

**EGYPT HEALTH
COMMUNICATION SURVEY
2007-2008**

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EXECUTIVE SUMMARY

The *Communication for Healthy Living (CHL)* project is a USAID-funded health communication initiative in Egypt that aims to empower households and communities to achieve and maintain good health. The project is based on the philosophy that households—with help from health service providers and their own communities—are the producers of health, and thus aims at integrating health care services and strengthening systems at the national, community and household levels in order to facilitate healthy practices. CHL works with a broad range of partners to build capacity for health communication among the public, NGO, and private sectors in Egypt. The project involves such innovative activities as the *Mabrouk (Congratulations) Initiative*, that encourages young newlywed couples to take responsibility for health across the stages of family life from pregnancy planning, first pregnancy antenatal care and safe delivery, postpartum care for the mother and child, breastfeeding, birthspacing, and protecting the family from infectious disease and other health threats. It has also developed the *Isaal Istashir (Ask Consult) Initiative*, a private sector effort that now links 30,000 pharmacies nationwide into a network for marketing family health products and information.

The CHL program has provided technical support to over 100 television and radio programs, including a national television variety show featuring newlywed couples, on topics ranging from general health to overpopulation and gender equity, and has produced theater plays, mass wedding celebrations and a wide variety of community-based and campus-based events. To date, CHL has involved over 1,000 outreach workers and health care providers in specialized training, seminars, and public events in ten project governorates and has worked with 150 NGOs to mobilize communities in support of health improvement.

In addition, the CHL program actively responds to emerging infectious diseases including Hepatitis C and avian influenza. On February 17th 2006, the government of Egypt confirmed cases of H5N1 in domestic poultry. Responding to requests from the Government of Egypt, CHL has produced three waves of TV spots on avian influenza prevention and response. Since the initial campaign—aimed primarily at household handling of poultry for food, the program has grown to cover emerging issues around safe backyard production of poultry, safe caging practices, detection and immediate treatment of human infections, and coordination among rapid response teams and community outreach efforts.

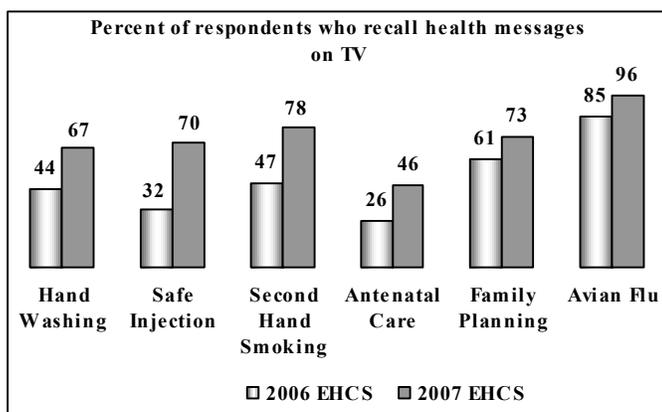
In the area of capacity building, the Egyptian State Information Service/IEC Center requested technical assistance from the John Hopkins University Media/Materials Clearinghouse to help them set up the infrastructure and systems to establish and manage an efficient Arabic/English Resource Center.

Thus, both the SIS/IEC Center and CHL program needed to evaluate their communication interventions. To assess the reach and impact of its family health communication activities, CHL has carried out two previous national surveys (the *Egypt Health Communication Surveys* or EHCS) in 2005 and 2006. The Egypt Health Communication Survey 2007 was designed to provide information about the effects of various CHL communication interventions on knowledge, attitudes and behavior change at the national level as well as to assess progress since the previous EHCS in 2006. The 2007 EHCS mirrors the content of the previous surveys, with some modifications to reflect emerging health issues and Government of Egypt priorities. Like the previous EHCS waves, the latest one used a nationally representative sample (n=3770 respondents in 1457 households, 34% urban and 66% rural) from 21 governorates to assess the reach of health-related messages and their impact on knowledge, attitudes, risk and efficacy perceptions, intentions and practices related to a broad range of family health issues. In each household, a married woman in the age group 15-49, her husband, and a youth in the age group 15-24 were selected randomly to be interviewed. About 32% of the respondents were married women, 30% were husbands, 23% were never-married male youth and 15% were never-married female youth. The estimates for key indicators, such as percentage of the adult population who were able to recall messages from different campaigns and who took protective actions, are presented in this report.

Some Highlights of the EHCS Results

Overall Exposure to CHL Messages

Overall, television is the predominant source of health information for Egyptians. EHCS data indicate that CHL reached 96%—or at least 40 million Egyptian adults—with televised avian influenza (AI) messages, but the reach of other message topics was extensive, as well. Half to three-quarters of the EHCS sample recalled seeing FP, safe motherhood, handwashing and second-hand smoke messages on television, and 80% or more saw messages on safe injection and HIV/AIDS prevention.



Exposure has increased to messages on family planning, birth spacing, antenatal care, postpartum care, second-hand smoke effects, handwashing, HIV/AIDS and AI since the EHCS in 2006. Not all of the increase has been due to television. For example, exposure to AI messages through posters, flyers and billboards has increased from 9% in 2006 to 21% in 2007 and through community seminars and meetings from 4% to 9%.

The fact that access to satellite broadcasting is rising rapidly so far has not resulted in dramatic decreases in exposure to CHL messages on terrestrial broadcast channels. For example, 97% of EHCS respondents in households with a satellite dish or cable access said they had seen AI messages on television compared to 92% of respondents with no satellite broadcast access.

Knowledge and Attitudes Related to Avian Influenza

In the 2007 EHCS, 97% of respondents who said they had seen or heard AI messages were able to name at least one way that AI is transmitted compared to only 83% in 2006. Knowledge of AI symptoms in birds has significantly increased, as well.

About 90% of respondents know ways to protect themselves from avian flu, almost the same level reported in the 2006 EHCS, but this knowledge is strongly related to exposure to campaign messages. Some change in respondents' attitudes regarding AI has also been observed. Ninety-one percent of respondents who remembered seeing or hearing AI messages reported that they know how to protect themselves from the virus compared to only 68% of those who could not remember the campaign.

The perceived likelihood of AI infection declined slightly but significantly from about one in four respondents in 2006 to about one in five 2007. But during the same time period, self-efficacy (confidence in one's ability to prevent AI infection) increased by 10 percentage points from roughly one-third to nearly one half across all respondent groups. Considering the increase from 2006 to 2007 in protective behaviors (see below), like handwashing with soap after handling birds and the use of protective equipment, it is likely that reduced susceptibility and increased self-efficacy are the result of growing confidence in one's own behavior through practice.

Change in Protective Practices Related to Avian Influenza

When EHCS respondents were asked if they had initiated any AI protective behaviors in the past 12 months, the most commonly reported new practices were washing hands with soap and water and washing utensils after preparing poultry for cooking (over 60% for women and female youth, less than 25% for husbands and male youth), cooking eggs and poultry more thoroughly (over 70% for women and female youth, 30% or less for husbands and male youth), avoiding eating eggs for a period of time (about 40% for all respondents), and keeping children and the elderly away from birds (40% for women and husbands, less than 40% for female and male youth). More than 60% of all respondents said they had talked to other people about AI protective actions.

Washing hands, washing utensils, proper cooking and talking to others are all positively associated with exposure to AI messages. Respondents who had seen/heard more messages were more likely to report these behaviors.

Practices Related to Birds

The 2007 EHCS data showed that around 28% of the Egyptian families breed poultry and other domestic birds inside the dwelling or near it: 6% of the urban population and 42% of the rural population breed birds. (In 2006, the reported percentage of families who breed poultry and other domestic birds was around 33%. Around 8% of these families keep the birds within the family living area, 35% keep them within the dwelling but away from the family living area, 58% keep them on the rooftop, and 16% keep them outside but near the dwelling. Overall, 73% of households that keep birds cage them at least intermittently, up from 58% in 2006.

***6% of urban population
and 42% of rural
population breed poultry
and other domestic birds***

OTHER HEALTH-RELATED MESSAGES AND CAMPAIGNS

Hepatitis C and Safe Injection

Evidence is growing that viral hepatitis is a serious health threat in Egypt. About 90% of all respondents are aware that there are blood-borne diseases that can be transmitted through the use of contaminated needles. Four-fifth of women and female youth, 87% of husbands, and 86% of male youth named Hepatitis C as one of those diseases and about 70% reported hearing messages about safe injection within the past 12 months. However, half of all respondents said they did not think they were susceptible to Hepatitis C infection.

More than 70% of all respondents reported that using uncontaminated needles is an effective preventive measure, but only 45% of women, husbands and female youth and 32% of male youth had ever purchased a disposable syringe, but they were more likely to have done so if they had been exposed to Ask Consult messages about safe injection.

Health Effects of Second-hand Smoking

Smoking behavior is still negligible among women in Egypt, but 48% of husbands and 19% of male youth said they were smokers. More than 90% of all respondents acknowledge that smoking endangers the health of smokers and only a slightly smaller percentage also acknowledge that smoking endangers the health of people around the smoker. However, knowledge of the effects of

***Half or less of respondents
associate passive smoking with
heart disease, high blood
pressure or cancer***

passive smoking—other than respiratory problems—is relatively limited. Half or less of all respondents associate heart disease with exposure to second-hand smoke and only one-third or less associate it with high blood pressure or cancer.

About half of all respondents said they would try to take steps to prevent non-smokers from exposure to tobacco smoke, such as not smoking in the presence of children and asking visitors to do that, as well. Roughly 40% of households report that they have a non-smoking area in the home, but this is strongly related to education level: 61% of respondents with more than a secondary level education reported a non-smoking area, twice the percentage of those with less than primary education.

Reproductive Health

There is nearly universal knowledge of the importance of antenatal care (except among male youth). Over 70% of women say that a pregnant woman should have 4 or more ANC checkups, a fact that is known by half or less of husbands. Similarly, 91% of women are familiar with at least some of the danger signs that can indicate pregnancy complications, while only 65% of their husbands are. Even among women, knowledge of some of the crucial danger signs such as severe headache, blurred vision and edema is low. Only about one-third of married women could name these danger signs.

Overall, 62% of never-married female youth, 43% of never-married male youth, 35% of women, and only 30% of husbands want 1-2 children; respondents from rural areas and from Upper Egypt generally want slightly larger families. The question about ideal number of children was not asked in the EHCS 2006, but it was asked in EHCS 2005. Ideal number of children has declined slightly among some respondent groups since 2005: it has not changed for married women (2.9) or male youth (2.8), but for husbands, the ideal number of children has declined from 3.3 to 3.0 and for female youth from 2.5 to 2.4.

EHCS 2007 also suggests support for increased birth spacing. Since 2005, the percentage of respondents who approve of family planning use after the birth of a couple's first child has increased significantly among all respondent groups except female youth, 96% of whom already supported this idea in 2005. The percent that approve of this practice rose from 87% to 94% among women, 81% to 90% among husbands, and 83% to 90% among male youth.

***Approval of the use of family
planning after the birth of the
first child is increasing***

Breast Cancer Risk Factors and Early Detection

Early detection of breast cancer before it spreads is one of the most important steps in reducing mortality related to the disease, so knowledge of risk factors and of breast cancer examinations is crucial. Unfortunately, 68% of respondents could not name any risk factors associated with breast cancer. Not surprisingly, women were the most likely to know at least one of these factors (34%), while male youth were the least likely (14%). Of those who could name any risk factors, the most commonly mentioned factor was smoking (named by only 15%) followed by family history (named by 14%).

Also unfortunately, only 9% of women and female youth know how to do a breast self-exam (although urban women are about twice as likely to know how to do this). Even fewer women (only 2%) have ever performed a self-exam, and less than 1% has had a clinical breast exam in the past 6 months.

Impact of Exposure to *Isaal Istashir* and *Sahetak Sarwetak* Health Campaigns

Exposure to the signature campaigns of the CHL program has been substantial and has increased since 2006. About seven in ten of 2007 EHCS respondents could recall *Isaal Istashir* (Ask Consult) messages, and 56% of them could recall *Sahetak Sarwetak* (Your Health Is Your Wealth) messages.

Further analysis of the 2007 EHCS showed that respondents who could recall messages from *Isaal Istashir* and *Sahetak Sarwetak* and from the AI campaign were more likely than those who could not recall these messages to report washing hands before preparing food, having a smoke free zone in the home, initiating or reinitiating use of family planning in the past 12 months, receiving antenatal care from a doctor or midwife, purchasing a disposable syringe and initiating at least one avian influenza protective behavior in the previous 12 months.

***Respondents who could recall
CHL campaign messages were
more likely to practice the
promoted behaviors***

In addition to these behaviors, several attitudes of primary interest to the CHL family planning efforts were also positively impacted by exposure to the campaign. Both exposure to *Your Health is Your Wealth* messages and to *Isaal Istashir* messages were associated with approval of small family size (two children or less) and approval of couples using family planning to space births after the first child. These findings held true even after controlling statistically for respondents' place of residence (urban versus rural), age, level of education, marital status and employment status

Respondents were more than three times as likely to initiate at least one behavior to protect themselves and their family from avian influenza and roughly twice as likely to wash hands before preparing food, to wash hands before feeding children, to have a smoke free area in their home, and to approve of family planning after the first child if they had been exposed to program messages. They were also roughly one and half times (50 percent) more likely to have (re)initiated family planning in the past year, to have purchased a disposable syringe, and to say they want no more than 2 children.

Taken together, these EHCS findings indicate substantial achievements of the CHL campaigns at the national level across a wide range of family health issues.

The *Communication for Healthy Living (CHL)* project is a USAID-funded health communication project in Egypt that aims to empower households and communities to protect and maintain their health. The project is based on the philosophy that households are the producers of health and thus aims at integrating health care services and strengthening systems at the national, community and household level that facilitate healthy practices. The USAID-funded Health Communication Partnership works with CHL to build capacity for health communication among the public, NGO, and private sectors in Egypt. The project involves such innovative activities as the *Mabrouk (Congratulations) Initiative*, that encourages young newlywed couples to take responsibility for health across the stages of family life from pregnancy planning, first pregnancy antenatal care and safe delivery, postpartum care for the mother and child, breastfeeding, birthspacing, and protecting the family from infectious disease and other health threats. CHL also introduced the *Al Afdal* TV show, which focuses on specific health messages that support the *Sahetak Sarwetak (Your Health is Your Wealth)* campaign. CHL has also worked with playwrights to produce *Aranib Si Al Sayed*, an informative theater play that focuses on issues such as family size, early marriage, gender preference and importance of education.

The CHL program has a national television variety show which features newlywed couples, and over 100 television and radio programs on topics ranging from general health to overpopulation and gender equity. In addition, the CHL program actively responds to emerging health issues such as infectious disease and avian influenza through those various communication interventions.

To date, CHL has involved over 1,000 outreach workers and health care providers in specialized training, seminars, and public events in ten project governorates (Fayoum, Beni-Suef, Menya, Qena, Giza, Aswan, Sharkia, Menoufia, Cairo, and Alexandria) and it has proved a successful way to engage community audiences in selected focal villages in three governorates (Menya, Fayoum, and Qena).

Although CHL focuses on a broad range of family health issues, it has been well-positioned to respond to new health challenges as they arise. Since December 2003, highly pathogenic H5N1 avian influenza viruses have swept through poultry populations across Asia and parts of Europe. The outbreaks are historically unprecedented in scale and geographical spread. Their economic impact on the agricultural sector of the affected countries has been large. From December 2003 to mid-July 2005, outbreaks of avian influenza A(H5N1) in poultry occurred in nine countries (Cambodia, China, Indonesia, Japan, the Republic of Korea, the Lao People's Democratic Republic, Malaysia, Thailand and Viet Nam). Since late July 2005, outbreaks in domestic poultry as well as wild birds have been reported in the Russian Federation, Kazakhstan, Romania, Mongolia, Turkey and Croatia. In addition, during this period outbreaks in poultry have increased again in Indonesia, Thailand, Viet Nam and China.

On February 17th 2006, the government of Egypt confirmed cases of H5N1 in domestic poultry. Responding to the government of Egypt request, CHL produced three waves of TV spots on avian flu prevention and response. Since that initial campaign aimed primarily at household handling of poultry for food, the program has grown to cover emerging issues around safe backyard production of poultry, safe caging practices, detection and immediate treatment of human infections, and coordination among rapid response teams and community outreach efforts. In addition, CHL has established a hotline for information and answers among avian influenza, conducted in-clinic seminars and distributed flyers/posters and booklets on AI.

Beyond the issue of avian influenza, the Egyptian State Information Service/IEC Center requested technical assistance from the John Hopkins University Media/Materials Clearinghouse to help them set up the infrastructure and systems to establish and manage an efficient Arabic/English Resource Center. Thus both the SIS/IEC center and CHL program needed to evaluate their communication interventions. In this regard, the Egypt Health Communication Survey 2007 (EHCS) was designed to provide information about the effects of the various CHL communication interventions on knowledge,

attitudes and behavior change, as well as track progress since the preceding EHCS survey in 2006.

The 2007 EHCS asks respondents very detailed questions about exposure to and recall of different health communication messages including intensive questions related to exposure to avian flu messages. Most questions mirrored the previous ones in 2006 to allow over time comparisons. and to ensure comparability with 2005 and 2007 EDHS data, the sampling frame of the 2007 EHCS is based on the one used for the DHS.

1.1 Objectives

The main objective of this survey is to assess to what extent the IEC campaigns on avian flu, reproductive health, family health and hygiene have succeeded in reaching the Egyptian public and increasing their knowledge, attitudes and safe practices. The specific objectives are to:

- Assess the level of exposure to and recall of the health campaign components among different groups in Egypt.
- Assess the level of knowledge of determinants of disease among different groups in Egypt.
- Assess the knowledge of safe practices and reporting among different groups in Egypt.
- Identify behavior changes in specific areas such as: smoking, avian flu, safe injection, family planning and other aspects of family health.

1.2 Organization and Objectives of the 2007 Egypt Health Communication Survey

The 2007 Egypt Health Communication Survey was conducted in the whole country under the auspices of the State Information Service/IEC Center. The survey was funded by the United States Agency for International Development (USAID), as part of its ongoing evaluation of the impact of the Health Communication Partnership (HCP).

To assess the reach and impact of the CHL program at the national level, the 2007 Egypt Health Communication Survey was implemented by El-Zanaty & Associates, with limited technical assistance from Johns Hopkins.

The goal of research and monitoring efforts is to assess the reach and impact of the CHL program activities on family members' values, attitudes, intentions, and health competency; on life-stage appropriate health behaviors; and on increased demand for and utilization of health information and services. The survey results are intended to assist the technical staff at the CHL project and the SIS/IEC Center to develop new communication strategies. refine existing ones, and design activities and messages for improving the health status of Egyptians.

1.3 Implementation of the 2007 Egypt Health Communication Survey

The 2007 EHCS was executed in four stages. The first stage involved preparatory activities, including the design of the sample, as well as development of the survey questionnaires and finalization. The preparatory stage was initiated in October 2007, and all of the activities (with exception to report writing) were completed by the end of February 2008. The second stage took place from 12 of December 2007 for three weeks, and involved training of field staff and interviewing of eligible households and individual respondents. The third stage involved all of the data processing activities necessary to produce a clean data file, including the data entry, verification of the data, editing, and coding, as well as consistency checking and tabulations. This stage started soon after the beginning of the fieldwork and lasted till the end of February 2008. The focus of the final stage of the survey was data analysis and report preparation. This phase began in May 2008 and took about 2 months.

Sample design

As previously mentioned, this survey is a national survey that was implemented in 21 governorates. The survey collected data from ever-married women in the age group 15-49 years, husbands of eligible women and never-married male and female youth aged 15-24 years. To permit estimation of

the main indicators at the national level, a systematic random self-weighted sample was selected from each governorate (i.e., a total of about 1,530 households). The sample was designed similar to 2006 national survey. Based on household composition data from the EDHS 2005, it was expected that this process would yield around 4200 interviews with at least 1300 women, 1200 husbands, and about 1500 youth.

Sample selection

A multistage random sample selection process was adopted, similar to that used for the EHCS 2006:

First Stage: The sample from the 21 governorates was selected in this stage with probability proportionate to size. Then the number of households in each governorate was determined proportionate to the size of the selected governorate (self weighted sample).

Second Stage: The PSU's of the 2005 EDHS of the selected governorates were used as a frame for the EHCS 2007 survey. A total of 153 PSU's were selected randomly from all governorates from both urban and rural units. In the EDHS 2005, two segments were selected from each PSU for listing. In this national health communication survey only one segment was chosen from each PSU.

Third Stage: Using the household listing in these segments, a systematic random sample of about 10 households was chosen from each segment (153 PSU). A total of 1530 households were selected for the survey.

Eligibility: In the selected households, interviews were conducted with all eligible household members. Eligible household members included ever-married women aged 15-49 years, husbands of those eligible women, and never-married youth aged 15-24 years.

Questionnaire development

The 2007 EHCS involved two types of questionnaires: a household questionnaire and an individual questionnaire. Both individual and household questionnaires used items adapted from the 2006 EHCS and 2005 EDHS questionnaires. The core individual questionnaire had three versions, modified for ever-married women, husbands, and never-married youth.

The **household questionnaire** consisted of two parts: a household schedule and a series of questions relating to the socioeconomic status of the household. The household schedule was used to list all usual household members. For each of the individuals included in the schedule, information was collected on the relationship to the household head, age, sex, marital status (for those 15 years and older), educational attainment (for those 6 years and older), and eligibility for the individual interview. The second part of the household questionnaire obtained information on characteristics of the physical and social environment of the household (e.g., type of dwelling, availability of electricity, source of drinking water, household possessions, and questions related to poultry ownership, poultry handling activities, and caging. Direct observations of cages were made, including whether they were secure and whether they were currently in use.

The **individual questionnaire** was administered to all ever-married women aged 15-49 who were usual residents of the household, husbands of those women of reproductive age, and never-married male and female youth aged 15-24. In general, individual questionnaires gathered information on the following topics:

- Respondent's background
- Exposure to related messages about health practices
- Exposure to avian flu campaign
- Knowledge of transmission of avian flu virus.
- Knowledge of infectious diseases
- Passive smoking and healthy life style
- Knowledge of reproductive health and family planning

- Attitudes and practices (for married respondents) toward reproductive health and family planning.
- Female circumcision
- Knowledge, attitudes and practices related to early detection of breast cancer (for women only)

Data collection activities

Staff recruitment. To recruit interviewers and field editors, a list was compiled of interviewers and field editors who had worked with El-Zanaty and Associates on another CHL-related survey, the Village Health Surveys (VHS) 2007 or on EDHS 2005. This action was taken to reduce the duration of training and to enhance the quality of the data since many questions are included in both surveys.

All candidates for the interviewer and field editor positions were university graduates and had intensive experience in VHS or other surveys. Another basic qualification was the willingness to work in any governorate covered in the survey.

Training materials. A variety of materials were developed for training personnel involved in the fieldwork. A lengthy interviewer's manual was prepared and given to all field staff. The manual presented general guidelines for conducting an interview as well as specific instructions for asking each of the questions in the 2007 EHCS questionnaires. Other training materials, including special manuals describing the duties of the team supervisor and the rules for field editing, were prepared.

Supervisor and interviewer training. Interviewer training for the 2007 EHCS data collection began on the 12th of December 2007 for two days. Six supervisors, 7 male interviewers and 16 female interviewers participated in the training program. The training program included:

- Lectures related to basic interviewing techniques and specific survey topics (e.g., reproductive health and family planning, communication interventions, healthy life style and passive smoking);
- Sessions on how to fill out the questionnaire, using visual aids;
- Opportunities for role playing and mock interviews;
- One day of field practice in area not covered in the survey;
- One quiz.

A special session for supervisors was conducted during the training and prior to the main fieldwork training. This session focused specifically on the supervisor's duties including field editing instructions.

Fieldwork. Fieldwork for the 2007 EHCS began on 14 December 2007 and was completed by 25th of December 2007. A total of 30 staff was responsible for the data collection. The field staff was divided into 6 teams; each team was composed of a supervisor and four interviewers (1 male interviewer and 3 female interviewers). Each team worked in 1 to 3 governorates depending on the total sample size assigned for each team.

Data processing activities

Office editing. Questionnaires were collected from teams by staff from the central El-Zanaty & Associates office who was responsible for conducting visits to field teams on regular basis. Office editors reviewed questionnaires for consistency and completeness, and a few questions (e.g., occupation) were coded in the office prior to data entry. To provide feedback for the field teams, the office editors were instructed to report any problems detected while editing the questionnaires; these problems were reviewed by the senior staff. If serious errors were found in one or more questionnaires from any team, a list of those errors and ways to avoid them were reported and sent to all teams.

Machine entry and editing. The machine entry and editing phase began while the interviewing teams were still in the field. The data from the questionnaires were entered and edited on microcomputers

using the Census and Survey Processing System (CSPPro), which is a software package for entering, editing, tabulating, and disseminating data from censuses and surveys.

Eight microcomputers with 6 data entry personnel processed the 2007 EHCS data. During the machine entry, 100% of each segment was reentered for verification. By working one shift 5 days per week, the data processing staff completed the entry by the end of January. In addition, recording and editing of data was completed by mid February 2008.

1.4 Coverage of the Survey

Table 1.1 summarizes the outcome of the fieldwork for the 2007 Egypt Health Communication Survey, by region and urban-rural residence. The table shows that, during the main fieldwork phase of the survey, out of 1,530 households selected for the 2007 EHCS, 1,461 households were found and 1,457 households were successfully interviewed, which represents a response rate of almost 100%.

A total of 1,230 women were identified as eligible to be interviewed. Questionnaires were completed for 1,229 of those women, which represents a response rate of almost 100%. A total of 1,121 husbands were identified as eligible to be interviewed; out of those, 1,107 husbands were successfully interviewed, a response rate of 99%. Finally, 1,141 youth were interviewed out of 1,473 eligible youth with a response rate of 98%. No substantial variation in the response rates among different respondents was found.

Results of the Household and Individual Interviews										
Number of households and eligible women, husbands, and youth interviewed and response rates, by region and urban-rural residence, EHCS 2007										
	Region						Urban/rural			
	Urban governorates	Lower Egypt	Urban lower Egypt	Rural Lower Egypt	Upper Egypt	Urban Upper Egypt	Rural Upper Egypt	Urban	Rural	Total
Interview Results										
Households sampled	290	680	190	490	560	170	390	650	880	1,530
Households found	272	652	173	479	537	154	383	599	862	1,461
Households interviewed	270	650	171	479	537	154	383	595	862	1,457
Household response rate	99.3	99.7	98.8	100.0	100.0	100.0	100.0	99.3	100.0	99.7
Women sampled	176	582	123	457	472	117	355	416	814	1,230
Women interviewed	176	582	122	456	472	117	355	415	814	1,229
Women response rate	100.0	99.8	99.2	99.8	100.0	100.0	100.0	99.8	100.0	99.9
Husbands sampled	163	523	107	416	435	107	328	377	744	1121
Husbands interviewed	163	516	107	409	428	106	322	376	731	1107
Husbands response rate	100.0	98.7	100.0	98.3	98.4	99.1	98.2	99.7	98.3	98.8
Never-married male youth sampled	107	400	89	311	370	81	289	277	600	877
Never-married male youth interviewed	104	396	89	307	362	78	284	271	591	862
Never-married male youth response rate	97.2	99.0	100.0	98.7	97.8	96.3	98.3	97.8	98.5	98.3
Never-married female youth sampled	73	273	67	206	233	64	169	204	375	579
Never-married female youth interviewed	72	271	67	204	229	64	165	203	369	572
Never-married female youth response rate	98.6	99.3	100.0	99.0	98.3	100.0	97.6	99.5	98.4	98.8
Youth sampled	226	655	144	511	592	123	469	493	980	1,473
Youth interviewed	176	544	134	410	462	128	334	407	744	1,141
Youth response rate	97.4	99.1	100.0	98.8	97.5	97.6	97.5	98.2	98.2	98.2

1.5 Organization of the Report

This report is organized in nine chapters. Following this introduction chapter, Chapter Two illustrates the socio-economics characteristics of households and respondents interviewed in the survey. Chapter Three discusses exposure to messages about various health issues including: family planning, antenatal care, postnatal care, hand washing, secondhand smoke and infectious diseases. Chapter Four describes exposure to messages regarding avian influenza. In Chapter Five, knowledge, attitudes and practices related to avian influenza are presented. Knowledge and attitudes related to some infectious diseases are covered in Chapter Six. In Chapter Seven, attitudes and practices related to passive smoking and healthy life style are described and Chapter Eight provides data on the knowledge and practices related to maternal health. Finally, exposure to CHL project activities is presented in Chapter Nine. Throughout the report a comparison between the EHCS 2006 survey and 2007 survey is presented at the end of each chapter for indicators that were measured at both points in time. Also, all detailed tabulations are presented in Appendix A (broken out by region and urban-rural residence) and Appendix B (broken out by respondent background characteristics).

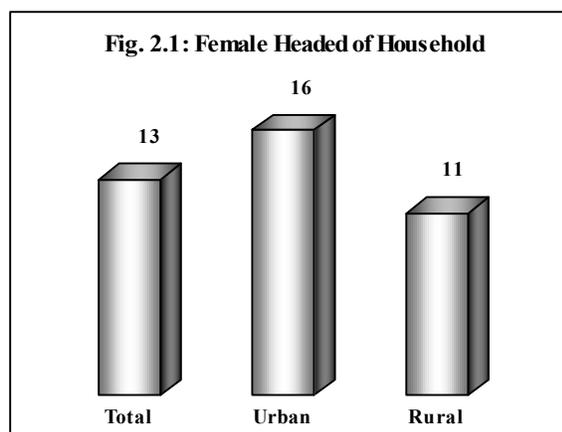
The demographic and socioeconomic profile of the respondents is presented in this chapter of the 2007 EHCS survey along with a descriptive assessment of the environment in which the respondents (women, husbands, male and female youth) live. This objective was achieved by examining the general characteristics of the households in the sample. This chapter also provides a profile of the respondents (ever-married women, husbands, and never-married youth 15-24) who were interviewed in the 2007 EHCS survey. Information is presented on the age, sex, education and employment status of the household members as well as on housing physical features and household possessions.

The demographic and socioeconomic profile of the 2007 EHCS respondents given in this chapter may provide significant input for social and economic development planning. Moreover, it will provide a context for the results presented in the following chapters.

2.1 Household Composition (Table 2.1 A&B)

All usual residents are counted as members in the household composition in the EHCS 2007. The distribution of households in the EHCS 2007 sample per region, by sex of the head of the household, and by the number of household members is presented in Table 2.1 (Annex A&B). These characteristics are significantly associated with socioeconomic differences between households. For example, female-headed households are frequently poorer than male-headed households. In addition, the size and composition of the household affects the allocation of financial and other resources among household members, which in turn affect the overall well-being of these individuals. Household size is also associated with crowding in the dwelling, which can lead to unfavorable health conditions.

Table 2.1 and Figure 2.1 show that females headed 13% of the households in the selected sample. There is minor variation in the proportion of female-headed households between regions; 16% of households in Urban Governorates were headed by females compared to 11% in rural Upper Egypt. The average number of persons per household is 5.0, with some variation across the different regions. The average number of persons per household in urban areas is 4.1 compared to 5.4 in rural areas. The highest family mean size (5.8) was recorded in rural Upper Egypt, compared to the lowest (4.0) which is recorded in the Urban Governorates. Approximately one-quarter of households have 3 members or fewer, while 18% of the households have 7 or more members.



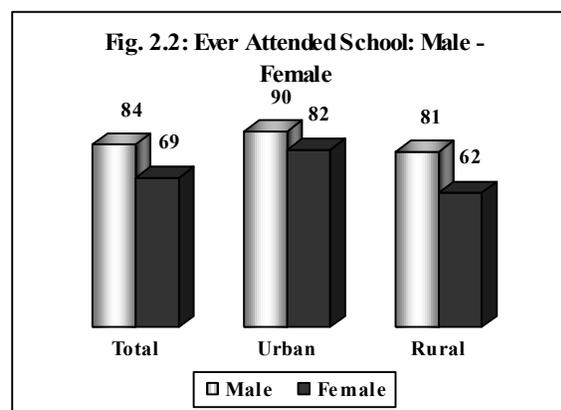
2.2 Education of the Household Population (Table 2.2 A&B)

The educational level of the household members is among the most important characteristics of the household because it is associated directly and indirectly with many health outcomes including reproductive behavior, knowledge and exposure to different messages. Results from household interviews can be used to look at both educational attainment among household members and school attendance among children and young adults.

Educational attainment

Data on the educational level of the household population (age 15 and over) is presented in Table 2.2 in the annex.

The results in Table 2.2 confirm that there is a gap in educational attainment between males and females. Figure 2.2 shows that overall, 84% of males in the EHCS households have ever attended school compared to only 69% of females. The mean number of years of schooling for males is 7.7, while the mean level for females is 6.1. The highest mean number of years of schooling for males and females was found in urban Lower Egypt (9.5 for males and 8.1 for females).



In general, respondents from urban areas have more education than respondents from rural areas. Across the different regions, it is clear that respondents from Urban Governorates are more educated than respondents from the other regions. Only 8% of males and 17% of females from Urban Governorates had no education. In addition, respondents in Urban Governorates and urban Lower Egypt reported the highest percentage of university or higher education attendance, with 30% of males and 22% of females having university training or more. The situation was different in Upper Egypt where 19 % of males and 36 % of females had no education, while only 13 % of males and 7 % of females have university training or more.

2.3 Housing Characteristics (Table 2.3 A&B)

Table 2.3 summarizes the distribution of some housing characteristics. Among these characteristics are electricity, source of drinking water, sanitation facilities, flooring, and number of rooms in the dwelling. These characteristics can be used as indicators of the socioeconomic status of the households and can also be considered important determinants of the health status of household members, particularly children.

The data presented in Table 2.3 demonstrated that nearly all 2007 EHCS households have electricity, and almost 95% of households have access to piped water, mainly within their dwelling or yard. There are significant variations across regions. Almost hundred percent of households from Urban Governorates have access to piped water in their dwelling, compared to the lowest percent recorded (82%) for households in rural Upper Egypt region. Virtually all households—if they don't have water piped into the house—at least have access to piped water in their dwelling or yard.

Almost 95% of households have access to piped water, mainly within their dwelling or yard.

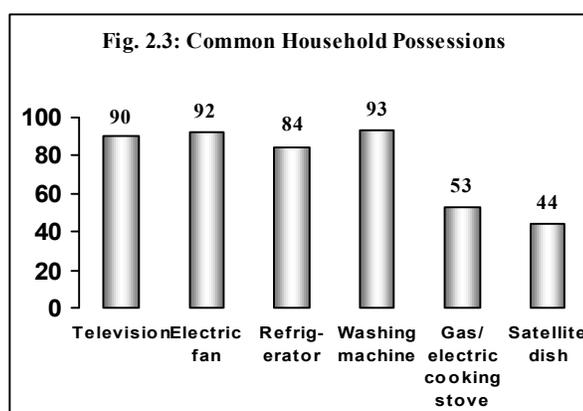
There are differences in the type of toilet facility across regions. Around 82% of households from Urban Governorates and urban Lower Egypt have modern toilets compared to only 4% of households from rural Upper Egypt. In general, traditional toilets are used more in rural areas while modern toilets are used more in urban areas. It was found that more than half of the households in the 2007 EHCS have traditional toilets, mainly without bucket flush, and 38% have modern flush toilets. Less than one percent of households have no toilet facility.

Table 2.3a also summarizes data on the type of flooring within the dwellings. Around 14% live in dwellings with earth or sand flooring, while 57% of households live in dwellings with cement tiles, and 19% live in dwellings with cement flooring. Significant differences were found across regions. Around 4 in 10 households in rural Upper Egypt live in a dwelling with earth/sand floors, compared to less than 1% of households in Urban Governorates. The highest usage of cement tiles was found in urban Lower Egypt (82%) and the least in rural Upper Egypt (36%).

The 2007 EHCS questionnaire included a question on the number of rooms that a household had (excluding the bathrooms, kitchen, and hallways). Merging this information with the information on the number of persons in the household provides a measure of crowding. Table 2.3 shows that only 11% of households have 1 or 2 rooms, 70% have 3-4 rooms, and 19% have 5 or more rooms. The mean rooms per household are 3.7 with an average of 1.4 persons per room.

2.4 Household possessions (Table 2.4 A&B)

Information on household possessions is detailed in Table 2.4. The data provide information on household ownership of durable goods and other possessions. Figure 2.3 shows that with regard to durable goods, around 92% own an electric fan, 94% own a washing machine, 53% own a gas/electric cooking stove, 84% own a refrigerator, and 41% own a water heater. In addition, 54% of the households have a telephone, and half of all households have at least one mobile phone. Of critical importance for communication programs, 90% of EHCS



2007 households own a television (color or black and white): 97% of households in urban areas and 86% in rural areas own a television. Access to satellite broadcasting is also extensive; 55% of households in urban areas and 36% in rural areas have a satellite dish. An additional 16% of households (same in urban and rural areas) have access to satellite broadcasting via cable. Nearly four in five households own a radio with a cassette recorder,

Differences are clearly observed across regions. In general, households in Urban Governorates and urban Lower Egypt own more of these items than households in other regions, while households in rural Upper Egypt are less likely to have the convenience of most of these items than the other regions.

Almost 30% of households own livestock/poultry, more (47%) in rural areas than in urban areas (6%). It is worth mentioning that the ownership of livestock/poultry in all regions is much lower than in 2005 ECHS, this is may be due to the fact that a government decree since February 2006 prohibits household breeding of poultry in urban areas during the winter flu season.

Moreover, the survey collected information on household ownership of means of transportation. Overall, only 8% of households own a car/van/truck, with the highest rate of ownership in urban governorates (24%) and the lowest rate in rural Lower Egypt (3%). Relatively few households have a motorcycle (3%), and rates of ownership of bicycles vary from 16% in rural Upper Egypt and 18% in rural Lower Egypt to only 3% in Urban Lower Egypt and 2% in Urban Governorates.

Households in rural areas are more likely (26%) to own land or farm compared to households in urban areas

As expected, households in rural areas are more likely to own land or arable farm compared to households in urban areas (26% and 2% respectively).

2.5 General Characteristics of Respondents (Table 2.5 A&B)

The distribution of women, husbands, and never-married female and male youth by various background characteristics including age, educational level, and work status by region and urban-rural residence will be discussed in this part. Educational and employment status of women and their husbands are compared in Figure 2.4.

Background characteristics of women

The data on age distribution for women shows that 33% of the 2007 EHCS interviewed women are 30 years old or less and around one-third are 40 years old or more; there are fewer women in the age group 15-19 (1.5%) compared to other cohorts. This was expected as many women aged 15-19 are not yet married, and hence not included in the sample of ever-married women. Overall, 92% of ever-married women are currently married and 8% are widowed or divorced.

The information given in this table shows that there are regional differences for women among regions. While only 19% of women from Urban Governorates have never been to school, more than half of women from rural Upper Egypt have no formal schooling. In Egypt as a whole, 38% of women have received no education and 40% completed secondary or higher.

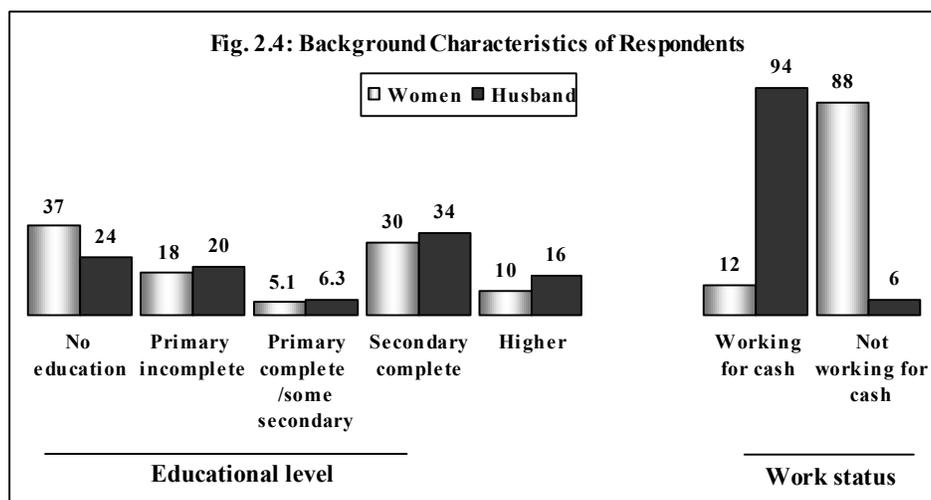
Regarding women's working status, 12% of women are working for cash, and 88% of women have no cash income of their own. Differences exist between regions. About 18% of women from urban Lower Egypt are working for cash compared to 3% of women from rural Upper Egypt.

Background characteristics of husbands

Background characteristics of husbands are shown in Table 2.5. From the age distribution of husbands presented in Table 2.5 it is clear that husbands on average are older than their wives. Forty-one percent of husbands are 40 or older and only 17% are under age 30.

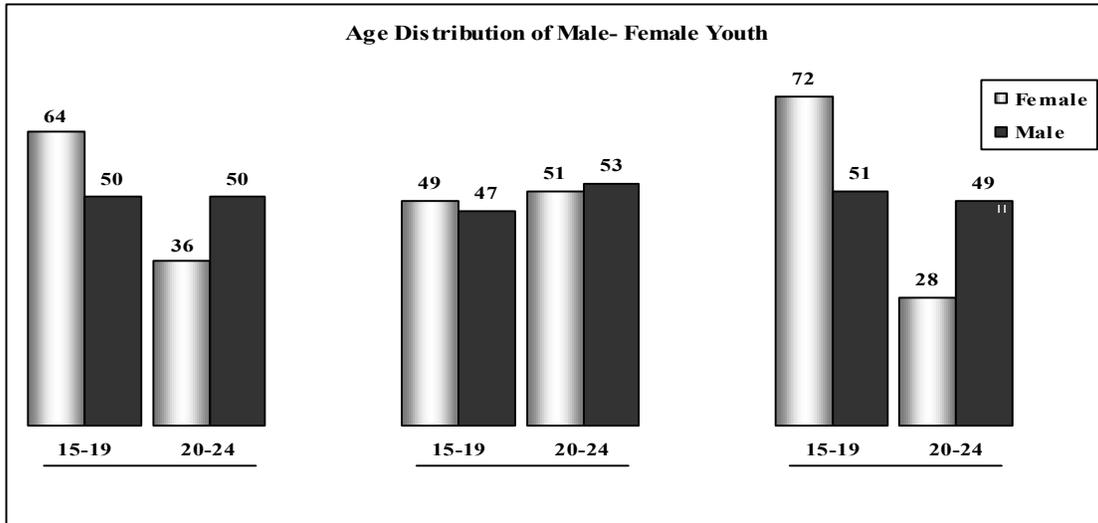
Regarding the educational level of husbands, Table 2.5 shows that husbands receive more education on average compared to their wives. Fifty percent of husbands completed secondary or higher and only 24% of husbands have no formal education. In rural Upper Egypt, 34% of husbands have no education compared to 10% of husbands from Urban Governorates. Additionally, the percentage of educated husbands in urban areas (89%) is significantly higher compared to rural areas (69%).

Table 2.5 shows that 94% of husbands are currently working for cash. Minor differences were observed between regions regarding husband's work status.



Background characteristics of never-married female and male youth (Table 2.5a A&B)

Table 2.5a summarizes the background characteristics of never-married female and male youth aged 15-24 years of age. About two-thirds of never-married female youth are in the age group 15-19 and around one-third is in the age group 20-24 (Figure 2.5).



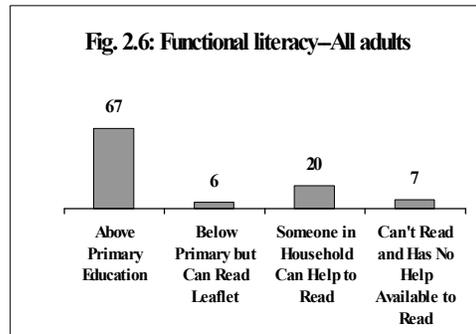
Education is more widespread among never-married female youth than among married women. Only 8% of never-married female youth have no education and more than one-quarter of the never-married female youth have obtained a higher educational level. Only three percent of never-married female youth from Urban Governorates have no education compared to 19% of those from Rural Upper Egypt.

Table 2.5a shows that only 6% of never-married female youth are currently working for cash; this differs by region. Almost two percent of never-married female youth from Rural Upper Egypt are working for cash compared to 18% of never-married female youth from urban Governorates.

Regarding the background characteristics of never-married male youth, Table 2.5a shows that the educational levels of never-married male youth are identical to that of the never-married female youth: only 5% have no education; one third have a secondary complete education, and 21% have higher education. Only four percent of never-married male youth from Urban Governorates have no education compared to 6% of those from Urban Upper Egypt.

Functional literacy

Although Table 2.5a indicates that a large proportion of older adults (more than half of married women and over 40 percent of husbands) have less than a primary level education, this does not necessarily mean that they lack access to print materials. To verify literacy, irrespective of one’s completed schooling level, the EHCS survey asked people to read a simple leaflet. People who could not read the leaflet were asked if there was someone in the household who could read print material to them. Figure 2.6 shows the breakdown of responses to these questions for all adults. Overall, 27% of adults were unable to read the leaflet, but most of those had someone in the household who could read to them. Only 7% of adults are unable to read printed material and have no one living in the household who can help them, and thus have no access to campaign print materials.



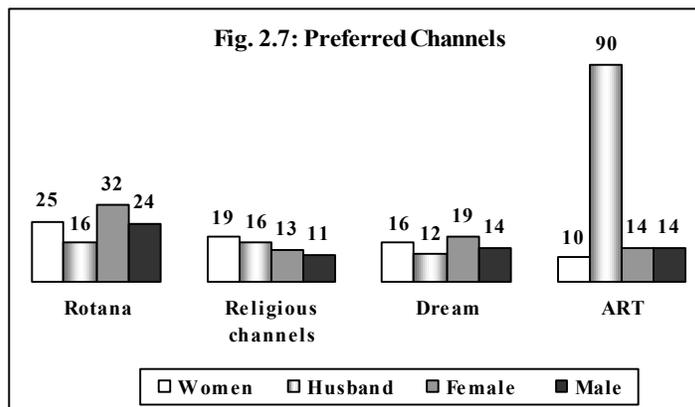
Regarding employment, 37% of never-married male youth are currently working for cash and, like other characteristics, this varies by region. Almost 25% of never-married male youth from Urban Lower Egypt are working for cash compared to 42% of never-married male youth from urban Governorates.

2.6 Television Watching Habits (Table 2.6 A&B)

Among all the mass media vehicles available in the Egyptian community, television plays the most vital role through which EHCS 2007 respondents receive information about different topics. To obtain information about TV's role as a source of information; questions were asked to assess the reach of TV among different groups of respondents and their preferred channels. In the following sections, data on exposure to TV will be discussed for women, husbands, and youth interviewed in the EHCS 2007 survey.

**99% of all respondents
watch TV regularly or
sometimes**

The results indicated that married and never-married men and women all are similar in their daily use of TV (85%). Virtually all respondents (99%) from all groups reported that they watch TV regularly or sometimes. Somewhat higher percentages watch TV daily in Urban Governorates compared to Rural Upper Egypt, but even in rural Upper Egypt roughly 80% of all groups report daily television viewing. Most of those who watch TV prefer Channels One and Two from the national/local channels, but a substantial percentage of all groups of respondents reported a preference for satellite channels. In addition, respondents in urban areas are more likely than rural respondents to prefer satellite channels. As the report will show in a later section, having or not having access to cable or satellite channels makes relatively little difference in terms of exposure to CHL messages.



Data from the 2006 EHCS revealed that Rotana Cinema is the most preferred channel for all groups of respondents, except for husbands who prefer Iqraa/ Majd/ ElNas over Rotana Cinema. Additionally, Husbands reported watching Dream 1 & 2 more than women and youth do.

The Ministry of Health and Population in Egypt is facing numerous challenges in its attempt to improve and insure better and healthy life for the people of Egypt. Among these challenges are the burden of combating illnesses associated with poverty, lack of education, diseases and illness attributed to modern and urban life style and access to global communications. Mass and interpersonal communication can help overcome educational deficits and extend the reach and effectiveness of traditional health service delivery systems.

This chapter focuses on the respondents’ exposure to different media messages about health issues from various communication sources.

3.1 Exposure to Media Messages about Reproductive Health and Child Health

Exposure to messages about family planning (Table 3.1 A&B)

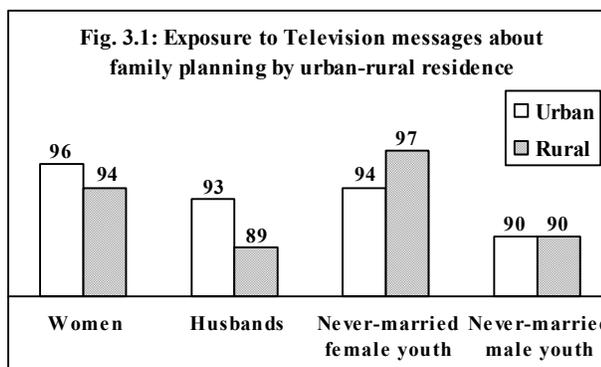
Table 3.1 presents data on the percentage of ever-married women, husbands, and never-married female and male youth who were exposed to messages about family planning in the past 12 months from different sources and among those exposed to any spot, percentage who recalled various messages, by region and urban-rural residence. Exposure to messages about family planning from any source was highest among women (91%), followed by female youth (78%), husbands (73%), and male youth (67%). By educational level, exposure is highest among respondents with higher than a secondary level education (84%) and lowest among those with primary or some secondary education (72%).

Results of the four studied groups revealed that exposure to television spots is the highest (more than 90%) compared to other sources. After television, family/friends/neighbors are the highest source of exposure among all groups, followed by facility-based health workers and radio.

Regarding regional variations, Figure 3.1 shows that exposure to family planning messages through television is higher in urban than in rural areas, except for youth. For female youth, the percent is higher in rural areas (97%), compared to the urban areas (94%), while television exposure is 90% for both rural and urban male youth.

More than half of the respondents in all groups recall messages about family planning methods, with the highest percent recorded among women group (68%).

Recall of messages about family planning methods was higher in urban compared to rural areas. Recall of messages about spacing between births and about the benefits of small families is ranked second among respondents of all the studied groups. However, it is worth noting that recalling “spacing between births 3-5 years” was more highly reported among respondents with education higher than the secondary level and among those in the age cohort 25-34.



More than half of all respondents have knowledge about family planning.

3.2 Exposure to Messages about Antenatal Care

Table 3.2 presents data on the percentage of respondents who were exposed to messages about

antenatal care in the past 12 months from different sources and, among those exposed to any spot, the percentage who recalled various messages, by region and urban-rural residence. Data revealed that two-thirds of women, 54% of female youth and about half of husbands and male youth were exposed to messages about antenatal care during the 12 months preceding the survey. Results also show that exposure levels are significantly higher among respondents from Upper Egypt, among those with educational level higher than the secondary level, and among those in the age group 25-29 than other respondents.

Exposure to antenatal care messages through television spots was highest among all sources in all groups. The highest value was recorded among never-married female youth (90%), where the lowest was recorded among never-married male youth (69%).

As for the regional variations, exposure to antenatal care messages through family/friends/neighbors is highest among never-married males in urban areas (92%) and lowest among never-married female youth in urban areas (8%).

Almost one third of all respondents have know about the importance of antenatal care

Almost two-fifths of women and male youth, as well as one third of husbands and female youth reported recalling messages about the importance of antenatal care. Expectedly, knowledge about the danger signs of pregnancy problems was more likely to be reported among the female groups compared to the two male groups.

3.3 Exposure to Messages about Pregnancy Dangerous Signs

Table 3.3a summarizes data on the percentage of ever-married women, husbands, and never-married female and male youth who were exposed to messages about precautions and danger signs during pregnancy that a pregnant woman should know about. Overall, 33% of women, 21% of female youth, 18% of husbands, and 14% of male youth reported exposure to messages about dangerous signs of pregnancy in the 12 months prior to the survey.

Due to the small sample size of respondents exposed to these messages, differences among the different respondent groups are not reliable. Accordingly the results will be presented for urban/ rural only. The data show that the percent of respondents exposed to messages from television is highest among all the studied groups. Exposure to messages from medical providers and other relatives are the two most common sources after television (Table 3.3a).

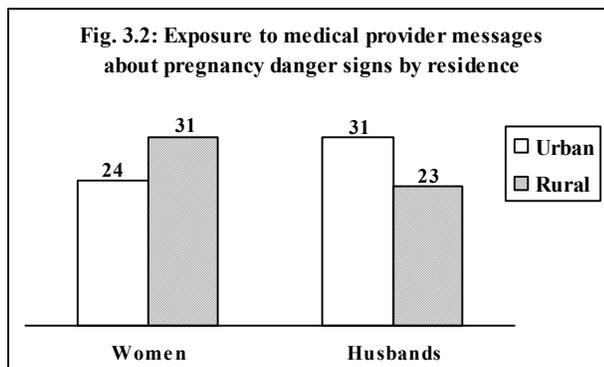
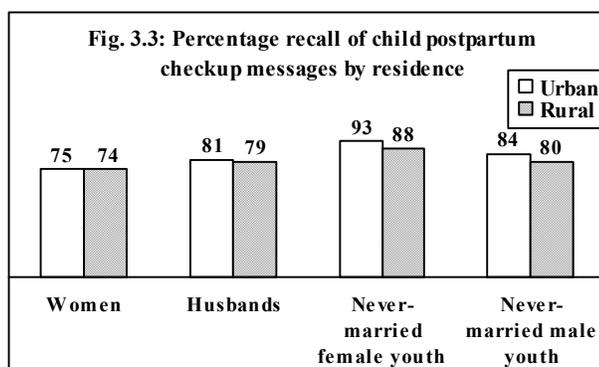


Figure 3.2 shows that recall of these messages is lower among ever-married women in Urban Governorates and Lower Egypt compared to Upper Egypt (14% and 21%, respectively, compared to 53%). The same regional pattern is observed among other respondent groups.

3.4 Exposure to Messages about Postnatal Care for Mother and Baby (Table 3.4 A&B)

Data presented in Table 3.4 shows the exposure level to messages about postnatal care for mother and baby among ever-married women, husbands, never-married female and male youth in the past 12 months from different sources. In general, exposure to postnatal care messages was highest among women (43%), followed by female youth (36%), husbands (31%), and finally male youth (31%).

As expected, television was the most common source of postnatal care messages among all groups. The highest level of exposure from TV was found among never married female youth (92%), and the lowest among never married male youth (57%). Messages from family/friends/neighbors were the second highest source followed by facility-based health worker among all the studied groups.



Results of the recalled messages data revealed that more than 80% of respondents in all groups have knowledge about the importance of checking their children’s health during the postnatal period. More than 60% of respondents in all groups know about the importance of checking the mother’s health during the postnatal period. It is also worth noting that the various recalled messages were more likely to be reported by respondents with higher than a secondary level education than respondents with a lower educational level.

3.5 Exposure to Messages about Zinc Medication for Treating Diarrhea (Table 3.5 A&B)

Table 3.5 shows the percentage of ever-married women, husbands, and never-married female and male youth who were exposed to a message in the past 12 months from various sources about medications containing zinc for the prevention and treatment of childhood diarrhea. Results show that exposure to these messages is relatively low among all respondents: 15% of women, 13% of female youth, 12% of husbands and 7% of male youth reported exposure to such messages. However, products containing zinc were only introduced to the Egyptian market in mid-2006 and promoted by CHL-supported messaging, so knowledge of these products is due largely to the CHL program.

The presented data shows that the percentage of respondents exposed to messages from television is the highest compared to other sources. The data clearly demonstrates that almost six out of ten respondents in all groups are exposed to television messages about zinc medication for treatment and prevention of diarrhea. Medical providers were the second highest source of exposure among all groups.

3.6 Exposure to Messages about Passive Smoking and Hand Washing

Exposure to messages about passive smoking (Table 3.6 A&B)

The EHCS also collected data on respondents’ exposure to messages about passive smoking in the past 12 months from different sources and, among those exposed, the specific messages they could recall. The data presented in Table 3.6 shows that almost eight out of ten respondents of all groups were exposed to at least one message about passive smoking.

Eight out of ten respondents of all groups are exposed to any message from the different sources about passive smoking.

As for most of the CHL health topics, TV is the main source of exposure to such messages. The highest level exposure from television is found among the ever-married women group (96%), and the lowest among the never-married male youth group (88%). Regional differences were not found.

Respondents were also asked about recall of specific messages. The majority of respondents (63% or more) recalled a message about the secondhand impact of smoking on people around smokers. The second most recalled message was about diseases caused by secondhand smoking: 62% of female youth, 59% of women, 56% of husbands and 48% of male youth recalled this message. Results also show that these two messages were more likely to be reported by respondents with higher levels of

education.

Exposure to messages about hand washing (Table 3.7 A&B)

Data were also collected regarding exposure to messages about hand washing. The data presented in Table 3.7 shows that almost seven out of ten respondents in all groups were exposed to at least one message about the hygienic aspects of hand washing.

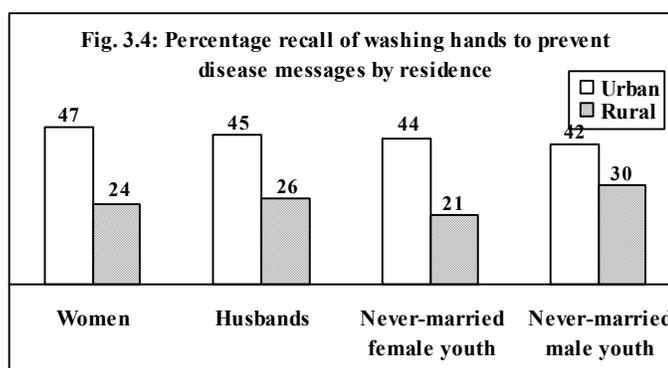
Seven out of ten respondents of all groups were exposed to at least one message source about hand washing.

Television was reported as the primarily source of information and the highest percentage of respondents exposed to messages from television was found among the never-married female youth (98%), and the lowest was found among the never-married male youth group (85%). Regional differences were not observed.

Respondents were asked about the hygienic aspects of

hand washing. The most commonly recalled message was about washing hands before eating (48%), followed by washing hands after eating, washing to prevent diseases and washing after defecation.

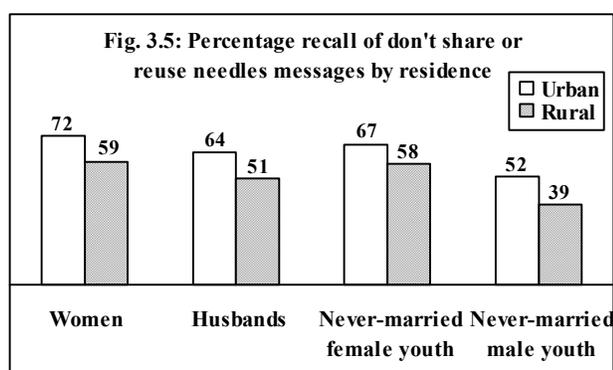
The data also demonstrated that the percentage of respondents who had knowledge about washing hands to prevent diseases was significantly higher among those from urban areas and those with a higher educational level.



3.7 Exposure to Messages about Safe Injection and Infectious Diseases

Exposure to messages about safe injection (Table 3.8 A&B)

During the EHCS 2007, respondents were asked about exposure to information and messages, from various sources during the 12 months preceding the survey, about what people should do to be sure that injections are given safely. Overall, about three-quarters of women and female youth, 71% of husbands and 69% of male youth reported exposure to such messages with the highest level of exposure observed among respondents with higher than a secondary level education (86%).



Television was the most common source of information for all groups of respondents. Almost nine out of ten respondents were exposed to safe injection messages through television. For all groups, the second most commonly reported source of information was family/friends/neighbors or messages from facility-based health workers.

Concerning the recalled messages, “Don't share or reuse needles” and “Hepatitis C, tetanus, and HIV/AIDS can be spread by infected needles” were the most frequently recalled messages among all groups. Variations by urban-rural residence were observed: respondents from urban areas were more likely to report recalling those messages than respondents from rural areas (Figure 3.5). It is also worth noting that there are significant variations in reporting “Hepatitis C, tetanus, and HIV/AIDS can

be spread by infected needles” message by education. More than half of the respondents with higher than a secondary education recalled that message, which is twice the percentage reported among respondents with no education.

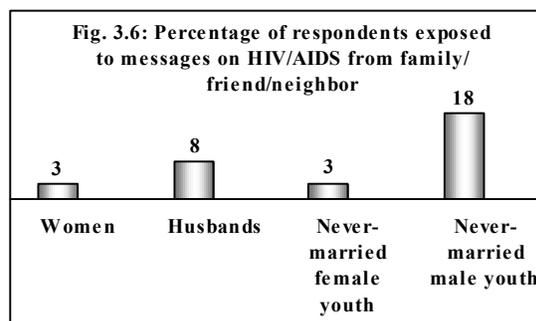
Exposure to messages about diseases that can be transmitted through used needles (Table 3.9 A&B)

Regarding the topic of blood borne diseases, respondents were asked if they have received information about diseases that can be transmitted through used needles in the past 12 months from different sources. Those who reported exposure to information about blood borne diseases were also asked to report sources of that exposure. Overall, about two-thirds of respondents reported exposure to such messages with the highest level of exposure observed among those with a higher than a secondary level education.

Television is, again, the top source of exposure for all groups. Never-married female youth were most likely to report exposure through television (97%) and never-married male youth were the least likely (89%). Regional differences in exposure were very minor. The second most common source of information about blood-borne diseases for all groups was medical providers, but exposure was low compared to television: the highest recall of this source was among the never-married male youth and the lowest among never-married female youth (15.2%, and 8.6%, respectively).

Exposure to messages about HIV/AIDS (Table 3.10 A&B)

Table 3.10 shows the percentage of ever-married women, husbands, never-married female and male youth who were exposed to a message about HIV/AIDS in the past 12 month from different sources and, among those exposed, the percentage who recalled various messages. Nine out of ten respondents were exposed to at least some messages about HIV/AIDS.



Almost all respondents were exposed to messages from television with insignificant variations by region. Exposure to messages from radio and newspapers is very low among all the studied groups (around 5%). Interestingly, Figure 3.6 shows that exposure of respondents to messages on HIV/AIDS from family/friends /neighbors is relatively high among male groups (husbands and never-married male youth, 8% and 18% respectively) compared to female groups (women and never-married female youth, 3%).

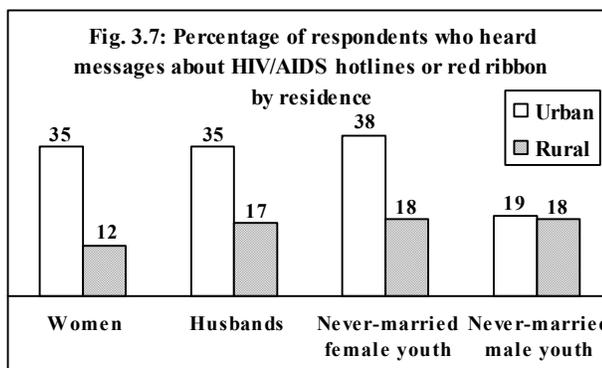
With regard to recall of specific messages, almost three quarters of respondents in all groups recalled messages about the modes of transmission of HIV/AIDS and about half or more recalled messages about how to prevent transmission of HIV. Urban respondents were somewhat more likely than rural respondents to recall these messages.

Almost three quarters of respondents in all groups have knowledge about the mode of transmission of HIV/AIDS.

Exposure to messages about HIV/AIDS hotlines or red ribbon (Table 3.11 A&B)

Respondents were also asked if they had heard about HIV/AIDS hotlines or had seen the red ribbon HIV/AIDS symbol in the past 12 months from different sources. Those who were exposed were also asked to report the sources of their knowledge. Overall, about two-thirds of respondents reported exposure to such messages with the highest level of exposure observed among those with a higher than a secondary level education.

About 25% of female youth, 23% of husbands, 20% of women and 18% of male youth reported that they had heard information about HIV/AIDS hotlines or about the red ribbon (Figure 3.7). The data also show variations by urban-rural residence. Generally, urban respondents are more likely than rural respondents to have heard about or seen any messages related to HIV/AIDS hotlines or the red ribbon (except among male youth, who showed no urban-rural difference). The highest recall was found among urban never-married female youth (38%), and the lowest was found among the rural ever-married women (12%). Differentials by educational level are astounding: 39% of respondents who have a higher educational level than the secondary education reported receiving information about HIV/AIDS hotlines or the red ribbon in the 12 months preceding the survey compared to 11% among those with no education. As expected, television is the primarily source of knowledge among all respondents.



Exposure to messages about female circumcision (Table 3.12 A&B)

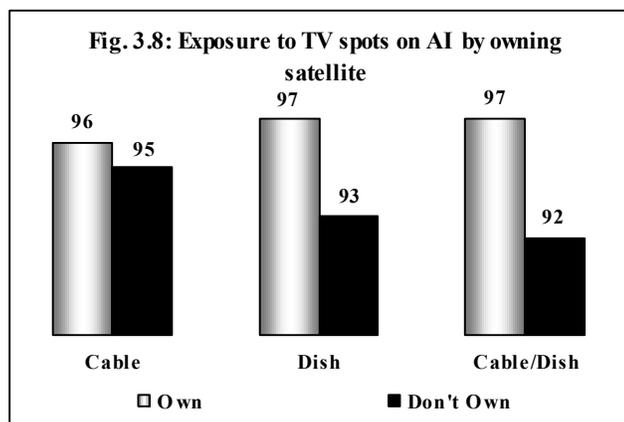
One of the main areas that the CHL communication intervention and other ministries focus on is female circumcision. Thus, data on exposure to messages about female circumcision was collected from respondents. The data show that almost nine out of ten respondents were exposed to any messages about female circumcision during the 12 months prior to the survey.

Almost nine out of ten respondents were exposed to any messages about female circumcision.

The highest percentage of respondents was exposed to messages from television source in the four groups. All urban never-married female youth were exposed to messages about female circumcision compared to among never married male youth from urban areas. Relatives were the second most frequently reported source of information for exposure to messages about female circumcision. The highest value was reported among never married male youth from urban area (20%), and the lowest was reported among never married female youth from urban areas (4%). Regional variations in exposure to messages from TV were insignificant except among the never married male youth where never married male youth from rural areas are more likely to report exposure from TV than those from urban areas (92% versus 85%).

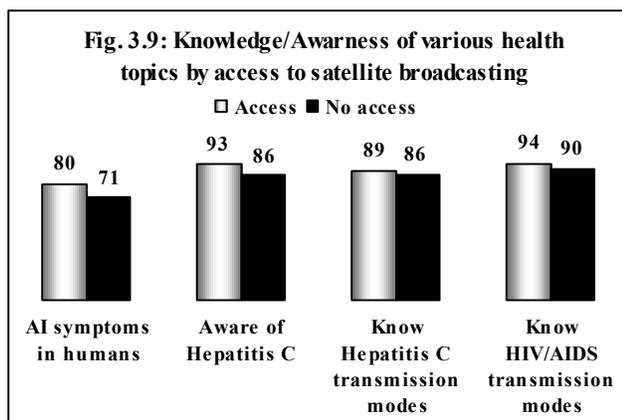
3.8 Effects of Cable and Satellite Access on Message Exposure

The CHL program aims to reach the broadest audience as it can with its messages. Therefore, it monitors the growing popularity of satellite broadcasting and its effect on the ability of terrestrial broadcasting channels—which carry the bulk of CHL messages—to reach Egyptian audiences. EHCS data indicate that even though a household has access to satellite broadcasting, this does not have a dramatic effect on their exposure to CHL messages. Figure 3.8, for example, shows that people in households with and without access to satellite



broadcasting (via either cable or dish) were almost equally likely to have seen television spots about avian influenza as people in households with no satellite broadcasting access.

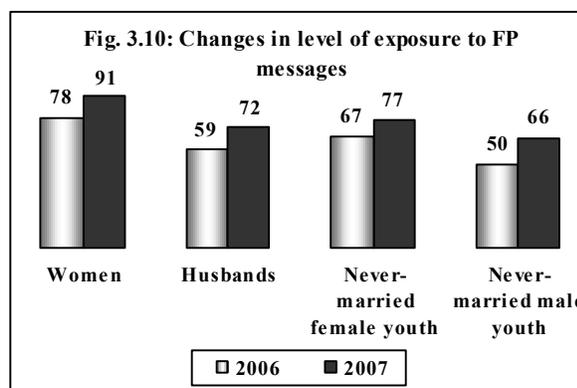
Figure 3.9 shows the percentage of respondents who have knowledge or awareness of various topics (knowledge of avian flu symptoms among humans, awareness of Hepatitis C, knowledge of Hepatitis C transmission modes, and knowledge of HIV/AIDS transmission modes) among those who have access to satellite broadcasting via a satellite dish or cable connection compared to those who do not have access.



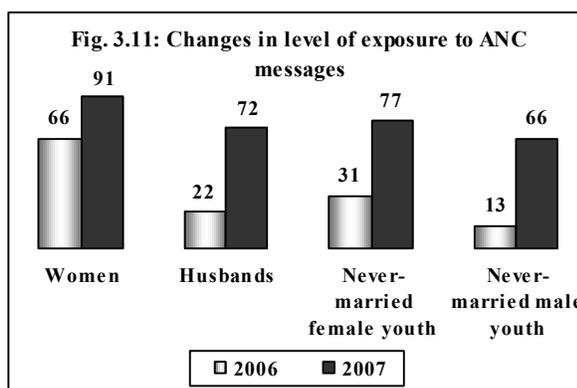
Although knowledge and awareness of these topics is generally a little higher among those who have access to satellite channels, differences range only from three to nine percentage points.

3.9 Change in Exposure to Health Messages—Comparison Between EHCS 2006 and EHCS 2007

Almost the same questions that were addressed to respondents in the 2006 EHCS, regarding exposure to health messages, were asked again to respondents in the 2007 EHCS. However, it has to be noted that the reference period in 2006 was the past 6 months prior to the survey while in 2007 it was the past 12 months prior to the survey. Generally, as shown in Figure 3.10, the levels of exposure to family planning messages have increased by at least 10 percentage points from 2006 and 2007. Results from both surveys also reveal that recalling “spacing births 3-5 years” and “using family planning after birth of the first child” messages has slightly increased during that period. For example, the percentage of women who recalled the message about birth spacing 3-5 years increased from 29% in 2006 to 34% in 2007. Also, percentage of women who recalled messages about “Using family planning after birth of first child” increased from 20% in 2006 to 27% in 2007.

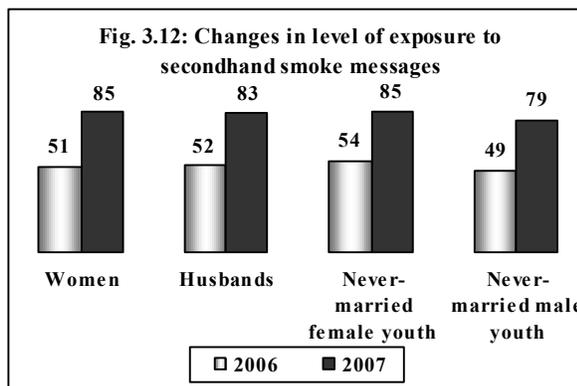


Looking at data regarding the reported level of exposure to ANC messages from both surveys, the overall reported level of exposure has dramatically increased during that period. Figure 3.11 shows the overall change. It is also worth noting that the increase in the levels of exposure was observed primarily from 3 sources: TV, family members/friends/neighbors, and health workers at a health facility. The greatest level of change was observed among male youth where data reveals an increase in level of exposure to ANC messages from 13% in 2006 to 66% in 2007.



With regards to receiving information about postnatal care, the level of exposure from various sources has more than doubled from 2006 to 2007. In 2006, the reported exposure to messages about postnatal care was 22% among women, 10% among husbands, 15% among female youth and 4% among male youth. These percentages increased in 2007 to 43% among women, 33% among husbands, 36% among female youth and 31% among male youth. Also recall of messages about the reasons for postnatal care has increased between both surveys especially for “check mother’s health”, “check child’s health” and “early detection of diseases” messages.

Concerning exposure to messages about secondhand smoking, results from both surveys indicate increase in levels of exposure from about 50% in 2006 to about 80% or more of the respondents in 2007 (Figure 3.12). Also, recall of specific messages has increased regarding diseases caused by secondhand smoke and the dangers that secondhand smoke cause for people around the smoker.



Levels of exposure to messages about hand washing have also increased from 2006 to 2007. The reported levels of exposure to messages about hand washing in 2006 was 53% among women, 41% among husbands, 51% among female youth and 39% among male youth. By 2007, levels of exposure had increased considerably: 74% among women, 67% among husbands, 71% among female youth and 69% among male youth.

Looking at data regarding the reported level of exposure to safe injection and HIV/AIDS messages from both surveys, the overall reported levels of exposure had dramatically increased during that period among all respondent groups. The table to the right summarizes these changes. .

Messages about	Women		Husbands		Never-married			
					Female youth		Male youth	
	06	07	06	07	06	07	06	07
Safe injection	37	78	31	71	37	76	27	69
HIV/AIDS	21	88	25	89	28	89	29	91

EXPOSURE TO MESSAGES ABOUT AVIAN INFLUENZA 4

In February 2006, the government of Egypt announced the presence of H5N1 in domestic poultry and in March the first related human fatality occurred. Since then, the virus has been reported in 18 governorates in Egypt. To date, 50 human cases have been confirmed, of which 22 died.

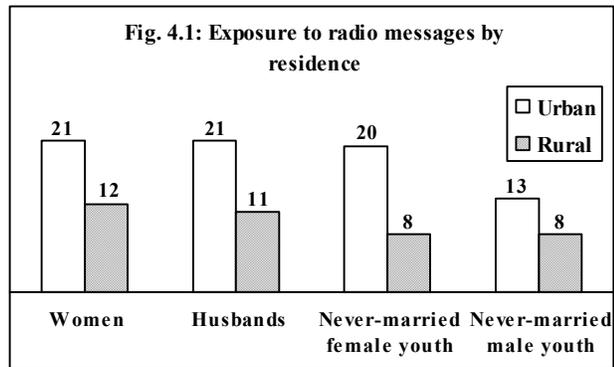
Since the appearance of avian flu in Egypt, collaborative efforts have been mounted to limit the spread of the disease among animals, to increase public knowledge and awareness of avian flu and to improve attitudes and practices to limit the spread of H5N1 from animals to humans. Communication interventions have been a key element of prevention efforts and CHL has played a leading role in developing and implementing the National Avian Influenza Communication Strategy.

This chapter discusses exposure to and recall of messages about avian influenza from the various sources including television, radio, and printed materials. The chapter also describes respondents' knowledge of the availability of AI hotlines.

4.1 Exposure to Avian Flu from Various Sources (Table 4.1 A&B)

In order to increase public awareness about avian flu; CHL with SIS/IEC produced two waves of TV spots; each wave had four TV spots. During the 2008 EHCS, respondents were asked if they have been exposed to any information about AI during the 12 months preceding the survey from various sources (with additional probes about exposure from each media channel). Respondents who reported exposure to AI messages were then asked about the messages they could recall from these spots. Table 4.1 presents the results of these questions for women, husbands, and female and male youth. The results indicated that exposure to spots from at least one source is universal among the four groups of respondents. Television spots were the most common source of exposure (96% or more), followed by family member/friend/ neighbors, then radio and health workers at a health facility.

Some differences are noted across regions and urban-rural residence. Surprisingly respondents from urban areas were more likely to report exposure to AI spots from the radio than respondents from rural areas. For example, 21% of women from urban areas reported exposure through radio compared to 12% among those from rural areas. The gap is even wider among female youth where 20% from urban areas reported exposure through radio compared to 8% among those from rural areas. Exposure to information about AI from family



members/friends/neighbors was more likely to occur in Urban Governorates than in Lower and Upper Egypt. In Urban Governorates, 76% of women, 75% of husbands, 71% of female youth and 86% of male youth reported knowledge about AI from interpersonal sources.

Respondents who had heard/seen any information about avian influenza during the 12 months prior to the survey were asked what messages they could recall from these sources. The most frequently recalled messages were: what is avian flu, how to protect ourselves from avian flu, how to handle birds, the importance of hand washing, how to deal with dead birds, what to do if you know about a sick person who might be infected, and how to identify an infected bird. The importance of hand washing with soap for protection against AI was highly reported among all respondents except male youth (reported by 20% only). It is worth noting that none of the respondents reported recalling a message about caging birds or early referral of sick cases.

None of the respondents reported recalling a message about caging birds.

Slight variations by region and residence were found. Generally, respondents from urban areas were more likely to recall various messages compared to respondents from rural areas except among male youth where those from rural areas were more likely to report how to handle birds, how to cage birds, and how to protect ourselves from AI than those from urban areas. Also, the importance of hand washing by soap for protection against Avian Flu was more likely to be reported by respondents from urban areas than those from rural areas, except for male youth.

4.2 Exposure to Posters/Flyers about Avian Flu (Table 4.2 A&B)

In addition to collecting information about exposure to AI messages via broadcast media, the EHCS 2007 collected information about exposure via posters/flyers/billboards. Respondents were asked if they saw any posters/flyers/billboards about avian flu during the 12 months preceding the survey. In addition, respondents who reported exposure to messages via posters/flyers/ billboards were asked about the location where they saw it and were asked to recall messages they saw.

Overall, 23% of women, 21% of husbands, 28% of never married female youth and 12% of never married male youth reported seeing a poster/flyer/billboard about avian flu during the 12 months prior to the survey. Generally, urban women and husbands were more likely to report seeing those materials than their counterparts in rural areas. Conversely, rural female and male youth were more likely to report seeing those materials than their counterparts in urban areas. The lowest levels of exposure to these sources was found in rural Upper Egypt for both women and husbands (18% and 15% respectively) and in urban Lower Egypt both never-married female and male youth (24% and 6% respectively). Exposure to these sources was correlated with educational level: about one-third of respondents with more than secondary level education reported exposure to posters/flyers/billboards compared to 22% among those with a secondary education, 16% with primary/some secondary education, and 14% among those with no education.

Respondents were more likely to report that they saw the posters/flyers/billboards that talk about AI in a health unit or hospital than in any other place (72% among women, 77% among husbands, 46% among female youth and 55% among male youth). Among never married youth, seeing the posters/flyers/billboards in the street and public places was also common: 38% of female youth and 54% of male youth saw these printed materials in the street and 37% and 34% respectively saw it in a public place. Less than 1% of women, husbands, and female youth reported receiving flyers at home and 2% of female youth in rural Upper Egypt reported receiving those materials at home.

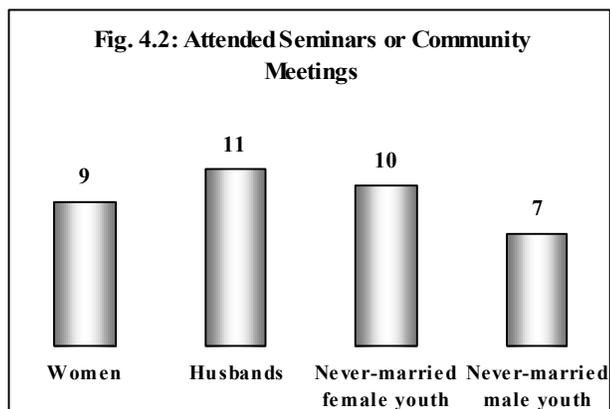
The most frequently recalled message by all respondents except male youth is the general message “what is avian flu”. In addition, how to handle birds, how to cage birds, how to protect ourselves from AI, importance of hand washing for protection from AI, and what to do if you think someone might be infected were among the most frequently reported messages. For example, 34% of women, 29% of husbands, 35% of female youth and 44% of male youth recalled the message about the importance of hand washing with soap to protect them from AI. Generally, respondents from Upper Egypt, especially rural areas, were more likely than respondents residing elsewhere to recall specific messages, such as the importance of hand washing as a protective measure, what to do if a person might be infected, how to handle birds and how to cage birds. As reported in the previous section, almost none of the respondents spontaneously recalled messages about caging, proper disposal of bird wastes and early referral for infected cases. Less than 1% of women and husbands recalled the message about separation of species compared to 6% of male youth overall and 11% of male youth in rural Upper Egypt recalled the message.

Respondents from rural Upper Egypt are more likely to recall a specific message than those in other areas.

4.3 Exposure to Seminars/Community Meetings about Avian Influenza (Table 4.3 A&B)

Another important channel used to deliver messages about AI, whether by the CHL behavior change communication campaigns or the involved ministries, is interpersonal communication via community meetings, seminars, as well as outreach services and home visits. Thus, respondents were asked if they have attended a community meeting or seminar or received information during household visits about avian influenza during the 12 months prior to the survey.

As confirmed in many previous surveys, attending community meetings is typically very low, usually in the range of 3-4%. However, this percentage has dramatically increased since the 2006 EHCS survey. Figure 4.2 shows that, overall, 9% of women, 11% of husbands, 10% of never-married female youth, and 7% of never-married male youth attended at least one community meeting/seminar about avian flu. There were limited differences by region, yet it is obvious that rural respondents are more likely to be exposed to community meetings/seminars.

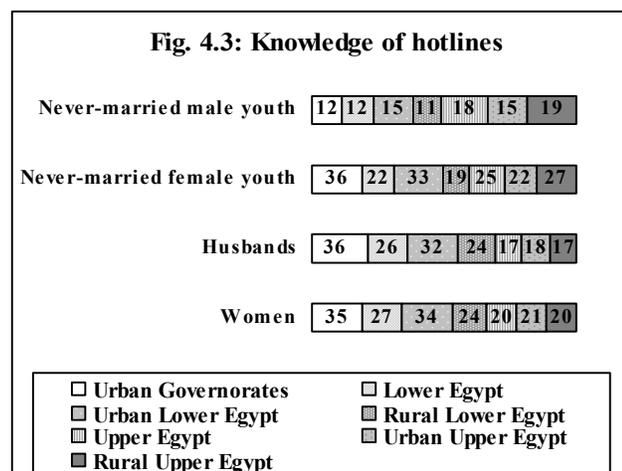


Almost the same pattern as that of other sources regarding recalled messages was observed regarding community meetings and seminars. From community meetings or seminars, the most frequently recalled messages were what avian influenza is, how to protect ourselves from avian flu, how to deal with birds, importance of hand washing, how to handle birds, how to deal with dead birds, what to do if you think a person might be infected, and how to identify an infected bird. However, differences were found across various groups of respondents. For example, 22% of women recalled the message how to identify an infected bird, while 31% of husbands, 25% of female youth, and 53% of male youth recalled that message.

4.4 Knowledge about the Hotline for Avian Influenza (Table 4.4 A&B)

The avian influenza communication strategy included many elements designed to maximize coordination and minimize the impact of the AI outbreak. Among the various interventions that were introduced is the promotion and establishment of hotlines, beginning in mid-2006. These hotlines are operated by the Ministry of Health and provide support and reliable information to the general public. As part of an ongoing assessment of hotline effectiveness, the EHCS 2008 included a question about the existence of these hotlines.

Respondents were asked whether they had heard about the AI hotlines during the 12 months preceding the survey (Figure 4.3). Overall, about one-quarter of women, husbands and female youth said they had heard about these hotlines, while only 14% of male youth had heard about it. Among women, husbands and female youth, urban residents were more likely to know about the hotlines, especially those in Urban Governorates and urban Lower Egypt, compared to residents of rural areas. Slightly more than one-third of women in Urban Governorates and urban Lower

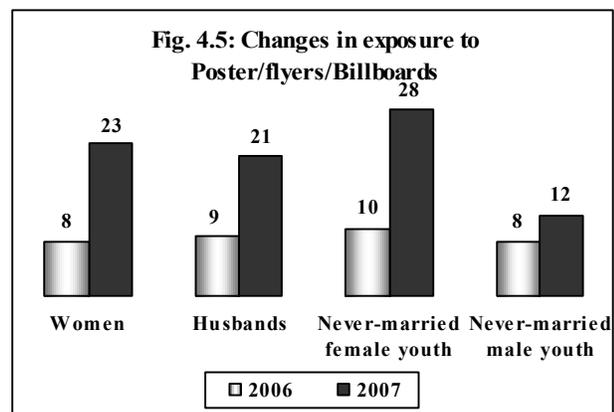
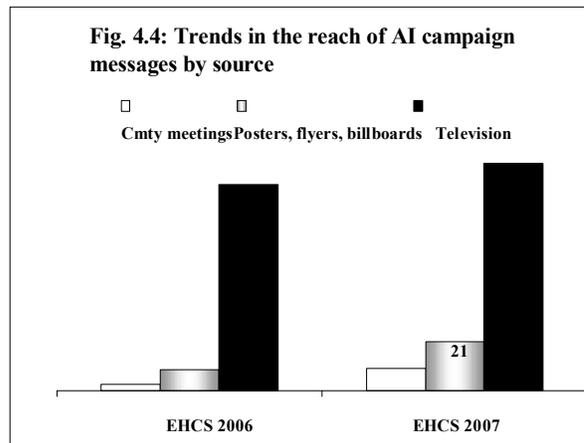


Egypt had heard about the hotlines compared to 24% of those in rural Lower Egypt and about one-fifth of those in urban Upper Egypt or rural Upper Egypt. Conversely, male youth knowledge of hotlines was higher among those in rural Upper Egypt compared to respondents in other areas.

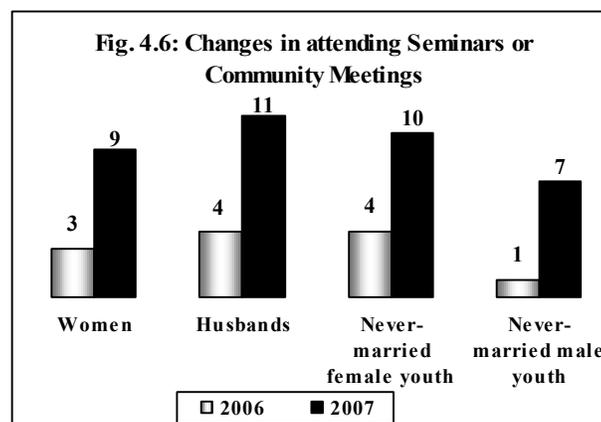
4.5 Change in Exposure to AI Messages—Comparison Between EHCS 2006 and EHCS 2007

Before presenting the variations between the 2006 and 2007 surveys it is important to understand that in the 2006 EHCS the reference period in questions about exposure to messages from various channels was 3 months, as the communication campaign had started 3 months prior to the survey; whereas in the 2007 EHCS the reference period is 12 months. Despite this variation in the reference period for questions addressed in the 2006 and 2007 EHCS, comparisons are valid because the same exposure levels and results showed by the 2006 survey would have been achieved if the reference period was 12 months. There is no overlap between the two reference periods.

Overall levels of exposure from various channels increased considerably from the 2006 EHCS to the 2008 EHCS (Figure 4.4). For example, exposure to AI messages on posters/flyers/billboards has increased during this period (Figure 4.5). The level of exposure among women has almost tripled from the 2006 to the 2008, while that of husbands and never-married female youth has more than doubled.



The same pattern of increase in levels of exposure was observed regarding the seminars and community meetings (Figure 4.6). The highest increase occurred among male youth: 1% only in the 2006 attended a seminar or a community meeting compared to 7% in the 2007 survey. Also, exposure levels among women, husbands, and female youth more than doubled. These levels of reach at the population level in 2007 are relatively high for community-based activities.



KNOWLEDGE, ATTITUDES AND PRACTICES RELATED TO AVIAN INFLUENZA PREPAREDNESS & RESPONSE 5

Raising population awareness, knowledge, and understanding about avian influenza modes of transmission, risks, symptoms as well as protective measures is an important step in preparedness and response. CHL developed various communication materials to raise population knowledge and awareness about AI including informative TV spots, radio spots, flyers, posters for Ask Consult pharmacies and community-based interpersonal communication and outreach.

In this chapter, population knowledge about avian influenza, modes of transmission, symptoms and protective measures are described. In addition, protective practices related to avian flu, as well as changes in those behaviors are presented.

5.1 Modes of transmission (Table 5.1 A&B)

During the EHCS, respondents were asked about the different modes of transmission through which avian flu could be transmitted to humans. Overall, almost all respondents reported some knowledge of AI modes of transmission with insignificant variations across groups with different background characteristics.

The most frequent mode of transmission reported by all respondents is contact with sick poultry/birds.

By far the best known mode of transmission is contact with sick poultry/birds: 88% of women, 84% of husbands, 89% of female youth, and 79% of male youth reported this mode of transmission. Contact with feces from sick poultry/birds was also commonly mentioned by 52% of women, 47% of husbands, 54% of female youth and 33% of male youth. In addition, contact with dead poultry/birds was mentioned by 18-

30% of respondents in the various subgroups. About 25% of respondents knew that eating undercooked eggs and poultry was a mode of transmission. Other modes of transmission were mentioned by small percentages of each subgroup. Although humans infected with H5N1 cannot transmit the virus to other humans, 14% of women, 21% of husbands, 10% of female youth and 25% of male youth believe that it can be transmitted this way.

Respondents from urban areas were more likely to report correct modes of transmission than those in rural areas. For example, more than 90% of women, husbands and female youth reported that contact with sick poultry/birds could transmit the virus which is at least 6 percentage points more than their counterparts in rural areas. Also, human to human transmission was more often mentioned among rural respondents than among urban respondents: for example, 26% of husbands from rural areas reported this mode compared to 10% from urban areas. Variations were also found across educational level. Respondents with more education were less likely to report human to human contact as a mode of transmission. On the other hand, respondents with more education were more likely to report “eating live poultry products” and “contact with contaminated water”.

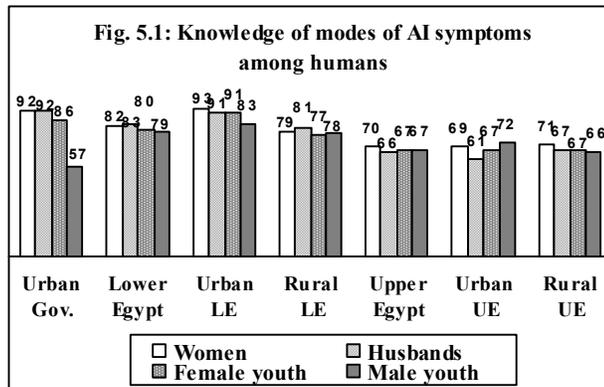
A significant percentage of respondents, especially those from rural areas reported contact with an infected person as one of the modes of transmission.

5.2 Symptoms of Avian Influenza (Tables 5.2-5.3 A&B)

Among Humans

Respondents were about their knowledge of symptoms of avian flu among humans and birds. More than three-quarters of all respondents know at least one symptom among humans. Knowledge of symptoms of AI among humans was higher in urban areas than in rural areas. The lowest knowledge

of human symptoms was found among male youth in Urban Governorates and among all groups in Upper Egypt, especially the rural areas. Knowledge of human symptoms was also related to the education level of respondents. Two-thirds of respondents with no education or some primary education could name at least one human symptom, while 89% of respondents with educational level higher than the secondary education could do so.



The most commonly mentioned human symptom was fever, which was reported by slightly more than 75% of all respondents. Also, more than half of the respondents mentioned general malaise as one of the symptoms (except for male youth: 42%). Other symptoms that were reported by one-third to one-fifth of respondents included sore throat, red eyes/eye infection, and difficulty breathing. There were no notable variations in knowledge of human symptoms by region or urban-rural residence.

Among birds

Knowledge of AI symptoms among birds was higher than knowledge of human symptoms. Overall, 93% or more of respondents could name at least one symptom among birds. Knowledge was universal across region and urban-rural residence except among male and female youth where the level of knowledge is slightly lower among those from rural Lower Egypt. By education, respondents with no education or those with higher than a secondary level education were slightly more likely to report knowledge of avian symptoms compared to those with primary complete/some secondary education or those with a secondary education (97% percent compared to 93%).

Level of knowledge of symptoms of AI among Birds is high (93% or more) across all regions.

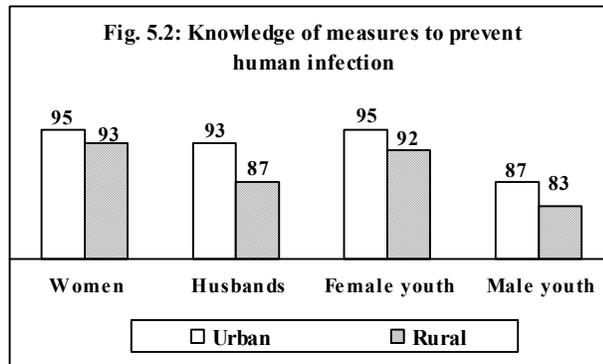
The most frequently mentioned avian symptom was weakness (reported by 50%-55%). Also, about two-fifths of women, husbands and female youth mentioned fever or crest/wattle and skin turning blue as one of the symptoms. Slightly more than one-third of women and female youth reported ruffled feathers compared to 31% among husbands and 27% among male youth. Sudden death was mentioned as a symptom by 21% of women, 26% of husbands, 22% of female youth and 34% of male youth.

Because ducks are carriers of the H5N1 virus, respondents were asked if ducks could have the virus but not appear ill. Knowledge of this fact was common: 71% of women, 72% of husbands, 73% of female youth and 77% of male youth knew that ducks can carry the virus without showing symptoms. This knowledge was slightly higher among respondents from urban areas than those from rural areas and among respondents with higher educational levels (80%) compared to those with lower education, (66%).

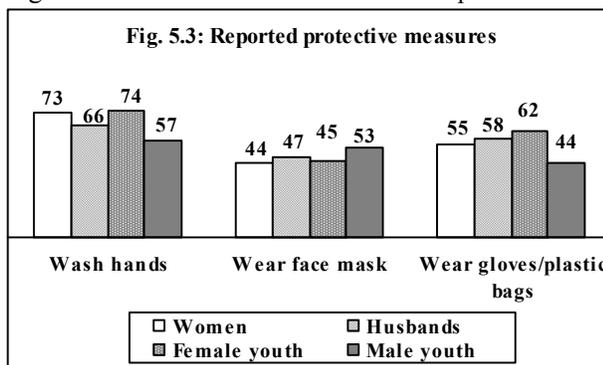
5.3 Knowledge of Protective Measures (Tables 5.4-5.6 A&B)

When respondents were asked if they know ways of preventing avian flu transmission, 93% of women and female youth, 89% of husbands, and 85% of male youth were able to name at least one way of protecting themselves from avian flu. Knowledge of protective practices was higher in urban than in rural areas, especially for husbands and male youth. Ninety-three percent of husbands and 89% of male youth from urban areas could name a protective measure compared to 87% and 83% respectively in rural areas. Lowest levels of preventive knowledge were found in rural Lower Egypt. By background characteristics, youngest (15-19 years) and oldest (50+) respondents, as well as those with educational below the secondary level were less likely to report knowledge of protective practices compared to other respondent groups.

Looking at the various protective measures reported by respondents, washing hands after contact with poultry/birds was by far the most frequently reported way, followed by wearing a face mask when in contact with birds and wearing gloves/plastic bags when handling birds. Slightly less than three-quarters of women and female youth, two-thirds of husbands, and 57% of male youth mentioned washing hands after contact with poultry and birds. The results also indicated some variations in reporting protective measures across respondent groups. For example, 42% of husbands reported avoiding eating undercooked eggs compared to 23% or less among other respondents. Also, about one-third of women and female youth reported changing and washing clothes after contact with birds compared to 18% among husbands. Women and female youth in Upper Egypt were more likely to report washing/changing clothes as a protective practice than respondents residing elsewhere. This variation may be because female youth and women are more likely to be engaged in breeding activities than males and thus are more likely to report ways that relate to those activities. Interestingly, vaccination of birds as a protective measure was more likely to be reported by husbands and female youth (7% and 6% respectively) than by women and male youth (1% or less). Respondents with more than a secondary level education were more likely to report wearing a face mask when in contact with poultry and wearing gloves/plastic bags when handling poultry than respondents with lower education levels. For example, wearing a face mask was reported by 58% of respondents with more than a secondary level education compared to 40% among those with no education.



Proper disposal and handling of sick birds or dead birds doesn't only protect the person involved with the disposal and handling activities; it also reduces the risk of virus transmission to other birds and into the human population. Thus, during the EHCS 2007 a question was addressed to respondents about knowledge of ways to deal with sick birds or those that have died. In general, 94% of women, 91% of husbands, 89% of female youth and 86% of male youth reported knowledge of at least one way to deal with sick/dead birds. Knowledge in rural areas was slightly higher than in urban areas. In addition, the highest levels of knowledge were observed in Urban Governorates, rural Lower Egypt and rural Upper Egypt, whereas the lowest levels of knowledge were observed in urban Lower Egypt, except for male youth where the lowest levels were observed in urban Upper Egypt.



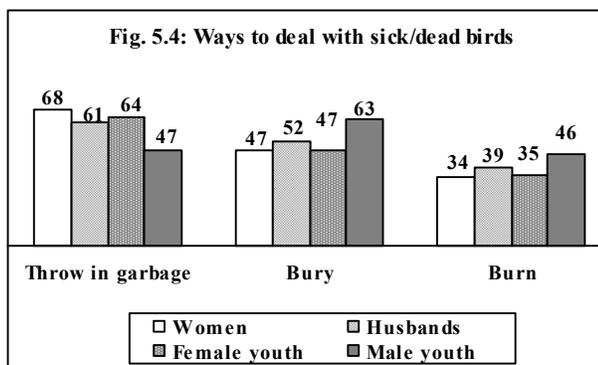
Knowledge of ways to deal with sick/dead birds is lowest among respondents from urban Lower Egypt except for male youth where the lowest level is in urban Upper Egypt.

Considering the reported ways to deal with sick/dead birds, the three most frequently mentioned were to throw them in the garbage, bury them, and burn them (Figure 5.4). Burying and/or burning sick/dead birds were more likely to be reported by male youth than by other respondent groups. Throwing birds in the garbage was more likely to be mentioned by respondents in rural areas than by those in urban areas, while the case was reversed for burying or burning birds. Only 14% of women and female youth, 17% of husbands and 8% of male youth reported that they would report sick or dead birds to the veterinary authorities. Disposal of sick/dead birds in sewage was mentioned almost

exclusively in rural areas, but not frequently; only 4% of female youth and 3% of husbands and male youth mentioned disposing of sick or dead poultry in this way.

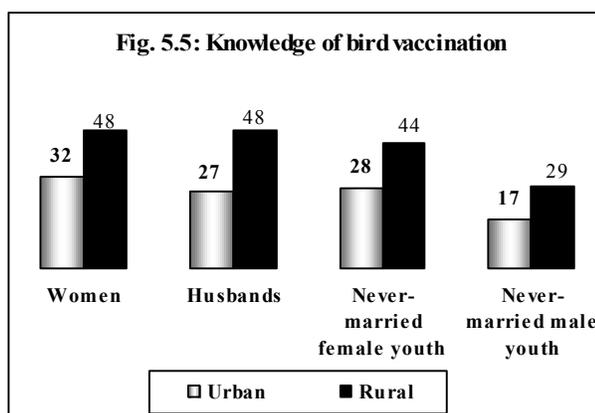
According to the WHO and FAO, it is safe to eat poultry or eggs if they are cooked properly. Proper cooking requires that the internal temperature of all parts of the poultry reach 75°C or above. Proper cooking of both poultry and eggs inactivates the virus and thus eliminates the risk in consuming them.

On this topic, the survey included a question about how respondents know that that poultry or eggs are fully cooked. Roughly half of all respondents (45% of women, 53% of husbands, 49% of female youth and 59% of male youth) said that poultry was fully cooked when the meat no longer looked pink. Significant numbers of women (42%), female youth (23%), and husbands (35%) reported that they identify fully cooked poultry by inserting a knife and tasting the poultry. With regard to cooking eggs, the majority of respondents reported that they identify a fully cooked egg when the yolk is no longer runny. Also, 39% of women, 35% of female youth, 30% of husbands, and 25% of male youth reported that they cook eggs for more than 10 minutes to ensure that they are safe.



5.4 Knowledge of Bird Vaccination (Table 5.7 A&B)

The survey has also collected information about respondents' knowledge of bird vaccination. Slightly more than two-fifths of women, husbands and female youth had heard about vaccinating birds against AI, compared to two-thirds of male youth. By region, the highest level of knowledge was found in Urban Governorates except for male youth who were most knowledgeable in urban Upper Egypt (Figure 5.5). By educational level, respondents with some primary education reported the highest level of knowledge of vaccinating birds against H5N1 (86%).



Respondents were also asked whether they had access to vaccination for their birds. Forty-three percent of women, 41% of husbands, 38% of female youth and 25% of male youth reported that they could get their birds vaccinated locally. About one-fifth of all respondents reported that they do not know whether they could get their birds vaccinated or not. Rural respondents were more likely than urban respondents to report that they could get their birds vaccinated.

5.5 Risk and Efficacy Perceptions Related to Avian Influenza (Table 5.8 A&B)

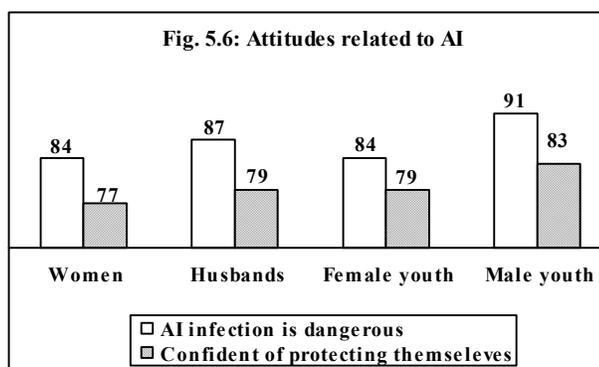
In order to investigate attitudes about risk and efficacy related to avian flu, a series of statements were read to the respondents about the severity or danger posed by avian flu, the susceptibility or likelihood that a family member might become infected, their confidence that AI could be prevented and their confidence that they could protect themselves and their family. Such questions can help program planners target audience groups that underestimate risk or lack the confidence to act in response to the threat of AI. Figure 5.6 shows that the perceived severity of avian influenza is high among all groups: 84% of women, 87% of husbands, 84% of female youth, and 91% of male youth said that they thought that AI was a dangerous or extremely dangerous disease. The perceived dangerousness of AI infection was higher among respondents from urban areas than among those from rural areas and

among respondents with a higher educational level than among those with a lower educational level.

When asked about the likelihood that a family member might become infected, slightly more than one-fifth of the respondents reported that this is likely to happen (the majority of them reporting that it is somewhat likely). On the other hand, 44% of women, 47% of husbands, 43% of female youth, and 65% of male youth reported that it is not likely at all.

By educational level, the perceived likelihood of a family member becoming infected decreases as educational level increases. One-quarter of respondents with no education reported likelihood of infection compared to 12% among those with more than a secondary level education.

Regarding confidence to prevent the spread of AI, 59% of women, 62% of husbands, 57% of female youth and 64% of male youth reported that they are somewhat or very confident that AI could be prevented. Also, a large majority of respondents (77%-83%) were confident that they could protect themselves and their families from AI. Confidence levels were higher among respondents with higher educational levels.



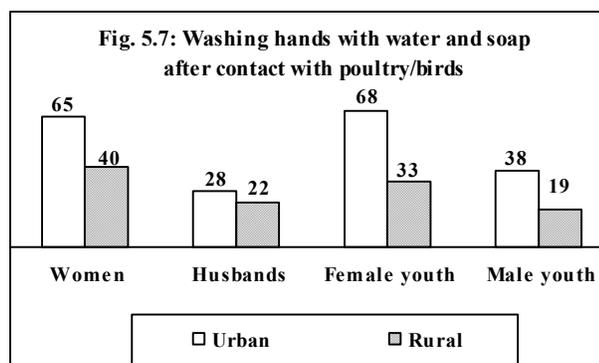
5.6 Practices Related to Avian Influenza (Tables 5.9-5.10 A&B)

During the EHCS 2007, all respondents were asked if they have been involved with either breeding/handling birds and poultry and/or slaughtering poultry/birds during last month. Among those who reported involved with such activities, questions were addressed to identify protective measure taken by them. Overall, one – third of respondents reported that they have been involved in breeding or handling poultry in three month prior to the survey. Less than half of women (48%), 22% of husbands, 40% of female youth, and only 19% of male youth reported that they have been involved with breeding or handling poultry/birds in the month prior to the survey. In addition, around one-third of women reported involvement with slaughtering compared to 17% among female youth, 7% among husbands and 5% among male youth. Involvement with slaughtering was much higher among respondents from rural areas than those from urban areas. For example, about half of the women from rural areas reported involvement with slaughtering compared to 8% only in urban areas.

Slaughtering is more common among women than other respondents and the majority of those involved with this activity are from rural areas.

When respondents who were involved with breeding, handling or slaughtering birds were probed about specific protective measures taken, washing hands with water and soap was the most common practice: 43% of women, 23% of husbands, 38% of female youth and 21% of male youth reported that they wash their hands with water and soap after direct contact with birds. This protective measure was more likely to be reported by respondents from urban areas than those from rural areas.

When respondents were asked whether they wore anything on their hands, covered their nose and month, or wore special clothes when working with birds, only a neglectable percentage reported following any of these protective measures.



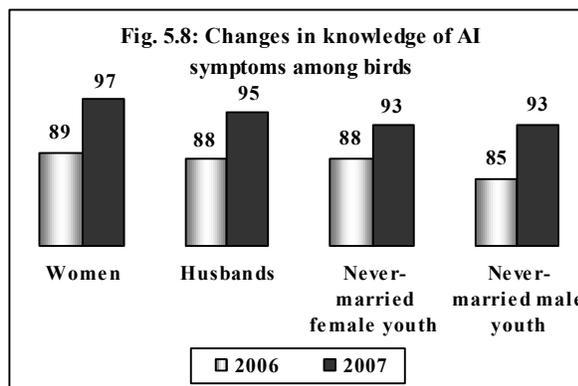
To assess respondents' protective practices, they were asked specific questions to identify protective behaviors during the 12 months preceding the survey¹. Respondents who reported having birds at home at the time of the interview, were asked additional questions about behaviors related to handling of birds. The most commonly reported practices by women and female youth were those related to their normal house chores: washing hands with soap after preparing poultry for cooking (78% and 76% respectively), cooking eggs until totally firm (77% and 72% respectively), cooking poultry thoroughly (71% and 70% respectively), and washing utensils more carefully after cooking (65% and 64% respectively). About two-thirds of the respondents reported that they had talked to others in the past year about how to protect themselves from AI. In addition, about two-fifths of women, husbands and female youth and 31% of male youth reported that they had avoided handling birds in the 12 months preceding the survey. Respondents with more than a secondary education were more likely to take protective measures, especially the following: avoided handling birds, wore protective clothing when having contact with birds and visited a doctor or health facility due to fever or illness.

5.7 Change in Knowledge, Attitudes and Practices related to AI—Comparison between EHCS 2006 and EHCS 2007

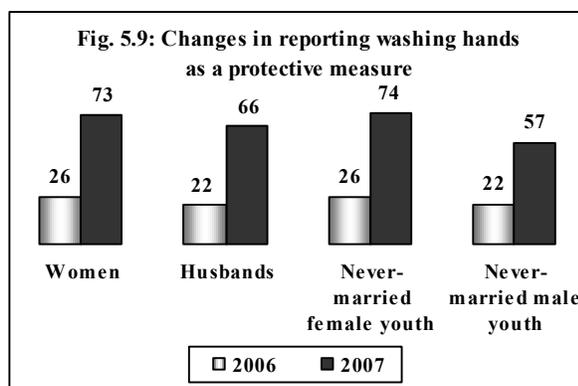
Almost the same questions that were addressed to respondents in the 2006 EHCS were asked again to respondents in the 2007 EHCS with some additional questions to gain a more in-depth understanding of public knowledge, attitudes and practices. Overall, levels of knowledge increased slightly from 2006 to 2007, but there were no significant changes in knowledge about AI modes of transmission and symptoms of AI among humans.

Respondents from rural areas were more likely to report that they have avoided handling birds than those in urban areas.

However, knowledge of symptoms of AI among birds increased significantly among all groups of respondents from 2006 to 2007 (Figure 5.8); the main increase was achieved in rural areas. For example knowledge of AI symptoms in birds increased among women in urban areas from 92% to 96% and among women in rural areas from 88% to 98%. The same pattern of change was observed in other respondent groups. Changes in knowledge of human symptoms also increased slightly but not significantly from 2006 to 2007. However, fever was more commonly mentioned as a human symptom in 2007 than in 2006: about two-fifths of the respondents in 2007 mentioned this symptom compared to one-quarter of the respondents in 2006. On the other hand, ruffled feathers and no egg production were more likely to be reported in 2006 than in the 2007 survey.



Regarding change in the actual practice of protective behaviors from 2006 to 2007, washing hands, wearing gloves/plastic bags on one's hands, and wearing a face mask when



¹ Not applicable responses were excluded from the analysis. Thus, results of each statement are based on the number of respondents reporting either yes or no.

dealing with birds were more likely to be reported in the 2007 than the 2006 survey. For example, Figure 5.9 shows the change in the percentage of each respondent group reporting hand washing as a protective measure. Also, reporting of both wearing gloves/ plastic bags, and wearing masks more than doubled during the same period. Because the CHL/MOH/SIS-supported campaign was the main purveyor of these ideas, the dramatic increase in these important protective behaviors provides encouraging evidence of the campaign's success.

Some change in respondents' attitudes regarding AI has also been observed. The perceived likelihood of AI infection declined slightly but significantly from 2006 to 2007: in 2006, 25% of women, 24% of husbands, 26% of female youth, and 25% of male youth said they were likely to get infected compared to 21%, 21%, 22%, and 11%, respectively, in 2007. During the same time period, self-confidence in one's ability to prevent AI infection increased among all four groups, from 33% to 43% for women, from 34% to 45% for men, and from 33% to 51% among male and female youth. Considering the increase from 2006 to 2007 in protective behaviors, like handwashing with soap after handling birds and the use of protective equipment, it is likely that reduced susceptibility and increased self-efficacy are the result of growing confidence in one's own behavior through practice.

Recently, program efforts have been directed at both the national and local levels to improve health knowledge and awareness of Egyptians in areas of infectious diseases. CHL health communication activities mainly focus on increasing knowledge and behavior practices in the areas of safe injection, HIV/AIDS and Hepatitis C. Thus, the 2007 EHCS questionnaire collected information about knowledge and attitudes related to HIV/AIDS and Hepatitis C. The questionnaire also collected information about knowledge and attitudes related to safe injection practices since this related to the transmission of blood-borne diseases.

6.1 Knowledge and Attitudes Related to HIV/AIDS (Tables 6.1-6.5 A&B)

Respondents were asked series of questions to assess their knowledge of HIV/AIDS, their sources of information about AIDS, knowledge of modes of transmission, and their attitudes related to persons infected with HIV/AIDS.

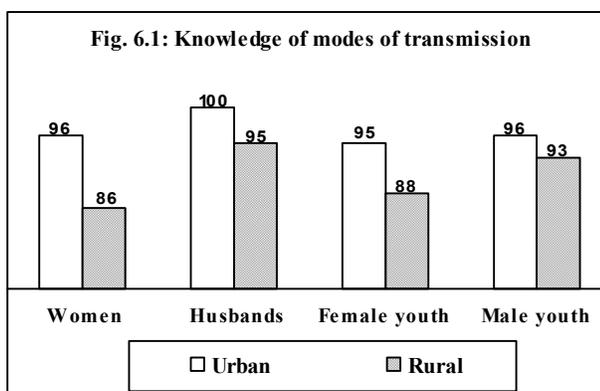
Knowledge of HIV/AIDS

Virtually all respondents reported that they have heard about HIV/AIDS: 98% of married women, 99% of husbands, 97% of female youth, and 99% of male youth. The data also revealed that women and female youth from rural areas (especially rural Upper Egypt) are less likely to report knowledge of HIV/AIDS than those in urban areas. Television, by far, was the most common source of knowledge. Almost all respondents, who reported that they have heard about HIV/AIDS, mentioned that their last source of knowledge is the television (96% or more) with no discrepancies by region or urban-rural residence.

Knowledge of HIV/AIDS is universal among all respondents, however, levels of knowledge are slightly lower among women and female youth from rural Upper Egypt

Modes of transmission of HIV/AIDS

Respondents who had heard about AIDS were asked if they know ways by which a person can be infected with HIV. Those who reported knowledge about HIV transmission were asked to name at least two ways through which AIDS can be transmitted. Results of these questions showed that 90% or more of respondents know at least one correct way by which HIV can be transmitted. Variations by urban-rural residence are large for women and female youth. Figure 6.1 shows that ninety-six percent of women and 95% of female youth from urban areas reported knowledge of ways of transmission compared to 86% and 88%, respectively. Also, variations by educational level were found: level of knowledge of modes of transmission was 85% among respondents with no education compared to 99% among respondents with more than a secondary level education.



Blood transfusion was the most commonly cited mode of transmission, with about three-quarters of the respondents reporting it as a mode of transmission. In addition, infected needles, illicit sexual relations and sexual relations with an infected person were among the most commonly reported modes of transmission with some variations across the four groups of respondents. For example,

about 70% of husbands and female youth reported infected needles as a mode of transmission compared to 63% and 58% among women and male youth respectively. By urban-rural residence, respondents from urban areas were more likely to report blood transfusion and infected needles as modes of transmission than those living in rural area. On the other hand, results show that even among those aware of HIV/AIDS, a significant number of respondents lack sufficient knowledge about the modes of transmission, especially with regard to mother-to-fetus transmission. Few respondents mentioned mother-to-fetus transmission (5% of women, 6% of husbands, 9% of never-married female youth, and 2% of never-married male youth). The group most likely to know that reporting blood transfusion is a mode of transmission was respondents with more than a secondary level education (84%).

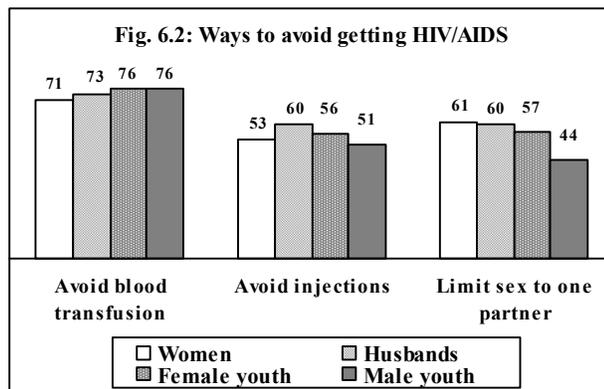
Knowledge of HIV transmission from mother-to-fetus is very low.

Knowledge of HIV/AIDS protective measures

Respondents who had heard about AIDS were also asked if they know ways to avoid getting HIV/AIDS. Those who said yes were asked to name at least two ways to avoid getting HIV/AIDS. Data indicate that almost all respondents (97%) know at least one way to avoid getting the HIV/AIDS. The results also show that respondents from Lower Egypt are less likely to report knowledge of preventive measures than respondents living elsewhere. For example, 94% of husbands in Lower Egypt (91% and 95% in urban and rural Lower Egypt respectively) reported knowledge of ways to avoid HIV/AIDS compared to 100% across other regions.

Almost all respondents reported knowledge of ways to avoid getting HIV/AIDS. However, levels of knowledge are slightly lower in Lower Egypt.

Looking at the reported ways to avoid getting HIV/AIDS, avoiding blood transfusions, limiting sex to one partner/staying faithful to one partner and avoiding injections were the most frequently reported ways to avoid getting HIV/AIDS (Figure 6.2). About three-quarter of female youth and male youth mentioned avoiding blood transfusions as did 73% of husbands and 71% of women. Also, husbands were slightly more likely to mention avoiding injections than other respondents. It is also worth noting that 18% of female youth, 17% of women and 16% of husbands and male youth mentioned abstaining from sex as a way of protection from infection. Variations by residence exist, where respondents from urban areas are more likely to mention avoiding blood transfusions, limiting sex to one partner, and avoiding injections as ways of protection than respondents from rural areas. On the other hand, respondents from rural areas were more likely to report abstaining from sex as a way of protection than respondents in urban areas. Expectedly, reporting of condom use as a protective measure was minimal: 4% among women, 5% among husbands, 3% among female youth and 5% among male youth. Few variations exist by educational level where respondents with more than a secondary level education were more likely to mention avoiding blood transfusions and limiting sex to one partner than other respondents with a lower educational level.



Attitudes related to HIV/AIDS

Attitudes toward HIV/AIDS, particularly risk and efficacy perceptions, can be important predictors of behavior. A series of statements was read to all respondents to investigate their attitudes towards HIV/AIDS. The responses were ranked on a scale of 1-5 (strongly disagree, disagree, neutral, agree, strongly agree). During the analysis stage, the mean score was calculated for each statement.

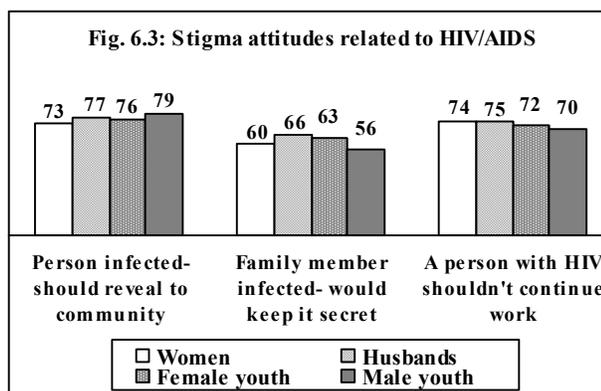
Almost all respondents agreed that getting an HIV/AIDS infection is severe (100% of husbands and 99% of women, male youth, and female youth) with no differentials across region or residence. Few respondents believe it is possible that they could get infected with HIV/AIDS (4% of women and husbands, 2% of female youth, and 3% of unmarried male youth). The majority of respondents (about three-quarter of women and female youth, and slightly more than two-fifth of husbands and male youth) disagreed that they could get HIV/AIDS. Disagreement of getting HIV/AIDS was higher among respondents from urban areas than those from rural areas.

More than half of the respondents believe that HIV/AIDS is a serious problem in Egypt. However, significant differences were observed between urban and rural areas. For example, 64% of urban female youth reported that HIV/AIDS is a serious problem in Egypt compared to 46% among those in rural areas. Moreover, there are variations in agreement regarding that HIV/AIDS problem in Egypt will increase in the future: 43% of women, 49% of husbands, 41% of female youth and 32% of male youth agreed that HIV/AIDS will increase in Egypt in the future

Most respondents are confident that they can protect themselves from HIV/AIDS: 91% of husbands, 90% male youth, 85% of women, and 84% of female youth. Confidence level was higher among respondent from urban areas, especially Urban Governorate and urban Upper Egypt, then those in rural areas.

However, the majority of respondents do not consider the use of condoms to be an effective way to prevent HIV/AIDS infection. Overall, around one-quarter of women, female and male youth, as well as one-third of husbands agree that condom use is an effective way to prevent HIV/AIDS. This attitude toward condom use was highest among respondents from urban Lower Egypt and lowest among those from Urban Governorates.

In the 2007 EHCS, respondents who have heard about HIV/AIDS were also asked a series of questions to assess their attitudes towards persons with HIV/AIDS, and thus the extent of stigma associated with HIV/AIDS. The results indicate that the majority of respondents believe that the community has the right to know if a person is HIV-positive (Figure 6.3). However, this percentage is highest among younger respondents and those with more than a secondary level education than other respondents. On the other hand, when respondents were asked if they would want to keep it secret if a family member is HIV-positive, roughly one-quarter to one-third of each subgroup said that they would want it to remain a secret. Data also revealed that the majority of respondents believe that a person with HIV who works with others should not be allowed to continue working. This attitude is most common among respondents with more than a secondary level education.



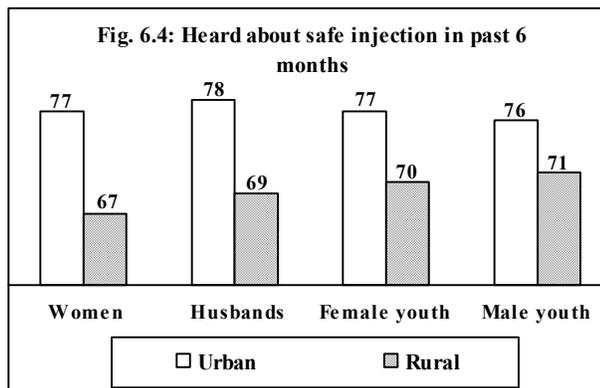
The survey found very little use of HIV/AIDS hotlines or other sources of information about HIV/AIDS. Less than 1% of the respondents reported that they have called an HIV/AIDS hotline to ask about information or for advice. Also with regards to visiting a health facility for advice or information about HIV/AIDS, less than 1% reported that they sought information or advice. Among female youth, none of them reported calling hotlines or visiting health facilities for information or advice about HIV/AIDS.

6.2 Knowledge, Attitudes and Practices Related to Safe Injections and Blood-Borne Diseases (Tables 6.6-6.10 A&B)

The 2007 EHCS collected information about respondents' knowledge, attitudes, and practices with regard to safe injections and the prevention of blood borne diseases.

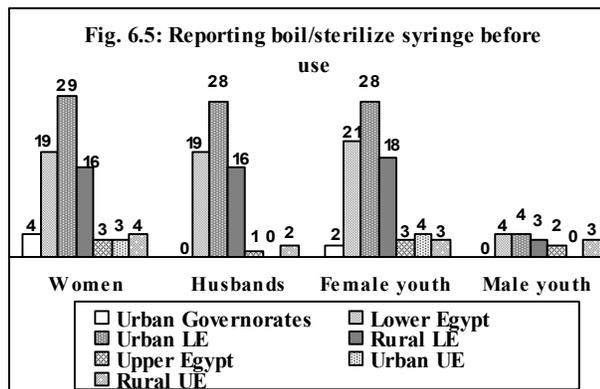
Exposure to information about safe injection, blood-borne diseases and ways to prevent infection from needles

When respondents were asked whether they have heard about safe injection during the 6 months preceding the survey, the majority reported hearing messages about safe injection during the said period: 70% among women, 72% among husbands and female youth, and 73% among male youth. The data also indicates that respondents from rural areas were more likely to have heard about safe injection during the 6 months preceding the survey than those in urban areas and the gap is greater among women and husbands (Figure 6.4). In addition, results also indicate



that levels of exposure were highest among respondents with more than a secondary education than those with a lower educational level: 83% of respondents with more than a secondary level education, 72% of those with secondary education, 67% of those with primary complete/some secondary, 65% of respondents with some primary education, and 68% of respondents with no education reported hearing about safe injection during the 6 months prior to the survey. With regards to the last source of information about safe injection, almost all respondents reported that the TV was their last source: 94% among women, 91% among husbands and male youth, and 95% among female youth. However, a few women and husbands from rural areas also reported health providers as the last source of information (5% in rural areas).

Looking at the received information, the two messages that were most commonly recalled by respondents are: only use a syringe in a sealed package and don't share syringes. Only use a syringe in a sealed package was reported by 96% of women, 94% of husbands, 99% of female youth and 94% of male youth. The message to not share a syringe also was mentioned by 76% of women, 73% of husbands, 74% of female youth, and 58% of male youth. Not sharing a syringe was more likely to be mentioned among respondents from urban areas than those in rural areas. Interestingly, few respondents reported that they received information about boiling or sterilizing needles before use (Figure 6.5). This information was more commonly reported among women and female youth (11%) and husbands (10%) than male youth (3%). In addition, reporting "boil/sterilize syringe before reuse" was highest among respondents with no education (12%) and those in the age cohort 30-34 (14%).

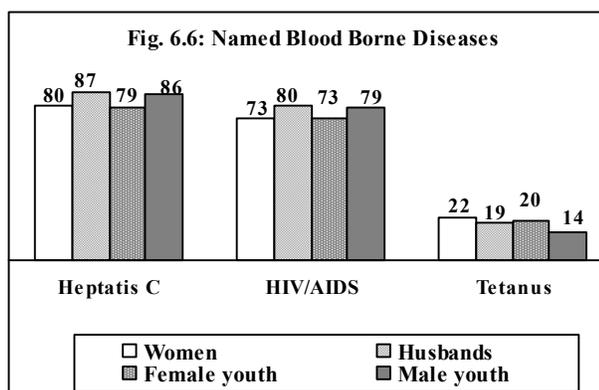


Respondents were also asked if they had ever heard about blood borne diseases that can be transmitted through used needles. Those who answered yes were asked to name those blood-borne diseases. The results show that 89% of

Results show that the majority of respondents (89% or more) know about blood borne diseases, yet the lowest level of knowledge is observed among respondents in rural Upper Egypt.

women, 93% of husbands, 92% of female youth and 90% of male youth had heard about blood borne diseases that can be transmitted through used needles. Differences across residence exist where respondents from urban areas, especially Urban Governorate and urban Lower Egypt, are more likely to report knowledge of blood borne diseases than those in rural areas. Variations by educational level are also observed where knowledge of blood borne diseases increases among respondents with higher educational level where 98% of those with more than a secondary education reported knowledge of blood borne diseases.

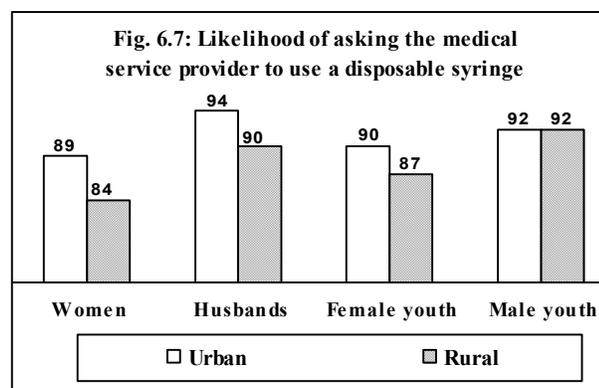
Respondents who have heard about blood borne diseases were asked to list the diseases they know (Figure 6.6). Hepatitis C and HIV/AIDS were the most frequently reported diseases. About four-fifth of women and female youth, 87% of husbands, and 86% of male youth named Hepatitis C as a blood borne disease. Also, slightly less than three-quarter of women and female youth, as well as about four-fifth of husbands and male youth named HIV/AIDS. Fewer respondents named Tetanus as a blood borne disease: 22% of women, 19% of husbands, 20% of female youth and 14% of male youth. Reporting Hepatitis C and HIV/AIDS was higher among respondents from urban areas than those in rural areas. For example, 91% and 84% of women in urban areas reported Hepatitis C and HIV, respectively, compared to 74% and 73% among those in rural areas. Data also revealed that respondents with educational level higher than the secondary level are more likely to mention Hepatitis C and HIV/AIDS than other respondents. For example, 97% of respondents with more than a secondary education listed hepatitis C as a blood borne disease compared to 71% among those with no education.



Respondents also were asked to name ways to prevent the risk of infection from needles. Overall, about nine in ten women, husbands and female youth and 82% of male youth mentioned not sharing or reusing needles as a preventive measure. This percentage was slightly higher among respondents from urban areas than those from rural areas. In addition, about one-third of respondents mentioned that purchasing a disposal syringe and taking it to one’s provider to use is also a preventive practice. Moreover, asking a health provider to use a disposable syringe was mentioned by about one-quarter of respondents, except for male youth (13%). It is also worth nothing that very few respondents (2% of less) reported that they do not know ways to prevent infection from used needles.

Attitudes related to safe injection

Respondents were asked how likely they were to ask a medical service provider to use a disposable syringe. The responses were measured on a scale of 1-5 (very unlikely, unlikely, somewhat likely, likely, and very likely). During the analysis stage, the responses were recoded into three categories: likely, unlikely and somewhat likely.



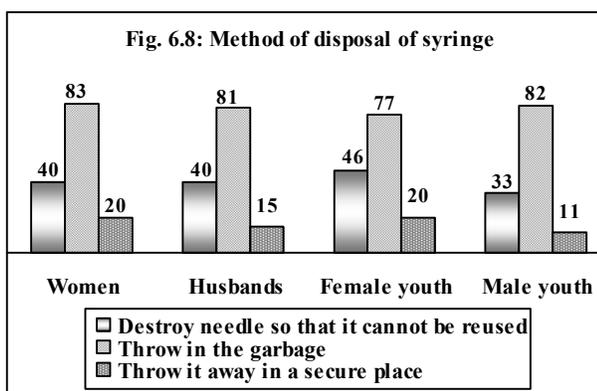
The majority of respondents reported being likely to ask the medical service provider to use a disposable syringe (86% of women, 91% of husbands, 88% of female youth, and 92% of male youth). Respondents from rural areas were less likely to say they would ask their provider to use a disposable syringe than those in urban areas (see Figure 6.7).

Practices related to safe injection

Questions were addressed to respondents in order to determine practices related to safe injection. Respondents were first asked if they have ever asked a service provider to use a disposable syringe, whether they have ever purchased a syringe for use at home and if so, whether it was reused or not, and how they dispose of a syringe. Only a few respondents report ever having asked the service provider to use a disposable syringe (8% of women, husbands, and female youth, and 6% of male youth). These percentages may reflect the fact that a relatively high percentage of respondents bring their own syringes with them (about one-quarter of the respondents).

About 45% of women, husbands, and female youth and 32% of male youth mentioned that they had ever purchased or obtained a syringe for use at home. Respondents who had ever purchased or obtained syringes for use at home were asked if they or any family member had ever reused a syringe. Very few respondents reported reuse of syringes: 6% of women and husbands, and about 10% of female and male youth reported that they themselves or a family member had ever reused a syringe.

Respondents who had ever purchased or obtained syringes for use at home were asked about their method of disposal of syringes after use (Figure 6.8). Unfortunately, most respondents indicated that they throw the syringes in the garbage without destroying them. Nevertheless, there is a promising degree of awareness of the need to properly dispose of used syringes, where 40% of women and husbands, 46% of female youth, and 33% of male youth reported that at least sometimes they destroy the needle so that it cannot be used again. By educational level, respondents with more than a secondary education were more likely to report destroying the needle so that it cannot be used again than respondents with a lower educational level, whereas respondents with no education were more likely to report throwing syringe in the garbage for disposal than respondents with a higher educational level. Urban residents were more likely to report that they destroyed needles after use.



6.3 Knowledge and Attitudes Related to Hepatitis C (Tables 6.11-6.14 A&B)

A series of questions were asked to assess respondents' knowledge of Hepatitis C, their source of information about Hepatitis C, and their perceptions and attitudes related to Hepatitis C. Results of these questions are presented in this section.

Knowledge of Hepatitis C

The majority of respondents reported that they have ever heard about Hepatitis C: 88% of women, 94% of husbands, 89% of female youth and 90% of female youth. Results also indicate that the highest level of knowledge about Hepatitis C is among husbands and women from urban Lower Egypt and male and female youth from urban Upper Egypt. In addition, data indicate that the lowest level of knowledge is among respondents with no education (78%).

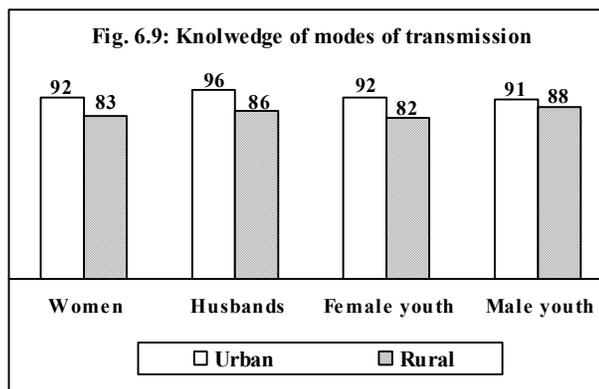
Respondents who had heard of Hepatitis C were asked about their last source of information. As expected, television was the most commonly mentioned source of information among all respondents, and was cited by 86% of women, 82% of husbands, 88% of female youth and 73% of male youth. Friends and neighbors, as well as other relatives were the second most commonly noted source of information.

Modes of transmission of Hepatitis C

Respondents who had heard about Hepatitis C were asked if they know how the Hepatitis C virus is

transmitted. Those who answered yes were asked to name at least two ways by which Hepatitis C can be transmitted.

Data revealed that 86% of women and female youth, 90% of husbands and 89% of male youth know at least one mode of transmission (Figure 6.9). Variations by urban-rural residence were found: 96% of husbands from urban areas reported that they know a mode of transmission compared to 86% of those in rural areas. Variations by age exist and are even more pronounced by education. For example, about 8 out of 10 respondents with no education or with less than a secondary level education reported knowledge of modes of transmission of hepatitis C compared to 90% among those with a secondary education and 98% among respondents with more than a secondary education.



Among respondents who reported that they know at least one mode of transmission of Hepatitis C, the most commonly mentioned mode of transmission was via infected needles followed by blood transfusion. Nine in ten women, husbands and female youth, as well as 81% of male youth reported infected needles as a mode of transmission. In addition, about three-quarters of respondents reported blood transfusion as a mode of transmission. Roughly one-tenth to one-quarter of respondents mentioned that Hepatitis C can be transmitted through casual physical contact with an infected person: 25% of women and husbands, 23% of female youth and 12% of male youth. Surprisingly, reporting casual contact as a mode of transmission was highest among respondents with more than a secondary education (26%).

Knowledge of protective measures

Respondents who had heard about Hepatitis C were also asked if they know ways by which a person can protect himself from getting Hepatitis C. Those who answered yes were asked to name at least two ways to avoid getting Hepatitis C. Virtually all respondents reported that they know ways of protection against Hepatitis C. Respondents were most likely to report avoiding sharing syringe with others, not using an infected syringe, and ensuring that transfused blood is not contaminated. Four-fifth of women, 82% of husbands, 76% of female youth and 71% of male youth reported not using an infected syringe as a protective measure against getting Hepatitis C. Also, two-thirds of women and female youth, 59% of husbands and 27% of male youth reported avoiding sharing syringe with others. In addition, 60% of women, 60% of husbands, 57% of female youth and 62% of male youth reported that a person should ensure that the transfused blood is not contaminated as a protection against getting Hepatitis C. Also about one in ten respondents reported avoiding eating street food as a protective measure with non-significant variations by background characteristics.

Virtually all respondents reported that they know ways of protection against Hepatitis C.

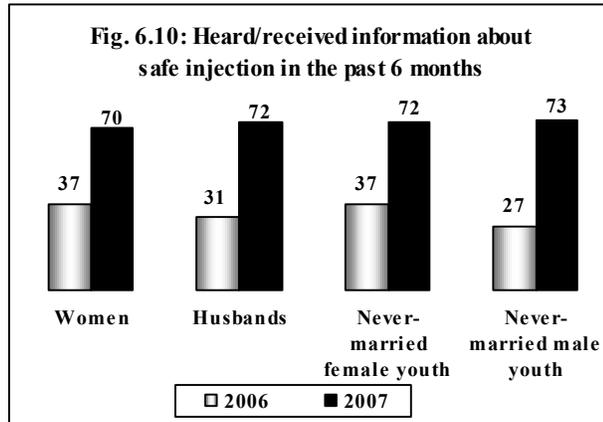
Risk and efficacy perceptions related to Hepatitis C

Respondents were read a series of statements to assess their risk and efficacy perceptions related to Hepatitis C. The answers were coded on a 3-point scale (disagree, neutral, agree). Overall, almost all respondents (94% or more) agree that Hepatitis C infection is severe. But more than half of the respondents believe that they are not susceptible to Hepatitis C, as indicated by majority disagreement with the statement, "It is possible that you will contract Hepatitis C." Fifty-one percent of women, 56% of husbands, 54% of female youth and 76% of male youth reported that they do not think it is possible that they will get Hepatitis C. Data also show that the majority of respondents agree that use of disposable syringes is an effective way to prevent Hepatitis C: 83% of women, 87% of husbands,

81% of female youth, and 89% of male youth.

6.4 Change in Exposure to Messages about Safe Injections—Comparison between 2006 and 2007 EHCS

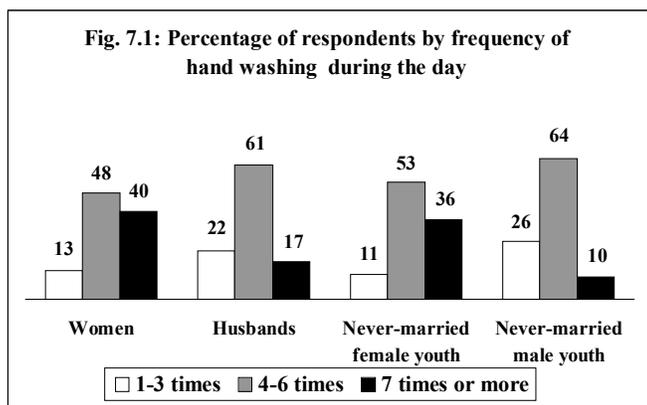
During the previous 2006 EHCS, information was collected on respondents' level of exposure to messages about safe injection in the 6 months preceding the survey; the same question was asked again in 2007. Exposure to safe injection messages (heard or received information about safe injections in the past 6 months) roughly doubled among all subgroups from 2006 to 2007 (Figure 6.10).



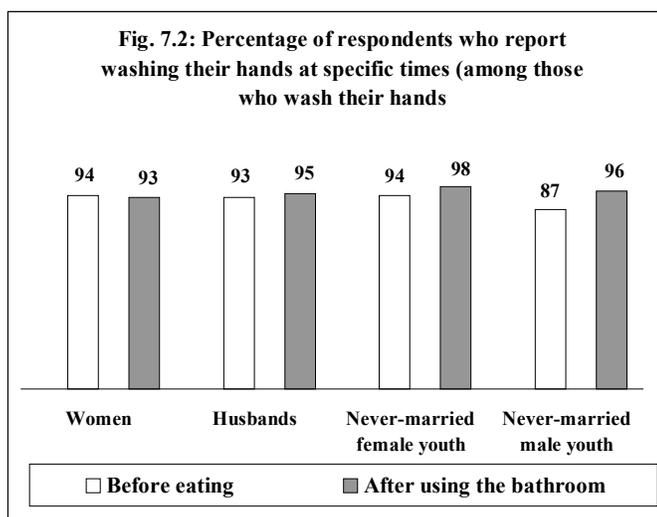
Promoting healthy lifestyles for households is one of the main objectives of the CHL program. Two of the most important aspects of healthy lifestyle are personal hygiene (principally handwashing) and passive smoking (exposure to secondhand smoke). In this chapter we describe the attitudes and practices of survey respondents related to handwashing, protecting non-smokers from the effects of second hand smoke and future intentions regarding smoking.

7.1 Practices Related to Washing Hands (Tables 7.1-7.2 A&B)

Respondents were asked about their hand washing practices. Overall, approximately half of the respondents indicate that they wash their hands 4-6 times a day. About half of women and never-married female youth and two thirds of husbands and never-married male youth report washing their hands 4-6 times a day (Figure 7.1). Very few respondents (less than one percent) claim that they never wash their hands. There are differences between urban and rural residents. Women, husbands, and never-married female youth in rural areas are the most likely to wash their hands 4-6 times per day (53%, 62%, and 55%, respectively). Never-married male youth from urban areas are most likely to wash their hands 4-6 times per day (69%). By background characteristics, respondents in the age group 15-19 and 50 years or older were least likely to report washing hands 7 times or more per day.



Very high percentages of all respondent groups reported washing their hands at the critical moments of after defecation and before eating (Figure 7.2). Ninety five percent or more of women, husbands and never-married female and male youth wash their hands after using bathroom, with some differences between regions. Washing before eating was a little less common than washing after defecation.



Respondents were asked a question about the health consequences of not washing hands before eating or after using toilet. Two main health effects were reported by all groups, namely stomach ache and diarrhea. Seventy-five percent or more of all groups reported stomach ache as a consequences of not washing hands. More than fifty percent of women, husbands and female youth reported diarrhea as a sequences of not washing hands, while around forty percent of male youth reported same consequences. It is also worth noting that 6% of women, 8% of husbands, 13% of male youth and 10% of female youth reported contracting Hepatitis C as a consequence of not washing hands with water and soap before eating or after using the toilet. The highest level of respondents who

reported Hepatitis C as a consequence of not washing hands was among respondent with more than a secondary education (17%). This might indicate that public still confuses Hepatitis C with Hepatitis A.

7.2 Knowledge, Attitudes, Practices, and Perceptions Related to Smoking (Tables 7.3-7.8 A&B)

Attitudes toward smoking

Respondents were read a set of four statements to assess their attitudes toward smoking. Responses were presented on a scale of 1-5, where 5 means strongly agree and 1 strongly disagree. Mean scores on this agree-disagree scale were calculated for each group of respondents. For some analyses, responses were regrouped into three categories: agree, disagree, and neutral.

Results show that there is almost universal agreement among respondents that smoking endangers the health of both the smoker and the people around the smoker. Slight differences were observed across target groups and across regions.

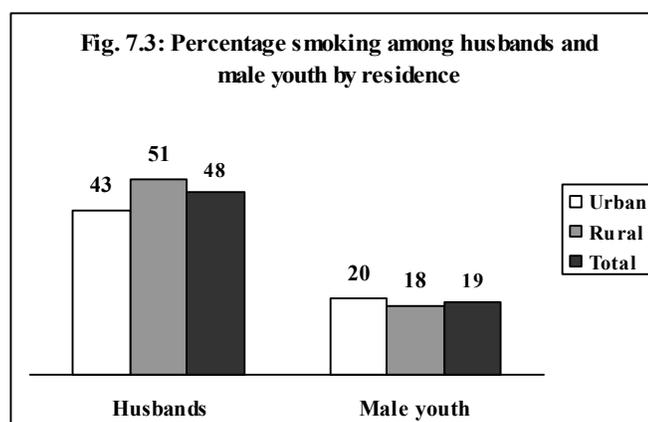
	Women	Husbands	Never-married	
			Female youth	Male youth
Smoking endangers the health of smokers (Mean)	4.9	4.9	4.9	5
Smoking endangers the health of people around smokers (Mean)	4.9	4.9	4.9	5
Smoking reduces a person's ability to participate in sports (Mean)	4.8	4.9	4.8	4.9
Creating a nonsmoking area in your home is an effective way to reduce the harmful effects of exposure to secondhand smoke (Mean)	4.8	4.8	4.8	4.9

When respondents were asked whether creating a non-smoking area in your home is an effective way to reduce harmful effects of second hand smoke, 92% of never-married male youth agreed with the statement compared to around 85% of the other target groups. Some variations were observed across regions. Respondents from Lower Egypt are less likely to agree that a nonsmoking area in the home would help reduce the effects of secondhand smoke than groups from other regions.

Practices related to smoking

Respondents also were asked about their smoking practices. Due to the small number of female smokers (less than 1%), results are shown for males only. Results show that smoking is a common practice among males. Overall, 48% of husbands and 19% of never-married male youth reported that they smoke any kind of tobacco, with some differences across regions. Thirty-one percent of never-married male youth from Urban Governorates reported that they smoke any kind of tobacco compared to 11% of never-married male youth from urban Lower Egypt.

Those who smoke were asked about their smoking practices. Smoking cigarettes is the most common type of smoking practice (83% of husbands and 96% of never-married male youth). The data also show that 19% of husbands and 4% of never-married male youth report smoking a water pipe (“shisha”). Smoking rolled cigarettes is a rare practice. The average number of smoked cigarettes per day is 20 for husbands and 18 for male youth. There are some differences by region (see table 7.4 Appendix A&B).



Knowledge of the health effects of exposure to secondhand smoke

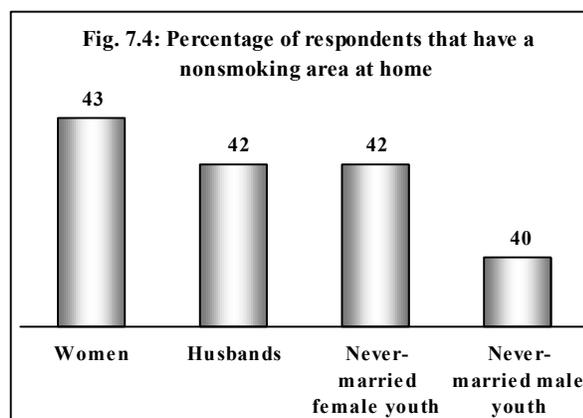
To assess respondents' knowledge about the health effects of secondhand smoking, they were asked to name some of the health effects of secondhand smoking. The data show that respiratory problems are the main health effect mentioned by the respondents (79 % of women and never-married male youth, 80% of husbands, and 83% of never-married female youth). Some differences were observed across regions. Respondents from Urban governorates are more likely to identify the health effects of secondhand smoking than respondents from other regions.

	Women	Husbands	Never-married	
			Female youth	Male youth
Heart Disease	45	50	50	43
Respiratory problems	79	80	83	79
High blood pressure	36	29	34	27
Cancer	36	37	42	33

Other main health effects of secondhand smoke exposure that the respondents mentioned were heart disease (50% of husbands and never-married female youth, 46% of women, and 43% of never-married male youth), cancer (42% of never-married female youth, 37% of husbands, 36% of women, and 32% of never-married male youth), and high blood pressure (36% of women, 34% of never-married female youth, 29% of husbands, and 27% of never-married male youth). There are some differences between regions: only 19% of husbands from urban governorates reported cancer as one of the health effects of exposure to secondhand smoke compared with 36 % of husbands from urban Lower Egypt. Data also shows that respondents with more than a secondary level education are more likely than other respondents to report heart disease and cancer as consequences of smoking (59% and 50% respectively.)

Attitudes toward creating a nonsmoking area in the home

Respondents were asked if they currently have a nonsmoking area at home and, if yes, they were asked about attitudes of family members, relatives and friends towards the created nonsmoking area. Results show that a significant percent of respondents have a nonsmoking area in their home (around 40% of all groups). Results varied across regions. Respondents in Lower Egypt were the least likely to indicate the presence of a nonsmoking area in their home than other regions. It is also obvious that creating a nonsmoking area is related to respondent's educational level: 61% of respondents with more than a secondary level education reported that they have a nonsmoking area in their home, which is twice the percentage of those with no education.



Respondents who indicated that they have a nonsmoking area in their home were asked how various people reacted to its creation. Ninety five percent or more of women and husbands reported that their spouse and children were supportive. Similarly, 95% of never-married female youth and all never-married male youth mentioned that their family members' reaction was supportive. Ninety five percent of never-

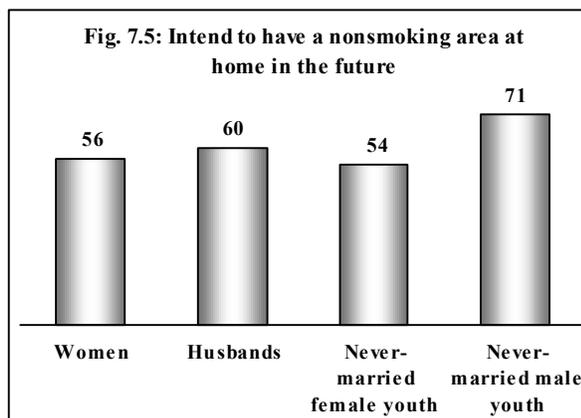
	Women	Husbands	Never-married	
			Female youth	Male youth
Spouse's reaction	98	100	N/A	N/A
Children's reaction	97	98	95	96
Other family members' reaction	97	95	95	98
Friends' reaction	96	95	95	92
Husband's friends' reaction	81	N/A	N/A	N/A

married female youth, and 92% of never-married male youth mentioned that their friend's reaction were supportive.

Attitudes toward creating a nonsmoking area in the future

Respondents who indicated that they do not have a nonsmoking area in their home were asked about their intention to do so and what they expected the reaction of their friends and family to be.

Results show that among respondents who do not have a nonsmoking area at home, 50% or more of women, husbands, and never-married female youth said that they are likely to create a nonsmoking area at home in the future; 71% of never-married male youth. Differences are clear across regions and some background characteristics. For example, roughly 20% of respondents with some primary education or with primary/some secondary education say they are likely to create a nonsmoking area at home compared to 15% among those with more than a secondary level education.



Respondents who do not have a nonsmoking area at home were asked about the expected reaction of various persons regarding the creation of such an area in the future. All husbands said that their wife will be supportive (99%) compared with only 56% of women who said their husband would be supportive. Around 95% of women and husbands said that their children will be supportive.

Percentage of Respondents Believing that Various Persons Would Support Creating a Nonsmoking Area

	Wom en	Husbands	Never-married	
			Female youth	Male youth
Spouse's reaction	56	99	N/A	N/A
Children's reaction	95	96	83	89
Other family members' reactio	90	90	79	87
Friends' reaction	95	71	84	75
Husband's friends' reaction	61	N/A	N/A	N/A

Future attitudes towards smoking

Besides creating a non-smoking area in the home, respondents were asked about the likelihood that in the next month they would take other actions (stop smoking the home or in the presence of children and asking visitors not to smoke in the home or in the presence of children) in order to reduce the danger of second hand smoke to others. Slightly more than half of all respondent groups said that they would ask visitors not to smoke in the home or in the presence of children, and the same percentage of husbands and male youth said that they themselves would stop smoking at home or in the presence of children. Some differences across area of residence were found: urban respondents were consistently more likely than rural residents to say they would act to reduce smoking in the home and in the presence of children.

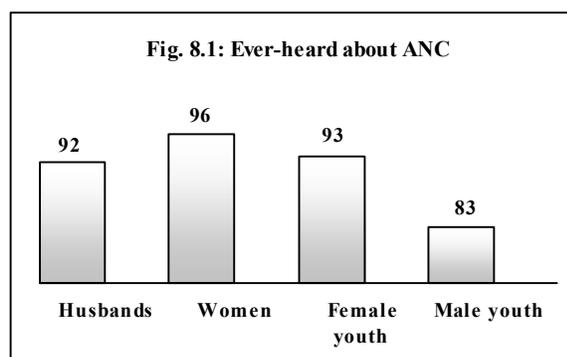
This chapter discusses the knowledge, attitudes, and practices related to four important health issues, namely: maternal health, family planning, female circumcision, and breast cancer. The following sections present the results obtained from the 2007 EHCS survey on these particular issues.

8.1 Knowledge, Attitudes, and Practices Related to Maternal Health

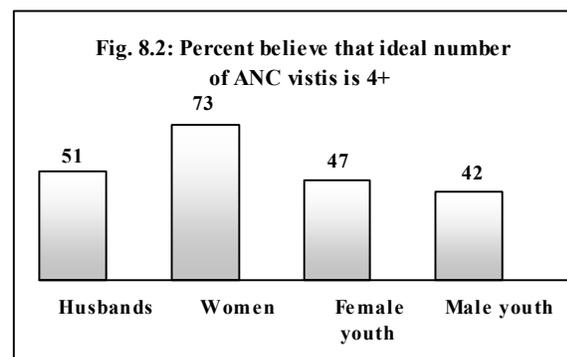
Maternal health has been one of the major focuses of the health program in Egypt during the past decade. Adequate antenatal care by a medical provider is important in monitoring women’s health status during pregnancy and in avoiding maternal deaths. The 2007 EHCS collected information about the knowledge and attitudes of married women, husbands, and never-married female and male youth regarding maternity care. This section reviews these data and presents the results of all questions related to maternity care services.

Respondents’ knowledge of antenatal care (Table 8.1 A&B)

As shown in Figure 8.1, most women, husbands, and female youth have heard about antenatal care (96%, 92%, and 93%, respectively) compared to only 83% of male youth. The 2007 EHCS data also show that observed differences in knowledge of antenatal care by regions were not significant. However, knowledge of ANC is slightly higher among respondents in the age cohorts 25-29 (98%) and 30-34 (95%), as well as those with more than a secondary level education (95%).



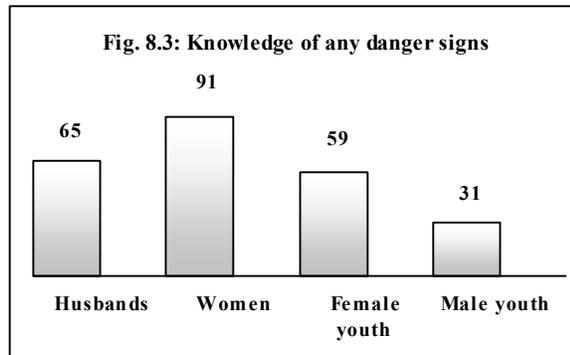
Respondents were also asked about the appropriate number of antenatal care visits during pregnancy. Twenty-four percent of women and about half other respondents admitted that they do not know this number. Male youth were least knowledgeable about the appropriate number of visits, with almost three-fifths reporting that they don’t know the appropriate number of visits (58%). The majority of respondents who know the ideal number of visits mentioned 4 visits or more. The majority of women mentioned 4+ visits (73%), while almost half of husbands and female youth mentioned the same figure. Male youth were the least likely to mention 4 visits or more (42%). The median number of visits reported was either 4 or 5 visits for all respondent categories in all regions. Respondents in the age group 25-29 years, 30-34 years were more likely than younger or older respondents to report the appropriate number of visits is 4+ visits where about three-quarter of those respondents mentioned 4+ visits. Most respondents reported that it is important for a woman to go for antenatal care (over 87%).



Knowledge of danger signs among women and husbands (Tables 8.2-8.2a A&B)

The 2007 EHCS individual questionnaires included items about the knowledge of respondents about danger signs that could happen to a woman during pregnancy. Data show that 91% of women and 65% of husbands reported that they knew the danger signs that could happen to the pregnant woman. Never-married youth were less likely to know about pregnancy danger signs: 59% of never-married

female youth and only 31% of never-married male youth reported that they knew about danger signs. Differences were observed between regions, especially among male youths. For example, while 55% of male youths in Urban Upper Egypt know about danger signs, only 21% of those in Urban Lower Egypt report knowing these signs. Data also reveals that respondents in the age group 25-34 are most likely to report knowledge of danger signs and those in the age group 15-19 are least likely to report knowledge of those signs. This might be attributed to the fact that respondents in the age group 25-34 are more likely to be expectant mothers and fathers than younger or older respondents. However, this also indicates that younger generations, who are future parents, need more information about such danger signs and safe pregnancy.

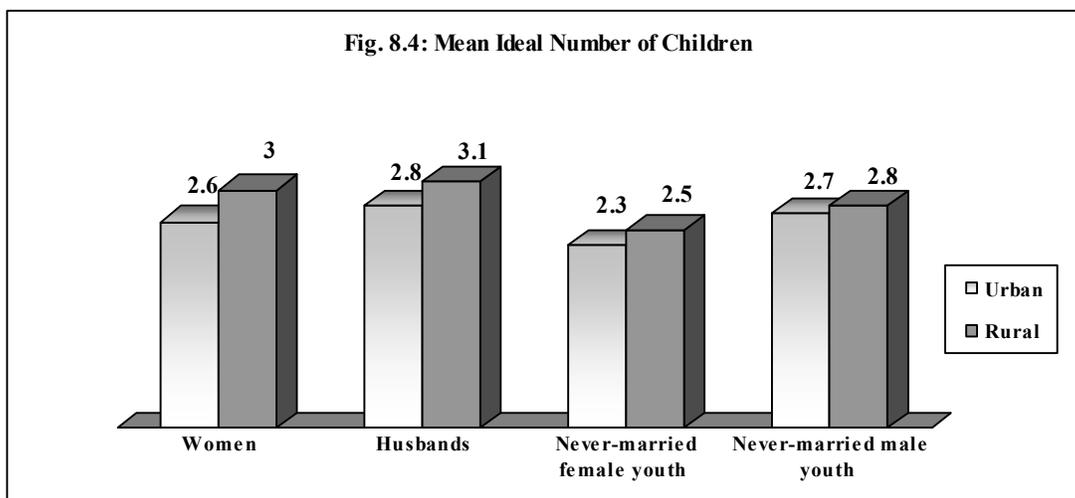


Bleeding was by far the most commonly mentioned danger sign among all respondents who say they know about danger signs (91% of women, 84% of husbands, 88% of female youths and 82% of male youths respectively). The other most commonly mentioned danger signs were high fever and vomiting. Results indicate that respondents lack knowledge about comprehensive danger signs during pregnancy. Even among ever-married women knowledge of some crucial danger signs was low including “sever headache with blurred vision” and “edema of hands, legs and face,” which were mentioned by only about one-third only of ever-married women.

The source of information about danger signs most frequently mentioned by women was TV (79%) followed by health providers (9%) and then pharmacists (5%). Other sources of information were mentioned by less than 3% of women. Differences were observed between regions regarding the main source of information about dangerous signs. While 85% in Urban Upper Egypt mentioned TV, only 71% in Urban Lower Egypt mentioned it.

Ideal number of children (Table 8.3 A&B)

Fertility preferences are obviously influenced by the number of children a woman and her husband already have. The 2007 EHCS obtained a measure of fertility preferences that is less dependent on the current family size by asking about the ideal number of children. The question about ideal family size asked currently married women and husbands to report the number of children they would like to have in their whole life regardless of the number (if any) that they already had. Never-married female and male youth were asked about the ideal number of children they would like to have in the future. Figure 8.4 shows the mean ideal number of children among the different respondents by urban-rural residence. Women and never-married female youth aspire to have smaller families than husbands and



never-married male youth do. It is also clear from Figure 8.4 that the mean ideal number of children is higher in rural areas than in urban areas. The question about ideal number of children was not asked in the EHCS 2006, but it was asked in EHCS 2005. Ideal number of children has remained steady since 2005 among married women (2.9) and male youth (2.8) but has declined slightly among husbands from 3.3 to 3.0 and among female youth from 2.5 to 2.4.

Overall, 62% of never-married female youth, 43% of never-married male youth, 35% of women, and only 30% of husbands want 1-2 children with some differences between regions. Fifty-one percent of husbands from Urban Governorates want 1-2 children compared to only 23% of husbands from Rural Lower Egypt. About 9 in 10 of never-married female youth from Urban Governorates want 1-2 children compared to around one-half of never-married female youth in Rural Upper Egypt.

Around 17% of husbands, 15% of women and 14% of never-married male youth, and 6% of never-married female youth want 4 children, with observed differences between regions. For example, while 18% of male youth in Urban Lower Egypt want to have 4 children, only 8% of those in Urban Upper Egypt want to have the same number of children. About 17% of women say that the number of children is "up to Allah". Also 8% of never-married male youth and 30% of husbands did not specify their ideal number of children.

Differences by age and educational level are evident. Percentage of respondents reporting that they want to have 1-2 children increases as the age of respondents increase showing a positive shift in attitudes among young generations. Also, this percentage increases as the educational level of respondents is higher. Slightly more than half of the respondents in the age group 15-19 reported that they want 1-2 children compared to 25% among those aged 45-49 and 21% among those aged 50 or older. Also, respondents with more than a secondary level education were twice as likely as those with no education to say that the ideal number of children is 1-2.

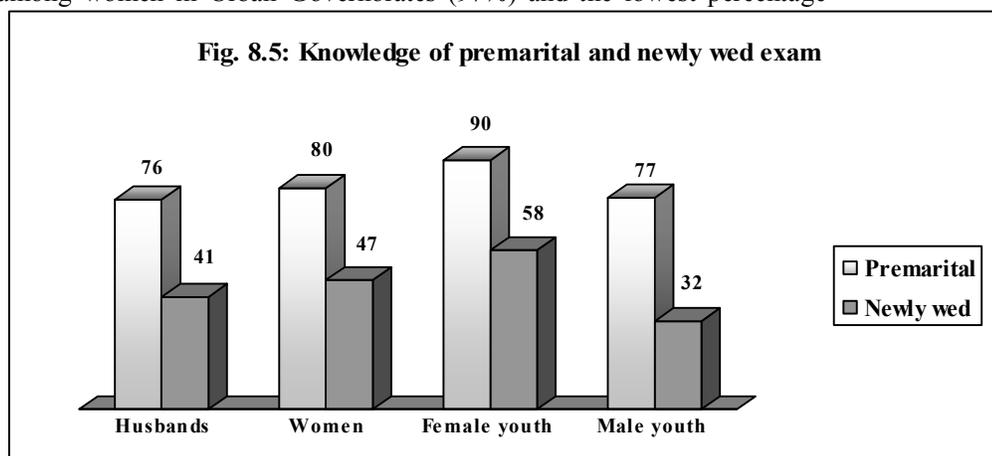
Percent reporting ideal number of children is 1-2	
Age	Want 1-2 children
15-19	51.1
20-24	49.0
25-29	42.0
30-34	35.6
35-39	30.8
40-44	30.4
45-49	24.6
50+	21.1

Premarital and newlywed examination (Table 8.4 A&B)

One important goal of the CHL program is to raise awareness about the benefits of premarital and newlywed examinations. The individual questionnaires in the 2007 EHCS included questions about the respondents' awareness of these two examinations. In addition, ever-married women and husbands who had heard about either examination were asked if they had ever had such a premarital or newlywed examination. Never-married male and female youth were asked about their intention to have these examinations in the future.

Figure 8.5 shows that 80% of ever-married women had heard about premarital examinations, with the highest percentage found among women in Urban Governorates (97%) and the lowest percentage found among women in rural Lower Egypt (71%).

Knowledge of premarital examination among husbands is slightly lower (76%), with some differences between regions. Ninety-six percent of husbands from Urban Governorates know about premarital examination compared to 69% of husbands from rural Upper Egypt. A smaller percentage of



women and husbands had heard about the newlywed examination (47% and 41%, respectively). Women and husbands from Urban Governorates are the most knowledgeable about newly wed examination (60% and 53%, respectively). None of husbands or married women said they had received a premarital examination at the time of their marriage.

Data from the 2007 EHCS show that the awareness about premarital examination is higher among never-married female youth compared to never-married male youth. Ninety percent of never-married female youth know about premarital examinations compared to 77% of never-married male youth, with some differences between regions. Ninety-one percent of never-married male youth from Urban Lower Egypt know about premarital examinations compared to 72% of those from rural Upper Egypt. In general, knowledge about premarital examinations is higher among never-married youth in urban areas than in rural areas. In addition, 58% of never-married female and 32% of never-married male youth know about newly wed examinations.

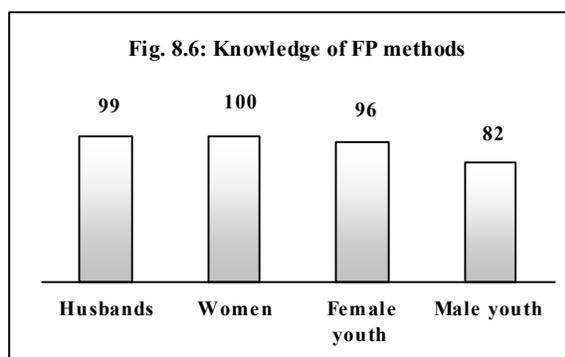
Fifty percent of never-married female youth and 43% of never-married male youth say they intend to have a premarital examination, with variation among regions. Seventy percent of never-married male youth from urban governorates intend to have a premarital examination compared to 32% of never-married male youth from rural Lower Egypt. Fewer percentages of never-married female and male youth intend to have a newly wed examination (11%).

8.2 Knowledge and Attitudes toward Family Planning

Knowledge of family planning (Table 8.5 A&B)

Awareness of family planning methods is crucial in deciding whether to use a contraceptive method and which method to use. Family planning programs typically aim to raise awareness about the importance of family planning and to employ a variety of channels to promote family planning, including mass media.

The 2007 EHCS questionnaire collected data on knowledge of modern methods and traditional methods among respondents. Figure 8.6 shows that all women and almost all husbands know of at least one modern or traditional method. Never-married female youth are more likely to know these methods than never-married male youth (96% versus 82%). The highest known method among women and husbands is IUD (98% of women and 93% of husbands), while the highest known method among youth is pills (91% for female youth and 73% for male youth).



Except for male youth, more than 90% of respondents know about pills. Generally speaking, knowledge of modern and traditional methods is lowest among male youth respondents. Knowledge of family planning methods varies by region. For example, while 94% of youth from Urban Governorates know at least one method, only 70% from urban Lower Egypt know this.

Attitudes toward family planning (Table 8.6 A&B)

To measure attitudes about use of family planning and about the ideal spacing interval between births, the 2007 EHCS questionnaire asked respondents about their level of agreement with a series of statements about these topics. The responses were coded into three categories: agree (score 3), neutral (score 2), and disagree (score 1). Table 8.6 in Appendix A presents the results for all respondents. Respondents were first asked about their level of agreement with the statement that couples should space birth 3 to 5 years. The data shows that overall 87% of respondents agree with this idea. Ninety-nine percent of respondents from Urban Governorates agreed that couples should space births at least 2 years compared to only 75% of those in urban Lower Egypt. The mean agree-disagree score for this statement is 2.81, ranging from 2.99 in Urban Governorates to 2.65 in Rural Lower Egypt. Data also

reveals that younger respondents and those with a high educational level are more likely to agree that couples should space 3-5 years than other respondents. For example, 91% of respondents in the age cohort 15-19 agreed with this statement, which is 8 percentage points higher than among those aged 50 or older (83%).

Respondents' general support for the use of contraceptives to space births was assessed through the level of agreement among women with the statement "After the birth, couples should begin using a family planning method before resuming marital relations". Overall, more than 90% of respondents agreed with this statement while 3% disagreed with it. Variations in agreement level exist between the different regions. For example, 98% of respondents in Urban Governorates agreed with this statement compared to only 82% of those in rural Lower Egypt. The mean agree-disagree score for this statement was 2.84 and ranged from 2.97 in urban governorates to 2.71 in rural Lower Egypt.

Respondents were also asked whether they agreed that proper spacing would cause the next child to be healthier. The results show that there is a high level of agreement with this statement (93%). The differences in the level of agreement with this statement between regions are lower than that observed for the previous statements. The mean agree-disagree score for this statement was 2.88 with very low variations among the different regions.

Table 8.6 also shows the level of agreement among respondents with the statement that delaying the birth of the next child will keep the mother healthier. Almost the same level of agreement with the statement "proper spacing will cause the next child to be healthier" was reported with this statement. In addition, the mean agree-disagree score for this statement was 2.87 with also very low variations among the different regions.

Respondents were also asked whether they agree that starting contraception immediately after the birth of a child would prevent accidental pregnancies that occur too soon. Data from Table 8.6 show that 81% of respondents agree that using a family planning method immediately after the birth of a child will prevent accidental unintended pregnancies, with the level of agreement ranging from 91% among respondents in Urban Governorates to 72% among those in rural Lower Egypt. About four-fifth of respondents disagreed with this statement. The mean agree-disagree score for this statement was 2.7.

Respondents were also asked about their level of agreement with the statement "Woman should visit a doctor during the first 40 days after delivery to identify the appropriate FP method to use". More than eight in ten respondents agreed with this statement with some variations existing between the different regions. Some variations are observed by age and education. For example, 80% of respondents with no education agreed to this statement compared to 89% among those with more than a secondary level education. The mean agree-disagree score for this statement was 2.71, ranging from 2.94 in urban governorates to 2.56 in urban Lower Egypt.

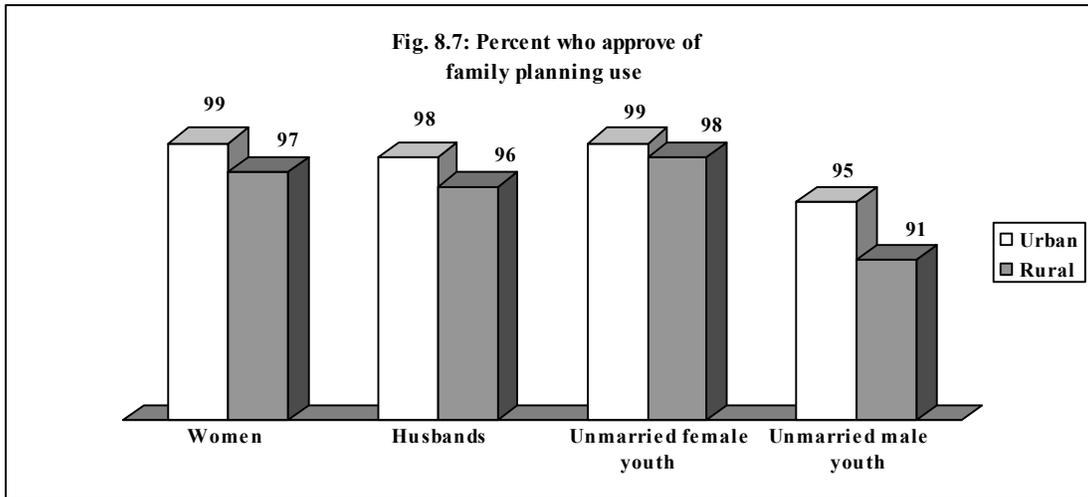
The level of agreement among respondents with the statement that newly born babies should have health care within the first week after delivery is presented in Table 8.6. Data in this Table show that 83% of respondents agreed with this statement. Only 4% disagreed with this statement. Differentials by age and education are pronounced where younger respondents and those with a higher educational level seem to have more positive attitude towards postpartum care for newborn babies with the first week of delivery. Although 88% of respondents in the age group 15-19 agreed to this statement; this percentage decreases to 75% among those in the age group 40-44. In addition, the mean agree-disagree score for this statement was 2.69, ranging from 2.9 in urban governorates to 2.6 in rural Upper Egypt.

Finally, respondents were asked whether they agreed that the woman should have health care within the first week after delivery. Overall, 82% of respondents agree that women should have health care within the first week of delivery, with the level of agreement ranging from 96% among respondents in urban governorates to 76% among those in rural Lower Egypt. The same pattern as that observed for the previous two statements was found: young respondents and those with a higher educational level are more likely to agree to this statement than other respondents. The mean agree-disagree score for this statement was 2.68.

Approval of family planning use (Tables 8.7-8.8 A&B)

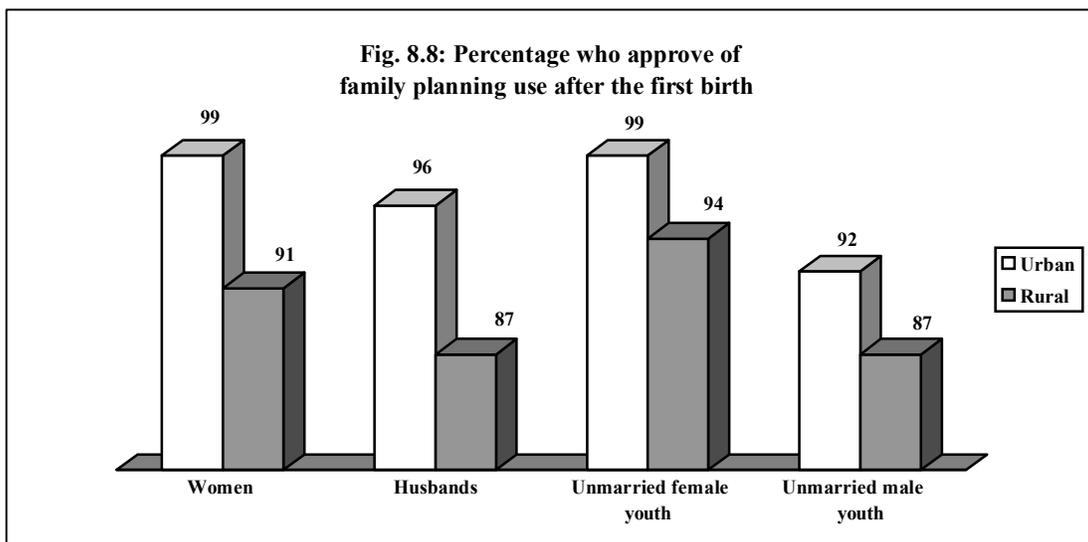
Having a positive attitude toward family planning is usually a prerequisite for the adoption of family planning. Thus, after asking respondents about their opinions on issues related to family planning use, respondents were asked whether they themselves approve of a couple's using family planning. Figure 8.7 shows the level of approval among all respondents by urban-rural residence.

Generally, there is almost a universal approval among respondents regarding family planning use in general (98% of women, 96% of husbands, 98% of never-married female youth, and 92% of never-married male youth), with minor variations between regions. In general the highest level of approval



was among female youths while the lowest was among the male youths. With respect to regions, the highest level of approval was found in Urban Upper Egypt and Urban Governorates. The lowest level of approval for all respondents was found in rural Lower Egypt. Except among male youths, minor variations were observed by urban-rural residence. Although the level of disagreement is low (6%), it is somewhat surprising to note that younger respondents (aged 15-19) are the age group most likely to disapprove family planning use.

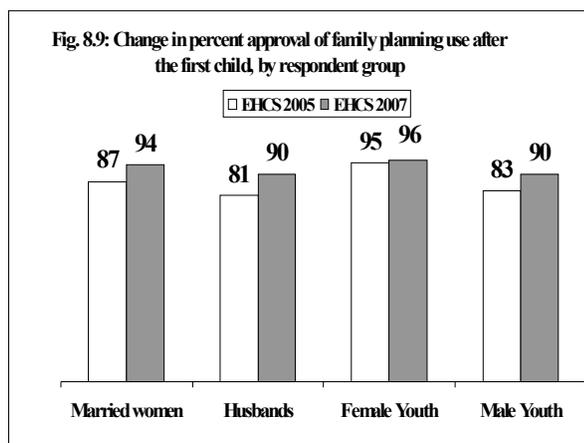
Respondents who approve of the use of family planning were asked additional questions about the appropriate timing of a couple's use of family planning: before the first birth and after the first birth. Figure 8.8 shows the level of approval for use of family planning after the first birth among all



respondents by urban-rural residence.

Results show that 96% of never-married female youth approve the use of family planning after the first birth compared to 94% of women, 90% of husbands and never-married male youth. Differences exist between regions and by urban-rural residence. As shown in Figure 8.8 above, 96% of husbands from urban areas approve the use of family planning after the first birth compared to 87% among husbands in rural areas. The highest level of approval was found in Urban Governorates and urban Upper Egypt. Approval of family planning after the first child also varies by age and education. Respondents with more than a secondary level education are the most likely to approve (97%) compared to those with a lower educational level. Also, the highest level of approval was cited among respondents age 25-29 years (96%) and the lowest was among those aged 50 year or more (88%).

This question was not asked in 2005, but was in 2006. Figure 8.9 shows that approval of family planning after the first birth has significantly increased since 2005 among all respondents except female youth, as shown in the figure at right.



8.3 Knowledge and Practices Related to Female Circumcision

In Egypt, female circumcision is a widely spread practice, especially in rural areas. The 2007 EHCS questionnaire included several questions about knowledge, prevalence, attitudes, and practices related to female circumcision.

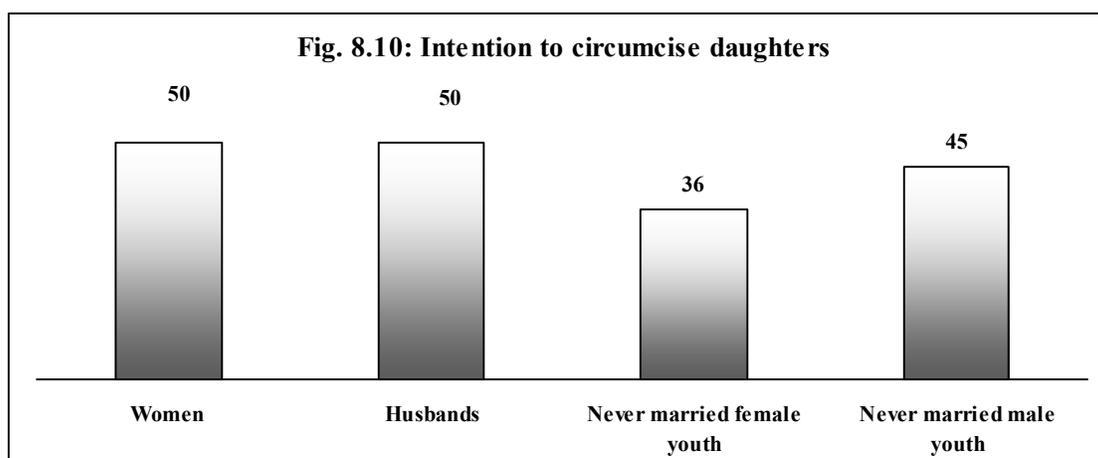
Prevalence of Female Circumcision and Intention to Circumcise Daughters (Tables 8.10a-8.10b A&B)

Both women and never-married female youth were asked whether they had been circumcised or not in order to obtain insight into the prevalence of female circumcision. Almost all women and never-married female youth indicated that they had been circumcised (95% of all females). As shown in the table, differences in female circumcision prevalence by age, region, urban/rural, and education are clear. Older women are more likely to be circumcised than younger women. Also rural women are more likely to be circumcised than urban women (99% and 87%, respectively). The highest prevalence of female circumcision is among women in Rural Upper

Prevalence of female circumcision among ever-married women 15-49		
Percentage of ever-married women 15-49 who have been circumcised according to selected background characteristics, EHCS 2007		
Background characteristic	Percentage of female age 15-49 who have been circumcised	Number of female age 15-49
Age		
15-19	91.9	383
20-24	89.7	350
25-29	96.6	238
30-34	96.6	207
35-39	98.1	216
40-44	97.8	178
45-49	97.8	229
Urban-rural residence		
Urban	87.4	618
Rural	98.6	1183
Place of residence		
Urban Governorates	83.2	248
Lower Egypt	94.9	852
Urban	83.9	189
Rural	97.9	663
Upper Egypt	98.6	701
Urban	96.1	181
Rural	99.4	520
Education		
No education	99.0	505
Primary incomplete	98.1	54
Prim. complete/some second.	96.1	232
Secondary	95.1	613
Higher	84.3	318
Total	1706	1801

Egypt and the lowest is among those in Urban Governorates. By level of education, women with more than a secondary level education are the least likely to be circumcised (84%).

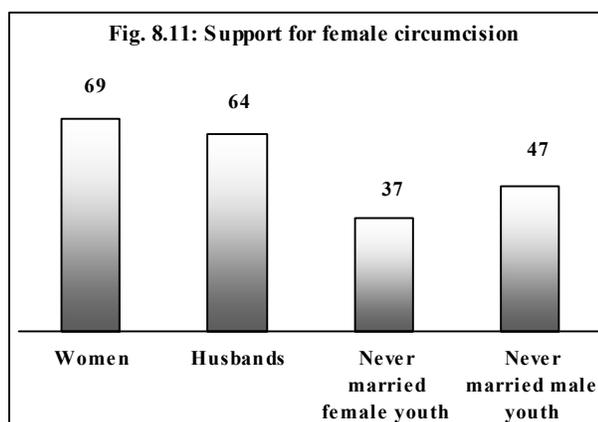
As shown in Figure 8.10, with regard to respondents' intention to have daughters circumcised in the future, one-half of women and husbands intend to circumcise their uncircumcised daughters. About 36% of female youths and 45% of male youths intend to circumcise their daughters in the future. Intention to circumcise daughters varies significantly by region. For example, only 12% of female youth from urban Lower Egypt intend to circumcise their daughters in the future compared to 66% of those in rural Upper Egypt. Some variations by age and education exist. Among husbands and women, more than 50% of those in the age group 25-44 intend to circumcise their daughter compared to about 35% among those in the age group 45-49 and 50 years or older. Data also show that the respondents from all four groups with more than a secondary level education are least likely to have future intentions to circumcise (33%).



Those who intend not to circumcise daughters in the future were asked about the reasons for that. The data show that the most common reason to not circumcise their daughter in the future was the fear of the complications of performing this practice, mentioned by 65% of women, 67% of husbands, 90% of female youths and 89% of male youths.

Support for Female Circumcision (Tables 8.11a-8.11b A&B)

Respondents in the different groups were asked whether the practice of female circumcision should be continued or discontinued in order to assess their attitudes about supporting continuation of female circumcision. Women and husbands were more likely than never-married female and male youth to indicate that the practice should be continued (69%, 64%, 37% and 47%, respectively). Rural Upper Egypt was the region where respondents were most likely to say that this practice should continue (81% of women, 78% of husbands, 50% of never-married female and 63% of male youth).



In addition, those with less education are more likely to support this practice than their more educated counterparts: 75% of married women and husbands with less than primary education say the practice should be continued compared to 55% of those with completed secondary education. Also, older respondents are more likely to support this practice: 72% of respondents in the age group 40-44 say the practice should be continued compared to 42% among those in the age group 15-19.

Respondents who indicated that female circumcision should be continued were asked to list their reasons for this belief. Multiple reasons could be mentioned, so percentages do not add up to 100%. As shown in the table, the most common reason indicated by women and never-married female youth was that it was a good tradition (75% and 76% respectively), while the most common reason indicated by husbands and never-married male youth was that it is required by religion (71% and 69% respectively). Cleanliness was mentioned by only 32% of never-married male youth who support female circumcision compared to 66% of women, 55% of female youth and 48% of husbands. Significant regional differences were found. For example, while 84% of women from Urban Governorates say that female circumcision is a good tradition, only 62% of women from urban Upper Egypt mentioned the same reason.

Reasons Female Circumcision Should Be Continued				
Reasons	Women	Husbands	Never-married	
			Female youth	Male youth
Percentage of FC Supporters Who Cited:				
Good tradition	75	70	76	63
Required by religion	65	71	64	69
Cleanliness	66	48	55	32

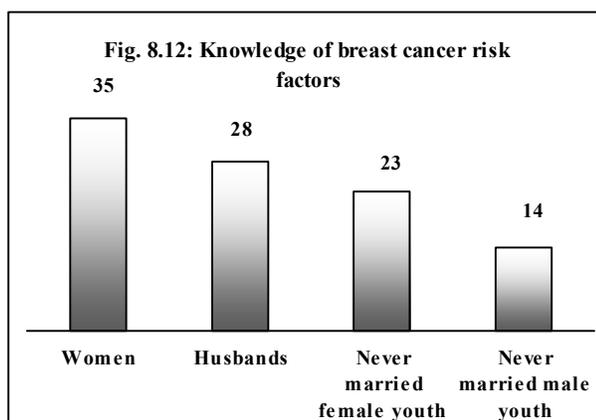
Respondents who indicated that female circumcision should be discontinued were also asked about the reasons for their beliefs. Multiple responses could be mentioned, so percentages do not add to 100%. The most common reason provided by all respondents is that it causes medical complications (84% of women, 77% of husbands, 78% of female youth and 84% of male youths). The second most common reason indicated by respondents, except for male youths, was that it is a bad tradition (57% of women, 53% of husbands and 57% of female youths). That circumcision goes against religion was mentioned as a reason for discontinuation by a slightly lower percentage of respondents. Significant differences between regions were observed in listing the reasons why female circumcision should be discontinued. For example, while three-quarters of women in Lower Egypt mentioned that it should be discontinued because it is a bad tradition, only one-quarter in urban Upper Egypt mentioned the same reason.

Reasons Female Circumcision Should Be discontinued				
Reasons	Women	Husbands	Never-married	
			Female youth	Male youth
Reasons				
Bad tradition	57	53	57	34
Against religion	47	52	53	53
Causes medical complications	84	77	78	84

Clearly, public opinion is divided about continuation of the practice of female circumcision, more so in urban than in rural areas. Considering how widespread the practice has been traditionally, the split in public opinion may indicate the beginning of a shift in norms around this practice.

8.4 Knowledge, Attitudes and Practices Related to Breast Cancer

Cancer has the potential to break through normal breast tissue barriers and spread to other parts of a woman's body. Early detection of cancer before it spreads is one of the most important steps in reducing mortality related to the disease. Thus breast self-exam should be part of a woman's monthly health care routine, and she should visit her doctor if she notices breast changes. If the woman is over 40 or at a high risk for the disease, she should also have an annual mammogram and physical exam by a doctor. The earlier breast cancer is found and



diagnosed, the better the woman's chances of beating it. The 2007 EHCS collected information about women's knowledge and practices related to breast cancer and breast self-exams.

Knowledge of risk factors (Tables 8.12 A&B)

All respondents were asked whether they know the factors that increase the risk of having breast cancer. The data show that 68% of respondents could not name any factors. Figure 8.12 above shows differences across groups in knowledge of risk factors: women are the most likely to know at least one of these factors (35%), while male youths are the least likely to know them (14%). Very slight differences between regions in the level of knowledge of these factors were observed. Of those who could name risk factors, the most commonly mentioned factors were smoking (15%), followed by family history (14%). Significant regional differences were observed: while 24% of respondents in urban Lower Egypt mentioned smoking as a factor that could lead to breast cancer, only 11% in urban Upper Egypt mentioned it.

Attitudes and knowledge about examination and detection (Table 8.13 A&B)

To measure attitudes about examination and detection of breast cancer, the 2007 EHCS questionnaire asked respondents about their level of agreement with a series of statements about this topic. The responses were coded into five categories; from strongly agree (score 5) to strongly disagree (score 1).

Respondents' attitudes toward routine breast-self examination was assessed through the level of agreement with the statement "A woman should perform a breast self examination monthly". Sixty-two percent of respondents agreed with this statement. The mean score for this statement was 4.15. Variations in agreement level exist between the different regions and according to the educational level of respondents. The level of agreement about this statement among urban respondents is higher than that of rural respondents (mean scores are 4.42 and 3.99, respectively). The mean score for this statement ranges from 4.08 among respondents with no education to 4.33 among respondents with education level higher than secondary.

Attitudes about examination and detection of breast cancer				
Agreement Statement	A woman should perform a breast self examination monthly	A woman should have a clinical breast exam yearly	A woman should have a mammogram after the age of 40	Many cancers can be cured if they are detected early
Background characteristic	Mean score	Mean score	Mean score	Mean score
Education				
No education	4.08	4.12	4.16	4.28
Primary	4.10	4.14	4.12	4.31
Secondary	4.11	4.12	4.10	4.31
More than secondary	4.33	4.32	4.32	4.44
Rural/Urban				
Urban	4.42	4.39	4.39	4.37
Rural	3.99	4.04	4.03	4.32
Total	4.15	4.19	4.17	4.34

Respondents were also asked whether they agree that women should have a clinical breast exam yearly. Figure 8.13 shows that 64% of respondents agree with this statement. The mean score for this statement was 4.19. The differences in the level of agreement with this statement between regions and according to education level are slightly lower than that observed for the statement about breast self-exams.

The data also show the level of agreement among respondents about having a mammogram yearly after the age of 40. Almost the same level of agreement with the statement "a woman should have a clinical breast exam yearly" was reported with this statement. The average mean score for this statement was 4.17 with very low variations among the different groups. The percentage of respondents that agrees with this statement was 62%.

Finally, respondents were asked whether they agreed that many cancers can be cured if they are detected early. The percentage of respondents that agrees with this statement and its mean score were higher than that of the previous statements (71% and 4.34, respectively). There was less variation across groups on this matter.

Practices related to breast self-exam and clinical exam (Tables 8.14-8.15 A&B)

To measure knowledge and practices related to breast self-exam and clinical examination of breast cancer, the 2007 EHCS questionnaire asked women and female youths whether they know how to do a breast-self exam, whether they have performed a breast self-exam in the past 30 days, and whether they have had a clinical breast exam during the past 6 months.

The data show that only 9% of women and female youths know how to do a breast self-exam, with significant variations in the level of knowledge according to education level and region. As shown in this table, urban women are more likely to know how to do a breast-self exam than rural women (18% and 5%, respectively). Also, education level is strongly correlated with women's knowledge. As shown in Table 8.5, while 21% of women with education level higher than secondary know how to do a breast-self exam, only 3% of women with no education know how to do that.

Knowledge and practices of breast cancer self-exam and clinical exam				
	Know how to do a breast self-exam	In the past 30 days, have you performed a breast self-exam	In the past 6 months, have you had a clinical breast exam	
Background characteristic	Yes	Yes	Yes	Number of women
Education				
No education	3.4	1.6	0.2	505
Primary	4.6	1.0	0.0	195
Secondary	9.5	2.2	1.3	783
More than secondary	21.1	3.8	0.9	318
Rural/Urban				
Urban	17.5	3.6	1.6	618
Rural	5.0	1.4	0.3	1183
Total	9.3	2.2	0.8	1801

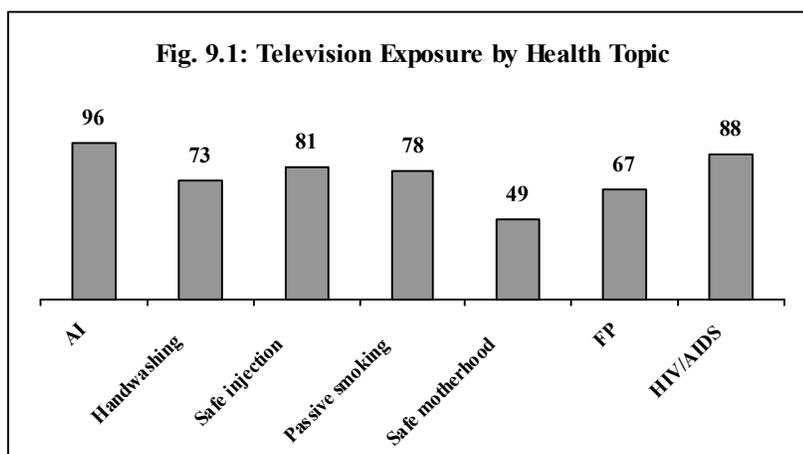
The data also show that in general the level of practice of breast-self exam is much lower than the level of knowledge (2% only had performed a breast-self exam in the past 30 days). Again the practice level of breast self-exam varies by region and education level. Urban women were more likely than rural women to perform this exam (4% and 1% respectively). The data also show that less than 1% of women and female youth have had a clinical breast exam in the past 6 months, most of them are from urban areas.

The Communication for Healthy Living Project, which is funded through USAID, is one of the main providers of health education in Egypt. CHL communication activities cover a wide range of topics including family planning, reproductive health, safe pregnancy, family health, smoking, and HIV/AIDS. CHL campaign messages also promote the benefits of premarital examinations, birth spacing, and the use of family planning during the postnatal period, as well as antenatal care, breastfeeding, and child vaccinations. In addition, CHL messages aim to increase awareness of the dangers of second-hand smoke.

This chapter examines the respondents’ recall of various CHL communication campaign elements and messages. The first sections of this chapter assess the recall of the CHL campaign through prompted questions about specific CHL campaign spots and slogans. To the extent possible, the data also show the effect of these messages on the respondents’ level of awareness and behavioral response to health issues.

9.1 Recall of Specific CHL Campaign Spots and Slogans

This section assesses recalling of specific CHL campaign spots and slogans through prompted questions. Overall, television is the predominant source of health information for Egyptians. Figure 9.1 shows the percentage of EHCS respondents across all four groups who reported receiving information on various health topics from television.



Nearly all respondents said they had received information about avian influenza from television and roughly 80 percent or more reported receiving safe injection, passive smoking and HIV/AIDS information from television, as well. Because most Egyptians have at least some access to television, the level of exposure is closely related to the intensity of message distribution through that medium. This figure reflects the intensity of AI campaigns in Egypt since 2006.

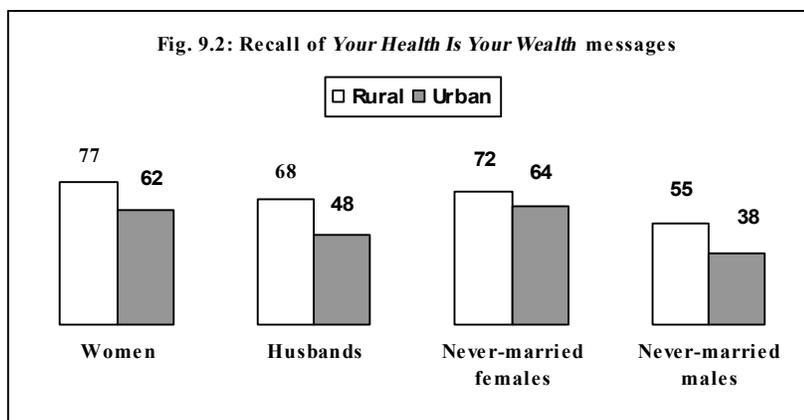
Women, husbands and youth also were asked about specific campaign activities, such as the *Your Health is Your Wealth* campaign, *Isaal Istashir* materials and the *Mabrouk* book. Respondents were also asked about the campaigns and spots messages

Exposure to the *Your Health is Your Wealth* Spots through TV (Table 9.1a-9.1b A&B)

Various *Your Health is Your Wealth* spots aired on the television during the 12 months preceding the survey. These spots talk about the health care of all family members, how the parents’ health affects their children’s health, and about antenatal care, birth spacing, breastfeeding, safe injection and other health issues. Tables 9.1a and 9.1b in Appendix A show the percentage of respondents who recall seeing these TV spots and the messages they could recall.

The Figure below indicates that females were more likely to recall the spot than males. Almost 67% of women and never-married female youth, but only 55% of husbands and 43% of the never-married male youth, recalled the TV spot. Urban-rural differences were clear, as shown in Figure 9.2,

respondents in urban areas are more likely to recall the spot than respondents in rural areas. Additionally, respondents in Urban Governorates are more likely to recall the spot than respondents in other regions. Data also show that recall of the “Your Health is Your Wealth” spot is highest among respondents with more than a secondary level education (74%).

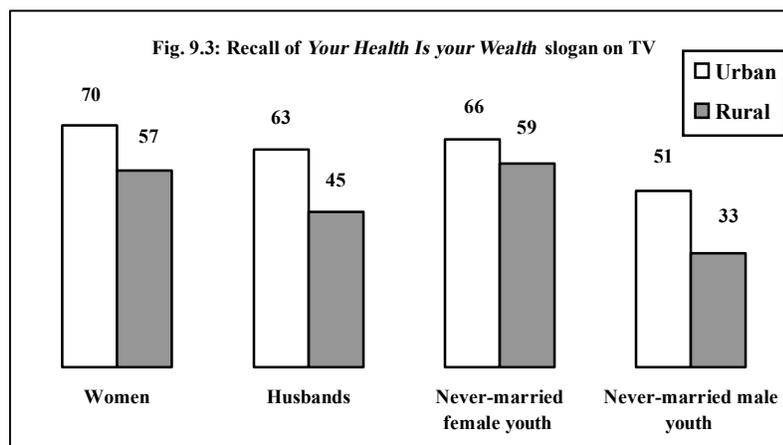


Similarly with regard to recall of the “Your Health is Your Wealth” TV spot, Table 9.1a shows that women are most likely to recall the messages about family health care (68%), husband's and wife's health affect child's health (46%), and antenatal care (28%). However, differences were observed between regions. For example, women in Rural Upper Egypt are most likely to recall antenatal care as the main spot messages, while women in Urban Governorates are most likely to mention family health care. Also, some variations are observed by educational level: respondents with a higher educational level are most likely to recall safe injection, danger of secondhand smoke and hand washing messages.

In general, Table 9.1a and 9.1b show that respondents are most likely to recall the general messages about “family health care” with significant differences between regions. The second most frequent recalled message among all respondents is “husbands and wife’s health affect child’s health”, followed by the message about antenatal care.

Recall of the *Your Health is Your Wealth* Slogan (Table 9.2 A&B)

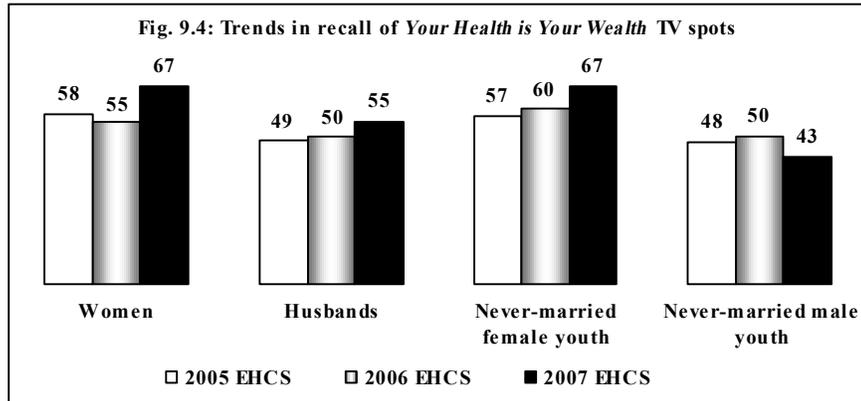
“Your Health is Your Wealth” was a unifying slogan featured in the majority of CHL materials across all media. The data indicate that women and never married female youth are more likely than other groups of respondents to recall hearing or seeing this slogan and that television is the main source of this exposure. Slightly less than two-thirds of women and never-married female youth,



51% of husbands and 38% of never-married male youth reported that they saw/heard this slogan mostly through television. Figure 9.3 shows that respondents in urban areas are more likely to see or hear this slogan through TV. Additionally, respondents in Urban Governorates are more likely to recall this slogan than those in other regions. Moreover, respondents’ level of exposure to the slogan increases with educational level from 46% among those with no education to 69% among those with more than a secondary level education.

Trends in Exposure to the *Your Health is Your Wealth* TV Spot 2005-2007

According to a series of EHCS surveys conducted in Egypt in 2005, 2006 and 2007, the level of recall of the "Your Health is Your Wealth" TV spots has increased in all respondent groups except never-married male youth, as shown in Figure 9.4.

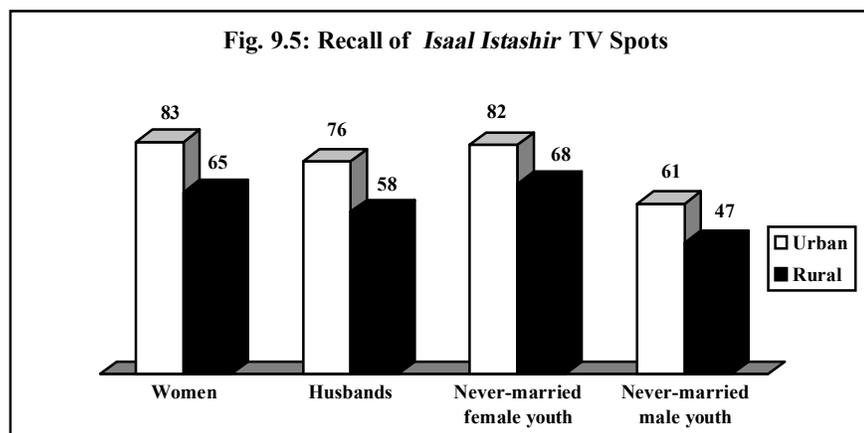


Exposure to *Isaal Istashir* materials (Tables 9.3a-9.3b A&B)

Another major communication initiative of CHL is the *Isaal Istashir* (Ask, Consult) campaign aimed at promoting local pharmacies as a convenient and reliable source of family health advice and supplies. The *Isaal Istashir* materials provide medical information about family planning methods, feminine hygiene, treatment of diarrhea, safe injection, and other health topics and advise people to consult a pharmacist who displays the *Isaal Istashir* logo if they have questions about any of those health issues—all related to over-the-counter products available in those pharmacies. Accordingly, respondents were asked whether they had ever seen or heard any of the *Isaal Istashir* materials.

Tables 9.3a and 9.3b present the level of recall among married and never-married respondents, respectively, of *Isaal Istashir* materials. Data shown in the tables indicate that a substantial percentage of all groups of respondents can recall these materials: three-quarters of women, 69% of husbands, 77% of never-married female youth and 57% of never-married male youth. Television is the main source of recall, followed by a poster in a pharmacy or in a clinic. Figure 9.5 shows the percentage of respondents who recalled seeing *Isaal Istashir* on TV. Urban-rural differences were clear across all groups of respondents. Respondents in urban areas had higher exposure to the TV spots than respondents in rural areas. Significant differences were observed between regions, with respondents in Rural Upper Egypt being least likely to see/hear an *Isaal Istashir* spot, and respondents in Urban Governorates most likely to recall such a spot. Results also indicated that husbands and women in the age groups 25-29 and 30-34 (subgroups most likely to have young families), and those with more than a secondary level education are the most likely to see/hear an *Isaal Istashir* spot (72%, 75% and 81% respectively).

Data presented in Tables 9.3a and 9.3b in the appendix show the take away messages that respondents were most likely to recall from the *Isaal Istashir* spots. The most common message recalled was the advice to consult a pharmacist about health problems or

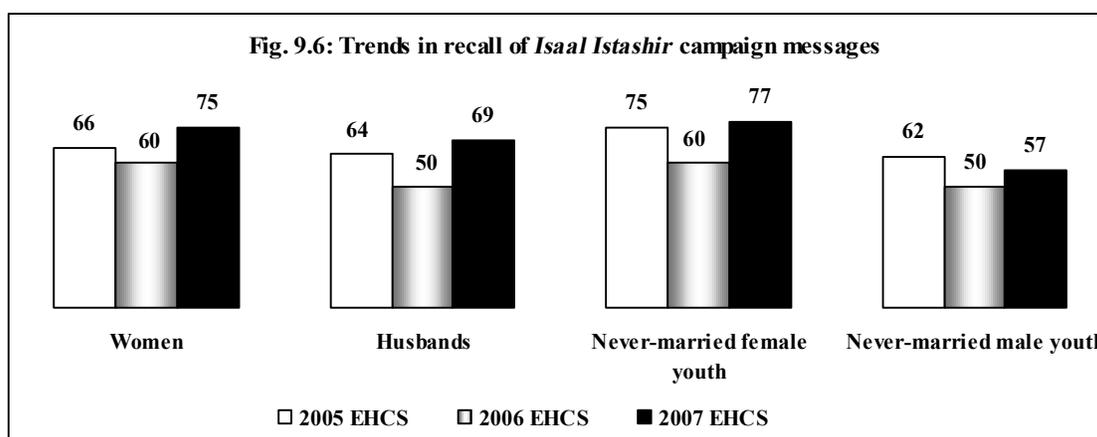


questions. For all respondent categories except male youth, the second most recalled message was promoting the use of family planning. The third most recalled message was to go to a pharmacy that has the *Isaal Istashir* sign. About 42% of all respondents recalled this message.

Respondents also were asked whether they have ever gone to a pharmacy that has the *Isaal Istashir* sign. The data show that 43% of women, 50% of husbands, 46% of never-married female youth and 42% of male youth reported that they have ever gone to a pharmacy that has the *Isaal Istashir* sign. Some differences in the use of *Isaal Istashir* pharmacies were observed between regions. All respondent groups in urban Upper Egypt except women are more likely to report that they went to a pharmacy with the *Isaal Istashir* sign than respondents in other regions. Also, respondents with more than a secondary level education are the most likely to go to *Isaal Istashir* pharmacies.

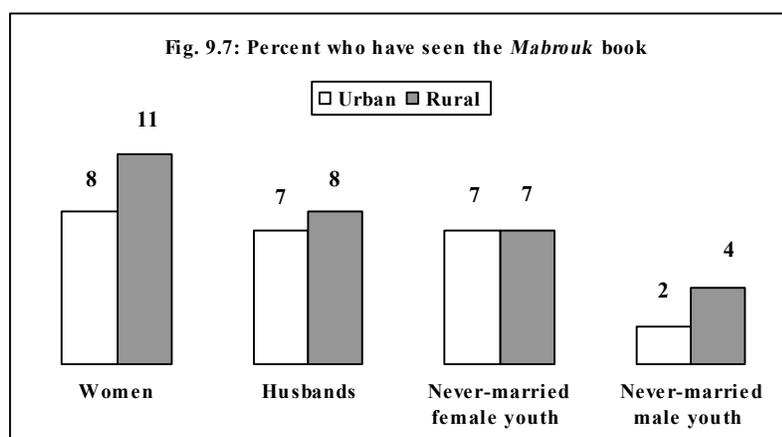
Trends in Recall of the *Isaal Istashir* campaign 2005-2007

The series of annual EHCS surveys in 2005, 2006 and 2007 shows that the level of recall to the *Isaal Istashir* spots and materials has increased over time among all respondent categories, except male youth. Due to the varying intensity of the campaign over time, the level of recall dips in 2006 across all respondent categories (see Figure 9.6).



Exposure to *Mabrouk* booklet (Table 9.4 A&B)

CHL's Newlywed Initiative is designed to capitalize on the newlywed couple's entry into a new phase of their life by providing each couple with the information and resources they can use to discuss and make joint decisions about their future. During the first visit to the newlyweds, an outreach volunteer provides a couple with a booklet called the *Mabrouk* (Congratulations!) book, and shares information from the booklet. *Mabrouk* messages describe the stages of family life from newlywed concerns about pregnancy to antenatal care and safe delivery, to postpartum breastfeeding and birth spacing, to child nutrition and general family health care. Table 9.4 in Appendix A and Figure 9.7 show the percentage of respondents who have seen *Mabrouk* book and the recalled messages included in the book.



Data show that, in contrast with the extensive reach of mass media messages, the reach of the *Mabrouk* book through outreach activities is relatively limited. Because the books are targeted to newlyweds, women and husbands have higher exposure to this book than do male and female youths (10% of women, 8% of husbands, 7% of female youths, and 3% of male youths have seen the book). Urban-rural differences were clear as shown in the figure above, where respondents in rural areas are more likely to have seen the book than respondents in urban areas, except for female youths. Additionally, respondents in Urban Lower Egypt are more likely to have seen the book than respondents in other regions, except for male youths. Moreover, respondents in the age group 25-29 were the most likely to report seeing the *Mabrouk* book.

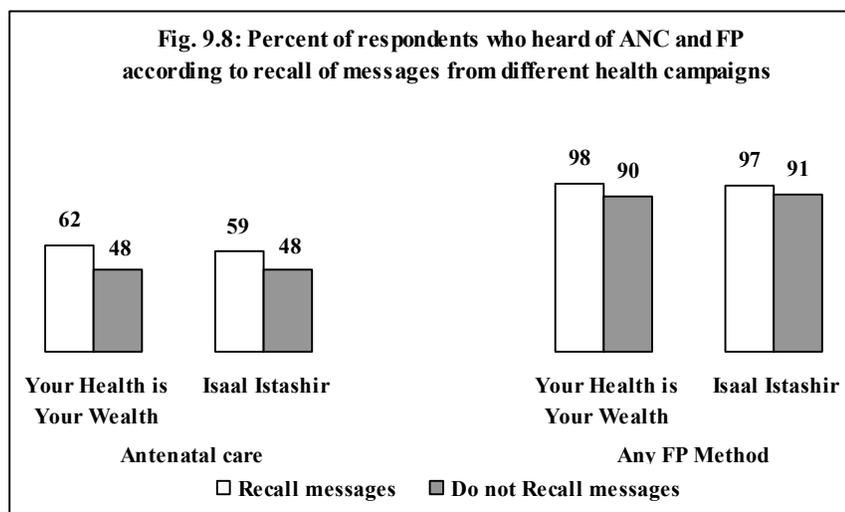
Regarding recall of the messages in the *Mabrouk* book, Table 9.1a shows that almost all respondents who recalled seeing this book are able to recall the messages about family's health and happiness (85% of women, 80% of husbands, 92% of female youths and all male youths, who recalled seeing *Mabrouk* book have mentioned this message). Forty-five percent of married women also recalled the messages about child and baby care, roughly the same in rural and urban areas. Thirty-six percent of husbands also recalled *Mabrouk* messages about the pregnancy period and antenatal care.

9.2 Recall of CHL spots and Awareness of Health Issues

Communication plays a vital role in increasing public awareness of health issues. Serious government efforts to increase health awareness beginning in the mid- 1970s has resulted in overall improvement in the health of the Egyptian population. This section assesses the association between recall of specific CHL campaign materials and awareness of specific health issues. It also assesses changes in behavior related to health.

Recall of CHL campaigns and knowledge about maternal health and family planning (Tables 9.5-9.6 A&B)

The statistical analysis of the 2007 EHCS shows that recalling *Your Health is Your Wealth* and *Isaal Istashir* campaigns is strongly correlated with the knowledge of antenatal care knowledge of family planning methods as shown in Tables 9-5 and 9-6. Figure 9.8 shows statistically significant differences in knowledge of antenatal care and of family planning methods between respondents who recall CHL campaigns and those who do not. As shown in this figure, respondents who recall the *Your Health is Your Wealth* campaigns are more likely than those who do not to know about antenatal care (62% versus only 48%, respectively) and also more likely to know about family planning methods (98% versus 90%, respectively). The same observation applies to respondents who recall *Isaal Istashir* messages as observed in the figure.



As shown in this figure, respondents who recall the *Your Health is Your Wealth* campaigns are more likely than those who do not to know about antenatal care (62% versus only 48%, respectively) and also more likely to know about family planning methods (98% versus 90%, respectively). The same observation applies to respondents who recall *Isaal Istashir* messages as observed in the figure.

The data presented in Table 9.5 in the appendix reveals that respondents who recall the CHL messages are more likely to mention that the appropriate number of antenatal visits is 4 or more (64% for respondents who recall your wealth is your health messages and *Isaal Istashir* compared to 54% to

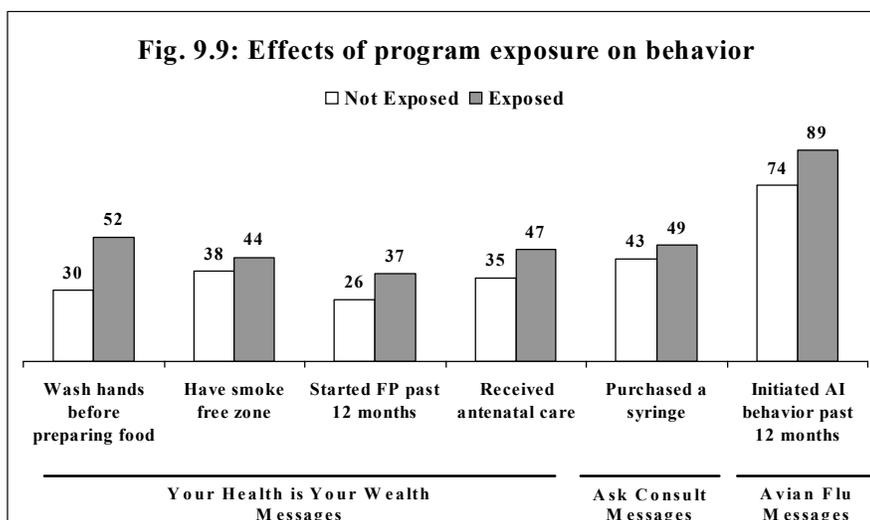
57% among those who do not recall these messages). Also, respondents who recall these messages are more likely to believe in the importance of antenatal care visits, as shown in Table 9.6. For example, 96% of respondents who recall *Isaal Istashir* messages believe in the importance of antenatal care visits compared to only 82% of those who do not recall the messages.

Table 9.6 shows that respondents who recall the CHL messages are more likely to know modern and traditional family planning methods. For example, the percentage of respondents who recall the *Isaal Istashir* messages and know about the Norplant/implant method is more than double the percentage of respondents who do not recall these messages and know this method (37% and 17%, respectively).

9.3 Recall of CHL Campaigns and Effects on Behaviors Related to Health (Table 9.9 A)

Table 9.9a in the appendix reflects the relationship level between recall of various CHL messages and behavior changes related to the frequency of hand washing, having a smoke free zone, initiating use of family planning in the past 12 months, receiving antenatal care from a doctor or midwife, purchasing a disposable syringe and initiating at least one avian influenza protective behavior in the past 12 months, across all groups of respondents. As shown in the figure below, respondents were more likely to practice each of these behaviors if they reported exposure to and recall of relevant CHL campaign messages.

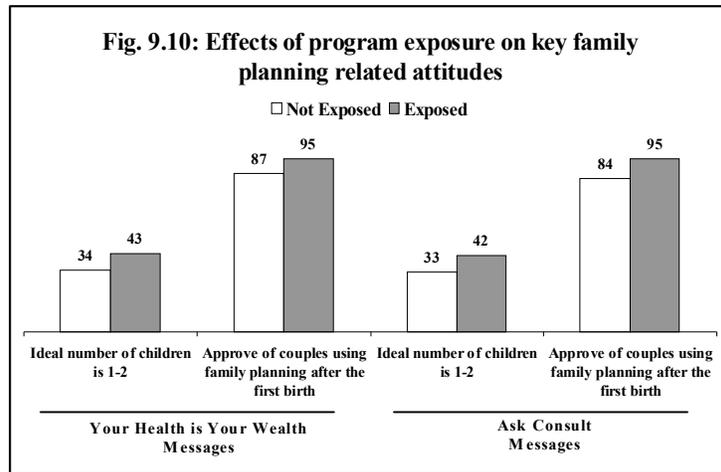
For example, Figure 9.9 shows that respondents who said they could recall *Your Health is Your Wealth* messages were more likely to report that they washed their hands before preparing food (52% compared to 30%), to have a smoke free zone in their home (44% compared to 38%), started (or restarted)



to use a family planning method (37% compared to 26%) and had received antenatal care for a pregnancy (47% compared to 35%). Recall of *Isaal Istashir* (Ask Consult) messages, which promoted safe injection practices, was positively associated with purchasing a disposable syringe (49% of respondents who were exposed compared to 43% of respondents who were not).

Because avian flu messaging was so intensive, virtually all respondents had been exposed to at least one message, usually from television. So for analysis of AI message effects, the number of AI message sources a respondent could recall was collapsed into a high recall category (0 or 1 source) and a high recall category (from 2 up to 10 sources). Table 9.9a and Figure 9.10 show that respondents with higher levels of recall (2 or more message sources) were more likely to have initiated at least one protective action (89%) compared to respondents with low levels of recall (74%).

In addition to these behaviors, several attitudes of primary interest to the CHL family planning efforts were also positively impacted by exposure to the campaign. Both exposure to *Your Health is Your Wealth* messages and to *Isaal Istashir* messages were associated with approval of small family size (two children or less) and approval of couples using family planning to space births after the first child. These results are shown in Figure 9.10.



Because many other factors can explain response to campaign messages besides exposure to the campaign alone, the relationships between message exposure, attitudes and behavior were reexamined while controlling statistically for respondents' place of residence (urban versus rural), age, level of education, marital status and employment status. Table 9.9a shows that all of the relationships were still significant after controlling for these background factors. Respondents were more than three times as likely to initiate at least one behavior to protect themselves and their family from avian influenza and roughly twice as likely to wash hands before preparing food, to wash hands before feeding children, to have a smoke free area in their home, and to approve of family planning after the first child if they had been exposed to program messages. They were also roughly one and half times (50 percent) more likely to have (re)initiated family planning in the past year, to have purchased a disposable syringe, and to say they want no more than 2 children.