



POLIOMYELITIS ERADICATION PROGRESS REPORT



2005 Annual Report

Introductory Remarks

In 1988 the World Health Assembly launched the Global Polio Eradication Initiative, paving the way for one of history's largest public-private health campaigns. Member countries of the World Health Organization continue to support a process of positive change by implementing targeted measures to ensure an imminent global effacement of poliomyelitis.

This report reflects the significant progress and efforts achieved by the Ministry of Health in Iraq, albeit the various hurdles encountered and the challenging work milieu.

A 1999 outbreak of poliomyelitis, was met with an immediate, and highly successful response from the Ministry of Health Iraq, WHO and UNICEF, who through the National Immunization Days (NID) campaign, conducted two rounds of vaccinations for the eligible population in October and November 1999, and, as a consequence, saw the swift interruption of the virus's transmission. Such a remarkable accomplishment helped boost the moral of all those involved in the Program and provided us with the incentive to forge ahead to achieve more milestones.

As a result of intensive and concerted efforts, more than 95% vaccination coverage for the targeted 4.6 million children under the age of 5 was achieved. To realize this, and again with the aid of the NID campaign, twelve successive immunization rounds were implemented through 2000-2002 supplemented by 2 mopping up rounds in 2000. An additional 4 rounds of house-to-house NIDs were carried out in January and February 2003 and September and October 2005. A clear indicator of this successful undertaking is that no case of poliomyelitis (due to wild poliovirus) has been reported in Iraq since January 28th, 2000.

The original 2005 plan called for the implementation of 2 NID rounds in October and November. However the resurgence of poliomyelitis in Sudan and Yemen forced us to take preventive action and hasten the execution of the scheduled NIDs in June and July 2005. Despite the prevailing difficult security environment, both rounds were successfully conducted. During each round 97% of the targeted children were reached and vaccinated through house-to-house visits.

This feat was a direct result of careful preparations over a period of 4 months, the high level of commitment from MoH and the close follow-up by HE the Minister of Health and his senior management as well as the technical expertise and determination of both national and international WHO staff.

The OPV vaccine used for the 2005 NIDs was secured by UNICEF, while MoH obtained all vaccines needed for routine immunization. The needed financial support for NIDs was provided by a USAID grant. Concurrent with NIDs, surveillance of Acute Flaccid Paralysis (AFP) and confirmatory laboratory investigations of suspect cases were also effectively carried out during the last 6 years.

During 2005, standard surveillance indicators were reached and maintained at a national scale and in all provinces except Anbar where the precarious security situation impeded the proper performance of vital activities necessary to support and maintain the surveillance level at the required degree of sensitivity and responsiveness.

During 2006, WHO will provide all the necessary support to ensure the implementation of the Planned 4 rounds of NIDs. Routine EPI will be given special attention in order to achieve coverage among infants of at least 80% by 3 OPV in every district. This will hopefully be attained by adopting the RED approach strategy. MoH and WHO will work in concert to advance measles surveillance and ensure that every case of rash and fever is clinically, epidemiologically and virologically investigated.

Dr. Naeema Al Gasseer
WHO Iraq Country Representative &
UN Nutrition and health cluster Coordinator
April 2006

1- POLIO ERADICATION IN IRAQ

1.1-Overview

Iraq has made great efforts to improve the trauma of human suffering and the loss of economic well-being caused by the war, the continuously deteriorating security conditions, and loss of law and order. The health care system faced many hardships in sustaining the various important programs such as the Polio Eradication and EPI program.

1.2- Routine Infant Immunization (EPI):

Polio vaccination was introduced in the year 1970 and is optional in Iraq, unlike the BCG vaccination, which is a must when obtaining a birth certificate or for food and rations card. Frequent shortages of the BCG vaccine in 2003 & 2004 have adversely affected the attendance of mothers at EPI and MCH clinics, leading to a drop in all EPI antigens coverage figures, however, the availability of vaccines at all levels was corrected to a great extent in 2005.

Since its introduction in early 1970, the Oral Polio Vaccine (OPV) is the only vaccine used in Iraq. The schedule of OPV in Iraq is for infants to receive 3 doses during the first year of life, at 2, 4, and 6 months of age, in addition to a zero dose which is given at the first week of life. Additional 2 booster doses are given at 18 months of age and at 3-4 years of age respectively.

The cold chain system has suffered the most from destruction, looting, lack of proper maintenance and lack of supportive supervision. Following the end of hostilities, kerosene refrigerators, provided through UNICEF, WHO and other international organizations, are functioning with low efficiency due to lack of maintenance compounded by frequent shortages of kerosene and unavailability of spare parts. Lack of motivation, frequent turnover of medical staff and the elapse of many years since the implementation of the last MLMT and cold chain training, have also severely affected the performance of the program throughout the country.

The declining trend noticed since 1998 in routine coverage of all EPI antigens, including OPV, was reversed for the first time in 2004 when reported OPV3 coverage among infants jumped from 58% in 2003 to 80% in 2004 and 83% in 2005.

The average OPV3 coverage in Iraq for 2005 of 83% is not evenly distributed all over the country. 50% of districts reported OPV3 coverage of less than 80%. 4 districts reported OPV3 coverage of <40%. The reasons for the low coverage in the districts of Faloja, Qaim, Amiryat Al-Falloga and Samara stems from the continuous military operations and lack of security during 2005. These districts are considered among the most risky areas in Iraq. MoH and WHO are focusing efforts and intensifying training, logistic support and supervision for these districts both during routine immunization and SIAs . In addition to the excellent results achieved during NIDs, MoH is seriously considering a special mopping up campaign using OPV as soon as conditions allow it.

MoH's plan is to achieve at least 80% coverage of infants with all vaccines in every district by the end of 2007. If this is achieved the average coverage for the country will automatically be pushed to 90% or above.

Table (1) DPT3/OPV3 Routine Infant Immunisation, Iraq, 1996-2005

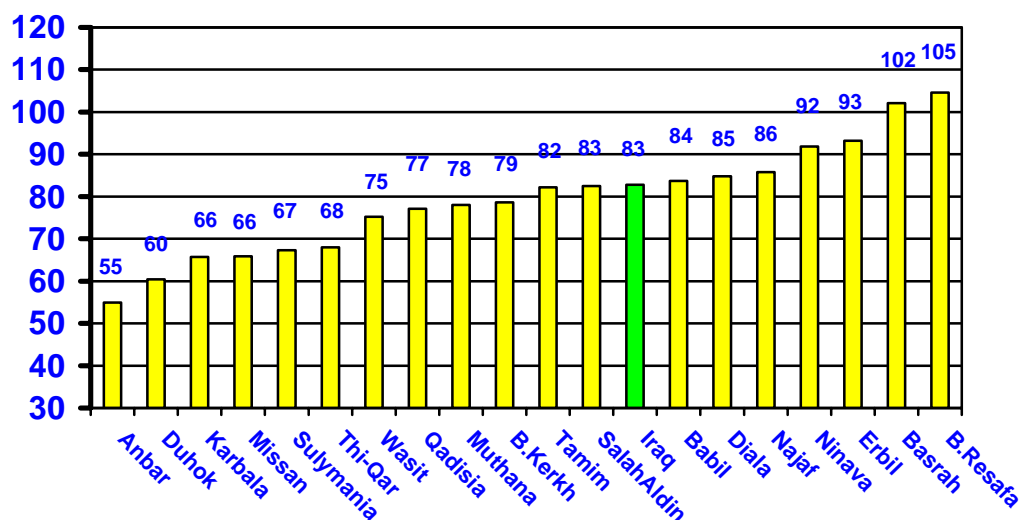
Year	DPT3/OPV3
1996	95%
1997	92%
1998	88%
1999	86%
2000	86 %
2001 (OPV3)	84 %*
2001 (DPT3)	78%*
Cluster Coverage Survey December 1998	76%
2000 multiple indicator Survey {OPV3 }	82 %
2000 multiple indicator Survey (DPT3 }	69 %
2001	84 %
2002	86 %
2003	58%
2004	80%
2005	83 %

Source: EPI UIN/ MOH

1.3- Causes for low OPV3/DPT3 routine infant immunization:

- Interrupted vaccine supply in some provinces.
- Repeated disruption of electric power and limited immunization services in some DoHs and in major health centers in towns and big villages.
- Lack of security compromising the access of both clients (especially women and children) and providers to health facilities.
- Health center staff, especially in rural areas, suffered from neglect due to lack of proper in-service training and supportive supervision.

Fig. (1) Reported OPV3 COVERAGE, by governorates, IRAQ, 2005



1.4. Activities to improve routine OPV3/DPT3 coverage

In order to improve routine immunization activities at the district and health facility levels; MoH, supported by WHO/UNICEF and IRCS will hold a workshop for ToT on the RED approach and measles elimination in the Dead Sea/Jordan early 2006. The meeting will be attended by EPI and measles surveillance officers from all the 19 DoHs of Iraq in addition to senior CDC and EPI staff from the central MoH and the EPI National Scientific Committee. Technical support and guidance will be provided by 4 WHO experts from VPI/RO, Sudan and Lebanon country programs. The meeting is expected to come out with the following recommendations to improve routine EPI coverage:

- Better use of coverage data at the health facility level to monitor progress and improve immunization activities through proper analysis and use of data collected by health workers at vaccination outlets.
- Using the polio-eradication experience; simple guidelines will be provided for micro-planning at district level.
- Ways and methods to improve the interaction between PHC centers and the local community.
- WHO/UNICEF will intensify support for MoH to revitalize outreach activities.
- WHO/UNICEF and MoH will better orient and provide sufficient logistic support to ensure high quality on-site supervision support.

Due to the low routine infant immunization, and difficulties facing the immediate rehabilitation of the EPI program in 50% of the districts, and in order to maintain the immunity levels among under 5 population, MoH implemented 2 rounds of house-to-house NIDs for all under 5 children, in June and July 2005 and is planning to conduct 4 additional rounds of house-to-house NIDs in Spring and Fall 2006.

1.4 Supplementary immunization activities:

1.4.1. Objectives of the NIDs: To prevent the spread and re-establishment of poliomyelitis in Iraq by maintaining a high immunity level against the poliovirus in the 4.7 million below- five Iraqi children. Out Put: Immunize all the 4.7 million under 5 Iraqi children by 2 doses of Oral Polio Vaccine through 2 rounds of house-to-house mass immunization campaigns in June and July 2005.

1.4.2- Strategies:

A house-to-house strategy was the only strategy adopted to vaccinate children all over the country. Fixed teams were available in each health center and at hospital out-patient clinics. Fixed posts were also placed at police checkpoints (especially between the North and South/Central provinces, holy shrines, bus stations and railway stations).



House- to- house immunization

1.4.3. Preparations for NIDs

The original plan was to conduct NIDs in the cooler months of October and November 2005. However, the resurgence of poliomyelitis in Sudan, and the huge epidemic in Yemen, forced us to conduct the 2 rounds of NIDs as an emergency campaign in June and July 2005. One of the major priorities was to ensure the strongest possible level of social mobilization and community awareness regarding the importance of OPV vaccination.

1.4.4. General framework of the Plan:

- The target population is 4,699,237 children under 5 years of age.
- Two emergency rounds will be conducted in June and July 05, each round will last 5 days.
- House-to-house vaccinations of targeted children will be adopted
- Each team, composed of two health workers, is expected to vaccinate an average of 100 children a day i.e. 500 children in 5 days.
- The total number of teams to vaccinate 4,699,237 children in 5 days = $4,699,237/500 = 9,398$ vaccination teams. Total vaccinators: 18,796
- Every 7 teams will be supervised by one field supervisor who will closely supervise and support his teams in his/her geographical locality. The total number of field supervisors will be: $9,398/7=1,343$ field supervisors.

1.4.5. Social mobilization, security concerns and rumor control

Special attention was given to:

- Maximizing the use of mass media, especially local TV, radio and newspapers.
- Creating good channels of communication and ensuring the strongest possible support of traditional and emerging community leader and local politicians.



Meeting the mass media in Duhok

- Educating all health workers, especially vaccination teams and their supervisors, on how to respond swiftly and adequately to stop rumors related to the origin or side effects of OPV.
- Increasing awareness and responsive measures during a conflict situation.



Training of health workers

- Selecting vaccinating teams and their supervisors from known members of the same community in order to overcome the fear of families to opening the door to strangers.

1.4.6. Training and meetings on social mobilization activities:

Meetings at a central level:

- Two meetings with central supervisors.
- One meeting with health education focal points at DoHs.
- One meeting for focal points of all health programs at MoH.
- One meeting with focal points at other ministries.

Table (2): Social Mobilization Training Activities for Polio NIDs, June-July 05*.

SN	DOH**	Social mobilization focal points at DoH level or PHC level 1	Pediatricians 2	Religious leaders 3	Women groups 4	Community leaders & NGOs 5	TBA 6	Total
1	Baghdad/Kerkh	2	1	1	1	1	1	7
2	Baghdad/Resafa	2	1	1	1	1	1	7
3	Ninewa	2	1	1	1	1	1	7
4	Basrah	2	1	1	1	1	1	7
5	Anbar	1	1	1	1	1	1	6
6	Diala	1	1	1	1	1	1	6
7	Salahaddin	1	1	1	1	1	1	6
8	Wasit	1	1	1	1	1	1	6
9	Kirkuk	1	1	1	1	1	1	6
10	Kerbala	1	1	1	1	1	1	6
11	Najaf	1	1	1	1	1	1	6
12	Babil	1	1	1	1	1	1	6
13	Diwaniyah	1	1	1	1	1	1	6
14	Muthanna	1	1	1	1	1	1	6
15	Misan	1	1	1	1	1	1	6
16	Thiqar	1	1	1	1	1	1	6
17	Erbil	1	1	1	1	1	1	6
18	Suleimaniyah	1	1	1	1	1	1	6
19	Dohuk	1	1	1	1	1	1	6
20	MOH/Social Mobilisation section	4	4	0	0	20	0	28
Total		27	23	19	19	39	19	146

* The average duration of each training activity was one day, except for pediatricians which lasted 1-2 days.

1. Total number of participants: 810

2. Total number of participants: 600

3. Total number of participants: 570

4. Total number of participants: 570

5. Total number of participants: 1,170

6. Total number of participants: 570

Total participants: 4,290



Meeting with religious leaders after prayers in Basra

1.4.7. Production of social mobilization materials at central level:

- 20 TV interviews with children on NIDs.
- 5 TV news reports.
- Few subtitles were broadcasted many times on 3 satellite channels.
- Participation in TV programs on 2 occasions.
- Health messages broadcasted on 6 satellite channels.
- 30 radio interview with specialist doctors from the following 4 broadcasts: Iraq, Hurriyah, Al-Nas, BBC and Dijlah
- Local Newspapers: 36 reports and 27 articles in various newspapers.

1.4.8. Social mobilization activities at governorate level:

- Use of loudspeakers one week before the campaign and throughout NIDs (884 times).
- Production of 1000 local materials by each DoH in the form of posters (3,482), folders (13,215), stickers (9,501), health messages(19,848)
- Publishing in local newspapers (94).
- Local Radios: 163 health messages and 150 radio meetings.
- Local TVs: 169 messages and 76 TV recordings.
- Opening Ceremonies: Two rounds held in all DoHs.
- Video photos: 17 with 36 photographs for each round.
- Number of Health Centers visited by Social Mobilization Focal Points at DoHs: 797
- Mosque calls to people: 2,220

Activities of civil society organizations:

- i. Muthanna Province: The Save the Children NGO produced an electric photo board, poster, calendar, and sent volunteers from nursing schools to support vaccination teams. Local Muthanna TV produced a CD on Polio NIDs and conducted interviews with medical staff, and one TV spot.
- ii. Diala Province: The Iraqi Women Center NGO produced a childrens T-shirt and delivered gifts to children on the date of scheduled NIDs.
- iii. Salahaddin Province: Its volunteers escorted vaccination teams.
- iv. Babil Province: Health messages were delivered during the second round by changing the tone of mobile phones. The Ammar Charity NGO sent its volunteers to share in social mobilization activities such as distribution of messages, folders, and accompanying vaccination teams.

Other Activities:

- v. Diwaniyah Province: Produced plastic sacs to promote NIDs. Additional banners were produced by PHC sectors.
- vi. Production of banners in Kurdish language in the Provinces of Diala, Kirkuk and Ninawa.
- vii. Production of wood banners at traffic lights in Diala province.
- viii. Coordinated with Atheer Mobile Co. to send messages through mobile phones network.
- ix. Sent messages through Asia Mobile Phone Co.
- x. Produced identification badges for health staff who participated in NIDs and specific badges for vehicles rented during NIDs.
- xi. Held activities by children of Al-Burroj Private Kindergarden Sadr PHC sector/ Baghdad-Resafa.
- xii. Coordinated with military units following closures of some roads for security reasons at Mahmoudiyah district in Baghdad/Kerkh to facilitate the travel of teams to houses to vaccinate children.
- xiii. Produced and printed files in Diala Province containing health messages and dates on NIDs
Delivered certificates of appreciations to health workers in NIDs in Salahaddin Province.
- xiv. TV views by distinguished actors on NIDs in Ninawa.
- xv. Produced invitation cards in Baghdad/Kerkh and Baghdad/Resafa
- xvi. Purchased support equipment for vaccination teams in Diala and Basra.
- xvii. Mobilized communities through public meetings organized by civil society organizations
- xviii. Increased public awareness through general health campaigns in Basra and Friday's religious addresses at mosques.
- xix. Distributed 2,500 specific IDs on NIDs in Muthanna Province.

1.4.9. Micro-plans and maps

The micro-plans and maps of the past NIDs required extensive updating to suit the new situation.

- Accommodate tens of thousands of displaced people in some DoHs, especially Kirkuk, Mosul, Anbar, Salahiddin, and Diyala.
- Take into consideration the return of almost a hundred thousand refugees from Iran to the provinces of Wasit, Missan, Kerbala and Najaf.
- Ensure that each vaccination team is a well known and trusted member of the community he/she is to immunize.
- The average number of children to be immunized by one team was reduced from 150 to 100. It was anticipated that working hours will be less and movement from health center to households will be more difficult.
- Alternate immunization sites were planned for each team, in case of problems faced in reaching originally planned immunization sites.

- Special plans to distribute vaccines and reach children caught in cross fires were developed with the assistance of birth attendants and community leaders.
- Contingency arrangements for power failure and vaccine storage in cold boxes were strengthened.
- Extensive training of vaccinators and supervisors in reading and interpreting VVM were conducted.

1.4.10. Campaign Logistical Support –Transportation

UNICEF/WHO (through a contractual agreement) assisted the MoH with the rental of vehicles for the mobile vaccination teams, field supervisors, district and governorate supervisors, and national supervisors. Vehicles facilitated movement of teams around the country and facilitated transportation to scattered villages and remote areas. Vehicle rental also enabled teams to carry out social mobilization activities and to conduct independent monitoring activities. In cooperation with MoH, WHO utilized an established competitive bidding procedure to select vehicle contractors.

Prior to receiving a USAID grant to support the two rounds of Polio NIDs, UNICEF/Iraq had fully supported the rental of the vehicles for the 1st round of NIDs conducted in June 05, together with the DoHs in 9 governorates of Iraq during the second round conducted in July 2005. During the second round (July 05) WHO covered the cost of vehicle rentals to the DoHs of Baghdad/Kerkh, Baghdad/Resafa, Diala, Misan, Thiqr, Muthanna, Kerbala, Suleimaniyah, Dohuk and Erbil. In addition to supporting the cost of vehicle rentals to the teams and supervisors during the process of independent monitoring conducted by the Iraqi Red Crescent Society (IRCS) for both rounds.

Table (3): Vehicles rented for activities of the 2nd round of NIDs

DOH	Mobile teams	Field supervisors	district supervisors	DOH supervisors	Central supervisors	Social Mobilization Supervisors*	IRCS supervisors**	Total
Baghdad/Kerk	345	141	6	7	6	1	14	520
Baghdad/Resafa	384	157	4	6	4	1	10	566
Basrah	250	102	8	9	2	1	18	390
Diala	166	68	5	6	1	1	12	259
Muthanna	64	26	3	5	1	1	12	112
Misan	94	38	4	5	2	1	10	154
Thiqr	175	71	5	6	2	1	12	272
Erbil	167	68	12	13	2	1	22	285
Suleimaniyah	143	53	13	14	2	1	32	258
Dohuk	103	43	6	7	2	1	16	178
Ninewa	0	0	0	0	0	0	26	26
Anbar	0	0	0	0	0	0	18	18
Salahaddin	0	0	0	0	0	0	18	18
Wasit	0	0	0	0	0	0	12	12
Kirkuk	0	0	0	0	0	0	14	14
Kerbala	0	0	0	0	0	0	8	8
Najaf	0	0	0	0	0	0	8	8
Babil	0	0	0	0	0	0	10	10
Diwaniyah	0	0	0	0	0	0	10	10
MOH/HQ	0	0	0	0	2	4	0	6
IRCS/HQ	0	0	0	0	0	0	8	8
MOH/North	0	0	0	0	3	0	0	3
Total	1891	767	66	78	29	14	290	3135

* These vehicles were rented one week before the beginning of the campaign and went on throughout the days of NIDs.

** 290 vehicles were provided by WHO for independent monitoring conducted by IRCS.

1.4.11. Financing of NIDs:

WHO/UNICEF support to the campaign: WHO support for both rounds was funded by USAID for a total of USD 3,366,632 as per the following:

- Micro planning and mapping training (USD 349845).
- Supervision & immunization technique training (USD 44040).
- Cold chain and immunization safety training (USD 4860).
- Other mobilization support (USD 1376255) (*incentives for out reach activities*)
- Social mobilization (USD 109360)
- Independent monitoring from the IRCS (USD135, 200).
- Contracts for the rental of vehicles (USD 609657)
- Other Logistical and Mobilization Support (USD 605415)
- Program oversight and management (USD 99,000)
- UNICEF supported the campaign by procuring 10 million OPV doses, and renting vehicles for a total cost of USD 1,7 million.



Marking of houses, Mosul

1.4.12. Target population and immunization strategies:

- The target population for June and July 2005 NIDs was more than the maximum number of below 5 children reached during any NIDs (4,699,237 children).
- House-to-house immunization was the only strategy used in all health centers. One team remained in each health center or hospital outpatient clinic to vaccinate any children who showed up.
- The average number of children vaccinated by each mobile team per day is 100.
- The total number of the vaccination teams was 9398.
- The total number of field supervisors (one for every 7 teams) was 1343.
- The total number of district and province supervisors was 330
- 49 qualified supervisors from the MoH were assigned and distributed throughout Iraq to train and support the local supervisors.
- 35% of the vaccination teams were assigned to rural and remote areas.
- The number of teams and supervisors that need vehicles to be mobile were 5030.
- 450 volunteers were contracted (Iraqi Red Crescent Society) to conduct Independent monitoring for 4 days during each round.

1.4.13. Cost of vaccinating one child:

- Total number of staff participating in NIDs = 21037
- Each staff worked for an average of 12 days (before, during and after NIDs), the average MoH salary per staff for 12 days= USD100.
- Cost of staff salaries= 21037 * USD = 2,103,700
- Cost of 10 million OPV doses = 1,200,000
- Cost of training, DSA, social mobilization, etc.... = 3,366,632
- Total cost for vaccinating the average of 4,699,237 = 6670332
- Cost of vaccinating one child by 2 OPV doses during NIDs = USD 1.42

1.4.14. Vaccine supply

10 million doses of OPV were procured by UNICEF for a total cost of 1.2 million USD

1.5. The national plan for the implementation of June and July 2005 NIDs:

The plan of action was presented, discussed and updated during a meetings held in Baghdad in May 2005. The meeting was chaired by the DG of public health and PHC and attended by:

- Director of primary health care.
- Head of the EPI section in MoH and his team.
- All NID central supervisors (25)
- Representatives from UNICEF.
- WHO OIC (in the capacity of WHO polio national MO)
- Representatives from the Iraqi Red Crescent Society.

The following points were stressed during the meeting and (WHO morning and evening daily) tele/video conferences held with DG of public health and PHC and EPI staff:

- Priority should be given to the implementation of high quality NIDs. Detailed and updated micro-plans and maps (simple and self explanatory) being the cornerstone for the successful implementation of NIDs.
- Special attention should be given to ensure that children receive fully potent vaccines. Ensure good cold chain system at all levels and full utilization of vaccine vial monitor (VVM).
- It is the responsibility of the supervisors at all levels to ensure that administrative reports reflect the reality of the activities conducted.
- Field supervisors need more intensive training and orientation to enable them to fulfill their supervisory activities properly.
- Allocation of vehicles at all levels needs to be reconsidered to ensure the efficient utilization of the available resources and to guarantee the maximum productivity of vaccination teams and supervisors.
- Independent Monitoring of NIDs by IRCS is now one of the pillars for ensuring high quality NIDs especially in high-risk areas. Therefore, all DOH staff and MoH central supervisors are expected to fully cooperate with IRCS teams and supervisors and avoid the sensitivities and problems noted in the previous rounds.
- Social mobilization has an essential role to play especially in high risk areas (hot spots).

1.6. Achievements of the NIDs:

FIRST ROUND (19-23 June 2005)

SECOND ROUND (24-28 July 2005):

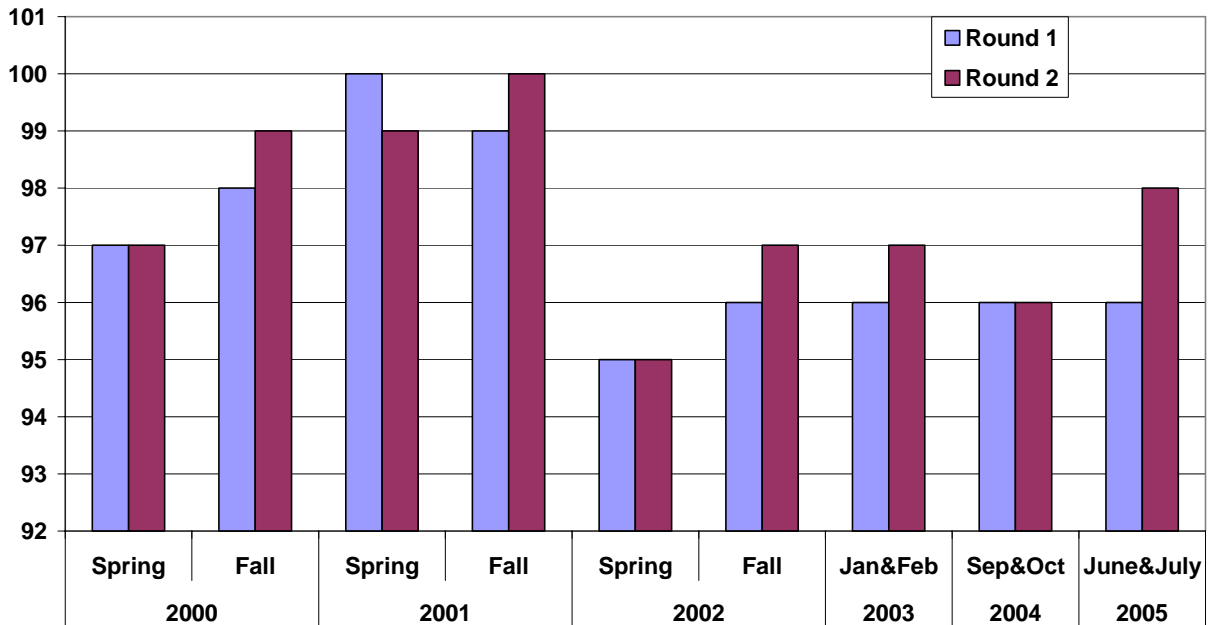
4,577,331 and 4,670,163 children were vaccinated out of 4,699,237 children below 5 years; in the first and second rounds respectively. This represents more than 97% of the total target of below five years children (Table 4). The number of children reached in January and February 2003 was 4,382,929 and 4,371,055 respectively which is about 97,000 less children than the children reached in 2005. Governorates affected by displaced population showed coverage of above 100%. The majority of the displaced population is coming from areas with ethnic tensions or repatriated refugees from Iran.

Fig. (2) below show clearly that despite the difficult conditions, the number of children reached during June and July 2005, were more than the number of children reached in the January and February 2003 rounds (before the war).

Table (4) Reported Coverage of Polio NIDs, June & July 2005, Iraq

Directorate of Health	< 5 pop	First round		Second round	
		vaccinated	coverage	vaccinated	coverage
Ninavah	480373	466421	97%	466421	97%
Kirkuk	148706	152125	102%	147243	99%
Erbil	237633	226311	95%	233309	98%
Duhuk	147559	141529	96%	143569	97%
Sulaimania	204157	192132	94%	189746	93%
Baghdad karkh	492829	458481	93%	465915	95%
Baghdad Russafa	549268	543450	99%	566237	103%
Basrah	366872	357905	98%	369743	101%
AL- Anbar	234250	232398	99%	229350	98%
Dyala	237744	237274	100%	248596	105%
Salahdeen	195240	191639	98%	193830	99%
Wasit	161918	153262	95%	160856	99%
Karbalaa	153000	144617	95%	155413	102%
Al-Najaf	193800	179571	93%	190024	98%
Babil	261042	257221	99%	263887	101%
Al-Qadesya	161034	161119	100%	160113	99%
Al-Muthana	90443	91116	101%	91054	101%
Meesan	133320	131480	99%	137439	103%
Thi Qar	250049	259280	104%	257418	103%
All Iraq	4699237	4577331	96%	4670163	98%

Fig. (2) Reported NIDs coverage, Iraq, 2000-2005



Independent monitoring of January and February 2003 NIDs which were supervised and coordinated by WHO and implemented in the most risky areas of the country by medical schools, the Iraqi Red Crescent Society (IRCS) and the Federation of the Red Cross and Red Crescent societies, confirmed the high coverage figures of administrative reports. In depth analysis of monitoring figures indicate that 15 out of 119 districts did not attain the 90% target. The districts lagging behind were from the following provinces: Baghdad (4), Muthana (3), Ninewah (1), Wasit (1), Diala (1), Suliemaniya (1), Duhok (1), Qadisiya (1), Kerbala (1), and Missan (1). Special attention will be given to these districts during the implementation of the ongoing, outreach defaulter tracing activities intended to strengthen routine EPI.

1.7. INDEPENDENT MONITORING

1.7.1. Introduction:

Independent Monitoring: A joint activity undertaken by WHO, UNCEF, IRCS and medical schools

1.7.2. Objectives:

- Active search in the Most Risky Areas to detect and immunize any child left or not reached by the immunization teams during the current campaign.
- Vaccinate any unvaccinated child.
- Identify the reasons for failure to vaccinate and immediately feed back to responsible health center, district and province
- Immediate feedback to health authorities in the locality to discuss and solve shortcomings or obstacles revealed by monitoring.

Methodology:

Monitoring is not an evaluation survey it is rather an active and dynamic follow up of the immunization activities conducted during NIDs. It depends on special non-probability sampling of the targeted children. The selection of children is limited to the most risky areas in each district. The selection criteria are also biased towards the selection of children who are more likely to be missed or not reached by immunization

teams. Statistically speaking, it is not correct to compare the results of independent monitoring with the MoH administrative reports.

Table (5) Monitored districts,(IRCS supervisors & monitors), Duration and monitored high risk areas by governorate, June and July 2005 NIDs

Governorate	No. of district		No. of supervisors		No. of monitors		No. of days of monitoring		No. of monitored children	
	First round	second round	First round	second round	First round	second round	First round	second round	First round	second round
Baghdad	10	10	10	10	20	36	4	4	2400	4320
Anbar	8	8	8	8	32	32	4	4	3840	3840
Babylon	4	4	4	4	16	16	4	4	1920	1920
Wassit	5	5	5	5	20	40	4	4	2400	4800
Basra	8	8	8	8	36	36	4	4	4320	4320
Nineveh	11	11	11	11	44	44	4	4	5280	5280
Missan	4	4	4	4	16	16	4	4	1920	1920
Qadisiya	4	4	4	4	16	16	4	4	1920	1920
Diyala	5	5	5	5	26	46	4	4	3120	5520
Kerbala	3	3	3	3	16	34	4	4	1920	4080
Taameem	5	5	5	5	10	20	4	4	1200	2400
Muthana	3	3	3	3	16	34	4	4	1920	4080
Thi qar	5	5	5	5	20	20	4	4	2400	2400
Najaf	3	3	3	3	16	24	4	4	1920	2880
Salah Al din	8	8	8	8	36	36	4	4	4320	4320
Suleimaniya	16	16	16	16	42	42	4	4	5040	5040
Erbil	14	14	14	14	28	28	4	4	3360	3360
Duhok	6	6	6	6	20	36	4	4	2400	4320
Total	122	122	122	122	430	556	72	72	51600	66720

Independent monitoring is a daily process carried out during each round to assess, roughly the immunization status of under 5 children in the most risky areas of each district in the country. In each district, 3-4 High Risk Areas (HRAs) are identified and monitored each day. Within each HRA, the immunization status of at least 30 under five children is evaluated. Therefore, a total of 90-120 children are evaluated in each district every day starting from the 2nd day of NIDs. In each day, children monitored are supposed to be vaccinated the day before.

A one page questionnaire is completed for every 30 children. Volunteers from IRCS collect data. District supervisors selected from interested medical schools staff supervise data collectors; one supervisor is selected for each district. Orientation meetings and training workshops and discussion are held with all supervisors and field workers. Governorates' supervisors are responsible for the training of monitors.

The total number of monitored children during June and July NIDs was 51600 and 66720 in the first and second round respectively. All the 122 health districts were monitored under the supervision of 122 district supervisors in each round. 430 and 556 monitors collected information over 4 days in the first and second round respectively.

1.7.3. Achieved coverage:

The overall coverage rate was 93 % and 91% for the first and second round respectively. The highest rate for both rounds was reported in Anbar (97% & 98%). Five other governorates reported rates exceeding 95% (Qadisiyah, Nineveh, Missan, Basrah, and Taameem). 3 DoHs (Wasit, Najaf and Baghdad) achieved a coverage of less than 90% during both rounds. Table 6 shows the achieved coverage by DoH during each round.

Table (6) IRCS monitoring results for June and July NIDs

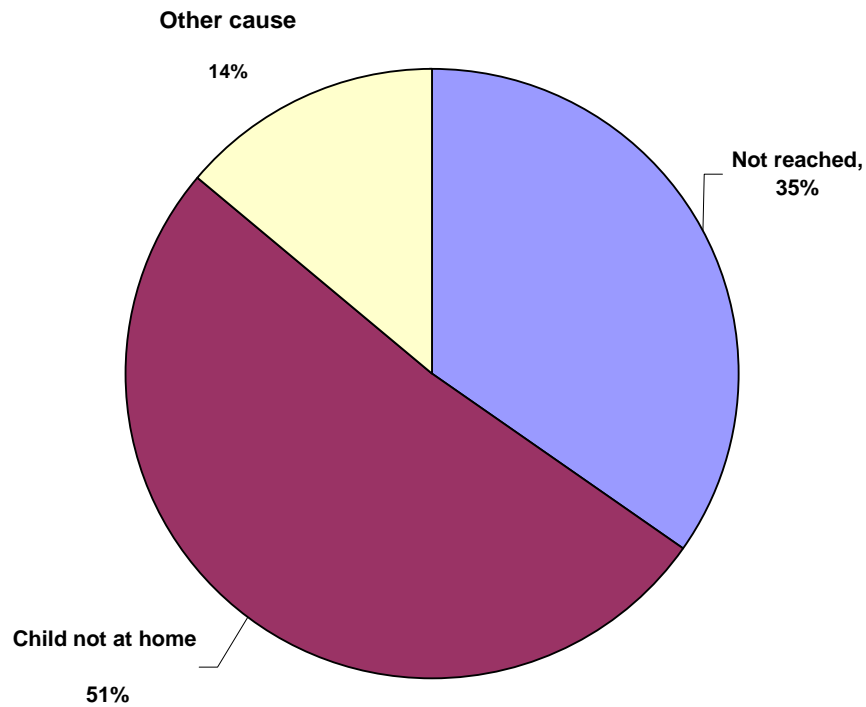
Governorate	First round			Second round		
	Monitored	Vaccinated	Coverage	Monitored	Vaccinated	Coverage
Wassit	2400	1979	82%	4800	4195	87%
Najaf	1920	1671	87%	2880	2326	81%
Baghdad	2400	2145	89%	4320	3804	88%
Diyala	3120	2808	90%	5520	5243	95%
Muthna	1920	1745	91%	4080	3438	84%
Kerbala	1920	1752	91%	4080	3647	89%
Babylon	1920	1757	92%	1920	1622	84%
Average Iraq	51600	48121	93%	66720	60966	91%
Duhok	2400	2249	94%	4320	4108	95%
Erbil	3360	3156	94%	3360	3257	97%
Suleimaniya	5040	4764	95%	5040	4607	91%
Thi qar	2400	2270	95%	2400	2273	95%
Salah Al din	4320	4087	95%	4320	3858	89%
Missan	1920	1824	95%	1920	1703	89%
Taameem	1200	1143	95%	2400	2333	97%
Nineveh	5280	5032	95%	5280	4924	93%
Qadisiya	1920	1846	96%	1920	1784	93%
Basra	4320	4161	96%	4320	4099	95%
Anbar	3840	3732	97%	3840	3745	98%

The below chart shows that 3 governorates did not achieve the required 90% coverage during both rounds. While only 3 governorates did not achieve coverage of 90% in the first round, 7 governorates did not achieve such a coverage in the second round, the reason for this deterioration was not explained to us yet.

Age specific proportion of un-vaccinated children:

The highest age specific proportion of un-vaccinated children was in the age category of 48-60 months (8.58%). This is seen in three governorates (Baghdad, Missan, and Taameem). In Babylon, Wassit, Qadisiyah, and Diyala, the highest rate was reported in the age category 24-48 months. In Anbar, Nineveh, and Erbil the highest rate was seen in the age category of less than one month.

Chart 2 reasons for unvaccination



1.7.3. Reasons for failure to vaccinate

About 51% of un-vaccinated children were not at home at time of vaccination. Figures exceeding 50% were reported in Wassit, Basrah, Ninevah, Qadisiyah, Diyala, Erbil and Suleimaniya.

About 35% of un-vaccinated children were not vaccinated because the vaccination teams who did not visit their homes. Figures exceeding 50% were reported in Missan, Taameem, Muthana, Najaf, and Salah Al-Din.

Other causes (mainly parent's refusal or the child being sick) were responsible for un-vaccination of about 14% of un-vaccinated children. Figures exceeding 50% were reported in Baghdad, and Anbar. (Figure 3)

Table (7) Number and reasons for failure to vaccinate

NID Round	The reason for un-vaccination						Total
	Not reached by vaccination team	not reached by vaccination team	child absent	Absent children	Other	other causes	
First	1287	37%	1657	48%	535	15%	3479
Second	1924	33%	3080	54%	750	13%	5754
Both	3211	35%	4737	51%	1285	14%	9233

1.7.4. Lesson learnt

- Monitors and supervisors should be, motivated; field oriented and possess good communication skills and sound knowledge of the area.
- Good, detailed and clear micro-planning is essential for proper monitoring.
- Close coordination, mutual understanding and harmony with MoH is essential for the immediate management of problems.
- Monitoring alerted health staff at all levels improves performance.
- Monitoring is a powerful tool for problem detection and immediate action.
- Standardized system for the follow up of children not at home during the campaign is essential.
- Neonates, unusual residence inhabitants and seasonal workers have now emerged as the main risk group for failure to be vaccinated.
- Independent monitoring of PNIDs, proved its effectiveness in maintaining vitality of the immunization activities.
- Whatever the causes of un-vaccination, we think that DoH in all governorates can formulate effective measures to deal with these causes and to find the suitable solutions.

1.7.5. Conclusions

- OPV3 coverage showed slight improvement from 80% level achieved in 2004 to 83% in 2005.
- More effort is needed to further improve coverage in 2006.
- Despite the exceptionally difficult security conditions in Anbar, DoH had a coverage of 97% and 98% was achieved in the first and second NIDs rounds.
- The overall coverage rate is 93% and 91% for the first and second rounds respectively.
- Three governorates reported rates <90 % (Wassit, Muthana, and Salah Al Din)
- Six districts reported extremely low rates (< 80%) (Zakho, Samarraa, Beji, Al Kattanna, Al-Nassiriya, and Shirgat)
- Four districts reported very low rates (80%-85%)(Al-Kut, Kalaat Salih, Samawa, and Suleimaniya City Center)
- About 4.3% of vaccinated children exceeded 60 months of age
- Around 51% of unvaccinated children were not present at time of vaccination and 35% were not reached by vaccination teams

1.7.6. Recommendation:

Since OPV3 routine coverage is still below the safe 90% coverage needed to prevent the spread of indigenous or imported wild polio virus, therefore, NIDs should be continued through 2006, 2 rounds during Spring and another 2 rounds during fall.



Vaccinating a child in a PHC

2. The AFP Surveillance System

2.1. Introduction:

Surveillance for suspected polio cases were established in 1989 where only suspected polio cases were investigated for poliovirus. Surveillance of acute flaccid paralysis (AFP) cases was introduced in 1996. The aim of AFP surveillance is to look for wild poliovirus circulation in the community through clinical, epidemiological and laboratory investigations of AFP cases. Active AFP surveillance was established in 1999. District polio officers visit all hospitals and rehabilitation centers in the country on a weekly basis. Good progress towards achievement of AFP surveillance indicators has been made since 1997.

In 2000 the national polio lab was accredited by the World Health Organization (WHO). Polio cases are diagnosed by isolating the poliovirus from stool specimens of AFP cases. NPL in Baghdad Poliovirus isolates were sent to a reference laboratory in Egypt for confirmation and intratypic differentiation, to differentiate between wild and vaccine derived (sabin) polioviruses.

Following the 2003 war the NPL was heavily looted and destroyed. However, thanks to the strong support of WHO, by March 2004 the NPL was completely rehabilitated, equipped, and staff retrained and the laboratory resumed its functions. The NPL is still not fully accredited, therefore all stool specimens are sent to VACSERA for testing.

A computerised data management system for acute flaccid paralysis data together with computers and the required-trained staff is in place in MoH since September 1999. This has facilitated the uninterrupted electronic transfer of data related to acute flaccid paralysis cases and weekly laboratory specimens from MoH in Baghdad to the WHO office in Amman and then to EMRO.

2.2. Passive surveillance:

Immediate notification of AFP in children <15 years of age is required. AFP should also be included in the weekly and monthly reporting system. When no case of AFP is detected, reporting units should still send weekly and monthly reports indicating zero cases.

2.3. Active surveillance:

The current system includes at least one reporting site in each of the 119 districts. In every reporting site, a local polio eradication coordinator submits a weekly active visit report concerning the presence or absence (zero report) of acute flaccid paralysis cases in the area under his/her jurisdiction. Weekly "zero" reporting of AFP cases by all reporting sites (hospitals and rehabilitation centers) is in place since 1996. Active case detection was carried out during National Immunization Days and Mopping-Up operations.

Supervisory visits to certain provinces showed some discrepancy between the reported data and the findings of field visits. Consequently, there is a need to assess the reliability of acute flaccid paralysis surveillance system; this is expected to further improve the quality of acute flaccid paralysis surveillance.

2.4- Main features:

-In the presence of certification standard surveillance no wild poliovirus was detected in Iraq since 28/01/2000.

-AFP rate of 1/100,000 under 15 children was attained for the whole country was reached and maintained since 1997.

-The required rate of 80% for AFP cases with 2 adequate stool specimens was achieved at the country level in the year 2000, however till the end of 2005 two provinces did not achieve the required standard.

-The NCC submitted to the RCC its Certification update for 2005, and would seem to have been accepted.

3.5. Major activities and achievements:

Surveillance progressed well during the last three years following the strong support of the WHO.

-The national polio laboratory resumed its functions since March 2004, however, it is still not fully accredited.

-Support in the form of expertise and funds have been provided since the last quarter of 1999 for the following activities:

1. Implementation of around 100 advocacy meeting during 2005, for clinicians on PEI and EPI.
2. 8 workshops for district surveillance focal points on acute flaccid paralysis surveillance and EPI target disease surveillance.
3. 4 workshops for province surveillance focal points on acute flaccid paralysis surveillance and EPI target disease surveillance.
4. Incentives are to be paid for the timely notification, investigation and follow up examination of AFP cases; as well as to those who carry out active weekly visits and transportation of faecal specimens.

Incentives are also paid for:

- Monthly meeting of the national expert committee for the final classification of AFP cases.
- Quarterly meetings of the national certification committee, The NCC has completed and submitted the 2005 certification update for Iraq.
- Quarterly meetings of the containment committee.

-Laboratory containment of wild poliovirus stocks: Iraq has been free of poliovirus for almost 6 years. Therefore, it is high time to ensure the proper containment of wild poliovirus stocks and other materials that may potentially be infected with the wild virus. The laboratory containment focal point and committee are conducting advocacy meetings for directors of laboratories all over the country. This was followed by field visits to all laboratories to update the inventory of laboratory storing infectious or potentially infectious material and make sure that appropriate bio-safety requirements are met.

-Monthly analysis of AFP surveillance data to monitor the performance indicators at national and provincial levels.

-Retrospective hospital record review was carried out in hospitals of provinces with low non-polio AFP rate.

-MoH AFP surveillance staff and WHO national MOs are continuously carrying out supervisory visits to provinces to follow-up AFP surveillance activities.

-We are planning to conduct regular meetings on a quarterly basis with, MoH, national and province AFP surveillance staff and national polio laboratory staff, for the follow up and

monitoring of AFP surveillance activities and co-ordination of activities and exchange of information. Due to the difficult security situation in Baghdad these meeting will be conducted in Amman.

The AFP surveillance field guide final draft is being edited and formatted, by May 2006 it will be printed and distributed to all province and district AFP surveillance officers as well as hospital focal points and PHC staff.

-Stool specimens collection from contacts of “Hot Cases” was re-instituted in November 2000.

-Stool specimens are collected from at least 5 contacts of an AFP case in the following conditions:

- ✓ The provisional diagnosis is suspected poliomyelitis.
- ✓ “Hot Cases” which means (unvaccinated or partially vaccinated cases, the paralysis is asymmetrical, there is rapid progression of paralysis and fever at onset of paralysis).
- ✓ A patient with AFP is lost to follow up or dies before the collection of 2 adequate stool specimens.

As a result of above activities certification standard surveillance indicators were achieved and maintained at the national level and there is continuous progress towards achieving the required standards at the sub-national level. Nevertheless in a few provinces data for 2005 showed that there is room for improvement with the following indicators:

Non-Polio AFP Rate:

- The non-polio AFP rate: The target was achieved at the national level Figure (4), However, at provincial levels the requested standard of 1 case per 100,000 under 15 population was achieved in all provinces except Anbar DoH (Figure 5) where the rate achieved was 0.49/100,000. This was a reflection of the bad security situation and continuous military operations that affected the whole of the surveillance system.

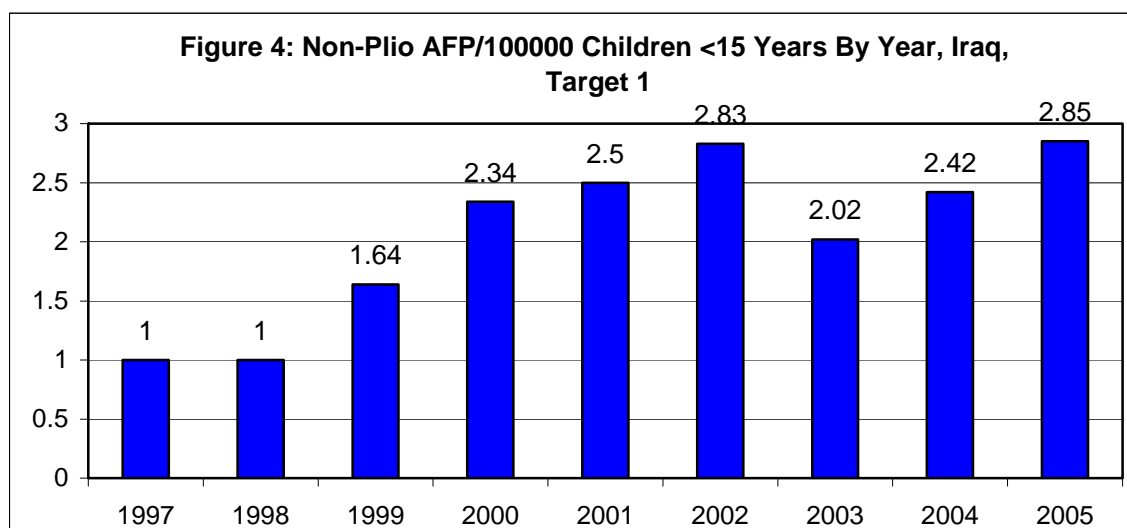
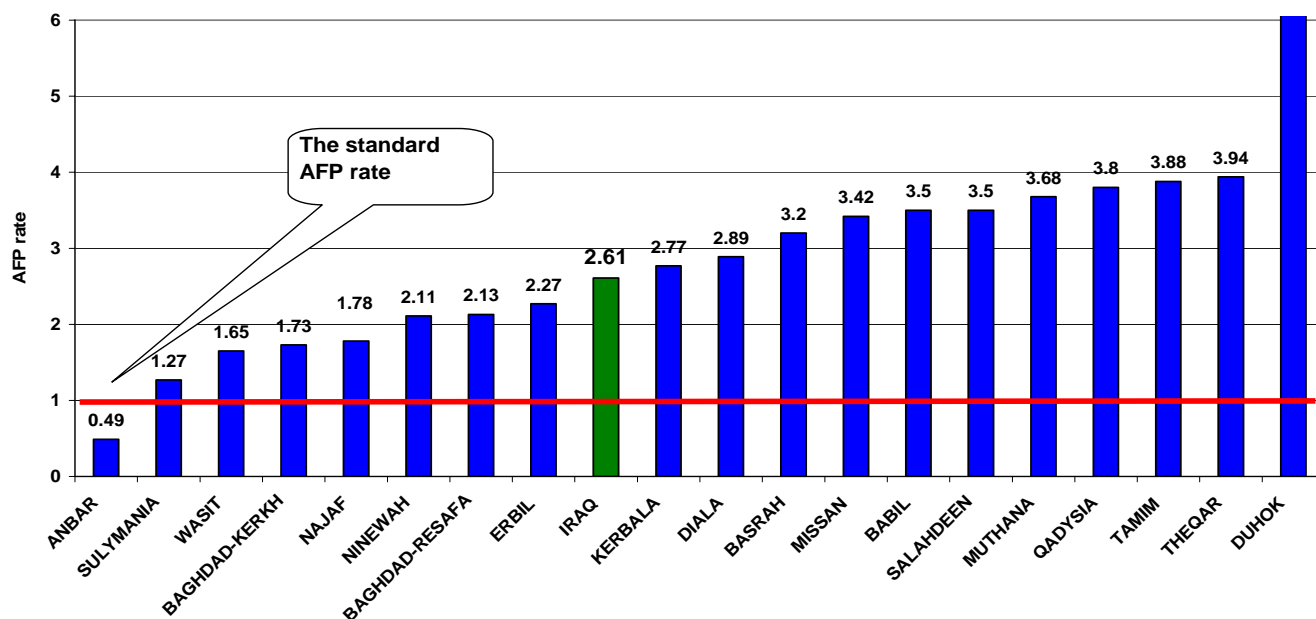


Fig. 5. Non-polio AFP (class not equal to one) in children less than 15 years of age per 100,000 population less than 15 years of age. (our target for Iraq now is >2.00) for the year 2005
(For the year 2005)



Silent Districts:

With the improvement in non-polio rates achieved in all governorates, the number of silent districts was also becoming better than previous 2 years. The number of silent districts in 2005 was 15, which represents 12 % of the total districts, (Figure 5 and table 8)

Table (8): Silent Districts By Province, 2005, IRAQ

PROVINCE	DISTRICT	<15 pop.
ANBAR	AL-KAEM	74073
ANBAR	HADETHA	30356
ANBAR	RAMADI	111853
BASRAH	BASRAH	404853
DIALA	GALAWLAA	53463
DUHOK	AKRIYA	80189
NAJAF	KUFA	113022
NINEWAH	HEMDANIA	81782
NINEWAH	MAKHMOR	36756
SALAHDEEN	FARIS	36439
SULYMANIA	DOKAN	26611
TAMMIM	Haweja	88994
WASIT	AZIZYIA	66764
WASIT	HAY	66699
WASIT	NUEMANIA	59712
Total		1331566

At a national level, adequate stool specimens were collected from 94% of AFP cases **Fig (5)**, which is more than what was achieved in 2004 (93%). At the provincial level Anbar was lagging behind (table. 8), In many cases the security situation made the timely collection and shipping of specimens very difficult.

Figure (7): Percents Of AFP Cases With Adequate Stool Specimens, 1997-2003, Iraq

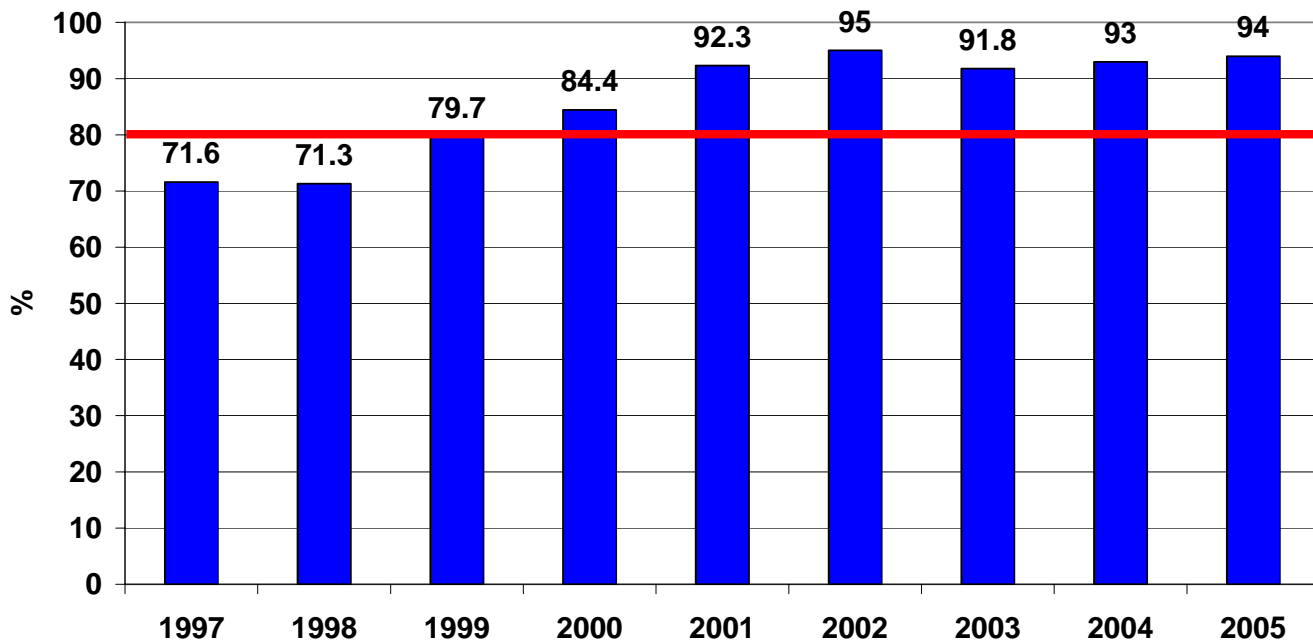
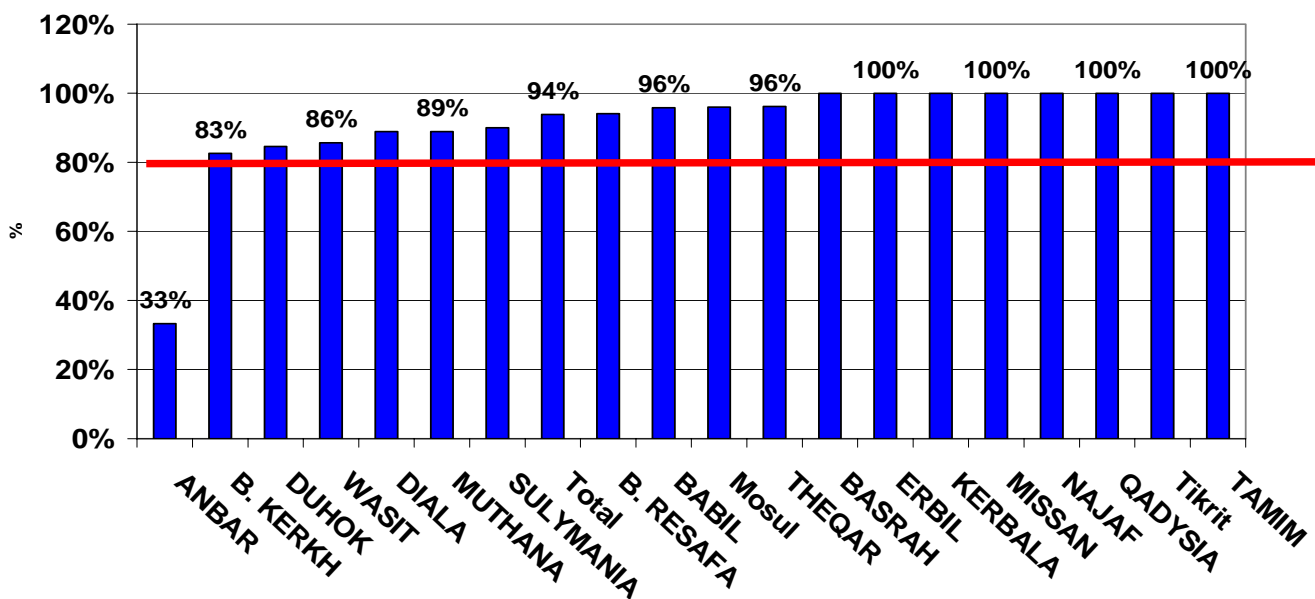


Fig. (8) : Percents of Adequate Stool Specimens By Province, Iraq, 2005

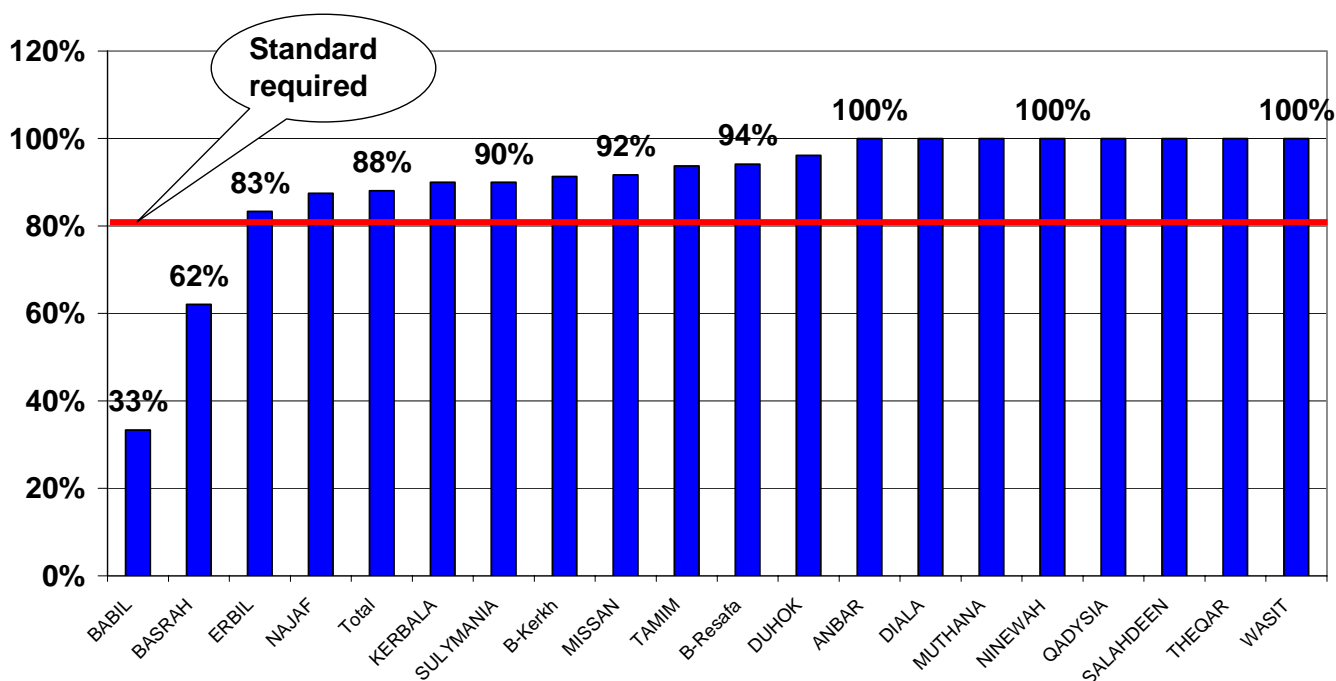


- **Timely investigation of AFP cases:** At a national level **88 %** of cases were investigated within 2 days of notification in the year 2005, compared to **86%** in 2004 (table 5). In 2005, **2** provinces failed to achieve the 80% standard for the period between notification and investigation of AFP cases, (Fig 9)

Table (9) Percent of AFP cases with time between notification and investigation <= 2 days by province, Iraq, 2005

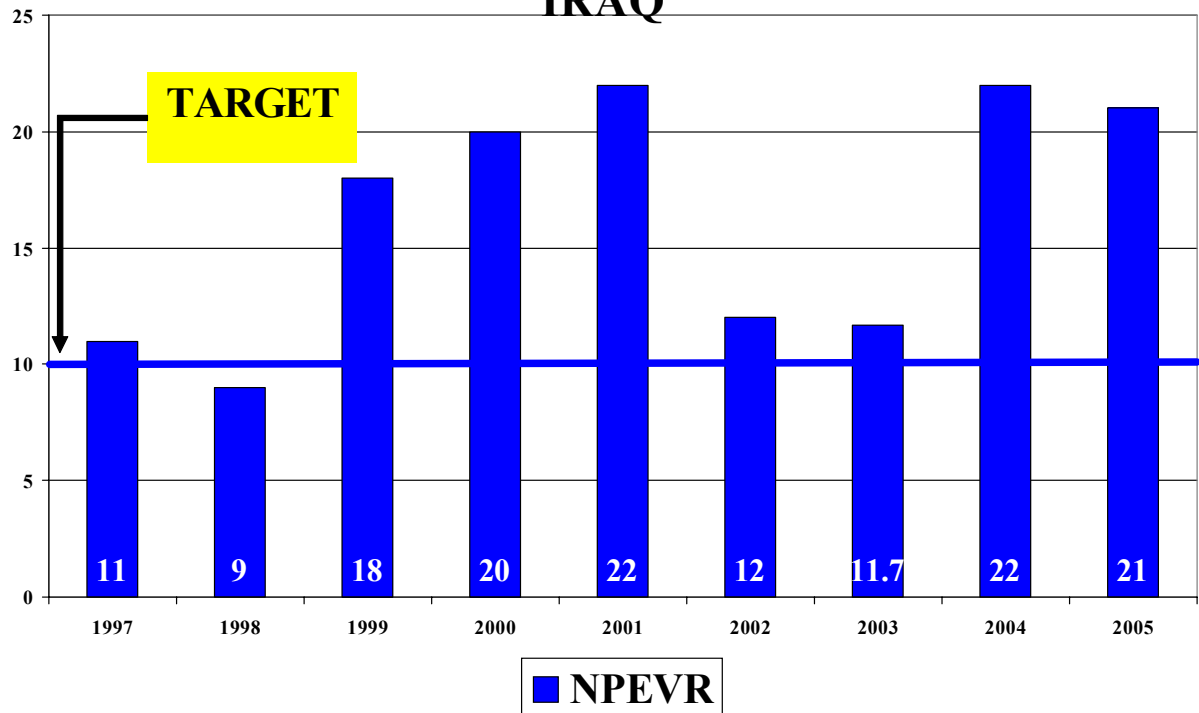
Year	2000	2001	2002	2003	2004	2005
% investigated within 2 days of notification	86%	90%	93%	88%	86%	88%

Percent of AFP cases investigated within 2 days of notification, province, Iraq 2005



- **Non-polio enterovirus isolation rate** The Non-Polio enterovirus isolation rate (NPEVR), in 2005 (21.1%) was almost the same as 2004 rate of 22%.

Figure (14): NPEVR By Year, 1997-2005, IRAQ



- The National Certification Committee (NCC) submitted its certification update for 2005, the report was provisionally accepted by the Regional Certification Commission (RCC).
- The two sister agencies WHO and UNICEF have provided all possible technical and financial support for the polio eradication activities.
- OPV vaccine used during 2005 for EPI routine vaccination activities was secured by MoH against its own resources. UNICEF provided the OPV used in June and July NIDs.

Table (10) Plan of action for the year 2006

Recommendation	Responsibility	Time Frame
Weekly active surveillance in all hospitals for AFP and other EPI target diseases	MoH/WHO	Continuous Activity
Weekly submission to EMRO of AFP and Laboratory data	MoH and WHO	Continuous Activity
Advocacy meetings for clinicians	WHO/MoH	Continuous (3 meetings /hospital/year)
Quarterly meetings in Amman for WHO, MoH, surveillance staff and NPL staff, to monitor AFP and measles surveillance activities	MoH/WHO	June-December 2006
Refresher training on AFP surveillance for governorate and district surveillance officers	WHO/ MoH	Continuous Activity, 2 workshops for each category/ year
Regular quarterly meetings of Certification, and containment committees	WHO/MoH	Continuous Activity a meeting every 3 months
Planning for April/May PNIDS	MoH/WHO/UNI CEF and IRCS	February/March
Training of mid-level staff on RED Approach and Measles surveillance	MoH/WHO	March 2006
Prepare, edit, print and distribute AFP surveillance field guide for AFP surveillance staff	MoH/WHO	April/June 2006
Implementation for April/May PNIDS	MoH/WHO/UNI CEF and IRCS	April/May
Accreditation of the NPL	MoH/WHO	June/July 2006
Production of the monthly newsletter " <i>Iraq Polio Monitor</i> ". As a venue to inform, update and feed back physicians about PEI and EPI.	CDC/ MoH and WHO	June 2006
Update the national inventory of laboratories where infectious/potentially infectious material is stored	National task force/WHO	April -August 2006
Training on computerized data Management measles data management software. For CDC/Lab and EPI surveillance coordinators	WHO / MoH	June 2006
Planning for Fall 2006 Polio NIDs	IRCS/IFRC/UNI CEF/ WHO/MoH	July-August .2006
Internal Assessment of AFP and measles surveillance	WHO/UNICEF/ MoH	August 2006
Planning for measles December catch up campaign	IRCS/UNICEF/ WHO/MoH	September 2006
Implementation of Fall 2006 NIDs	IRCS/IFRC/UNI CEF/ WHO/MoH	Sept-Oct 2006
Implementation of catch up immunization campaign	IRCS/IFRC/UNI CEF/ WHO/MoH	Nov/Dec 20006