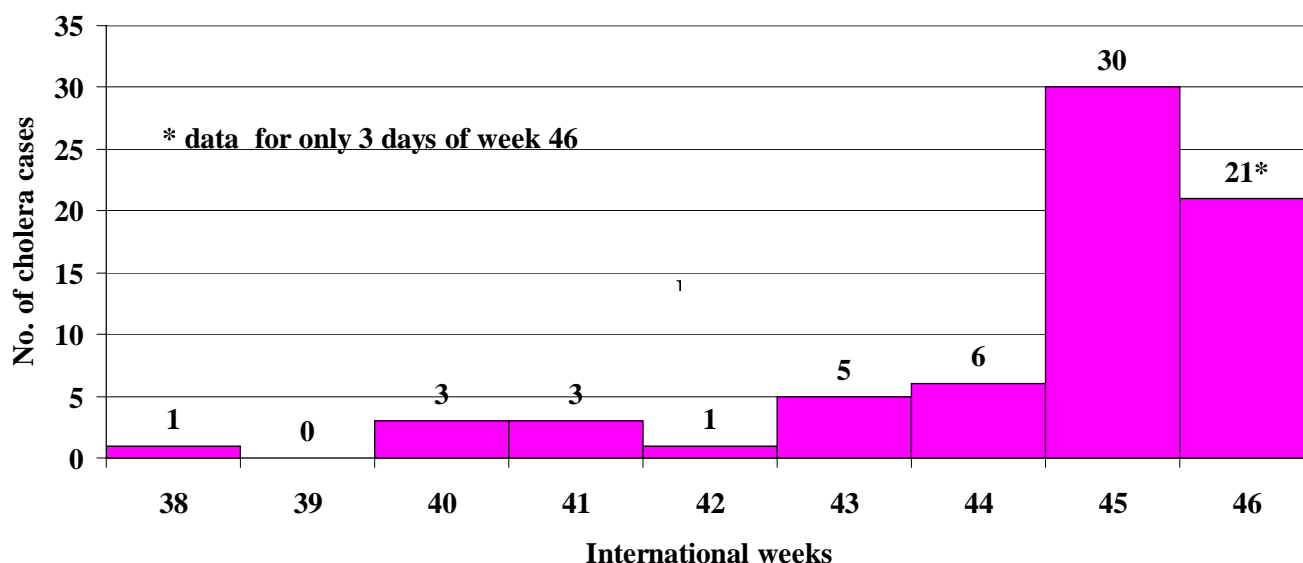
Health service to inmates is provided through daily visits (during daytime working hours) by the near by hospital and health center. It is clear that the 2 death could have been avoided if there was a 24 hours clinic for the inmates (all are mentally retarded and therefore, are in need of close and continuous medical and health care). It was agreed that WHO will support the DoH to establishment a 24 hours clinic inside this institution.

According to WHO team that visited the institution; the building is in good shape, level of cleanliness of wards and kitchen is acceptable. However, the water supply and sewage disposal system were old and leaking with visible cross connections between drinking water and sewage and both are in vital need immediate maintenance.

Another important development during the last 3 days is the steep increase in the number of cholera cases in Baghdad-Rasafa and the spread of cholera to Baghdad- Karakh.

Out of the 28 new cholera cases reported during the first 3 days of week 46, 21 (75%) were reported from Baghdad. The cumulative number of laboratory-confirmed cases reported from Baghdad increased by 161 %, from 49 to 70.

**Confirmed cholera cases in Baghdad for the period 19/09-14/11/2007, by international weeks up to week 45 ending 11/11 and the first 3 days of week 46**



75% of new laboratory-confirmed cholera cases during the first 3 days of week 45 were reported mainly from the high-risk areas in the 5 most disadvantaged districts in Baghdad (Sadder City, Me'dain, Baladiat; Al-Resafa and Karakh). Data provided from Baghdad is neither complete nor timely, therefore, reported cholera cases may underestimate the real situation. What is reported from Baghdad seems to be the tip of the iceberg.

While the cholera outbreak is moving quickly towards Baghdad, WHO and UNICEF are running short of the needed resources to improve case reporting, management and containment activities in all affected areas, especially in Baghdad. MoH/WHO/UNICEF efforts in Erbil, Kirkuk and Sulaymaniyah seem to halt the progress of the epidemic in these 3 provinces.

As of 15 November 2007 (week 46), 46 districts, 28 in northern Iraq and 18 in the centre and South have reported laboratory-confirmed cases of cholera. In northern Iraq, 13 out of the 14 districts of Sulaymaniyah governorate, all 5 districts of Kirkuk governorate, 6 of 7 districts of Erbil governorate, 4 districts in Dahuk. As for the centre and South, the affected districts are: 5 districts in Baghdad, 3 districts in each of Tikrit, Mosul and Diyala, 2 districts in Basra as well as one district in each of

Wassit and Anbar. The results of the samples of vibrio cholerae isolates from Sulaymaniyah, Kirkuk, Erbil and Central Public Health Laboratory in Baghdad were received by the U.S. Naval Medical Research Unit No. 3 (NAMRU-3) laboratory, Cairo. NAMRU-

3-, Sulaymaniyah- and Central Public Health Laboratory (CPHL) results all confirmed that the outbreak was caused by vibrio cholerae O1, biotype El Tor Inaba, sensitive to commonly used antibiotics. Less frequently, v. cholerae, O1, biotype El Tor Ogawa also was detected. The isolated strains were found resistant to trimethoprim-cotrimoxazole. The molecular structure of the cholera isolates from the recent outbreak closely resemble the molecular structure of 1999 and 2000 isolates; which confirms that cholera is endemic in Iraq with epidemic exacerbation

98% of Iraq's cholera cases were reported from Kirkuk, Sulaymaniyah and Erbil, northern Iraq. Sporadic cases with definite history of travel and food consumption in Kirkuk were reported from Tikrit province, however, isolated cases with no epidemiological link to northern Iraq were also confirmed in Mosul, Wassit, Baghdad, Anbar and Basra.

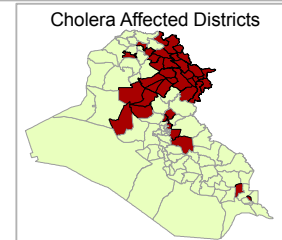
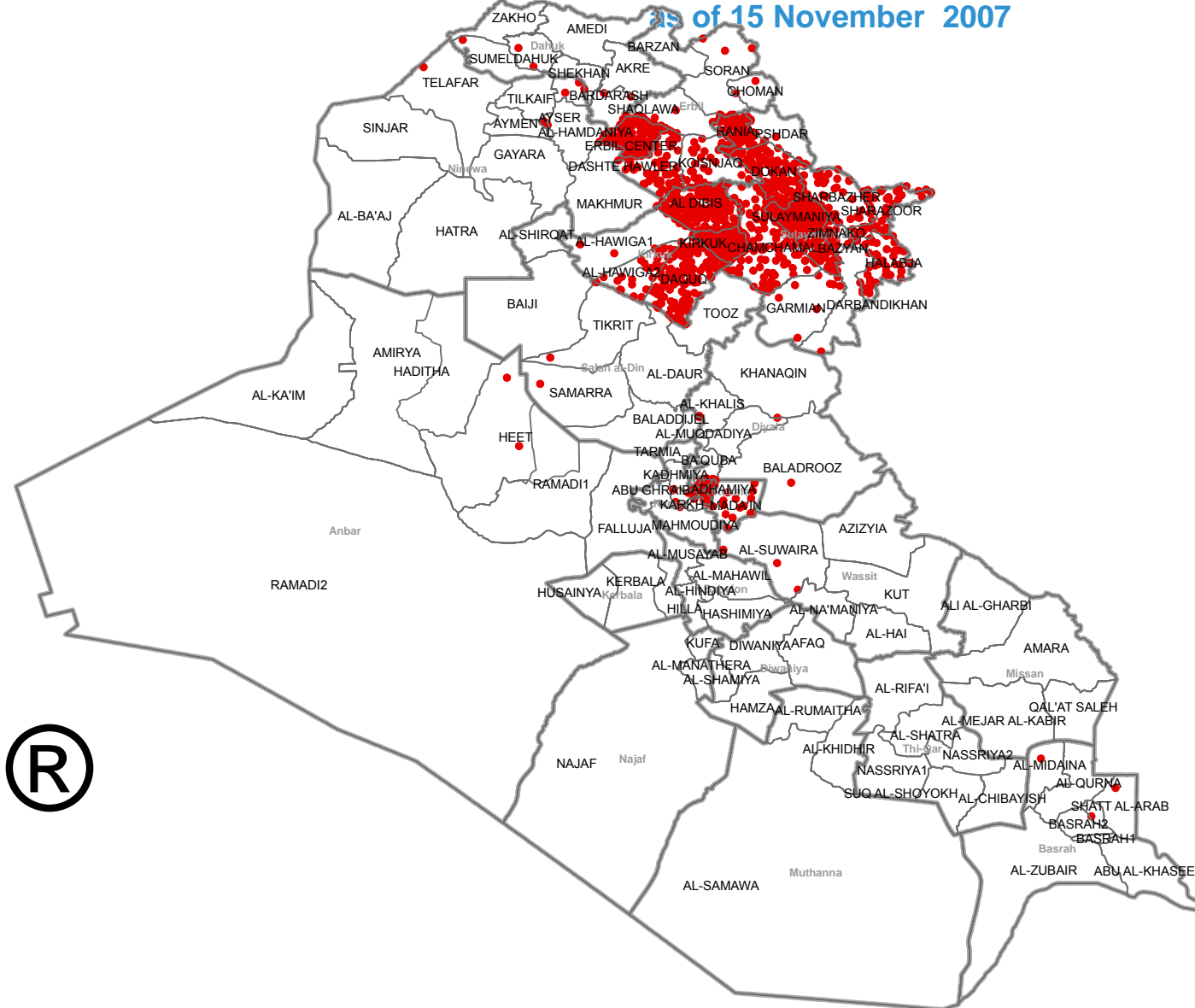
One of the important features in this outbreak is that most of the cases seen have mild to moderate signs and symptoms. The traditional signs and symptoms of severe dehydrating diarrhoea were seen only very occasionally among 4,575 cumulative laboratory-confirmed cholera cases; 23 deaths were reported, most of the deceased had other, serious underlying morbidity. 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. In non-epidemic provinces, during the period 14 August–15 November 2007, 73 cholera cases were discovered.

**Table: Laboratory-confirmed cholera cases—Iraq, 14/08–15/11/2007**

Province	No. districts affected	Date first case reported	Date most recent case reported	No. deaths reported	No. laboratory-confirmed cholera cases
Kirkuk	5	14/08/2007	13/11/2007	5	3005
Sulaymaniyah	13	23/08/2007	10/11/2007	14	1236
Erbil	6	05/09/2007	15/11/2007	0	254
Dahuk	4	07/09/2007	28/10/2007	0	6
Tikrit	3	12/09/2007	7/10/2007	0	5
Ninawa	3	15/09/2007	15/11/2007	2	7
Baghdad	4	19/09/2007	14/11/2007	3*	70
Basra	2	19/09/2007	2/10/2007	0	2
Wasit	1	20/09/2007	20/09/2007	0	3
Anbar	1	03/10/2007	3/10/2007	1	2
Diyala	3	03/10/2007	3/10/2007	0	6
Total	45			25	4596

\* 2 confirmed cholera and one suspect cholera

# Map showing Cholera affected Districts of Iraq, as of 15 November 2007



**Legend**

- One confirmed Cholera case
- Governorate boundary

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