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El-Zanaty & Associates

SUPPORT TO NATIONAL COMMUNICATION POLIO PLAN

Baseline Survey

Prepared By:

El- Zanaty & Associates

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INTRODUCTION AND METHODOLOGY

1

1.1 Background

The Demographic and Health Survey 2000 showed that Immunization coverage among children under 5 reached 92 percent, with no significant differentials between regions. Maintaining this coverage is important to reduce morbidity and mortality from vaccine preventive diseases. In Egypt the number of reported Polio cases has dramatically dropped from hundreds at the beginning of the 1990s to only 5 cases last year.

Effective communication strategies can contribute substantially to maintain high immunization coverage. Accordingly, the need to conduct a strong public mobilization campaign at the various levels is critical if Egypt is to be announced free of Polio by the end of 2003.

Several expert reports noted the gap in implementing effective social mobilization campaigns. These reports have particularly called for an effective national and sub-national strategy that is tightly managed with clear message content and effective utilization of appropriate channel mix. Field reports have also showed that there are some negative attitudes and behavioral shortcomings such as the public reluctance and ignorance of the importance of routine immunization, spread of some rumors and misconceptions regarding the after effects of the vaccine. Other caretakers don't cooperate with Vaccination teams particularly if they have already given their children one or two doses through the routine immunization program. Most of these problems have been strongly evidenced in poor urban areas particularly in Mega cities due to their density and over population. Additionally, reaching every child in urban areas has been always a major challenge. Thus, it has been strongly recommended that a comprehensive communication plan geared to address national and sub-national issues be developed and implemented to bridge these gaps.

Documenting the impact of social mobilization efforts has been particularly problematic over the past years. There is no systematic assessment of the public awareness, knowledge, attitudes and practices regarding immunization in general and Polio in particular, which is weakening sound communication planning. In addition, there is no segregated data that could be used for audience segmentation for devising appropriate mass media or interpersonal communication strategies.

The Ministry of Health and Population Expanded Program for Immunization is the key implementing agency of Polio activities in Egypt. MOHP is supported by WHO, UNICEF, USAID, and rotary International in its effort to free Egypt from Polio.

1.2 Objectives

The goal of this Baseline Survey is to contribute to the eradication of Polio in Egypt by providing sound information to enlighten the design and implementation of communication strategies and social mobilization campaign and to assess its outcomes.

The specific objectives are to provide baseline data on public awareness, knowledge, attitudes, and practices regarding routine immunization and in particular as related to Polio.

1.3 Sample Design and Selection

The sample of the Baseline Survey was a three stages random sample.

First Stage: Two urban governorates, four governorates from Lower Egypt and four governorates from Upper Egypt were selected in this stage with probability proportion to size. Then the number of households in each governorate was determined proportion to the size of the selected governorate (self weighted sample).

Second Stage: The PSU's of the EDHS of the selected randomly governorates were used as a frame for the survey. Ninety-eight PSU's were selected randomly from each governorate from both urban and rural areas. In the EDHS, two segments were selected from each PSU for listing. In the Baseline Survey only one segment was chosen from each PSU this was decided in order to use the second segment in the post survey sample.

Third Stage: Using the household listing in these segments, a systematic random sample of about 20 households was chosen from each segment (98 PSU). A total of 2048 households were selected for the Baseline.

Urban was over sampled by selecting number of households from Lower and Upper Egypt equally divided between Urban and Rural areas in addition 400 households were selected from Urban governorates (Cairo and Suez).

Thus, the urban areas were over sampled due to the fact that field reports have showed that there are some negative attitudes and behavioral shortcomings such as the public reluctance and ignorance of the importance of routine immunization, spread of some rumors and misconceptions regarding the after effects of the vaccine, Etc. Most of these problems have been strongly evidenced in poor urban areas particularly in mega cities due to their density and over population.

1.4 Survey Instruments and pretest

Two questionnaires were developed in order to collect information needed for the Baseline Survey; the household questionnaire and the caretaker (usually the mother of the child) questionnaire. In addition, an interviewer manual was developed and used during the training.

• Household Questionnaire

The household questionnaire focused on identifying the household members via the household schedule. For each individual included in the household schedule information was collected on the relationship to the household head, age, sex, marital status. In addition, it included questions about ownership, dwelling and other items to assess the economic and the social status of the household. Also, household questionnaire was used to identify all caretakers of children under-five.

• Caretaker Questionnaire

The caretaker is the person responsible for a child whose age is less than 5 years (for example, taking decision concerning the child).

This questionnaire included questions on: the background characteristics of the respondent (i.e. caretaker). Also, questions related to media habits in order to know the best channels for airing the campaign.

In addition to this part, the questionnaire included separate sections about:

- Awareness of immunization and Polio in specific.
- Knowledge of immunization and Polio in specific.
- Attitudes about immunization and Polio in specific.
- Practices towards immunization and Polio in specific.

• Pretest

The pretest was conducted one week prior to data collection in two governorates (Cairo and Giza) in areas not covered in the main survey. A total of 25 households were interviewed. Interviewers comments and pretest results were used to modify questionnaires. A Final English version of each questionnaire is included in the Appendix.

1.5 Data Collection Activities

Recruiting and Training of Field Staff. All supervisors and interviewers selected for the Baseline Survey had a previous experience in the data collection. The final selection of supervisors and interviewers depended on their performance in the training program. A total of 5 supervisors and 20 interviewers participated in the training sessions. The training program included sessions for explaining survey questions, role-playing, and mock interviews.

Data Collection. Four teams were participated in the data collection of the Baseline Survey of Polio campaign after three days training course. Each team consists of one supervisor (male) who serves also as field editor, and four interviewers (females). The supervisor was responsible for organizing the teamwork and at the same time reviewing the questionnaires in the field to insure completeness and consistency. Each team was assigned to work in two to three governorates. The data collection started July 19th for one week.

1.6 Sample Coverage

A summary of the outcome of the fieldwork for the Baseline survey is presented in Table 1-1 by region. The table shows that during the fieldwork and callbacks phase 1934 households were successfully interviewed, which represent a response rate of 94.4 Percent. There were differences between urban and rural areas in the response rate as well as by region. A total of 1142 urban households, and 792 rural households were successfully interviewed with a response rate of 93 percent and 97 percent respectively. A total of 751 caretakers were found in the interviewed households.

Table 1-1 Survey Sample						
Number of eligible households, caretaker and response rate, by region, Baseline Survey 2002.						
Region	Urban Govern	Lower Egypt	Upper Egypt	Total		
				Urban	Rural	Total
No. of Households	403	880	765	1229	819	2048
Households Interviewed	381	814	739	1142	792	1934
Households Response Rate	94.5	92.5	96.6	92.9	96.7	94.4
Number of Eligible Caretakers	110	295	346	365	386	751
Number of Eligible Caretakers Interviewed	110	295	345	365	385	750
Caretaker Response Rate	100.0	100.0	99.7	100.0	99.7	99.9

1.7 Organization of the Report

This report is organized in seven chapters. Following this introduction and methodology, chapter two discuss the characteristics of households and respondents interviewed in the survey. The media habits among caretakers of watching TV, listening to the Radio, and reading newspaper and magazines are presented in chapter three. Chapter four deals with the knowledge of immunization in general and Polio in particular, while chapter five presents the attitudes and perception of caretakers towards Polio vaccine. The practice of immunization of children in general and Polio in particular as well as immunization coverage will be presented in chapter six. Finally, the main conclusions and recommendations out of the Baseline Survey will be discussed in chapter seven.

CHARACTERISTICS OF HOUSEHOLDS AND CARETAKERS 2

The main objectives of this chapter are to provide background information about the demographic and socioeconomic profile of the households and caretakers interviewed in the Baseline Survey 2002. The household characteristics give a descriptive assessment of the environment in which caretakers and children live in, by examining the general characteristics of the households in the sample. Information is presented on age, sex, and education of the household population as well as on housing facilities and household possessions. For caretakers a basic profile including age, educational level, and work status is presented in the second part of this chapter.

2.1 Characteristics of the Household Population

Table 2-1 presents the percent distribution of the *de-jure* population of households by age, sex, marital status, education, and residence. A total of 9686 members were found in the interviewed households. Fifty-one percent of the household members are males and 49 percent are females. Around 37 percent of household members are less than 16 years, 59 percent are in the labor age, and only 4 percent are 65+ years. The education levels of household members shown in the table for those who are 6 and more years. A total of 25 percent of household population has secondary certificate or higher, and around half of the population never went to school. This high percent of never attended school is due to the fact that it is calculated for the 6 and more years.

Fifty-nine percent of household population lives in rural areas, while 41 percent lives in urban areas. Urban Governorates host 19 percent of the population, Lower Egypt host 39 percent, and Upper Egypt host 42 percent.

2.2 Household Environment

Housing Characteristics

Table 2-2 presents the distribution of households by selected housing characteristics including the source of drinking water, type of sanitation facilities, type of flooring, and number of rooms in the

Table 2-1 Household Characteristics		
Percentage distribution of household members by background characteristics, Baseline survey 2002.		
Variable & Category	Percent	Number
Sex		
Male	51.4	4951
Female	48.6	4735
Age		
Less than 16	36.8	3497
16-64	59.0	5788
65 +	4.2	401
Marital Status		
Married	37.3	3616
Widowed	4.4	431
Divorced	1.0	51
Separated	0.1	12
Never married/ singed contract	23.7	2361
Education		
Never Been To School/ Primary Incomplete	55.2	5170
Primary Complete	9.8	967
Preparatory Complete	10.4	1022
Secondary Complete	18.4	1860
University and Higher	6.2	667
Urban or Rural		
Urban	41.1	5115
Rural	59.0	4571
Region		
Urban Governorates	18.7	1591
Lower Egypt	39.3	3950
Upper Egypt	42.1	4145
Number of Household	100	9686

dwelling. Almost all households interviewed in the Baseline Survey live in a dwelling with electricity, and 85 percent of households have access to piped water mainly in their dwelling. Urban households especially those from Urban Governorates are somewhat more likely to have access to piped water than rural households. Households in Upper Egypt are somewhat less likely to have access to piped water.

Table 2-2 Housing Characteristics						
Percent distribution of households by housing characteristics by region and residence, Baseline Survey 2002.						
Characteristic	Urban Govern	Lower Egypt	Upper Egypt	Total		Total
				Urban	Rural	
Electricity	99.7	99.8	97.4	99.7	98.1	98.9
Source of drinking water						
Piped water						
Piped into residence	96.1	88.9	71.4	94.2	74.6	84.0
Piped into yard/ plot	3.4	0.7	0.2	1.9	0.4	1.1
Public tap	0.5	1.0	0.7	0.3	1.2	0.8
Open well water						
Well into yard/ plot	0.0	0.3	0.4	0.1	0.4	0.3
Protected into residence	0.0	4.5	7.0	0.4	8.1	4.4
Protected into yard/ plot	0.0	1.2	1.6	0.0	2.1	1.1
Protected Public well	0.0	3.3	3.5	0.2	4.8	2.6
Other	0.0	0.2	15.3	2.9	8.5	5.8
Sanitation facility						
Modern flush toilet	59.9	31.7	21.8	57.5	13.0	34.4
Traditional w/tank flush	4.7	4.9	0.9	3.4	3.4	3.4
Traditional w/bucket flush	34.6	62.2	59.2	38.1	70.2	54.8
Pit toilet/latrine	0.8	1.2	11.5	0.8	8.8	5.0
No facility	0.0	0.0	6.7	0.2	4.6	2.5
Flooring						
Earth/sand	2.4	7.9	35.0	3.9	28.8	16.8
Wood planks	0.0	0.1	0.0	0.1	0.0	0.0
Parquet/polished wood	1.3	0.0	1.4	1.7	0.0	0.8
Ceramic/marble tiles	8.4	1.8	2.3	7.0	0.2	3.5
Cement tiles	83.5	66.6	44.0	79.9	45.3	62.0
Cement	4.2	23	16.2	6.1	25.7	16.3
Wall-to-wall carpet	0.0	0.4	1.2	1.2	0.0	0.6
Vinyl	0.3	0.0	0.0	0.1	0.0	0.1
Persons per sleeping room						
Less than 3	93.2	96.4	97.5	94.1	98.0	96.1
3- less than 5	6.6	2.8	2.0	5.4	1.5	3.4
5+	0.3	0.8	0.5	0.6	0.5	0.5
Mean rooms per household	3.3	3.8	3.8	3.5	3.9	3.7
Mean persons per room	4.2	5.0	5.7	4.4	5.8	5.1
Number of households	381	814	739	1142	792	1934

About a third of interviewed households have modern flush toilets, 55 percent have traditional flush toilets. There are differences in the type of facilities by both urban and rural residence and place of residence. Urban households are more likely to have a modern flush toilet (57

percent) than traditional flush toilet. In comparison, the majority of rural households (70 percent) have traditional with bucket flush. All of the households without toilet facilities are found in rural Upper Egypt.

With regard to the flooring, about 62 percent of interviewed households live in dwelling with cement tile floors, and 16 percent in dwelling with cement floor. About one-fifth of the households have a dirt (earth/sand) floor in their dwelling. There are substantial differences in the flooring materials in urban and rural dwellings (see Table 2-2).

The Baseline Survey included question about the number of rooms that a household had. Taken together with the information on the number of persons in the household, the results provide a measure of crowding. Table 2-2 shows that 94 percent of the households have one or two rooms in the dwelling, 5 percent only have 3 to 5 rooms in the dwelling. The mean number of rooms per households is 3.7. The mean number of persons per households is 5.1, 4.4 persons in urban household, compared with 5.8 persons per rural households. Mean number of persons per room is 1.4 with limited differences between urban and rural areas.

Household Possessions

Table 2-3 provides information on household ownership of durable materials and other possessions. With regard to durable materials, about 90 percent or more own Television, stove, and electric fan. Around eighty percent of households own refrigerator, washing machine, water heater, and Radio. Eleven percent of households have mobile phone. Only five percent of households have satellite and same percent own computer.

Urban households are more likely to have these items than rural households. For example, 97 percent of urban households own TV, compared with 89 percent of rural households. Rates of ownership of various household possessions also differ by place of residence, with higher rates of ownership for most items reported among households in Urban Governorates and Lower Egypt, than in Upper Egypt.

Table 2-3 also includes information on household ownership of a means of transportation. Overall, 7 percent of households own car, with the highest rate observed in Urban Governorates (13 percent), and the Lowest rate in Lower Egypt (4 percent). Relatively few households have motorcycle, only one percent of households have motorcycle.

As expected, households in rural areas are significantly more likely than urban households to own farm/other land. Around forty percent of rural households own a farm or other land, compared with only 7 percent of urban households. There is considerable variation in the proportion reporting that they own livestock or poultry, from 74 percent in rural households to 14 percent in urban households.

Table 2-3 Housing Possessions						
Percentage of households possessing various household effects, means of transportation, property, and farm animals, by region and residence, Baseline Survey 2002.						
Possession	Urban	Lower	Upper	Total		Total
	Govern	Egypt	Egypt	Urban	Rural	
Household effects						
Radio	93.8	85.0	70.3	89.9	73.7	81.5
Television	97.9	94.5	88.0	96.9	89.1	92.8
Video	33.7	9.3	9.1	26.1	4.4	14.8
Satellite	9.0	2.6	4.3	8.1	1.5	4.7
Computer	14.2	1.4	3.8	10.4	0.4	5.2
Telephone	70.7	38.1	30.7	62.1	24.9	42.8
Mobile	25.0	6.2	7.5	20.0	2.7	11.0
Electric fan	96.8	88.0	82.1	95.5	80.7	87.8
Water heater	63.0	27.3	25.2	58.0	13.0	34.6
Refrigerator	95.0	81.8	68.4	93.8	66.9	79.8
Deep freezer	7.6	1.7	2.6	6.6	0.5	3.4
Sewing machine	10.3	8.6	6.4	11.1	5.4	8.1
Automatic washer	27.3	5.8	9.8	23.2	2.0	12.2
Dish washer	4.0	0.3	1.9	3.3	0.2	1.7
Other washer	82.1	93.9	72.2	83.6	82.6	83.1
Air condition	8.2	1.4	3.5	7.4	0.4	3.7
Stove	97.1	96.6	78.5	95.7	81.7	89.9
Means of transportation						
Bicycle	7.6	14.1	17.3	9.5	17.8	13.8
Motor cycle	1.6	1.1	1.3	1.5	1.1	1.3
Car	13.2	4.2	5.6	10.7	3.2	6.8
Property						
Farm/other land	3.9	34.3	25.9	6.6	40.6	24.3
Farm animals						
Livestock/poultry	8.3	56.3	56.0	14.3	73.9	45.3
Non of the above	0.0	0.5	2.6	0.4	1.9	1.2
Number of households	381	814	739	1142	792	1934

2.3 Caretaker Characteristics

Table 2-4 presents the background characteristics of the caretakers interviewed in the Baseline Survey. More than two-thirds of the caretakers are found in the age group 25-39, 23 percent are less than 25 years and only 8 percent are found to be more than 40 years. Around two-fifth of the caretakers completed secondary school or higher, while more than forty percent have never been to school/didn't complete primary school. Eighty-seven percent of the caretakers are not working for cash and the remaining work for cash. Two-thirds of the caretakers are from rural areas and one third from urban areas. The highest percent of caretakers are from Upper Egypt.

Table 2-4 Caretaker Characteristics		
Percentage distribution of caretakers by background characteristics, Baseline survey 2002.		
Variable & Category	Percent	Number
Age		
Less than 25	22.9	166
25-39	69.3	523
40 +	7.8	61
Education		
Never Been To School/		
Primary Incomplete	42.6	298
Primary Complete	11.4	92
Preparatory Complete	7.9	57
Secondary Complete	28.9	223
University and Higher	9.3	80
Working		
Working for Cash	12.8	104
Not Working for Cash	87.2	646
Urban or Rural		
Urban	36.6	365
Rural	63.4	385
Region		
Urban Governorates	16.3	110
Lower Egypt	37.9	295
Upper Egypt	45.8	345
Number of care taker	100	750

MEDIA HABITS

3

Mass media is one of the most important channels of information and education, particularly in the field of child-mother health. Accordingly, exposure to a broadcast is a prerequisite to the exposure to any media campaign.

The Demographic and Health Survey-2000 indicated that the majority of women exposed to broadcast, where more than 90 percent of women watch television weekly, and around three-quarter of them listen to the radio weekly. Considering place of residence EDHS-2000 showed that women living in urban areas are more likely to be exposed to the mass media channels than women in rural areas.

In order to design the National Immunization Campaign for eradication of Polio, the baseline survey included questions related to exposure to different mass media channels. The collected data included information on the number of daily hours they listened to radio/watched TV. Also, caretakers were asked about their preferred channels and time for watching TV/listening to the radio. In addition, more questions were added about caretakers' exposure to printed materials and the regularly reading a newspaper or magazine, and the preferred newspaper and magazines for the caretakers.

This chapter presents the results of the questions on caretakers' exposure to media broadcast. As mentioned before questions were asked to assess media habits including questions on exposure to TV, radio, and printed materials. In the following, the data on exposure to TV will be discussed first then followed by radio and printed materials among caretakers in the survey.

3.1 Watching Television

Table 3-1 presents caretakers' exposure to TV by region. Overall, data indicated that around 93 percent of caretakers reported that they watch TV regularly or sometimes. Most of those who watch TV prefer channels one and two (97 percent & 79 percent respectively). As for local channels, channel three is the most preferred channel (19 percent) followed by channels eight and seven (13 percent & 10 percent respectively). Watching TV in the evening (6 pm: 9pm) is the most preferred time for around 87 percent of the caretakers. They also prefer to watch the TV at night (52 percent) (after 9pm). Among those who reported watching TV the mean number of daily hours watching TV is 4.2.

Caretakers in urban area' reported watching TV more than rural caretakers (97 percent vs. 91 percent), with no significant differences in the order of the preferred channel. However, channel three and Nile TV are the preferred channels, after the main two channels reported by urban caretakers (40 percent & 27 percent respectively), while for rural caretakers channel eight (13 percent) then channels seven and six (10 percent & 9 percent respectively) come after the two main channels. As for the preferred time for watching TV, urban and rural caretakers indicated that watching TV at the evening (6pm: 9pm) is the most preferred time for them (84 percent & 89 percent respectively). Data also showed that 72 percent of urban caretakers watch TV at night (after 9pm) compared with only 40 percent of caretakers in rural area. The urban caretakers watch TV on average for longer time than rural caretakers, where

the mean daily hours watching TV is 4.7 among urban caretakers compared with 3.9 hours among rural caretakers.

There are limited differentials by region in the level of exposure to TV, where caretakers from Urban Governorates are more likely to watch TV (98 percent) than caretakers from other regions (94 percent & 90 percent in Lower and Upper Egypt respectively). Differentials are clearer in the preferred channel by region. Logically caretakers from Urban Governorates prefer channel one, two then three as well as Nile TV, while caretakers from Lower Egypt prefer channel one, two then local channel six, and caretakers from Upper Egypt prefer channel one, two, then local channels eight and seven. Also, there are limited differences in the preferred time for watching TV between regions. Evening time (6pm: 9pm) is preferred time in the three regions than any other time. There is no significant differences between regions concerning average time of watching TV, caretakers watch TV on average for around 4 hours a day.

Table 3-1 Caretaker's Exposure to TV						
Percentage distribution of caretakers by percentage watching TV preferred channels, time of watch, and average time of watching TV by region , Baseline Survey 2002.						
Variable & Category	Urban Govern	Lower Egypt	Upper Egypt	Total		Total
	Urban	Rural		Urban	Rural	Total
Watch TV						
Regularly	85.6	71.1	58.0	77.6	61.6	67.5
sometimes	12.5	23.3	32.0	19.7	28.9	25.5
Never watch TV	1.8	5.6	10.0	2.7	9.5	7.0
Favorite channels						
Channel 1	99.1	97.7	95.6	97.7	96.6	97.0
Channel 2	92.6	74.6	77.3	89.2	72.5	78.9
Channel 3	58.5	9.9	12.5	40.0	6.6	19.4
Channel 4	12.0	3.5	2.1	8.5	1.8	4.3
Channel 5	11.2	6.2	3.2	8.8	3.8	5.7
Channel 6	10.2	20.9	0.4	10.9	9.4	9.9
Channel 7	11.2	3.0	15.9	10.8	9.7	10.1
Channel 8	15.8	7.2	17.5	13.5	13.0	13.2
Nile TV	41.7	8.2	7.5	27.0	5.4	13.7
Satellite Channels	4.6	3.3	1.8	5.4	1.3	2.9
Other	0.0	0.3	1.7	1.1	0.8	0.9
Times						
Morning (6am:9am)	2.7	1.5	1.2	2.4	1.0	1.6
Forenoon (9am:12pm)	8.3	6.6	4.0	7.0	4.9	5.7
Noon (12pm:3pm)	25.9	25.8	23.6	25.5	24.4	24.8
Afternoon (3pm:6pm)	39.8	28.8	33.5	37.3	29.9	32.8
Evening (6pm:9pm)	87.0	89.7	84.7	84.2	88.7	87.0
Night (after 9pm)	76.9	46.0	47.5	72.1	39.5	52.0
No specific time	3.7	1.6	4.6	4.9	2.3	3.3
Average hours	4.1	4.2	4.2	4.7	3.9	4.2
Number of caretakers	110	295	345	365	385	750

3.2 Listening to the Radio

Previous surveys showed that exposure to the radio are much less than exposure to TV. In the following discussion of exposure to radio among caretakers will be presented by area and region.

Table 3-2 presents caretakers listening to radio, the preferred channels, and time of listening to the radio by region. Overall, around 42 percent of caretakers listen to radio, El-Quran El-Karim is the most prefer channel for 65 percent of caretakers followed by El-Bernameg EL-Aam then El-Shark El-Aosaat, (42 percent, & 19 percent respectively). On the contrary to TV, most of women listen to the radio in the forenoon (9am: 12pm) or morning (6am: 9am) (46 percent and 40 percent respectively). The daily average hours caretakers listen to radio is 4.8. Caretakers were asked whether they listening to radio during Ramadan or not. Data showed that the percent of caretakers who listen to radio during Ramadan is higher than those who listening to radio during the ordinary time (58 percent vs. 42 percent respectively). Overall, El-Quran El-Karim is the most prefer channel during Ramadan for 70 percent of caretakers followed by El-Bernameg El-Aam (19 percent) then El-Shark El-Aosaat (9 percent). The preferred time of listen to radio during Ramadan is before Eftar (58 percent).

Differentials exist between urban and rural caretakers and by region. Urban caretakers are more likely to listen to the radio than rural caretakers (47 percent vs. 39 percent respectively). El- Quran El-Karim channel followed by El-Bernameg El-Aam are the most preferred channels for both urban and rural caretakers. There is a significant difference between urban and rural caretakers in the times usually they listen to the radio or the mean number of hours. The daily average hours Caretakers listen to radio in urban area is 3.9 hours composed to 5.4 hours in rural area.

It is clear from the table that there are significant differentials between regions. Almost half of Lower Egypt caretakers listen to the radio compared with only 43 percent among caretakers in Urban Governorates and 36 percent in Upper Egypt. Around 50 percent in each of Urban Governorates and Upper Egypt caretakers prefer to listen to El-Bernameg EL-Aam after El-Quran El-Karim channel, while this percent decrease to 33 percent in Lower Egypt. The daily average hours Caretakers listen to radio in Urban Governorates is similar to the average in Lower Egypt (5.6 hours & 5.8 hours respectively), while the average daily listening hours decreased in Upper Egypt to 3.2 hours.

As mentioned before rate of those who listen to radio during Ramadan is higher than rates of those who listen to radio during ordinary time. Around 62 percent of caretakers in Urban Governorates mentioned listening to radio during Ramadan composed whit 59 percent in Lower Egypt and 56 percent in Upper Egypt. Listening to radio before Eftar is preferred by caretakers in Urban Governorates and Upper Egypt (62 percent & 63 percent respectively), while caretakers in Lower Egypt prefer to listen to radio after Eftar (59 percent).

Table 3-2 Caretaker's Listening To Radio						
Percentage distribution of caretakers by percentage listening to the Radio preferred channels, time of listening, and average time of listening to the Radio by region, Baseline Survey 2002.						
Variable & Category	Urban	Lower	Upper	Total		Total
	Govern	Egypt	Egypt	Urban	Rural	
Listen to the Radio						
Regularly	14.6	17.6	10.4	14.8	13.2	13.8
sometimes	28.1	31.3	25.2	32.2	25.5	28.0
Never listen to radio	57.3	51.1	64.5	52.9	61.3	58.2
Prefer Channels						
El-Bernameg El-Aam	49.0	33.3	49.9	45.6	40.1	42.4
El-Shark El-Aosaat	17.1	28.0	8.7	17.9	19.2	18.6
Soat El-Arab	2.1	0.0	0.8	0.9	0.5	0.7
El-Quran El-Karim	55.3	71.6	60.8	61.5	66.9	64.7
El-Shabab Wa El-Riada	2.1	2.6	4.5	1.9	4.3	3.3
Shamal EL-Saaid	0.0	0.0	1.1	0.0	0.8	0.4
Other	23.5	10.6	8.4	18.2	7.4	11.9
Times						
Morning (6am:9am)	32.0	44.5	38.9	38.6	41.4	40.2
Forenoon (9am:12pm)	31.8	43.2	54.5	40.8	49.2	45.7
Noon (12pm:3pm)	8.5	11.5	6.1	11.2	7.3	8.9
Afternoon (3pm:6pm)	17.1	11.8	13.5	15.1	12.1	13.3
Evening (6pm:9pm)	21.4	13.4	10.0	17.2	10.8	13.4
Night (after 9pm)	21.4	9.4	8.2	14.1	8.7	10.9
No specific time	17.0	12.5	6.5	11.4	10.5	10.9
Average hours listening to the Radio	5.6	5.8	3.2	3.9	5.4	4.8
Listen to radio in Ramadan	61.8	59.0	55.9	59.8	57.2	58.3
Prefer Channels						
El-Quran El-Karim	57.9	82.4	64.0	63.9	76.0	70.2
El-Bernameg El-Aam	28.1	10.6	21.1	22.8	14.5	18.5
El-Shark El-Aosaat	10.5	5.7	11.2	10.5	7.1	8.7
Times of Listening in Ramadan						
Before Eftar	62.2	51.9	63.1	58.7	57.3	57.9
After Eftar	48.4	59.3	39.3	51.7	48.5	49.9
Number of caretaker	110	295	345	365	385	750

3.3 Reading Printed Materials (Newspapers/Magazines)

The level of exposure of caretakers to printed materials is important to identify those who are subject to exposure campaign messages through that media. Table 3-3 presents reading newspapers and magazines habits. Data show that the level of exposure to printed media is remarkably much lower than other broadcast media especially television.

Caretakers who can read were asked if they read any newspapers and/or magazines and among those who read newspapers/magazines, they were asked about their preferred newspapers/magazines. These data are shown in Table 3-3. Overall, 21 percent of women read newspapers/magazines regularly or sometimes, while 79 percent never read any newspapers/magazines or indicated that they can't read. Urban caretakers reported reading

newspapers and magazines more than rural caretakers (37 percent vs. 12 percent), with significant differences between urban and rural regions. Caretakers in Urban Governorates are most likely to read newspapers/magazines (46 percent) followed by lower Egypt (20 percent) and Upper Egypt (13 percent).

Looking at the caretakers preferred newspapers/magazines, unexpectedly El- Ahram newspaper is found to be a preferred newspaper by 57 percent of all caretakers composed whit Al-Akhbar newspaper (39 percent) and this may be due to the small number of caretakers who answered that they read newspapers. As for the magazines, Nesef El-Donia and Hawaa are preferred by 8 percent and 6 percent respectively. There are significant differentials by residence concerning the preferred newspapers/magazines. Sixty-five percent of caretakers in urban area prefer to read El-Ahram newspaper composed whit to only 42 percent in rural area. As for region, the highest percent of those who prefer to read El-Ahram newspaper in found in Urban Governorates (70 percent) and this percent decreased to 50 percent in both Lower and Upper Egypt. However, in all regions Al-Akhbar is coming in the second rank in the three regions (46 percent, 39 percent and 29 percent in Urban Governorate, lower Egypt, and Upper Egypt respectively).

Table 3-3 Reading Newspapers and Magazines Habits Among Caretakers						
Percentage distribution of caretakers by percentage reading newspapers and magazines, and preferred newspapers and magazines, Baseline Survey 2002.						
Variable & Category	Urban	Lower	Upper	Total		Total
	Govern	Egypt	Egypt	Urban	Rural	
Reading Newspapers And Magazines						
Regularly	22.8	7.3	4.4	18.1	2.9	8.5
Sometimes	22.8	12.5	8.7	18.8	8.8	12.4
Never read/ can't read	54.4	80.2	86.9	63.1	88.3	79.1
Prefer Newspapers/ Magazines						
Akhbar	46.1	39.4	28.6	38.2	39.5	38.7
Ahram	70.0	49.7	50.2	65.2	42.3	57.1
Gomhoria	10.0	17.4	15.7	14.8	13.5	14.3
Rose El-Youssef	4.0	1.0	3.1	2.7	2.5	2.7
Nesef El-Donia	12.0	4.8	5.2	10.2	2.5	7.5
Hawaa	10.0	2.5	4.0	5.9	5.0	5.6
Other	18.0	35.6	28.8	20.4	40.1	27.4
Number of caretaker	110	295	345	365	385	750

KNOWLEDGE OF POLIO IMMUNIZATION

4

The Ministry of Health and Population aim to raise the awareness about the importance and benefits regarding immunization in general, Polio vaccination in particular and the public participation in the National Immunization Day (NID). Accordingly, a series of questions were asked to caretakers about their knowledge of main vaccines, Polio vaccine and NID. In addition, other questions were asked related to the correct information of Polio vaccine doses and the appropriate reaction towards the appearance of any symptom of Polio disease. This chapter presents the results of these questions.

4.1 Knowledge of Main Vaccinations for Children

Caretakers were asked about their knowledge of routine immunization other than Polio and the number of doses of these vaccinations. Table 4-1 presents responses of these questions. Differences exist between urban and rural caretakers in their knowledge. In general, urban caretakers knew the main vaccinations for child more than rural caretakers. In addition, it is important to notice that BCG and measles vaccines are the most known vaccines compared to the other vaccines. Almost 80 percent of caretakers from Urban Governorates know BCG and measles vaccines compared to around 45 percent of other vaccines (hepatitis and DPT).

Table 4-1 Knowledge about Other Routine Immunization									
Percentage of caretakers by their knowledge about other routine immunization and their number of doses, according to selected background characteristics, Baseline survey 2002.									
Background Characteristics	BCG		Hepatitis		DPT		Measles		Total No. of Caretakers
	Know vaccine	Know no. of doses	Know vaccine	Know no. of doses	Know vaccine	Know no. of doses	Know vaccine	Know no. of doses	
Age									
Less than 25	64.1	63.5	29.3	28.7	37.6	36.9	64.3	62.7	166
25-39	70.6	70.0	35.5	33.5	50.1	48.6	70.3	69.6	523
40+	73.4	73.4	37.5	37.5	53.3	53.3	62.7	62.7	61
Urban / Rural Residence									
Urban	82.9	81.7	46.4	45.2	53.2	51.8	79.4	78.5	365
Rural	61.5	61.3	27.2	25.5	44.1	43.1	62.0	61.2	385
Place of Residence									
Urban Governorates	80.9	79.1	48.3	46.4	44.6	42.7	79.1	78.2	110
Lower Egypt	69.5	69.5	38.4	37.3	56.0	55.6	74.3	73.4	295
Upper Egypt	65.1	64.4	25.8	24.1	41.5	39.9	59.6	58.8	345
Education									
Never Been To School/									
Primary Incomplete	54.4	53.7	16.9	15.3	30.4	28.8	50.9	50.0	298
Primary Complete	61.7	61.7	28.3	25.9	44.1	40.5	72.2	70.7	92
Preparatory Complete	74.5	74.5	36.2	36.2	40.6	40.6	69.5	69.5	57
Secondary Complete	86.0	85.0	49.3	47.4	63.9	63.9	85.5	84.5	233
University and Higher	90.9	90.9	72.4	72.4	84.8	84.0	89.4	89.4	80
Work Status									
Working for Cash	86.1	85.0	60.4	60.4	77.3	77.3	84.5	84.5	104
Not Working for Cash	66.9	66.4	30.4	28.7	43.1	41.8	66.0	65.0	646
Total	69.4	68.7	34.2	32.7	47.5	46.3	68.4	67.5	750

Table 4-1 shows also that the level of knowledge increases as the level of education increases, in addition, caretakers who are working for cash knew routine immunization more than other caretakers. With regard to the number of doses of different vaccines, same pattern is observed for the knowledge of main vaccinations. Differentials by region, education and work status took also the same pattern.

4.2 Knowledge of Polio Vaccine Doses for Children

Table 4-2 presents the level of caretakers' knowledge about Polio disease; the existence of new Polio cases in Egypt these days and the way of protecting the children from the disease. The results indicated that all caretakers heard about Polio (not shown in a table). Around 91 percent knew that Polio is a disease that makes the child unable to walk and 17 percent knew that it is a serious disease.

Background Characteristics	New Cases in Egypt	Polio is:			Protect by Immunization	Total No. of Caretakers
		A Disease that Makes Child Unable to Walk	Dangerous Disease	Other		
Age						
Less than 25	6.6	90.9	14.6	0.0	99.7	166
25-39	6.2	91.4	18.4	0.2	100.0	523
40 +	5.4	92.7	11.4	1.8	100.0	61
Urban / Rural Residence						
Urban	7.7	92.2	15.4	0.4	99.8	365
Rural	5.4	90.9	17.9	0.2	100.0	385
Place of Residence						
Urban Governorates	10.9	99.1	2.7	0.0	100.0	110
Lower Egypt	6.3	87.9	23.7	0.4	99.8	295
Upper Egypt	4.5	91.5	16.5	0.3	100.0	345
Education						
No Education/ Primary Incomplete	5.8	90.9	12.9	0.3	100.0	298
Primary Complete	6.1	93.8	13.2	0.0	100.0	92
Preparatory Complete	2.2	89.5	24.9	0.0	100.0	57
Secondary Complete	7.7	91.3	20.8	0.5	99.73	233
University and Higher	6.4	92.7	21.4	0.0	100.0	80
Work Status						
Working for Cash	7.1	90.1	20.7	0.0	99.4	104
Not Working for Cash	6.1	91.6	16.4	0.3	100.0	646
Total	6.2	91.4	17.0	0.3	99.9	750

Regarding the existence of new Polio cases in Egypt these days, the table indicates that 6 percent of caretakers reported the existence of new cases. However, differentials were observed among regions and among various levels of education. Eleven percent of caretakers in Urban Governorates aware by the existence of new Polio cases, compared to 5 percent in Upper Egypt. Six percent from those who have never been to school aware by the existence of new Polio cases, compared to 8 percent among those who completed secondary school. When

caretakers were asked about the way of protection the children from Polio disease, immunization was the only response reported by all caretakers.

Table 4-3 presents the distribution of caretakers regarding their knowledge of Polio vaccine doses. The results shown in the table indicated that the correct number of main Polio doses (3 or 4 doses) was mentioned by about 38 percent only of caretakers. Rural caretakers knew the correct number of doses more than urban caretakers (39 percent vs. 35 percent). Differentials were also observed among regions, the knowledge among caretakers in Urban Governorates is much higher than in Upper Egypt (44 percent and 33 percent respectively). Caretakers who are not working for cash knew the number of main Polio doses more than those who are working for cash (38 percent and 32 percent respectively).

Table 4-3 Caretaker's Knowledge about Polio vaccine									
Percentage of caretakers by their general Knowledge about Polio vaccine, according to selected background characteristics, Baseline survey 2002.									
Background Characteristics	Number of Polio doses (3 or 4)	Known correct age for Polio vaccine					Polio AD	Polio vaccine has a side effect	Total No. of Caretakers
		Polio 1	Polio 2	Polio 3	Polio 4	Polio			
Age									
Less than 25	33.5	82.3	82.4	83.4	65.0	64.5	31.2	166	
25-39	38.9	83.3	83.3	84.1	62.6	64.1	25.4	523	
40 +	39.2	72.1	69.7	67.3	53.6	51.9	27.5	61	
Urban / Rural Residence									
Urban	35.4	91.4	90.6	90.2	79.0	77.7	22.5	365	
Rural	39.0	76.9	77.0	78.2	52.9	54.9	29.4	385	
Place of Residence									
Urban Governorates	43.8	92.8	92.8	91.8	80.0	79.1	21.8	110	
Lower Egypt	40.5	85.4	83.4	84.5	62.4	65.9	40.2	295	
Upper Egypt	33.2	75.9	77.1	77.7	56.2	55.5	17.7	345	
Education									
No Education/ Primary Incomplete	40.2	68.2	69.2	70.5	43.8	42.9	20.3	298	
Primary Complete	35.2	87.2	88.7	88.7	65.8	62.8	32.1	92	
Preparatory Complete	32.7	86.5	86.8	86.8	63.4	73.7	35.6	57	
Secondary Complete	37.2	96.6	94.5	94.6	82.2	84.1	30.9	233	
University and Higher	35.1	92.3	89.5	89.5	81.9	83.3	30.6	80	
Work Status									
Working for Cash	32.4	88.7	86.6	88.1	71.3	76.8	32.0	104	
Not Working for Cash	38.5	81.3	81.3	81.8	61.2	61.3	26.1	646	
Total	37.7	82.2	82.0	82.6	62.5	63.3	26.9	750	

Almost all caretakers knew Polio vaccine, however, the correct age of child for receiving different doses were not known by all of them. The ages for the first three doses were known by about 90 percent and 77 percent for urban and rural caretakers respectively, while the other two doses were known by 78 and 53 percent for the two areas respectively. Differentials by regions, levels of education and work status are clear in the table. Highly educated caretakers and those who work for cash are more aware by the correct age of child for different doses of Polio vaccine more than other caretakers.

Regarding the side effects of Polio vaccine, Table 4-3 indicates that 27 percent of caretakers reported that Polio vaccine has side effects with large differences between regions (40 percent in Lower Egypt vs. 18 percent in Upper Egypt).

4.3 Knowledge of NID of Polio Vaccine

The Ministry of Health and Population has recommended a new strategy to encourage caretakers to immunize their children against Polio disease to completely eradicate Polio from Egypt. Maximizing the coverage of the upcoming National Immunization Day (NIDs) that works on door-to-door basis covering all Egypt is an effective strategy to eradicate Polio. Accordingly, caretakers were asked some questions about their knowledge of NID of Polio vaccine. Table 4-4 shows that almost all caretakers heard about NID, however, some differences were presented regarding the time of the last NID for Polio made by MOHP. The results shown in the table indicate that 6 percent of all caretakers mentioned that the last NID was in the previous year (2001) and 10 percent mentioned “*don't know*” category. Six percent mentioned that the last NID was in July 2002, since some of those caretakers was found in Qena where a NID was carried there in this month.

Background Characteristics	Heard about NID	Why MOHP do NID				Imp. of NID	Total No. of Caretakers
		To totally eradicate Polio	To make sure all children are immunized	To protect children against Polio	D.K		
Age							
Less than 25	99.7	51.8	31.1	43.0	0.0	99.0	166
25-39	99.4	54.8	30.0	39.8	0.5	97.3	523
40 +	100.0	46.2	32.5	37.9	3.7	95.6	61
Urban / Rural Residence							
Urban	98.7	59.6	30.2	34.2	1.0	96.9	365
Rural	100.0	49.9	30.6	44.0	0.5	98.0	385
Place of Residence							
Urban Governorates	99.1	58.1	35.5	19.0	1.8	98.2	110
Lower Egypt	99.1	51.9	14.8	63.6	0.8	97.6	295
Upper Egypt	100.0	53.0	41.6	28.9	0.1	97.3	345
Education							
No Education/ Primary Incomplete	99.6	42.7	31.1	41.0	1.4	96.5	298
Primary Complete	99.3	45.2	30.2	45.7	0.0	96.5	92
Preparatory Complete	100.0	58.5	34.8	31.1	0.0	98.2	57
Secondary Complete	99.7	64.7	27.0	40.1	0.2	99.7	233
University and Higher	98.4	73.2	34.9	40.0	0.0	96.7	80
Work Status							
Working for Cash	100.0	67.9	28.6	47.2	0.0	98.8	104
Not Working for Cash	99.5	51.3	30.7	39.4	0.7	97.4	646
Total	99.5	53.4	30.5	40.4	0.6	97.6	750

In mentioning the reasons that make MOHP do NID: “*To total eradicate the disease*” was mentioned by more than half of caretakers, and “*To protect children against the disease*” was

mentioned by slightly more than 40 percent. Large differences were observed between areas, regions and different levels of education. The first reason was reported by 60 percent and 50 percent of urban and rural caretakers respectively, while it was reported by 73 percent from highly educated caretakers compared to 43 percent among those who have never been to school. Less than one-fifth from caretakers in Urban Governorates mentioned the second reason compared to 64 percent in Lower Egypt. When caretakers were asked about the importance of NID, Table 4-4 shows that 98 percent mentioned that it is important with slight differences between areas and between different levels of education.

All caretakers were asked if the NID doses differ from the routine immunization doses of Polio. Table 4-5 shows that 82 percent of caretakers mentioned that the Polio vaccine administered during NID is the same as that used during routine immunization, while 15 percent mentioned “*don't know*” category with some differentials between areas and between regions. Eighty nine percent from Urban Governorates said that there are no differences between the two doses compared to 79 percent from Upper Egypt. Moreover, some differentials were observed between different levels of education.

Table 4-5 Perception about Polio Immunization										
Percentage of caretaker by perception about Polio Immunization, according to selected background characteristics, Baseline survey 2002.										
Background Characteristics	NID Doses Differ from Main Doses			Ability of Taking NID Doses with Main Doses			NID Doses Replace the Main Immunization Doses			Total No. of Caretakers
	Yes differ	Don't differ	D.K	Yes	No	D.K	Yes	No	D.K	
Age										
Less than 25	3.0	81.0	15.6	95.8	3.9	0.0	10.5	80.6	8.6	166
25-39	3.2	82.4	13.9	95.2	3.5	0.7	10.4	80.1	8.9	523
40 +	2.0	83.8	14.2	93.9	4.0	2.2	14.7	79.7	5.6	61
Urban / Rural Residence										
Urban	3.2	87.4	8.1	95.6	2.7	0.4	8.6	86.3	3.7	365
Rural	3.0	79.2	17.9	95.0	4.2	0.8	12.0	76.6	11.4	385
Place of Residence										
Urban Governorates	1.8	89.1	8.2	96.4	1.8	0.9	5.4	91.8	1.8	110
Lower Egypt	4.1	83.6	11.4	91.4	6.4	1.3	6.7	89.3	3.1	295
Upper Egypt	2.6	78.5	18.9	98.0	2.0	0.0	16.1	68.5	15.5	345
Education										
No Education/ Primary Incomplete	1.1	77.2	21.4	94.0	4.5	1.1	14.9	68.5	16.3	298
Primary Complete	2.2	82.4	14.8	98.5	0.8	0.0	10.3	84.6	4.4	92
Preparatory Complete	3.5	87.6	8.9	95.1	5.0	0.0	0.0	93.7	6.3	57
Secondary Complete	4.6	87.6	7.5	95.5	3.6	0.6	8.8	88.6	2.2	233
University and Higher	8.1	83.4	6.9	96.2	2.2	0.0	7.7	90.7	0.0	80
Work Status										
Working for Cash	7.8	82.8	9.5	95.6	3.1	1.3	9.3	87.0	3.8	104
Not Working for Cash	2.4	82.1	15.0	95.2	3.7	0.6	11.0	79.2	9.3	646
Total	3.0	82.2	14.3	95.2	3.6	0.7	10.8	80.2	8.6	750

Caretakers were also asked about the ability of taking the NID doses if the child was given the 3 main doses and the activated doses of Polio. Slightly more than 95 percent agreed that the

child should take NID doses even if he was given all main doses. These percentages differ by regions. Regarding the ability of the NID doses to replace the main doses, 80 percent mentioned that children should come to be immunized even those who have already been immunized in previous NID, that is NID doses can not replace the main doses, while 11 percent agreed the replacement, with large differentials between areas, regions and levels of education. Ninety two percent of caretakers in Urban Governorates reported that NID can not replace the main doses compared to 68 percent in Upper Egypt. Caretakers who working for cash are more aware by the importance of the main doses that can not be replaced by NID doses more than those who are not working for cash (87 percent vs. 79 percent).

Table 4-6 covers caretaker's knowledge about the effectiveness of extra doses of Polio vaccine on child. Overall, the table shows that 64 percent mentioned that extra doses will not harm the child and 24 percent mentioned that extra doses provide the child with extra protection and increase the child's resistance to Polio, while 4 percent mentioned that the child might have Polio and 8 percent mentioned "don't know" category. Large differentials are observed among different categories in Table 4-6. Seventy three percent of caretakers in Lower Egypt mentioned "will not harm the child" compared to 55 percent in Upper Egypt, while 21 percent mentioned "extra protection" compared to 27 percent in Upper Egypt. Regarding the level of education and the work status of caretakers, some differentials were observed and clear in the table.

Table 4-6 Perception about Polio Immunization					
Percentage of caretaker by perception about Polio Immunization, according to selected background characteristics, Baseline survey 2002.					
Background Characteristics	Effectiveness of Extra Doses				Total No. of Caretakers
	No harm	More protection	Might have polio	D.K	
Age					
Less than 25	66.6	23.1	4.2	6.1	166
25-39	62.7	25.9	2.9	8.6	523
40 +	66.6	14.3	6.7	12.4	61
Urban / Rural					
Residence					
Urban	63.7	29.3	2.9	4.1	365
Rural	64.0	21.5	3.8	10.7	385
Place of Residence					
Urban Governorates	67.3	25.5	4.6	2.7	110
Lower Egypt	72.9	21.0	4.0	2.1	295
Upper Egypt	55.2	26.7	2.6	15.4	345
Education					
No Education/ Primary Incomplete	58.1	23.6	4.2	14.2	298
Primary Complete	62.0	29.4	5.2	3.5	92
Preparatory Complete	69.6	20.3	7.9	2.2	57
Secondary Complete	68.9	24.9	1.0	5.2	233
University and Higher	72.5	23.5	2.0	2.1	80
Work Status					
Working for Cash	71.5	18.3	4.5	5.8	104
Not Working for Cash	62.8	25.2	3.3	8.7	646
Total	63.9	24.3	3.5	8.3	750

4.4 Knowledge of Correct Information about Polio Vaccination

Polio is an infectious dangerous disease that can cripple or kill the child. Accordingly, caretaker's knowledge regarding the correct information of Polio vaccine was examined and presented in Tables 4-7 – 4-13.

Table 4-7 shows the percentage distribution of caretakers according to their responses regarding the cases of not receiving all doses of Polio vaccine, one dose and delays any dose. When caretakers asked about the consequences of not receiving any Polio immunization dose, 54 percent mentioned “*Surely will have Polio*” and 44 percent mentioned “*Might have Polio*” with large differentials between regions and between levels of education. Seventy seven percent of caretakers in Urban Governorates mentioned that the child surely will have Polio compared to 34 percent only among Upper Egypt, while 21 percent among Urban Governorates mentioned that the child might have Polio compared to 64 percent among Upper Egypt. Highly educated caretakers are more aware by the great consequences of not receiving all Polio doses more than those who have never been to school.

When caretakers were asked about the consequences of not taking one dose of the main immunization doses, 16 percent mentioned that the child surely will have Polio while 62 percent mentioned that he might have Polio and 13 percent mentioned nothing happens. The highest percentage of caretakers mentioned that the child will have Polio as a result of not receiving one dose was found in Urban Governorates (38 percent) compared to 6 percent only in Upper Egypt. The situation is reversed for caretakers who mentioned that the child might have Polio.

Regarding the delaying of one dose, Table 4-7 shows that 43 percent of caretakers reported “*Nothing happens*”. Half of caretakers in Lower Egypt mentioned the same response compared to one fifth only in Urban Governorates. Slight differences were observed between levels of education and work status.

Table 4-7 Caretaker's Knowledge about the Effects if the Child Doesn't Take Polio Vaccine

Percentage of caretaker by their general Knowledge about the effects if the child does not take Polio vaccine, according to selected background characteristics, Baseline survey 2002.

Background Characteristics	What Happened if the Child													Total No. of Caretakers
	Doesn't not Take Any dose				Doesn't not Take One dose				Delays Any Dose					
	Nothing happens	Might have Polio	Surely will have Polio	D.K	Nothing happens	Might have Polio	Surely will have Polio	D.K	Nothing happens	Nothing happens if delays 1 month only	Might have Polio	Surely will have Polio	D.K	
Age														
Less than 25	1.2	40.9	56.7	1.2	10.3	66.7	17.1	4.8	49.4	20.5	11.6	7.2	9.7	166
25-39	0.6	45.2	53.3	0.9	12.6	60.4	16.9	9.4	41.7	21.5	16.8	6.4	13.0	523
40 +	0.0	40.3	53.8	6.0	17.9	62.3	3.8	16.1	37.8	22.0	14.4	3.8	22.1	61
Urban / Rural Residence														
Urban	0.7	30.8	67.7	0.8	15.8	52.3	24.2	7.0	30.7	25.3	22.1	12.5	8.6	365
Rural	0.7	51.3	46.3	1.7	10.6	67.5	11.2	10.0	50.3	19.0	11.6	2.8	15.5	385
Place of Residence														
Urban Governorates	0.9	21.0	77.2	0.9	19.1	37.4	37.3	5.4	19.9	23.7	26.4	24.6	4.5	110
Lower Egypt	0.7	29.4	68.6	1.3	14.3	63.4	18.9	2.7	49.7	29.0	10.9	3.8	5.8	295
Upper Egypt	0.7	63.8	33.9	1.6	8.7	69.5	5.9	15.2	45.9	14.1	15.3	2.0	22.0	345
Education														
No Education/ Primary Incomplete	1.1	55.6	41.2	2.2	9.8	61.1	12.7	15.4	45.3	12.3	13.6	4.6	23.3	298
Primary Complete	0.0	35.5	61.7	2.8	15.6	58.3	18.1	8.0	35.1	33.3	15.7	8.1	7.8	92
Preparatory Complete	0.0	37.9	60.6	1.6	15.0	62.5	20.5	2.0	44.0	19.0	15.1	10.3	11.8	57
Secondary Complete	0.0	37.4	62.6	0.0	12.7	69.2	14.1	4.0	45.6	29.2	16.3	5.0	3.7	233
University and Higher	2.9	25.0	72.1	0.0	18.2	47.6	30.2	1.1	35.0	25.3	21.3	13.6	2.0	80
Work Status														
Working for Cash	0.0	35.2	64.8	0.0	20.8	55.5	21.1	2.6	43.0	26.9	17.7	7.8	4.0	104
Not Working for Cash	0.8	45.1	52.5	1.6	11.3	62.9	15.2	9.8	43.1	20.5	15.1	6.2	14.3	646
Total	0.7	43.8	54.1	1.4	12.5	61.9	15.9	8.9	43.1	21.3	15.4	6.4	13.0	750

Figure 4.1 shows the distribution of caretakers according to their knowledge regarding the existence of a maximum number of Polio doses, the minimum and the maximum age of child for receiving these doses. The findings indicate that half of caretakers mentioned that there is no maximum number of doses, while slightly more than 30 percent mentioned the existence of a limited number of doses and 20 percent mentioned “don’t know” category. Regarding the age of child receiving Polio doses, Figure 4.1 indicates that 46 percent of all caretakers reported that the child from the first day of delivery can receive Polio dose and almost 39 percent mentioned two months while 11 percent mentioned one month. Slight differences were observed between areas and between regions (not shown in the figure). With respect to the maximum age of child receiving Polio dose, figure 4.1 shows that more than three-fourth of caretakers reported that children less than five years of age should be brought for immunization.

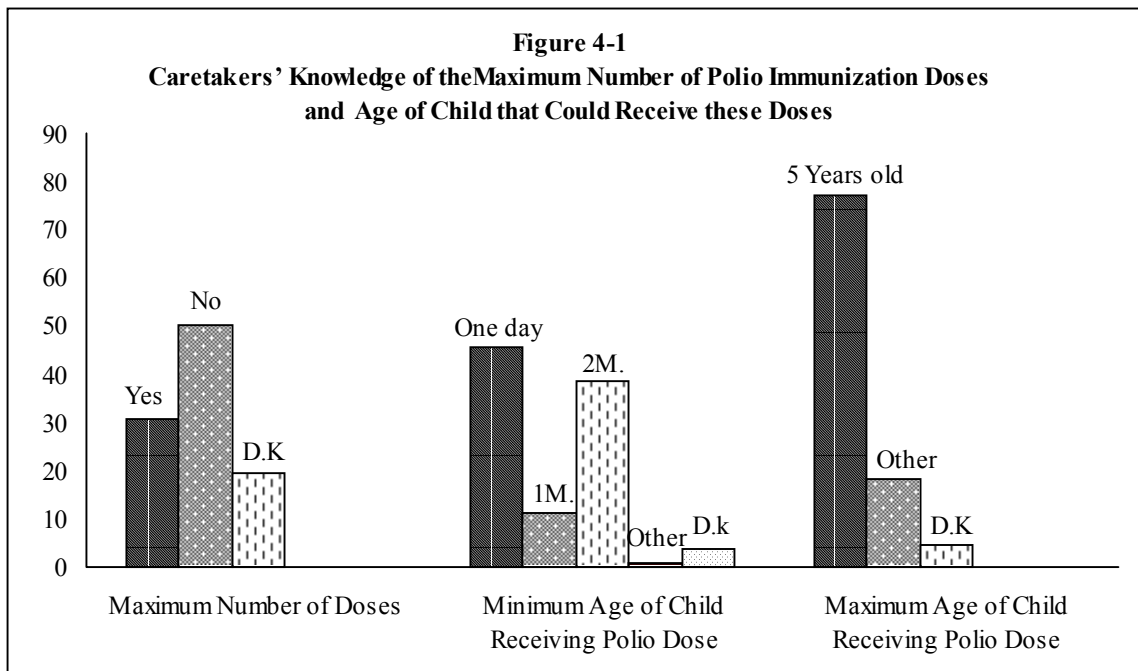


Table 4--8 presents information about caretakers’ knowledge regarding the ability of the child to be immunized in some special cases. Regarding the existence of fever, data shown in the table indicates that 62 percent of caretakers mentioned that child could not be immunized while having fever and 36 percent reported that he could be immunized. Differentials were observed among regions and according to levels of education. Caretakers in Urban Governorates are more likely to immunize their children while having fever than those in Upper Egypt (55 percent vs. 29 percent). Also, caretakers in higher levels of education are more likely to immunize their children while having fever than those in lower levels of education.

Table 4-8 shows also that 86 percent of caretakers mentioned that the child could be immunized if he ate before getting the vaccine with minor differences between regions, work status and levels of education. When caretakers were asked about the needs of child who breastfeed to be immunized, 85 percent mentioned that the child should take the vaccine.

Table 4-8 Perception about Polio Immunization

Percentage of caretakers by perception about Polio immunization, according to selected background characteristics, Baseline survey 2002.

Background Characteristics	Can a Child Get Immunized While Having Fever			Can a Child Get Immunized If He Ate Before It			Does a Child Who is Breastfed Needs to Get Immunized			Total No. of Caretakers
	Yes	No	D.K	Yes	No	D.K	Yes	No	D.K	
Age										
Less than 25	36.1	62.1	1.9	85.8	11.4	2.8	87.4	12.6	0.0	166
25-39	35.9	61.9	2.2	86.6	12.5	1.0	83.9	15.6	0.5	523
40 +	36.7	57.2	6.2	80.0	15.8	4.2	84.4	15.6	0.0	61
Urban or Rural Residence										
Urban	45.6	51.8	2.6	85.8	12.0	2.2	88.0	12.0	0.0	365
Rural	30.4	67.2	2.3	85.9	12.8	1.3	82.8	16.6	0.6	385
Place of Residence										
Urban Governorates	54.6	42.8	2.6	84.6	11.8	3.6	94.5	5.5	0.0	110
Lower Egypt	36.7	63.1	0.2	87.3	12.4	0.4	83.7	16.3	0.0	295
Upper Egypt	28.8	67.0	4.2	85.2	12.8	2.0	83.0	17.1	0.8	345
Education										
Never Been To School/										
Primary Incomplete	26.4	69.9	3.6	81.7	16.1	2.3	83.6	15.6	0.9	298
Primary Complete	41.9	58.1	0.0	79.3	19.4	1.3	82.1	17.9	0.0	92
Preparatory Complete	34.6	64.7	0.8	88.9	10.3	0.8	83.8	16.2	0.0	57
Secondary Complete	37.9	58.0	2.1	90.8	7.5	1.7	84.6	15.4	0.0	233
University and Higher	61.5	36.3	2.1	95.3	4.8	0.0	94.5	5.5	0.0	80
Work Status										
Working for Cash	47.2	51.6	1.2	88.2	10.6	1.2	90.6	9.4	0.0	104
Not Working for Cash	34.4	63.1	2.6	85.5	12.8	1.7	83.9	15.7	0.4	646
Total	36.0	61.6	2.4	85.9	12.5	1.7	84.7	14.9	0.4	750

Table 4-9 presents information about caretakers' knowledge regarding the immunization of children against Polio while having diarrhea. Caretakers were asked: "if the child had received a Polio vaccine dose while having diarrhea, should he immunized again?", overall, forty one percent of caretakers mentioned that he should receive it again, while 49 percent mentioned that he should not. Those who reported that the child should be re-immunized again, they were asked "after how long should repeat the immunization dose?", 94 percent mentioned that after the recovery of the child.

To examine the awareness of caretakers regarding the symptoms of Polio, Table 4-10 shows that 67 percent of caretakers knew that child can not walk or stand with minor differences between regions and levels of education. Eight percent knew that the symptom of Polio is high fever with cold, while quarter of caretakers do not know any symptoms for Polio and 11 percent said any other symptoms.

Table 4-9 Immunization During Diarrhea

Percentage of caretakers by their attitudes towards immunization during the existence of diarrhea, according to selected background characteristics, Baseline survey 2002.

Background Characteristics	Re-vaccine Child if Vaccine Taken While Having Diarrhea			After How Long Should He Take this Immunization Dose				Total No. of Caretakers
	Yes	No	D.K	After 4 Weeks	After 8 Weeks	After recovery	Other	
Age								
Less than 25	36.5	48.1	15.4	3.1	0.0	95.0	2.0	166
25-39	41.4	49.2	9.4	3.9	1.3	92.7	2.2	523
40 +	50.4	46.4	3.2	0.0	0.0	97.5	2.5	61
Urban / Rural Residence								
Urban	42.9	49.8	7.3	4.5	0.0	93.2	2.3	365
Rural	39.9	48.2	12.0	2.7	1.4	93.8	2.1	385
Place of Residence								
Urban Governorates	39.1	54.5	6.3	2.3	0.0	95.3	2.3	110
Lower Egypt	42.7	48.2	9.1	2.1	0.0	96.3	1.6	295
Upper Egypt	40.3	47.2	12.6	4.9	2.0	90.6	2.6	345
Education								
Never Been To School/ Primary Incomplete	39.2	48.0	12.8	3.2	0.0	94.3	2.5	298
Primary Complete	27.2	63.4	9.4	0.0	0.0	100.0	0.0	92
Preparatory Complete	41.7	43.9	14.3	0.0	0.0	100.0	0.0	57
Secondary Complete	48.7	42.9	8.5	2.9	2.6	93.0	1.6	233
University and Higher	41.6	56.3	2.1	11.2	0.0	82.4	6.4	80
Work Status								
Working for Cash	38.5	50.4	11.1	9.1	0.0	84.7	6.2	104
Not Working for Cash	41.4	48.5	10.2	2.6	1.0	94.8	1.6	646
Total	41.0	48.7	10.3	3.4	0.9	93.6	2.2	750

Polio is an infectious disease, but this information was not known by all caretakers, Table 4-10 shows that 9 percent only of caretakers knew that Polio is an infectious disease, while three-quarters of caretakers mentioned that the child will not affect others when he suffers from one of the symptoms of Polio. Some differentials were observed among regions, 21 percent of caretakers in Urban Governorates mentioned that it is an infectious disease decreased to 8 percent in Lower Egypt and 5 percent in Upper Egypt. Moreover, increasing the level of education will increase the awareness of caretakers that it is an infectious disease.

Table 4-10 Knowledge about Symptoms of Polio

Percentage of caretakers by their knowledge about symptoms of Polio, according to selected background characteristics, Baseline survey 2002.

Background Characteristics	Symptoms of Polio				Child effect others during symptoms			Total No. of Caretakers
	Can't stand up or walk	High fever & cold	Other	D.K	Yes	No	D.K	
Age								
Less than 25	64.8	10.3	6.9	29.8	10.1	72.6	17.3	166
25-39	68.2	8.0	12.7	23.1	8.3	76.1	15.6	523
40 +	59.1	4.7	18.6	30.8	8.9	67.6	23.5	61
Urban / Rural Residence								
Urban	64.6	11.5	16.3	27.2	14.2	67.9	17.9	365
Rural	68.0	6.4	9.2	24.1	5.7	78.5	15.9	385
Place of Residence								
Urban Governorates	71.1	16.4	12.8	24.4	21.0	62.8	16.3	110
Lower Egypt	60.4	13.4	12.0	27.8	8.4	75.5	16.1	295
Upper Egypt	70.4	1.1	11.3	23.4	4.8	78.1	17.1	345
Education								
Never Been To School/ Primary Incomplete	70.0	2.0	8.4	24.6	5.7	74.0	20.3	298
Primary Complete	62.1	6.6	13.4	28.3	12.1	74.5	13.5	92
Preparatory Complete	60.7	2.4	7.1	34.9	9.5	71.2	19.3	57
Secondary Complete	63.2	13.3	16.2	25.0	8.6	77.6	13.7	233
University and Higher	73.7	28.2	15.9	16.6	18.7	71.1	10.2	80
Work Status								
Working for Cash	66.1	15.2	21.9	22.7	11.8	73.9	14.3	104
Not Working for Cash	66.8	7.2	10.3	25.6	8.3	74.7	17.0	646
Total	66.8	8.2	11.8	25.2	8.8	74.6	16.6	750

Most of caretakers (96 percent) do not know any one who was infected by Polio disease (not shown in a table). However, they were asked about their reaction if they know someone who was infected by Polio. Table 4-11 shows that 96 percent of all caretakers mentioned that they will advise him to go to a physician and five percent mentioned that they will immunize their children since it is an infectious disease. Confirming the previous results, caretakers in Urban Governorates and those who are in high levels of education aware that Polio is an infectious disease, where those caretakers mentioned that they will examine and immunize their children more than other caretakers.

Almost all caretakers (not shown in a table) mentioned that they will go to a health unit or a health provider when they were asked about their reaction if they feel that one of their children was unable to walk.

Background Characteristics	If Someone Have Polio Symptoms						Total No. of Caretakers
	Advice Him to Go to Physician	Examine My Children	Get Away from My Children	Immunize My Children	Other	D.K	
		Because Polio is Infectious					
Age							
Less than 25	96.4	3.0	1.3	4.2	0.7	0.3	166
25-39	95.3	2.4	1.1	4.7	0.6	1.5	523
40 +	98.2	0.7	2.9	8.7	0.0	1.8	61
Urban \ Rural Residence							
Urban	92.4	4.9	1.6	7.6	1.5	1.9	365
Rural	97.7	1.0	1.1	3.4	0.0	0.8	385
Place of Residence							
Urban Governorates	92.7	5.5	0.9	8.2	0.9	0.9	110
Lower Egypt	97.2	1.6	1.7	4.8	0.3	0.8	295
Upper Egypt	95.7	2.0	1.1	3.8	0.7	1.7	345
Education							
Never Been To School/ Primary Incomplete	96.4	0.4	1.1	4.0	0.7	1.3	298
Primary Complete	95.0	3.5	3.0	6.8	0.0	0.0	92
Preparatory Complete	93.4	0.0	0.0	4.3	1.9	4.8	57
Secondary Complete	96.1	4.3	1.5	4.8	0.3	0.5	233
University and Higher	95.1	6.5	0.6	7.8	0.0	1.6	80
Work Status							
Working for Cash	95.2	5.2	1.3	6.9	0.0	1.2	104
Not Working for Cash	95.9	2.0	1.3	4.6	0.6	1.2	646
Total	95.8	2.4	1.3	4.9	0.6	1.2	750

Table 4-12 presents the attitudes of the child's family who is infected by the symptoms of Polio disease. Overall, 93 percent of caretakers mentioned that this family should go to a physician or to a health unit (90 percent in Urban Governorates compared to 95 percent in Upper Egypt) with minor differentials among different levels of education. When caretakers were asked about the place that should be informed by the child's family regarding the appearance of symptoms of Polio on the child, overall, 55 percent mentioned that they will inform the health unit in the area, with some differentials between regions, educational levels and work status. Caretakers who work for cash are more aware to inform a health unit about the infected child more than not working caretakers (65 percent vs. 54 percent respectively). Also caretakers in Urban Governorates are more aware than those in Lower and Upper Egypt (63 percent vs. 50 percent and 57 percent respectively). Slightly more than 36 percent of all caretakers do not know whom to inform regarding the appearance of any infected child and 8 percent mentioned places other than a health unit.

Table 4-12 Symptoms of Polio							
Percentage of caretakers by their attitudes towards the appearance of symptoms, according to selected background characteristics, Baseline survey 2002.							
Background Characteristics	Family Reaction if Someone Have Polio			Report to Whom about Infection			Total No. of Caretakers
	Will Do Nothing	Go to Physician/ Health Unit	D.K	Health Unit	Other	D.K	
Age							
Less than 25	7.9	90.9	1.3	61.1	7.2	31.8	166
25-39	5.8	94.1	0.2	55.7	8.3	36.1	523
40 +	4.9	93.3	1.8	37.0	11.1	51.9	61
Urban or Rural Residence							
Urban	5.7	94.0	0.4	59.9	7.5	32.6	365
Rural	6.5	92.9	0.6	52.9	8.7	38.4	385
Place of Residence							
Urban Governorates	9.1	90.0	0.9	62.8	2.7	34.5	110
Lower Egypt	6.5	92.7	0.8	49.9	12.3	37.8	295
Upper Egypt	4.8	94.9	0.3	57.5	6.8	35.7	345
Education							
Never Been To School/ Primary Incomplete	5.5	93.6	1.0	47.6	7.3	45.1	298
Primary Complete	7.5	92.5	0.0	58.7	5.1	36.2	92
Preparatory Complete	0.0	98.1	1.9	56.2	9.9	33.9	57
Secondary Complete	7.4	92.6	0.0	62.2	10.2	27.6	233
University and Higher	9.4	90.6	0.0	66.1	8.8	25.2	80
Work Status							
Working for Cash	5.0	95.0	0.0	64.7	10.7	24.6	104
Not Working for Cash	6.4	93.0	0.6	54.1	7.9	38.0	646
Total	6.2	93.3	0.6	55.5	8.2	36.3	750

ATTITUDES TOWARDS POLIO IMMUNIZATION

5

To assess the attitudes of caretakers towards Polio immunization, caretakers were asked first about their perception on the importance of having Polio immunization and the importance of taking all main and activated doses. The questionnaire included questions on timing and dating for taking Polio immunization. Caretakers were also asked if they advise their neighbors to immunize their own children and reason for advising. In addition, more questions were added about the importance of taking NID until the child reached his fifth birthday and reason for this, and if they think that Polio immunization will harm the child or not. In the following the results of those questions will be discussed.

5.1 Attitudes towards Polio Immunization

As mentioned before, caretakers were asked about the importance of routine immunization. Data in Table 5-1 indicated a very positive and supportive attitude of all caretakers towards Polio immunization; all of them mentioned that Polio is important, and the majority of them (90 percent) said that the child have to take all main and activated Polio doses, while 9 percent mentioned that taking the main Polio doses is enough for the child.

Background Characteristics	Polio is	Imp. of Taking All Main	Imp. to Take Vaccine			Total No. of Caretakers
	Imp. or Not	and Activating Doses	at a Specific Date			
	Imp.	Imp. to Take Main Doses	Imp.	Unimp.		
Age			Imp. to Take Main & Activating Doses			
Less than 25	100.0	11.6	88.4	96.3	2.3	166
25-39	100.0	7.9	91.1	96.2	2.7	523
40 +	98.2	8.8	85.0	96.6	1.6	61
Urban / Rural Residence						
Urban	100.0	8.0	91.6	96.3	3.6	365
Rural	99.8	9.3	89.1	96.3	1.9	385
Place of Residence						
Urban Governorates	100.0	13.7	86.3	96.4	3.7	110
Lower Egypt	99.6	9.5	89.2	98.5	1.1	295
Upper Egypt	100.0	6.5	92.0	94.4	3.3	345
Education						
Never Been To School /Primary Incomplete	99.7	11.7	85.5	94.1	3.4	298
Primary Complete	100.0	11.4	88.6	97.6	2.4	92
Preparatory Complete	100.0	4.7	95.3	95.3	3.2	57
Secondary Complete	100.0	4.9	95.1	98.6	1.5	233
University and Higher	100.0	7.8	92.2	98.3	1.7	80
Work Status						
Working for Cash	100.0	4.8	93.8	96.5	3.5	104
Not Working for Cash	99.8	9.4	89.4	96.2	2.4	646
Total	99.9	8.8	90.0	96.3	2.5	750

Timing for Polio immunization is important to keep it effective and avoid the child of having any health complication. Data in Table 5-1 show that 96 percent of interviewed caretakers motivate the idea of the importance of taking vaccine at a specific date.

As shown in Table 5-1 almost all interviewed caretakers at different age groups and residence in urban or rural area, either in Lower Egypt or Upper Egypt believe that Polio immunization is important (100 percent). Also, it is clear from the table that caretaker's at different levels of education or those who are working for cash or not also believes in the importance of Polio immunization (100 percent). This result indicated that all caretakers are aware of the importance of Polio immunization.

5.2 Attitudes towards Advising Neighbors

To measure caretakers attitudes toward their neighbors was important issue in the study, therefore caretakers were asked if they are willing to advice their neighbors to immunize their own children, and why they are willing to do that. Results of these questions presented in Table 5-2. Data show that, overall, 89 percent of the caretakers indicated that they are willing to advice their neighbors to immunize their own children, while only 7 percent answer "No". "Not to have Polio" is the only answered mentioned by all caretakers who show that they are willing to advice their neighbors to immunize their own children (94 percent), while 6 percent mentioned other different answers.

Table 5-2 Attitudes towards Advice Neighbors						
Percentage of caretakers by Attitudes towards advice neighbors, according to selected background characteristics, Baseline survey 2002.						
Background Characteristics	Advice Neighbors to Immunize Children			Reasons for Advice Not to have Polio		Total No. of Caretakers
	Yes	No	D.K	Polio	Other	
Age						
Less than 25	87.4	8.5	4.2	92.1	7.9	166
25-39	89.9	6.1	4.1	94.1	5.9	523
40 +	89.8	7.5	2.7	92.3	7.7	61
Urban / Rural Residence						
Urban	91.3	7.1	1.6	93.8	6.2	365
Rural	88.1	6.5	5.4	93.4	6.6	385
Place of Residence						
Urban Governorates	93.7	6.3	0.0	93.7	6.3	110
Lower Egypt	89.2	7.7	3.1	93.5	6.5	295
Upper Egypt	87.8	6.1	6.1	93.5	6.5	345
Education						
Never Been To School/ Primary Incomplete	84.4	7.4	8.2	92.1	8.0	298
Primary Complete	88.9	10.6	0.5	91.2	8.8	92
Preparatory Complete	91.8	8.6	0.0	91.4	8.6	57
Secondary Complete	95.1	3.7	1.6	96.9	3.1	233
University and Higher	92.4	7.6	0.0	94.1	5.9	80
Work Status						
Working for Cash	94.8	4.7	0.5	96.5	3.5	104
Not Working for Cash	88.5	7.0	4.5	93.1	6.9	646
Total	89.3	6.7	4.0	93.5	6.5	750

Caretakers residence in urban areas especially in Urban Governorates are more supportive to advice their neighbors to immunize their children (91 percent in urban area & 94 in Urban Governorates). Also, highly educated caretakers (95 percent of those with secondary education) and 95 percent of those who are working for cash mentioned that they are willing to advice their neighbors to immunize their children.

5.3 Attitudes towards Polio Immunization in NID

All caretakers were asked if they think that it is important for the child to take the immunization at each NID until age five or not to recognize their attitudes towards Polio immunization in NID. Data in Table 5-3 presents caretakers attitudes towards immunization in NID. Overall, 86 percent of caretakers mentioned that it is important for the child to take all NID doses until age five, while 13 percent mentioned that it is not important for the child to take all NID doses and can take only some of NID doses. All caretakers were asked to identify reasons for their attitudes. Almost two third of caretakers said that it prevent child of having Polio, while 19 percent of them said that vaccination is a must till five years, and 12 percent indicated that immunization is important to give child more immunity. The most obvious and surprising result was that around 10 percent of caretakers believe that Polio immunization will harm the child.

Table 5-3 Attitudes Towards Polio Immunization in NID									
Percentage of caretakers by attitudes towards Polio immunization in NID, according to selected background characteristics, Baseline survey 2002.									
Background Characteristics	Take NID Doses Until Age 5		Reason for Importance				Polio Immunization Will Harm the Child		Total No. of Caretakers
	Imp. in all	Imp. in some	Not to have Polio	Told that vaccination is a must till 5 years	More immunity	More doses makes the child sick	Yes	No	
Age									
Less than 25	86.0	14.0	64.5	24.2	8.2	3.1	14.3	85.7	166
25-39	87.4	11.9	66.4	17.8	13.1	1.8	9.8	89.8	523
40 +	76.3	23.7	72.0	18.6	9.4	0.0	3.1	95.1	61
Urban / Rural Residence									
Urban	85.8	13.4	66.4	14.2	16.1	2.0	14.0	85.2	365
Rural	76.5	13.3	66.4	22.3	9.1	1.9	8.2	91.6	385
Place of Residence									
Urban Governorates	83.6	16.4	64.5	14.6	15.5	4.6	20.1	78.1	110
Lower Egypt	87.8	11.7	69.9	15.3	11.1	3.2	14.9	84.8	295
Upper Egypt	85.8	13.5	64.2	24.4	10.8	0.0	3.1	96.9	345
Education									
Never Been To School/ Primary Incomplete	84.4	14.9	64.8	22.3	10.3	1.9	6.8	92.2	298
Primary Complete	82.2	17.8	71.2	19.4	6.9	2.6	13.3	86.7	92
Preparatory Complete	84.5	15.5	69.0	21.3	7.9	1.8	7.4	92.6	57
Secondary Complete	90.5	9.5	68.8	16.2	13.5	1.0	12.9	78.1	233
University and Higher	87.5	10.8	58.3	13.7	21.5	4.8	17.2	82.8	80
Work Status									
Working for Cash	85.6	13.2	62.9	10.8	21.3	3.8	10.2	89.8	104
Not Working for Cash	86.3	13.3	66.9	20.6	10.3	1.7	10.3	89.2	646
Total	86.2	13.3	66.4	19.3	11.7	2.0	10.3	89.3	750

Caretakers in urban areas indicated that child immunization at all NID until age five is important (86 percent) compared to 77 percent of caretakers residence in rural area. Also, respondents who are less than 25 years or at age group 25-39 more supportive to the idea of the importance of taking all NID doses until age five (86 percent & 87 percent respectively), while only three quarters of those at age group 40 years and more mentioned that taking all NID doses until age five is important. More than 85 percent of caretakers with secondary education or with university and higher believe that taking all NID doses until age five is important. With no significant differential between those who are working for cash or not (86 percent for each of them). Most of caretakers who risk that Polio immunization will harm the child are those less than 25 years old (14 percent), residence in urban areas (14 percent), especially in Urban Governorate (20 percent) and having a university degree and higher (17 percent).

PRACTICES OF POLIO IMMUNIZATION

6

Increasing the immunization coverage of children against the major preventable diseases of childhood is a cornerstone of Egypt's child survival programs.

Therefore, Egypt's ministry of Health and Population has adopted World Health Organization "WHO" guidelines for childhood immunizations that call for all children to receive a BCG vaccination against tuberculosis; three doses of the DPT vaccine to prevent diphtheria, pertussis, and tetanus; three doses of Polio vaccine; and a measles vaccination during the first year of life. In addition to these standard immunizations, Egypt's childhood immunization program recommends that children receive three doses of the hepatitis vaccine.

To measure caretakers practices for taking vaccination, the questionnaire included two sets of questions addressed to caretakers. The first set of questions was asked to only those who receive the main doses of all kinds of vaccinations to measure immunization coverage. The second set of questions were addressed to those who receive NID Polio doses, to highlight coverage of Polio vaccine particularly NID, and reasons for not receiving any of the NID doses at time. Accordingly, the following discussion in this chapter will present results for these sets of questions.

6.1 Immunization Coverage

In Egypt, immunization may be recorded on a child's birth record (certificate) or on a special health card. In collecting data on immunization coverage in "Support to National Communication Polio Plan Survey", caretakers were asked to show the interviewer the birth record and/or health card for each child under five. When the caretaker was able to show the birth record and/or health card, the dates of vaccinations were copied from the document(s) to the questionnaire. If neither a birth record nor a health card was available (or a vaccination was not recorded), caretakers were asked a series of questions to determine whether the child had ever received specific vaccines and, if so, the number of doses.

Table 6-1 shows information on vaccination coverage whether by the child's birth record and/or health card or the caretaker's report, according to selected background characteristics of caretakers. The table represents data for children 12-59 months of age in order to focus on children already had received the main immunization doses.

Table 6-1 shows that birth records and/or health cards were available in the case of 70 percent of children 12-59 months with 73 percent in rural areas and 65 percent in urban areas. For the rest of the children, the information on vaccinations was based on the mother's report. Regarding the place of residence, Lower Egypt has the highest birth record or health card compared to other regions (74 percent in Lower Egypt compared to 69 percent in Upper Egypt and 63 percent in Urban Governorates). The results presented in the table indicate also that among children more than one year, less than one percent have not been immunized against any of the preventable childhood diseases.

Table 6-1 Vaccinations by Background Characteristics

Percentage of children 12- 59 months who had received specific vaccines by the time of the survey (according to the vaccination record or the mother's report) and the percentage with a vaccination record, by selected background characteristics, Baseline Survey 2002

Background Characteristics	Percentage of Children who Received:														Percentage with a vaccination record	Number of children	
	BCG	DPT			POLIO			HEPATITIS			Mea-ales	All	All plus hepatitis none				
		1	2	3+	1	2	3+	1	2	3+							
Age																	
Less than 25	100.0	98.8	97.2	95.7	100.0	97.9	97.9	98.8	96.5	95.7	100.0	95.2	95.2	0.0	71.4	168	
25-39	99.8	97.6	92.8	92.6	100.0	95.9	95.9	94.1	90.3	90.2	99.5	91.9	89.2	0.0	69.5	559	
40 +	95.4	94.4	91.4	91.4	96.4	93.4	93.4	94.4	91.4	91.4	96.4	91.4	91.4	3.6	39.7	65	
Urban / Rural Residence																	
Urban	99.4	99.2	95.1	94.9	99.6	96.7	96.7	98.8	94.0	93.7	99.6	94.1	93.0	0.4	65.0	372	
Rural	99.6	96.8	92.9	92.4	99.8	95.9	95.9	93.3	90.6	90.3	99.3	91.8	89.5	0.2	72.6	420	
Place of Residence																	
Urban Governorates	100.0	99.1	96.3	96.3	100.0	96.3	96.3	98.1	95.4	95.4	100.0	95.4	94.4	0.0	62.9	108	
Lower Egypt	99.4	99.3	97.0	96.1	99.6	98.4	98.4	99.3	97.0	96.5	99.6	96.1	96.1	0.4	73.8	303	
Upper Egypt	99.4	95.9	90.2	90.0	99.7	94.4	94.4	91.1	86.6	86.4	99.0	89.1	85.4	0.3	69.3	381	
Education																	
Never Been To School/																	
Primary Incomplete	98.8	94.9	89.0	89.0	99.4	93.7	93.7	89.7	85.5	85.5	98.6	88.1	84.7	0.6	68.6	324	
Primary Complete	100.0	100.0	100.0	99.6	100.0	99.0	99.0	8.4	98.4	98.0	100.0	98.5	96.9	0.0	77.3	89	
Preparatory Complete	100.0	100.0	92.4	92.4	100.0	93.4	93.4	100.0	92.4	92.4	100.0	92.4	92.4	0.0	71.7	59	
Secondary Complete	100.0	99.5	97.1	95.9	100.0	98.3	98.3	99.5	96.3	95.7	100.0	95.5	94.7	0.0	71.8	226	
University and Higher	100.0	100.0	98.7	98.2	100.0	100.0	100.0	100.0	98.7	98.2	100.0	98.2	98.2	0.0	62.1	94	
Work Status																	
Working for Cash	100.0	100.0	98.3	97.9	100.0	100.0	100.0	100.0	97.0	96.6	100.0	97.9	96.6	0.0	71.0	118	
Not Working for Cash	99.4	97.2	92.9	92.5	99.7	95.6	95.6	94.4	90.9	90.7	99.3	91.8	89.8	0.3	69.8	674	
Total	99.5	97.6	93.7	93.2	99.7	96.2	96.2	95.2	91.8	91.5	99.4	92.6	90.7	0.3	69.9	792	

Regarding coverage levels for different types of vaccinations, Table 6-1 indicates that the coverage levels for BCG and measles are virtually universal and the proportion receiving three doses or more of the DPT is 93 percent. Considering Polio vaccination, the table indicates that almost all children 12-59 months received the first dose of Polio and around 96 percent received the second and the third dose or more of Polio vaccine. Overall, 93 percent of children are considered immunized against all of these preventable diseases, i.e., they have received a BCG and measles vaccination and the three doses of the DPT and Polio vaccines (This figure is almost the same as that in the EDHS 2000).

Hepatitis vaccinations were introduced into Egypt's childhood immunization program in the mid-1990s. Table 6-1 shows that coverage levels are high for the hepatitis vaccine, with 92 percent of children reported as having received the third dose of this vaccine. Overall, 91 percent of children 12-59 months are fully immunized against hepatitis as well as the other eight preventable illnesses.

Table 6-2 presents the percentage of children 12-59 months having the vaccination cards and the results are shown by the interviewer and the percentage of children receiving vaccinations according to the child's current age. Each age group in the table represents the experience of children during a specified calendar period before the survey. It is important to remember that the procedure used in deriving the estimates in Table 6-2 assumed that the proportion of vaccinations given to the children was based on written records/health cards as well as caretakers' recall. The first row of Table 6-2 indicates that the percentage of children for whom vaccination records were seen decreases directly with increasing age, from 72 percent among children 12-23 months to 66 percent among those 48-59 months. Thus the estimates of the percentage of children vaccinated may be less accurate as the age of the child increases.

Vaccination	Current Age of Child in Months				All children 12-59 months
	12-23	24-35	36-47	48-59	
Vaccination record seen by interviewer	72.2	71.1	70.5	65.8	69.9
Percent vaccinated					
BCG	98.7	99.4	100.0	98.4	99.2
DPT 1	97.2	97.2	97.9	98.0	97.6
DPT 2	93.5	95.5	94.7	90.8	93.7
DPT 3	91.7	93.3	93.9	87.8	91.8
Polio 1	99.4	99.4	100.0	100.0	99.7
Polio 2	97.0	97.8	95.8	94.1	96.2
Polio 3	95.9	95.8	95.8	93.0	95.2
Measles	94.5	96.6	94.0	94.8	94.9
Hepatitis 1	90.7	94.9	92.1	88.3	91.5
Hepatitis 2	88.7	92.6	90.8	86.0	89.6
Hepatitis 3	97.6	96.6	96.4	98.7	97.3
All vaccinations	90.1	90.1	90.3	83.6	88.6
All standard plus hepatitis	86.4	89.3	86.3	79.8	85.5
No vaccinations	0.6	1.2	0.0	0.0	0.4
Number of children	180	190	230	192	792

Overall, the results suggest that there is small variation regarding the immunization coverage levels during the four-year period before the survey. The proportion of children fully immunized (excluding hepatitis) did not change during the three-year period preceding the survey (90 percent), while decreased to 84 percent among children 48-59 months. Almost same pattern was observed regarding fully vaccinated (with hepatitis) group of children (around 86 percent of children during the three-year period preceding the survey compared to 80 percent during the forth-year before the survey).

6.2 Coverage of Polio Vaccine

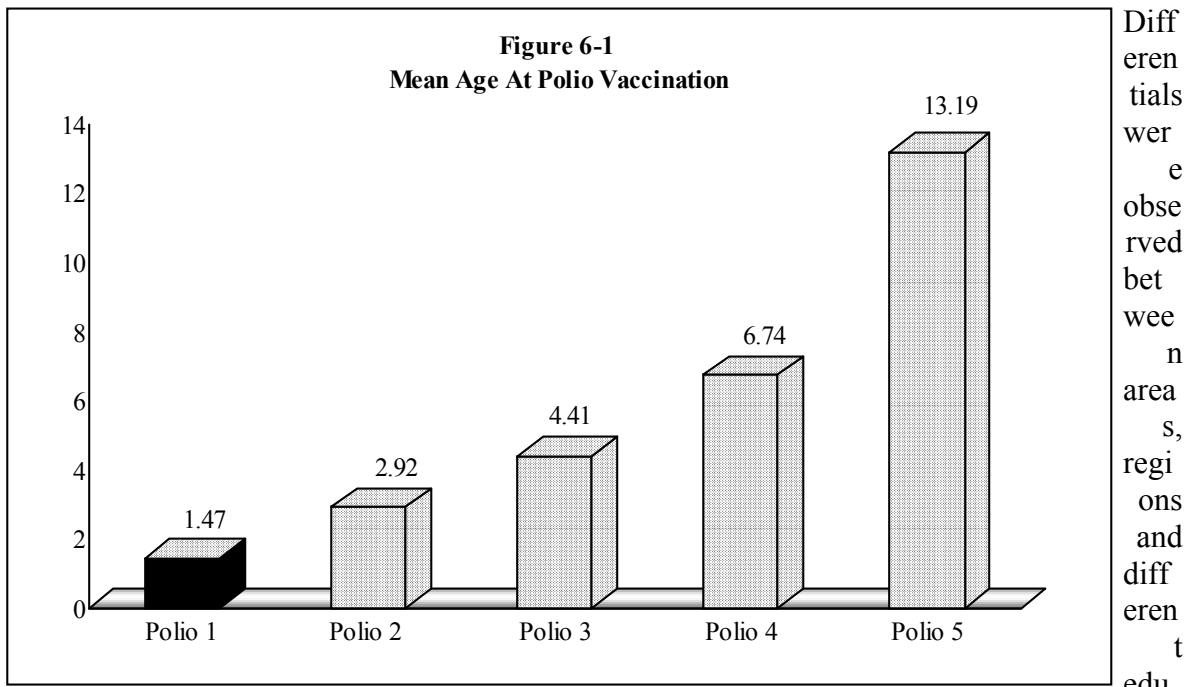
Table 6-3 presents the percentage of children 12-59 months whom a vaccination record was seen by the interviewer who received the three main doses and the activated doses of Polio vaccine. Data in the table indicated that about 93 percent of children received the first and the second dose of Polio and this percentage decreased to 91 percent for the third dose. Differentials between areas and regions are clear in the table. Caretakers in urban areas are more aware in giving their children the main doses of Polio vaccine than rural caretakers. In addition, the percentage of children received the three main doses of Polio vaccine in Urban Governorates reaches 99 percent decreased to around 86 percent in Upper Egypt. Also, working caretakers are more aware by the main doses of Polio vaccine than not working caretakers.

Table 6-3 Polio Vaccination Using Vaccination Records						
Percentage of children 12-59 months whom a vaccination record was seen by the interviewer who had received Polio vaccine, by selected background characteristics, Baseline Survey 2002.						
Background Characteristics	Polio 1	Polio 2	Polio 3	Polio 4	Polio 5	Total No.
Age						
Less than 25	94.0	94.0	92.0	89.2	74.6	148
25-39	92.0	91.7	90.8	85.2	76.8	559
40 +	94.5	94.5	94.5	88.7	79.2	65
Urban / Rural Residence						
Urban	97.5	97.2	97.2	95.5	85.9	372
Rural	90.1	89.8	88.2	81.4	71.5	420
Place of Residence						
Urban Governorates	99.1	99.1	99.1	97.2	84.2	108
Lower Egypt	98.1	98.0	97.4	91.2	84.6	303
Upper Egypt	86.5	86.0	84.5	79.3	76.8	381
Education						
Never Been To School/ Primary Incomplete	86.1	85.7	84.2	77.4	69.1	324
Primary Complete	95.2	95.2	95.2	89.2	81.2	89
Preparatory Complete	95.3	95.3	93.7	92.9	78.8	59
Secondary Complete	99.0	98.7	97.6	94.3	82.8	226
University and Higher	9.3	99.3	99.3	95.8	84.5	94
Work Status						
Working for Cash	97.0	97.0	97.0	95.2	84.1	118
Not Working for Cash	92.0	91.7	90.5	85.0	75.3	674
Total	92.7	92.4	91.4	86.4	76.5	792

Regarding the activated doses, Table 6-3 shows that about 86 percent of children 12-59 months received the forth dose/first activated dose while 76 percent received the second activated dose. These small figures for the activated doses may be due to the sample of

children included in the table, where these children (12-59 months) are still young to receive these activated doses specially the second activated dose. Considering children more than two years of age, the percentage of those who received the activated doses increased to around 85 percent (not shown in the table).

Table 6-4 and figure 6-1 show the mean age of children 12-59 months in receiving different doses of Polio vaccine from whom a vaccination record was seen by the interviewer. Overall, the first dose of Polio was received on average at age of 1.5 month, second dose at 2.9 month, third dose at 4.4 month, fourth dose/ the first activated dose at 6.7 month and the second activated dose at 13.2 month (Figure 6-1).



The mean ages reported at urban areas are less than the ideal ages reported in the birth record and/or health card in rural areas. Same results were observed between regions, where Lower Egypt is better than Upper Egypt and Urban Governorates. No differences were observed between different work status of caretakers.

Table 6-4 Mean Age at Polio Vaccination						
Mean age of children 12-59 months at Polio vaccinations whom a vaccination record was seen by the interviewer by selected background characteristics, Baseline Survey 2002.						
Background Characteristics	Polio 1	Polio 2	Polio 3	Polio 4	Polio 5	Total No.
Age						
Less than 25	1.5	2.6	4.3	6.6	13.3	148
25-39	1.5	2.6	4.4	6.8	13.2	559
40 +	1.5	3.0	4.6	6.7	13.1	65
Urban / Rural Residence						
Urban	1.4	2.7	4.0	6.0	11.9	372
Rural	1.5	3.1	4.6	7.2	14.0	420
Place of Residence						
Urban Governorates	1.3	2.6	3.9	5.8	11.3	108
Lower Egypt	1.5	3.0	4.6	7.1	13.9	303
Upper Egypt	1.5	3.0	4.4	6.8	13.2	381
Education						
Never Been To School/ Primary Incomplete	1.5	2.9	4.5	6.9	13.4	324
Primary Complete	1.6	3.2	4.8	7.0	14.2	89
Preparatory Complete	1.6	3.1	4.6	7.1	13.6	59
Secondary Complete	1.5	2.9	4.4	6.8	13.4	226
University and Higher	1.3	2.5	3.8	5.6	11.0	94
Work Status						
Working for Cash	1.5	2.9	4.3	6.5	12.5	118
Not Working for Cash	1.5	2.9	4.4	6.8	13.3	674
Total	1.5	2.9	4.4	6.7	13.2	792

Sometimes children did not receive scheduled Polio vaccination at a time, so caretakers were asked to declare the reasons for not receiving any Polio vaccine at time. Table 6-5 presents reasons for not taking the Polio vaccine at a time. "The child is still young" is the reason behind not receiving most Polio vaccine doses except for the first dose, followed by the illnesses of child that makes 58 percent of children did not receive the first dose. Less than one fifth of children not receiving the first and the second dose of Polio vaccine their caretakers mentioned "not important" as the reason.

Considering all Polio vaccine doses, the child is still young is the reason mentioned by 72 percent of cases, while 25 percent mentioned family circumstances. Only 3 percent of caretakers were forgetting to take the child for vaccination (not shown in the table).

Table 6-5 Reasons for Not Taking Polio Vaccine Doses at a Time					
Percentage of children under Five by reasons for not take the Polio vaccine at a time, Baseline Survey 2002					
Reasons	Polio 1	Polio 2	Polio 3	Polio 4	Polio 5
Reasons for not take Polio vaccine doses at a time					
Go at govern. Call only	8.3	7.5	8.0	3.3	1.3
Still young	0.0	43.8	51.1	76.7	83.6
Don't remember	7.8	11.2	8.9	5.6	6.3
Child is sick	58.2	16.5	20.3	8.1	4.4
Caretaker is busy/sick	8.8	1.3	1.1	4.2	2.7
Doesn't important	15.6	18.7	10.2	2.0	1.7
Vaccine not found	1.3	1.1	0.4	0.0	0.0
Total	32	86	116	149	282

Table 6-6 presents vaccinations by source and caretakers' background characteristics. Data show that public sector is the main source for the vaccination, with no significant differentials according to caretakers' age, region, residence, education, or work status. Only one percent of caretakers prefer to take the vaccine from private sector and most of them are aged 40 years or higher (2 percent), living in urban areas (2 percent), highly educated (5 percent) and working for cash (3 percent).

Table 6-6 Vaccinations by Source				
Percentage of children under Five by source of the last vaccine and background characteristics of caretakers, Baseline Survey 2002.				
Background Characteristics	Health unit/ health office	Private doctor	Don't remember	Total
Age				
Less than 25	99.9	0.1	0.0	227
25-39	98.5	1.1	0.4	669
40 +	96.4	1.7	1.8	67
Urban / Rural Residence				
Urban	98.4	1.5	1.1	443
Rural	99.4	0.6	0.0	520
Place of Residence				
Urban Governorates	98.5	1.5	0.0	131
Lower Egypt	98.8	1.2	0.0	373
Upper Egypt	98.7	0.5	0.8	459
Education				
Never Been To School/ Primary Incomplete	99.5	0.0	0.6	395
Primary Complete	99.0	1.0	0.0	115
Preparatory Complete	100.0	0.0	0.0	70
Secondary Complete	98.8	1.2	0.0	272
University and Higher	94.1	4.7	1.2	111
Work Status				
Working for Cash	96.2	2.8	1.0	133
Not Working for Cash	99.1	0.6	0.3	830
Total	98.7	0.9	0.4	963

6.3 Coverage of NID

More questions were asked about vaccinations at NID. Data in table 6-7 indicated that around 93 percent of children under age five have taken any dose from NID. Differentials between areas and regions are clear in the table. Ninety five percent of children in rural areas received any dose during NID compared to 90 percent in urban areas. Upper Egypt represents the highest response in receiving doses during NID compared to Lower Egypt and Urban Governorates (96 percent vs. 92.9 and 88 percent respectively).

Despite only 7 percent mentioned that their children did not receive the Polio vaccine at NID, it is still considered a very high percentage, so more questions were asked to identify reasons for not taking the vaccine at NID. Data in Table 6-7 indicated that around 43 percent of the children did not receive vaccine at NID because they are still young or the NID did not come in the area where they are living (40 percent). Data also highlight a very important issue

which is related to rumors and fears of vaccination as reasons for not taking the vaccine doses (10 percent).

Background Characteristics	Took Any Dose from NID	Reasons for Not Immunized NID				Total
		NID Didn't Come	Newly Born	Rumors	Family Circumstance	
Age						
Less than 25	92.8	42.2	50.2	0.0	7.7	239
25-39	93.7	37.0	45.1	15.3	2.6	688
40 +	92.6	54.9	0.0	0.0	45.1	71
Urban / Rural Residence						
Urban	90.0	36.1	42.3	11.7	9.9	464
Rural	95.2	43.8	43.9	7.9	4.4	534
Place of Residence						
Urban Governorates	88.3	31.0	50.2	6.3	12.5	137
Lower Egypt	92.1	52.5	37.1	10.5	0.0	389
Upper Egypt	96.0	28.1	45.7	12.5	13.7	472
Education						
Never Been To School/ Primary Incomplete	96.8	26.3	48.1	17.3	8.3	403
Primary Complete	93.3	27.6	49.7	22.7	0.0	120
Preparatory Complete	87.3	60.3	39.7	0.0	0.0	76
Secondary Complete	90.9	47.6	42.5	0.0	9.9	286
University and Higher	90.5	27.3	35.1	25.8	11.8	113
Work Status						
Working for Cash	93.3	26.0	24.6	49.4	0.0	137
Not Working for Cash	93.4	41.8	45.7	4.2	8.3	861
Total	93.4	39.8	43.0	9.9	7.3	998

CONCLUSIONS AND RECOMMENDATIONS

7

As mentioned before the number of reported Polio cases has dramatically dropped in Egypt from hundreds at the beginning of the 1990s to only 5 cases last year. Effective communication strategies can contribute substantially to maintain high immunization coverage and eradicate Egypt from Polio. Accordingly, the need to conduct a strong public mobilization campaign at the various levels is critical if Egypt is to be announced free of Polio by the end of 2003. The Ministry of Health and Population Expanded Program for Immunization is the key implementing agency of Polio activities in Egypt. MOHP is supported by WHO, UNICEF, USAID, and rotary International in its effort to free Egypt from Polio.

Accordingly, Baseline Survey was conducted to provide sound information on public awareness, knowledge, attitudes, and practices regarding routine immunization and in particular as related to Polio. This data is important to help in the design and implementation of communication strategies and social mobilization campaign and to assess its outcomes later.

A sample of 2048 households were selected for the baseline survey, out of those households 94 percent were interviewed. A total of 750 caretakers were interviewed in those households.

The main conclusions out of the Baseline survey as well as some related recommendations will be discussed in this chapter.

7.1 Conclusions

Media Habits

- Overall, around 93 percent of caretakers reported watching TV and most of them prefer channels one and two.
- As expected for local channels, channel three is the most preferred channel for caretakers from Urban Governorates, while caretakers from Lower Egypt prefer channel six and those from Upper Egypt prefer channels eight and seven.
- Watching TV in the evening (6 pm: 9pm) is the most preferred time for around of 87 percent of the caretakers. They also prefer to watch TV at night (52 percent) (after 9pm).
- Overall, around 42 percent of caretakers listen to radio, El- Quran El-Karim is the most prefer channel followed by El-Bernameg EL-Aam then El-Shark El-Aosaat. On the contrary to TV, most of caretakers listen to the radio during forenoon (9am:12pm) or morning (6am:9am).
- The percent of caretakers who listen to the radio during Ramadan is higher than those who listen to the radio during the rest of the year (58 percent vs. 42 percent respectively).
- During Ramadan, listening to radio before Eftar is preferred by caretakers in Urban Governorates and Upper Egypt (62 percent & 63 percent respectively), while caretakers in Lower Egypt prefer to listen to radio after Eftar (59 percent).

- Level of exposure to printed media is remarkably much lower than other broadcast media especially television. Overall, 21 percent of caretakers read newspaper/magazine, while 79 percent never read any newspapers/magazines or reported that they can't read.
- Urban caretakers reported reading newspapers and magazines more than rural caretakers (37 percent vs. 12 percent), with significant differences between urban and rural regions.
- El- Ahram newspaper was found to be a preferred newspaper by 57 percent of all caretakers compared to Al-Akhbar newspaper (39 percent). As for the magazines, Neseef El-Donia and Hawaa are preferred by 8 percent and 6 percent respectively.

Knowledge of Polio Immunization

- Differences in knowledge of Polio immunization exist between urban and rural caretakers. In general, urban caretakers know the main vaccinations more than rural caretakers. In addition, BCG and measles vaccines are the most known vaccines compared to the other vaccines.
- The level of knowledge increases as the level of education increases. In addition, caretakers who are working for cash knew routine immunization more than other caretakers.
- Around 91 percent of all caretakers who heard about Polio knew that Polio is a disease that makes the child unable to walk and 17 percent knew that it is a serious disease.
- Thirty eight percent of caretakers mentioned the correct number of main Polio doses (3 or 4 doses). Rural caretakers knew the correct number of doses more than urban caretakers (39 percent vs. 35 percent).
- The correct child's age at receiving Polio vaccination for the first three doses was known by about 90 percent and 77 percent for urban and rural caretakers respectively, while the other two doses were known by 78 and 53 percent for the two areas respectively.
- Almost all caretakers heard about NID.
- *"To totally eradicate the disease"* and *"To protect children against the disease"* were the two reasons mentioned by caretakers as reasons for MOHP doing NIDs.
- Almost three quarter of caretakers mentioned that the Polio vaccine administered during NIDs is same as that used during routine immunization.
- Almost all caretakers agreed that the child should take NIDs doses even he was given all main doses.
- NIDs can not replace the main doses was reported by 92 percent of caretakers in Urban Governorates compared to 68 percent in Upper Egypt.
- Two third of caretakers mentioned that extra doses will not harm the child and quarter of them mentioned that extra doses will provide the child with extra protection while 4 percent mentioned that the child might have Polio.
- More than half of the caretakers mentioned that, *"The child surely will have Polio"* as a consequences of not receiving any Polio immunization dose, and 44 percent mentioned

that, “*The child might have Polio*”. Highly educated caretakers are more aware by the great consequences of not receiving all Polio doses than those who never been to school.

- As a consequence of not taking one dose of the main immunization doses, 16 percent of caretakers expected that “*The child surely will have Polio*”, while 62 percent mentioned that “*The child might have Polio*” and 13 percent mentioned “*Nothing will happen*”.
- Regarding the delaying of one dose, 43 percent of caretakers reported “*Nothing happens*”.
- Half of caretakers mentioned that there is no maximum number of doses for Polio vaccine, while slightly more than 30 percent mentioned the existence of a limited number of doses.
- Forty six percent of all caretakers reported that the child from the first day of delivery can receive Polio dose and more than three-fourth of caretakers reported that the child less than five years of age should be brought for immunization.
- Eighty six percent of caretakers mentioned that the child could be immunized if he ate before getting the vaccine. And when caretakers were asked about the needs of child who breastfed to be immunized, 85 percent mentioned that the child should take the vaccine.
- Forty one percent of caretakers mentioned that the child should receive Polio vaccine again if he received it while having diarrhea. While 62 percent of caretakers mentioned that child could not be immunized while having fever and 36 percent reported that he could be immunized.
- Going to a health unit or a health provider is the first action that will be taken by almost all of caretakers if they feel that one of their children was unable to walk.
- Slightly more than one-third of all caretakers do not know whom to inform regarding the appearance of any infected child and 8 percent mentioned places other than a health unit.

Attitudes towards Polio Immunization

- All caretakers reported that Polio is important, and 91 percent of them said that the child have to take all main and activated Polio doses, while only 8 percent mentioned that taking the main Polio doses is enough for the child.
- Eighty nine percent of caretakers indicated that they are willing to advice their neighbors to immunize their own children, and the only reason mentioned by all caretakers is “*Not to have Polio*”.
- Eighty eight percent of caretakers reported that it is important for the child to take all NID doses until age five, while 12 percent mentioned that it is not important for the child to take all NID doses.
- The most obvious and surprising result was that around 11 percent of caretakers believe that Polio immunization will harm the child.

Practices of Polio Immunization

- Birth records and/or health cards were available in the case of 70 percent of children 12-59 months with 73 percent in rural areas and 65 percent in urban areas. Lower Egypt is the best region that has birth record or health card more than other regions.
- Ninety-three percent of children 12-59 months took all the immunization (excluding hepatitis).
- Almost all children 12-59 months received the first dose of Polio and around 96 percent received the second and the third dose or more doses of Polio vaccine.
- Ninety-three percent of children 12-59 months for whom a vaccination record was seen by the interviewer received the first and the second dose of Polio while 91 percent of them received the third dose.
- Caretakers in urban areas are more aware of giving their children the main doses of Polio vaccine than rural caretakers.
- First dose of Polio was received on average at age of 1.5 month, second dose at 2.9 month, third dose at 4.4 month, fourth dose/ the first activated dose at 6.7 month and the second activated dose at 13.2 month.
- Public sector is the main source for vaccination.
- Around 43 percent of the children did not receive vaccine at NIDs because they were still young or the NIDs did not come in the area where they are living (40 percent). Data also highlight a very important issue which related to rumors and fears of vaccination are still reason for not taking the vaccine doses (10 percent).

7.2 Recommendations

- Utilize the Quran El-Kareem radio channel in airing spots about Polio vaccinations and NIDs.
- Airing TV spots at different times throughout the day especially at evening and night, while for radio spots at morning and forenoon times.
- Increase awareness of caretakers about:
 - The importance of immunization of children in all the NID especially among caretakers in urban areas.
 - The number of main Polio doses.
 - The importance of taking the Polio doses on date.
- Design of especially spots targeting caretakers who misbelieve about Polio vaccination in order to change their misperception.