

The Awareness about NIDs Program in a Rural Area of Al-Nahrawan District of Baghdad

Essam J AL-Zwaini*, Mohammed J AL-Khalidi*, Dia H AL-Beldawi**

ABSTRACT:

BACKGROUND:

A cross sectional study was conducted to explore the awareness of the local population of AL-Nahrawan district about National Immunization days (NIDs) and their major sources of information about the campaign.

METHODS:

A total of 476 households, selected randomly during the first NIDs round of the year 2000, were screened using pretested questionnaires. The questionnaires include questions about various aspects of NIDs campaign.

RESULTS:

There were 61.8% females, 70% aged between 20-39 years and about 79% were either illiterate or can just read and write. The study reveal that 88.2% of the respondents were aware of the NIDs but only 10.5% knew the date of the next NIDs and less than half of the respondents (43.3%) were understood the purpose of the program. Tow aspects of the NIDs (whether a previously immunized child is involved in NIDs and whether involved children should be vaccinated again in the next NIDs were understood by the majority of the respondents 92.2% and 78.2% respectively). Among the various media used to increase awareness of population about NIDs, the television was the most popular.

CONCLUSION:

The general awareness about NIDs program in AL-Nahrawan district is acceptable which probably reflect the successfulness of the program in Iraq. Some points about the program need to be verified and reinforced.

KEYWORDS: National Immunization Days , Nahrawan , Iraqi

INTRODUCTION:

The global poliomyelitis eradication by the year 2000 was launched by a resolution of the forty-first world health assembly in May 1988⁽¹⁾. This followed the successful eradication of small pox in 1979 and progress during the 1980s towards elimination of the poliovirus in the Americas, as well as rotary international's commitment to raise funds for polio eradication⁽²⁾. Based on cases officially reported to WHO, progress toward eradication has been substantial: in 1992, a total of 15,445 paralytic poliomyelitis cases were reported worldwide compared with 32,419 cases in 1988⁽³⁾. The last confirmed case of poliomyelitis in the Americas, caused by wild poliovirus, occurred in 1991 in Peru⁽⁴⁾. No cases have been reported from western hemisphere since that time⁽⁴⁾.

In the Southeast Asia region, successful eradication strategies resulted in a 96% decrease in the number of reported cases of poliomyelitis during the period from 1988 to 1996⁽⁵⁾. In Iraq, the EPI program was initiated in the early 1980s, expanding to national coverage in the mid 1980s. Coverage increase steeply from a level of 16% in the early 1980s to 83% in 1990. After 1990 coverage decline gradually due to supply, personal, and infrastructural difficulties primarily related to international sanctions. Officially reported data in the 1990s tend to overestimate coverage due to difficult access to population as well as a likely underestimation of the denominator. The Multiple Indicator Cluster Survey (MICS) 1996/97 reports 73% for 1995. Between 1996 and 1999 the estimate follows the trend of officially reported data with the level established by the MICS survey. Estimates since 1999 based on 1999 survey data point. No reliable data are available to show current level of immunization coverage⁽⁶⁾. In 1997, there were 28 reported cases of poliomyelitis from Iraq⁽⁷⁾ and at the end of 1999; Iraq was one of the 30 remaining polio infected countries⁽²⁾. Wide spread

*Department of Pediatrics, AL-Kindi College of Medicine, Baghdad University

**Department of Pediatrics, College of Medicine, Baghdad University

transmission of the polio virus in Iraq is posing a growing health threat to both country and the region. For the global poliomyelitis eradication, the WHO has recommended four strategies: maintenance of high vaccination coverage levels among children by giving at least three routine doses of oral polio vaccine (OPV), development of sensitive epidemiological and laboratory surveillance, localized mop up vaccination campaigns targeted at high risk areas where wild polio virus transmission is most likely to persist at low level, and national immunization days^(8, 9). NIDs are mass campaigns during which supplemental doses of OPV are given to all children in a country to interrupt the circulation of wild polio virus.

This supplementary immunization is aimed to complement rather than replace routine immunization. The WHO recommend that NIDs consist of two rounds of door-to-door OPV delivery, 4-6 weeks apart, during the season of low polio virus transmission, that each round be conducted over as short a time as possible, and that OPV be administered to all children under 5 years of age regardless of their immunization status⁽¹⁰⁾.

The aim is to interrupt circulation of poliovirus by early catching of children who are not immunized, or only partially protected as well as boosting immunity of those who have been immunized. The NIDs is usually supported by a massive campaign of information and education through television, radio, health centers and posters.

The present study was conducted in AL-Nahrawan district, a rural area lies about 20 Km south to Baghdad, during the first NIDs round of the year 2000 with the aim of evaluation of awareness of the local population about NIDs and the impact of the media on such awareness.

MATERIAL AND METHODS:

A randomly selected group of households' samples were chosen from AL-Nahrawan district during the first NIDs round of the year 2000, housing blocks were selected using random sampling procedure.

The selected household were screened using a pretested questionnaires administered in face to face interview by trained doctors. The mother or the father were aimed to be interviewed and if they were not

present at the time of interview the oldest sister or brother were asked. The questionnaire includes questions on age, sex, education, and occupation of the respondent and their awareness about NIDs program in the district. Also it includes questions to test their information about the campaign such as the date of the next NIDs, the upper age limit of children to be vaccinated, the purpose of the campaign, whether a previously immunized child should be vaccinated in the campaign and whether the child need vaccination in the next NIDs.

The respondents were also asked about the number of OPV vaccine received by their children previously. The source of information of the respondents was also inquired on. The data presented in this study was analyzed using Epi-Info version 6.

RESULTS:

Four hundred seventy six household were surveyed. Two hundred ninety four (61.8%) of them were female and about 70% were aged between 20 and 39 years. About 79% of them were either illiterate or can just read and write and 297(62.4%) were housewife or non employed (Table 1).

Table 1 also shows the awareness of the respondents about the various aspect of NIDs program and the effect of age, sex, education and occupation on this awareness. It shows that the majority of them (88.2%) were aware of the NIDs but only 10.5% knew the date of the next NID. Table 2 shows the respondent's knowledge about the purpose of NIDs program. Only 43.3% were aware about actual purpose of NIDs (global eradication of poliomyelitis), while 29% thought it will prevent disability, 17.2% thought it will decrease the incidence of poliomyelitis and 10.5% don't know the purpose of NIDs. When the respondents were asked about the number of times their child received OPV, 4.8% received OPV for one time, 14.3% for two times, 22.7% for three time and 42.9% for four times or more. One percent of them didn't receive the vaccine at all. Fourteen percent respondents were not sure whether their children had received the vaccine or not. The most popular source of information about the NIDs campaign was the television (81.9%) followed by health centers (8.4%) but 7.1% had not heard about NIDs at all.

Table 1- over all responses and the effect of age, sex, education and occupation.

	No of respondent (%)	No aware of NIDs program (%)	No. with correct answer				
			Date of next NIDs (%)	Upper age limit (%)	Purpose of NIDs (%)	Need to vaccinate the child in the next NIDS (%)	Whether previously immunized child should be vaccinated again in NIDs (%)
Total	476(100)	420(88.2)	50(10.5)	322(67.6)	206(43.3)	372(78.2)	439(92.2)
Age groups(years)							
• <20	49(10.2)	42(85.7)	6(12.2)	34(69.4)	22(44.9)	33(67.3)	42(85.7)
• 20-29	193(40.5)	177(91.7)	21(10.9)	135(69.9)	88(45.6)	152(78.6)	180(93.6)
• 30-39	141(29.7)	126(89.4)	11(7.8)	96(68.1)	69(48.9)	110(78)	130(92.2)
• >40	93(19.6)	75(80.7)	12(12.9)	57(61.3)	27(29)	77(82.8)	87(93.5)
Sex							
• Male	182(38.2)	165(90.6)	15(8.2)	110(60.4)	109(59.9)	147(80.8)	162(89)
• female	294(61.8)	255(86.7)	35(11.9)	212(72.1)	97(33)	225(76.5)	277(94.2)
Education							
• illiterate	188(39.5)	161(85.6)	18(9.6)	112(59.6)	59(31.4)	145(77.1)	173(92)
• read& write	187(39.2)	161(86.1)	21(11.2)	134(71.7)	88(47)	150(80.2)	172(92)
• secondary school	80(16.8)	77(96.3)	9(11.3)	60(75)	42(52.5)	61(76.3)	73(91.3)
• university	21(4.5)	21(100)	2(9.5)	16(76.2)	17(81)	16(76.2)	21(100)
Occupation							
• house wife & non employed	297(62.4)	258(86.9)	34(11.4)	209(70.4)	93(31.3)	226(76.1)	279(93.3)
• students	23(4.8)	23(100)	0(0)	17(73.9)	19(82.6)	20(87)	22(95.7)
• farmers	38(8)	32(84.2)	1(2.6)	20(52.6)	29(76.3)	28(73.3)	32(84.2)
• workers	118(24.8)	107(90.7)	15(12.7)	76(64.4)	65(55.1)	98(83.1)	106(89.8)

Table 2- knowledge about the purpose of NIDs

PURPOSE OF NIDS	NUMBER OF RESPONDENTS	PERCENTAGE
Prevent disability	138	29
Decrease the incidence of polio	82	17.2
Eradication of polio	206	43.3
Don't know	50	10.5
Total	476	100

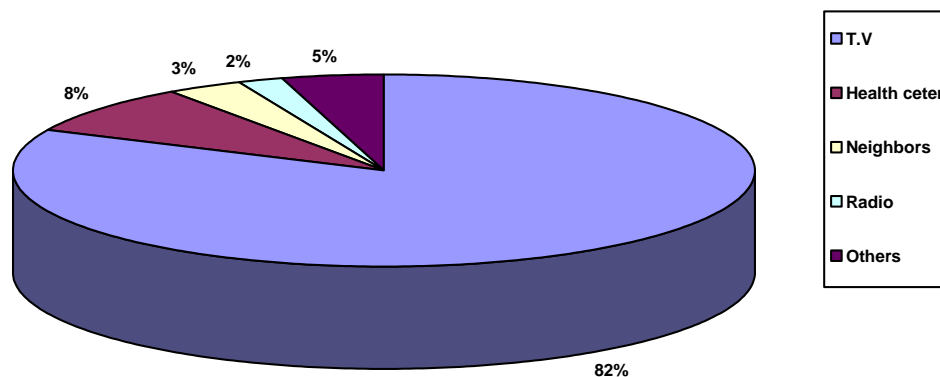


Figure 1: Pie chart shows the source of information about NIDs

DISCUSSION:

There has been remarkable progress since the polio eradication goal was established in 1988, with an 88% decrease in the number of polio cases globally. The number of polio cases reported from the Eastern Mediterranean Region declined 77% from 1988 to 1996 (2339 to 528) ⁽¹¹⁾. The last wild polio virus isolate in Mediterranean Region was on 14th December 2004, in Pakistan and Afghanistan. In Iraq the last major polio outbreak was in 1999, when 68 children contracted the disease and the last wild polio virus was on 28th January 2000 ⁽¹²⁾. One of the major reasons for such achievement is the establishment of national mass campaigns administering oral polio vaccine to all children under 5 years of age. Iraq has successfully established such a program. Public awareness about NIDs is essential step for successfulness of such a program ⁽¹³⁾. The study shows that 88.2% of respondents were aware of NIDs. This figure is encouraging, yet, it is lower than that reported from another developing country, Nepal, which report 94.1% awareness ⁽¹⁴⁾. Furthermore, 97.7% of mothers in Delhi were aware about NIDs ⁽¹⁵⁾. More efforts are needed to achieve a higher level of awareness among Iraqi population. Only 10.5% of the respondents knew the date of next NID. A slightly higher figure (18.1%) was reported among the general population of Delhi in India ⁽¹⁶⁾. This is in contrast with results of Nepal's study which report 89.3% ⁽¹⁴⁾. This indicates that intensive

awareness campaign about NIDs in our country is confined to the present one and not extends beyond that. Knowledge about the age limit of the children to be immunized is important for the successfulness of the campaigns. First to be sure that all involved children be immunized and second to limit wasting resources and time. Sixty seven percent of the respondents were aware about the upper age limit of children to be immunized. The purpose of the NIDs program was clear for 43.3% of the respondents, although it is higher than that reported by other studies 24.4 % and 31.6 % ^(14,17), yet, it is lower than that needed for successful program. In a study from Turkey, logistic regression analysis showed increased risk of non vaccination in people who did not know the purpose of NIDs ⁽¹³⁾. Information about the purpose of the program (global eradication of polio) should be stressed on. When the respondents were asked about whether they will vaccinate their children in the next NIDs, 78.3% answer correctly and when asked whether a previously immunized child should be immunized again in the NIDs, 92.2% answer correctly. These two important aspects of the NIDs are very important for overall success of the program which includes multiple rounds of supplementary doses of oral polio virus vaccine given to all children under 5 years of age regardless of their previous immunization state as recommended by WHO. Among various media used

for education about NIDs and increasing awareness among population, the television was the most popular (81.9%), a similar role for television in promoting NIDs has been reported from other developing countries^(16,17-20). In Nepal, the radio was the single most effective media⁽¹⁴⁾. Wide availability of television in most Iraqi houses is responsible for this difference. Our study highlight the minor role for primary health care centers (PHC) in public education about NIDs since it contributes to only 8.4 % as a source of information. This is in contrast to the results from other developing country where it contributes to 21 %^(16, 19). Health workers and paramedical staffs ,working at PHC should play a major role as they are in close contact with population attending health centers which are distributed all over the country.

CONCLUSION:

The general awareness about NIDs program in AL-Nahrawan district is acceptable which probably reflect the successfulness of the program Iraq. Certain aspects need to be verified and reinforce (knowing the date of next NIDs and the purpose of the program). Television is the single best medium to be used for this purpose. The role of PHC in awareness campaign for polio eradication should be more effective in disseminating the information to the population. The results of this study can be used to improve the overall NIDs campaign in Iraq.

REFERENCES:

1. WORLD HEALTH ORGANIZATION: Global poliomyelitis eradication by the year 2000, plan of action. Geneva, WHO 1992.
2. WORLD HEALTH ORGANIZATION PRESS. *SMJ* 2000; 21:507-9.
3. CDC Update: National Poliomyelitis Immunization Days-People's Republic of China 1993. *MMWR* 1993; 42:837-9.
4. CDC Update: Progress Towards Poliomyelitis Eradication, 1985-1994. *MMWR* 1995; 44:273-5.
5. Expanded Program on Immunization. Update: Progress Towards Poliomyelitis Eradication, WHO Southeast Asia Region. *Weekly epidemiological record*, 1997; 72: 157-62.
6. WHO/UNICEF. Review of National Immunization Coverage 1980-2004: Iraq. August, 2005.
7. WHO Regional Office for the Eastern Mediterranean. Regional data on the health and

- disease of children and adolescents. *Eastern Mediterranean Health journal*, 1998; 4:612.
8. Robbins FC. Polio- historical In: Plotken and Mortimer (Eds.). *Vaccines*. Philadelphia; W.B Saunders. Company, 1994; 137-54.
9. World Health Organization. Expanded program on immunization. Global Poliomyelitis Eradication by the year 2000. Plan of Action. Geneva, 1996; WHO/EPI/GEN/96.03.
10. World Health Organization: Immunization Policy. Geneva; WHO, 1995.
11. Tangemann R.H. et al. Current status of the global eradication of poliomyelitis .*World health STATISTICS Quarterly* 1997; 50:188-94.
12. Iraqi Polio Monitor. A monthly newsletter issued by directorate of preventive health-MOH in collaboration of office of WHO representative, Iraq. Vol 1, Issue 6. December 2004.
13. Harmanci H, Gurbuz Y, Torun SD et al. Reasons for non-vaccination during national immunization days: a case study in Istanbul, Turkey. *Public Health*. 2003; 117:54-61.
14. Jha N, Pokhrel S, Shgal R. Awareness about a national immunization day programme in the Sunsari district of Nepal. *Bulletin of the World Health Organization* 1999; 77:602-6.
15. Bhasin SK, Agarwal OP, Kanan AT. Knowledge and practice of mothers regarding pulse polio immunization in National Capital Territory of Delhi. *J Commun Dis*. 1977; 29:363-6.
16. Singh MM, Bano T, Dabas P et al. Awareness about pulse polio immunization among the general population in Delhi. *Indian Journal of Medical Sciences*. 2001; 55:453-7.
17. gomber S, Taneja K, Mohank. Awareness of pulse polio immunization. *Indian journal of pediatrics* 1996; 63:99-103.
18. Alfaify S K, El Bushra HE, Abdudahish AA. Evaluation of oral polio vaccine delivery during National Immunization Days. *SMJ* 1998; 19:546-50.
19. Rasania SK, Sachdev TR. Pulse polio programme: an overview of parent's perception. *J Community Dis*.2000; 32:275-83.
20. Browne EN, Bonney AA, Agyapong FA et al. Factors influencing participation in national immunization days in Kumasi, Ghana. *Ann Trop Med Parasitol*. 2002; 96:93-104.