UNITED ARAB EMIRATES
MINISTRY OF HEALTH & PREVENTION

UAE NATIONAL HEALTH SURVEY REPORT 2017-2018

National Health Survey 2017-2018

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2017-2018

STATISTICS & RESEARCH CENTER (SARC)

UNITED ARAB EMIRATES
MINISTRY OF HEALTH & PREVENTION

الإمارات العربية المتحدة
وزارة الصحة ووقاية المجتمع

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DUBAI HEALTH AUTHORITY

الهيئة الاتحادية للتنافسية والإحصاء
FEDERAL COMPETITIVENESS AND STATISTICS AUTHORITY

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WORD FROM THE MINISTER OF HEALTH AND PREVENTION

The Ministry of Health & Prevention aims to achieve a world-class healthcare system by offering exceptional services delivered in a sustainable surrounding. The UAE National Agenda 2021 has been put forth as a comprehensive strategy to improve health, education, infrastructure, economy, judicial process, public safety, and overall health and well-being in the United Arab Emirates. Our strategic pillars focuses on providing comprehensive and cutting-edge healthcare, evidence-based research, leading services and processes, and cost-effective innovations supporting this vision.

Preserving the momentum to achieve the National Vision 2021 goals is only possible if we have the political will and the capacity to prioritize timeliness, regular and reliable data collection to guide public health interventions and policy decisions. Ministry of Health and Prevention has placed a strong focus and attention to deliver healthcare services that is responsive to the needs of individuals along with providing the most trusted health-related data using national health surveys to effectively monitor the health of the nation.

We further look forward to the shared joint successes in advancing healthcare in the UAE and engaging our partners on this journey to ensure quality healthcare for all.

AbdulRahman bin Mohamed Al Owais
Minister of Health & Prevention

WORD FROM THE ASSISTANT UNDERSECRETARY

The Ministry of Health & Prevention (MoHAP) – Statistics & Research Centre (SRC) takes pleasure in presenting the principal report of the United Arab Emirates World Health Survey (UAE WHS) 2017-2018, in which the detailed results of the survey are further elaborated upon.

The UAE WHS 2017-2018 was funded by the Ministry of Health & Prevention. The collaborative nature between local entities made the success of the survey possible. The Federal Competitiveness & Statistics Authority (FCSA), WHO EMRO office, Abu Dhabi Department of Health, Dubai Health Authority, Abu Dhabi Statistics Center, and Dubai Statistics Center provided the technical support required.

The UAE government and leadership believe in providing the best quality of health system and health care to the population as it is an essential factor in the continuous prosperity of the nation. Moreover, the UAE Vision 2021 National Agenda aims to achieve a world-class healthcare system which can be achieved with the government's concerted efforts in collecting health data, supporting research and development in the region, and working closely on monitoring and evaluation of both existing and future health policies.

The main objective of the survey is to provide comprehensive data on household health, risk factors for non-communicable diseases, under 5 health indicators including immunization coverage, mortality, family planning, and fertility preferences, as well as maternal and child health, and health expenditure to be used by program managers and policy makers to evaluate and improve existing programs. The data obtained will be useful for researchers and scholars interested in analyzing trends in the demographic parameters of the UAE as well as conducting comparative, regional or cross-national studies and in-depth analyses.

The UAE is a melting pot of nationalities and cultures where people from all over the world come to live and work. Therefore, the sample is nationally representative by having 40% locals and 60% non-local residents included, and has been designed to produce estimates of major survey variables at the national level, for the country's seven Emirates. Approximately 9,000 households and more than 6,000 ever-married women were interviewed for the survey.

We would like to end by acknowledging the continuous support and effort from all our stakeholders without whom we could not have achieved the successful response rate of 94% and spreading awareness across the nation. Thank you to all the individuals who worked hard day and night, weekdays and weekends, on the success of the UAE WHS.

His Excellency Dr Hussain Mohammed Al Rand,
Assistant Undersecretary, Ministry of Health & Prevention

WORD FROM THE DIRECTOR OF STATISTICS AND RESEARCH CENTER

The Ministry of Health & Prevention (MoHAP) – Statistics & Research Centre (SRC) is pleased to present this report. The National Health Survey (NHS) is a part of Ministry of Health and Prevention ongoing surveillance of the health status of the UAE population. It provides useful information on the health state description and prevalence of major non-communicable diseases for example, diabetes Mellitus, cardiovascular diseases and hypertension together with associated risk factors such as smoking, and obesity from a representative sample of the resident population.

This report guides us to understand where estimates or data are available and where we lack insights. We are at a pivotal moment to ensure continued focus on measuring the health-related indicators. Our primary objectives are to improve the data collection at the source, strengthen the capacity of the country for data analysis along with introducing innovation in data capture, dissemination, and analysis.

Our sincere thanks is extended to Steering and Technical working committees that oversaw the implementation of the survey and to all those who helped in processing, collecting, and presenting this data at the country and international levels. UAE WHS 2017-2018 could not have been produced without this enormous dedicated collective effort. We further plan to improve the statistical analysis, strengthen civil registration and vital statistics systems and expand support for the dissemination and curation of national data along with promoting the availability of quality and timely data for the coming era.

I would like to gratefully acknowledge all who have, in one way or another contributed to the successful completion of UAE WHS 2017-2018. I would also thank all the survey participants who have given their time to take part and whose support made this report possible.

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- World Health Organization, EMRO
- IQVIA

This report summarizes the findings of the 2017-2018 UAE World Health Survey that was led by the Statistics and Research Centre, Ministry of Health & Prevention.

IQVIA provided technical assistance and implemented the field work for this survey.

The UAE World Health Survey 2017-2018 is part of the worldwide World Health Surveys Program, which is designed to collect data on household health, prevalence of risk factors for non-communicable diseases, and related clinical and biochemical indicators.

Additional information about the UAE WHS 2017-2018 survey may be obtained from the Statistics & Research Centre, Ministry of Health & Prevention, Muhaisna 2, beside Etisalat Academy on Sheikh Muhammed bin Zayed Road, Dubai.

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ACKNOWLEDGMENT

The Ministry of Health & Prevention (MOHAP) is indebted for the support of countless individuals, institutions, governments, nongovernmental and international organizations for their continual collaboration during this journey.

We wish to express our sincere gratitude for the generous support, and hard work offered by the employees of different sections of the Ministry of Health & Prevention (MOHAP). Without their dedication, support, and expertise this report would not have been possible.

We are thankful to and fortunate enough to get constant encouragement, support, advises and guidance from all the stakeholders and steering committees, the success and outcome of this project required plenty of guidance and assistance and we are extremely privileged to have got this all from the joint efforts .

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GLOSSARY

AED	Arab Emirates Dirham (Official Currency of UAE)
ANC	Antenatal care
BCG	Bacillus Calmette-Guérin (vaccine)
BMI	Body Mass Index
CAPI	Computer-Assisted Personal Interview
CVA	Cerebrovascular Accident
CVD	Cardiovascular Diseases
DBP	Diastolic Blood Pressure
DHA	Dubai Health Authority
DoH	Department of Health, Abu Dhabi
DPT	Diphtheria pertussis tetanus (vaccine)
DSC	Dubai Statistics Center
EMRO	Eastern Mediterranean Regional Office (WHO)
FBS	Fasting Blood Sugar
FCSA	Federal Competitiveness & Statistics Authority
HbA1C	Glycosylated Hemoglobin
HepB	Hepatitis B (vaccine)
HiB	Haemophilus influenzae type B (vaccine)
IUD	Intra-uterine device
IPV	Injectable Polio Vaccine
LAM	Lactational amenorrhea method
MOHAP	Ministry of Health and Prevention
NCDs	Non Communicable Diseases
OPV	Oral Polio Vaccine
PCV	Pneumococcal conjugate vaccine
PNC	Postnatal care
PSU	Primary sampling unit

RV1	Rotavirus vaccine
SARC	Statistics and Research Center
SBP	Systolic Blood Pressure
SCAD	Statistics Center Abu Dhabi
UAE WHS	United Arab Emirates World Health Survey
WHO	World Health Organization
WHO STEPS	STEPwise approach to noncommunicable disease risk factor surveillance (STEPS)

WHO FACTSHEET INDICATORS

UAE (184) STEPS Survey 2017-2018
Fact Sheet

The STEPS survey of non-communicable disease (NCD) risk factors in [UAE/184] was carried out from Nov 2017-Apr 2018. [UAE/184] carried out Step 1, Step 2 and Step 3. Socio demographic and behavioral information was collected in Step 1. Physical measurements such as height, weight and blood pressure were collected in Step 2. Blood glucose and cholesterol levels were checked in Step 3. The survey was a population-based survey of adults aged 18+. 10,000 Randomly selected Households across all seven Emirates were selected as sample design was used to produce representative data for that age range in [UAE/184]. A total of 8214 adults participated in the survey. The overall response rate was 87% among Adults Participants. A repeat survey is planned for 2022-2023.

Step 1 Tobacco Use			
Percentage who currently smoke tobacco	**9.1%** (8.3-10.0)	**15.7%** (14.2-17.2)	**2.4%** (1.8-3.0)
Percentage who currently smoke tobacco daily	**8.0%** (7.2-8.8)	**13.9%** (12.4-15.3)	**2.0%** (1.4-2.5)
For those who smoke tobacco DAILY			
Average age started smoking (years)	**20.2** (19.6-20.7)	**20.0** (19.4-20.5)	**21.6** (19.7-23.6)
Percentage of daily smokers smoking manufactured cigarettes	**100.0%** (100.0-100.0)	**100.0%** (100.0-100.0)	**100.0%** (100.0-100.0)
Mean number of manufactured cigarettes smoked per day (by smokers of manufactured cigarettes)	**12.0** (10.9-13.1)	**12.1** (10.9-13.2)	**11.655** (-- - --)*
* *Total number of respondents are very low = 46*			
Step 1 Alcohol Consumption			

Results for adults aged 18-69 years (incl. 95% CI) (adjust if needed)	**Both Sexes**	**Males**	**Females**
Percentage who are lifetime abstainers	**94.8%** (94.0-95.6)	**93.3%** (92.0-94.6)	**96.3%** (95.5-97.2)
Percentage who are past 12-month abstainers	**0.9%** (0.6-1.2)	**0.8%** (0.5-1.2)	**0.9%** (0.5-1.3)
Percentage who currently drink (drank alcohol in the past 30 days)	**2.5%** (2.0-3.0)	**3.7%** (2.8-4.7)	**1.2%** (0.8-1.6)
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	**1.4%** (1.0-1.8)	**2.2%** (1.4-3.0)	**0.5%** (0.2-0.8)
Step 1 Diet			
Mean number of days fruit consumed in a typical week	**5.4** (5.3-5.4)	**5.2** (5.1-5.3)	**5.5** (5.4-5.6)
Mean number of servings of fruit consumed on average per day	**1.6** (1.5-1.7)	**1.5** (1.5-1.6)	**1.7** (1.6-1.7)
Mean number of days vegetables consumed in a typical week	**5.8** (5.7-5.8)	**5.7** (5.6-5.8)	**5.9** (5.8-5.9)
Mean number of servings of vegetables consumed on average per day	**1.9** (1.8-2.0)	**1.9** (1.7-2.0)	**2.0** (1.9-2.1)
Percentage who ate less than 5 servings of fruit and/or vegetables on average per day	**82.8%** (81.1-84.5)	**83.8%** (81.7-85.9)	**81.8%** (79.9-83.7)
Percentage who always or often add salt or salty sauce to their food before eating or as they are eating	**51.7%** (49.3-54.1)	**47.7%** (44.7-50.7)	**48.9%** (46.2-51.6)
Percentage who always or often eat processed foods high in salt	**19.9%** (18.2-21.5)	**20.3%** (18.0-22.6)	**19.4%** (17.4-21.4)
Step 1 Physical Activity			
Percentage with insufficient physical activity (defined as < 150 minutes of moderate-intensity activity per week, or equivalent) *	**70.8%** (69.0-72.6)	**66.8%** (64.5-69.1)	**74.8%** (72.5-77.1)
Median time spent in physical activity on average per day (minutes) (presented with inter-quartile range)	**0.0** 0.0-25.7	**0.0** 0.0-30	**0.0** 0.0-20
Percentage not engaging in vigorous activity	**90.5%** (89.5-91.4)	**87.3%** (85.9-88.8)	**93.6%** (92.4-94.8)
Step 1 Cervical Cancer Screening			
Percentage of women aged 30-49 years who have ever had a screening test for cervical cancer			**14.6%** (12.6-16.6)
Step 2 Physical Measurements			

Results for adults aged 18-69 years (incl. 95% CI) (adjust if needed)	**Both Sexes**	**Males**	**Females**
Mean body mass index - BMI (kg/m2)	27.8 (27.6-28.0)	27.8 (27.5-28.1)	27.9 (27.5-28.2)
Percentage who are overweight (BMI ≥ 25 kg/m2)	67.9% (66.0-69.8)	70.8% (68.1-73.4)	64.9% (62.2-67.6)
Percentage who are obese (BMI ≥ 30 kg/m2)	**27.8%** (26.1-29.4)	**25.1%** (22.8-27.4)	**30.6%** (28.1-33.0)
Average waist circumference (cm)	**NA**	**97.2** (96.4-98.0)	**90.5** (89.7-91.2)
Mean systolic blood pressure - SBP (mmHg), including those currently on medication for raised BP	**121.5** (120.8-122.2)	**127.1** (126.2-127.9)	**115.8** (114.9-116.7)
Mean diastolic blood pressure - DBP (mmHg), including those currently on medication for raised BP	**81.9** (81.4-82.4)	**84.5** (83.9-85.2)	**79.2** (78.6-79.8)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)	**28.8%** (27.0-30.6)	**37.8%** (35.1-40.6)	**19.5%** (17.5-21.6)
Percentage with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg) who are not currently on medication for raised BP	**72.5%** (69.4-75.7)	**74.9%** (71.2-78.6)	**67.8%** (62.4-73.3)
Step 3 Biochemical Measurement			
Mean fasting blood glucose, including those currently on medication for raised blood glucose [choose accordingly: mmol/L or mg/dl]	**103.8** (102.1-105.4)	**106.1** (103.6-108.6)	**101.4** (99.3-103.6)
Percentage with impaired fasting glycaemia as defined below • plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) • capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl)	**11.7%** (10.0-13.3)	**13.6%** (11.3-15.9)	**9.7%** (7.8-11.6)
Percentage with raised fasting blood glucose as defined below or currently on medication for raised blood glucose • plasma venous value ≥ 7.0 mmol/L (126 mg/dl) • capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl)	**11.8%** (10.3-13.3)	**13.3%** (11.2-15.4)	**10.3%** (8.4-12.2)
Mean total blood cholesterol, including those currently on medication for raised cholesterol [choose accordingly: mmol/L or mg/dl]	**182.3** (180.0-184.6)	**181.1** (178.3-184.0)	**183.5** (180.3-186.7)
Percentage with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol)	**43.7%** (41.3-46.0)	**44.4%** (41.2-47.6)	**42.9%** (39.8-46.1)
Mean intake of salt per day (in grams)	**NA**	**NA**	**NA**
Cardiovascular disease (CVD) risk			

Results for adults aged 18-69 years (incl. 95% CI) (adjust if needed)	**Both Sexes**	**Males**	**Females**
Percentage aged 40-69 years with a 10-year CVD risk ≥ 30%, or with existing CVD**	**2.7%**	**3.6%**	**1.7%**
Summary of combined risk factors • current daily smokers • less than 5 servings of fruits & vegetables per day • insufficient physical activity • overweight (BMI ≥ 25 kg/m2) • raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)			
Percentage with none of the above risk factors	**1.5% (0.9-2.0)**	**1.8% (0.9-2.6)**	**1.1% (0.6-1.7)**
Percentage with three or more of the above risk factors, aged 18 to 44 years	**49.5% (47.1-51.9)**	**54.4% (50.9-58.0)**	**45.1% (42.0-48.2)**
Percentage with three or more of the above risk factors, aged 45 to 69 years	**61.7% (58.0-65.5)**	**63.3% (58.2-68.4)**	**59.3% (53.6-65.1)**
Percentage with three or more of the above risk factors, aged 18 to 69 years	**52.5% (50.5-54.6)**	**57.1% (54.2-60.0)**	**47.9% (45.3-50.6)**

** A 10-year CVD risk of ≥30% is defined according to age, sex, blood pressure, smoking status only current smokers, total cholesterol, and diabetes (previously diagnosed OR a fasting plasma glucose concentration >7.0 mmol/l (126 mg/dl).

SURVEY OVERVIEW

SCALE

~30000 interviews in <6 months

130 Managing ground resources + members

Collaboration between MOHAP & strategic partners

Multiple strategic partners

1. WHO
2. DoH
3. DHA
4. MOHAP
5. Federal Competitiveness and Statistics Authority
6. Abu Dhabi Statistics Center
7. Dubai Statistic Center

TYPE OF DATA COLLECTED

Face-to-face interviews
Clinical & biochemical measurement

DISTINCT
FIELD ACHIEVEMENTS

- All 7 Emirates covered
- Done in 6 months only
- ~90% response rate
- Electronic data collection
- eDatabase & server in UAE

PROJECT
MANAGEMENT

- Full coordination with Police & General Public
- Wide media coverage
- Helpline 80011111

INTRODUCTION

Background to the survey

Established on December 2, 1971, the United Arab Emirates (UAE) is a federation of seven emirates (Abu Dhabi, Ajman, Dubai, Fujairah, Ras Al Khaimah, Sharjah, and Umm Al Quwain). The discovery of oil drove significant economic and industrial growth in the UAE, which has impacted the demographic landscape of the nation. (Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research, 2015).

Population growth in the UAE is currently reported to be among the highest in world, with census data recording a seven-fold increase in population between the years of 1975 and 2005 (Population of the UAE, 2014). The fact that this growth is bolstered by an influx of migrant workers, coupled with the high percentage of men working in the expansive construction industry, means that a large portion of the demographic are pre-retirement age males. The UAE population for the year 2016 is 9,121,167 according to administrative records available with the Federal Competitiveness and Statistics Authority dated until 31 December 2016. The population administrative records also showed that 6,298,294 are male and 2,822,873 are female, making the gender split in the UAE 69% male and 31% female (Federal Competitiveness and Statistics Authority, FCSA 2016).

This ever-changing demographic landscape has had a direct impact on the healthcare landscape of the country, with evolving vital parameters such as life expectancy, under-5 mortality, age-standardized mortality, total fertility, etc. With an intention to accurately account for this change, UAE has been commissioning periodic nationwide demographic and health surveys.

The World Health Survey (WHS) is a large-scale, multi-round survey conducted in a representative sample of households in 70 countries that are members of World Health Organization. The WHS is a collaborative project between the World Health Organization and respective Ministries of Health in these 70 countries. Building on the 2000-01 WHO Multi-Country Survey Study, these surveys were launched by the World Health Organization to strengthen national capacity to monitor critical health outcomes and health systems through the fielding of a valid, reliable, and comparable household survey instrument. The first round of WHS was implemented between 2002 and 2004 in countries selected to represent all regions of the world. Study samples were nationally representative and probabilistically selected. Sampling weights were generated and adjusted for the population distribution with final post-stratification corrections for non-response. Household data includes a household roster, health insurance coverage, health expenditures, and indicators of permanent income or wealth. Individual level data include sociodemographic information, health state descriptions, health state evaluation, risk factors, chronic conditions, mortality, health care utilization, health systems responsiveness and social capital. UAE being a signatory to this collaborative project has undertaken 2 previous rounds of WHS – in 2003 and in 2009 (World Health Organization, 2016). These nationwide surveys were to be repeated every 5 years to reflect any changes in the healthcare indicators. The Federal Ministry of Health & Prevention of UAE is now keen to implement the 3rd round of the WHS starting 2017, retaining objectives as previous rounds with some additional objectives.

The UAE Ministry of Health and Prevention (MOHAP) over the past 10 years has taken social and

economic aspects of UAE into consideration when developing its health strategies as health constitutes an important aspect of the overall human development as well as national development.

As has been mentioned prominently by the MOHAP, the strategic objectives are the following:

1	To provide excellent health services to UAE society according to the international standards
2	To improve the quality of existing systems & develop healthcare facilities & ensure accessibility in accordance to international standards Healthy Society.
3	To promote a healthy lifestyle in UAE Society to prevent it from lifestyle related diseases
4	Development of health care system to protect & control the community from communicable as well as non-communicable diseases.
5	To enhance the healthcare legislations and policies in UAE and to enforce its implementation in collaboration with the public and private sectors.
6	To ensure and guarantee the provision of all administrative services according to the standards of quality, efficiency and transparency.
7	To build innovation culture in the working environment.

The MOHAP has also paid special attention to coordinate its activities closely with other sectors that cater to the healthcare provision in the country as well as fostering cooperation with regional and international organizations.

By adopting such policies, the MOHAP achieved many of the objectives specified in its national plans and managed to provide high quality healthcare which has been widely recognized and lauded by professional and academic bodies.

Building on its first edition of the World Health Survey (WHS) conducted in 2009, the UAE MOHAP in collaboration with the WHO conducted the WHS 2017-2018 across the country. This version of the survey was a combination of behavioral interviews and STEPS survey. The STEPS is a WHO-developed, standardized but flexible framework for countries to monitor the main NCDs risk factors through questionnaire assessment and physical and biochemical measurements. STEPS survey methodology is expected to help implementing countries to develop their own surveillance system to monitor and fight against non-communicable diseases.

The results of the WHS are expected to aid the MOHAP in developing / enhancing strategies for the following sectors of health services delivery:

1	Integrated health services and increase quality of care
2	Healthcare reform, community mobilization and maximizing access to quality services
3	Women's health, maternal health and safe motherhood
4	Child survival, breast feeding, nutrition
5	Family planning and reproductive health
6	Environment health

Objectives of the survey:

The primary objectives of the WHS 2017-2018 in UAE were to obtain:

1	Measures of knowledge, attitudes, behaviors related to individual's health competency and their trends across time
2	Quantifiable indicators of current health status and clinical, anthropometric and biochemical-markers
3	Information on national health behavior and service utilization indicators.

These objectives will be focal point for gathering data on health behaviors that will be monitored across the community and health competency that will be measured at individual, family as well as community level.

Methodology and Organization of the Survey

This section explains the important features of the UAE World Health Survey (WHS), including the sample design, the questionnaire and major aspects of the analysis of the survey. This includes the training procedure for interviewers and the data entry process for the completed questionnaires.

As the UAE WHS 2017-18 is a part of the World Health Survey series developed by the (WHO) which means to compile comprehensive baseline information on the health of populations in different countries and due to the standardized questionnaire, this information is also comparable between countries, and currently the WHS has been implemented in more than 70 countries.

The survey was designed on a modular basis, with the intention of providing low-cost information that supplements data from national health information systems in order to build up an evidence base for policymakers.

The initial preparation for the survey was done in coordination with a team of experts from across UAE, drawn from the fields of public health, epidemiology and statistics. The implementation was assisted by a technical team from the WHO EMRO. There were two main stakeholders in the UAE WHS 2017-18. These were the Federal Competitiveness and Statistics Authority (FCSA) and the Statistics & Research Center (SARC), Ministry of Health & Prevention, UAE.
The SARC team provided the main leadership to this project through the main steering committee and three sub-committees to help coordinate the planning and implementation of the WHS:

The main steering committee – constituted for the management and supervision of the national health survey project. The committee had significant role in the development and preparing the project plan, making vital decisions. It also had continues auditing over the project progress, monitoring the compliance of project implementation. Other responsibilities were assigned to the main committee such as leading and supervising the sub committees, liaising and coordinating with international stakeholders like WHO EMRO.

1. **The sampling sub committee** – constituted for review of the sampling plan with FCSA & other statistics authorities in UAE. The main task of this sub committee was to provide the Emirate level sample frames from the respective Emirates and consolidate them into a single sample frame before allocating them to the operational team to conduct the fieldwork. The sub committee was also responsible to check the validity of the households within individual clusters to ensure that only the most updated list of households with correct address and names were included for the survey. The sub committee also determined the eligibility criteria for households to be selected in the survey as well as the criteria for replacing a sample in case of low or non-response. The sub committee also decided on the total number of respondents to be selected from each household as well as the selection criteria for those respondents.

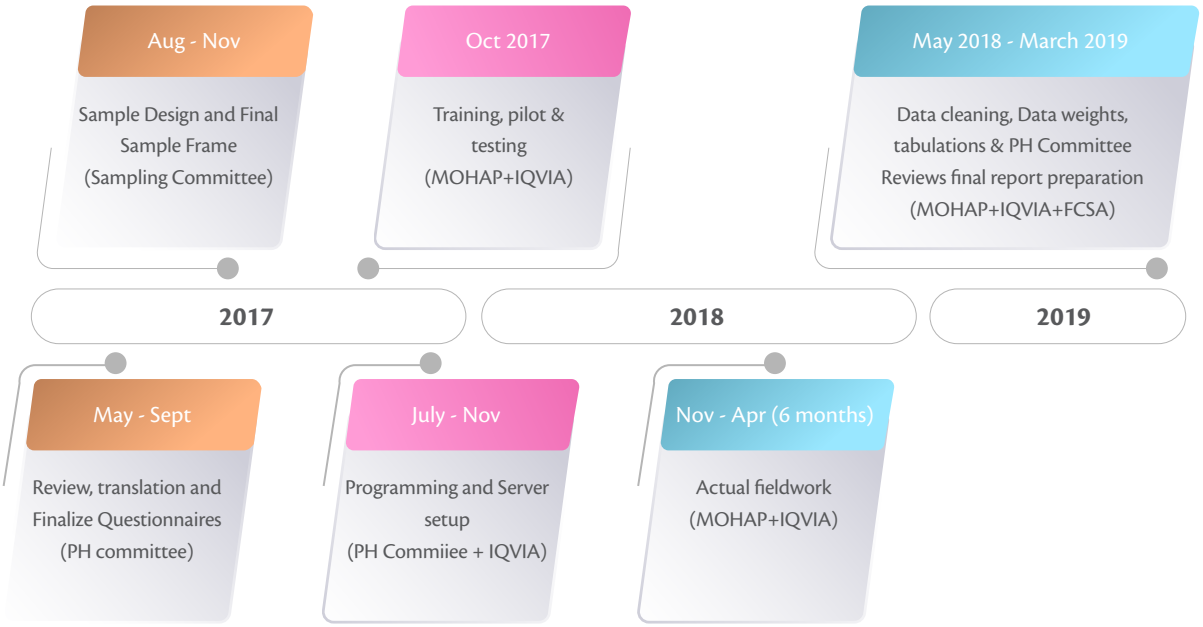
2. **The public health sub committee** – constituted for the review of the questionnaires, its final programming on the tablet computer and also on the data output from the survey. Working in close technical collaboration with the WHO EMRO office team, the sub committee determined the number of questions that can be added or modified within the expanded modules of the questionnaires. Accordingly, the sub committee deliberate on the feasibility of retaining certain questions including on culturally sensitive matters such as contraception, alcohol and substance abuse and including questions on risk factors for non-communicable diseases such as diet, tobacco usage and depression. The questionnaires to be used for the UAE WHS were modified and finalized into three modules, the Household questionnaire, Adult questionnaire which include the STEPS and Ever-married questionnaire.

3. **The marketing sub committee** – constituted for the review and coordination with civic, religious and law enforcement authorities to ensure smooth conduct of field work. Successful involvement of the general public in such large surveys was the key objective of the marketing sub committee to implement a well planned and executed public relationship campaign. The marketing sub committee headed by members of MOHAP used proven public relations (PR) tools and activities to promote positive attitudes and behaviors towards UAE WHS. These were hoped to increase public awareness and increasing the participation of communities. Key activities considered and implemented were:
   a. Consultation and on-boarding of government bodies - at Emirate & Federal level.
   b. Public relations campaign using all channels - print and electronic
   c. Different approaches successfully employed:
      i. SMS campaigns
      ii. Toll free number set-up by MoHAP team in close working with the police to answer any question from general public about the survey
      iii. Banners and hoardings on UAE NHS at prominent public locations
      iv. Announcements in mosques during prayer times
      v. Social media: Using social networking sites such as MOHP Facebook and Twitter
      vi. Radio announcements
      vii. Newspaper advertisements

Project timelines

The project planning started in early 2017 with the discussions between the MOHAP and FCSA on the approach and methodology to the UAE WHS. These discussions also were held with the WHO EMRO team to ensure that the design adopted was consistent with the WHS done elsewhere in the World.

The subsequent activities of planning, survey questionnaire design, translations, validations, sampling design and final sample frame, programming on the CAPI tool and field work are as shown in the illustration below.



Sample Design

The UAE WHS was a nationally representative survey. To ensure that the sample of households and individuals who were interviewed were representative of all the seven Emirates, a detailed sample design was implemented and led by the FCSA.

In order to obtain reliable results for both citizens and non-citizens at the level of each Emirate, The first stage of sampling design was stratification of Each Emirate of the seven emirates into two strata, (except for some Emirates which use a stratification of more than two strata like the Emirate of Abu Dhabi), each strata was according to the nationality of Emirate population, strata 1: Emirati and strata 2: non-Emirati.

The second stage of sampling design was dividing each strata into clusters. The number of clusters per each strata will be depending on population size, geographical distribution of population, density of population per km2.
Each cluster was classified either as Emirati if more than 50% of its households were citizens, or Non-Emirati if more than 50% of its households were non-emirate.

The WHS sampling guidelines recommended a target sample size of 10000 households in UAE wherein the primary sampling units (PSUs) will be the households.

The FCSA provided operational definitions for the household which is (All persons living under one roof or occupying a separate housing unit (dwelling), having either direct access to the outside (or to a public area) or a separate cooking facility, share at meals and living in accommodation more than 6 months in the year preceded the survey. The members of a household shall be related by blood or

law, where they constitute a family. The household and may consist of a single family or some other grouping of people)

A household is classified as either:

a. A one-person household is a person who makes provision for his or her own food or other essentials for living without combining with any other person to form part of a multi-person household; or

b. A multi-person household (private families) is a group of two or more persons living together who share meals ('eat out of the same pot') and usually stay in the household for at least six months (continuous or intermittent) a year. They may be related or unrelated persons or constitute a combination of persons both related and unrelated. combination of persons both related and unrelated.[1]

For the UAE WHS, both one-person household and multi-person (private families) households were included.

The head of the household is a member of the household "15 years and older" whom the family considers to be its head and who is related to some or all of its members and is most often responsible for spending on it and does not have to be the oldest person, with highest income, or male.
Relationship to the head of the family is the social relationship between any member of the family and the head, and this field is fulfilled only for members of private families, whether a citizen or non-citizen.

Who can qualify as head of the household?

- Husband / wife of the head of the family
- Son / daughter of the head of the family
- The son / daughter of the wife of the head of the family
- Father / mother of the head of the family
- The wife/husband of the son/daughter of the head of the family
- Grandson / granddaughter of the head of the family
- Brother / sister of the head of the family
- Grandfather / grandmother of the head of the family
- Father/mother-in-law of the husband/wife of the head of the family
- Another similarity is the case in which there is a relative to the head of the family but not from the cases mentioned earlier

As a background to the sampling exercise for the UAE WHS, the UAE population was divided into the following groups and subgroups:

1. Non-institutional population (people living in regular households):

a. Emirati households
b. Non-Emirati households

2. Institutional population:

a. Emirati and non-Emirati population living in institutions (e.g., army barracks, hospitals, dormitories, prisons)
b. Emirati and non-Emirati population living in collective households – which were defined as temporary residential units of group of individuals not related to one another but sharing the same living space
c. Labor camps – these were the residential settlements meant for the laborers working in the various construction and other infrastructure works across UAE.

The UAE WHS 2017-18 included only the non-institutional population and excluded the institutional population.

1. Report II. Household income and expenditure statistics. International Labour Organization. Seventeenth International Conference of Labour Statisticians. 2003.

The sample design and related descriptions reported in next sections refer only to the sample design for these non-institutional households.

The non-response rate from UAE nationals (Emirati households) for the previous survey conducted in UAE has been relatively small, less than 20%. Since the present round of UAE WHS involved completion of long and complex questionnaires by more than one individual in a household, coupled with many physical and biochemical measurements with specialized instruments, a higher rate of non-response was anticipated from the Emirati households. Hence, the proportion of the Emirati households in the sample frame was doubled to 40% (as against approximately 20% proportion of Emiratis in the general UAE population). The remaining 60% of the sample frame comprised of non-Emirati households.

Sampling Frame

While Abu Dhabi, Dubai and Sharjah had recently held population censuses in their respective Emirates for immediate reference to prepare a sampling frame, the Northern Emirates of Ajman, Umm Al Quwain, Fujairah and Ras Al Khaimah did not have a recent population register to refer to. The Statistical Authorities on Abu Dhabi and Dubai provided the sample frames for their regions whereas the FCSA provided the sample frames for Sharjah and the 4 Northern Emirates.

The task of compiling the sample frames for all the 7 Emirates and providing the target sample frame for the field team was led by FCSA.

Due to different geographic settlements of Emirati and non-Emiratis, a cluster-based approach to sample was adopted. Each cluster identified had a fairly homogenous population type (Emirati or non-Emirati). A total of 1000 clusters were identified from across the 7 Emirates based on the sample frames provided by the respective statistical authorities. After selecting the required clusters from each of the Emirates, based on probability proportionate to population size, all the households within these clusters were enumerated. This was to ensure that all households in a given cluster had an equal chance of being selected in the final sampling frame.

After this enumeration procedure has been completed, the final sample was obtained. Random sampling methods were implemented to obtain the final sample of 15 households from each of cluster. These 15 households were identified with the details of the name of head of household, building name, street name and city in each Emirate. 10 households were determined to be selected for primary sample whereas 5 households were determined to be kept as reserve sample to compensate for low response or refusals.

Table 2.1 Sample size spread across the UAE

Households				
No. of Clusters	**Total**	**Non-Emirati**	**Emirati**	**Emirate**
300	3000	1800	1200	AUH
300	3000	1830	1170	DXB
146	1460	1010	450	SHJ
64	640	440	200	AJM
44	440	220	220	UAQ
86	860	430	430	RAK
60	600	240	360	FUJ
1,000	**10,000**	**5,970**	**4,030**	**TOTAL**

Sample weights:

Prior to the data tabulations and analysis, the data were weighted to account for differential selection probabilities and differential sizes of each of the clusters used in the selection of the final sample of households. These weights are calculated from the sizes of the different PSUs and to account for households that did not respond to the survey.

The sample design was not self-weighting design at the country level as mentioned before, but it is self-weighting at the stratum level prior to conducting the survey. This was Due to changes that could happen after conducting the survey like changes in the number of households covered in each cluster or non-response of some households; so it was important to calculate the final weights after completing the survey and cleaning the data for each cluster.

The basic weight for each household was equals to the reverse of the probability of selection the household in the sample (it calculated by multiply the probability of all stages).

Relative weight was also calculated to find a factor to change the sample from not self-weighting to the self-weighting sample, this factor is called the relative weight and this operation is applied to make use of the relative weight advantage.

Therefore, the relative weight calculated for each observation and the summation of relative weights will be equal to the total number of observations. This method provides high flexibility to the researchers when using the data for analysis purposes and deals with the results in the best way to estimate means, or proportions, or totals of the sample at different levels, like Emarah. The relative weight for each household from a specific cluster is equal to the adjusted weight of the cluster divided by the result of mean weight multiplied by the number of completed questionnaires.

After weighting the counts of respondents in each category, it may not be a round number; If this was the case, the count was rounded to the nearest whole number. Therefore, one will observe that in many tables described in later sections, the total number of respondents may differ from the sum of the respondents in each of the categories.

Survey Process and Questionnaires

The questionnaires used in the UAE WHS were adapted from the international survey instruments provided by the WHO, with separate modules for various components. The modules cover key aspects of the health system outcomes, inputs to the health system and aspects of the way the health systems function.

The different modules cover:

- The health states of the population: measuring health in multiple domains.
- The risk factors and their association with health states: measuring various risk factors such as tobacco, nutrition and physical activity levels.
- The responsiveness of health systems: whether a health system meets the legitimate expectations of the population.
- The coverage, access and use of key health services such as immunization, treatment of childhood illness, safe motherhood interventions, essential treatments, mental health interventions, etc.
- The health care expenditures: how much households contribute to the health system.

There were totally 3 distinct questionnaires used in the survey.

1	The household questionnaire
2	The adult questionnaire comprising of a detailed behavioral component and another smaller questionnaire referred to as STEPS questionnaire that used to assess certain physical and biochemical parameters of health related to the survey objectives.
3	The ever-married questionnaire used to assess health parameters of married women and health status of children under 5.

While the questionnaires retained the core variables by the WHO, certain sections were modified to include UAE specific context such as functioning assessment for elderly aged more than 60 years old.

Face-to-face Interviews

Household Questionnaire:

The aim of the household questionnaire is to collect information that is common to all those who live in the same household. To answer the household questionnaire one person, a key informant, was interviewed from each of the sampled households.
This questionnaire first collected information regarding all the residents in the selected household, including their ages, education, marital status and whether any person had a disability or there were any deaths in the household. Further questions on the household questionnaire related to information about the facilities in the household, expenditure on health and other items, assets owned and the income of the household. The household questionnaire recorded every member of the household in a household roaster. Using a random selection algorithm programmed in the CAPI tool, one adult was randomly selected from the list of eligible men and women in the household roaster to answer the individual questionnaire.

Adult Questionnaire (had both behavioral, physical & biochemical components) :

One person aged over 18 from each of the sampled households was randomly (using a random selection algorithm programmed in the CAPI tool) selected to answer the individual questionnaire. This individual may or may not have to be the same person who answered the household questionnaire.

The individual questionnaire consisted of two main components: the behavioral component and a physical & biochemical component.

The behavioral component of adult interview included the following sections:

1. Sociodemographic characteristics: This section includes questions on the date of birth, education, and marital status.

2. Work history and benefits: Information regarding the working history of the individual was collected, reasons for not working and occupation data was also collected.

3. Risk factors and preventative health behavior: this module contained questions related to risk factors such as consumption of tobacco, alcohol consumption, diet and physical activity including both vigorous and moderate activity.

4. Health state description: self-ratings of health on a number of different domains, such as mobility, self-care, sleep and energy, interpersonal relationships, pain and functional assessments were included here. These will be explained in further sections in tables.

5. Chronic conditions and health services coverage: this section included questions on raised blood pressure, diabetes, hypercholesterolemia, cardiovascular conditions, arthritis, chronic lung diseases, depression, cataract, medications for these conditions, Injuries, oral health and vision. Further subsections were asked in this module, including questions on cervical and breast cancer screening for women aged 18-69 years, a subsection for elderly respondents those aged 60yrs and above.
6. Health care utilization: use of the health system was investigated in this module, including an assessment of the responsiveness of the system. The module covered areas such as the importance of health care, seeing health care providers, outpatient care, care at home and inpatient hospital care.

STEPS Questionnaire and physical & biochemical measurements:

Related components that were captured through another module within the adult questionnaire was referred to as "STEPS Questionnaire". All the measurements within the STEPS questionnaire were collected by trained nurses. STEPS is a sequential process. It started with gathering key information on risk factors with a questionnaire, followed by physical measurements and then to more complex blood tests for biochemical analysis.

After completion of the interviews, the respondents were requested to respond to all the measurements within the STEPS survey followed by introducing the nurses. The nurses after explaining the process of the various measurements proceeded to perform the height, weight and hip circumference measurement as per the standardized protocol. After this, the pulse rate of the respondents was evaluated followed by measurement of blood pressure. After these physical measurements, blood samples were collected for the biochemical measurements which included hemoglobin, fasting blood glucose & glycosylated hemoglobin (only for diabetics) and lipid profile assay.

Ever Married Questionnaire:

Depending upon the number of women who were ever-married in the household, one ever married woman was selected randomly through the CAPI program.

The key parameters of enquiry for this segment of respondents included socio-demographic variables such as education and work history of women, questions on their reproductive health including total pregnancies, healthcare provided during pregnancy, total live births, type of delivery, place of delivery, healthcare provided after pregnancy, important neonate and infant care practices including full details of immunizations and anthropometric measures for all children below 5 years and contraceptive usage.

Programming the questionnaires on CAPI

All these questionnaires were administered by face-to-face interviews, using Computer Assisted Personal Interview (CAPI) techniques. The CAPI tool is a digital version of the questionnaires, wherein all the questionnaires were programmed onto an android based application.

All the questionnaires were initially translated into Arabic by a certified translator and adapted to suit the culture in UAE. The questionnaires were then tested for cultural applicability and sensitivity through word and pilot testing of the questionnaires before programming onto the CAPI tool.

After all the questionnaires were finalized, they were programmed on the CAPI tool. The application was thoroughly tested, validated and piloted before introducing into the main survey. The application was installed onto mobile tablet computers to be used by the field interviewers and was capable of collecting data even when the tablets were not connected to the internet. Data from all the interviews conducted during the daytime were later pushed to an electronic database at the end of each day, when the tablets were connected to the internet.

Recruitment of the Survey Teams

The survey team for the UAE WHS were selected and recruited at 3 main levels:

Team level comprising of 2 interviewers and 1 nurse – a total of 20 teams in the field

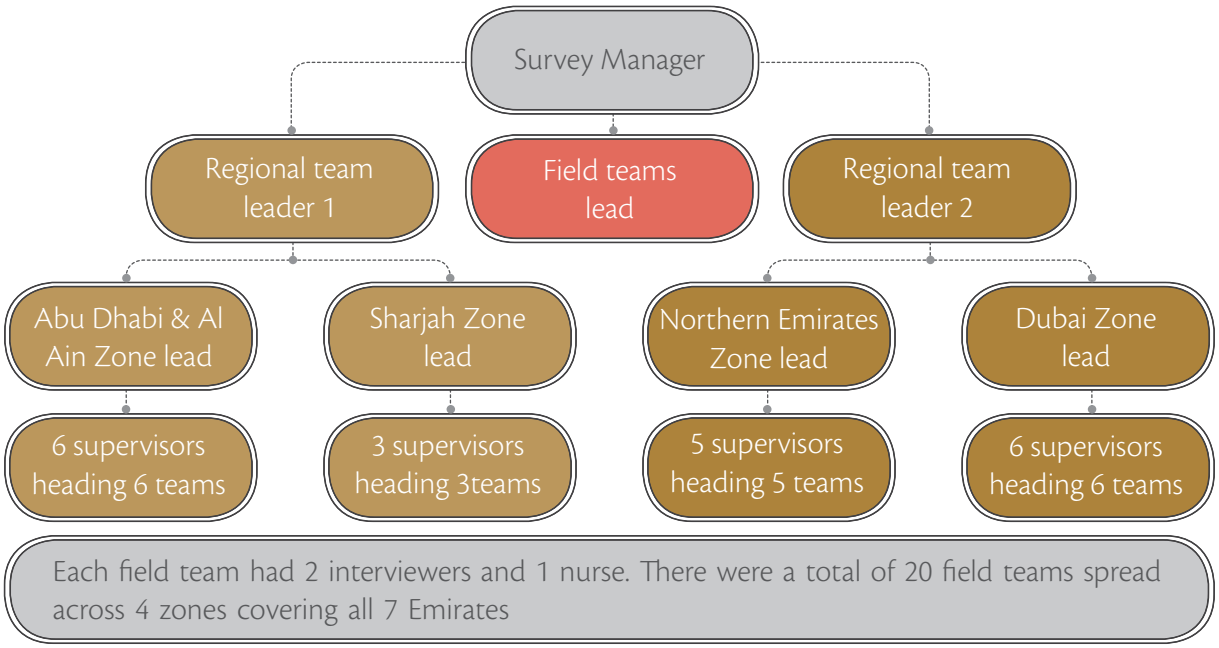
1	2 Interviewers – both male and females of mixed ethnic and culture background and with prior experience in household surveys
2	1 Nurse – all females and trained in point-of-care testing to accompany the interviewers for the collecting data on physical and biochemical parameters (STEPS questionnaire)
3	1 Field supervisor was assigned for every team to help in ground level planning and preparation before the teams can go into the households

There were Zonal level comprising of 4 zones of Abu-Dhabi & Al Ain, Dubai, Sharjah and all Northern Emirates. Each zone was managed by one zonal lead who oversaw the work of 3 to 6 supervisors depending upon the zone. There were 4 Zonal leads to oversee the work of a team of 10 supervisors

There were 2 regional team leads or field executives, who managed 2 zonal leads and supervised the work of all the teams under those zonal leads. The figure in the following page illustrates the team structure adopted for the survey.

To comply with the regulations of the law enforcement agencies in UAE, all survey team members had to mandatorily receive a police clearance and security clearance before he/she was allotted an identity card from the MOHAP and the FCSA.

Anyone not having such an authorized identity card issued both by the MOHAP and the FCSA was not allowed to participate in the field work.



Training

A series of training events was conducted to ensure:

1. Highest possible standards and quality of data being collected.
2. Field teams are qualified by training, experience and education.

First, an orientation session lasting 2 days was conducted by IQVIA team to train the supervisors and field executives in preparation for conducting the training of the field interviewers and nurses. This was held in August 2017. Following this, there was a workshop organized by the Statistics and Research Center with inputs by the WHO experts from the EMRO office and was carried out in Dubai from 5th to 7th September for the survey teams. This discussed the objectives, research methodology and data collection tools used in the survey.

IQVIA and MOHAP team organized 2 main training sessions before start of the main survey field work and monthly refresher trainings.

The first training program was conducted prior to the pilot survey between 25th and 27th September for 3 days.

The pilot survey was held immediately after the first training program in 1st week of October.
Based on the feedback received from the pilot study, the questionnaire and the CAPI tool was modified.

The training for the main survey fieldwork was scheduled in two batches. This was done to accommodate the large field team and also to ensure adequate ratio between trainer and trainees.
Training for batch 1 was held between 22nd and 26th October 2017 (5 days). This also included a separate 3 days training schedule for the nurses.

Training for batch 2 was held between 30th October and 2nd November 2017 (4 days).

These daily sessions involved 6 hours of training at the workshop, and an additional 2 hours home assignment each evening. After the opening session, interviewers were divided into groups including a separate group for the nurses, three of which consisted of Arabic-speaking interviewers. A detailed discussion for each of the 3 questionnaires was performed. Every question was explained for its purpose, and appropriate modes of administration

TRAINING FOR STEPS SURVEY

The nurses' training was focused mainly on discussing about the objectives of the survey and how to convey the need for collecting the physical, physiological and biochemical data in the survey to the public.

Their training therefore, specifically focused on the procedures for collecting the body weight, height, hip and waist circumference, heart rate, blood pressure using standardized measuring devices.

Upon successful collection of the above physical and physiological data, the nurses supposedly conducted blood tests for assessing the hemoglobin, glycosylated hemoglobin, fasting blood glucose, and fasting cholesterol assay, again using WHO approved portable devices that used finger prick blood / capillary blood to conduct these tests to provide results on-the-spot. The results of all the physical, physiological and biochemical measurements were entered into standard feedback forms that were shared back with the respondents after entering the same data onto the data collection templates of the survey.

The following table lists all the devices and instruments used to collect the physical, physiological and biochemical measurements:

Type of measurement	Device / Instrument Details
Body weight	Omron weighing scale
Body height	Stadiometer
Blood pressure & heart rate	Omron automated sphygmomanometer
Waist and hip circumference	Standard measuring tapes
Hemoglobin	HemoCue Hb201 analyzer and microcuvettes
Glycated hemoglobin (HbA1C)	BioHermes GluCoA1C Analysis System
Fasting glucose and cholesterol levels	PTS diagnostics with separate e-glucose strips and lipid panel strips

*HBA1C was done either on individuals previously diagnosed with diabetes (by oral confirmation of participant) or were currently on active diabetes treatment
All the devices and instruments used were in accordance to the WHO quality requirements for devices to be used in World Health Surveys. Prior to the using them, these devices were calibrated and standardized after repeated measurements.

In addition to the standard devices and instruments, all the consumables such as gloves, finger pricking lancets were disposable and designed for single use. Finger prick was performed after cleaning with single use alcohol prep pads.

All the waste generated in the field was collected in the separate color-coded bags. Moreover, economical puncture proof containers were used for sharp wastes, as per the standard protocol of segregating biomedical wastes that were ultimately disposed safely.

Pilot Survey

A short pilot survey was undertaken in the selected households in Dubai and Abu-Dhabi during 1st week of October 2017 as an initial preparatory assessment of the survey tools and the survey teams. The findings from the pilot survey was helpful to incorporate important changes to the survey questionnaires before initiating the main survey on 12th November 2018

Quality assurance during the fieldwork

Data quality measures were put in place at all levels during the survey – starting from:

Questionnaire and CAPI Program level:

a. Questionnaires were programmed on the CAPI tool in a manner that significantly minimized the chances of erroneous data entry
b. Thorough testing of the CAPI tool was executed to ensure only valid and correct entries were recorded on the data collection tool, before proceeding with the field work
c. Quality assurance in CAPI design:

i. Arabic translation and validation by a certified Arabic translating agency.
ii. Scripting and programming including randomization algorithm and branching.
iii. Define logic, range, skip and consistency checks.
iv. Most responses were close-ended and pre-coded.
v. Minimum free text entries.
vi. Modular construction and navigation rules between sections.

vii. User interface for data collection team.
viii. Full functionality testing and user acceptance testing.
ix. Pilot testing and further refinement of the CAPI.

d. Final release for main survey and ongoing vigil for any bugs or functional issues.

Team level:

e. The team was structured in a manner that could permit maximum field supervision from individual teams, to the 4 zones and 2 regions

i. Supervisor must ensure team members are working in the allocated clusters efficiently during the specified time for fieldwork
ii. Supervisor must ensure that the right respondents were interviewed
iii. Supervisor must do a random spot check of completed households
iv. Supervisor to conduct at least 1 accompanied interview per day with his team interviewers a day
v. Zonal Team Leader must visit an average of 1 team per day
vi. Field Team Leader must visit a different team each day, without giving prior notice of which team will be visited on a day
vii. Field Team Leader must ensure that supervisors are following all QC measures

Database level:

f. The data entered on the tablet devices were synced at the end of each day by all interviewers to an electronic database that was maintained on a secure server which is located inside UAE.

g. Data fed to the database too had certain preconditions and the data had several back-ups to ensure zero data loss and complete data confidentiality

i. Server is accepting data only by means of the electronic mechanism, i.e. through devices only
ii. Consumption of data through secured channels only.
iii. Data at the server end is accessed only by the Authentic Users based on the access rights.
iv. Data check points/logic at multiple layers at application server layer as well as data base layer.
v. Data is maintained in a structured manner on the server.
vi. Full audit-ready systems:
    - Server logs are maintained for possible system failures
    - Server resources (CPU, Memory, Storage , network Etc.) are under observation and optimized regularly.
    - Server capacity is designed to support concurrent users.
    - Database level logs are maintained so to ensure who updated what
    - Regular back-up of the data on the server to prevent any data-loss
    - Daily data backup and delete the oldest file after 7 days

In addition, the data collected on the electronic database was checked for completeness and correctness on a regular basis. Call-backs with respondents for missing entries or incomplete data was supported by the MOHAP team members, which helped to further ensure data collected was complete to the highest possible extent.

Data Processing after completion of the field work

After completion of field work on 30th April and verifying that no data was pending on tablets to be uploaded to electronic database, the database was locked from receiving any fresh data on 5th May 2018. The final data files was then retrieved for a detailed check and cleaning before the sampling weights were applied to discount for any non-response or low response. Summary tables from the survey data are presented in the subsequent sections.

HOUSEHOLD CHARACTERISTICS

In this section, the main findings of the interviews with the households are presented. In total we had reached 10,000 households using the sample frame provided by the FCSA across the 7 Emirates. Of these, we managed to secure the participation of 9,171 households who were successfully interviewed, yielding a response rate of 91.7%.

The survey represents data collected from the head of households.

In the interviewed households, there were a total of 14208 males and 14680 females. From each household, a household roaster was prepared by the field team comprising of all members in the household. Using a software program embedded within the electronic data collection, one adult member aged 18 years and above and one ever-married woman aged 15-49 years were randomly selected for participation in the survey. Similarly, one elderly resident (aged equal to or more than 60 years) of the household too was selected randomly whenever there were more than 1 elderly members as usual residents of the household.Table 1 shows by respondent background characteristics - both the weighted and unweighted numbers and the weighted percent distributions of the household residents. About 80% of usual residents were aged below 49 years with males and females being equally represented across the various age-groups.

Although the unweighted numerical and percentage distribution of Emirati and Non-Emirati population does not represent the national distribution, the same was corrected after applying the relative weights. Hence the weighted numbers and distribution represents the national distribution between Emirati and non-Emirati population

The representation of the various Emirates in the household population follows that of the national distribution. Abu-Dhabi, Dubai and Sharjah comprise of the majority of the survey respondents (more than 85%) while the remaining Northern Emirates represent the remaining household population.

Literacy rate:

The overall weighted literacy rate in the survey population was more than 99.5% in both males and females having received formal education above primary grade with more than 50% of the household members having bachelor's degree or higher.

Health insurance coverage:

More than 88% of the household members had health insurance.

1.1. Demographics of household population

Table 1. Distribution of household survey respondents

Variable	Male		Female		Male		Female	
	UW N	UW %	UW N	UW %	W N	W %	W N	W %
Age Group								
Less than one year	282	1.7%	285	1.7%	237	1.7%	246	1.7%
1 - 4	1478	9.2%	1336	8.0%	1349	9.5%	1196	8.1%
5 - 9	1932	12.0%	1823	10.9%	1627	11.5%	1499	10.2%

10 - 14	1667	10.3%	1487	8.9%	1314	9.2%	1233	8.4%
15 - 19	1229	7.6%	1140	6.8%	944	6.6%	859	5.9%
20 - 24	907	5.6%	1075	6.4%	611	4.3%	779	5.3%
25 - 29	1048	6.5%	1694	10.1%	780	5.5%	1554	10.6%
30 - 34	1479	9.2%	1984	11.9%	1409	9.9%	1974	13.4%
35 - 39	1514	9.4%	1684	10.1%	1540	10.8%	1745	11.9%
40 - 44	1244	7.7%	1302	7.8%	1320	9.3%	1293	8.8%
45 - 49	1057	6.5%	1074	6.4%	1082	7.6%	1024	7.0%
50 - 54	783	4.9%	623	3.7%	790	5.6%	512	3.5%
55 - 59	589	3.6%	448	2.7%	562	4.0%	331	2.3%
60 - 64	402	2.5%	296	1.8%	317	2.2%	176	1.2%
65 - 69	246	1.5%	223	1.3%	170	1.2%	129	0.9%
70 - 74	136	0.8%	128	0.8%	90	0.6%	73	0.5%
75 - 79	85	0.5%	65	0.4%	38	0.3%	34	0.2%
80 - 84	38	0.2%	34	0.2%	19	0.1%	13	0.1%
85+	24	0.1%	25	0.1%	9	0.1%	10	0.1%
Marital Status								
Never married	3014	27.8%	2843	24.0%	2209	22.6%	2012	19.0%
Currently married	7641	70.5%	8203	69.2%	7456	76.3%	8179	77.1%
Divorced /separated	121	1.1%	315	2.7%	72	0.7%	181	1.7%
Widowed	59	0.5%	492	4.1%	25	0.3%	232	2.2%
Do not know	8	0.1%	5	0.0%	6	0.1%	1	0.0%
Emirate of residence								
Abu Dhabi	4994	30.9%	5228	31.3%	4956	34.9%	4999	34.0%
Dubai	4140	25.7%	4407	26.3%	5039	35.5%	5472	37.3%
Sharjah	2046	12.7%	2039	12.2%	2361	16.6%	2319	15.8%
Ajman	1294	8.0%	1310	7.8%	749	5.3%	797	5.4%
Umm al-Quwain	980	6.1%	956	5.7%	160	1.1%	161	1.1%
Ras Al Khaimah	1542	9.6%	1564	9.4%	587	4.1%	578	3.9%
Fujairah	1144	7.1%	1222	7.3%	355	2.5%	358	2.4%
Nationality								
Emirati	7043	43.6%	7585	45.3%	2074	14.6%	2279	15.5%
Non-Emirati	9097	56.4%	9141	54.7%	12135	85.4%	12405	84.5%

Education Level								
Never educated	50	0.4%	48	0.3%	51	0.4%	51	0.4%
Pre-Primary	434	3.1%	423	3.0%	343	2.8%	324	2.5%
Primary	608	4.4%	541	3.8%	593	4.8%	479	3.7%
Lower secondary	2372	17.0%	2248	15.8%	1842	14.8%	1755	13.7%
Upper secondary	1721	12.3%	1634	11.5%	1276	10.3%	1234	9.6%
Post-secondary non-tertiary	2513	18.0%	2460	17.2%	1518	12.2%	1621	12.6%
Short-cycle tertiary	465	3.3%	556	3.9%	448	3.6%	549	4.3%
Bachelor's or equivalent	634	4.5%	693	4.9%	597	4.8%	658	5.1%
Master's or equivalent	4192	30.1%	4715	33.1%	4503	36.3%	4889	38.1%
Doctoral or equivalent	815	5.8%	816	5.7%	1088	8.8%	1117	8.7%
Not elsewhere classified	124	0.9%	103	0.7%	136	1.1%	121	0.9%
Refused	17	0.1%	26	0.2%	23	0.2%	22	0.2%
Don't Know			1	0.0%			0	0.0%
Health Insurance Coverage	14396	89.2%	14718	88.0%	12612	88.8%	12833	87.4%
Household population structure								
Total 15-49 years	8478	78.6%	9953	84.4%	7686	79.4%	9229	87.8%
Total 50-59 years	1372	12.7%	1071	9.1%	1352	14.0%	843	8.0%
Total 60 years and above	931	8.6%	771	6.5%	643	6.6%	436	4.1%

UW = Unweighted; W = Weighted numbers and percentage

Age-Gender Pyramid of all respondents in surveyed households in UAE

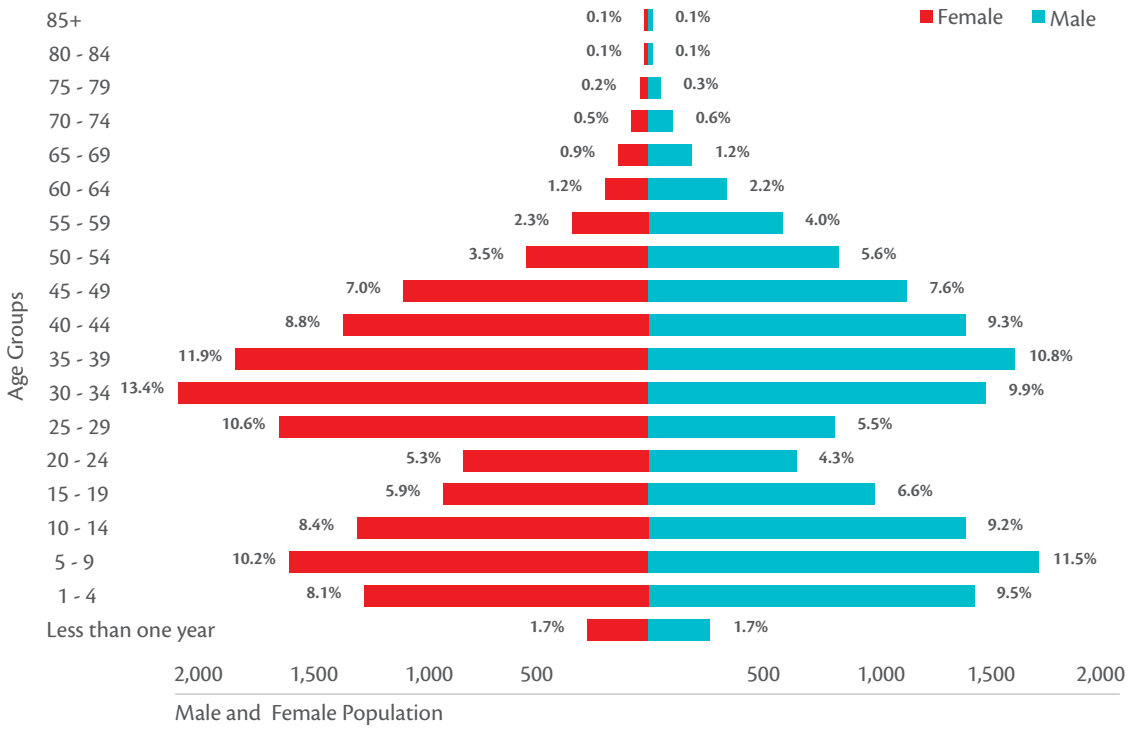


Figure 1: Age-gender pyramid of all respondents

Age-Gender Pyramid of all Emirati respondents

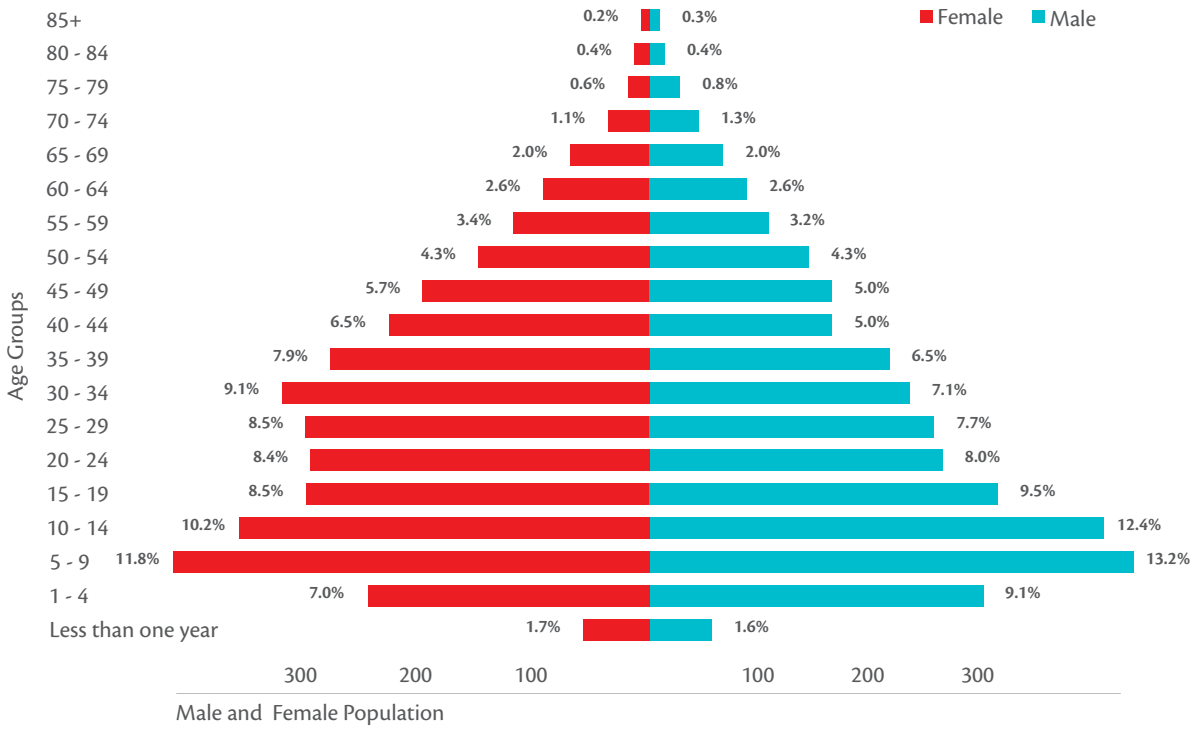


Figure 2: Age-gender pyramid of all Emirati respondents

Age-Gender Pyramid of all non-Emirati respondents

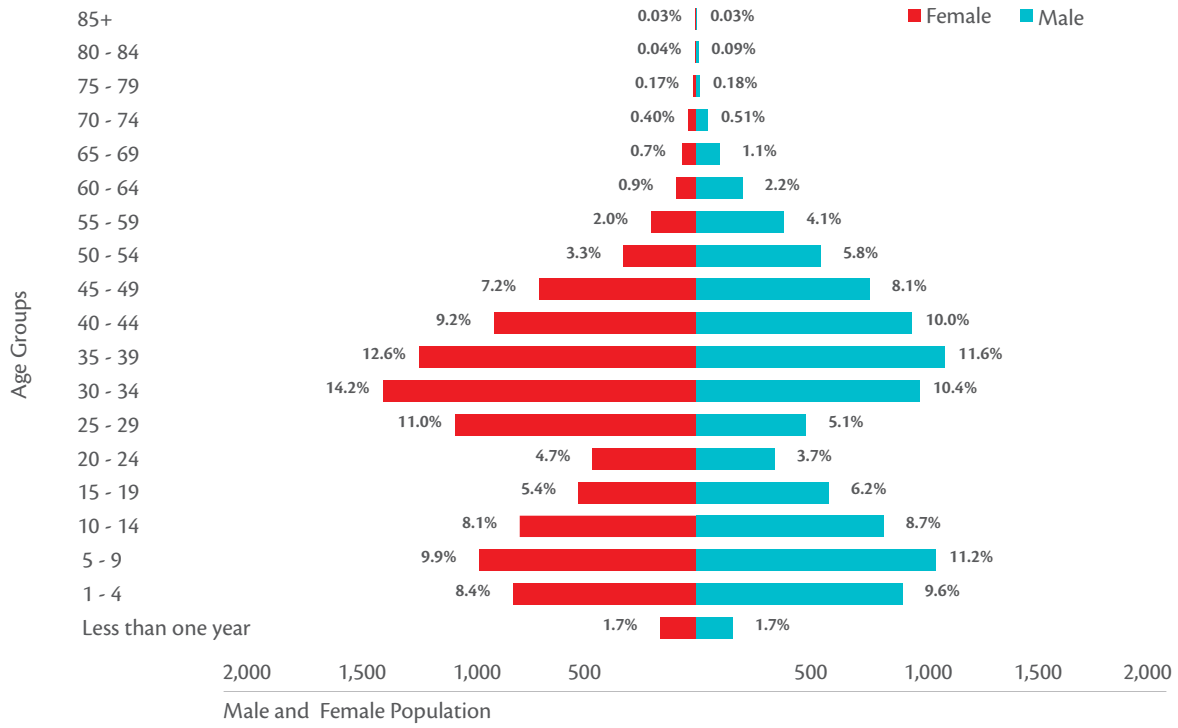


Figure 3: Age-gender pyramid of all non-Emirati respondents

A population pyramid, also called an "age-gender pyramid", is a graphical illustration that shows the distribution of various age groups in a population (typically that of a country or region of the world). In the above illustrations, we have tried to illustrate the total population covered in the survey. Males are shown on the right and females on the left and length of the bars in each age-group shows the relative size of the population. The percentage shown against each bar is the relative size of that particular age-group and gender.

When reviewing the structure of the age-gender pyramids among the Emirati and non-Emirati population, it was noted that size of the population gets smaller in age-group above 50 years in the non-Emiratis whereas the Emirati population is characterized by a large base denoting large share of the young population and narrower tip, denoting a decrease in the number of elderly populations. These characteristics are also a reflection of the overall demographic structure of UAE.

1.2. Healthcare insurance coverage and care seeking behavior

Table 2: Distribution of the members within the household according to health insurance coverage stratified as per Nationality

	TOTAL	Emirati	Non-Emirati
(Denominator: Total members in the households who had health insurance coverage)	28,729	4,340	24,389
	100.0%	100.0%	100.0%
No health insurance coverage	3,381	.	3,381
	11.8%	.	13.9%
Government funded health insurance	7,274	3,782	3,493
	25.3%	87.1%	14.3%

Private health insurance	17,238	451	16,787
	60.0%	10.4%	68.8%
Other forms of health insurance	835	107	728
	2.9%	2.5%	3.0%

Table 3: Distribution of the members within the household according to health insurance coverage stratified as per gender

	TOTAL	Male	Female
(Denominator: Total members in the households who had health insurance coverage)	28,729	14,128	14,600
	100.0%	100.0%	100.0%
No health insurance coverage	3,381	1,568	1,814
	11.8%	11.1%	12.4%
Government funded health insurance	7,274	3,595	3,679
	25.3%	25.4%	25.2%
Private health insurance	17,238	8,534	8,703
	60.0%	60.4%	59.6%
Other forms of health insurance	835	432	404
	2.9%	3.1%	2.8%

More than 88% of population surveyed were covered by a form of insurance. Government funded insurance was the most common form of insurance among Emirati population, many of whom also had an additional private health insurance. More than 65% of non-Emiratis were covered by private health insurance whereas about 14% of non-Emirati population did not have any health insurance cover.

Table 4: Distribution of frequency of seeing a healthcare provider in the last 30 days for outpatient care stratified as per nationality

	TOTAL	Emirati	Non-Emirati
(Denominator: Total members in the households)	28,291	4,308	23,983
	100.0%	15.2%	84.8%
Never	22,581	3,228	19,353
	79.8%	74.9%	80.7%
1-5 times	5,633	1,053	4,580
	19.9%	24.5%	19.1%
More than 5 times	77	27	50
	0.3%	0.6%	0.2%

Table 5: Distribution of frequency of seeing a healthcare provider in the last 30 days for outpatient care stratified as per gender

	TOTAL	Male	Female
(Denominator: Total members in the households)	28,268	13,929	14,339
	100.0%	100.0%	100.0%
Never	22,581	11,317	11,263
	79.9%	81.3%	78.5%
1-5 times	5,633	2,588	3,045
	19.9%	18.6%	21.2%
More than 5 times	54	23	31
	0.2%	0.2%	0.2%

Table 6: Average number of per capita visits to OPD in last 30 days

	TOTAL	Male	Female
Total members of household who answered YES to outpatient visits in past 30 days	5687	2611	3076
Average number of Per capita visits	1.48	1.43	1.53

As can be seen in the above tables, less than 20% of people surveyed had visited a healthcare provider for outpatient consultation for less than 5 times in the 30 days preceding the survey. Females has more OPD health consultations (21.2%) than males (18.6%). The average per capita OPD visit in both the genders was 1.48

Table 7: Distribution of any member of household admitted in a hospital for at least one night during the last 12 months stratified as per nationality

	TOTAL	Emirati	Non-Emirati
(Denominator: Total members in the households)	28,041	4,266	23,775
	100.0%	100.0%	100.0%
Zero Hospital admissions	24,361	3,587	20,774
	86.9%	84.1%	87.4%
Up to 2 admissions	2,096	399	1,697
	7.5%	9.4%	7.1%
Between 3 and 5 admissions	1,117	184	933
	4.0%	4.3%	3.9%
More than 5 admissions	467	96	371
	1.7%	2.2%	1.6%

Table 8: Distribution of any member of household admitted in a hospital for at least one night during the last 12 months stratified as per gender

	TOTAL	Male	Female
(Denominator: Total members in the surveyed households)	28,026	13,777	14,249
	100.0%	100.0%	100.0%
00 Hospital admissions	24,361	12,069	12,291
	86.9%	87.6%	86.3%
Up to 2 admissions	2,096	950	1,146
	7.5%	6.9%	8.0%
Between 3 and 5 admissions	1,117	571	546
	4.0%	4.1%	3.8%
More than 5 admissions	452	186	266
	1.6%	1.3%	1.9%

Table 9: Average per capita admissions and overnight stay in the last 12 months

	TOTAL	Male	Female
Total members of household who answered YES to hospital admissions in past 12 months	3665	1707	1958
Average number of Per capita admissions	3.23	3.37	3.11

As can be seen from the tables above, less than 14% of the survey population had hospital admissions with an overnight stay during the last 12 months. Among survey respondents who were hospitalized, majority had up to 2 admissions. More number of females (8%) were hospitalized than the males (6.9%). The average per capita hospitalization was less than 4.

1.3. Safe drinking water and improved sanitation

Table 10: Distribution of household according to the source of drinking water

	TOTAL	Emirati	Non-Emirati
(Denominator: Total Households answering)	9171	997	8174
	100.0%	100.0%	100.0%
Improved Source of Drinking Water	9168	995	8173
	100.0%	99.8%	100.0%
Unimproved Source of Drinking Water	3	2	1
	0.0%	0.2%	0.0%

As per the United Nations Organization, safe drinking water for the sustained development goals (SDGs) is defined as drinking water that is located on premises, available when needed and free from contamination. Accordingly, we have considered the following categories:
Safe drinking water - piped water into dwelling, piped to yard/plot, bottled water; public tap/standpipe; tube well/borehole; protected well; protected spring; tanker-truck; cart small tank; Unsafe drinking water - unprotected spring; surface water (river, dam, lake, pond)

Table 11: Distribution of households according to the type of toilet facility used by the members

	TOTAL	Emirati	Non-Emirati
(Denominator: Total Households answering)	9171	997	8174
	100.0%	100.0%	100.0%
Improved form of sanitation	9146	992	8154
	99.7%	99.5%	99.7%
Unimproved form of sanitation	25	5	21
	0.3%	0.5%	0.3%

Improved sanitation included following: Piped sewer systems, septic tank, pit latrine, ventilated improved pit latrine, pit latrine with slab and don't know where
Unimproved sanitation included the following: No. of facilities / bush field, pit latrine without slab, to somewhere else

1.4. Household Income Characteristics

Table 12: Average monthly income of the households

	TOTAL	Emirati	Non-Emirati
(Total respondents answering the household income question)	8181	795	7386
	100.0%	100.0%	100.0%
Less than or equal to 5000 AED	1010	25	985
	12.3%	3.2%	13.3%
5001-10,000 AED	2139	87	2052
	26.1%	10.9%	27.8%
10,001 - 15,000 AED	1598	109	1489
	19.5%	13.7%	20.2%
15,001 - 20,000 AED	1158	153	1005
	14.2%	19.3%	13.6%
20,001 AED - and more	2276	421	1855
	27.8%	52.9%	25.1%

More than 85% of households surveyed had monthly income above AED5000 with almost 30% households having income above AED20000. More than 50% of Emirati households surveyed had monthly income above AED20000

Table 13: Distribution of households below the international poverty line (below AED210 per capita per month)

	TOTAL	Emirati	Non-Emirati
(Denominator: Total Answering)	8181	795	7386
	100.0%	100.0%	100.0%
Below international Poverty line	12	0	12
	0.1%	0.0%	0.2%
Above international Poverty line	8169	795	7374
	99.9%	100.0%	99.8%

The poverty line was defined as per the World Bank definition. Accordingly, more than 99% of non-Emirati and all Emirati households had income above the defined poverty line. Although this definition may not be the best indicator of poverty in UAE, wherein people who participated in the survey were able to afford rentals, which is a significant portion of a household's income and have incomes higher than AED210 per capita per month, in the absence of any other global indicator, we are using the international poverty line. The international poverty line definition needs scrutiny as well, in order to adjust for the inflation and current costs of living.

1.5. Household expenditure characteristics

Table 14: Number of households spending (either in cash or kind) on out-patient health care in the last 30 days

	TOTAL	Emirati	Non-Emirati
Total households	9,171	997	8,174
	100.0%	10.9%	89.1%
Yes	504	95	409
	5.5%	9.6%	5.0%
No	8,667	901	7,765
	94.5%	90.4%	95.0%

Table 15: Number of households spending (either in cash or kind) on in-patient healthcare in the last 1 year

	TOTAL	Emirati	Non-Emirati
Total households	9,168	997	8,171
	100.0%	10.9%	89.1%
Yes	266	51	215
	2.9%	5.1%	2.6%
No	8,902	946	7,956
	97.1%	94.9%	97.4%

Out of the 9171 households, only 5.5% of households said that they had spent in cash or kind on all healthcare services that did not require any overnight stay in the 30 days preceding the survey and only 2.9% of households said that they had spent in cash or kind on all healthcare services that required any overnight stay in the 12 months preceding the survey. In order to compute the out of pocket expenses, all expenditures were first added and any reimbursement from health insurance was adjusted. The resulting amount was then equated into monthly expenditure to comparison.
After these adjustments, we had 211 households who had incurred expenditures for health (both in-patient and out-patient combined). The tables below provide additional characteristics of these households including their nationality, income and educational details.

Table 16: Total out of pocket expenditure on health against the total income of the households

	TOTAL	Emirati					Non-Emirati				
		Less than or equal to 5000 AED	5001 - 10000 AED	10001 - 15000 AED	15001 - 20000 AED	20001 AED - and more	Less than or equal to 5000 AED	5001 - 10000 AED	10001 - 15000 AED	15001 - 20000 AED	20001 AED - and more
(Denominator: Total House-holds incurring out of pocket expenses per month)	211	2	4	6	4	23	26	43	32	26	44
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Less Than 10%	153	.	2	5	3	20	9	27	27	24	37
	72.2%	.	35.2%	79.9%	59.5%	87.7%	34.7%	61.2%	83.2%	90.1%	85.2%
10% to 25%	29	0	1	1	1	2	4	11	3	1	5
	13.9%	24.6%	16.4%	12.9%	24.4%	7.1%	17.1%	24.7%	9.1%	5.6%	11.7%
More Than 25%	29	1	2	0	1	1	12	6	2	1	1
	13.9%	75.4%	48.4%	7.3%	16.1%	5.1%	48.2%	14.1%	7.7%	4.3%	3.1%

Table 17: Total out of pocket expenditure on health distributed against nationality and gender of head of households

	Total	Emirati		Non-Emirati	
		Male	Female	Male	Female
(Denominator: Total Households incurring out of pocket expenses per month)	211	20	20	122	49
	100.0%	100.0%	100.0%	100.0%	100.0%
Less Than 10%	153	14	15	83	40
	72.2%	69.9%	77.7%	68.3%	80.9%
10% to 25%	29	3	2	20	5
	13.9%	14.9%	8.4%	16.3%	9.5%
More Than 25%	29	3	3	19	5
	13.9%	15.2%	13.9%	15.4%	9.6%

It is to be noted that of all the households incurring out-of-pocket expenditure, 14% of households expended more than 25% of their monthly income. Majority of such households incurring more than 25% of their household income were the non-Emiratis and belonged to the low-income category.

Table 18: Total out of pocket expenditure on health distributed against the educational status of head of households

	Total Households	Total of out of pocket expenditure		
		Less Than 10%	10% to 25%	More Than 25%
(Denominator: Total Households incurring out of pocket expenses per month)	205*	149	29	27
	100%	100%	100%	100%
Never educated	0	0	0	0
	0%	0%	0%	0%
Pre-Primary & Primary Education	4	4	.	.
	2%	2%	.	.
Secondary Education	23	18	1	4
	11%	12%	3%	15%
Tertiary Education	33	24	6	3
	16%	16%	21%	11%
Bachelor's education	13	7	4	2
	6%	5%	14%	7%
Higher education (including master's & doctoral)	132	96	18	18
	64%	65%	62%	67%

*educational details were not available for 6 households

We see the out-of-pocket happening in the higher income category. It is noteworthy that many healthcare transactions require co-payment even if an individual is covered by health insurance. Often these co-payments vary significantly depending upon the type of insurance and are non-reimbursable. It was not possible to delineate such expenses within the scope of the survey and it is therefore necessary to examine the nature of these out-of-pocket expenses through another survey or source to inform any decision making.

2. ADULTS RESPONDENTS CHARACTERISTICS

2.1. General Socio-Demographic Characteristics of Adult Respondents

A total of. 8188 individuals (weighted numbers) responded to the adult questionnaire. The following tables and sections describe the key characteristics of these respondents

Table 19: Summary of the socio-demographic characters of respondents to the adult questionnaire

Variable	Male		Female		Male		Female	
	UNW N	UNW %	UNW N	UNW %	Wt N	Wt %	Wt N	Wt %
Age Group								
18 To 27 Years	521	13.2%	683	16.0%	638	15.4%	835	20.6%
28 To 36 Years	1126	28.5%	1481	34.7%	1236	29.8%	1479	36.6%
37 To 46 Years	1150	29.1%	1185	27.8%	1186	28.6%	1059	26.2%
47 To 60 Years	832	21.1%	658	15.4%	855	20.6%	529	13.1%
60 and Above	315	8.0%	259	6.1%	228	5.5%	143	3.5%
Nationality								
Emirati	1188	30.1%	1481	34.7%	566	13.7%	563	13.9%
Non-Emirati	2760	69.9%	2785	65.3%	3577	86.3%	3482	86.1%
Marital Status								
Never married	674	17.1%	443	10.4%	762	18.4%	399	9.9%
Currently married	3171	80.3%	3418	80.1%	3320	80.1%	3418	84.5%
Separated	27	0.7%	71	1.7%	23	0.6%	42	1.0%
Divorced	36	0.9%	96	2.3%	22	0.5%	63	1.6%
Widowed	40	1.0%	238	5.6%	16	0.4%	123	3.0%
Education Level								
Never educated	115	2.9%	217	5.1%	75	1.8%	91	2.3%
Pre-Primary Education	19	0.5%	33	0.8%	13	0.3%	18	0.4%
Primary Education	184	4.7%	191	4.5%	147	3.5%	129	3.2%
Lower secondary education	255	6.5%	271	6.4%	219	5.3%	187	4.6%
Upper secondary education	732	18.5%	721	16.9%	598	14.4%	506	12.5%

Post-secondary non-tertiary education	201	5.1%	215	5.0%	214	5.2%	207	5.1%
Short-cycle tertiary education	208	5.3%	205	4.8%	184	4.4%	172	4.2%
Bachelor's or equivalent level	1800	45.6%	2002	46.9%	2121	51.2%	2214	54.7%
Master's or equivalent level	382	9.7%	366	8.6%	511	12.3%	475	11.7%
Doctoral or equivalent level	45	1.1%	44	1.0%	50	1.2%	45	1.1%
Not elsewhere classified	7	0.2%	1	0.0%	11	0.3%	0	0.0%
Respondents who are currently working	3339	84.6%	1632	38.3%	3673	88.7%	1774	43.8%

UNW N = Unweighted numbers; UNW % = Unweighted percentage; Wt N = Weighted numbers; Wt % = Weighted percentage

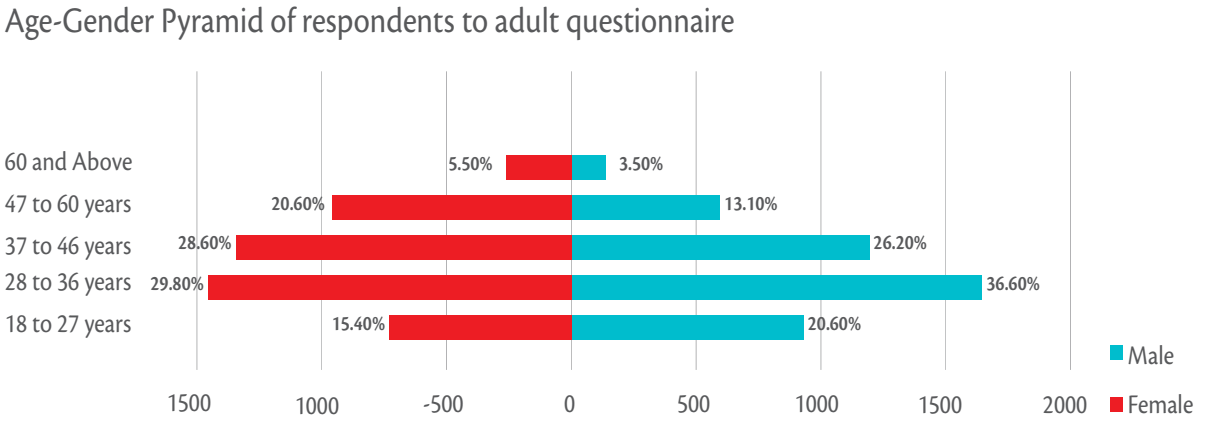


Fig: Age-gender distribution of respondents answering adult questionnaire

As can be seen from the summary table earlier and the age-gender pyramid above, there was an equal distribution of respondents who responded to the adult questionnaires across all age groups. There was also an equal distribution of respondents between the 2 genders.

Literacy rate among Adults respondents:
The overall weighted literacy rate in the adults respondents was 97.6% in both males and females having received formal education above primary grade, with more than 66% of the adults respondents having bachelor's degree or higher.

Unemployment Rate

The employment status was one of the key indicators studied in the adult questionnaire, data on working history such as current employer & occupation, total years of working or not working, and reasons for not working.
The unemployment ratio was calculated among the total workforce those who are eligible to work, they are actively looking for a job and reported that they are not able to find a job.

Unemployment Rate	Total
Currently employed	97.03%

Not employed	2.97%
Grand Total	100%

2.2. Tobacco Usage

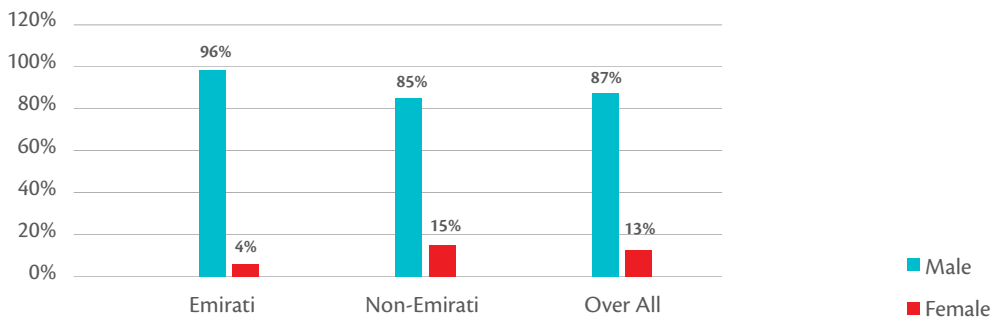
Table 20: Distribution of respondents who are currently smoking tobacco products such as cigarettes, cigars or pipes according to gender and nationality

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
(Denominator: Total Answering)	8,188	566	563	3,577	3,482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes, currently smoking	747	116	5	534	92
	9.1%	20.5%	1.0%	14.9%	2.6%
No, not currently smoking	7,441	450	558	3,043	3,390
	90.9%	79.5%	99.0%	85.1%	97.4%
Daily smokers	654	101	5	468	80
	8.0%	17.8%	0.9%	13.1%	2.3%

Distribution of respondents who are currently smoking tobacco products by gender and nationality

	TOTAL	Gender	
		Male	Female
Emirati	16%	96%	4%
	121	116	5
Non-Emirati	84%	85%	15%
	626	534	92
Total	100%	87%	13%
	747	650	97

Distribution of current users of Tobacco



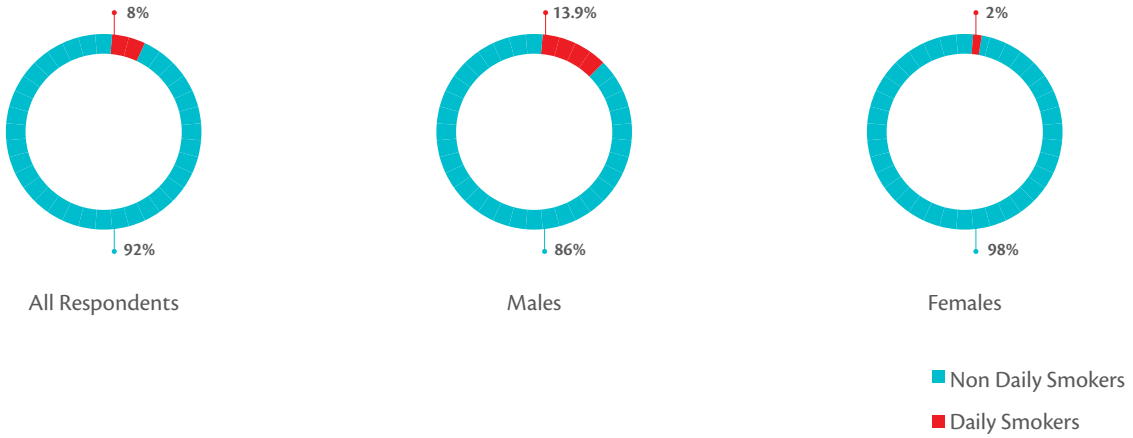
There was a total of 747 respondents who were currently smoking among all the respondents who answered the adult questionnaires. The graph above further illustrates the characteristics of the current smokers.

The number of male smokers was significantly higher than the female smokers among all respondents as well as within the Emirati and non-Emirati population

Table 21: Distribution of current smokers according to their age

Age group	Total current tobacco users	Male	Female
TOTAL	747	650	97
	100.0%	100.0%	100.0%
18 To 27 Years	128	114	14
	17.1%	17.5%	14.7%
28 To 36 Years	278	231	48
	37.2%	35.5%	48.9%
37 To 46 Years	210	191	19
	28.2%	29.5%	19.5%
47 To 60 Years	109	98	10
	14.5%	15.1%	10.5%
60 and Above	22	16	6
	2.9%	2.4%	6.4%

Distribution of daily and non-daily smokers



The table above illustrates the age and gender distribution of current smokers. There were higher number of smokers between 18 and 46 years age group and males smokers exceeded female smokers. The graph above illustrates the distribution of daily smokers and non-daily smokers among the total respondents. Majority of smokers were non-daily smokers

Table 22: Distribution of the type of tobacco smoked

	Manufactured cigarettes	Shisha	Cigar	Medwakh	E-Cigarettes
Total current smokers	528	69	6	51	27
	100.0%	100.0%	100.0%	100.0%	100.0%
18 To 27 Years	77	9	.	29	12
	14.5%	12.6%	.	57.3%	43.6%

28 To 36 Years	204	30	2	12	7
	38.7%	43.8%	26.7%	23.3%	27.2%
37 To 46 Years	153	23	1	7	8
	29.0%	33.9%	8.8%	14.2%	27.9%
47 To 60 Years	78	6	4	0	0
	14.7%	8.4%	59.1%	0.5%	0.9%
60 and Above	16	1	0	2	0
	3.1%	1.2%	5.5%	4.7%	0.4%

Of the 747 current smokers who responded to the question on "what form of tobacco they consumed", we have tabulated their responses to the most common form of tobacco consumed against the age-groups. As can be seen, the most common form of smoked tobacco use was in the form of manufactured cigarettes followed by Shisha, Medwakh and E-Cigarettes. As noted before, the consumption of smoked form of tobacco was more common among younger age-groups between the aged 18 to 46 years.

Table 23: Distribution of the exposure to second hand smoke at home during the last 30 days

		Emirati		Non-Emirati	
	TOTAL	Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes	506	71	47	227	162
	6.2%	12.5%	8.3%	6.3%	4.6%
No	7682	496	516	3350	3321
	93.8%	87.5%	91.7%	93.7%	95.4%

Males were more subjected to second hand smoking. Overall 6.2% of the respondent was exposed to second hand smoke at home during last 30 days.

Table 24: Distribution of the exposure to second hand smoke at workplaces during the last 30 days

		Emirati		Non-Emirati	
	TOTAL	Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes	440	31	16	261	132
	5.4%	5.5%	2.9%	7.3%	3.8%
No	7464	513	517	3198	3236
	91.2%	90.6%	91.8%	89.4%	92.9%
Don't work in a closed area	284	23	30	118	114
	3.5%	4.0%	5.4%	3.3%	3.3%

Overall only 5.4% of the respondent who responded to the adult questionnaires, were exposed to second hand smoking at work place, which shows that passive smoking prevalence may not be a major public health problem in UAE.

Table 25: Tobacco Economics

Average amount spent on 20 manufactured cigarettes [AED]	AED 60.1
	Range (43.7 to 76.6)
Average monthly expenditure on manufactured cigarettes [AED]	AED 882.8
	Range (575.7 to 1189.9)
Cost of 100 packs of manufactured cigarettes as a percentage of per capita Gross Domestic Product (GDP) [2016]	4.4 %
	Range (3.2 to 5.5)

Overall, cigarettes still appear to be affordable in UAE as can be seen from the table above.

Table 26: Seeing advertisements or signs promoting cigarette smoking in cinema theatres / movie halls during the last 30 days

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes	1579	91	100	729	659
	19.3%	16.0%	17.7%	20.4%	18.9%
No	6154	440	429	2647	2639
	75.2%	77.7%	76.1%	74.0%	75.8%
Don't Know	455	36	34	200	184
	5.6%	6.3%	6.1%	5.6%	5.3%

Above 20% of the respondents recall seeing some form of advertisements or signs promoting cigarette smoking in cinema theatres / movie halls during the last 30 days before the survey. This is something to be taken note by program and policy managers towards the need to target places of public recreation to create more awareness about the dangers of tobacco usage.

Table 27: Hearing information on radio about the dangers of smoking cigarettes or messages that encourage quitting during the last 30 days

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes	3054	194	219	1403	1238
	37.3%	34.2%	38.8%	39.2%	35.6%
No	4602	344	308	1941	2008
	56.2%	60.8%	54.7%	54.3%	57.7%

Don't Know	532	28	36	232	235
	6.5%	5.0%	6.5%	6.5%	6.8%

More than 50% of respondents did not hear any information on radio about the dangers of smoking cigarettes or messages that encouraged people to quit smoking in the 30 days preceding the survey. Whether respondents listened to radio often or used other means of mass-communication was not clear and hence in order to know the effectiveness of radio for spreading awareness on anti-tobacco programs, it is first necessary to know people's access and use of radio as a means of communication and entertainment.

Table 28: Noticing health warnings on cigarette packages during the past 30 days

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes	2091	174	83	1162	671
	25.5%	30.7%	14.8%	32.5%	19.3%
No	3181	179	209	1357	1436
	38.8%	31.5%	37.1%	38.0%	41.2%
Did not see any cigarette packages in last 30 days	2796	201	263	1002	1330
	34.1%	35.4%	46.7%	28.0%	38.2%
Don't Know	121	13	8	55	44
	1.5%	2.3%	1.5%	1.5%	1.3%

About a quarter of respondents were aware of noticing health warnings on cigarette packages in the 30 days before survey and majority of them were current smokers

2.3. Alcohol Consumption

Table 29: Distribution of respondents who responded to the question of ever consuming alcoholic drinks

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Total respondents to adult questionnaire	8188	566	563	3577	3482
	100.0%	100.0%	100.0%	100.0%	100.0%
Yes, ever consumed alcoholic drinks	423	7	0	269	147
	5.2%	1.3%	0.1%	7.5%	4.2%
No, never consumed alcohol drinks (lifetime abstainers)	7766	559	562	3308	3336
	94.8%	98.8%	99.8%	92.5%	95.8%

Only 5.2% of the respondent ever consumed alcohols. The number were more in Non-Emirati respondents compared to the Emirati respondents. The majority of Emirati's reported that they had never consumed alcohol.

Table 30: Distribution of respondents who had ever consumed alcohol and responded to the question of drinking in the past 12 months

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Those who have ever consumed alcohol	423	7	.	269	147
	100.0%	100.0%	.	100.0%	100.0%
Yes, have consumed alcohol in past 12 months	351	6	.	236	110
	83.2%	75.7%	.	87.7%	75.3%
No, have not consumed alcohol in past 12 months	71	1	.	33	36
	16.8%	19.6%	.	12.3%	24.7%
Refused to answer this question	0	0	.	.	.
	0.1%	4.7%	.	.	.

Out of 423 respondents who ever consumed alcohol, 83.2% have consumed alcohol in past 12 months, whereas the majority of them were Non- Emirati 98.3%.

Table 31: Distribution of respondents who responded to the question "Have you stopped drinking due to health reasons, such as a negative impact on your health or on the advice of your doctor or other health worker?"

	TOTAL	Male	Female
Only for those who have not consumed alcohol in past 12 months	71	35	36
	100%	100%	100%
Yes	18	8	10
	25.3%	22.9%	27.8%
No	53	27	26
	74.6%	77.1%	72.2%

Out of 71 respondent who have not consumed alcohol in past 12 months, 25.3% stopped drinking due to health reasons, such as a negative impact on their health or on the advice of their doctor or other health worker. More percentage of females had stopped drinking due to the negative impact on health and advice from their doctor.

Table 32: Average number of times that respondents had six or more standard drinks in the last 30 days

	TOTAL	Male	Female
Percentage who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	1.4%	2.2%	0.5%
Average largest number of standard drinks among those who engage in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days)	2.2	2.4	1.5

Only 1.4% of the respondents reported that they were engaged in heavy episodic drinking (6 or more drinks on any occasion in the past 30 days before the survey.

2.4. Diet

Table 33: Summary of consumption of fruits and vegetables

	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Denominator all respondents responding to number of servings of fruit and/or vegetables on average per day	8188	566	563	3577	3482
Total respondents who ate less than 5 servings of fruit and/or vegetables on average per day	6780	474	458	2998	2851
Percentage of respondents eating less than 5 servings of fruits and/or vegetables on average per day	82.8%	83.7%	81.3%	83.8%	81.9%
Total respondents who ate at least 5 or more than 5 servings of fruit and/or vegetables on average per day	1408	92	105	579	631
Percentage of respondents eating at least 5 or more than 5 servings of fruits/vegetables on average per day	16.7%	16.3%	18.7%	16.2%	18.1%
Age wise distribution of respondents eating less than 5 servings of fruits and/or vegetables on average per day					
18-29 years	1831	170	160	624	876
Percentage	27.0%	21.4%	15.5%	78.6%	84.6%
30-44 years	3254	171	161	1448	1475
Percentage	48.0%	10.6%	9.8%	89.5%	90.2%
45-59 years	1349	70	76	782	420
Percentage	19.9%	8.3%	15.4%	91.8%	84.6%
60+ years	346	43	44	166	93
Percentage	5.1%	20.4%	31.9%	79.6%	68.2%

For additional details on the diet related questions asked in the adult questionnaire, please refer to the annexure section

It is recognized that consuming a requisite amount of fruit and vegetables each day can lead to better health. The WHO has defined five portions of fruit and vegetables as being the requisite level. In the WHS, respondents were asked about their dietary intake and the percentage of those who consumed less than five portions were calculated. 82.8% of the respondents interviewed consumed less than 5 servings of fruits and/or vegetables on average per day. This finding was most noticeable in the age group of 30-44 years of age.

Table 34: Summary of other dietary practices*

Dietary Factors	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
How often do you add salt or a salty sauce such as soya sauce to your food right before you eat it or as you are eating it?					
Total respondents	8,117	559	559	3,525	3,474
	100.0%	100.0%	100.0%	100.0%	100.0%
Always	2,024	55	71	990	909
	24.9%	9.8%	12.6%	28.1%	26.2%
Often	1,304	53	62	550	638
	16.1%	9.6%	11.1%	15.6%	18.4%
Sometimes	2,394	181	171	1,047	995
	29.5%	32.3%	30.6%	29.7%	28.6%
Rarely	1,170	102	100	477	491
	14.4%	18.3%	17.8%	13.5%	14.1%
Never	1,225	168	155	461	441
	15.1%	30.0%	27.8%	13.1%	12.7%
How often do you eat processed food high in salt? By processed food high in salt I mean foods that have been altered from their natural state, such as packaged salty snacks, canned salty food including pickles and preserves, salty food prepared at a fast food restaurant					
Total respondents	8,103	563	557	3,515	3,467
	100.0%	100.0%	100.0%	100.0%	100.0%
Always	373	23	26	169	155
	4.6%	4.0%	4.6%	4.8%	4.5%
Often	837	43	57	382	354
	10.3%	7.7%	10.3%	10.9%	10.2%
Sometimes	2,703	184	170	1,157	1,192
	33.4%	32.7%	30.5%	32.9%	34.4%
Rarely	2,174	119	123	960	973
	26.8%	21.1%	22.0%	27.3%	28.1%
Never	2,015	194	181	846	793
	24.9%	34.5%	32.6%	24.1%	22.9%

What type of meat do you usually eat in one day?					
Total respondents	8,072	564	555	3,517	3,437
	100.0%	100.0%	100.0%	100.0%	100.0%
Red meat (goat, lamb, cow)	1,764	180	128	831	626
	21.9%	31.8%	23.0%	23.6%	18.2%
Fish and seafood	2,015	189	168	842	816
	25.0%	33.5%	30.2%	24.0%	23.8%
Poultry (chicken)	3,737	193	249	1,585	1,711
	46.3%	34.2%	44.9%	45.1%	49.8%
I do not eat meat	556	3	11	259	284
	6.9%	0.5%	2.0%	7.4%	8.3%

41.0% of the total respondents reported they always or often add salt or a salty sauce such as soya sauce to their food right before eating or as they at. This points to the need for public awareness
14.9% of the total respondents reported they always or often eat processed food high in salt, such as foods that have been altered from their natural state including packaged salty snacks, canned salty food including pickles and preserves, and salty food prepared at a fast food restaurant.
It was also noted that majority of respondents (more than 95%) used vegetable oils for cooking and the use of other forms of fat was relatively less frequent. Among the vegetable oil users, majority used refined oils and oils with unsaturated fatty acids such as olive oil, sunflower oil, corn oil and canola oil.
As can be noted from further tables, about 70% of respondents consumed white meat such as chicken/poultry and fish/seafood vs 21.9% who consumed red meats. About 7% of respondents interviewed reported that they are not consuming any type of meats. We have excluded the "don't know" category of responses.
**The tables above have been consolidated based on the responses to the various questions on individual dietary habits. The tables exclude the 'don't know' category of responses.*

2.5. CORE - Physical Activity

Sufficient Physical Activity is defined by WHO in this report as over 150 minutes per week of an activity defined as moderate or vigorous. In order to calculate sufficient Physical Activity, the total time spent in physical activity during a typical week and the intensity of the physical activity was taken into account.

To compute the WHO Indicator on percentage of respondents with insufficient physical activity, defined as at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity, we had to combine multiple variables on physical activities at home and work place in order to derive the final estimates.

Those with less than 150 minutes in total were classified with insufficient levels of Physical Activity. It was noted that majority of respondents interviewed (70.8%) did not meet the WHO recommendations for sufficient physical activity and majority of such respondents were aged less than 45 years. Females report higher levels of insufficient physical activity than males. The age group 30-44 years has the highest percentage of insufficient physical activity compared to other age groups disregarding the gender or nationality.

Table 35: Summary of the physical activities

	Population Total	Gender		TOTAL		Emirati		Non-Emirati	
		Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Denominator all respondents responding to physical activity questions	8188	4143	4045	1129	7059	566	563	3577	3482
Total respondents not meeting the WHO recommendations	5797	2769	3028	912	4885	424	489	2345	2539
Percentage with insufficient physical activity*	70.8%	66.8%	74.8%	80.8%	69.2%	74.9%	86.9%	65.6%	72.9%
Total respondents meeting the WHO recommendations on physical activity for health	2391	1374	1017	217	2174	142	74	1232	943
Percentage with sufficient physical activity*	29.2%	33.2%	25.1%	19.2%	30.8%	25.1%	13.1%	34.4%	27.1%
Distribution of respondents not meeting WHO definition by age group									
18-29 years	1490	579	911	308	1182	143	162	439	746
Percentage	25.7%	20.9%	30.1%	33.8%	24.2%	33.8%	33.2%	18.7%	29.4%
30-44 years	2777	1282	1496	346	2433	158	185	1123	1310
Percentage	47.9%	46.3%	49.4%	37.9%	49.8%	37.3%	37.9%	47.9%	51.6%
45-59 years	1183	717	466	162	1021	70	90	647	376
Percentage	20.4%	25.9%	15.4%	17.8%	20.9%	16.5%	18.5%	27.6%	14.8%
60+ years	348	191	156	100	247	50	48	143	107
Percentage	6.0%	6.9%	5.2%	11.0%	5.0%	11.9%	9.9%	6.1%	4.2%

*WHO recommendations for sufficient physical activity should do at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity.

Table 36: Summary tables on physical activity at work and home

Type of physical activity AT WORK	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like [carrying or lifting heavy loads, digging or construction work] for at least 10 minutes continuously?					
Yes	353	34	24	180	116
	4.3%	6.0%	4.2%	5.0%	3.3%
No	7835	532	540	3396	3367
	95.7%	94.0%	95.8%	95.0%	96.7%
Average number of days of vigorous-intensity activities as a part of your work	3.9	3.8	2.3	4.2	3.6
Average time spent doing the vigorous-intensity activities as a part of your work in hours	2.4	2.1	2.8	3.0	1.7
Does your work involve moderate-intensity activity, that causes small increases in breathing or heart rate such as brisk walking [or carrying light loads] for at least 10 minutes continuously?					
Yes	484	35	14	270	165
	5.9%	6.1%	2.5%	7.5%	4.7%
No	7704	532	549	3307	3317
	94.1%	93.9%	97.5%	92.5%	95.3%
Average number of days of moderate—intensity activities as a part of your work	4.8	4.2	3.4	4.9	4.9
Average time spent doing the moderate-intensity activities as a part of your work in hours	2.9	3.5	1.7	3.9	1.4

Physical activity at home (leisure and sports)

Type of physical activity AT WORK	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Do you do any vigorous-intensity sports, fitness or recreational (leisure) activities that cause large increases in breathing or heart rate like [running or football] for at least 10 minutes continuously?					
Yes	703	98	26	381	198
	8.6%	17.3%	4.5%	10.7%	5.7%
No	7485	468	538	3195	3284
	91.4%	82.7%	95.5%	89.3%	94.3%
Average number of days in a week on vigorous-intensity sports, fitness or recreational (leisure)	3.9	3.7	3.8	3.8	4.2
Average time spent on vigorous-intensity sports, fitness or recreational activities on a typical day (in Hours)	1.4	1.6	1.2	1.5	1.1

Do you do any moderate-intensity sports, fitness or recreational (leisure) activities that cause a small increase in breathing or heart rate such as brisk walking, [cycling, swimming, volleyball] for at least 10 minutes continuously?					
Yes	593	77	20	300	196
	7.2%	13.5%	3.5%	8.4%	5.6%
No	7595	490	543	3276	3286
	92.8%	86.5%	96.5%	91.6%	94.4%
Average number of days in a week on moderate-intensity sports, fitness or recreational (leisure)	3.6	3.7	4.4	3.5	3.6
Average time spent on moderate-intensity sports, fitness or recreational activities on a typical day (in Hours)	1.5	1.2	2.3	1.7	1.3

As can be noted from the tables above, a majority of respondents interviewed did not do moderate or vigorous activity at their work or during their leisure. It is also to be noted that doing moderate vigorous intensity activity during leisure or recreation, there were more females than males who did not engage in such activities.

2.6. EXPANDED – Physical Activity

Table 37: Time spent by respondents in sedentary / sitting or reclining posture in hours in a day

	TOTAL (hours)	Emirati	Non-Emirati
Average time spent on sitting or reclining on a typical day	4.9	1.7	4.0

Table 38: Respondents' views on factors that will encourage them to do more physical activity

	TOTAL	Emirati	Non-Emirati
Total respondents to adult questionnaire	8,188	1,130	7,059
	100.00%	100.00%	100.00%
Availability of public parks near my residence	4,974	777	4,198
	60.7%	68.8%	59.5%
Availability of physical activity times during usual working hours	2,196	216	1,981
	26.8%	19.1%	28.1%
Availability of sidewalks on main roads (for walking and biking)	1,942	251	1,690
	23.7%	22.2%	23.9%
Availability of GYMS in residence \ near my residence	1,847	300	1,546
	22.6%	26.6%	21.9%
reasonable fees for subscription in GYMS	1,843	220	1,623
	22.5%	19.5%	23.0%
Availability of GYMS separate for men and women	1,379	230	1,150
	16.8%	20.4%	16.3%

2.7. Health State Descriptions

Each adult respondent in the survey was asked to rate their health status on a five point scale of none to extreme. The question was "Overall in the last 30 days, how much difficulty did you have?". The following tables displays the results for self-rated difficulties with a number of selected tasks, such as work and household activities, self-care, bodily aches and other aspects of health.

15.8% of the respondent had mild to moderate difficulty in moving around and only 0.8% of the total respondent had severe to extreme difficulty in moving. 17.1% of the total population had breathlessness and increase heart rate when doing any vigorous activities. 1.2% of the total respondent had severe to extreme increase in heart rate and breathlessness.19.4 % of the respondent were having bodily aches or pains from mild to moderate. 1.3% had severe to extreme body ache and pain. 13.1% of the total respondent were having mild to moderate difficulty in learning some kind of new activities. 12.4% of the respondent were having mild to moderate problem in personal relationship and community participation. 17.1% of the respondent were having mild to moderate problem of not feeling rested or refreshed during the day. Around 13 % of the respondent faced mild to moderate issue in making new friends.

Table 39: Summary of the health state descriptions

Health state descriptions and difficulty with specific activities	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Total people responding to these questions	8188	566	563	3577	3482
Overall in the last 30 days, how much difficulty did you have:					
1. With moving around?					
None	6787	421	380	3076	2910
	82.9%	74.4%	67.5%	86.0%	83.6%
Mild to Moderate	1291	131	159	458	543
	15.8%	23.2%	28.2%	12.8%	15.6%
Severe to Extreme	67	11	17	19	20
	0.8%	2.0%	3.0%	0.5%	0.6%
2. In vigorous activities (vigorous activities require hard physical effort and cause large increases in breathing or heart rate)?					
None	6622	403	370	2982	2868
	80.9%	71.2%	65.7%	83.4%	82.4%
Mild to Moderate	1398	137	160	533	567
	17.1%	24.3%	28.4%	14.9%	16.3%
Severe to Extreme	102	22	24	29	27
	1.2%	3.9%	4.3%	0.8%	0.8%
3. With self-care, such as bathing/washing or dressing yourself?					

None	7120	454	430	3183	3054
	87.0%	80.1%	76.4%	89.0%	87.7%
Mild to Moderate	964	102	120	349	392
	11.8%	18.0%	21.3%	9.8%	11.3%
Severe to Extreme	63	9	6	24	23
	0.8%	1.6%	1.1%	0.7%	0.7%
4. Of bodily aches or pains?					
None	6439	410	360	2884	2786
	78.6%	72.4%	63.9%	80.6%	80.0%
Mild to Moderate	1588	141	177	621	650
	19.4%	24.9%	31.4%	17.4%	18.7%
Severe to Extreme	104	14	23	29	38
	1.3%	2.5%	4.2%	0.8%	1.1%
5. Bodily discomfort ?					
None	6543	418	369	2957	2800
	79.9%	73.8%	65.5%	82.7%	80.4%
Mild to Moderate	1500	131	171	556	641
	18.3%	23.2%	30.4%	15.6%	18.4%
Severe to Extreme	92	15	20	29	27
	1.1%	2.7%	3.5%	0.8%	0.8%
6. In your daily life because of your pain?					
None	534	26	32	237	239
	26.4%	15.1%	14.4%	29.7%	28.7%
Mild to Moderate	1363	131	168	501	563
	67.3%	77.1%	75.7%	62.9%	67.3%
Severe to Extreme	87	12	17	29	28
	4.3%	7.0%	7.8%	3.7%	3.4%
7. With concentrating or remembering things?					
None	6828	434	413	3051	2930
	83.4%	76.6%	73.4%	85.3%	84.2%
Mild to Moderate	1215	115	129	462	509
	14.8%	20.4%	22.8%	12.9%	14.6%
Severe to Extreme	97	16	18	28	35
	1.2%	2.9%	3.1%	0.8%	1.0%

8. In learning a new task (for example, learning how to get to a new place, learning a new game, learning a new recipe)?					
None	6963	440	418	3098	3007
	85.0%	77.7%	74.2%	86.6%	86.4%
Mild to Moderate	1071	107	129	413	423
	13.1%	18.8%	22.9%	11.5%	12.1%
Severe to Extreme	104	19	12	37	36
	1.3%	3.4%	2.1%	1.0%	1.0%
9. With personal relationships or participation in the community?					
None	7026	451	424	3124	3028
	85.8%	79.6%	75.3%	87.3%	86.9%
Mild to Moderate	1011	95	117	399	401
	12.4%	16.7%	20.7%	11.2%	11.5%
Severe to Extreme	103	20	17	29	38
	1.3%	3.5%	3.0%	0.8%	1.1%
10. With dealing with conflicts and tensions with others					
None	6824	429	400	3045	2950
	83.3%	75.7%	70.9%	85.1%	84.7%
Mild to Moderate	1221	120	139	480	482
	14.9%	21.1%	24.7%	13.4%	13.9%
Severe to Extreme	99	18	21	29	31
	1.2%	3.1%	3.7%	0.8%	0.9%
11. With making new friendships or maintaining current friendships?					
None	6972	443	425	3090	3015
	85.1%	78.2%	75.4%	86.4%	86.6%
Mild to Moderate	1064	106	116	423	419
	13.0%	18.7%	20.6%	11.8%	12.0%
Severe to Extreme	108	16	16	42	34
	1.3%	2.9%	2.9%	1.2%	1.0%
12. With sleeping, such as falling asleep, waking up frequently during the night or waking up too early in the morning?					
None	6644	416	385	2989	2854
	81.1%	73.5%	68.4%	83.6%	82.0%
Mild to Moderate	1414	133	159	549	572
	17.3%	23.5%	28.3%	15.3%	16.4%
Severe to Extreme	95	16	14	20	44
	1.2%	2.8%	2.5%	0.6%	1.3%

13. Due to not feeling rested and refreshed during the day (for example, feeling tired, not having energy)?					
None	6705	410	385	2993	2916
	81.9%	72.5%	68.4%	83.7%	83.7%
Mild to Moderate	1400	144	165	546	544
	17.1%	25.5%	29.4%	15.3%	15.6%
Severe to Extreme	46	10	8	15	13
	0.6%	1.8%	1.4%	0.4%	0.4%

2.8. Functional Assessment (only for Elderly respondents aged ≥ 60 years)

37.2% of the total elderly respondents interviewed were facing mild to moderate difficulty in sitting for long periods, while 40% of the elderly respondents were faced mild to moderate difficulty in walking short distances. It would be interesting to further probe these parameters on the impact of such limitations in mobility on the mental health of individuals.

Table 40: Summary of the functional state assessments

Descriptions of various functional activities & difficulty levels	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Think back over the last 30 days and please tell us about how much difficulty you had doing the following activities.					
1. In sitting for long periods?					
Total Respondents	406	56	51	191	109
	100.0%	100.0%	100.0%	100.0%	100.0%
None	230	27	22	125	55
	56.5%	48.5%	42.9%	65.6%	51.0%
Mild to Moderate	151	21	24	62	44
	37.2%	37.0%	47.8%	32.4%	40.9%
Severe to Extreme	25	8	5	4	9
	6.3%	14.5%	9.3%	2.0%	8.1%
2. In walking 100 meters?					
Total Respondents	402	55	47	191	108
	100.0%	100.0%	100.0%	100.0%	100.0%
None	198	22	14	114	48
	49.2%	39.5%	28.9%	59.7%	44.6%
Mild to Moderate	161	24	23	67	47
	40.0%	43.6%	47.5%	35.3%	43.2%
Severe to Extreme	43	9	11	10	13
	10.8%	16.8%	23.6%	5.0%	12.2%

53.4% of total respondents had mild to moderate difficulty in standing up from sitting down. This problem was more common in female population irrespective of nationality. More Female respondents were facing mild to moderate difficulties on taking in flight of stairs without resting in comparison to male respondent. Once again, this finding of limited functionality was consistent with the previous observations on the mobility. Such restrictions on mobility may impact the social and emotional well-being of individuals and the relationships between these two factors needed further investigation.

3. In standing up from sitting down?					
Total Respondents	410	56	50	193	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	219	24	16	134	46
	53.4%	42.9%	31.4%	69.2%	41.2%
Mild to Moderate	153	24	25	52	52
	37.3%	42.8%	50.4%	26.8%	46.9%
Severe to Extrem	38	8	9	8	13
	9.3%	14.4%	18.2%	4.0%	11.9%
4. With climbing one flight of stairs without resting?					
Total Respondents	389	56	47	187	99
	100.0%	100.0%	100.0%	100.0%	100.0%
None	176	19	12	114	32
	45.2%	33.9%	24.8%	60.8%	31.9%
Mild to Moderate	156	23	20	65	48
	40.2%	41.7%	42.1%	34.7%	48.8%
Severe to Extreme	57	14	16	8	19
	14.6%	24.4%	33.2%	4.5%	19.3%

61.9 % of Non-Emirati Females were facing mild to moderate difficulty with stooping, kneeling or crouching in compared to 45.7% of Emirati Females. There was no significant difference between the males and females among Emiratis who were facing mild to moderate trouble in picking up things with fingers, whereas among the Non-Emiratis, more female respondents were having mild to moderate difficulty in picking up things from the finger.

5. With stooping, kneeling or crouching?					
Total Respondents	403	56	49	191	107
	100.0%	100.0%	100.0%	100.0%	100.0%
None	168	17	11	113	26
	41.6%	30.2%	23.5%	59.2%	24.5%
Mild to Moderate	189	28	22	72	66
	46.8%	50.6%	45.7%	37.6%	61.9%
Severe to Extreme	47	11	15	6	15
	11.6%	19.3%	30.8%	3.2%	13.7%

6. Picking up things with your fingers (such as picking up a coin from a table)?					
Total Respondents	406	56	49	192	109
	100.0%	100.0%	100.0%	100.0%	100.0%
None	266	29	26	151	60
	65.5%	51.7%	52.5%	78.5%	55.5%
Mild to Moderate	117	21	18	39	40
	28.9%	36.7%	35.8%	20.5%	36.8%
Severe to Extreme	23	7	6	2	8
	5.6%	11.7%	11.7%	1.0%	7.7%

Overall 34.2% of the respondents were having mild to moderate issues in taking care of household responsibilities. 49.8 % Female non-Emiratis respondent were not able to take care of household responsibility that was quite higher percentage when compared among gender and nationality.

7. In taking care of your household responsibilities?					
Total Respondents	386	48	45	186	107
	100.0%	100.0%	100.0%	100.0%	100.0%
None	231	25	20	141	45
	59.8%	52.7%	43.9%	75.5%	42.4%
Mild to Moderate	132	17	17	44	53
	34.2%	36.6%	38.5%	23.6%	49.8%
Severe to Extreme	23	5	8	2	8
	6.0%	10.7%	17.6%	0.9%	7.8%
8. In joining in community activities (for example, festivities, religious or other activities) in the same way as anyone else can?					
Total Respondents	396	52	43	190	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	240	23	20	139	58
	60.7%	44.8%	45.5%	73.4%	52.1%
Mild to Moderate	129	22	17	47	44
	32.6%	42.3%	38.7%	24.8%	39.3%
Severe to Extreme	27	7	7	4	10
	6.7%	12.9%	15.8%	1.8%	8.6%

There was a significant difference between males and females respondents with mild to moderate issues in extending arms above shoulder. In Emirati Nationals more males were having such issues with movement of arms and shoulders than females but in non-Emiratis Nationals more females were having issues in extending arms above shoulder.

9. In extending your arms above shoulder					
Total Respondents	410	56	50	192	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	255	24	23	147	61
	62.3%	42.6%	45.4%	76.6%	55.0%
Mild to Moderate	129	25	19	42	42
	31.4%	45.0%	37.9%	21.9%	38.1%
Severe to Extreme	26	7	8	3	8
	6.3%	12.4%	16.7%	1.5%	6.9%
10. Concentrating on doing something for 10 minutes?					
Total Respondents	410	56	50	193	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	261	25	24	152	60
	63.5%	44.5%	47.5%	78.8%	53.8%
Mild to Moderate	133	26	20	41	45
	32.3%	46.3%	41.0%	21.2%	40.6%
Severe to Extreme	17	5	6	.	6
	4.2%	9.2%	11.5%	.	5.6%

There was difference in male and female non-Emirati respondents who were having mild or moderate problem in bathing whole body. More number of female respondents (38.5%) had difficulties than male respondents (19.2%).

11. In walking a long distance such as a kilometer?					
Total Respondents	384	51	42	191	100
	100.0%	100.0%	100.0%	100.0%	100.0%
None	174	15	11	112	36
	45.4%	29.6%	26.5%	58.8%	35.8%
Mild to Moderate	155	23	16	70	46
	40.5%	45.2%	37.9%	36.9%	45.8%
Severe to Extreme	54	13	15	8	18
	14.2%	25.3%	35.6%	4.3%	18.4%
12. In bathing/washing your whole body?					
Total Respondents	412	56	50	194	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	273	30	26	157	61
	66.4%	53.0%	52.3%	80.8%	54.4%
Mild to Moderate	118	21	18	37	43
	28.8%	36.6%	35.4%	19.2%	38.5%
Severe to Extreme	20	6	6	.	8
	4.8%	10.3%	12.3%	.	7.1%

About 50% of respondents reported to have mild to moderate and severe to extreme difficulty in carrying things. This number was reported more among Non-Emirati respondents. About a quarter of respondents (24.9%) had mild to moderate issue in eating including cutting up food items.

13. With carrying things?					
Total Respondents	397	54	44	190	109
	100.0%	100.0%	100.0%	100.0%	100.0%
None	198	18	14	131	36
	49.9%	32.6%	31.4%	68.8%	33.1%
Mild to Moderate	160	25	21	55	59
	40.3%	46.4%	48.6%	28.9%	53.7%
Severe to Extreme	39	11	9	4	14
	9.8%	21.0%	20.0%	2.3%	13.2%
14. With eating (including cutting up your food)?					
Total Respondents	407	56	49	193	109
	100.0%	100.0%	100.0%	100.0%	100.0%
None	295	34	30	163	68
	72.4%	60.0%	61.1%	84.4%	62.4%
Mild to Moderate	102	19	14	30	39
	24.9%	33.3%	28.8%	15.6%	35.5%
Severe to Extreme	11	4	5	.	2
	2.7%	6.7%	10.1%	.	2.1%

37.8% and 30.4% of the total respondent had mild to moderate difficulties in getting up from lying down and using the toilet respectively.

15. With getting up from lying down?					
Total Respondents	411	56	50	193	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	242	25	25	142	50
	58.9%	44.2%	50.4%	73.5%	45.0%
Mild to Moderate	155	26	21	51	58
	37.8%	46.3%	40.8%	26.5%	51.9%
Severe to Extreme	13	5	4	.	3
	3.2%	9.5%	8.8%	.	3.1%

16. With getting to and using the toilet?					
Total Respondents	412	56	50	194	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	271	31	29	149	61
	65.8%	55.0%	58.4%	76.9%	55.2%
Mild to Moderate	125	22	16	44	44
	30.4%	38.2%	31.1%	22.6%	39.8%
Severe to Extreme	16	4	5	1	6
	3.8%	6.8%	10.5%	0.5%	5.0%

30.2% of the total respondents had mild to moderate difficulty in using private or public transport. With reference to being emotionally affected by health condition, only 25.9% reported mild to moderate being emotionally affected by their health condition.

17. With getting where you want to go, using private or public transport if needed?					
Total Respondents	392	50	44	189	110
	100.0%	100.0%	100.0%	100.0%	100.0%
None	254	29	23	143	60
	64.9%	58.2%	51.9%	75.6%	54.7%
Mild to Moderate	118	17	14	45	42
	30.2%	34.2%	31.4%	24.0%	38.6%
Severe to Extreme	19	4	7	1	7
	4.9%	7.7%	16.7%	0.5%	6.6%
18. In the last 30 days, how much have you been emotionally affected by your health condition(s)?					
Total Respondents	411	56	51	193	111
	100.0%	100.0%	100.0%	100.0%	100.0%
None	287	33	31	154	69
	69.8%	58.5%	61.3%	79.7%	62.2%
Mild to Moderate	107	19	16	37	34
	25.9%	34.6%	31.0%	19.2%	30.9%
Severe to Extreme	18	4	4	2	8
	4.3%	6.9%	7.7%	1.1%	7.0%

Only 23.8% of the total respondents had used any assistive device other than eye glasses. 37.3 % of respondents were far-sighted and this percentage was the highest among the non-Emiratis females. 44.1% of the total respondents were having mild to moderate difficulty in seeing distant object with no significant difference between gender or nationality.

19. Besides any vision aids (eyeglasses or contact lenses) or hearing aids, do you use any other assistive devices (cane, walker or other) for any difficulties you experience?					
Yes"	98	16	11	48	23
	23.8%	29.1%	21.0%	24.9%	20.5%
No	315	40	41	146	88
	76.2%	70.9%	79.0%	75.1%	79.5%

20. Do you use eyeglasses to see up close (for example at arm's length, like when you are reading)?					
Yes"	154	16	12	79	48
	37.3%	27.6%	24.1%	40.5%	42.7%
No	259	41	39	116	64
	62.7%	72.4%	75.9%	59.5%	57.3%
21. In seeing and recognizing an object or a person you know across the road (from a distance of about 20 meters)?					
Total Respondents	405	54	51	191	109
	100.0%	100.0%	100.0%	100.0%	100.0%
None	208	27	24	103	55
	51.5%	50.3%	47.0%	53.6%	50.4%
Mild to Moderate	179	24	22	82	51
	44.1%	45.2%	43.4%	42.8%	46.4%
Severe to Extreme	18	2	5	7	3
	4.3%	4.5%	9.6%	3.6%	3.2%
22. In seeing and recognizing an object at arm's length (for example, reading)?					
Total Respondents	406	55	50	191	110
	100.0%	100.0%	100.0%	100.0%	100.0%
None	193	25	22	100	46
	47.6%	46.4%	43.2%	52.5%	41.8%
Mild to Moderate	193	26	24	83	59
	47.5%	47.1%	48.6%	43.6%	54.0%
Severe to Extreme	20	4	4	8	5
	4.9%	6.5%	8.2%	3.9%	4.3%

2.9 Chronic Conditions

2.9.1 Blood Pressure

More than 50% of the respondents who said they were diagnosed by their doctors to have high blood pressure were in the age group of 47 years and above. There was no significant difference between males and females or nationalities of the respondents in this age group. A sizeable proportion of people taking medications for control of raised blood pressure were also taking herbal and traditional medicines. Among those respondents taking herbal or traditional medicines for control of raised blood pressure, there was no significant difference between their ages. Around 38.4% of the total respondent in the age group of 47 to 59 years were told that they have high blood pressure.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been told by a doctor or other health worker that you have raised blood pressure or hypertension?					
Respondents who answered NO	4465	335	334	1798	1999
Respondents who answered YES	708	72	78	348	211
18 To 36 Years	124	16	14	37	57
	17.5%	21.9%	17.9%	10.8%	27.0%
37 To 46 Years	186	12	13	119	42
	26.2%	16.2%	16.7%	34.3%	19.8%
47 To 59 Years	272	22	24	140	85
	38.4%	31.1%	31.4%	40.2%	40.4%
60 and Above	127	22	26	51	27
	17.9%	30.8%	33.9%	14.7%	12.8%
In the past two weeks, have you taken any drugs (medication) for raised blood pressure prescribed by a doctor or other health worker?					
Respondents who answered NO	156	14	15	67	61
Respondents who answered YES	552	58	63	281	150
18 To 36 Years	66	8	8	21	29
	12.0%	14.5%	12.0%	7.6%	19.2%
37 To 46 Years	138	9	9	91	29
	25.0%	15.3%	15.0%	32.3%	19.2%
47 To 59 Years	228	19	22	121	66
	41.4%	33.7%	35.2%	42.9%	44.2%
60 and Above	119	21	24	49	26
	21.7%	36.6%	37.8%	17.3%	17.4%
Are you currently taking any herbal or traditional remedy for your raised blood pressure?					
Respondents who answered NO	631	63	70	309	189
Respondents who answered YES	77	9	8	39	21
18 To 36 Years	12	1	0	5	6
	15.0%	8.7%	6.5%	11.6%	26.9%
37 To 46 Years	26	2	1	19	5
	34.0%	18.4%	16.2%	48.1%	21.4%
47 To 59 Years	25	3	4	10	8
	32.1%	32.3%	48.1%	26.8%	35.9%
60 and Above	15	4	2	5	3
	18.9%	40.7%	29.1%	13.5%	15.9%

2.9.2. Diabetes

Overall, the highest self-reported raised blood sugar or diabetes was 34.7% among the adults' respondents in the age group (47 – 59). The Non-Emirati Males had the highest rate of 38.3%. In the same age group of (47 to 59) years, 38.6 % reported that they were using herbal or traditional remedy for diabetes..

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been told by a doctor or other health worker that you have raised blood sugar or diabetes?					
Respondents who answered NO	3964	286	289	1622	1767
Respondents who answered YES	864	92	89	395	288
18 To 36 Years	185	24	19	57	85
	21.4%	26.0%	20.8%	14.5%	29.4%
37 To 46 Years	224	16	20	118	70
	25.9%	17.4%	22.2%	30.0%	24.1%
47 To 59 Years	299	26	25	151	97
	34.7%	27.9%	28.2%	38.3%	33.8%
60 and Above	156	26	26	68	36
	18.1%	28.7%	28.7%	17.2%	12.6%
In the past two weeks, have you taken any drugs (medication) for diabetes prescribed by a doctor or other health worker?					
Respondents who answered NO	292	30	31	129	102
Respondents who answered YES	572	62	58	266	186
18 To 36 Years	70	6	9	21	34
	12.2%	10.0%	15.0%	7.7%	18.6%
37 To 46 Years	153	10	9	85	49
	26.8%	15.6%	15.6%	32.0%	26.4%
47 To 59 Years	229	22	21	114	72
	40.0%	36.0%	35.4%	42.7%	39.0%
60 and Above	120	24	20	47	30
	21.0%	38.4%	34.0%	17.5%	16.1%

Are you currently taking insulin for diabetes prescribed by a doctor or other health worker?					
Respondents who answered NO	641	61	65	301	214
Respondents who answered YES	223	31	24	94	75
18 To 36 Years	26	3	3	7	13
	11.6%	9.0%	13.7%	7.1%	17.5%
37 To 46 Years	51	6	3	23	19
	22.9%	19.0%	12.0%	24.9%	25.6%
47 To 59 Years	83	10	9	38	26
	37.3%	32.3%	39.0%	40.3%	35.0%
60 and Above	63	12	8	26	16
	28.2%	39.6%	35.3%	27.7%	21.8%
Are you currently taking any herbal or traditional remedy for your diabetes?					
Respondents who answered NO	777	87	85	354	251
Respondents who answered YES	88	4	4	42	37
18 To 36 Years	18	.	.	9	8
	19.7%	.	.	21.8%	22.0%
37 To 46 Years	17	0	1	12	4
	19.3%	7.2%	13.5%	28.2%	11.5%
47 To 59 Years	34	2	3	11	19
	38.6%	34.3%	58.2%	26.7%	50.2%
60 and Above	20	3	1	10	6
	22.4%	58.5%	28.3%	23.3%	16.3%

2.9.3. Blood cholesterol

40.2% of the total respondent in the age group of (47 to 59) years were on treatment of raised cholesterol, around 70% of the respondent having raised cholesterol were taking traditional medicine to manage cholesterol.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been told by a doctor or other health worker that you have raised cholesterol?					
Respondents who answered NO	3478	252	250	1406	1570
Respondents who answered YES	559	56	58	313	132
18 To 36 Years	90	8	8	57	16
	16.0%	14.2%	14.3%	18.3%	12.1%
37 To 46 Years	175	13	12	106	44
	31.3%	23.4%	20.6%	33.9%	33.2%

47 To 59 Years	204	19	20	114	50
	36.5%	34.0%	34.7%	36.5%	38.2%
60 and Above	91	16	18	35	22
	16.2%	28.4%	30.4%	11.2%	16.6%
In the past two weeks, have you taken any oral treatment (medication) for raised total cholesterol prescribed by a doctor or other health worker?					
Respondents who answered NO	178	19	14	105	39
Respondents who answered YES	381	37	44	208	93
18 To 36 Years	39	4	4	25	7
	10.4%	10.8%	9.1%	11.9%	7.2%
37 To 46 Years	107	5	7	65	30
	28.1%	13.9%	15.5%	31.3%	32.4%
47 To 59 Years	153	15	17	84	38
	40.2%	40.8%	39.6%	40.1%	40.5%
60 and Above	81	13	16	35	19
	21.4%	34.5%	35.8%	16.7%	20.0%
Are you currently taking any herbal or traditional remedy for your raised cholesterol?					
Respondents who answered NO	486	48	51	277	110
Respondents who answered YES	73	8	7	37	21
18 To 36 Years	8	2	.	3	3
	11.2%	28.7%	.	9.1%	11.9%
37 To 46 Years	24	1	1	13	9
	33.7%	16.2%	21.9%	36.0%	39.8%
47 To 59 Years	28	2	2	17	7
	38.3%	22.8%	35.0%	45.5%	32.4%
60 and Above	12	3	3	3	3
	16.9%	32.3%	43.1%	9.4%	15.9%

2.9.4. Cardio Vascular Disease (CVD)

Less than 2% (151) of the respondents surveyed responded as yes to a past history of heart attack or chest pain from heart disease (angina) or stroke (cerebrovascular accident) and of them, only 51 respondents (about 33%) were taking aspirin regularly for prevention or treatment of heart disease.

Among the same 151 respondents, who ever had a history of heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident), 60 respondents (about 40%) were taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever had a heart attack or chest pain from heart disease (angina) or a stroke (cerebrovascular accident or incident)?					
Respondents who answered NO	8037	545	544	3509	3439
Respondents who answered YES	151	21	19	68	43
18 To 27 Years	22	4	4	5	8
	14.3%	18.8%	23.5%	7.2%	19.2%
28 To 36 Years	39	1	5	18	16
	25.8%	4.3%	23.8%	26.2%	36.5%
37 To 46 Years	37	5	2	19	10
	24.4%	24.1%	11.8%	28.3%	24.1%
47 To 59 Years	29	5	4	14	6
	18.9%	24.2%	19.1%	20.8%	13.2%
60 and Above	25	6	4	12	3
	16.6%	28.6%	21.8%	17.5%	7.0%
Are you currently taking aspirin regularly to prevent or treat heart disease? (among respondents who ever had a heart attack or chest pain from heart disease or a stroke)					
Respondents who answered NO	101	12	13	42	34
Respondents who answered YES	51	10	6	26	9
18 To 36 Years	5	0	1	2	2
	11.2%	3.2%	14.4%	8.5%	25.6%
37 To 46 Years	11	2	0	6	3
	22.1%	20.3%	1.7%	23.1%	34.4%
47 To 59 Years	16	3	2	10	1
	32.3%	30.5%	33.5%	39.4%	12.9%
60 and Above	17	5	3	7	2
	34.4%	46.0%	50.4%	29.0%	27.0%
Are you currently taking statins (Lovastatin/Simvastatin/Atorvastatin or any other statin) regularly to prevent or treat heart disease?					
Respondents who answered NO	91	14	10	37	29
Respondents who answered YES	60	7	9	30	14
18 To 27 Years	2	.	1	.	1
	3.7%	.	8.6%	.	10.4%
28 To 36 Years	14	0	2	7	5
	23.3%	4.3%	18.7%	24.3%	33.7%

37 To 46 Years	16	2	1	7	5
	25.9%	23.1%	13.3%	24.2%	38.7%
47 To 59 Years	15	2	3	11	.
	25.0%	21.0%	30.3%	36.2%	.
60 and Above	13	4	3	5	2
	22.1%	51.6%	29.1%	15.3%	17.2%

2.9.5 Arthritis

The prevalence and treatment levels of arthritis are also displayed in Tables above. Overall, 241 adult respondents (3%) reported that they had been diagnosed with arthritis, of which only 32 respondents (12%) were taking any medications or treatment for it during the 2 weeks preceding the survey. Levels of reported arthritis among age group (47-59) were much higher than those in other age groups, same trend noted in the treatment as well.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been diagnosed with/told by health care professional that you have arthritis (sometimes called rheumatism or osteoarthritis)?					
Respondents who answered NO	7947	540	517	3503	3388
Respondents who answered YES	241	26	47	74	94
18 To 36 Years	44	7	6	13	19
	18.5%	25.8%	12.6%	17.8%	19.8%
37 To 46 Years	46	3	6	15	23
	19.2%	10.6%	12.2%	20.2%	24.2%
47 To 59 Years	78	4	16	24	34
	32.5%	16.6%	33.9%	32.8%	36.1%
60 and Above	72	12	19	22	19
	29.8%	47.1%	41.2%	29.2%	19.8%
Have you been taking medications or other treatment for it During the last 2 weeks?					
Respondents who answered NO	78	9	10	25	34
Respondents who answered YES	32	1	7	14	10
18 To 36 Years	7	.	2	.	5
	22.6%	.	33.8%	.	48.4%
37 To 46 Years	7	0	1	3	3
	22.1%	16.5%	7.9%	21.0%	33.3%
47 To 59 Years	11	0	2	7	2
	34.5%	40.7%	30.9%	47.6%	18.3%
60 and Above	7	0	2	4	.
	20.8%	42.8%	27.3%	31.4%	.

2.9.6 Stroke

The respondents to the survey were asked whether they had ever been told by a health professional that they had suffered from a stroke in their lifetime. It is important to bear in mind that the results may not accurately reflect coverage of treatment for people who have had a stroke, partly because of the relatively high case fatality rate of stroke and partly because many stroke patients become confined to the hospital given the potential severity of the condition. Those in this situation, have not been included in the survey.

Of the 14 respondents who had suffered from stroke, 8 respondents had taken medications or other treatment for stroke in the 2 weeks preceding the survey.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been diagnosed by health professional or health care provider with stroke?					
Respondents who answered NO	8174	564	560	3571	3479
Respondents who answered YES	14	3	3	6	3
18 To 36 Years	0	0	0	0	0
	2.0%	0	0	0	8.5%
37 To 46 Years	3	.	.	1	2
	23.9%	.	.	16.6%	74.1%
47 To 59 Years	5	0	0	5	.
	35.3%	7.9%	5.6%	83.4%	.
60 and Above	5	2	3	.	1
	38.8%	92.1%	94.4%	.	17.3%
Have you been taking any medications or other treatment for stroke during the last 2 weeks?					
Respondents who answered NO	5	2	2	0	1
Respondents who answered YES	8	1	1	6	1
18 To 36 Years	0	0	0	0	0
	0	0	0	0	0
37 To 46 Years	1	.	.	1	.
	11.9%	.	.	16.6%	.
47 To 59 Years	5	0	.	5	.
	60.8%	11.5%	.	83.4%	.
60 and Above	2	1	1	.	1
	27.4%	88.5%	100.0%	.	100.0%

2.9.7 Chronic Lung Disease

Of the 8188 adult respondents surveyed, 68 respondents (less than 1%) were diagnosed by health professional or healthcare provider with chronic lung disease (emphysema, bronchitis, COPD) of which only 7 respondents were taking any medications or other treatment (like Oxygen) for chronic lung diseases during the last 2 weeks before the survey.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been diagnosed by health professional or health care provider with chronic lung disease (emphysema, bronchitis, COPD)?					
Respondents who answered NO	8120	556	553	3556	3455
Respondents who answered YES	68	10	10	20	27
18 To 27 Years	10	0	2	3	4
	14.5%	3.3%	20.5%	15.6%	15.7%
28 To 36 Years	18	4	1	1	12
	27.2%	38.0%	11.9%	6.0%	44.4%
37 To 46 Years	13	3	3	3	4
	19.4%	30.5%	26.3%	17.1%	14.4%
47 To 59 Years	17	1	1	9	5
	24.7%	13.0%	14.0%	44.2%	18.6%
60 and Above	10	2	3	3	2
	14.2%	15.2%	27.4%	17.1%	7.0%
Have you been taking any medications or other treatment (like oxygen) for chronic lung diseases during the last 2 weeks?					
Respondents who answered NO	19	4	2	4	8
Respondents who answered YES	7	1	2	2	2
18 To 36 Years	1	.	1	.	1
	23.8%	.	38.4%	.	38.8%
37 To 46 Years	2	0	1	.	1
	32.5%	71.2%	24.6%	.	61.2%
47 To 59 Years	2	0	.	2	.
	32.5%	28.8%	.	100.0%	.
60 and Above	1	.	1	.	.
	11.1%	.	37.0%	.	.

2.9.8 Depression

The following tables shows the prevalence and treatment rates for depression of adults respondents. Of the 8188 adult respondents surveyed, only 46 (less than 1%) respondents had been clinically diagnosed by health professional or healthcare provider with depression. The level of reported depression was very similar for both the non-Emirati and Emirati population. The age group apparently most affected by depression was the (28-36) age group, where 34.3% reported depression.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Have you ever been diagnosed by health professional or health care provider with depression?					
Respondents who answered NO	8143	562	558	3567	3456
Respondents who answered YES	46	5	5	10	27
18 To 27 Years	4	.	1	.	3
	8.5%	.	20.8%	.	10.7%
28 To 36 Years	16	1	2	2	10
	34.3%	32.0%	34.1%	23.0%	38.8%
37 To 46 Years	15	1	1	5	8
	32.6%	33.0%	21.1%	49.4%	28.6%
47 To 59 Years	10	1	1	3	5
	20.9%	27.8%	21.7%	27.6%	17.2%
60 and Above	2	0	0	.	1
	3.7%	7.2%	2.4%	.	4.7%
Do you have regular consultation for depression?					
Respondents who answered NO	30	1	2	6	21
Respondents who answered YES	16	4	3	3	6
18 To 27 Years	2	.	1	.	1
	11.6%	.	31.5%	.	14.5%
28 To 36 Years	2	1	.	.	1
	11.9%	29.3%	.	.	14.2%
37 To 46 Years	9	1	1	3	3
	58.0%	40.8%	32.0%	100.0%	59.6%
47 To 59 Years	2	1	1	.	.
	11.5%	21.0%	32.9%	.	.
60 and Above	1	0	0	.	1
	7.0%	8.9%	3.6%	.	11.7%
Have you been taking any medications or other treatment for depression during the last 2 weeks?					
Respondents who answered NO	31	2	3	3	23
Respondents who answered YES	14	2	2	6	3
18 To 27 Years	2	.	1	.	1
	12.9%	.	47.0%	.	24.7%
28 To 36 Years	1	0	.	1	.
	10.5%	12.3%	.	18.9%	.
37 To 46 Years	7	1	1	4	1
	48.7%	57.9%	47.6%	57.4%	26.5%
47 To 59 Years	3	0	.	2	1
	20.1%	15.6%	.	23.8%	28.9%
60 and Above	1	0	0	.	1
	7.8%	14.2%	5.4%	.	19.8%

Of the 46 respondents clinically diagnosed with depression, only 16 were having regular consultations for the condition and only 14 of them were taking regular medications or other treatment for depression during the 2 weeks before the survey. Of these 46 respondents clinically diagnosed with depression, 14 respondents said they had a period lasting several days (more than 3 days) when they felt sad, empty or depressed during the 12 months preceding the survey.

During the last 12 months, have you had a period lasting several days (>3) when you felt sad, empty or depressed?					
Respondents who answered NO	31	2	2	7	21
Respondents who answered YES	14	3	3	3	6
18 To 27 Years	2	.	1	.	1
	13.1%	.	32.5%	.	14.6%
28 To 36 Years	3	0	1	.	2
	20.4%	10.4%	20.4%	.	34.2%
37 To 46 Years	7	1	1	3	2
	51.6%	49.1%	32.9%	100.0%	41.2%
47 To 59 Years	1	1	0	.	.
	7.8%	28.4%	10.5%	.	.
60 and Above	1	0	0	.	1
	7.2%	12.0%	3.7%	.	10.0%

2.9.9 Cataract

98 respondents (about 1.25%) were diagnosed with a cataract in one or both eyes. The condition was more common among males in both Emirati and non-Emirati population. Of those diagnosed, 55 (more than 50%) respondents had underwent eye surgery to remove the cataract in the 12 months preceding the survey. Among these 96 respondents, 59 respondents had vision problems with light, such as glare from bright lights, or halos around lights.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
In the last 12 months, were you diagnosed with a cataract in one or both of your eyes (cloudiness in the lens of the eye)?					
Respondents who answered NO	8033	542	546	3510	3435
Respondents who answered YES	98	22	16	32	28
18 To 36 Years	18	5	3	7	4
	18.4%	22.5%	16.0%	21.1%	13.5%
37 To 46 Years	22	3	2	8	9
	22.4%	12.2%	15.4%	25.7%	30.6%
47 To 59 Years	26	3	4	10	9
	26.7%	15.8%	25.7%	29.6%	32.5%

60 and Above	32	11	7	8	7
	32.5%	49.5%	42.9%	23.6%	23.5%
In the last 12 months, have you had eye surgery to remove this cataract(s)?					
Respondents who answered NO	44	3	7	20	14
Respondents who answered YES	55	19	9	12	15
18 To 36 Years	7	5	2	0	.
	12.2%	26.1%	18.6%	0.9%	.
37 To 46 Years	10	2	1	3	5
	18.7%	9.7%	9.2%	25.1%	30.5%
47 To 59 Years	16	3	3	4	5
	28.4%	18.3%	28.7%	36.2%	34.7%
60 and Above	22	9	4	5	5
	40.7%	45.9%	43.4%	37.9%	34.9%
Vision problems with light, such as glare from bright lights, or halos around lights?					
Respondents who answered NO	39	11	8	12	8
Respondents who answered YES	59	11	8	20	20
18 To 36 Years	4	2	.	2	.
	7.0%	15.7%	.	12.4%	.
37 To 46 Years	16	2	1	5	8
	26.4%	16.3%	17.0%	24.6%	37.5%
47 To 59 Years	19	2	3	6	7
	31.8%	22.2%	35.1%	30.6%	36.8%
60 and Above	21	5	4	6	5
	34.8%	45.8%	47.9%	32.5%	25.7%

2.9.10. Injuries

About 1.2% of the total respondents (97) were involved in a road traffic accident in the 12 months preceding the survey where they suffered from bodily injuries. Another 76 respondents had other form of bodily injury (other than road traffic accident). Mostly these injuries were accidents (unintentional). No major Differences were observed between both genders and nationalities.

Question asked	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
In the last 12 months, have you been involved in a road traffic accident where you suffered from bodily injury?					
Total respondents answering	8188	566	563	3577	3482
Yes, once only	80	16	10	30	25
	1.0%	2.8%	1.8%	0.8%	0.7%

Yes, more than once	17	1	0	6	10
	0.2%	0.2%	0.1%	0.2%	0.3%
In the last 12 months, have you had any other event where you suffered from bodily injury? (other than road traffic accident)					
Total respondents answering	8188	566	563	3577	3482
No bodily injury	8112	556	553	3548	3455
Yes, once only	67	10	10	23	25
	0.8%	1.7%	1.8%	0.6%	0.7%
Yes, more than once	9	0	.	6	3
	0.1%	0.0%	.	0.2%	0.1%
Reason for the bodily injuries (other than road traffic accident) (multiple)					
Total respondents with bodily injuries	97	17	11	35	34
It was an accident (unintentional)	79	15	9	30	26
	81.4%	90.7%	79.8%	84.2%	74.7%
Someone did it deliberately (intentional)	6	0	1	.	4
	5.8%	2.4%	12.7%	.	11.2%
I did it to myself deliberately (self-inflicted)	7	0	0	1	5
	6.8%	2.2%	1.2%	3.4%	14.1%
What was the cause of injury?					
Total respondents responding	76	10	10	29	28
Fall	22	4	5	5	9
	29.3%	43.0%	45.8%	17.1%	31.1%
Struck/hit by person or object	25	5	1	13	7
	32.9%	48.8%	6.4%	44.9%	24.3%
Fire, flames or heat	12	.	1	4	7
	15.3%	.	9.3%	12.8%	25.4%
Poisoning	5	.	1	2	2
	6.7%	.	8.9%	7.4%	7.4%
Animal bite	1	.	0	.	1
	1.9%	.	3.7%	.	3.9%
Electricity shock	3	.	2	.	2
	4.6%	.	15.5%	.	7.0%
Other	3	1	1	2	0
	4.5%	8.2%	7.2%	5.9%	0.8%

2.10. Health Promotional Messages

The section was intended to understand the trend of healthcare professionals in UAE spreading health promotional messages during their consultations with patients. Overall, around 45% of the total respondents received Health promotional messages given by their physicians or health care professionals. Quit using tobacco was least communicated advice (28.5%) between physicians and their patients.

Table 41: Summary Summary of the health promotional messages

Health promotional and preventative messages given by physicians to their patients	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
Quit using tobacco or don't start	2338	185	120	1163	869
	28.5%	32.6%	21.4%	32.5%	25.0%
Reduce salt in your diet	3456	262	257	1590	1347
	42.2%	46.3%	45.7%	44.4%	38.7%
Eat at least five servings of fruit and/or vegetables each day	4050	297	301	1839	1613
	49.5%	52.5%	53.4%	51.4%	46.3%
Reduce fat in your diet	4092	291	296	1828	1677
	50.0%	51.4%	52.5%	51.1%	48.2%
Start or do more physical activity	4055	287	278	1829	1661
	49.5%	50.7%	49.3%	51.2%	47.7%
Maintain a healthy body weight or lose weight	4320	294	301	1916	1809
	52.8%	51.9%	53.4%	53.6%	52.0%
Reduce sweetened beverages (soft drinks such as Pepsi and Cola)?	3353	266	261	1537	1288
	40.9%	47.0%	46.4%	43.0%	37.0%

2.11. Cervical & Breast Cancer Screening (for women between 18-69 years only)

The question of pelvic examination and screening for cervical cancer were asked only to the ever-married women only aged (18-69) whereas the questions on breast cancer screening by mammography were asked from women aged 40 years and above regardless of their marital status.

There were total of 3599 married women aged between 18-69 years who responded to the question on pelvic examination. A total of 682 women had undergone pelvic examination for examination of vagina and uterus. Majority of the women (65.7%) had undergone pelvic examination in the last 1 year prior to the survey and very few beyond 5 years since the survey.

Table 42: Respondents undergoing pelvic examination (for screening of vaginal and uterine pathologies) and time since last pelvic examination

	TOTAL	Emirati	Non-Emirati
Distribution of Respondents by Time since last pelvic examination	680	148	533
	100.0%	100.0%	100.0%
Below 2 Years	447	99	348
	65.7%	67.1%	65.4%
2 to 5 Years	211	43	169
	31.1%	28.9%	31.7%
More than 5 years	22	6	16
	3.2%	4.0%	3.0%

Table 43: Respondents who ever had a screening test* for cervical cancer aged (18-69)

Percentage of respondents who ever had a screening test* for cervical cancer	TOTAL	Emirati	Non-Emirati
	12.60%	27.3%	10.6%
Distribution by age groups			
18 To 27 Years	54	15	39
	11.9%	20.9%	8.0%
28 To 36 Years	155	37	118
	34.2%	27.6%	9.3%
37 To 46 Years	122	35	87
	26.9%	34.6%	9.4%
47 To 60 Years	106	23	83
	23.4%	26.9%	19.6%
60 and Above	16	5	11
	3.5%	15.9%	16.9%

Out of the total of 3599 women aged 18-69 years, 2613 women said that they had not undergone such screening tests whereas 255 respondents refused to answer this question while 278 women said they did not know if they had ever undergone any cervical cancer screening test.

Only 453 women responded yes to have ever undergone screening for cervical cancer by one of the methods - Visual Inspection with Acetic Acid/vinegar (VIA), Pap smear and Human Papillomavirus (HPV) test. There were no respondents below the age of 18 years in the survey population.

Out of 453 women aged 18-69 years, there were 210 women between 30 and 49 years age group. When we narrow down the age group of women undergoing any screening test for cervical cancer between 30 and 49 years, we see the following distribution

Table 44: Respondents who ever had a screening test* for cervical cancer aged (30-49)

Total Women aged 30-49 years who had undergone any cervical cancer screening	Emirati	Non-Emirati
210	45	178
14.6%	12.6%	16.5%

In the WHS, women aged 40+ were asked if they had a mammography, or a breast examination, to detect breast cancer, Only 8.5% of the total respondents reported having an examination. The Emirati females deemed in need of a breast examination (i.e. over the age of 40), 16.7% reported having received one. This figure is lower than that of the Non-Emirati females

Table 45: Respondents who responded to question – "Have you done a mammography (an X-ray of your breast taken to detect breast cancer at an early stage)

	TOTAL	Emirati	Non-Emirati
This question was answered only by those Females aged more than 40 years regardless of their marital status	3,993*	544	3,450
	100.0%	100.0%	100.0%
Yes	338	91	248
	8.5%	16.7%	7.2%
No	2,951	373	2,578
	73.9%	68.6%	74.7%
Refused	318	34	283
	8.0%	6.3%	8.2%
Don't Know	387	46	341
	9.7%	8.4%	9.9%

* Please note the difference between the numbers of married women respondents aged 18-69 years was 3599 and they answered the question on pelvic examination and cervical cancer screening whereas the question on mammography was answered by 3993 women aged above 40 years regardless of their marital status

Table 46: Age distribution of women who had underwent mammography

	Emirati					Non-Emirati				
TOTAL	18 To 27 Years	28 To 36 Years	37 To 46 Years	47 To 60 Years	60 and Above	18 To 27 Years	28 To 36 Years	37 To 46 Years	47 To 60 Years	60 and Above
338	6	8	31	36	11	7	40	79	104	17
8.5%	3.8%	4.9%	27.0%	40.5%	35.0%	1.0%	3.1%	8.4%	23.6%	24.5%

2.12. Health Services Coverage, Utilization & Satisfaction

This section shows the results on respondents' self-assessed need for healthcare services for different time periods, according to selected healthcare services (inpatient or outpatient). It also shows the results for healthcare utilization separately for inpatient and outpatient treatment.

About 9% of total respondents (258) said that they did not get healthcare the last time when they needed. The main reason for these respondents to seek healthcare was acute conditions (21.2%) followed by non-communicable diseases such as cardiovascular, respiratory diseases, diabetes, hypertension, arthritis.

Table 47: Summary of the healthcare coverage and utilization parameters

Healthcare Utilization Question	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
The last time you needed health care, did you get health care?					
No	258	12	19	104	123
	8.9%	4.6%	6.8%	8.2%	11.2%
Yes	2647	250	267	1158	972
	91.1%	95.4%	93.2%	91.8%	88.8%

What was the main reason you needed care, even if you did not get care?					
Respondents who did not get healthcare the last time they needed healthcare	258	12	19	104	123
Non-Communicable disease (cardiovascular, respiratory diseases, diabetes, hypertension, arthritis)	49	4	5	17	24
	19.0%	31.0%	23.3%	16.1%	19.5%
Communicable disease (infections, malaria, tuberculosis, HIV)	17	0	2	3	12
	6.6%	2.1%	9.7%	3.2%	9.4%
Maternal and perinatal conditions (pregnancy)	16	0	1	.	14
	6.3%	4.1%	6.8%	.	11.8%
psychological or mental disorders	1	.	1	.	.
	0.3%	.	4.5%	.	.
Acute conditions (pain, diarrhea, fever, flu, headaches, cough, other)	55	5	7	21	22
	21.2%	41.9%	34.6%	20.4%	17.8%
Injuries (including occupation/work related condition/injury,)	2	0	.	2	.
	0.9%	1.8%	.	2.0%	.
Surgery or surgical intervention	7	0	0	5	1
	2.9%	2.7%	0.9%	5.3%	1.2%
Other	111	2	4	55	50
	42.8%	16.3%	20.1%	52.9%	40.4%

2.12.1 Inpatient

Of the 2647 respondents who received healthcare the last time they needed healthcare, 397 respondents (15.0%) had stayed overnight in a hospital in UAE.
51.3% of the respondents were very satisfied with the health care services while 44.6% were satisfied with the healthcare services. Majority of the respondent got better and much better after visiting the healthcare.
Majority of respondents were satisfied with care they received in their last hospital stay. Majority of the respondent got better or much better after their last hospital stay.

Healthcare Utilization Question	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
In the last 3 years, have you ever stayed overnight in a hospital in both private and public sector in UAE?					
Total respondents who answered this question	2647	250	267	1158	972
Yes, I stayed overnight in a hospital	397	46	80	99	173
	15.0%	18.2%	30.1%	8.5%	17.8%

Overall, how satisfied were you with the care you received during your last hospital stay?					
Total respondents who answered this question	251	31	52	57	111
Very satisfied	128	18	27	29	54
	51.3%	58.0%	51.9%	51.8%	48.9%
Satisfied	112	11	24	25	52
	44.6%	36.3%	46.2%	43.8%	46.6%
Neither satisfied nor dissatisfied	8	1	1	2	4
	3.1%	2.2%	1.9%	4.4%	3.2%
Dissatisfied	2	0	.	.	2
	0.7%	1.0%	.	.	1.4%
Very dissatisfied	1	1	.	.	.
	0.3%	2.6%	.	.	.
What was the outcome or result of your visit to the health care provider? Did your condition.....					
Total respondents who answered this question	251	31	52	57	111
Get much better	113	15	24	24	51
	45.3%	47.2%	46.5%	41.7%	46.1%
Get better	129	15	26	32	56
	51.7%	48.1%	50.5%	56.7%	50.6%
No change	5	0	2	.	3
	2.0%	0.7%	3.0%	.	2.9%
Get worse	2	0	.	1	0
	0.7%	1.4%	.	1.6%	0.4%
Get much worse	1	1	.	.	.
	0.3%	2.6%	.	.	.

2.12.2 Outpatient

Private clinic or health care facility was most utilized in last 12 months by respondents. Non-Emiratis visited most in private clinic while Emiratis mostly visited to Public hospital in last 12 months.
Around 40% of the respondent went to seek healthcare services for Acute conditions (pain, diarrhea, fever, flu, headaches, cough, other) and 27.8% of the respondent visited for non-communicable diseases such as cardiovascular, respiratory diseases, diabetes, hypertension, arthritis.
Majority of respondents were satisfied with care they received in their last outpatient visit. Majority of the respondent got better or much better after their last outpatient visit

Healthcare Utilization Question	TOTAL	Emirati		Non-Emirati	
		Male	Female	Male	Female
What was the last (most recent) health care facility / service you visited in the last 12 months for outpatient care and care at home?					
Total respondents who answered this question on outpatient care and care at home	1826	191	222	731	682
Private doctor's office	527	45	68	223	192
	28.9%	23.3%	30.7%	30.5%	28.1%
Private clinic or health care facility	761	24	23	357	357
	41.7%	12.4%	10.3%	48.8%	52.4%
Public clinic or health care facility	135	26	25	44	40
	7.4%	13.6%	11.4%	6.1%	5.8%
Public hospital	387	95	105	101	86
	21.2%	49.4%	47.2%	13.9%	12.6%
Home visit	1	.	.	.	1
	0.1%	.	.	.	0.1%
Pharmacy	7	1	.	3	3
	0.4%	0.4%	.	0.4%	0.5%
Do not know	6	1	1	2	2
	0.3%	0.5%	0.3%	0.3%	0.3%
Other	1	1	.	.	1
	0.1%	0.3%	.	.	0.1%
Which reason best describes why you needed this visit for outpatient care and care at home?					
Total respondents who answered this question	1826	191	222	731	682
Non-Communicable disease (cardiovascular, respiratory diseases, diabetes, hypertension, arthritis)	507	60	75	223	149
	27.8%	31.5%	33.8%	30.6%	21.8%
Communicable disease (infections, malaria, tuberculosis, HIV)	49	5	3	17	23
	2.7%	2.7%	1.5%	2.4%	3.4%
Maternal and perinatal conditions (pregnancy)	175	2	33	7	133
	9.6%	1.2%	15.0%	0.9%	19.4%
psychological or mental disorders	7	3	.	.	4
	0.4%	1.6%	.	.	0.6%
Acute conditions (pain, diarrhea, fever, flu, headaches, cough, other)	731	67	55	343	265
	40.0%	35.2%	24.9%	47.0%	38.9%

Injuries (including occupation/work related condition/injury)	34	7	3	19	4
	1.9%	3.8%	1.5%	2.6%	0.6%
Surgery or surgical intervention	58	10	8	14	26
	3.2%	5.5%	3.6%	2.0%	3.7%
Do not know	47	4	3	23	17
	2.6%	2.2%	1.4%	3.1%	2.5%
Other	217	31	40	84	61
	11.9%	16.2%	18.2%	11.5%	9.0%
Overall, how satisfied were you with the care you received during your last visit for outpatient care and care at home?					
Total respondents who answered this question	1826	191	222	731	682
Very satisfied	721	84	123	270	243
	39.5%	44.0%	55.6%	37.0%	35.7%
Satisfied	1008	89	80	427	413
	55.2%	46.4%	35.9%	58.4%	60.6%
Neither satisfied nor dissatisfied	70	16	17	21	16
	3.8%	8.3%	7.7%	2.8%	2.4%
Dissatisfied	20	3	2	8	7
	1.1%	1.3%	0.7%	1.1%	1.1%
Very dissatisfied	7	.	0	5	2
	0.4%	.	0.1%	0.7%	0.3%
What was the outcome or result of your visit to the health care provider for outpatient care and care at home? Did your condition					
Total respondents who answered this question	1826	191	222	731	682
Get much better	519	64	88	172	194
	28.4%	33.7%	39.6%	23.6%	28.5%
Get better	1205	115	111	524	456
	66.0%	60.1%	50.0%	71.7%	66.8%
No change	92	11	21	30	29
	5.0%	5.8%	9.6%	4.2%	4.3%
Get worse	6	1	1	3	1
	0.3%	0.5%	0.5%	0.4%	0.1%
Get much worse	4	.	1	1	2
	0.2%	.	0.3%	0.1%	0.3%

2.13. Clinical and Biochemical Measurements

A total of 4971 individuals had provided physical, physiological and biochemical measurements that included weight, height, waist and hip circumference, heart rate, blood pressure, hemoglobin, glycated hemoglobin (HbA1c), fasting blood glucose levels and fasting blood cholesterol levels.

Overall 27.8% of the respondents were obese. Prevalence of obesity was more among female respondents and particularly in Emiratis. 41.8% of the female Emirati respondents were obese. Prevalence of obese was the highest in the 30-44 years age group.

Overall 67.9% of the respondents were overweight. Males were in particular more over weight than females. Prevalence of over-weight was more in the 30-44 years age group.

28.8% of total respondents were having high BP. High BP was more in the male respondent and in the Non-Emiratis group. 72.5% of the population were suffering from the raised BP. Majority were non-Emiratis and particularly male respondents in the age group 30-44 years.

11.8% of the respondents were having raised fasting glycaemia (Diabetes) and most were males. Non-Emiratis males (14.2%) had higher prevalence of raised fasting glycaemia than Emiratis males (10.3%). Overall 11.7% of the respondents were having impaired fasting glycaemia and most were males. Non-Emiratis males (14.1%) had higher prevalence of impaired fasting glycaemia than Emiratis males (12.1%).

43.7% of the total respondents had raised blood cholesterol. The peak prevalence of raised cholesterol was noted in the age-group of 30-44 years and female in this age group were most affected. More number of Emirati female respondents had higher cholesterol level in comparison to Emirates males. On the contrary number of male population with higher cholesterol levels was higher among non-Emiratis.

Table 48: Summary of the Clinical and Biochemical Measurements

		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents who are overweight with BMI 25 kg/m2 among different age groups									
Denominator all respondents with valid BMI readings	4815	2481	2334	656	4159	336	321	2145	2013
Numerator (Total respondents with BMI ≥ 25 kg/m2)	3270	1756	1515	466	2805	237	228	1518	1287
	67.9%	70.8%	64.9%	70.9%	67.4%	70.7%	71.1%	70.8%	63.9%
18-29 years	667	331	336	133	534	75	58	256	278
	20%	19%	22%	29%	19%	32%	25%	17%	22%
30-44 years	1028	235	793	193	835	101	92	134	701
	31%	13%	52%	41%	30%	43%	40%	9%	54%
45-59 years	788	480	308	91	697	38	53	442	255
	24%	27%	20%	20%	25%	16%	23%	29%	20%
60+ years	188	110	78	49	139	23	26	87	52
	6%	6%	5%	11%	5%	10%	11%	6%	4%

		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents who are obese with BMI 30 kg/m2 among different age groups									
Denominator all respondents with valid BMI readings	4815	2481	2334	656	4159	336	321	2145	2013
Numerator (Total respondents with BMI ≥ 30 kg/m2)	1337	624	713	242	1095	108	134	516	579
	27.8%	25.1%	30.6%	36.9%	26.3%	32.2%	41.8%	24.1%	28.8%

18-29 years	260	129	131	60	200	32	28	97	103
	19%	21%	18%	25%	18%	30%	21%	19%	18%
30-44 years	667	300	367	104	563	52	52	248	315
	50%	48%	51%	43%	51%	48%	39%	48%	54%
45-59 years	317	157	160	50	267	16	34	141	126
	24%	25%	22%	21%	24%	15%	25%	27%	22%
60+ years	93	38	55	28	65	8	20	30	35
	7%	6%	8%	12%	6%	7%	15%	6%	6%
		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP)									
Denominator all respondents with valid BP readings	4971	2515	2456	678	4293	338	340	2177	2116
Numerator (Total Respondents with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg or currently on medication for raised BP))	1432	951	481	184	1248	101	83	850	398
	28.8%	37.8%	19.5%	27.1%	29.1%	29.9%	24.4%	39.0%	18.8%
18-29 years	170	101	69	23	147	14	9	87	60
	11.9%	10.6%	14.3%	13%	12%	14%	11%	10%	15%
30-44 years	625	434	191	67	558	41	26	393	165
	43.6%	45.6%	39.7%	36%	45%	41%	31%	46%	41%
45-59 years	476	311	165	50	426	25	25	286	140
	33.2%	32.7%	34.3%	27%	34%	25%	30%	34%	35%
60+ years	161	105	56	44	117	21	23	84	33
	11.2%	11.0%	11.6%	24%	9%	21%	28%	10%	8%

		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents with raised BP (SBP ≥ 140 and/or DBP ≥ 90 mmHg) BUT who were not currently taking any medications for raised BP									
Denominator all respondents with valid BP readings	1432	951	481	184	1248	101	83	850	398
Numerator (Total respondents with raised BP as per definition above)	1036	712	324	114	922	67	47	645	277
	72.5%	74.9%	67.8%	62.0%	73.9%	66.3%	56.6%	75.9%	69.6%
18-29 years	157	94	63	22	135	14	8	80	55
	15%	13%	19%	19%	15%	21%	17%	12%	20%
30-44 years	524	364	160	54	470	33	21	331	139
	51%	51%	49%	47%	51%	49%	45%	51%	50%
45-59 years	284	201	83	25	259	13	12	188	71
	27%	28%	26%	22%	28%	19%	26%	29%	26%
60+ years	71	53	18	13	58	7	6	46	12
	7%	7%	6%	11%	6%	10%	13%	7%	4%

		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents with impaired fasting glycaemia as defined below: **1) Plasma venous value ≥6.1 mmol/L (110 mg/dl) and <7.0 mmol/L (126 mg/dl) or 2) Capillary whole blood value ≥5.6 mmol/L (100 mg/dl) and <6.1 mmol/L (110 mg/dl)**									
Denominator all respondents with valid blood glucose readings	3294	1667	1627	448	2846	224	225	1443	1403
Numerator (Total respondents with impaired fasting glycaemia as per definition)	387	230	157	44	343	27	17	203	140
	11.7%	13.6%	9.7%	9.8%	12.1%	12.1%	7.6%	14.1%	10.0%

18-29 years	63	29	34	12	51	7	5	22	29
	16.3%	12.6%	21.7%	27%	15%	26%	29%	11%	21%
30-44 years	178	105	73	17	161	10	7	95	66
	46.0%	45.7%	46.5%	39%	47%	37%	41%	47%	47%
45-59 years	125	83	42	10	115	7	3	76	39
	32.3%	36.1%	26.8%	23%	34%	26%	18%	37%	28%
60+ years	21	13	8	5	16	3	2	10	6
	5.4%	5.7%	5.1%	11%	5%	11%	12%	5%	4%
		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents with raised fasting blood glucose as defined below or currently on medication for raised blood glucose: **1) Plasma venous value ≥ 7.0 mmol/L (126 mg/dl) OR 2) Capillary whole blood value ≥ 6.1 mmol/L (110 mg/dl)**									
Denominator all respondents with valid blood glucose readings	3294	1667	1627	448	2846	224	225	1443	1403
Numerator (Total respondents with raised fasting blood glucose as per definition above)	395	228	167	45	350	23	22	205	145
	11.8%	13.3%	10.3%	10.0%	12.3%	10.3%	9.8%	14.2%	10.3%
18-29 years	34	19	15	5	29	4	1	15	14
	9%	8%	8.9%	11%	8%	17%	5%	7%	10%
30-44 years	139	71	68	10	129	6	4	65	64
	35%	31%	40.7%	22%	37%	26%	18%	32%	44%
45-59 years	171	105	66	17	154	6	11	99	55
	43%	46%	39.5%	37.8%	44%	26%	50%	48%	38%
60+ years	51	33	18	13	38	7	6	26	12
	13%	14%	10.8%	28.9%	11%	30%	27%	13%	8%

		Gender		TOTAL		Emirati		Non-Emirati	
	Population Total	Male	Female	Emirati	Non-Emirati	Male	Female	Male	Female
Respondents with raised total cholesterol (≥ 5.0 mmol/L or ≥ 190 mg/dl or currently on medication for raised cholesterol)									
Denominator all respondents with valid blood cholesterol readings	3270	1652	1618	442	2827	220	223	1432	1395
Numerator (Total respondents with raised total cholesterol as per definition or currently on medication for raised cholesterol))	1429	734	695	197	1232	81	116	653	579
	43.7%	44.4%	42.9%	44.5%	43.6%	36.9%	52.1%	45.6%	41.5%
18-29 years	237	93	144	48	189	17	31	76	113
	17%	13%	21%	24%	15%	21%	27%	12%	20%
30-44 years	719	386	333	79	640	35	44	351	289
	50%	53%	48%	40%	52%	43%	38%	54%	50%
45-59 years	378	205	172	43	335	17	26	188	147
	26%	28%	25%	22%	27%	21%	22%	29%	25%
60+ years	95	50	45	27	68	12	15	38	30
	7%	7%	6%	14%	6%	15%	13%	6%	5%

3.EVER MARRIED WOMEN RESPONDENTS' CHARACTERISTICS

3.1. General Socio-Demographic Characteristics of Ever Married Women Respondents

Table 49: Summary of the socio-demographic characteristics of ever-married women respondents

Characteristic of the ever-married women participating in the survey	TOTAL	Nationality	
		Emirati	Non-Emirati
Nationality	7467	735	6732
	100%	9.8%	90.2%
Current marital status			
Currently married	7250	673	6577
	97.1%	91.6%	97.7%
Divorced/Separated	162	48	114
	2.2%	6.6%	1.7%
Widowed	54	13	41
	0.7%	1.8%	0.6%
Age			
15 - 19 Years	33	4	29
	0.4%	0.6%	0.4%
20 - 24 Years	293	49	244
	3.9%	6.6%	3.6%
25 - 29 Years	1263	107	1156
	16.9%	14.6%	17.2%
30 - 34 Years	1849	153	1696
	24.8%	20.8%	25.2%
35 - 39 Years	1696	160	1536
	22.7%	21.7%	22.8%
40 - 44 Years	1294	137	1157
	17.3%	18.6%	17.2%
45 - 49 Years	1039	125	914
	13.9%	17.0%	13.6%
Women who were currently working	3178	274	2903
	42.6%	37.3%	43.1%
Education status			
Never Educated	95	14	81
	1.3%	1.9%	1.2%

Pre-Primary Education	23	6	17
	0.3%	0.9%	0.2%
Primary Education	228	47	180
	3.0%	6.4%	2.7%
Lower secondary education	333	81	252
	4.5%	11.0%	3.7%
Upper secondary education	894	198	697
	12.0%	26.9%	10.3%
Post-secondary non-tertiary education	376	52	324
	5.0%	7.0%	4.8%
Short-cycle tertiary education	393	34	359
	5.3%	4.6%	5.3%
Bachelor's or equivalent level	4081	284	3796
	54.7%	38.7%	56.4%
Master's or equivalent level	933	16	917
	12.5%	2.2%	13.6%
Doctoral or equivalent level	97	2	95
	1.3%	0.3%	1.4%
Ever-married women who ever given birth to a live baby	5581	618	4963
	74.7%	84.1%	73.7%
Women who gave birth in 5 years preceding the survey	2369	291	2078
	42.4%	47.1%	41.9%
Women who gave birth inside UAE	1,556	281	1,275
	65.7%	96.5%	61.4%
Place of delivery for all deliveries in UAE			
Hospital and health facility based	1546	279	1267
	99.4%	99.3%	99.4%
Home based	10	2	8
	0.6%	0.7%	0.6%
Women who saw a doctor, nurse or midwife for post-natal care in UAE	1,324	231	1,093
	87.6%	84.9%	88.2%
At least 3 antenatal visits (computed only for last child born in UAE)	1140	212	928
	97.3%	97.7%	97.2%
Exclusive breastfeeding	138	21	117
	59.70%	63.40%	60.30%

A total of 7467 women (weighted number) who were ever married participated in the survey of which about 10% were Emirati and 90% were non-Emirati women.

About 97% of the ever-married women who participated in the survey were currently married. More than 40% of ever-married women respondents were working with the literacy rates being more than 98%. The participating women were found to be highly literate with more than 65% of women being either graduate or above.

Among the ever-married women about 75% of them had ever given birth to a live baby with more number of Emirati women having ever given birth to a live baby than non-Emirati women. About 43% of women had given birth to a child in the 5 years preceding the survey and here again, the proportion of Emirati women with live birth in the 5 years preceding the survey was more than the non-Emirati women.

In total, among the women who had given live birth in the 5 years before the survey, 65% of them had delivered in UAE, with the number of Emirati women delivering inside UAE being obviously much higher (about 97%) than non-Emirati women (about 61%).

It is noteworthy that more than 99% of all deliveries were conducted inside hospitals. More than 87% of women who gave birth also saw a doctor, nurse or midwife for post-natal care in UAE.

More than 97% of women delivering inside UAE had at least 3 antenatal visits, this number was computed for the last-born child.

About 60% of women reported to have exclusively breast fed their children with the number being higher among Emirati women than non-Emirati women.

Table 50: Average number of children borne by the ever-married women respondents

How many children have you ever given birth to?	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
		Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
15 - 19 Years	1.9	1.1	2.0	-	2.2	1.0	-	-	1.0	-	1.0	-	-	-	-	2.0	2.0
20 - 24 Years	1.5	1.8	1.4	2.2	1.4	1.2	1.2	2.0	1.7	1.8	1.5	1.6	1.1	1.2	1.6	1.3	1.3
25 - 29 Years	1.6	2.1	1.6	2.4	1.7	1.6	1.3	2.0	1.6	2.1	1.5	2.3	1.6	1.9	2.3	1.9	1.6
30 - 34 Years	2.0	3.0	1.9	3.1	2.2	2.4	1.5	3.4	2.0	2.7	2.1	2.8	2.4	3.0	1.9	2.8	1.8
35 - 39 Years	2.3	3.5	2.1	3.9	2.6	2.7	1.7	3.0	2.2	4.3	2.8	3.3	3.5	3.6	2.8	3.9	3.0
40 - 44 Years	2.6	4.1	2.4	4.4	3.0	3.5	1.7	3.5	3.2	4.9	3.2	4.8	2.4	5.2	2.9	3.8	3.0
45 - 49 Years	2.7	4.5	2.4	4.7	2.7	3.6	1.9	5.1	3.9	5.1	3.0	5.4	3.6	4.6	3.8	4.5	2.6
Total	2.2	3.4	2.1	3.6	2.4	2.9	1.6	3.3	2.3	3.9	2.3	3.9	2.6	3.5	2.6	3.5	2.4

The average number of children born by the ever-married women gradually increased from 25 years onwards, with an average of 2.2 children being born by all ever married women across the age-groups. Emirati women born more children (3.4 average number of children) than non-Emirati women (2.1).

3.2. Antenatal Care

Table 51: Number of antenatal visits among ever married women with their last birth in UAE

Number of antenatal visits among women who had seen a doctor, nurse or midwife for their checkup in UAE	TOTAL	Emirati	Non-Emirati
Minimum 1 antenatal visit	1157	215	942
	98.8%	99.1%	98.6%
At least 2 antenatal visits	1155	215	941
	98.5%	98.9%	98.5%
At least 3 antenatal visits	1140	212	928
	97.3%	97.8%	97.2%
Total	1172	217	955
	100.0%	100.0%	100.0%

Please note that the responses above are overlapping and hence the column total will not be 1172, which is the total number of women who had seen a healthcare provider in UAE during their last pregnancy. Please note the small decline in the percentage of women receiving antenatal visits from only 1 visit to the at least 3 antenatal visits. Couple of explanations could be as per the prevailing policy in UAE, pregnant women are required to go to a hospital after their 7th month of pregnancy, which may reduce the visits to clinics. Also, many non-Emirati women prefer to deliver in their home countries where they have care and support available from their relatives and extended family members and hence they travel outside the country before their expected delivery date. The 2nd reason can be illustrated in a later table on the place of delivery – inside or outside UAE.

Table 52: Use of iron supplements during antenatal care

Women who were visiting a health care provider during their last pregnancy	TOTAL	Emirati	Non-Emirati
Yes, have taken iron tables &/or syrup	1,725	260	1,466
	92.1%	90.8%	93.4%
No, have not taken iron tablets &/or syrup	107	21	86
	5.7%	7.7%	6.0%
Do not know	41	4	37
	2.2%	1.5%	0.6%
Total	1,873	285	1,588
	100.0%	100.0%	100.0%

More than 92% of women receiving antenatal care within UAE had taken iron tablets or syrups as supplement during their last pregnancy.

3.3. Post-natal care

Table 53: Place of delivery for the last-born child – inside or outside UAE

Women who were visiting a health care provider during their last pregnancy	TOTAL	Emirati	Non-Emirati
Inside UAE	1,556	281	1,275
	65.7%	96.3%	61.4%
Outside UAE	813	11	803
	34.3%	1.4%	19.6%

Total	2,369	291	2,078
	100.0%	100.0%	100.0%

Among all the women who had given a live birth in the 5 years preceding the survey, about 66% of them had delivered inside UAE and the number of Emirati women who delivered inside UAE was much higher than non-Emirati women delivering inside UAE

Table 54: For all deliveries done in UAE for last born child - type of healthcare professional who provided assistance in delivery

Multiple responses	TOTAL	Emirati	Non-Emirati
Doctor	1,453	257	1,196
	93.5%	91.7%	93.9%
Nurse or midwife	404	105	299
	26.0%	37.5%	23.5%
None	9	1	8
	0.6%	0.5%	0.6%
Relative/friend with no medical training	5	4	1
	0.3%	1.3%	0.1%
Traditional birth attendant	0	0	0
	0.0%	0.1%	0.0%
Other	0	0	0
	0.0%	0.0%	0.0%
Total	1,554	281	1,273
	100.0%	100.0%	100.0%

Majority of women delivering inside UAE were assisted by a doctor or a nurse. As can be seen from the later tables, more than 99% of women who delivered inside UAE had delivered within a hospital.

Table 55: Place of delivery for all last- born child born in UAE

Place of delivery	TOTAL	Emirati	Non-Emirati
TOTAL Women who were seeing a doctor, nurse or midwife in UAE for their last pregnancy & delivered in UAE	1,556	281	1,275
	100%	100%	100%
Hospital & Health Facility Based Deliveries (District/regional Governmental hospital, private hospital & other health facilities)	1,543	278	1,265
	99.2%	99.0%	99.2%
Home Based Deliveries	10	2	8
	0.64%	0.6%	0.7%
Other type of health facility	2	0	2
	0.45%	0.00%	0.47%

Table 56: Respondents who answered, "After your delivery, did you see a doctor, nurse or midwife for post-natal care in UAE?"

	TOTAL	Emirati	Non-Emirati
Total number of women aged 15-49 years with a live birth in last 5 years	1,511	272	1,240
	100.00%	100.00%	100.00%
Yes, I saw a doctor, nurse or midwife for PNC in UAE	1,324	231	1,093
	87.6%	84.9%	88.2%
No, I did not see any doctor, nurse or midwife for PNC in UAE	187	40	147
	12.4%	15.1%	11.9%

More than 99% of all women delivering inside UAE had delivered inside a hospital and more than 87% of them saw a doctor, nurse or a midwife for postnatal care in UAE.

3.4. Birth Weight of Last-Born Child

Table 57: Birth weight of last-born children

	TOTAL	Emirati	Non-Emirati
Total number of last-born children among women in the last 5 years	1,996	238	1,758
	100.0%	100.0%	100.0%
Low birth weight (Below 2500grams)	331	57	273
	16.6%	24.1%	15.5%
Normal birth weight (2500 grams to 4500 grams)	1,644	178	1,466
	82.4%	74.8%	83.4%
Above normal (more than 4500 grams)	22	3	19
	1.1%	1.1%	1.1%

Among the women who had delivered a live birth inside UAE in the 5 years before the survey, 1996 women recall having birth weight of their last-borne children being checked. Among these 1996 last-borne children, 331 (16.6%) children had birth weights below 2500 grams, which is below the international cutoff for low-birth weight. This number is consistent with the prevalence of low-birth weight among other OECD countries as per the report published by World Bank and UNICEF.

Table 58: Type of deliveries for the youngest 4 children

Order of birth	GROSS TOTAL	Type of Delivery Total		TOTAL		Emirati		Non-Emirati	
		Normal	Cesarean	Emirati	Non-Emirati	Normal	Cesarean	Normal	Cesarean
1st order births	2341	1504	838	290	2052	215	75	1289	763
	100%	64%	36%	12%	88%	74.1%	25.9%	62.8%	37.2%
2nd order births	505	314	191	104	401	75	29	239	162
	100%	62.2%	37.8%	20.6%	79.4%	72.1%	27.9%	59.6%	40.4%
3rd order births	60	40	20	20	40	15	5	25	15
	100%	66.7%	33.3%	33.3%	66.7%	75.0%	25.0%	62.5%	37.5%
4th order births	4	3	1	1	3	1	0	3	0
	100%	75.0%	25.0%	25.0%	75.0%	100.0%	0.0%	100.0%	0.0%

We have recorded the type of deliveries for the last 4 children. As can be seen, majority of deliveries were normal vaginal deliveries and the proportion of normal deliveries was higher among Emirati women than in non-Emirati women.

Table 59: Distribution of women who had delivered a live birth in the 5 years preceding the survey and had ever breast fed

Question: Have you ever breastfed your baby?	TOTAL	Emirati	Non-Emirati
Yes, have ever breast fed	2,168	259	1,910
	91.8%	89.0%	92.2%
No, never breast fed	193	32	161
	8.2%	11.0%	7.8%
Total women who delivered live birth in last 5 years	2,361	291	2071
	100.0%	100.0%	100.0%

We recorded the breast feeding and other infant feeding practices of ever-married women who had delivered in the 5 years preceding the survey. Of the 2361 women with history of live birth in the 5 years preceding the survey, about 92% of women (2168) had ever breast fed.

Table 60: Distribution of women who had ever breast fed and currently breast feeding their children

Question: Are you still breastfeeding your baby?	TOTAL	Emirati	Non-Emirati
Yes	795	119	677
	36.5%	45.7%	35.3%
No	1,381	141	1,240
	63.5%	54.3%	64.7%
Total	2,176	259	1,917
	100.0%	100.0%	100.0%

Among the women with live birth in 5 years preceding the survey and with a history of ever-breast feeding their children, 795 women (36.5%) were currently breast feeding their children and 1381 women were not currently breast feeding. Among the 795 women who were currently breast-feeding, we further narrowed down the list of breast-feeding to infants below the age of 6 months.

We noted that there were 231 women who currently breast feeding their infants who were aged below 6 months of age. We have used this number to further compute the prevalence of exclusive breast-feeding among infants less than 6 months of age. The steps and details of the exclusive breast-feeding have been explained in detail in the next table.

3.5. Exclusive Breast Feeding among Children Up to 6 months

We have used the WHO definition of Exclusive breastfeeding rate 0-5 months of age, which is defined as "Percentage of infants 0–5 months of age (<6 months) who are fed exclusively with breast milk".
The method of measurement: Percentage of infants 0–5 months of age who received only breast milk on the previous day = (infants 0–5 months of age who received only breast milk during the previous day/infants 0–5 months of age) x 100. Current status data are used. Vitamins and minerals drops, or medicines are not counted.
The formula is as below:

Prevalence of exclusive breast feeding among children upto 6 months

=

(Number of infants 0-5 months of age (<6 months) who are fed exclusively with breast milk during the previous day)

(Total number of children upto 6 months of age in the survey)

Accordingly, we have followed the below steps:

1. We collected the date of birth of youngest child for such women with children below 5 years living with them in UAE = 2369
2. From these records of date of births of all children below 5 years, we looked at all youngest children records below the age of 6 months (180 days) = 231
3. We then reviewed the number of all youngest children who were ever breastfed by their mothers = 217
4. From the above, we narrowed the records to those children who were fed in the last 24 hours and how many of them had been exclusively breastfed = 138

Therefore, the numerator is 138, denominator is 231, and the prevalence was 59.7%

Table 61: Distribution of ever-married women respondents with infants between 0-6 months of age and who reported exclusive breast-feeding them

Question: Are you still breastfeeding your baby?	TOTAL	Emirati	Non-Emirati
(Denominator: Total infants below 6 months)	231	37	194
	100.0%	100.0%	100.0%
Exclusive Breastfed	138	21	117
	59.7%	56.8%	60.3%
Not Exclusive Breastfed	93	16	77
	40.3%	43.2%	39.7%

3.6. Contraceptive Indicators

Table 62. Contraceptive prevalence among currently married women

	TOTAL	15 - 19 Years	20 - 24 Years	25 - 29 Years	30 - 34 Years	35 - 39 Years	40 - 44 Years	45 - 49 Years
Using Some Contraceptive Methods	420	.	16	113	136	114	39	3
	19.5%	.	16.0%	20.2%	17.5%	22.7%	21.2%	10.7%
Not Using Any Contraceptive Method	1729	6	84	448	640	388	143	22
	80.5%	100.0%	84.0%	79.8%	82.5%	77.3%	78.8%	89.3%
Total	2149	6	100	561	776	501	181	25
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Please note only those women who were currently married, had ever given a live birth and had given a live birth in the last 5 years and who were not currently pregnant answered the question on contraceptive usage. From the total pool of 7467 ever married women, only 2149 women fulfilled this criterion and answered this question

As per the WHO definition, contraceptive prevalence is the percentage of women aged 15–49 years,

married or in union, who are currently using, or whose sexual partner is using, at least one method of contraception, regardless of the method used.

In the UAE WHS, the topic of contraception included the following methods:
Female sterilization; Male sterilization; IUD; Injectable; Implants; Pills; Male condom; Female condom; Diaphragm; Foam / Jelly; Lactational amenorrhea method; Periodic abstinence / Rhythm; Withdrawal

3.7. Child Immunization History

Table 63: Coverage of BCG vaccine

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for BCG vaccine	Covered	1,510	202	1,308	103	490	15	545	25	155	15	74	4	7	24	17	15	19
		99.2%	99.3%	99.1%	100.0%	99.2%	97.9%	99.5%	100.0%	98.1%	100.0%	98.3%	100.0%	88.9%	98.7%	100.0%	94.5%	100.0%
	Not Covered	13	1	11	.	4	0	3	.	3	.	1	.	1	0	.	1	.
		0.8%	0.7%	0.9%	.	0.8%	2.1%	0.5%	.	1.9%	.	1.7%	.	11.1%	1.3%	.	5.5%	.
Below 1 Year	Covered	295	37	259	17	97	2	110	7	31	4	12	1	1	4	5	2	4
		98.2%	99.2%	98.0%	100.0%	97.9%	100.0%	100.0%	100.0%	91.1%	100.0%	100.0%	100.0%	89.3%	92.8%	100.0%	100.0%	100.0%
	Not Covered	5	0	5	.	2	.	.	.	3	.	.	.	0	0	.	.	.
		1.8%	0.8%	2.0%	.	2.1%	.	.	.	8.9%	.	.	.	10.7%	7.2%	.	.	.
1 - 2 Years	Covered	343	47	297	25	131	3	110	5	27	2	19	1	1	7	3	2	5
		99.0%	99.0%	98.9%	100.0%	100.0%	91.7%	97.7%	100.0%	100.0%	100.0%	96.7%	100.0%	100.0%	100.0%	100.0%	94.0%	100.0%
	Not Covered	4	0	3	.	.	0	3	.	.	.	1	.	.	.	.	0	.
		1.0%	1.0%	1.1%	.	.	8.3%	2.3%	.	.	.	3.3%	.	.	.	.	6.0%	.
Above 2 years upto 5 years	Covered	871	119	752	61	262	9	326	13	97	9	43	3	5	13	9	10	11
		99.6%	99.4%	99.6%	100.0%	99.3%	100.0%	100.0%	100.0%	100.0%	100.0%	98.6%	100.0%	85.7%	100.0%	100.0%	93.6%	100.0%
	Not Covered	4	1	3	.	2	.	.	.	.	.	1	.	1	.	.	1	.
			0.6%	0.4%	.	0.7%	.	.	.	.	.	1.4%	.	14.3%	.	.	6.4%	.

The BCG is a live attenuated vaccine for tuberculosis (TB) disease given as a single dose and intradermal immediately after birth. BCG is used in many countries with a high prevalence of TB to prevent childhood tuberculous meningitis and military / disseminated disease. In the survey, both referring to the vaccination card as well

as direct recall of the mother-collected information on the vaccination status of the children. More than 99.2% of children were given the single dose of BCG.

Table 64: Coverage of Hep B vaccine 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of Hep B vaccine	Covered	1,511	205	1,306	104	487	15	540	25	161	15	74	4	8	24	17	16	19
		98.4%	99.6%	98.2%	99.2%	98.1%	100.0%	98.6%	100.0%	96.7%	100.0%	98.6%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	24	1	24	1	9	.	8	.	6	.	1	.	.	.	.	.	.
		1.6%	0.4%	1.8%	0.8%	1.9%	.	1.4%	.	3.3%	.	1.4%	.	.	.	.	.	.
Below 1 Year	Covered	301	38	264	18	99	2	110	7	34	4	12	1	1	4	5	2	4
		98.2%	98.9%	98.1%	97.6%	98.0%	100.0%	100.0%	100.0%	91.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	5	0	5	0	2	.	.	.	3	.	.	.	.	.	.	.	.
		1.8%	1.1%	1.9%	2.4%	2.0%	.	.	.	8.2%	.	.	.	.	.	.	.	.
1 - 2 Years	Covered	339	48	291	26	130	4	107	5	27	2	18	1	1	7	3	3	5
		97.0%	100.0%	96.5%	100.0%	98.6%	100.0%	95.5%	100.0%	91.5%	100.0%	94.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	11	.	11	.	2	.	5	.	3	.	1	.	.	.	.	.	.
		3.0%	.	3.5%	.	1.4%	.	4.5%	.	8.5%	.	5.5%	.	.	.	.	.	.
Above 2 years upto 5 years	Covered	871	119	751	61	259	9	324	13	100	9	44	3	5	13	9	11	11
		99.0%	99.6%	98.9%	99.3%	97.9%	100.0%	99.2%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	8	0	8	0	5	.	3	.	.	.	.	.	.	.	.	.	.
		1.0%	0.4%	1.1%	0.7%	2.1%	.	0.8%	.	.	.	.	.	.	.	.	.	.

The hepatitis B vaccine is an injection (or shot) that is generally given in the arm and as a three-dose series on a 0, 1, and 6-month schedule. The recommended doses depend on the vaccine brand and the person's age. 1st dose - At any given time, newborns should receive this dose in the delivery room; 2nd dose - At least one month (or 28 days) after the 1st shot; 3rd dose - At least 4 months (16 weeks) after the 1st dose (or at least 2 months after the 2nd shot). Infants should be a minimum of 24 weeks old at the time of the 3rd shot. In the UAE WHS, more than 98% of children had received the first dose of Hep B vaccine but as can be seen from the next 2 tables, the coverage of vaccine for the 2nd and 3rd dose slightly decreases. While there may be many reasons for this decline, the most obvious one may be (and which needs investigation) is loss to follow-up for the subsequent doses or if the first dose was started later in childhood, then the vaccination card

may not have captured the information.

Table 65: Coverage of Hep B vaccine 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of Hep B vaccine	Covered	1,464	198	1,266	101	479	15	519	25	157	13	68	4	7	24	16	16	19
		95.9%	96.6%	95.8%	96.7%	97.5%	97.6%	94.8%	100.0%	96.3%	85.5%	91.3%	89.2%	84.2%	98.7%	92.9%	99.1%	100.0%
	Not Covered	63	7	56	3	12	0	28	.	6	2	6	0	1	0	1	0	.
		4.1%	3.4%	4.2%	3.3%	2.5%	2.4%	5.2%	.	3.7%	14.5%	8.7%	10.8%	15.8%	1.3%	7.1%	0.9%	.
Below 1 Year	Covered	272	33	239	16	91	2	99	7	31	2	10	1	1	4	4	2	4
		89.7%	87.5%	90.0%	89.3%	91.4%	84.1%	90.5%	100.0%	87.3%	46.1%	82.9%	100.0%	55.4%	92.8%	85.0%	93.7%	100.0%
	Not Covered	31	5	27	2	8	0	10	.	5	2	2	.	0	0	1	0	.
		10.3%	12.5%	10.0%	10.7%	8.6%	15.9%	9.5%	.	12.7%	53.9%	17.1%	.	44.6%	7.2%	15.0%	6.3%	.
1 - 2 Years	Covered	340	46	294	25	129	4	107	5	30	2	18	1	1	7	3	3	5
		97.7%	97.4%	97.7%	95.7%	99.0%	100.0%	95.9%	100.0%	100.0%	100.0%	96.6%	86.5%	100.0%	100.0%	92.9%	100.0%	100.0%
	Not Covered	8	1	7	1	1	.	5	.	.	.	1	0	.	.	0	.	.
		2.3%	2.6%	2.3%	4.3%	1.0%	.	4.1%	.	.	.	3.4%	13.5%	.	.	7.1%	.	.
Above 2 years upto 5 years	Covered	852	119	733	61	260	9	313	13	97	9	40	3	5	13	9	11	11
		97.3%	99.2%	97.0%	99.3%	99.0%	100.0%	95.9%	100.0%	98.5%	97.6%	91.2%	87.9%	85.7%	100.0%	97.2%	100.0%	100.0%
	Not Covered	23	1	22	0	3	.	13	.	2	0	4	0	1	.	0	.	.
		2.7%	0.8%	3.0%	0.7%	1.0%	.	4.1%	.	1.5%	2.4%	8.8%	12.1%	14.3%	.	2.8%	.	.

Table 66: Coverage of Hep B vaccine 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of Hep B vaccine	Covered	1,416	192	1,224	99	462	14	506	25	154	13	62	4	6	23	16	15	18
		93.0%	93.9%	92.8%	94.4%	94.2%	92.3%	92.4%	97.3%	94.4%	83.2%	84.8%	85.5%	82.7%	96.1%	91.4%	95.7%	94.4%
	Not Covered	107	13	94	6	29	1	42	1	9	3	11	1	1	1	1	1	1
		7.0%	6.1%	7.2%	5.6%	5.8%	7.7%	7.6%	2.7%	5.6%	16.8%	15.2%	14.5%	17.3%	3.9%	8.6%	4.3%	5.6%
Below 1 Year	Covered	243	29	215	13	82	1	90	7	28	2	7	0	0	4	4	2	3
		80.4%	76.6%	80.9%	75.0%	82.7%	59.0%	82.6%	100.0%	78.7%	46.1%	61.3%	75.1%	44.7%	85.5%	85.0%	68.8%	71.0%
	Not Covered	60	9	51	4	17	1	19	.	8	2	5	0	1	1	1	1	1
		19.6%	23.4%	19.1%	25.0%	17.3%	41.0%	17.4%	.	21.3%	53.9%	38.7%	24.9%	55.3%	14.5%	15.0%	31.2%	29.0%
1 - 2 Years	Covered	336	47	289	26	127	4	105	5	30	2	17	1	1	7	3	3	5
		97.2%	98.8%	96.9%	97.9%	99.0%	100.0%	93.8%	100.0%	100.0%	100.0%	96.4%	100.0%	100.0%	100.0%	92.9%	100.0%	100.0%
	Not Covered	10	1	9	1	1	.	7	.	.	.	1	.	.	.	0	.	.
		2.8%	1.2%	3.1%	2.1%	1.0%	.	6.2%	.	.	.	3.6%	.	.	.	7.1%	.	.
Above 2 years upto 5 years	Covered	837	116	720	60	253	9	310	12	97	9	37	2	5	13	8	11	11
		95.7%	97.3%	95.4%	98.5%	96.1%	97.7%	95.2%	94.8%	98.5%	93.6%	86.4%	82.9%	85.7%	97.4%	94.4%	100.0%	100.0%
	Not Covered	38	3	35	1	10	0	16	1	2	1	6	1	1	0	0	.	.
		4.3%	2.7%	4.6%	1.5%	3.9%	2.3%	4.8%	5.2%	1.5%	6.4%	13.6%	17.1%	14.3%	2.6%	5.6%	.	.

Table 67: Coverage of Hep B vaccine 4th dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 4th dose of Hep B vaccine	Covered	1,343	182	1,161	93	446	14	484	24	133	13	58	4	6	21	15	15	18
		88.4%	89.4%	88.2%	89.5%	91.0%	88.9%	88.4%	94.2%	81.7%	83.2%	81.0%	85.5%	81.3%	86.2%	90.0%	92.9%	94.4%
	Not Covered	177	22	155	11	44	2	64	1	30	3	14	1	1	3	2	1	1
		11.6%	10.6%	11.8%	10.5%	9.0%	11.1%	11.6%	5.8%	18.3%	16.8%	19.0%	14.5%	18.7%	13.8%	10.0%	7.1%	5.6%
Below 1 Year	Covered	197	24	173	12	69	1	76	7	15	2	7	0	0	2	4	1	3
		65.2%	65.1%	65.2%	65.8%	69.4%	37.2%	69.1%	100.0%	41.3%	46.1%	59.5%	75.1%	44.7%	36.4%	80.0%	61.8%	71.0%
	Not Covered	106	13	92	6	30	1	34	.	21	2	5	0	1	3	1	1	1
		34.8%	34.9%	34.8%	34.2%	30.6%	62.8%	30.9%	.	58.7%	53.9%	40.5%	24.9%	55.3%	63.6%	20.0%	38.2%	29.0%
1 - 2 Years	Covered	330	46	284	24	127	4	102	5	30	2	16	1	1	7	3	3	5
		95.8%	96.2%	95.7%	93.0%	99.0%	100.0%	91.2%	100.0%	100.0%	100.0%	92.6%	100.0%	92.6%	100.0%	92.9%	100.0%	100.0%
	Not Covered	15	2	13	2	1	.	10	.	.	.	1	.	0	.	0	.	.
		4.2%	3.8%	4.3%	7.0%	1.0%	.	8.8%	.	.	.	7.4%	.	7.4%	.	7.1%	.	.
Above 2 years upto 5 years	Covered	815	112	703	57	250	9	306	12	89	9	35	2	5	13	8	11	11
		93.5%	94.3%	93.4%	94.9%	95.4%	97.7%	93.9%	88.8%	90.8%	93.6%	82.2%	82.9%	85.7%	95.1%	94.4%	97.5%	100.0%
	Not Covered	57	7	50	3	12	0	20	1	9	1	8	1	1	1	0	0	.
		6.5%	5.7%	6.6%	5.1%	4.6%	2.3%	6.1%	11.2%	9.2%	6.4%	17.8%	17.1%	14.3%	4.9%	5.6%	2.5%	.

Table 68: Coverage of DPT 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of DPT vaccine	Covered	1,460	197	1,263	101	472	14	532	25	153	13	64	4	6	24	16	16	19
		96.1%	96.3%	96.0%	96.1%	96.2%	96.4%	97.2%	100.0%	95.3%	85.5%	88.2%	91.2%	82.8%	98.7%	94.3%	99.1%	100.0%
	Not Covered	60	8	52	4	18	1	15	.	8	2	9	0	1	0	1	0	.
		3.9%	3.7%	4.0%	3.9%	3.8%	3.6%	2.8%	.	4.7%	14.5%	11.8%	8.8%	17.2%	1.3%	5.7%	0.9%	.
Below 1 Year	Covered	268	32	235	15	88	2	102	7	28	2	9	1	1	4	4	2	4
		89.3%	86.0%	89.8%	86.1%	88.7%	84.1%	93.1%	100.0%	86.6%	46.1%	76.6%	100.0%	69.4%	92.8%	85.0%	93.7%	100.0%
	Not Covered	32	5	27	2	11	0	8	.	4	2	3	.	0	0	1	0	.
		10.7%	14.0%	10.2%	13.9%	11.3%	15.9%	6.9%	.	13.4%	53.9%	23.4%	.	30.6%	7.2%	15.0%	6.3%	.
1 - 2 Years	Covered	339	47	292	26	125	4	112	5	28	2	17	1	1	7	3	3	5
		98.6%	98.2%	98.7%	97.9%	97.5%	95.6%	100.0%	100.0%	100.0%	100.0%	96.4%	86.5%	92.6%	100.0%	100.0%	100.0%	100.0%
	Not Covered	5	1	4	1	3	0	.	.	.	.	1	0	0	.	.	.	.
		1.4%	1.8%	1.3%	2.1%	2.5%	4.4%	.	.	.	.	3.6%	13.5%	7.4%	.	.	.	.
Above 2 years upto 5 years	Covered	854	118	736	60	259	9	318	13	96	9	38	3	4	13	9	11	11
		97.4%	98.7%	97.2%	98.3%	98.4%	100.0%	97.6%	100.0%	96.8%	97.6%	87.8%	91.0%	82.9%	100.0%	97.2%	100.0%	100.0%
	Not Covered	23	2	22	1	4	.	8	.	3	0	5	0	1	.	0	.	.
		2.6%	1.3%	2.8%	1.7%	1.6%	.	2.4%	.	3.2%	2.4%	12.2%	9.0%	17.1%	.	2.8%	.	.

As per the US CDC, infants and children should receive 5 doses of DPT. Each of the 5 doses to be given at: 2 months, 4 months, 6 months, 15 through 18 months, and 4 years through 6 years. Just like the pattern seen for Hep B vaccine, the coverage for DPT vaccine too decreases from 1st dose to the 5th dose. There is a sharp decline in the coverage of the 5th dose of DPT vaccine and one of the plausible reasons could be that this detail was not captured in the vaccination card as the dose was due only after 5 years of age.

Table 69: Coverage of DPT 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of DPT vaccine	Covered	1,436	192	1,244	99	469	14	521	24	151	13	62	4	6	23	16	15	18
		94.5%	93.8%	94.6%	94.4%	95.3%	91.4%	95.2%	97.3%	95.2%	83.2%	85.9%	91.4%	80.8%	96.1%	92.9%	94.7%	94.4%
	Not Covered	84	13	71	6	23	1	26	1	8	3	10	0	1	1	1	1	1
		5.5%	6.2%	5.4%	5.6%	4.7%	8.6%	4.8%	2.7%	4.8%	16.8%	14.1%	8.6%	19.2%	3.9%	7.1%	5.3%	5.6%
Below 1 Year	Covered	247	29	219	13	84	1	91	7	27	2	9	1	1	4	4	1	3
		82.5%	76.6%	83.3%	75.1%	85.1%	59.0%	83.1%	100.0%	81.5%	46.1%	82.2%	100.0%	55.4%	85.5%	85.0%	61.8%	71.0%
	Not Covered	52	9	44	4	15	1	19	.	6	2	2	.	0	1	1	1	1
		17.5%	23.4%	16.7%	24.9%	14.9%	41.0%	16.9%	.	18.5%	53.9%	17.8%	.	44.6%	14.5%	15.0%	38.2%	29.0%
1 - 2 Years	Covered	340	46	294	26	127	4	112	5	28	2	17	1	1	7	3	3	5
		99.1%	98.2%	99.3%	97.9%	99.0%	95.6%	100.0%	100.0%	100.0%	100.0%	96.3%	86.5%	92.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	3	1	2	1	1	0	.	.	.	.	1	0	0	.	.	.	.
		0.9%	1.8%	0.7%	2.1%	1.0%	4.4%	.	.	.	.	3.7%	13.5%	8.0%	.	.	.	.
Above 2 years upto 5 years	Covered	849	117	732	60	258	9	318	12	97	9	36	3	4	13	8	11	11
		96.8%	97.5%	96.7%	98.5%	97.4%	98.0%	97.6%	94.8%	98.5%	93.6%	82.7%	91.3%	82.9%	97.4%	94.4%	100.0%	100.0%
	Not Covered	28	3	25	1	7	0	8	1	2	1	8	0	1	0	0	.	.
		3.2%	2.5%	3.3%	1.5%	2.6%	2.0%	2.4%	5.2%	1.5%	6.4%	17.3%	8.7%	17.1%	2.6%	5.6%	.	.

Table 70: Coverage of DPT 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of DPT vaccine	Covered	1,349	181	1,168	93	453	13	491	24	129	13	60	4	6	20	13	15	17
		88.7%	88.5%	88.7%	88.6%	91.7%	86.6%	89.6%	94.2%	81.1%	83.2%	83.3%	85.4%	77.9%	84.8%	77.1%	92.0%	86.0%
	Not Covered	172	24	148	12	41	2	57	1	30	3	12	1	2	4	4	1	3
		11.3%	11.5%	11.3%	11.4%	8.3%	13.4%	10.4%	5.8%	18.9%	16.8%	16.7%	14.6%	22.1%	15.2%	22.9%	8.0%	14.0%
Below 1 Year	Covered	197	23	174	10	75	1	73	7	13	2	7	0	0	1	1	1	3
		65.7%	61.0%	66.4%	59.3%	76.2%	37.2%	66.8%	100.0%	41.0%	46.1%	66.0%	71.0%	44.7%	28.2%	30.0%	61.8%	71.0%
	Not Covered	103	15	88	7	24	1	36	.	19	2	4	0	1	3	3	1	1
		34.3%	39.0%	33.6%	40.7%	23.8%	62.8%	33.2%	.	59.0%	53.9%	34.0%	29.0%	55.3%	71.8%	70.0%	38.2%	29.0%
1 - 2 Years	Covered	329	46	283	25	124	4	107	5	28	2	15	1	1	7	3	3	5
		95.6%	96.8%	95.4%	95.3%	95.2%	95.6%	95.5%	100.0%	100.0%	100.0%	86.5%	86.5%	92.0%	100.0%	100.0%	100.0%	100.0%
	Not Covered	15	2	14	1	6	0	5	.	.	.	2	0	0	.	.	.	.
		4.4%	3.2%	4.6%	4.7%	4.8%	4.4%	4.5%	.	.	.	13.5%	13.5%	8.0%	.	.	.	.
Above 2 years upto 5 years	Covered	823	112	711	57	253	9	311	12	87	9	38	3	4	13	8	11	9
		93.9%	93.8%	93.9%	94.1%	95.8%	95.6%	95.3%	88.8%	89.1%	93.6%	86.4%	87.9%	80.8%	95.1%	94.4%	96.2%	85.2%
	Not Covered	54	7	46	4	11	0	15	1	11	1	6	0	1	1	0	0	2
		6.1%	6.2%	6.1%	5.9%	4.2%	4.4%	4.7%	11.2%	10.9%	6.4%	13.6%	12.1%	19.2%	4.9%	5.6%	3.8%	14.8%

Table 71: Coverage of DPT 4th dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 4th dose of DPT vaccine	Covered	1,019	145	874	73	330	10	353	18	110	10	52	3	5	17	10	13	14
		67.4%	71.1%	66.8%	69.6%	67.4%	68.1%	64.7%	72.7%	69.1%	68.3%	72.8%	72.0%	59.4%	72.0%	61.4%	81.9%	74.3%
	Not Covered	494	59	435	32	159	5	192	7	49	5	19	1	3	7	7	3	5
		32.6%	28.9%	33.2%	30.4%	32.6%	31.9%	35.3%	27.3%	30.9%	31.7%	27.2%	28.0%	40.6%	28.0%	38.6%	18.1%	25.7%
Below 1 Year	Covered	75	9	66	4	31	.	22	2	8	1	4	0	.	1	0	1	1
		25.2%	24.5%	25.3%	21.1%	31.3%	.	20.4%	32.2%	23.5%	29.0%	38.5%	24.9%	.	29.9%	10.0%	35.1%	17.4%
	Not Covered	223	28	195	14	68	2	87	5	25	3	6	0	1	3	4	1	3
		74.8%	75.5%	74.7%	78.9%	68.7%	100.0%	79.6%	67.8%	76.5%	71.0%	61.5%	75.1%	100.0%	70.1%	90.0%	64.9%	82.6%
1 - 2 Years	Covered	170	31	139	17	69	2	35	5	15	2	12	0	1	4	2	2	4
		50.2%	64.8%	47.8%	63.8%	54.8%	42.8%	32.4%	91.2%	54.2%	73.7%	70.9%	40.8%	67.3%	56.7%	57.1%	73.3%	82.6%
	Not Covered	168	17	152	9	57	2	74	0	13	1	5	1	0	3	1	1	1
		49.8%	35.2%	52.2%	36.2%	45.2%	57.2%	67.6%	8.8%	45.8%	26.3%	29.1%	59.2%	32.7%	43.3%	42.9%	26.7%	17.4%
Above 2 years upto 5 years	Covered	774	105	669	53	230	9	295	11	87	8	36	3	4	12	8	10	10
		88.3%	88.3%	88.4%	86.0%	87.0%	96.0%	90.5%	87.9%	88.6%	82.5%	81.6%	91.3%	69.4%	92.8%	91.7%	93.3%	90.1%
	Not Covered	102	14	88	9	34	0	31	1	11	2	8	0	2	1	1	1	1
		11.7%	11.7%	11.6%	14.0%	13.0%	4.0%	9.5%	12.1%	11.4%	17.5%	18.4%	8.7%	30.6%	7.2%	8.3%	6.7%	9.9%

Table 72: Coverage of DPT 5th dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 5th dose of DPT vaccine	Covered	268	55	214	31	119	1	21	14	54	2	13	2	1	3	2	1	4
		17.8%	26.8%	16.4%	29.5%	24.4%	6.2%	3.8%	59.2%	34.6%	14.2%	18.0%	45.1%	16.1%	12.1%	14.3%	8.1%	18.5%
	Not Covered	1,236	149	1,087	74	367	14	522	10	102	13	59	2	7	21	15	15	16
		82.2%	73.2%	83.6%	70.5%	75.6%	93.8%	96.2%	40.8%	65.4%	85.8%	82.0%	54.9%	83.9%	87.9%	85.7%	91.9%	81.5%
Below 1 Year	Covered	37	6	31	2	20	.	3	2	8	0	1	0	.	0	.	0	.
		12.5%	15.4%	12.1%	12.9%	19.9%	.	2.4%	32.2%	23.5%	13.1%	10.3%	24.9%	.	7.2%	.	15.4%	.
	Not Covered	257	32	225	15	79	2	102	5	25	3	9	0	1	4	5	2	4
		87.5%	84.6%	87.9%	87.1%	80.1%	100.0%	97.6%	67.8%	76.5%	86.9%	89.7%	75.1%	100.0%	92.8%	100.0%	84.6%	100.0%
1 - 2 Years	Covered	67	17	50	10	28	0	7	5	11	0	3	0	0	2	.	0	.
		19.7%	36.6%	16.9%	36.4%	21.9%	8.0%	6.6%	91.2%	39.3%	12.6%	19.0%	30.9%	17.3%	28.5%	.	12.1%	.
	Not Covered	274	30	244	17	99	3	105	0	17	2	14	1	1	5	3	2	5
		80.3%	63.4%	83.1%	63.6%	78.1%	92.0%	93.4%	8.8%	60.7%	87.4%	81.0%	69.1%	82.7%	71.5%	100.0%	87.9%	100.0%
Above 2 years upto 5 years	Covered	164	31	133	19	71	1	11	7	35	1	8	2	1	1	2	1	4
		18.9%	26.4%	17.7%	31.3%	27.4%	7.0%	3.4%	60.5%	37.0%	15.0%	19.4%	53.6%	19.1%	5.5%	27.8%	5.8%	32.6%
	Not Covered	705	87	618	42	189	8	315	5	60	8	35	1	4	12	6	11	7
		81.1%	73.6%	82.3%	68.7%	72.6%	93.0%	96.6%	39.5%	63.0%	85.0%	80.6%	46.4%	80.9%	94.5%	72.2%	94.2%	67.4%

Table 73: Coverage of Hemophilus influenza 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of Hemophilus influenza vaccine	Covered	1,373	194	1,179	100	460	15	473	25	147	12	59	4	6	22	14	16	18
		91.2%	94.8%	90.6%	95.9%	94.7%	96.5%	86.4%	100.0%	95.9%	78.1%	85.4%	87.7%	77.5%	93.4%	82.9%	98.0%	95.8%
	Not Covered	133	11	122	4	26	1	75	.	6	3	10	1	2	2	3	0	1
		8.8%	5.2%	9.4%	4.1%	5.3%	3.5%	13.6%	.	4.1%	21.9%	14.6%	12.3%	22.5%	6.6%	17.1%	2.0%	4.2%
Below 1 Year	Covered	255	32	223	15	86	2	93	7	28	2	8	1	1	4	3	2	4
		85.4%	86.0%	85.3%	86.1%	87.3%	85.1%	84.6%	100.0%	86.6%	43.3%	75.2%	100.0%	66.1%	92.8%	70.0%	93.7%	100.0%
	Not Covered	44	5	38	2	13	0	17	.	4	2	3	.	0	0	1	0	.
		14.6%	14.0%	14.7%	13.9%	12.7%	14.9%	15.4%	.	13.4%	56.7%	24.8%	.	33.9%	7.2%	30.0%	6.3%	.
1 - 2 Years	Covered	309	46	264	25	122	4	92	5	25	2	15	1	1	6	2	3	5
		91.4%	95.1%	90.8%	96.0%	96.9%	100.0%	82.5%	100.0%	100.0%	91.6%	86.5%	86.5%	92.6%	85.0%	71.4%	100.0%	100.0%
	Not Covered	29	2	27	1	4	.	20	.	.	0	2	0	0	1	1	.	.
		8.6%	4.9%	9.2%	4.0%	3.1%	.	17.5%	.	.	8.4%	13.5%	13.5%	7.4%	15.0%	28.6%	.	.
Above 2 years upto 5 years	Covered	808	116	692	60	251	9	288	13	94	8	36	2	4	13	8	11	10
		93.1%	97.5%	92.4%	98.7%	96.4%	98.2%	88.3%	100.0%	98.0%	88.0%	87.7%	85.5%	75.7%	97.7%	94.4%	98.4%	92.6%
	Not Covered	60	3	57	1	9	0	38	.	2	1	5	0	1	0	0	0	1
		6.9%	2.5%	7.6%	1.3%	3.6%	1.8%	11.7%	.	2.0%	12.0%	12.3%	14.5%	24.3%	2.3%	5.6%	1.6%	7.4%

Haemophilus influenzae type b (Hib) disease is a serious disease caused by bacteria. It usually affects children under 5 years old. It can also affect adults with certain medical conditions. The germs spread from person to person. If the germs stay in the child's nose and throat, the child probably will not get sick. But sometimes the germs spread into the lungs or the bloodstream, leading Hib to cause serious problems. Doses of Hib vaccine are usually recommended at these ages: First Dose: 2 months of age; Second Dose: 4 months of age; third Dose: 6 months of age (if needed, depending on brand of vaccine); and Final/Booster Dose: 12-15 months of age.

Hib vaccine may be given at the same time as other vaccines.
In the survey, the coverage rates for the first dose of the HiB vaccine was more than 91% with the higher coverage among Emirati than non-Emirati children. However, the coverage for later doses of the vaccines starts declining with less than 65% coverage rate for the final/booster dose of the HiB vaccine.

Table 74: Coverage of Haemophilus influenza 2ndt dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of Haemophilus influenza vaccine	Covered	1,334	186	1,148	96	448	14	457	24	143	12	62	4	6	21	14	15	18
		89.1%	91.4%	88.8%	92.1%	92.4%	90.3%	83.8%	97.3%	95.9%	77.4%	88.3%	83.7%	81.5%	92.1%	80.0%	92.4%	94.4%
	Not Covered	163	18	145	8	37	2	88	1	6	3	8	1	1	2	3	1	1
		10.9%	8.6%	11.2%	7.9%	7.6%	9.7%	16.2%	2.7%	4.1%	22.6%	11.7%	16.3%	18.5%	7.9%	20.0%	7.6%	5.6%
Below 1 Year	Covered	233	27	206	13	78	1	87	7	24	2	9	0	1	3	3	1	3
		78.4%	73.1%	79.2%	71.8%	79.2%	55.1%	79.1%	100.0%	80.2%	41.2%	85.1%	75.1%	66.1%	84.4%	70.0%	52.7%	71.0%
	Not Covered	64	10	54	5	21	1	23	.	6	2	2	0	0	1	1	1	1
		21.6%	26.9%	20.8%	28.2%	20.8%	44.9%	20.9%	.	19.8%	58.8%	14.9%	24.9%	33.9%	15.6%	30.0%	47.3%	29.0%
1 - 2 Years	Covered	305	45	260	25	122	4	90	5	23	2	16	1	1	6	2	3	5
		91.9%	94.1%	91.5%	93.8%	98.1%	95.8%	82.2%	100.0%	100.0%	91.6%	93.8%	76.6%	92.6%	90.8%	71.4%	100.0%	100.0%
	Not Covered	27	3	24	2	2	0	20	.	.	0	1	0	0	1	1	.	.
		8.1%	5.9%	8.5%	6.2%	1.9%	4.2%	17.8%	.	.	8.4%	6.2%	23.4%	7.4%	9.2%	28.6%	.	.
Above 2 years upto 5 years	Covered	796	114	682	59	247	9	280	12	96	8	37	2	4	12	8	11	11
		91.7%	96.0%	91.0%	97.2%	94.7%	97.7%	85.9%	94.8%	100.0%	88.2%	86.8%	87.9%	81.5%	95.0%	88.9%	98.6%	100.0%
	Not Covered	72	5	67	2	14	0	46	1	.	1	6	0	1	1	1	0	.
		8.3%	4.0%	9.0%	2.8%	5.3%	2.3%	14.1%	5.2%	.	11.8%	13.2%	12.1%	18.5%	5.0%	11.1%	1.4%	.

Table 75: Coverage of Haemophilus influenza 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of Hemophilus influenza vaccine	Covered	1,259	179	1,080	93	430	13	434	23	123	12	56	4	6	19	14	14	18
		84.1%	87.5%	83.6%	88.8%	88.8%	85.9%	80.0%	94.1%	81.1%	77.4%	80.3%	83.7%	74.3%	80.8%	80.0%	90.7%	91.1%
	Not Covered	238	26	212	12	54	2	108	1	29	3	14	1	2	5	3	1	2
		15.9%	12.5%	16.4%	11.2%	11.2%	14.1%	20.0%	5.9%	18.9%	22.6%	19.7%	16.3%	25.7%	19.2%	20.0%	9.3%	8.9%
Below 1 Year	Covered	178	22	155	10	67	1	64	7	12	2	6	0	1	1	3	1	2
		59.5%	59.5%	59.5%	59.3%	67.9%	34.7%	58.5%	100.0%	35.8%	41.2%	61.9%	75.1%	55.4%	22.6%	70.0%	52.7%	53.6%
	Not Covered	121	15	106	7	32	2	46	.	21	2	4	0	0	3	1	1	2
		40.5%	40.5%	40.5%	40.7%	32.1%	65.3%	41.5%	.	64.2%	58.8%	38.1%	24.9%	44.6%	77.4%	30.0%	47.3%	46.4%
1 - 2 Years	Covered	302	45	256	25	121	4	90	5	23	2	14	1	1	6	2	3	5
		91.1%	95.3%	90.4%	96.0%	96.8%	95.8%	82.0%	100.0%	100.0%	91.6%	86.0%	76.6%	92.6%	90.8%	71.4%	100.0%	100.0%
	Not Covered	29	2	27	1	4	0	20	.	.	0	2	0	0	1	1	.	.
		8.9%	4.7%	9.6%	4.0%	3.2%	4.2%	18.0%	.	.	8.4%	14.0%	23.4%	7.4%	9.2%	28.6%	.	.
Above 2 years upto 5 years	Covered	779	111	668	57	242	9	280	12	88	8	35	2	4	12	8	11	11
		89.9%	93.1%	89.4%	94.1%	92.9%	95.6%	86.7%	88.8%	92.1%	88.2%	82.6%	87.9%	73.1%	92.8%	88.9%	96.1%	100.0%
	Not Covered	87	8	79	4	19	0	43	1	8	1	7	0	1	1	1	0	.
		10.1%	6.9%	10.6%	5.9%	7.1%	4.4%	13.3%	11.2%	7.9%	11.8%	17.4%	12.1%	26.9%	7.2%	11.1%	3.9%	.

Table 76: Coverage of Hemophilus influenza 4th (booster) dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 4th dose of Hemophilus influenza vaccine	Covered	955	140	816	72	335	10	301	18	102	9	49	3	4	15	10	13	13
		63.9%	68.5%	63.2%	68.3%	69.2%	65.5%	55.4%	71.4%	68.3%	61.4%	71.0%	59.8%	57.9%	65.0%	61.4%	81.7%	69.2%
	Not Covered	539	64	475	33	149	5	242	7	48	6	20	2	3	8	7	3	6
		36.1%	31.5%	36.8%	31.7%	30.8%	34.5%	44.6%	28.6%	31.7%	38.6%	29.0%	40.2%	42.1%	35.0%	38.6%	18.3%	30.8%
Below 1 Year	Covered	72	8	64	4	36	.	15	2	8	1	4	.	0	1	0	1	.
		24.4%	22.0%	24.7%	22.3%	36.3%	.	13.5%	32.2%	26.7%	24.1%	44.4%	.	10.7%	15.6%	10.0%	26.1%	.
	Not Covered	224	29	195	14	63	2	95	5	23	3	5	1	1	3	4	2	4
		75.6%	78.0%	75.3%	77.7%	63.7%	100.0%	86.5%	67.8%	73.3%	75.9%	55.6%	100.0%	89.3%	84.4%	90.0%	73.9%	100.0%
1 - 2 Years	Covered	156	30	126	16	74	2	24	4	10	2	11	0	1	3	2	2	4
		47.1%	62.3%	44.6%	62.8%	59.3%	45.2%	22.4%	90.3%	44.2%	73.7%	67.3%	30.9%	67.3%	42.9%	57.1%	81.1%	75.6%
	Not Covered	175	18	157	10	51	2	85	0	13	1	5	1	0	4	1	0	1
		52.9%	37.7%	55.4%	37.2%	40.7%	54.8%	77.6%	9.7%	55.8%	26.3%	32.7%	69.1%	32.7%	57.1%	42.9%	18.9%	24.4%
Above 2 years upto 5 years	Covered	727	102	625	51	225	8	261	11	84	7	34	2	3	12	8	10	10
		83.9%	85.4%	83.6%	83.9%	86.4%	92.3%	80.8%	85.2%	87.6%	73.2%	78.6%	81.9%	65.2%	90.6%	91.7%	92.9%	90.1%
	Not Covered	140	17	122	10	35	1	62	2	12	2	9	1	2	1	1	1	1
		16.1%	14.6%	16.4%	16.1%	13.6%	7.7%	19.2%	14.8%	12.4%	26.8%	21.4%	18.1%	34.8%	9.4%	8.3%	7.1%	9.9%

Table 77: Coverage of IPV 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of injectable polio vaccine	Covered	1,437	196	1,241	100	459	15	525	25	155	13	62	4	6	23	15	16	19
		94.8%	95.8%	94.7%	95.9%	94.3%	95.5%	95.9%	100.0%	97.2%	84.4%	84.7%	94.9%	77.8%	97.5%	87.0%	97.9%	100.0%
	Not Covered	78	9	70	4	28	1	22	.	4	2	11	0	2	1	2	0	.
		5.2%	4.2%	5.3%	4.1%	5.7%	4.5%	4.1%	.	2.8%	15.6%	15.3%	5.1%	22.2%	2.5%	13.0%	2.1%	.
Below 1 Year	Covered	264	32	232	15	85	2	102	7	30	2	7	1	1	4	4	2	4
		87.9%	84.6%	88.4%	86.1%	86.3%	78.5%	92.8%	100.0%	87.1%	41.2%	66.7%	100.0%	80.1%	92.8%	78.9%	84.6%	100.0%
	Not Covered	36	6	30	2	14	1	8	.	4	2	4	.	0	0	1	0	.
		12.1%	15.4%	11.6%	13.9%	13.7%	21.5%	7.2%	.	12.9%	58.8%	33.3%	.	19.9%	7.2%	21.1%	15.4%	.
1 - 2 Years	Covered	328	46	283	25	122	4	107	5	27	2	17	1	1	6	3	3	5
		96.0%	96.0%	96.0%	94.6%	96.5%	95.8%	95.9%	100.0%	100.0%	100.0%	89.9%	100.0%	84.6%	95.4%	85.7%	100.0%	100.0%
	Not Covered	14	2	12	1	4	0	5	.	.	.	2	.	0	0	0	.	.
		4.0%	4.0%	4.0%	5.4%	3.5%	4.2%	4.1%	.	.	.	10.1%	.	15.4%	4.6%	14.3%	.	.
Above 2 years upto 5 years	Covered	845	119	726	61	251	9	316	13	98	9	38	3	4	13	8	11	11
		96.7%	99.3%	96.3%	99.3%	96.2%	100.0%	97.0%	100.0%	100.0%	97.6%	86.9%	92.2%	75.4%	100.0%	91.7%	100.0%	100.0%
	Not Covered	28	1	28	0	10	.	10	.	.	0	6	0	1	.	1	.	.
		3.3%	0.7%	3.7%	0.7%	3.8%	.	3.0%	.	.	2.4%	13.1%	7.8%	24.6%	.	8.3%	.	.

Two types of vaccines are used for vaccination against poliomyelitis: an inactivated poliovirus given by injection (IPV) and a live-attenuated poliovirus given by mouth called oral polio vaccine (OPV). The World Health Organization recommends all children must be fully vaccinated against polio. In countries with >90% primary immunization coverage and low risk of importation, the WHO has recommended one or two IPV doses starting at 2 months of age followed by at least two OPV doses, with the doses separated by 4–8 weeks depending on the risk of exposure. In the UAE National Immunization schedule, currently both IPV and OPV are used in line with the WHO recommendation. Approximately 95% of children were covered by the first dose of the IPV and 92% of children covered by the 2nd dose. The coverage rates for the first dose of OPV was also more than 90% with the coverage decreasing for the 2nd and 3rd dose of OPV.

Table 78: Coverage of IPV 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of injectable polio vaccine	Covered	1,409	188	1,220	97	466	14	505	24	148	13	63	4	6	23	14	14	18
		92.9%	92.1%	93.0%	92.3%	94.6%	90.3%	92.1%	97.3%	95.2%	82.0%	87.2%	94.6%	76.3%	94.8%	84.1%	89.1%	94.4%
	Not Covered	108	16	92	8	27	2	43	1	7	3	9	0	2	1	3	2	1
		7.1%	7.9%	7.0%	7.7%	5.4%	9.7%	7.9%	2.7%	4.8%	18.0%	12.8%	5.4%	23.7%	5.2%	15.9%	10.9%	5.6%
Below 1 Year	Covered	242	28	213	13	84	1	88	7	26	2	8	1	1	4	4	1	3
		81.2%	75.7%	82.0%	75.1%	85.1%	55.1%	80.5%	100.0%	81.3%	41.2%	77.4%	100.0%	55.4%	85.5%	78.9%	58.0%	71.0%
	Not Covered	56	9	47	4	15	1	21	.	6	2	2	.	0	1	1	1	1
		18.8%	24.3%	18.0%	24.9%	14.9%	44.9%	19.5%	.	18.7%	58.8%	22.6%	.	44.6%	14.5%	21.1%	42.0%	29.0%
1 - 2 Years	Covered	326	44	282	24	127	4	100	5	28	2	18	1	1	6	3	2	5
		94.6%	93.7%	94.8%	91.0%	99.0%	95.8%	89.3%	100.0%	100.0%	100.0%	93.3%	100.0%	84.6%	95.4%	78.6%	94.0%	100.0%
	Not Covered	18	3	15	2	1	0	12	.	.	.	1	.	0	0	1	0	.
		5.4%	6.3%	5.2%	9.0%	1.0%	4.2%	10.7%	.	.	.	6.7%	.	15.4%	4.6%	21.4%	6.0%	.
Above 2 years upto 5 years	Covered	841	116	725	60	254	9	316	12	94	9	38	3	4	13	8	10	11
		96.2%	96.6%	96.1%	97.8%	96.0%	97.7%	97.0%	94.8%	98.6%	93.6%	86.9%	91.8%	78.3%	97.4%	88.9%	93.6%	100.0%
	Not Covered	34	4	30	1	10	0	10	1	1	1	6	0	1	0	1	1	.
		3.8%	3.4%	3.9%	2.2%	4.0%	2.3%	3.0%	5.2%	1.4%	6.4%	13.1%	8.2%	21.7%	2.6%	11.1%	6.4%	.

Table 79: Coverage of OPV 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of oral polio vaccine	Covered	1,423	191	1,233	98	470	14	504	24	156	13	63	4	7	23	15	15	18
		93.6%	93.2%	93.6%	93.6%	95.5%	90.3%	92.4%	97.3%	96.3%	82.0%	84.9%	97.5%	90.7%	94.8%	90.0%	94.6%	94.4%
	Not Covered	98	14	84	7	22	2	41	1	6	3	11	0	1	1	2	1	1
		6.4%	6.8%	6.4%	6.4%	4.5%	9.7%	7.6%	2.7%	3.7%	18.0%	15.1%	2.5%	9.3%	5.2%	10.0%	5.4%	5.6%
Below 1 Year	Covered	252	28	223	13	86	1	94	7	28	2	9	1	1	4	4	1	3
		83.8%	75.7%	85.0%	75.1%	86.4%	55.1%	85.4%	100.0%	82.2%	41.2%	84.8%	100.0%	55.4%	85.5%	85.0%	58.0%	71.0%
	Not Covered	49	9	39	4	14	1	16	.	6	2	2	.	0	1	1	1	1
		16.2%	24.3%	15.0%	24.9%	13.6%	44.9%	14.6%	.	17.8%	58.8%	15.2%	.	44.6%	14.5%	15.0%	42.0%	29.0%
1 - 2 Years	Covered	332	46	287	25	127	4	105	5	30	2	16	1	1	6	3	3	5
		95.8%	96.0%	95.8%	94.6%	99.0%	95.8%	93.4%	100.0%	100.0%	100.0%	83.7%	100.0%	91.9%	95.4%	78.6%	100.0%	100.0%
	Not Covered	15	2	13	1	1	0	7	.	.	.	3	.	0	0	1	.	.
		4.2%	4.0%	4.2%	5.4%	1.0%	4.2%	6.6%	.	.	.	16.3%	.	8.1%	4.6%	21.4%	.	.
Above 2 years upto 5 years	Covered	840	117	723	60	257	9	306	12	98	9	37	3	5	13	9	11	11
		96.0%	97.6%	95.8%	98.5%	97.3%	97.7%	94.4%	94.8%	100.0%	93.6%	85.4%	96.2%	97.6%	97.4%	97.2%	100.0%	100.0%
	Not Covered	35	3	32	1	7	0	18	1	.	1	6	0	0	0	0	.	.
		4.0%	2.4%	4.2%	1.5%	2.7%	2.3%	5.6%	5.2%	.	6.4%	14.6%	3.8%	2.4%	2.6%	2.8%	.	.

Table 80: Coverage of OPV 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of oral polio vaccine	Covered	1,331	180	1,151	93	448	13	467	23	133	13	62	4	7	20	16	14	18
		87.9%	88.1%	87.9%	88.4%	91.3%	86.9%	86.1%	94.0%	83.5%	82.0%	84.0%	87.1%	92.3%	83.5%	91.4%	90.7%	94.4%
	Not Covered	184	24	159	12	43	2	75	1	26	3	12	1	1	4	1	1	1
		12.1%	11.9%	12.1%	11.6%	8.7%	13.1%	13.9%	6.0%	16.5%	18.0%	16.0%	12.9%	7.7%	16.5%	8.6%	9.3%	5.6%
Below 1 Year	Covered	194	22	171	10	71	1	71	7	15	2	8	0	1	1	4	1	3
		64.5%	59.4%	65.2%	59.3%	71.5%	34.7%	64.4%	100.0%	44.5%	41.2%	72.7%	46.1%	55.4%	28.2%	80.0%	52.7%	71.0%
	Not Covered	107	15	91	7	28	2	39	.	19	2	3	0	0	3	1	1	1
		35.5%	40.6%	34.8%	40.7%	28.5%	65.3%	35.6%	.	55.5%	58.8%	27.3%	53.9%	44.6%	71.8%	20.0%	47.3%	29.0%
1 - 2 Years	Covered	322	45	276	25	124	4	97	5	30	2	17	1	1	6	3	2	5
		93.3%	95.7%	92.9%	94.6%	97.7%	95.7%	86.2%	100.0%	100.0%	100.0%	87.0%	100.0%	91.9%	95.4%	100.0%	94.0%	100.0%
	Not Covered	23	2	21	1	3	0	15	.	.	.	3	.	0	0	.	0	.
		6.7%	4.3%	7.1%	5.4%	2.3%	4.3%	13.8%	.	.	.	13.0%	.	8.1%	4.6%	.	6.0%	.
Above 2 years upto 5 years	Covered	816	112	703	57	253	9	300	11	88	9	37	3	5	13	8	11	11
		93.8%	94.1%	93.8%	94.1%	95.7%	97.7%	93.5%	88.4%	92.1%	93.6%	85.4%	91.2%	100.0%	95.1%	94.4%	97.5%	100.0%
	Not Covered	54	7	47	4	11	0	21	1	8	1	6	0	.	1	0	0	.
		6.2%	5.9%	6.2%	5.9%	4.3%	2.3%	6.5%	11.6%	7.9%	6.4%	14.6%	8.8%	.	4.9%	5.6%	2.5%	.

Table 81: Coverage of OPV 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of oral polio vaccine	Covered	986	143	843	72	335	10	321	18	110	10	48	3	5	17	10	13	13
		64.9%	69.8%	64.2%	68.4%	68.0%	67.4%	58.8%	71.4%	69.2%	64.7%	66.0%	71.5%	70.4%	70.4%	61.4%	82.6%	69.2%
	Not Covered	532	62	471	33	158	5	225	7	49	5	25	1	2	7	7	3	6
		35.1%	30.2%	35.8%	31.6%	32.0%	32.6%	41.2%	28.6%	30.8%	35.3%	34.0%	28.5%	29.6%	29.6%	38.6%	17.4%	30.8%
Below 1 Year	Covered	70	8	62	3	35	.	14	2	9	1	4	.	0	1	0	1	.
		23.4%	21.4%	23.7%	19.7%	35.1%	.	12.3%	32.2%	26.3%	24.1%	41.8%	.	10.7%	21.7%	10.0%	26.1%	.
	Not Covered	230	30	201	14	64	2	96	5	25	3	6	1	1	3	4	2	4
		76.6%	78.6%	76.3%	80.3%	64.9%	100.0%	87.7%	67.8%	73.7%	75.9%	58.2%	100.0%	89.3%	78.3%	90.0%	73.9%	100.0%
1 - 2 Years	Covered	166	30	136	17	72	2	29	4	17	2	11	1	1	3	2	2	4
		48.1%	64.3%	45.5%	63.2%	56.3%	43.3%	26.0%	90.3%	56.8%	73.7%	59.4%	54.3%	64.5%	55.4%	57.1%	73.3%	75.6%
	Not Covered	179	17	163	10	56	2	83	0	13	1	8	0	0	3	1	1	1
		51.9%	35.7%	54.5%	36.8%	43.7%	56.7%	74.0%	9.7%	43.2%	26.3%	40.6%	45.7%	35.5%	44.6%	42.9%	26.7%	24.4%
Above 2 years upto 5 years	Covered	749	104	645	52	227	9	278	11	85	7	33	3	4	12	8	11	10
		85.9%	87.3%	85.7%	84.7%	86.0%	96.0%	85.9%	85.2%	88.3%	78.6%	74.7%	91.2%	84.1%	92.8%	91.7%	96.1%	90.1%
	Not Covered	123	15	108	9	37	0	46	2	11	2	11	0	1	1	1	0	1
		14.1%	12.7%	14.3%	15.3%	14.0%	4.0%	14.1%	14.8%	11.7%	21.4%	25.3%	8.8%	15.9%	7.2%	8.3%	3.9%	9.9%

Table 82: Coverage of OPV 4th dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 4th dose of oral polio vaccine	Covered	252	55	197	30	117	1	18	14	46	2	6	2	3	2	3	3	3
		16.7%	27.1%	15.1%	28.9%	23.9%	7.0%	3.4%	57.9%	29.9%	15.7%	8.6%	46.8%	34.9%	9.6%	17.1%	17.5%	16.8%
	Not Covered	1,257	149	1,108	74	373	14	524	10	109	13	66	2	5	21	14	13	16
		83.3%	72.9%	84.9%	71.1%	76.1%	93.0%	96.6%	42.1%	70.1%	84.3%	91.4%	53.2%	65.1%	90.4%	82.9%	82.5%	83.2%
Below 1 Year	Covered	41	4	37	2	24	.	3	2	8	.	1	.	0	0	.	0	.
		13.7%	11.9%	14.0%	9.1%	24.4%	.	3.1%	32.2%	22.5%	.	12.1%	.	21.5%	7.2%	.	15.4%	.
	Not Covered	259	33	226	16	75	2	106	5	27	4	9	1	1	4	5	2	4
		86.3%	88.1%	86.0%	90.9%	75.6%	100.0%	96.9%	67.8%	77.5%	100.0%	87.9%	100.0%	78.5%	92.8%	100.0%	84.6%	100.0%
1 - 2 Years	Covered	61	15	46	9	28	0	0	4	14	0	3	0	0	1	0	1	.
		17.9%	32.2%	15.6%	32.7%	22.5%	4.3%	0.2%	90.3%	48.2%	12.6%	16.2%	40.8%	26.9%	9.7%	14.3%	27.2%	.
	Not Covered	280	32	248	18	98	4	112	0	14	2	15	1	1	6	3	2	5
		82.1%	67.8%	84.4%	67.3%	77.5%	95.7%	99.8%	9.7%	51.8%	87.4%	83.8%	59.2%	73.1%	90.3%	85.7%	72.8%	100.0%
Above 2 years upto 5 years	Covered	150	36	114	20	64	1	15	8	25	2	2	2	2	1	2	2	3
		17.3%	29.8%	15.3%	33.0%	24.3%	10.0%	4.6%	59.4%	27.1%	22.8%	4.5%	58.0%	39.7%	10.4%	27.8%	15.7%	29.6%
	Not Covered	717	84	633	41	200	8	306	5	68	7	42	1	3	12	6	9	8
		82.7%	70.2%	84.7%	67.0%	75.7%	90.0%	95.4%	40.6%	72.9%	77.2%	95.5%	42.0%	60.3%	89.6%	72.2%	84.3%	70.4%

Table 83: Coverage of Pneumococcal conjugate vaccine 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of pneumococcal conjugate vaccine	Covered	1,417	192	1,225	100	460	15	533	25	136	11	57	3	6	23	16	15	18
		94.2%	93.9%	94.2%	95.4%	94.8%	96.5%	97.3%	100.0%	89.5%	73.4%	79.0%	70.9%	79.6%	95.2%	92.9%	95.9%	94.4%
	Not Covered	87	12	75	5	25	1	15	.	16	4	15	1	2	1	1	1	1
		5.8%	6.1%	5.8%	4.6%	5.2%	3.5%	2.7%	.	10.5%	26.6%	21.0%	29.1%	20.4%	4.8%	7.1%	4.1%	5.6%
Below 1 Year	Covered	265	32	234	15	89	2	102	7	28	2	7	0	1	4	4	2	3
		88.2%	83.9%	88.8%	86.1%	90.0%	85.1%	93.1%	100.0%	82.8%	41.2%	66.7%	75.1%	55.4%	85.5%	80.0%	84.6%	71.0%
	Not Covered	35	6	29	2	10	0	8	.	6	2	4	0	0	1	1	0	1
		11.8%	16.1%	11.2%	13.9%	10.0%	14.9%	6.9%	.	17.2%	58.8%	33.3%	24.9%	44.6%	14.5%	20.0%	15.4%	29.0%
1 - 2 Years	Covered	325	45	280	25	124	4	110	5	24	2	13	1	1	6	3	2	5
		95.7%	94.5%	95.9%	94.3%	98.2%	95.8%	98.0%	100.0%	92.6%	100.0%	70.8%	71.0%	92.0%	91.7%	100.0%	94.0%	100.0%
	Not Covered	15	3	12	1	2	0	2	.	2	.	5	0	0	1	.	0	.
		4.3%	5.5%	4.1%	5.7%	1.8%	4.2%	2.0%	.	7.4%	.	29.2%	29.0%	8.0%	8.3%	.	6.0%	.
Above 2 years upto 5 years	Covered	827	115	712	60	246	9	321	13	84	7	37	2	4	13	9	11	11
		95.7%	96.9%	95.5%	98.6%	95.0%	100.0%	98.5%	100.0%	91.1%	79.5%	85.4%	69.9%	81.2%	100.0%	97.2%	98.6%	100.0%
	Not Covered	37	4	34	1	13	.	5	.	8	2	6	1	1	.	0	0	.
		4.3%	3.1%	4.5%	1.4%	5.0%	.	1.5%	.	8.9%	20.5%	14.6%	30.1%	18.8%	.	2.8%	1.4%	.

Pneumococcal conjugate vaccine (PCV13 or Prevnar13®) is recommended for all children younger than 2 years of age as per the UAE National Immunization schedule.

The vaccine is given to infants as a series of 4 doses, one dose at each of these ages: 2 months, 4 months, 6 months, and 12 through 15 months.
Children who miss their shots or start the series later should still get the vaccine. The number of doses recommended and the intervals between doses will depend on the child's age when vaccination begins. The coverage for the first dose of Pneumococcal conjugate vaccine was noted at 94.2% with almost similar coverage between Emirati and non-Emirati children. The coverage decreases for subsequent 3 doses of Pneumococcal conjugate vaccine with less than 65% coverage for the last dose of Pneumococcal conjugate vaccine.

Table 84: Coverage of Pneumococcal conjugate vaccine 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of pneumococcal conjugate vaccine	Covered	1,393	186	1,206	97	454	14	517	23	135	12	60	3	6	22	16	15	18
		92.7%	91.9%	92.8%	93.0%	93.8%	91.4%	94.4%	97.1%	89.3%	79.1%	83.6%	76.2%	79.9%	92.5%	91.4%	92.4%	94.4%
	Not Covered	109	16	93	7	30	1	31	1	16	3	12	1	2	2	1	1	1
		7.3%	8.1%	7.2%	7.0%	6.2%	8.6%	5.6%	2.9%	10.7%	20.9%	16.4%	23.8%	20.1%	7.5%	8.6%	7.6%	5.6%
Below 1 Year	Covered	244	28	216	13	84	2	91	7	27	2	7	0	1	3	4	1	3
		81.3%	73.5%	82.4%	71.8%	84.9%	61.7%	83.3%	100.0%	77.9%	46.1%	71.0%	75.1%	55.4%	78.3%	80.0%	52.7%	71.0%
	Not Covered	56	10	46	5	15	1	18	.	8	2	3	0	0	1	1	1	1
		18.7%	26.5%	17.6%	28.2%	15.1%	38.3%	16.7%	.	22.1%	53.9%	29.0%	24.9%	44.6%	21.7%	20.0%	47.3%	29.0%
1 - 2 Years	Covered	325	45	280	25	125	4	107	5	24	2	14	1	1	6	3	2	5
		95.9%	95.7%	96.0%	96.0%	98.9%	95.8%	95.9%	100.0%	92.6%	100.0%	79.0%	86.5%	90.3%	91.7%	100.0%	94.0%	100.0%
	Not Covered	14	2	12	1	1	0	5	.	2	.	4	0	0	1	.	0	.
		4.1%	4.3%	4.0%	4.0%	1.1%	4.2%	4.1%	.	7.4%	.	21.0%	13.5%	9.7%	8.3%	.	6.0%	.
Above 2 years upto 5 years	Covered	824	113	711	60	245	9	318	11	85	8	39	2	4	13	8	11	11
		95.4%	96.3%	95.3%	97.8%	94.6%	97.7%	97.6%	94.2%	92.6%	87.5%	88.3%	72.8%	82.6%	97.4%	94.4%	100.0%	100.0%
	Not Covered	40	4	35	1	14	0	8	1	7	1	5	1	1	0	0	.	.
		4.6%	3.7%	4.7%	2.2%	5.4%	2.3%	2.4%	5.8%	7.4%	12.5%	11.7%	27.2%	17.4%	2.6%	5.6%	.	.

Table 85: Coverage of Pneumococcal conjugate vaccine 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of pneumococcal conjugate vaccine	Covered	1,298	174	1,124	91	428	13	484	21	114	12	58	3	6	19	16	15	18
		86.2%	86.0%	86.3%	86.4%	87.9%	86.9%	88.4%	91.3%	74.7%	79.2%	81.5%	72.2%	75.9%	81.3%	91.4%	91.7%	94.4%
	Not Covered	207	28	179	14	59	2	64	2	39	3	13	1	2	4	1	1	1
		13.8%	14.0%	13.7%	13.6%	12.1%	13.1%	11.6%	8.7%	25.3%	20.8%	18.5%	27.8%	24.1%	18.7%	8.6%	8.3%	5.6%
Below 1 Year	Covered	184	21	164	9	68	1	71	7	12	2	7	0	1	1	4	1	3
		61.5%	54.6%	62.5%	49.8%	68.5%	41.3%	64.5%	100.0%	34.3%	41.2%	66.7%	46.1%	55.4%	21.0%	80.0%	52.7%	71.0%
	Not Covered	116	17	98	9	31	1	39	.	22	2	3	0	0	3	1	1	1
		38.5%	45.4%	37.5%	50.2%	31.5%	58.7%	35.5%	.	65.7%	58.8%	33.3%	53.9%	44.6%	79.0%	20.0%	47.3%	29.0%
1 - 2 Years	Covered	313	44	269	24	119	4	102	4	24	2	15	1	1	6	3	3	5
		92.4%	93.2%	92.3%	93.2%	93.7%	95.8%	91.4%	87.9%	92.6%	100.0%	83.7%	86.5%	90.3%	91.7%	100.0%	100.0%	100.0%
	Not Covered	26	3	23	2	8	0	10	1	2	.	3	0	0	1	.	.	.
		7.6%	6.8%	7.7%	6.8%	6.3%	4.2%	8.6%	12.1%	7.4%	.	16.3%	13.5%	9.7%	8.3%	.	.	.
Above 2 years upto 5 years	Covered	801	110	691	57	241	9	311	10	79	8	37	2	4	13	8	11	11
		92.4%	93.1%	92.3%	94.1%	92.5%	95.6%	95.3%	87.4%	84.7%	89.5%	83.9%	72.8%	76.8%	95.1%	94.4%	97.5%	100.0%
	Not Covered	66	8	58	4	20	0	15	1	14	1	7	1	1	1	0	0	.
		7.6%	6.9%	7.7%	5.9%	7.5%	4.4%	4.7%	12.6%	15.3%	10.5%	16.1%	27.2%	23.2%	4.9%	5.6%	2.5%	.

Table 86: Coverage of Pneumococcal conjugate vaccine 4th dose (booster)

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 4th dose of pneumococcal conjugate vaccine	Covered	964	136	827	69	321	10	340	15	93	10	48	2	4	16	10	13	12
		64.4%	67.4%	63.9%	66.1%	66.8%	67.6%	62.1%	67.8%	61.5%	62.9%	66.9%	51.2%	51.4%	68.4%	59.4%	82.6%	60.9%
	Not Covered	533	66	467	36	159	5	208	7	58	6	24	2	4	8	7	3	8
		35.6%	32.6%	36.1%	33.9%	33.2%	32.4%	37.9%	32.2%	38.5%	37.1%	33.1%	48.8%	48.6%	31.6%	40.6%	17.4%	39.1%
Below 1 Year	Covered	67	8	60	3	32	0	16	2	8	1	3	.	0	1	0	1	.
		22.5%	20.8%	22.7%	18.2%	32.3%	6.6%	14.7%	32.2%	22.5%	29.0%	33.7%	.	10.7%	14.5%	10.5%	26.1%	.
	Not Covered	232	30	202	14	67	2	94	5	27	3	7	1	1	4	4	2	4
		77.5%	79.2%	77.3%	81.8%	67.7%	93.4%	85.3%	67.8%	77.5%	71.0%	66.3%	100.0%	89.3%	85.5%	89.5%	73.9%	100.0%
1 - 2 Years	Covered	163	28	135	15	70	2	40	4	10	2	11	0	1	4	1	2	2
		48.4%	59.8%	46.5%	58.6%	55.8%	45.2%	35.4%	78.3%	39.8%	73.7%	62.7%	30.9%	60.5%	53.6%	42.9%	73.3%	40.9%
	Not Covered	174	19	155	11	55	2	72	1	15	1	7	1	0	3	2	1	3
		51.6%	40.2%	53.5%	41.4%	44.2%	54.8%	64.6%	21.7%	60.2%	26.3%	37.3%	69.1%	39.5%	46.4%	57.1%	26.7%	59.1%
Above 2 years upto 5 years	Covered	733	100	633	51	219	9	284	9	75	7	33	2	3	12	8	11	10
		85.3%	85.5%	85.2%	83.0%	85.5%	94.0%	87.2%	86.3%	82.1%	73.9%	76.1%	69.4%	57.7%	92.8%	91.7%	96.1%	90.1%
	Not Covered	127	17	110	10	37	1	42	1	16	2	10	1	2	1	1	0	1
		14.7%	14.5%	14.8%	17.0%	14.5%	6.0%	12.8%	13.7%	17.9%	26.1%	23.9%	30.6%	42.3%	7.2%	8.3%	3.9%	9.9%

Table 87: Coverage of MMR 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of MMR vaccine	Covered	1,179	161	1,018	84	393	12	422	18	113	10	58	3	6	19	12	14	15
		78.3%	78.7%	78.2%	79.8%	81.1%	79.9%	77.4%	74.7%	72.8%	69.3%	78.3%	69.2%	79.6%	78.9%	70.0%	87.9%	79.0%
	Not Covered	327	43	284	21	91	3	123	6	42	5	16	1	2	5	5	2	4
		21.7%	21.3%	21.8%	20.2%	18.9%	20.1%	22.6%	25.3%	27.2%	30.7%	21.7%	30.8%	20.4%	21.1%	30.0%	12.1%	21.0%
Below 1 Year	Covered	83	9	74	4	44	0	19	2	8	1	3	.	0	1	0	1	.
		27.8%	23.0%	28.5%	22.0%	44.1%	6.6%	17.6%	32.2%	22.5%	29.0%	31.6%	.	21.5%	14.5%	10.0%	33.1%	.
	Not Covered	215	29	186	14	55	2	88	5	27	3	7	1	1	4	4	1	4
		72.2%	77.0%	71.5%	78.0%	55.9%	93.4%	82.4%	67.8%	77.5%	71.0%	68.4%	100.0%	78.5%	85.5%	90.0%	66.9%	100.0%
1 - 2 Years	Covered	311	43	268	24	117	3	100	5	24	2	19	1	1	6	3	3	4
		92.0%	91.8%	92.0%	90.4%	93.6%	88.9%	88.9%	100.0%	93.4%	89.7%	96.7%	80.3%	100.0%	91.7%	92.9%	100.0%	93.0%
	Not Covered	27	4	23	2	8	0	12	.	2	0	1	0	.	1	0	.	0
		8.0%	8.2%	8.0%	9.6%	6.4%	11.1%	11.1%	.	6.6%	10.3%	3.3%	19.7%	.	8.3%	7.1%	.	7.0%
Above 2 years upto 5 years	Covered	785	109	676	56	233	9	303	11	81	7	35	2	5	12	8	11	11
		90.2%	91.1%	90.1%	91.8%	89.2%	96.2%	93.0%	88.4%	85.2%	80.6%	81.3%	79.5%	86.8%	92.8%	94.4%	96.1%	100.0%
	Not Covered	85	11	74	5	28	0	23	1	14	2	8	1	1	1	0	0	.
		9.8%	8.9%	9.9%	8.2%	10.8%	3.8%	7.0%	11.6%	14.8%	19.4%	18.7%	20.5%	13.2%	7.2%	5.6%	3.9%	.

All children should be given two doses of MMR (measles-mumps-rubella) vaccine, starting with the first dose at 12 through 15 months of age, and the second dose at 4 through 6 years of age. Children can receive the second dose earlier as long as it is at least 28 days after the first dose. MMR vaccine is given later than some other childhood vaccines because antibodies transferred from the mother to the baby can provide some protection from disease and make the MMR vaccine less effective until about 1 year of age.
MMR vaccine was introduced recently in the UAE Immunization schedule. Prior to this, children received measles vaccine. It is plausible that children who had received

measles vaccines earlier may not have taken the MMR vaccine. This may partly explain the low coverage rates for the MMR vaccine.

Table 88: Coverage of MMR 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of MMR vaccine	Covered	977	138	840	69	329	11	333	18	98	10	51	2	5	16	10	12	13
		64.7%	67.4%	64.3%	65.6%	67.5%	70.8%	60.9%	72.7%	63.2%	64.7%	69.9%	46.5%	62.1%	67.3%	61.4%	76.7%	69.2%
	Not Covered	533	67	467	36	158	5	214	7	57	5	22	2	3	8	7	4	6
		35.3%	32.6%	35.7%	34.4%	32.5%	29.2%	39.1%	27.3%	36.8%	35.3%	30.1%	53.5%	37.9%	32.7%	38.6%	23.3%	30.8%
Below 1 Year	Covered	74	8	66	3	38	0	16	2	8	1	3	.	0	1	0	1	.
		24.5%	20.8%	25.0%	18.2%	38.4%	6.6%	14.7%	32.2%	22.5%	29.0%	31.6%	.	10.7%	14.5%	10.0%	26.1%	.
	Not Covered	227	30	197	14	61	2	94	5	27	3	7	1	1	4	4	2	4
		75.5%	79.2%	75.0%	81.8%	61.6%	93.4%	85.3%	67.8%	77.5%	71.0%	68.4%	100.0%	89.3%	85.5%	90.0%	73.9%	100.0%
1 - 2 Years	Covered	167	28	138	15	74	2	32	4	13	2	13	0	1	4	2	2	4
		49.1%	59.9%	47.3%	55.8%	58.6%	49.4%	28.4%	90.3%	49.7%	73.7%	68.1%	30.9%	74.7%	53.6%	57.1%	73.3%	75.6%
	Not Covered	173	19	154	12	53	2	80	0	13	1	6	1	0	3	1	1	1
		50.9%	40.1%	52.7%	44.2%	41.4%	50.6%	71.6%	9.7%	50.3%	26.3%	31.9%	69.1%	25.3%	46.4%	42.9%	26.7%	24.4%
Above 2 years upto 5 years	Covered	737	101	636	51	216	9	285	11	78	7	35	2	4	12	8	10	10
		84.7%	85.1%	84.7%	83.4%	82.9%	97.7%	87.5%	88.4%	81.4%	76.7%	80.0%	60.7%	69.3%	90.8%	91.7%	87.6%	90.1%
	Not Covered	133	18	115	10	44	0	41	1	18	2	9	1	2	1	1	1	1
		15.3%	14.9%	15.3%	16.6%	17.1%	2.3%	12.5%	11.6%	18.6%	23.3%	20.0%	39.3%	30.7%	9.2%	8.3%	12.4%	9.9%

Table 89: Coverage of MMR 3rd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 3rd dose of MMR vaccine	Covered	245	52	194	29	111	1	24	13	45	2	6	1	2	2	2	2	3
		16.3%	25.4%	14.9%	27.9%	23.0%	8.5%	4.4%	57.7%	29.4%	13.2%	9.0%	28.9%	20.6%	9.5%	14.3%	13.4%	16.8%
	Not Covered	1,257	152	1,105	76	372	14	524	10	107	14	65	3	6	22	15	14	16
		83.7%	74.6%	85.1%	72.1%	77.0%	91.5%	95.6%	42.3%	70.6%	86.8%	91.0%	71.1%	79.4%	90.5%	85.7%	86.6%	83.2%
Below 1 Year	Covered	42	5	36	3	23	0	3	2	9	0	1	.	0	.	.	0	.
		13.9%	14.4%	13.8%	15.4%	23.4%	6.6%	2.3%	32.2%	26.9%	4.9%	12.1%	.	10.7%	.	.	6.3%	.
	Not Covered	259	32	227	15	76	2	107	5	25	4	9	1	1	4	5	2	4
		86.1%	85.6%	86.2%	84.6%	76.6%	93.4%	97.7%	67.8%	73.1%	95.1%	87.9%	100.0%	89.3%	100.0%	100.0%	93.7%	100.0%
1 - 2 Years	Covered	61	15	47	8	29	0	3	4	11	0	4	0	0	1	.	0	.
		18.2%	31.1%	16.1%	31.9%	23.1%	11.8%	2.3%	78.3%	43.1%	12.6%	21.2%	30.9%	32.7%	19.0%	.	12.1%	.
	Not Covered	276	33	243	18	96	3	110	1	14	2	14	1	1	5	3	2	5
		81.8%	68.9%	83.9%	68.1%	76.9%	88.2%	97.7%	21.7%	56.9%	87.4%	78.8%	69.1%	67.3%	81.0%	100.0%	87.9%	100.0%
Above 2 years upto 5 years	Covered	142	32	111	18	59	1	19	7	24	2	1	1	1	1	2	2	3
		16.5%	26.6%	14.8%	29.7%	22.7%	7.5%	5.9%	64.3%	26.6%	16.5%	3.0%	34.0%	19.3%	7.8%	27.8%	15.2%	29.6%
	Not Covered	722	87	635	43	201	8	307	4	67	8	42	2	4	12	6	9	8
		83.5%	73.4%	85.2%	70.3%	77.3%	92.5%	94.1%	35.7%	73.4%	83.5%	97.0%	66.0%	80.7%	92.2%	72.2%	84.8%	70.4%

Table 90: Coverage of Rota virus 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of Rota virus vaccine	Covered	1,384	190	1,194	100	455	15	502	22	138	12	60	4	7	22	13	15	19
		92.1%	94.0%	91.8%	95.3%	93.9%	94.4%	91.7%	100.0%	89.9%	77.0%	84.6%	83.7%	92.0%	93.8%	75.0%	96.9%	100.0%
	Not Covered	118	12	106	5	30	1	45	.	15	4	11	1	1	1	4	0	.
		7.9%	6.0%	8.2%	4.7%	6.1%	5.6%	8.3%	.	10.1%	23.0%	15.4%	16.3%	8.0%	6.2%	25.0%	3.1%	.
Below 1 Year	Covered	258	32	226	15	87	2	97	7	28	2	8	1	1	4	2	2	4
		85.7%	84.4%	85.9%	85.3%	87.6%	85.1%	88.5%	100.0%	82.8%	46.1%	74.7%	100.0%	66.1%	85.5%	35.0%	84.6%	100.0%
	Not Covered	43	6	37	3	12	0	13	.	6	2	3	.	0	1	3	0	.
		14.3%	15.6%	14.1%	14.7%	12.4%	14.9%	11.5%	.	17.2%	53.9%	25.3%	.	33.9%	14.5%	65.0%	15.4%	.
1 - 2 Years	Covered	313	45	268	25	122	4	97	5	24	2	16	1	1	6	3	3	5
		93.1%	94.7%	92.8%	94.3%	98.1%	95.8%	86.6%	100.0%	93.4%	100.0%	90.5%	100.0%	92.6%	87.1%	100.0%	100.0%	100.0%
	Not Covered	23	2	21	1	2	0	15	.	2	.	2	.	0	1	.	.	.
		6.9%	5.3%	7.2%	5.7%	1.9%	4.2%	13.4%	.	6.6%	.	9.5%	.	7.4%	12.9%	.	.	.
Above 2 years upto 5 years	Covered	813	113	699	60	246	9	308	11	85	8	37	2	5	13	8	11	11
		94.0%	96.9%	93.5%	98.5%	94.2%	96.3%	94.6%	100.0%	91.6%	83.3%	84.7%	74.5%	97.1%	100.0%	87.5%	98.6%	100.0%
	Not Covered	52	4	48	1	15	0	18	.	8	2	7	1	0	.	1	0	.
		6.0%	3.1%	6.5%	1.5%	5.8%	3.7%	5.4%	.	8.4%	16.7%	15.3%	25.5%	2.9%	.	12.5%	1.4%	.

Rotavirus spreads easily among infants and young children. The virus can cause severe watery diarrhea, vomiting, fever, and abdominal pain. As per US CDC, Rotavirus vaccine is the best way to protect your child against rotavirus disease. Most children (about 9 out of 10) who get the vaccine will be protected from severe rotavirus disease. About 7 out of 10 children will be protected from rotavirus disease of any severity. The recommended schedule for Rota virus vaccine in UAE is 2 doses given at 2nd and 4th month. As can be seen from the table above, the coverage for 1st dose of Rota virus vaccine is more than 92% whereas that of the 2nd dose is around 90%. One of plausible reason for the high coverage of Rota virus vaccine is that both the doses are to be given before the child turns 1 year old and the time when the coverage to immunization is highest.

Table 91: Coverage of Rota virus 2nd dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of Rota virus vaccine	Covered	1,353	186	1,167	98	445	14	490	22	136	12	58	4	6	22	13	15	18
		90.1%	91.6%	89.9%	93.4%	91.9%	90.3%	89.7%	93.1%	88.7%	79.4%	82.2%	83.7%	78.9%	92.4%	78.6%	91.2%	94.4%
	Not Covered	149	17	132	7	39	2	56	2	17	3	13	1	2	2	4	1	1
		9.9%	8.4%	10.1%	6.6%	8.1%	9.7%	10.3%	6.9%	11.3%	20.6%	17.8%	16.3%	21.1%	7.6%	21.4%	8.8%	5.6%
Below 1 Year	Covered	237	28	209	13	82	2	89	7	27	2	7	1	0	3	2	1	3
		78.9%	74.3%	79.5%	71.8%	82.7%	68.3%	81.0%	100.0%	77.9%	46.1%	68.7%	100.0%	32.2%	78.3%	35.0%	52.7%	71.0%
	Not Covered	63	10	54	5	17	1	21	.	8	2	3	.	1	1	3	1	1
		21.1%	25.7%	20.5%	28.2%	17.3%	31.7%	19.0%	.	22.1%	53.9%	31.3%	.	67.8%	21.7%	65.0%	47.3%	29.0%
1 - 2 Years	Covered	313	46	268	25	122	4	97	5	24	2	16	1	1	6	3	3	5
		93.4%	96.3%	92.9%	96.0%	98.1%	95.8%	86.8%	100.0%	93.4%	100.0%	90.5%	100.0%	92.6%	91.7%	100.0%	100.0%	100.0%
	Not Covered	22	2	21	1	2	0	15	.	2	.	2	.	0	1	.	.	.
		6.6%	3.7%	7.1%	4.0%	1.9%	4.2%	13.2%	.	6.6%	.	9.5%	.	7.4%	8.3%	.	.	.
Above 2 years upto 5 years	Covered	803	112	691	60	241	9	305	10	85	8	35	2	4	12	8	11	11
		92.7%	95.1%	92.4%	98.5%	92.5%	94.0%	93.7%	86.1%	91.3%	87.1%	82.2%	74.5%	84.8%	97.3%	94.4%	96.8%	100.0%
	Not Covered	63	6	57	1	20	1	21	2	8	1	8	1	1	0	0	0	.
		7.3%	4.9%	7.6%	1.5%	7.5%	6.0%	6.3%	13.9%	8.7%	12.9%	17.8%	25.5%	15.2%	2.7%	5.6%	3.2%	.

Table 92: Coverage of varicella virus 1st dose

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 1st dose of varicella vaccine	Covered	1,152	154	998	81	385	12	415	15	110	11	56	3	6	19	12	14	15
		76.9%	76.2%	77.0%	77.0%	79.2%	79.8%	75.9%	65.7%	73.1%	70.0%	80.0%	64.9%	72.7%	79.8%	68.6%	85.7%	79.0%
	Not Covered	347	48	298	24	101	3	131	8	40	5	14	2	2	5	5	2	4
		23.1%	23.8%	23.0%	23.0%	20.8%	20.2%	24.1%	34.3%	26.9%	30.0%	20.0%	35.1%	27.3%	20.2%	31.4%	14.3%	21.0%
Below 1 Year	Covered	83	8	75	3	40	0	22	2	8	1	4	.	0	1	0	1	.
		27.6%	21.3%	28.5%	18.2%	40.0%	6.6%	20.4%	32.2%	22.5%	29.0%	41.8%	.	32.2%	14.5%	10.0%	33.1%	.
	Not Covered	218	30	188	14	59	2	87	5	27	3	6	1	1	4	4	1	4
		72.4%	78.7%	71.5%	81.8%	60.0%	93.4%	79.6%	67.8%	77.5%	71.0%	58.2%	100.0%	67.8%	85.5%	90.0%	66.9%	100.0%
1 - 2 Years	Covered	308	42	266	23	117	3	98	4	25	2	16	1	1	6	3	3	4
		91.5%	89.6%	91.8%	87.9%	92.2%	88.9%	88.5%	87.9%	100.0%	100.0%	96.6%	80.3%	100.0%	91.7%	92.9%	100.0%	93.0%
	Not Covered	29	5	24	3	10	0	13	1	.	.	1	0	.	1	0	.	0
		8.5%	10.4%	8.2%	12.1%	7.8%	11.1%	11.5%	12.1%	.	.	3.4%	19.7%	.	8.3%	7.1%	.	7.0%
Above 2 years upto 5 years	Covered	761	104	658	55	229	9	294	8	77	7	35	2	4	12	8	10	11
		88.4%	88.4%	88.4%	89.3%	87.7%	96.0%	90.3%	77.4%	84.7%	78.4%	83.0%	72.8%	73.5%	95.0%	91.7%	92.9%	100.0%
	Not Covered	100	14	87	7	32	0	31	2	14	2	7	1	1	1	1	1	.
		11.6%	11.6%	11.6%	10.7%	12.3%	4.0%	9.7%	22.6%	15.3%	21.6%	17.0%	27.2%	26.5%	5.0%	8.3%	7.1%	.

Varicella vaccine, also known as chickenpox vaccine, is a vaccine that protects against chickenpox. One dose of vaccine prevents 95% of moderate disease and 100% of severe disease. Two doses of vaccine are more effective than one as has been recommended in the UAE National Immunization Schedule. Children should receive two doses of the vaccine—the first dose at 12 through 15 months old and a second dose at 4 through 6 years old. The coverage of first dose of varicella immunization was more than 75% with similar coverage rates for Emirati and non-Emirati children. However, the coverage noted from the survey for the 2nd dose was very low at less than 15% with the rates in non-Emiratis much lesser than Emirati children. The exact reason for this anomaly in all the 2nd and later doses of immunizations should be investigated in future.

Table 93: Coverage of varicella virus 2nd dose (given between 5-6 years)

Age	Status	Total	Nationality		Abu Dhabi		Dubai		Sharjah		Ajman		Umm Al Quwain		Ras Al Khaimah		Fujairah	
			Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati	Emirati	Non-Emirati
Total records for 2nd dose of varicella vaccine	Covered	218	51	167	31	102	1	13	12	38	2	6	1	2	2	2	2	3
		14.6%	25.5%	12.9%	29.9%	21.0%	6.2%	2.4%	51.7%	25.7%	10.2%	9.0%	28.1%	30.8%	10.4%	14.3%	15.1%	16.8%
	Not Covered	1,275	149	1,126	72	384	15	531	11	109	14	65	3	5	21	15	14	16
		85.4%	74.5%	87.1%	70.1%	79.0%	93.8%	97.6%	48.3%	74.3%	89.8%	91.0%	71.9%	69.2%	89.6%	85.7%	84.9%	83.2%
Below 1 Year	Covered	36	5	31	2	20	0	3	2	8	0	1	.	0	.	.	0	.
		12.0%	13.8%	11.7%	12.9%	19.7%	6.6%	2.3%	32.2%	23.5%	4.9%	6.1%	.	21.5%	.	.	15.4%	.
	Not Covered	263	32	231	15	80	2	107	5	25	4	10	1	1	4	5	2	4
		88.0%	86.2%	88.3%	87.1%	80.3%	93.4%	97.7%	67.8%	76.5%	95.1%	93.9%	100.0%	78.5%	100.0%	100.0%	84.6%	100.0%
1 - 2 Years	Covered	61	15	46	9	27	0	5	4	8	0	4	0	1	1	.	0	.
		18.1%	31.6%	15.9%	33.7%	21.6%	7.6%	4.3%	78.3%	35.6%	8.4%	25.5%	30.9%	67.3%	19.1%	.	12.1%	.
	Not Covered	274	32	243	17	99	4	106	1	15	2	13	1	0	5	3	2	5
		81.9%	68.4%	84.1%	66.3%	78.4%	92.4%	95.7%	21.7%	64.4%	91.6%	74.5%	69.1%	32.7%	80.9%	100.0%	87.9%	100.0%
Above 2 years upto 5 years	Covered	122	31	90	20	55	0	6	6	22	1	1	1	1	1	2	2	3
		14.2%	26.8%	12.2%	33.2%	21.1%	5.5%	1.7%	52.3%	24.0%	12.7%	3.0%	32.8%	22.4%	9.5%	27.8%	15.7%	29.6%
	Not Covered	737	85	652	40	206	9	318	5	69	8	42	2	4	12	6	9	8
		85.8%	73.2%	87.8%	66.8%	78.9%	94.5%	98.3%	47.7%	76.0%	87.3%	97.0%	67.2%	77.6%	90.5%	72.2%	84.3%	70.4%

LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE

CAPI Development

Freezing the questionnaires before starting the programming on the CAPI tool by involving all stakeholders into confidence. For the current survey, we provided the first cut by modifying the standard WHO questionnaires and involving WHO teams, who then did more changes to the questionnaires. This led to a lot of reprogramming and delays.
Always rely on industry standard tools for CAPI methods instead of developing a new platform. As the requirements to have the data server in UAE, we built the CAPI tool from the scratch, which had long testing and standardization timelines. This has affected the survey timelines.

Public Relations campaign

The need for solid Public Relations campaign, which is the backbone of such large scale and sensitive surveys, is very important and essential. Support from all stakeholders in terms of marketing and awareness campaigns should be made throughout the entire project time line as this definitely supports during the fieldwork.

Researchers and Nurses ID

Planning the issuance of relevant ID cards to carry out the fieldwork well in advance is of crucial importance. This has to be done by maintaining proper trackers of all the resources we have applied for and the status has to be updated.
Need to anticipate high refusal rates for resources whom we apply form and hence.

Police support

Police support is of utmost importance, and having everything in place and set up prior to project launch must be mandatory. Meeting the relevant contacts from the police face to face prior to fieldwork launch can be very beneficial in order not to lose any time during the actual fieldwork.

Researchers' communication skills

Stronger communication skills lead to much better response rates overall, so there is a need to assess this specific attribute for all resources involved in the project, especially for those resources that will act as leaders in the roles of supervisors.

Data tabulations and report writing

Proper coordination between various stakeholders involved in the project is needed. There were many stakeholders who had different requirements, views, comments and feedback. This results in delays in completion of the data tabulations and final report writing.

Field team

Proper training session conducted along with monthly refresher training sessions to circulate best practices and Update field guidelines. Field SOP prepared for this survey as well as Stretched field team operating hours in Field (6 days a week) is very important. Interviews time scheduling as per respondent convenience was crucial for the success of the survey.

Collaboration with police

Informing police ahead of time to ensure that fieldwork progresses as smoothly as possible. After reaching the targeted clusters, researchers team are encouraged to call 999 and inform the police about the survey and provide them with their location, cars plate number, names … etc.

This step will help in solving any complaints that might come during the fieldwork in any cluster from households, as the front liner police officer will be aware about the field team and their names and can confirm to any household that the research team are representative of MOHAP.

Police patrols to accompany field team in some regions and whenever required.

LESSONS LEARNED AND RECOMMENDATIONS FOR FUTURE

Field teams structure

Proper structuring of field teams was one of the key elements in the survey success (further details on survey Field team's structure can be found in the introduction section). Professional dress code with identification Badges/Cards played a significant role in smoothly running fieldwork.

Field teams practices

Weekly/daily field plan prepared and implemented during field work,
Constant presence of field team leaders on daily basis,
Interviewers to immediately escalate any issues/ challenges/crisis to their supervisors, who in turn would escalate to the team leaders, who would then take immediate action to solve the problem.
Hotlines numbers and direct contacts from the ministry provided to households (whenever required).
MOHAP involvement in convincing households to participate through calls and SMS as a part of the public relation campaign.

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APPENDIX

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