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منتدى الإمارات للسياسات العامة
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The State of UAE Healthcare Service Delivery: Public Perceptions- Preliminary Insights

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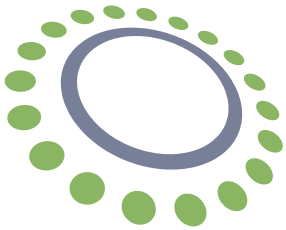

منتدى الإمـارات للسياسات العامة

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Abstract

The UAE Ministry of Health and Prevention has been developing a comprehensive system proficient of rationalizing the involvement of all institutions providing health services and leading such input to make quality, access, and affordability of healthcare as the triad. The study aims to investigate public perceptions of healthcare delivery in the UAE with respect to affordability, availability/access, and quality. Given the recent mandatory healthcare coverage for all employees by their employers, this study will focus on the public perception's appropriateness and application of the current healthcare practices in the UAE. This exploratory study highlights the findings of perceptions on UAE healthcare services delivery from 5,855 respondents. The key findings indicated the differences in perceptions across different socio-demographics groups with respect to healthcare services factors: quality, access and approachability, affordability and responsiveness, respectively. This report compares and contrasts key areas including the imperative need for healthcare expansion and reforms, historical and ideological perspectives, and insights into the health development in the Middle East. Furthermore, the report explores the main purposes, practices and reforms in UAE healthcare service delivery. Based on the findings, the study provides some policy recommendations and future directions while taking into account the current public-private partnership landscape in the country.

Keywords: UAE Healthcare, Affordability, Quality, Access, Health Policy

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Chapter 1: Introduction

This section documents current debates on key areas including the imperative need for health expansion and reforms.

1.1 Imperatives for Health Expansion and Reforms

It is rather challenging to construct comprehensive criteria of effective and efficient healthcare systems. Benchmarks and international comparisons have long been exhausted to reach a universal list of prerequisites; yet all attempts have concluded how the unique characteristics of societies critically determine the latter. All the way from health policies, healthcare systems, to healthcare outcomes, health sectors have been continuously challenged to ambitiously strive for the most affordable services to offer the public.

In the wake of the World Health Organization's controversial report comparing health systems and with the growing availability of comparative data from the Organization for Economic Cooperation and Development (OECD), health policymakers and politicians are perhaps both more able and more willing to look elsewhere for lessons on how to fund, manage, and organize health care (OECD, 2012). Moreover, the problems they face—rising costs, demographic changes, technological advances, and increasing consumer expectations—are pretty universal (OECD, 2012).

Improving health care systems, while containing cost pressures, is a key policy challenge in most developed and emerging economies alike. And, t is no secret that the recent financial crisis, along with the dramatic drop in oil prices and subsequently oil export revenues; have exerted substantial pressure on governments' fiscal policies; particularly the UAE. With that in mind and an agenda promising to improve efficiency of public spending, the UAE has had a challenging assignment to reconsider its budget allocation. According to the country's disclosed 2017 budget, health care spending stood at 8.6% of GDP (AED 4.2 billion) and furthermore, on seventh November 2017, the 2018 updates on healthcare spending, Dh4.5bn, or 7.4%, is earmarked for the UAE health sector (Ministry of Finance, 2017; The National, 2017).

Furthermore, health care costs are escalating rapidly on the global sphere, driven by population ageing, rising relative prices and costly developments in medical technology. Public health care spending is always projected to increase by 3.5 to 6 percentage points of GDP within the coming three decades in most developed and developing nations (OECD, 2015; de la Maisonneuve & Martins, 2015). Against this background, exploiting efficiency gains will be crucial to meet rapidly growing health care demand, without putting the public finances on an unsustainable path.

With undoubted soars of projected healthcare spending relative to GDP, there is a need to

correlate such projections with probabilities of improving healthcare outcomes. Defining health care outcomes is challenging since health care policy pursues many objectives. Many factors affect the health status of the population – including socio-economic and lifestyle factors. In addition, these should be taken into account when assessing the efficiency of health care spending.

A "system" can be understood as an arrangement of parts and their interconnections that come together for a purpose (World Bank, 2006). What sets apart a health system from its counterparts is that its purpose is related to a very sensitive and crucial element; and that is peoples' wellbeing. There are numerous stakeholders intertwined in a healthcare network: there are the patients, the families, insurance companies, Ministries of Health, health providers, pharmaceutical companies, health financing bodies, and other organizations play important roles. The interconnections of the health system can be viewed as the functions and roles played by these parts. These functions include oversight (e.g., policymaking, regulation), health service provision (e.g., clinical services, health promotion), financing, and managing resources (e.g., pharmaceuticals, medical equipment, and information) (World Bank, 2006). Describing the parts, interconnections, and purpose, Roemer (1991) defined a health system as "the combination of resources, organization, financing and management that culminate in the delivery of health services to the population." The World Health Organization (2000) redefined the main purpose in its definition of a health system as "all activities whose primary purpose is to promote, restore, and maintain health."

In this context, there is dire need to explore the imperatives needed for effective and efficient healthcare expansion and reform. As an introduction, most reform initiatives that emerged in healthcare systems worldwide did so to overcome cost-related incompetence. As a first-hand catalyst for change, systems in most developed nations were based on cost cutting plans to allow for a wider spectrum of affordability to all income-level earners. Second to that comes concerns of quality. Reformatory moves have long delved into concerns over standards related to "quality of care". With statistical records of mortality rates, disease acquisitions, and diagnosis errors, documented numerical data can very much prove the argument that quality of healthcare delivered has ample room for improvement.

Another concern that has recently triggered reform measures in well-established healthcare systems is that of accessibility. Now, this criterion may tackle an impressive set of dimensions. To give it a clear-cut operational definition would be rather challenging. However, accessibility of healthcare provision addresses – among other important elements – the availability of sufficient experienced practitioners serving a particular number of patients. Other dimensions manifesting themselves under the accessibility spectrum include insurance coverage schemes that should guarantee not only patients' affordability of treatment; but also the ability to receive it from otherwise unaffordable physicians or medical centers.

Nurturing accessibility to healthcare services has been a fundamental objective of health policymaking in many countries. Introductory steps taken revolved around ensuring insurance coverage of essential care was made available. Subsequently steps to eliminate financial barriers, ensure adequate supply and address disparities related to social characteristics were also embedded in many reform programs (OECD, 2003). On the other

hand, with emerging pressures exerted from well-informed-citizens and human rights activists, countries have recently turned their attention to other dimensions of health system performance – ensuring that the system works to improve health and functional ability, and that it provides an adequate level of patient and population satisfaction (OECD, 2013).

The focal point for countries like the UAE and its emerging counterparts, is to expand the coverage of health care provision across all population strata, and also improve achievable health outcomes. With evident activities of benchmarking against best practices witnessed from the experiences of some advanced economies, health expansion and reform targets are more likely than not visible on the short-term horizon. However, with fiscal policy adjustments trending towards more consolidated approaches in recent years; and medical coverage is still rather incomplete, the ultimate goal would be to expand basic healthcare provision to a larger share of the population without triggering fiscal pressures over the medium term.

As a preliminary action plan, tackling efficiency of medical coverage will be fundamental for effective long-term performance especially with respect to basic and preventive medical care. It will be also advisable to allocate additional fiscal spending to establish sound precautionary measures for combating infectious diseases and improve critical health indicators that haven't been so impressive. In support of this preliminary action plan, it is no news that the participation of the private sector endorses competition and service variety (NBER, 2012). With initiatives to activate the contribution of the latter, it is needless to assert that such initiatives would strongly require firm government regulation, due to the well-known failures of the healthcare industry (NBER, 2012). The imperfections of healthcare sectors imply that governments must impose regulatory measures as previously stated; yet there is no guaranteed recipe of a single model that ensures best results in any one particular market (IMF, 2012).

Hence, the nature of government intervention (be it in the form of policies, laws, mandates, provision schemes, or fiscal policy plans) has emerged in a variety of concoctions across countries. Therefore, there is no unique "optimal" level of public health spending that can provide a benchmark for comparing countries. Countries may place different weights on equality of access, face differing fiscal constraints, or attach different weights to health spending as opposed to other uses of public funds. Yet there is a need to ensure that whatever "model" for health care is adopted, public health care services are provided in an efficient way (IMF, 2012).

In conclusion, health care reform will need to incorporate many variables of change that are affecting economies substantially. From fiscal pressures to profound demographic changes, governments have been embarking on up-rooting conventional systems, and replacing them with modern set ups characterized by empowered private counterparts and fiscal reform. With emerging spending pressures expected to intensify over the next two decades, reflecting the aging of the population, income growth, and continued technological innovations in health care; health care reform remains a key issue, given substantial lags in health indicators and limited fiscal resources. For these economies, the challenge will be to expand public coverage without undermining fiscal sustainability.

Chapter 2: Literature Review

This section documents current debates on key areas including the historical and ideological perspectives, insights into the health development in the Middle East, the main purpose and practice of Health in the UAE, explore the recent trends of health reform in the UAE, the perceptions of UAE health policies and its reform agenda and future directions.

2.1 Historical and Ideological Healthcare Services Perspectives

2.1.1 Characteristics of the Healthcare Delivery Systems

The healthcare system across the world is influenced by many extrinsic factors such as philosophical, economic, political and cultural (Shi & Singh, 2008, p.9). Overall, there are ten underlying basic characteristics that differentiate the United States healthcare system from others worldwide such as the United Arab Emirates (UAE). However, there are three characteristics that are deemed as important to bear in mind when considering the delivery of the healthcare regardless of the country: firstly, access: 'no central governing agency and little integration and coordination'; secondly, cost: 'high on cost, unequal access, average in outcome'; and thirdly, quality: 'quest for quality, integration and accountability' (Shi & Singh, 2008, p.10). These three constituents: cost, access, and quality are referred to the 'Iron Triangle' or the 'Triad of Healthcare', a term coined by Dr. William Kissick (1994). This describes the relationship that exists between these factors for institutional policy-making, healthcare and businesses.

The UAE healthcare system is not centrally controlled, which means that both the public and private sectors provide the funding resulting in various payments, insurance coverage and services offered. This, in itself is a complex system that is very costly to manage and sustain due to the varying expenditures involved (Shi & Singh, 2008, p.10). For instance, the U.S. government plays a vital role in providing and expanding the Medicaid and Medicare services to many of its residents (Moonesar, 2013). While the World's financial system is at its breaking point, the healthcare costs continues to rise. Therefore, thinking about redesigning and reforming the system to be more of a centrally controlled healthcare system would make it be less complex and less costly to manage and maintain.

Access to healthcare is not only limited only to the availability of healthcare but also extends itself to considerations of high cost, unequal access and average in satisfaction outcomes. Access to healthcare would be considered as the second characteristic for the delivery of the UAE healthcare. According to the World Health Organization Global Health Expenditure, in 2014 the UAE spent almost 4% of the nation's Gross Domestic Product (GDP) on healthcare, where over 72% of total health expenditure comes from the government (public) and the health expenditure per capita, for public-private partnerships is approximately 2,405. According to the UAE government reports (UAE Government, 2017), for the year 2016, the

UAE Government had allocated 7.9 per cent of the budget amounting to approximately AED 3.83 billion for the health sector alone.

In 2017, the UAE Government allocated 7.4% of the federal budget to the health sector for 2018, which is in addition to the significant spending by the local emirates. Some possible concerns would include uninsured patients who are unable to pay for the healthcare services, therefore will not receive healthcare services. These said patients would usually wait until the health problems escalates, then to proceed to the healthcare institution for attention which may result as it being too late for the patients to recover fully. It would be vital to highlight, research studies recommend the implementation of cost-effectiveness analysis (CEA) program for assessing and improving the value and efficiency of the delivery of the healthcare services which will impact positively on the life expectancy and health-related quality of life (Bryan, Sofaer, Siegelberg, & Gold, 2009; Moonesar, 2013).

The quest for quality, integration and accountability is another important characteristic to bear in mind when considering the delivery of the healthcare in the UAE and worldwide. It is of paramount importance to develop health policies and procedures on high quality standards and to be implemented across the healthcare sectors. The roots and foundations of the healthcare administrators would be to strive for continual quality improvement, in addition to creating an attuned relationship amongst healthcare professionals. Policy makers can change healthcare environments through the reforming and adaptation of strategies and auditing (Shi & Singh, 2008, p.18). In addition, to this characteristic, an opportunity for potential would be to implement CEA, in order to improve on the quality of life (Bryan et al., 2009).

The extrinsic factors that may influence all of the three characteristics are through the economic, in terms of the implications and impact of the downfall of the current economy and the political arena, in terms of, changes, revisions and developments in the health policies, laws and regulations (Moonesar, 2017). Additionally, both the partial access and quest for quality characteristics have the extrinsic factor of cultural and philosophical, in terms of cultural and ethnic diversity, social cohesion, creating patient-provider relationships, and identifying health needs (Shi & Singh, 2008).

2.2 Continuum of Care

In practice, general healthcare services exemplify a comprehensive system that follows the birth to death care. This comprehensive system is the continuum of care (Moonesar & Goes, 2017; Barton, 2010) which is also consistent in the United Arab Emirates (UAE). This is a model that involves an incorporated system of healthcare services that guides and monitors patients over time spanning an array of health services (Moonesar & Goes, 2017). The continuum of care of health services includes prenatal care, health promotion, primary disease prevention, diagnosis of disease, treatment of acute disease, secondary disease prevention, tertiary disease prevention, treatment of chronic illness or disease, rehabilitative care, long-term care, and palliative care (Jeffs et al., 2013; Marchildon, 2013; Wang & Hong, 2013). The continuum of care focuses upon providing care to address the diagnosis, treatment and prevention of diseases and illnesses.

2.2.1 Continuum of Care–Stage 1

Prenatal care is the first stage of the continuum of care. This type of care involves care for both the mother (the pregnant woman) and unborn baby before the birth, with an effort to improve the overall birth outcomes and reduce the mortality rates (Conde-Agudelo et al., 2013; Lozano et al., 2011; Moonesar & Vel, 2012; Schmölzer et al., 2013; Smith et al., 2014). The general findings of a recent study (Moonesar, 2017) recommended improving the availability and access to such care through enhanced policies and national budgets. An example of one of the many healthcare institutions representing this stage within the UAE is the Al Qasimi Hospital for Women and Children.[1]

2.2.2 Continuum of Care–Stage 2

The second stage of the continuum of care is a health promotion aspect. This stage focuses on promoting good health habits, awareness, and practices in order to preserve and improve the health status (Conde-Agudelo et al., 2013; Lozano et al., 2011; Moonesar & Vel, 2012; Schmölzer et al., 2013; Smith et al., 2014). The general findings of a recent study (Moonesar, 2017) recommended improving the health promotion efforts and awareness activities through the enhancement of policies and strategies. An example of one of the many healthcare institutions representing this stage within the UAE is the VPS Healthcare[2].

2.2.3 Continuum of Care–Stage 3

The third stage is the primary disease prevention where the care is guided to prevent disease causing agents from developing into an ailment (Donnelly et al., 2013) with steps such as genetic testing, counseling, and even health screenings. An example of one of the many healthcare institutions representing this stage within the UAE is the Rashid Hospital.[3]

2.2.4 Continuum of Care–Stages 4 and 5

The next step of the continuum is the diagnosis of disease where health professionals and practitioners (usually medical doctors, nurse practitioners, and dentists) diagnose and mitigate the presence of disease and initiate treatment for acute disease, which is the next stage of the continuum of care (Barton, 2010; Kerber et al., 2007). An example of one of the many healthcare institutions representing this stage within the UAE is the Mediclinic Middle East.[4]

1. Al Qassimi Hospital for Women and Children, 2017. Retrieved from: http://www.mohap.gov.ae/en/aboutus/Pages/HealthCareFacilities.aspx#k=#s=25
2. VPS Healthcare, 2017. Retrieved from: http://vpshealth.com/medical-centers-services
3. Rashid Hospital, 2017. Retrieved from: https://www.dha.gov.ae/en/RashidHospital/Pages/PreventionAndControlOfInfection.aspx
4. Mediclinic Middle East, 2017. Retrieved from: http://www.mediclinic.ae/

2.2.5 Continuum of Care–Stage 6

The sixth stage of the continuum of secondary disease prevention is considered to be early detection and treatment towards the curing or controlling the cause of a disease, or both (Barton, 2010). An example of one of the many healthcare institutions representing this stage within the UAE is the Preventive Medicine center- Ajman.[5]

2.2.6 Continuum of Care–Stage 7

The seventh step is the tertiary disease prevention, which is when the disease is at a state where disability and dependence tend to occur (Jinks et al., 2011). The treatment of chronic disease or illness is the care of long-term diseases such as diabetes, hypertension, metabolic syndrome, and many others. An example of one of the many healthcare institutions representing this stage within the UAE is the Seha Emirates Hospital.[6]

2.2.7 Continuum of Care–Stage 8

Rehabilitative care is the eighth step of the continuum of care, which is the care delivered in institutional settings expanded to persons living with mental and/or physical disorders (Killaspy et al., 2011) followed by the long-term care (LTC). LTC is influenced by the life expectancy of a country. For instance, in UAE, the average life expectancy at birth is 76 years, for both sexes; whilst the average life expectancy at age 60 is 19 years, for both sexes (WHOSIS, 2014). The life expectancy statistics for the EMR are illustrated in Table 1. An example of one of the many healthcare institutions representing this stage within the UAE is the Emirates Rehab and Homecare Center.[7]

Table 1
Comparison of Life Expectancy at Birth for Both Sexes by WHO Region Classification

Year Region	1990 (years)	2011 (years)	Difference (years)
African Region	50	56	6
Region of the Americas	71	76	5
South-East Asia Region	59	67	8
European Region	72	76	4
Eastern Mediterranean Region	61	68	7
Western Pacific Region	70	76	6
Global Mean	64	70	6

Note. There are six regions classified by the World Health Organization. Adapted from "World Health Statistics 2013" by World Health Organization. Retrieved from http://www.who.int/gho/publications/world_health_statistics/EN_WHS2013_Full.pdf

5. Preventive Medicine center- Ajman, 2017. Retrieved from: http://www.mohap.gov.ae/en/aboutus/Pages/HealthCareFacilities.aspx#k=#s=25
6. Seha Emirates Hospital, 2017. Retrieved from: http://www.sehaemirates.com/
7. Emirates Rehab and Homecare Center, 2017. Retrieved from: http://www.emiratesrehabilitation.ae/

2.2.8 Continuum of Care–Stage 9

LTC is the ninth step within the continuum of care, whereby such care is often classified by providers as either institutional such as subacute care, nursing care, and assisted-living care and housing services, or non-institutional caregivers such as adult day care, home care, hospice care (Pratt, 2010; Rawlins et al., 2008), and finally, palliative care (Barton, 2010, p. 306). An example of one of the many healthcare institutions representing this stage within the UAE is the Emirates Home Nursing.[8]

2.2.9 Continuum of Care–Stage 10

The final step within the continuum of care is palliative care. This is the end-of-life care provided to minimize the pain and suffering when no more supplementary surgical or medical therapies are available to treat a patient's condition (De Lima & Radbruch, 2014; Hanks et al., 2011; Van der Steen et al., 2014). The findings of these studies recommended improving the availability and access to such care through enhanced policies and national budgets. An example of one of the many healthcare institutions representing this stage within the UAE is the Beverly Hills Home Healthcare.[9]

In summary, for this research study, the primary focus was on all the 10-stage continuum of care. Researchers have indicated the need for improving the availability and access to such care through enhanced policies and national budgets, in addition to improving the health promotion efforts and awareness activities through the enhancement of policies and strategies.

2.3 Historical Overview of Healthcare Services in the Middle East Region

Healthcare services aims to highlight the determinants and associated factors, measures, strategies, and operations to promote the good health, safety, and the necessary development of all population: children, mothers and fathers (Moonesar, 2017; Kotch, 2013). Healthcare policy development has been a prominent driver, worldwide, in contemporary times in order to be in accordance with the United Nations Global Goals, the Sustainable Development Goals (SDGs), particularly Goal 3: Good Health and Well-Being. A comprehensive UAE list of historical healthcare-related developments is illustrated in Appendix A.

2.3.1 Developments in the 19th Century

Researchers identified that the Eastern Mediterranean Region (EMR), also known as the Middle East Region, healthcare services and systems were first developed and began in Cairo, Egypt at the times of the French Army rule of the Napoleonic Wars in 1798 (Jabbour

8. Emirates Home Nursing, 2017. Retrieved from: http://www.emirateshomenursing.ae/
9. Beverly Hills Home Healthcare, 2017. Retrieved from: http://www.beverlyhillshomehealthcare.com/

et al., 2012; Kronfol, 2012a; Worldology, 2009). In the latter part of the 19th century, there were religious missionaries who developed the medical universities and schools within Cairo, Istanbul, Levant, Bahrain, and Oman in early part of the 20th century (Bourmaud, 2008; Jabbour et al., 2012; Kronfol, 2012a). In 1865, there was an outbreak of the epidemic cholera that took place during the pilgrimage of Mecca, Kingdom of Saudi Arabia (KSA). As a result, there was the commencement of quarantine measures associated with the international health legislation passed and enforced in the early 20th century in Iraq and other EMR countries (Jabbour et al., 2012). During this period, the countries mentioned within this section-embraced public health as an initiative to improve the health status of the citizens. However, as a way forward for improving the public health section practices, they moved towards the adoption of international measures that occurred within the 20th century.

2.3.2 Developments in the 20th Century

Between the period of 1900 and the 1950s, there was the establishment of more healthcare facilities, usually small hospitals across the EMR countries. Table 2 illustrates the number of healthcare institutions for the pre-1950s. Small hospitals were typically 20 to 30 beds. They were privately owned by physicians who received their medical trainings and education in Europe, Syria, Lebanon, Egypt, or Iraq (Jabbour et al., 2012; Kronfol, 2012a). Simultaneously, the history of international influence on health within the EMR occurred right after the Second World War while the establishment of the United Nations also occurred (Kronfol, 2012a). The main purpose was to keep the peace and conflict resolutions between nations across the world. Then, in 1948, the WHO was created to promote and protect the health of the people across the nations worldwide. One of the top-most priorities of the WHO in 1948 focused on the MCH policies and remains the primary focus in contemporary times (Jabbour et al., 2012). UNICEF was also created in the same year in order to rescue the abandoned and orphaned children after the war (Jabbour et al., 2012; Kronfol, 2012a). The UNICEF mandate was to provide a comprehensive range of MCH services such as immunizations, child and maternal guidance clinics, and trainings for healthcare professionals and practitioners (UNICEF, 1989, p. 21).

In the 1950s, after the Second World War, most of the EMR countries had gained their respective independence and continued to use the healthcare facilities established during the colonial era. By that time, the governments or ministries across the EMR intervened in the healthcare sector. These governments improved and provided the services geared more of a charitable nature than seeing it as a human right to healthcare (Kronfol, 2012a). These governments and ministries were expected to be fully involved in the policy-making and make periodic assessment of healthcare needs in order to implement the developmental plans adopted from the UNICEF and in favor of WHO (UNICEF, 1989, p. 34).

UNICEF's first involvement that was favored by the WHO, within the EMR, was geared towards the improvement of the existing healthcare clinics (over 1,500), as illustrated in Table 2. Their involvement was focused on medical centers and training of the health professionals and practitioners (UNICEF, 1989, p. 22). Table 2 provides an illustration of the number of

healthcare institutions that received UNICEF medical equipment and supplies across the EMR for the period of 1959 to 1985. One of EMR main challenges within this era was the cultural and traditional conservatism barrier in terms of the role of women working in the public service, therefore impacting the nursing and midwifery practices (Kronfol, 2012b; UNICEF, 1989, p. 23).

Another challenge that was apparent in the EMR pertained to the lack of education opportunities for women. Such a problem made it difficult to recruit for healthcare employment (Kronfol, 2012b; UNICEF, 1989, p. 23). Researchers and reporters were concerned about such challenges and predicted that proactive directions and development to occur in overcoming such challenges in the 21st century. The countries illustrated in Table 3, as 1 within the WHO-EMR group classifications commonly known as the Gulf Cooperation Countries, includes Bahrain, Kuwait, Oman, Qatar, KSA, and UAE.

Table 2
Number of Health Institutions That Received Medical Equipment and Supplies From UNICEF Throughout the EMR for the Period 1959-1985

MCH type	Through 1959	-1960 1969	-1970 1979	-1980 1985	Total through 1985
Child health					
District and referral hospitals	66	210	667	631	1,574
Urban health centers and institutions	136	431	2,013	2,123	4,703
Rural health centers	836	2,133	4,232	6,613	13,814
Demonstration centres	---	1,896	4,236	1,278	7,410
Sub-centers, village MCH centers	110	2,497	4,081	15,883	22,571
Child welfare centers	---	373	1,754	1,325	3,452
Total child health	1,148	5,644	12,747	26,575	46,114
Family & child Welfare					
Women's institutions such as community centers, units	---	267	1,110	441	1,818
Centres for adolescences and youth	---	439	1,148	24	1,611
Support centres	---	128	173	76	377
Training institutions	---	258	242	21	521
Total Family & Child Welfare	---	525	1,352	462	2,339

Note: There are eleven types of healthcare centres and institutions. Adapted from "Monograph XII - UNICEF in the Middle East and North Africa: A Historical Perspective, p. 21-25," by United Nations Children's Fund. Retrieved from https://www.unicef.org/about/history/files/CF-HST-MON-1989-001-middle-east-north-africamono-XII.pdf. Copyright 1987 by the United Nations Children's Fund.

The GCC joined forces with UNICEF, in 1972, towards the developing and improvement of MCH services in its' countries. The UNICEF central head office was in Abu Dhabi, UAE, from 1972 to 1987, and was then transferred to Riyadh, KSA (UNICEF, 1989, p. 52). In 1979, EMR and international universities and organizations organized a regional conference on the 'Arab Child Health'. A conference was held in Kuwait in December 1979 that was sponsored by UNICEF, International Children's Centre (ICC) and WHO (UNICEF, 1989, p. 51). At the beginning of 1985, there were two more health-related events. In that year, a United Nations (UN) World Conference was held to review and appraise the achievements of women that highlighted the pregnancy risk factors in developing countries (Rosenfield & Maine, 1985). Developing countries with low per capita income and human development index (HDI),[10] remained stagnant with no evidence or progression and improvement (Malik, 2013; UNDP, 2013).

Table 3
Percentage of Adopted Policies and Strategies Across the EMR, as of 2015, and Classification

#	Eastern Mediterranean Region (EMR) Countries	Percentage of Policies and Strategies Adopted	WHO-EMR Group Classification
1	Bahrain	100%	1
2	Islamic Republic of Iran	100%	2
3	Jordan	100%	2
4	Kuwait	100%	1
5	Lebanon	100%	2
6	Libya	100%	2
7	Occupied Palestinian territory	100%	2
8	Oman	100%	1
9	Qatar	100%	1
10	Kingdom of Saudi Arabia	100%	1
11	Syrian Arab Republic	100%	2
12	Tunisia	100%	2
13	United Arab Emirates	100%	1
14	Afghanistan	50%	3
15	Morocco	50%	2
16	Pakistan	50%	3
17	Yemen	50%	3
18	Sudan	40%	3
19	Djibouti	30%	3
20	Egypt	30%	2
21	Iraq	20%	2
22	Somalia	0%	3
23	South Sudan	0%	3

Note. There are three groups of classification within the EMR. Classified from "Saving the Lives of Mothers & Children: Rising to the Challenge in the Eastern Mediterranean Region," by World Health Organization- Eastern Mediterranean Region, 2013. Retrieved from http://www.emro.who.int/about-who/mothers-and-children/background-documents.html

10. The Human Development Index (HDI) is a measure of three basic dimensions of human development: healthy and long life, knowledge and good quality of living.

This event resulted in the identification of healthcare programs within developing countries (Rosenfield & Maine, 1985). The outcome of these developments led to the determination of having MCH programs within the developing countries (Rosenfield & Maine, 1985). In February 1987, there was an international conference geared towards reducing maternal mortality, sponsored by the World Bank, WHO and UNFPA (Boulet et al., 2006; Hogan et al., 2010). The objective of this global initiative, Safe Motherhood, was to raise the awareness on the increasing number of maternal deaths due to pregnancy-related complications (AbouZahr, 2003; Starrs, 2006). Following these major international events, in 1994 the "United Nations sponsored the International Conference Population and Development" with the primary aim of strengthening the global commitment to reproductive health strategies (Boulet et al., 2006; Obaid, 2009). In 2000, the precedence was set for improving the child and maternal health through the launch of the MDG 4 and MDG 5. Nowadays, it is the United Nations Global Goals, the Sustainable Development Goals (SDGs), goal number 3[11]: Good health and well-being.

In the 19th century, the EMR countries and cities such as Cairo, Istanbul, Levant, Bahrain, Kingdom of Saudi Arabia and Oman all embraced public health as an initiative to improve the health status of the citizens. However, research studies have shown that as the improvement of public health policy and practices were evident as they moved towards the adoption of international measures that occurred during the 20th century. In the first half of the 20th century, there was the growth of healthcare establishments across the EMR. By this time, one of the top-most priorities of the WHO in 1948 focused on the MCH policies (Kronfol, 2012a; UNICEF, 1989, p. 21) and remained the primary focus in contemporary times (Jabbour et al., 2012).

One of EMR main challenges during the 20th century era was the cultural and traditional conservatism barrier concerning the role of women working in the public service; therefore, influencing the nursing and midwifery practices and policy-making processes (Kronfol, 2012b; UNICEF, 1989, p. 23). Moreover, lately policy recommendations have been on a topic of debate in the EMR where has been evidence of very little adoption of the health policy recommendations through MDGs 4 and 5 goals and also, responding to the United Nations Global Goals, the Sustainable Development Goals (SDGs)[12], goal number 3: Good health and well-being.

2.4 Purpose and Scope (Practice) of Health in the UAE

There was a recently government-commissioned report from the Mohammed Bin Rashid School of Government, published by the Government Summit indicated that healthcare and education score the lowest in terms of quality according to public perception in the lower middle income countries (World Government Summit, 2014). Providing world-class is one of the six pillars of the National Agenda in line with Vision 2021. According to the country's official health authorities, the government is working on having all public and private hospitals accredited

11. Sustainable Development Goals (SDGs), Goal number 3: Good health and well-being. Retrieved from http://www.un.org/sustainabledevelopment/health/

12. United Nations Global Goals, the Sustainable Development Goals (SDGs) http://www.globalgoals.org/

according to unified national and international quality standards of medical services and staff (UAE Ministry of Health and Prevention, 2016). This was further endorsed when the ministry of finance recently disclosed its approval of a record Dhs51.4 billion federal budget for the upcoming year (2018) with substantial emphasis on the health sector; alongside education and community welfare divisions (Ministry of Finance, 2017). The UAE's National Agenda has also declared its intention to endorse preventive medicine, reduce terminal diseases and improve lifestyle related illnesses across the country, to ensure healthier lifestyles among citizens. This will ultimately result in qualifying the UAE to become one of the best countries in the world in terms of quality healthcare by the year 20201 (DHA, 2017). There are Key Performance Indicators (KPIs) that the Health Authorities have established, mainly to ensure the adherence of all medical providers to the quality standards the country is aiming to achieve.

Abu Dhabi and Dubai recently announced their future scope and purpose of operation by adding to the country's 2021 Agenda some of the following aims and objectives: (1) the enhancement of the quality of healthcare services; (2) the attraction, retention, career development of healthcare professionals, (3) ensuring patient safety and wellbeing, (4) emergency preparedness, (5) health-hazards precautionary awareness to improve public health, (6) ensuring value for money and sustainability of healthcare spending, (7) the inclusion of private sector health providers and endorsing their investment initiatives in the sector, and last but not least (8) launching an electronic health program as a primary facilitator for the other priorities mentioned above (UAE Ministry of Health and Prevention, 2016).

The above priorities do not only manifest themselves as comprehensive agenda items that are set to be achieved, but rather catalysts for innovation, reform, and development of the healthcare sector in general in the UAE. There are clear intentions for the government to invite the investments of the private sector to ensure the accomplishment of the sector's KPIs. It is hence no surprise that the Healthcare sector is a top priority in the UAE government agenda and is meant to deliver the planned outcomes as the country moves forward to alleviated quality and performance standards.

To achieve these outcomes, the country has been working on numerous initiatives tackling a diverse set of priority areas in the coming few years. To do so, the healthcare authorities are currently striving to cover scopes of activities pertaining to reducing capacity gaps in the healthcare industry and minimizing the over-dependence on international healthcare service providers. This will entail improving healthcare services in rural areas and launching specialized healthcare programs for the community to address patients' needs.

Furthermore, the UAE healthcare industry is placing substantial weight to the element of quality. To improve the latter, the health authorities launched an initiative by the name "Jawda", which is the Arabic translation of quality. This initiative is meant to allow for meticulous regulation of quality standards among medical care providers, and also prepare the latter to qualify for incentive schemes. The expected quality outcomes will undergo careful scrutiny and will be benchmarked for thorough validation prior to public disclosure (HAAD, 2014). Such comprehensive quality standards and incentive programs are expected to entice industry stakeholders towards innovative approaches in healthcare management and delivery, all the while improving service delivery in the sector.

With respect to the human resource element of the healthcare sector, which manifests itself as a core element in the sector's excellence equation; the UAE health authorities have also worked on a comprehensive long term plan to attract, train, and retain healthcare professionals. With the intention to widen the Emirati work-force base, the Authorities have embarked on a holistic plan to activate Emiratization through a number of official memorandums and agreements with stakeholder entities.

Another scope of operation that the UAE health authorities have embedded in their current and future agendas encompass the element of wellness and prevention of diseases within the UAE community. The wellness and prevention component will strive to address public health initiatives with a focus on disease-precautionary practices, injury prevention, safety regulation in job fields, combating communicable diseases, fighting hereditary illnesses, and last but not least; enhancement of oral health among children (HAAD, 2016).

Finally, the UAE health authorities across the capital emirate and other local states are currently striving to ensure the worthiness of money paid by UAE patients for the healthcare services they receive. To ensure that, the Health Authority of Abu Dhabi has set a number of initiatives to monitor utilization of healthcare services, and has developed a plan to optimize spending on medical products and assess health insurance premiums. In addition to that, it has formally launched an electronic-based health system, referred to as e-health, which is a comprehensive database platform that basically saves and stores enormous amounts of data about registered patients. This health information platform will allow for smooth exchange of data among providers and will facilitate the other action items addressed above. It is estimated that by the year 2022 up to 4,800 additional doctors and 13,000 nurses will be required (HAAD, 2016).

2.5 Recent Trends of UAE Healthcare Reforms

The UAE government aspires to build a world-class health system to improve the quality of healthcare and the health outcomes for its population. To achieve this, it has implemented extensive health system reforms in the past 10 years. The nature, extent and success of these reforms have not recently been comprehensively reviewed (Koornneef et al., 2017). In this chapter, progress and outcomes of health systems reform in the UAE will be reviewed.

As recently as the late 1960s, in the UAE, it was reported that only half of newborn babies survived and one in three mothers died during childbirth. Almost 50 years later many health outcomes are on par or even better than those seen in developed countries. The maternal mortality ratio (MMR) is now 8 per 100,000 live births (in contrast to an MMR of 14 in the USA) and the infant mortality rate is 5.6 per 1000 live births (5.8 in the USA), (WHO, 2015). With the impressive and progressive economic growth witnessed in the country, it has been evident that between 2011-2015, the UAE has devoted substantial sums of its fiscal budget to improve and further develop its healthcare sector. During this period, the UAE increased its fiscal spending on the latter by a substantial 10% of its GDP spending ratio, mounting it to approximately $11 billion (WHO, 2015).

Part of the comprehensive reform plans the UAE has embedded in its futuristic agenda for 2021, was the improvement of healthcare services provided to UAE citizens and residents alike, making it one of the top seven priorities of the futuristic strategy.

Given its starting point, it is remarkable what has been achieved in the UAE in the last four decades. However, since the early 2000s the UAE has been involved with an ambitious program of health system reforms to further improve health and health services and to address cost and quality challenges. These reforms have focused on the introduction of private health insurance and encouraging the growth of private health provision against a back-drop of rapid population growth and a rising prevalence of chronic disease and chronic disease risk factors including obesity, low levels of physical activity and diabetes (Koornneef et al., 2017).

Meanwhile, UAE government leaders have emphasized in the country's 2021 vision that all Emiratis and residents alike should have access to comprehensive world-class facilities with the best quality services in early diagnosis and preventive medicine. With this focal point, it was made mandatory for all residents to apply for medical insurance schemes. This mandate was applied across the entire country and not confined to the capital only. This allowed for the prediction that consumption patterns of healthcare services were to triple in volume. It also gave rise to the notion that healthcare sector regulators will find it helpful to easily identify the gaps in services at hospitals and clinics across the emirates.

In addition to that, the Health Authorities projected the availability of better information on the market would pave the way for the smooth inclusion of private sector healthcare providers into the scene. This had other peripheral advantages such as the invitation for additional investment channels into the healthcare industry (Gohari & Alabdulrazak, 2012).

To further endorse the above reform initiatives, Abu Dhabi embarked on new projects that would harness the competitiveness of the private sector in the market. With the aim of incorporating the latter's know-how, expertise, and knowledge; the emirate sought the transformation of these competitive edges into the local market. Through the ratification of a Public-Private Partnership Law (number 22) in 2015, and the cooperation that was launched between Mubadala and Cleveland Clinic; an example of the strategic direction and importance the government of Abu Dhabi has placed on providing world-class healthcare services to its citizens was apparent (Gohari & Alabdulrazak, 2012).

Dubai, on the other hand, completed the reform efforts initiated by the capital by creating a specialized healthcare free zone (Dubai Healthcare City) which aimed at attracting internationally recognized medical service providers to set up in 100% ownership structure (Gohari & Alabdulrazak, 2012). In Dubai, it was noted that this was a first step presenting an initial view on partnership projects as per PPP Regulation Law No. 22 of 2015, and all relevant decisions issued by the Head of Supreme Fiscal Policy Committee, as per Article 38 of the same law, stating that: "the Head of the Committee shall take decisions necessary to execute provisions of this law".

Sharjah as well, took part in the reformatory movement in the healthcare sector and announced the establishment of the Sharjah HealthCare City (SHCC), which also aimed at attracting international healthcare companies and private sector establishments to its

market landscape. It was estimated that SHCC will require an average of 630 additional beds in the next five years to meet proliferating demand (Gohari & Alabdulrazak, 2012). As such, healthcare has been designated as a key focus sector for the attraction of Foreign Direct Investment into the emirate.

The UAE is actively expanding its national healthcare system to meet the growing needs of its people and support economic diversification, with leading worldwide medical centers, corporations, and academic institutions playing vital roles in the process[13]. All seven Emirates provide comprehensive healthcare services to their citizens and residents, and are rapidly building healthcare infrastructure inclusive of hospitals and clinics (reference to Table 4 & Table 5), while simultaneously developing the local workforce and competencies. Healthcare services in the context of the UAE is the total of public and private services, and institutions provided by UAE to care for the health of its population (in general), whether in its sector or within the private sector. It includes all hospitals, Clinics, Pharmacies and Human resources from doctors, nurses and all who work in this field.

Table 4
Government (Public) Health Services Statistics (2010-2015)

	2010	2011	2012	2013	2014	2015
No. of Hospitals	32	33	33	34	38	38
No. of Beds	6,393	6,465	6,354	6,100	6,564	7,022
No. of Clinics & Centers	129	138	127	126	127	124
No. of Physicians[1]	4,702	5,105	5,224	7,076	7,453	6,952
No. of Dentists[1]	490	606	583	634	787	737
No. of Nurses[1]	13,123	13,554	13,974	15,442	17,464	16,832

Source: Ministry of Health and Prevention
Note[1]: The clear difference in doctors, dentists and nursing is the result of the data of the Health Authority in Abu Dhabi between 2014 and 2015.

Table 5
Private Sector Health Services Statistics (2010-2015)

	2010	2011	2012	2013	2014	2015
No. of Hospitals	53	56	65	73	78	88
No. of Beds	2,436	2,627	3,281	3,660	4,051	5,412
No. of Clinics & Centers	2,521	3,146	3,350	3,531	3,866	4,228
No. of Physicians [1]	8,069	7,751	8,275	9,246	10,932	13,529
No. of Dentists [1]	2,489	2,394	2,560	2,547	3,222	4,179
No. of Nurses [1]	8,648	11,996	13,541	15,281	19,014	29,323

Source: Ministry of Health and Prevention
Note[1]: The clear difference in doctors, dentists and nursing is the result of the data of the Health Authority in Abu Dhabi between 2014 and 2015

13. US-UAE Business Council: The U.A.E. Healthcare Sector, 2016. Retrieved from: http://usuaebusiness.org/wp-content/uploads/2016/09/Healthcare-Report-Final.pdf

The review of UAE health infrastructures & services Statistics for the period of 1970-2015 is illustrated in Table 6.

Table 6
Review of Health Infrastructures & Services Statistics (1970-2015)

Years		1970	1980	1990	2000	2015
Population		580,000	1,040,000	1,844,000	3,108,000	9,154,000
Hospitals		7	20	29	30	126
Hospital Beds	Total	700	3,000	4,300	4,473	12,434
	Population/ Bed	1/1500	8,275	9,246	10,932	1/736
Health Centers		21	65	90	115	4,352
Physicians	Total	200	1,000	1,500	2,350	20,481
	Population/ Physicians	1/2900	1/932	1/1230	1/1322	1/447
Nurses	Total	1,000	3,300	4,600	6,300	46,064
	Population/ Nurses	1/580	1/315	1/400	1/490	1/199

Source: Ministry of Health and Prevention; World Health Organization

Demographic shifts and societal changes are intensifying pressures on health systems and demanding new directions in the delivery of healthcare. We are getting older. Ageing populations in both emerging and developed nations are driving up the demand for healthcare.

According to the United Nations, the world's population is expected to increase by one billion people by 2025. Of that billion, 300 million will be people aged 65 or older, as life expectancy around the globe continues to rise. Additional healthcare resources and service innovation is needed globally to deliver the long-term care and chronic disease management services required by a rapidly increasing senior population.

At the same time, developing countries are experiencing significant growth in their middle class. The Brookings Institute estimates 65% of the global population will be middle class by 2030. Accelerated urbanization and access to middle-class comforts are promoting sedentary lifestyle changes that will inevitably lead to greater incidence of obesity, diabetes and other costly health conditions.

These demographic changes will not be evenly distributed across the globe, however. Growth, for example, will be more concentrated in some parts of the world. Africa's population is anticipated to double by 2050, while Europe's population is shrinking (OECD, 2016).

Driven in part by demographic changes, a new paradigm of public and private sector collaboration is developing to transform healthcare financing and delivery. Partnerships with new market participants from industries such as retail, telecommunications, technology, wellness and fitness are expanding and reshaping the health system. What is the payoff for collaborators? These partnerships open the door to a multi-trillion dollar global market

for these new commercial entrants, while governments gain access to the innovation and efficiency of new technologies they would not otherwise be able to afford. The shared benefits are long-term cost savings with better outcomes for the patients at a time when changing demographics are depleting health resources.

A rising middle class will fuel increasing demand for more health options. Looking forward, more effective partnerships are needed between the public and private sectors to meet these expectations. Collaborations that in the past may have seemed unlikely will become commonplace. Changing technology and consumer needs will inspire partnership innovations that cut through conventional thinking.

As the population grows, technological innovations in mobile health will advance cost-effective health solutions. Technology and analytics are ushering in new ways of promoting wellness, preventing disease and providing patient-centric care. These advances are exciting tools for providers, private payers and governments alike, as they bring greater precision to predicting patient behavior and detecting and diagnosing diseases.

Different parts of the world will be impacted differently by these demographic shifts. Successful and sustainable change across the globe will require flexible and adaptive models to fit the new health economies.

2.6 Public-Private Partnerships in the Healthcare system

The UAE government formalized public-private partnerships (PPPs) in 2015.[14] Sufficient and long-term strategic health-care plans need to be formulated alongside the country's forward-looking initiatives to fill capacity and quality gaps. Studies have shown that there are shortages of healthcare professionals and concerns pertaining to accessibility and affordability of healthcare. These pressures will automatically translate to additional expenditures devoted to the sector. Subsequently, governments have sought the collaboration with the private sector, aiming to improve a number of indicators that have pushed down the quality of health care. Known as Public-Private Partnerships, the UAE has officially ratified a PPP-Law in 2015 (Law No. 22 of 2015) endorsing the cooperation between the two sectors to improve the provision of goods and services on a multidimensional level. It is worth noting that not all forms of collaborations are classified under the PPP title.

A clear PPP interaction must include a comprehensive contract and memorandum of understanding encompassing clear terms and conditions between all parties involved; explicit partner obligations and duties; measurable performance indicators and expected outcomes; along with a specified timeline (Akkawi, 2010). Given the fact that healthcare systems are intricately complex by nature, it is important to admit that there is no best practice for public-private-sector collaborations. Instead, private sector stakeholders are invited to contribute mainly to improve the overall performance of the health care system, and with that ultimate objective in mind; governments' regulatory roles stand crucial.

14. The UAE government has encouraged public-private partnerships (PPPs) prior to 2015 and ratified a specific decree (law) for this practice. Refer to: https://government.ae/en/information-and-services/business/public-private-people-partnership/public-private-partnership

Both sectors enjoy more than a handful of competitive advantages that any collaboration could benefit from. What is expected from PPPs in the healthcare sector in particular is the identification of weaknesses the latter suffers from, and calling on the expertise of the private sector to resolve them. The private sector is expected to participate in improving the efficiency and effectiveness of healthcare delivery by utilizing its expertise in administrative and managerial support functions. In addition to that, the private sector is also expected to contribute with its financial leverage, injecting capital into profitable ventures and harnessing labor resources, spurring innovation, and applying administrative best-practices.

2.7 Evolution of PPPs in UAE's Healthcare System

The United Arab Emirates' public healthcare system has evolved substantially since 2001. Many reforms and improvements have taken place since then, reflecting a fertile landscape of innovative administrative and policy management in the sector. Since 2001, the public healthcare sector has been administered through three main zones: a southern zone encompassing the Emirate of Abu Dhabi, a central zone located in the Emirate of Dubai, and a third zone including the Northern Emirates (Whitehead, 2012). The three zones differ broadly in the way they are managed, funded, as well as in matters of policymaking. Hence, a coordinating entity known as the National Health Council (NHC) was established in 2008, and since then has been acting as a liaison among the different federal and local government health entities across the country, and includes representatives from the private sector. There has been a number of attempts to engage the private sector in the healthcare industry in the UAE.

Almost two decades later, Abu Dhabi by itself has outsourced the management of almost 50% of its hospitals to private sector operators. In Dubai, partnerships have been achieved at the hospital department level, along with agreements with some private hospitals to see patients from the public system when necessary. In the northern zone, there have been tentative steps in this direction (Whitehead, 2012). The primary reason behind the continuous support granted to the private sector, is to reap the benefits of knowledge transfer from the latter to its public counterpart, hence alleviating service delivery criteria and accountability. For this to occur, having the right enabling environment in place can significantly facilitate this knowledge transfer through official partnerships between the two sectors.

The collaboration with the private sector can take many forms such as service and/or management contracts, lease deeds, build-operate-transfer set-ups, build-own-operate-transfer arrangements, and build-own-operate models (Department of Finance, 2016). A management outsourcing arrangement is one of the simplest models of PPPs. The private partner is typically paid a management fee that will include the cost of its services and a profit margin.

The Health Authority of the UAE's capital, Abu Dhabi, is considered the pioneer in the calling for the participation of the private sector. Ever since 2006, Abu Dhabi lead a 10-year affiliation agreement with Johns Hopkins International to outsource the management a local counterpart in Al-Ain (Whitehead, 2012). During the two years that followed, the pace by which similar

arrangements rose that eventually up to 90% of the capital's hospital capacity was under the management of four different internationally recognized medical centers. This pace of PPPs would not have been made possible without the vision of the country's leadership to improve the quality of medical services, widen the coverage of insurance schemes, and create accountability in the health sector.

Dubai, on the other hand, took a different approach to collaborating with the private sector. Dubai chose to outsource its public hospital departments and other component services with private facilities while holding on to its centralized management style. With the establishment of the Dubai Health Authority in 2007, a trend was to be witnessed in the health care arena of the emirate. The DHA recognized the importance of performance measurement in improving quality and hence it called for the segregation between the strategy management and its service delivery departments by internal divisions, meanwhile encouraging the measurement approach (DHA Strategy, 2016).

The many initiatives of PPPs across the UAE have recently demonstrated that existing in the appropriate facilitating environment is crucial for the latter to succeed and will more likely contribute to the achievement of quality improvements (U.S.-U.A.E. Business Council report, 2016). Previous studies have concluded that three main contingent variable or rather conditions must prevail to make for such an appropriate and facilitating environment. These three conditions are: a strategic healthcare reform agenda, clear governance goals, and a performance measurement culture (Guastella, A. & Menghi, A., 2016). In the absence of any of these, PPPs may still be possible, yet bound to be costlier and less effective.

Researching the UAE environment during the period between 2012-2015, evidence has shown that the single most important element, which existed, was the formulation of a strategic reform agenda that planned to include the private sector. However, the availability of a clear policy from the country's leadership enabling individuals in executive roles to make decisions regarding the level of engagement of private sector partners is conditional. Otherwise, little of long-term benefit will result from private sector collaboration. It has been argued that the successful PPP initiatives that emerged in the UAE's capital prior to 2015 were attributed to the substantial availability of financial resources. That is only a single aspect of the success triad formula. The existence of financial resources has of course proven to facilitate decisions and speed up business processes; yet has never replaced the need for a clear strategy and the willingness to enforce change (Guastella, A. & Menghi, A., 2016).

Clear governance of the private sector, the second component of the appropriate and facilitating environment; has manifested itself in the UAE as a predominantly prevailing element. Once again, the UAE environment prior to 2015 experimented substantially with policy implementation leading to the development of efficient governance models that were widely implemented across the country. With the inevitable presence of conflicting interests in most PPP ventures, the UAE government implemented in 2007 a separation of roles between regulator and service provider through the creation of two distinct organizations, SEHA (The Abu Dhabi Health Services Company established under Decree No. 10 of 2007 as an Abu Dhabi joint stock company owned by the Abu Dhabi government) and HAAD (Health Authority-Abu Dhabi), which were derived from the General Authority of Health Services (Department of Health, 2013). This separation of roles endorsed the accountability of the public sector

because one of the main purposes of the regulator is the independent enforcement of quality standards (Whitehead, 2012). In the absence of a clear and distinct regulator, performance within medical establishments tend to suffer because of a lack of incentive to measure and improve key performance indicators (KPIs) (Whitehead, 2012). With the separation of roles, medical establishments become obliged to measure, report, and ultimately improve performance.

The third and last condition for a facilitating environment meant to nurture PPP initiatives is performance measurement, which automatically transcends from the previous two components. The strategic reform agenda allows the government to set the goals and policy direction, proper governance ensures that the right structural incentives are in place for achieving that vision, and performance measurement permits the government to know where it stands and to hold individuals and organizations accountable for achieving the vision (Chahine et al., 2012).

It is known that KPs reflect the level of performance of any business establishment. They should be clearly articulated and embedded as part of every public healthcare service provider entity, regardless to the involvement of the private sector in the service provision practice. However, when a private sector provider becomes directly involved in the process, remuneration and bonuses can be directly linked to the KPIs measured, hence providing the partner with a strong incentive to maintain and improve its performance (Chahine et al., 2012). Ultimately, activating a KPI measurement system helps the government sector better manage the performance of its private sector partner in a number of areas during the contract cycle (Chahine et al., 2012).

Prior to 2015, PPP experiences across the Emirates displayed the importance of a KPI measurement system, and its impact on extracting maximum benefits from collaborating with private sector counterparts. According to SEHA's leadership, performance measurement was one of the key factors behind the success of their PPP projects. When SEHA embarked on outsourcing several of its hospitals, there was no comprehensive system in place to measure KPIs. The first task of the new operators was to measure the performance baseline, and this data was used for assessing and improving performance. SEHA has since gone on to measure performance in all of its hospitals, and can compare the relative performance of each.

Dubai also came to see the importance of performance measurement to accountability and initiated a comprehensive performance management program, which was inaugurated in 2010 (Whitehead, 2012). At that time, despite the DHA decision not to outsource the management of any of its hospitals, it knew that it became at a better position to judge the performance of healthcare operators if it ever decided to do otherwise.

2.7.1 Partnership Examples

The UAE is working with leading global institutions to further develop its healthcare system. The UAE seeks to become a major center for world-class healthcare in the Middle East, for

not only its own citizens and residents, but also for those in the region. A number of the UAE's strong partnerships are with US-based institutions[15] and are listed below:

- The Cleveland Clinic Abu Dhabi is in operation as a world-class specialty hospital and clinic.
- The Johns Hopkins Medical School manages healthcare systems in Abu Dhabi, including the 469-bed Tawam Hospital.
- The Susan G. Komen Breast Cancer Foundation has a partnership with the UAE government for breast cancer education.
- The Children's National Medical Center and the Health Authority of Abu Dhabi partnership has been credited for helping improve infant mortality rates in the UAE, developing a successful internship program with Emirati doctors and establishing the UAE as a destination for regional, pediatric care.

15. Ministry of Health and Prevention, 2017. Retrieved from: www.mohap.gov.ae

Chapter 3: Methodology

The chapter provides an overview of the research design, rationale and a description of the variables under consideration. In addition, it describes the population, sample, sampling procedure and provides a comparison with other research studies in similar domain. The chapter discusses operationalization of constructs, offers a brief discussion on the use of Likert scaling in the study and highlights procedures for data collection (including the recruitment and participation strategies) and data analysis. Lastly, it discusses the threats to validity and the ethical procedures.

3.1 Introduction

The goal of the study is to find evidence on public perceptions of healthcare service delivery in the UAE with respect to quality, affordability, availability/access and responsiveness. In the recent years, the UAE government has made it mandatory for all employers to provide basic health insurance to their employees. Given the recent healthcare insurance coverage for all employees, this study will focus on the public perception's appropriateness and application of the current healthcare practices and policy implications in the UAE.

The objectives of this research project are to examine public perceptions towards quality, affordability, accessibility, and responsiveness in the UAE healthcare sector. This exploratory study also aims to determine whether there is an association between respondents' perceived satisfaction from the health delivery system in the UAE and the above-mentioned factors. Chapman et al. (2014) and Smith et al. (2014) argue that these factors are most relevant in determining the overall satisfaction in the healthcare sector.

3.1.1 Research Questions and Hypotheses

The research questions and hypotheses for the study were established as follows:

1. Are the perceptions related to the quality, affordability, accessibility, responsiveness and the overall satisfaction in the UAE healthcare sector different across various demographic characteristics?

   Null Hypothesis (Ho): There is no significant difference between the perceptions of respondents belonging to different demographic groups with respect to quality, affordability, accessibility, responsiveness and overall satisfaction in the UAE healthcare sector.

2. To what extent, does quality, affordability, accessibility, responsiveness relate to the perceived overall satisfaction in the UAE healthcare sector?

Null Hypothesis (Ho): There is no association between quality, affordability, accessibility, responsiveness and overall satisfaction in the UAE healthcare sector.

3.2 Sampling and Data Collection

In quantitative research methods, theory comes before scientific analysis, which is either tested or measured against data (Creswell, 2009). A quantitative methodology is the most appropriate approach to be used because deductive theory allows for less depth but more breadth of information across a large number of cases (Creswell, 2009).

3.2.1 Population

Respondents for the research study consist of citizens and residents of the United Arab Emirates. According to reports from the UAE Federal Competitiveness and Statistics Authority for 2016, the overall population was 9,121,167 (FCSA, 2017). The sample size consideration recognized the values, language preferences, cultural beliefs, traditions, attitudes, and health and medical practices and services of a diverse population.

3.2.2 Sample Size and Sampling Procedures

The sampling procedure usually follows a selection of defining the population, contrasting sample versus census, determining the sampling plan, determining the sample size, estimating costs of sampling, and last, executing the sampling process (Smith & Albaum, 2010). The research design instrument is the survey research method because of the likelihood to reach more participants (Christensen, Johnson, & Turner, 2011). Sampling is the course of action of drawing a sample from a population (Christensen et al., 2011). There are selection methods for sampling procedures: probability and non-probability (Smith & Albaum, 2010; Trieman, 2009).

A convenience sampling design provides a degree of representativeness. The sample size, however, is determined by consideration of the precision of the resulting estimates (95% CIs) and the ability to detect meaningful differences between groups of interest (power). The convenience sampling technique was conducted using the MBRSG database of UAE government and private sector database and YouGov Middle East databases to participate in the study. In other words, the sampling procedure employed was a non-probability; however, the large sample size might mitigate the non-representativeness concern to some extent.

Accordingly, for this study, where N is the size of the study population of approximately 9,121,170 then n the recommended sample is at least 3,382 (Krejcie & Morgan, 1970). It is important to note that the sample size of 3,382 chosen and calculated through the Raosoft Sample Size calculator as an estimate (Raosoft Inc., 2004; Wilson, 2014) was based on the

98% confidence level (Bartlett, Kotrlik, & Higgins, 2001; Krejcie & Morgan, 1970). Table 7 provides an illustration of the manual calculation of the sample size according to the formula adopted by Krejcie and Morgan (1970).

Table 7
Sample Size Calculation

Sample size formula (adopted from Krejcie & Morgan, 1970)

$$n = \frac{(Z)2 * (p) * (1-p)}{(c)2}$$

$$n = \frac{(2.33)2 * (0.5) * (1-0.5)}{(0.02)2}$$

n = 3,382 (respondents)

Where:
Z = Z-value (2.33 at 98% confidence level)
p = sample proportion, that is, percentage picking a choice, expressed as decimal (0.5 used for sample size needed)
c = confidence interval (also known as the margin of error, expressed as decimal, 0.02 = ±2%)
n = sample size

Correction for finite population

$$\text{New } n = \frac{n}{1 + \frac{(n-1)}{\text{population}}}.$$

New n = 3,382
Therefore, sample size is 3,382.
Where: population = 9,121,170

The minimum sample size of 3,382 (Bartlett et al., 2001; Krejcie & Morgan, 1970) will include UAE population (citizens and residents) over 18 years across all seven emirates for the research study.

3.2.3 Research Design

The nature of the study followed guidelines by the Medical Research Council (Craig et al., 2008). These guidelines were focused on the selection of appropriate design choices and theoretical framework for the study (Craig et al., 2008). The model is summarized in following Figure 1.

Throughout the study, there was the development process of the theoretical framework that is the identification of the evidence base theories, identification of the theories, and modelling of the process and outcomes (Craig et al., 2008) representing the healthcare triad: quality, access and cost of healthcare. As illustrated in Figure 1, the key elements of the development and evaluation process of the theoretical framework were applied to the study. The exploratory research design reflected the characteristics of the UAE population (citizens and residents) and determined relationships between the variables. The correlational analysis followed the cross-sectional study-type approach using a sample survey. This cross-section approach involved the drawing of a sample of participants where this also generated a summary of statistics such as averages, percentages, and correlations.

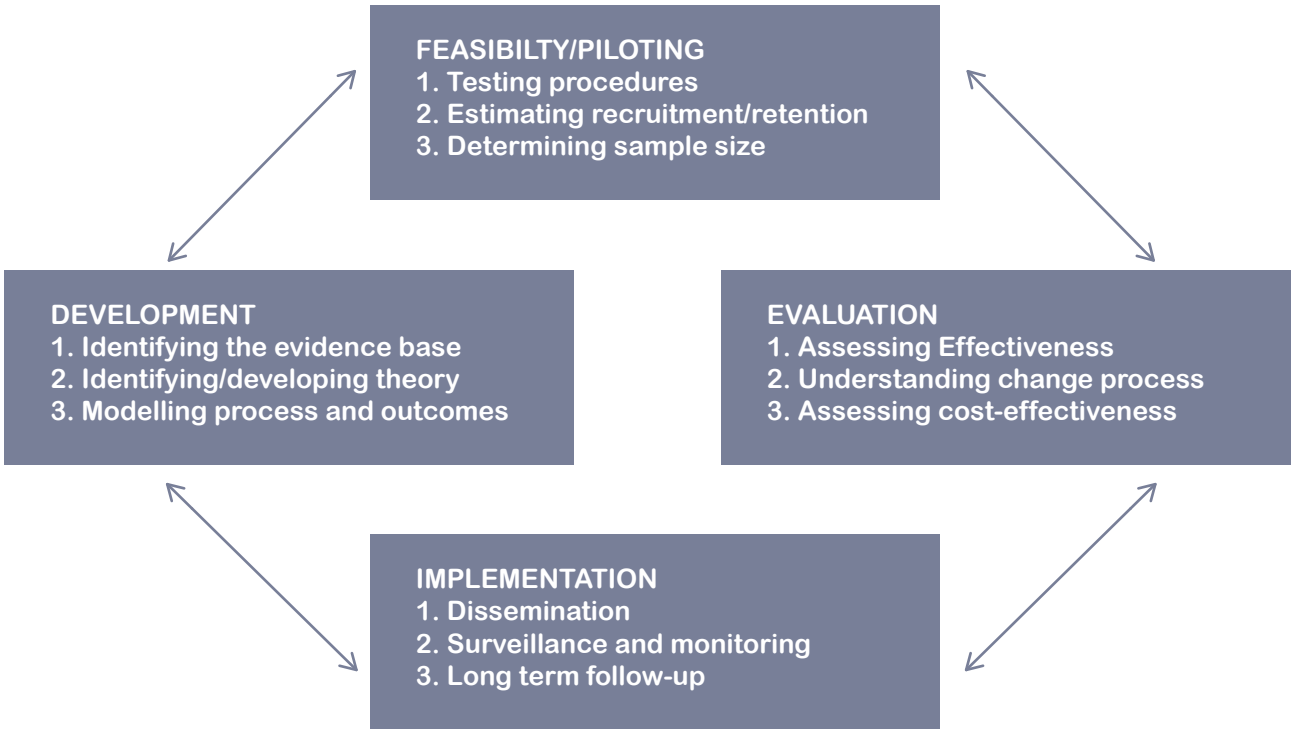


Figure 1. The Medical Research Council guidelines. Adapted from the Craig, P., Dieppe, P., Macintyre, S., Michie, S., Nazareth, I., & Petticrew, M. (2008). Developing and evaluating complex interventions: The new Medical Research Council guidance. British Medical Journal, 337. Reprinted with permission.

3.2.4 Study Variables

The demographic variables included gender, nationality, age, employment status, Emirate of residence, family size[16], income, education, and the type of health insurance plans held (Jacobs et al., 2012). In addition, respondents were asked to respond on the following questions:

1. Do you have a regular general practitioner / family doctor? (Yes/No)
2. Did you have a medical visit in the UAE during the last three years? (Yes/No)
3. Would you consider going/ travelling back to your home country for a medical consultation? (Yes/No)

Age in years was aggregated into four groups: 18-19 years; 20-35 years; 36-50 years; and 51+ years as per the conventions of the YouGov Middle East. Nationality was classified into two groups: Emiratis and non-Emiratis. The employment status was classified into eight groups: Public Sector; Private Sector; Semi-government; Non-governmental organization; Family Businesses; Self-employed (including freelancers); Students; and Unemployed. Residents of all seven emirates (Dubai; Abu Dhabi & Al Ain; Ajman; Sharjah; Umm al-Quwain; Fujairah; and Ras al-Khaimah) were represented in the sample. The family member size (household size) was classified into four groups: 1-3 members including children; 4-6 members including children; 7-9 members including children; and 10+ members including children, which was in accordance with the WHO Eastern Mediterranean Region conventions. The level of education was categorized as Doctorate (Ph.D.) Master, Diploma Post University (Postgraduate Diploma), Bachelor, and others.[17],[18],[19]

The total monthly household income (AED) was grouped into ten categories with increments of AED 5,000 (AED 0 – 60,001+) as per the conventions of the Federal Competitiveness Statistics Authority reporting. The information on the type of UAE Health Insurance Plans held by respondents was also collected.[20] The respondents were asked to indicate if they have a regular family doctor or family physician, they had had a medical visit in last three years, and if they would consider travelling to their home countries of medical treatment. The responses on these questions were recorded as Yes or No.

16. Number of members in the family
17. The level of education or the highest degree earned is defined by the Federal Competitiveness & Statistics Authority (formerly UAE National Bureau of Statistics).
18. Others include secondary education, certificates, professional training (FCSA, 2017; UAE-NBS, 2013).
19. Data on education specialization was also collected to determine the precise field of study including fourteen categories: Arts & Design; Engineering; Information Technology; Business & Economics; Education; Foreign languages; Environment & Health Sciences; Medical Sciences; Communication & Media Sciences; Sciences; Sharia & Law; Human & Social Sciences; Foundations; and Others.
20. Individual Plans {You are paying solely for this individual plan for a comprehensive UAE medical insurance plan}; Family Plan {You are paying solely for this family plan for a comprehensive UAE medical insurance plan}; Group Plans 1 {Your company or sponsor is paying solely for a comprehensive UAE medical insurance plan, with a co-payment}; Group Plans 11 {Your company or sponsor is paying solely for a comprehensive UAE medical insurance plan, with no co-payment}; and Traveler Plans {You are paying solely for this traveler plan for a comprehensive UAE (including outside) medical insurance plan who travel very frequently}.

The survey items for the health services factors were adopted from Professor Grant Marshall, PhD. Senior Behavioral Scientist, RAND where approval was granted. Eighteen items of the healthcare services factors survey questions for this study were included as follows (for the survey in English and Arabic, refer to Appendix B):

1. Doctors are good about explaining the reason for medical tests.
2. I think my doctor's office has everything needed to provide complete medical care.
3. The medical care I have been receiving is just about perfect.
4. Sometimes doctors make me wonder if their diagnosis is correct.
5. I feel confident that I can get the medical care I need without being set back financially.
6. When I go for medical care, they are careful to check everything when treating and examining me.
7. I have to pay for more of my medical care than I can afford.
8. I have easy access to the medical specialists I need.
9. Where I get medical care, people have to wait too long for emergency treatment.
10. Doctors act too businesslike and impersonal toward me.
11. My doctors treat me in a very friendly and courteous manner.
12. Those who provide my medical care sometimes hurry too much when they treat me.
13. Doctors sometimes ignore what I tell them.
14. I have some doubts about the ability of the doctors who treat me.
15. Doctors usually spend plenty of time with me.
16. I find it hard to get an appointment for medical care right away.
17. I am dissatisfied with some things about the medical care I receive.
18. I am able to get medical care whenever I need it.

Each of the eighteen items had scale anchors from 1 (strongly disagree) to 5 (strongly agree) (Shore & Wayne, 1993).

3.2.5 Recruitment, Participation, and Data Collection

The participation of respondents for the study was considered in terms of location and development of a database. While an established sampling frame is not available, various population estimates provided by the Federal Competitiveness Statistics Authority (FCSA) used data to infer the appropriate sample distribution.

3.2.6 Instrumentation

The survey in English and Arabic languages were disseminated online for this exploratory research study. The survey instrument complied with ethics guidelines, and clearance and approval of the Ethics Committee at the Mohammed Bin Rashid School of Government (MBRSG). Initially, pilot testing of the survey instrument included information about the survey's objectives, benefits and any potential risks.

The internal consistency was measured among a group of items combined to form a single scale through the determination of the Cronbach's coefficient alpha. A Cronbach's coefficient alpha between 0.70 and 1.00 is deemed acceptable (Tabachnick & Fidell, 2007). Reliability was established by ensuring that the instructions were standardized across all settings: 1) the number of items to be increased; 2) omitting unclear items; 3) minimizing the effect of external events; and 4) moderating the easiness and/or difficulties of tests.

The face validity, content validity and convergent construct validity were measured. The survey adopted the face validity technique within the pilot testing that entailed reviews by untrained persons to determine whether they think that the questions and items were clear and understandable. Content validity involved the subjective measure of how appropriate the items seemed to a set of experts from the field of study. This form of validity consisted of an organized review of the survey instrument's contents to ensure that it contained all the relevant details and questions and advised on what was to be excluded and included. The test items in the survey were universal through establishing a content expert, verifying whether the items represent all the possible items and whether the number of items reflects what was taught.

The third form of validity included the evaluations of convergent construct validity that is similar to the alternative form of reliability as mentioned in the reliability section. This method of validity entailed the use of different methods for obtaining the same information about a given concept to produce similar results. While this was the most difficult source of validity to establish, attempts were made to utilize a construct in terms of a group of interrelated variables such as each specific healthcare service factors. Then, the construct would either correlate with related independent variables (IVs) or not correlate with IVs that are not related.

3.2.7 Procedures for Informed Consent

In the process of approaching participants for the study, careful consideration was taken into account for confidentiality, informed consent and opportunity for participants to withdraw from the study if they chose to do so. The informed consent form was distributed to each respondent participating in an online survey, which is discussed in detail later in this section. The participants were given a universal link to the survey (such that the same

link is given to all potential participants). Before the survey commences, the objectives, information on the research project and rationale of the survey, was presented to the participants. The participants were asked to agree or disagree to the information provided before proceeding to the survey questions. Those respondents who selected 'disagree' were diverted to a closed webpage of the survey.

The informed consent form highlighted the purpose of the study, the procedures for participating in the survey questionnaire, confidentiality protection issues, the foreseeable risks to the participants, potential benefits to the participant or others, contact information for questions regarding the study, participants' rights, and the conditions of participation, including right to refuse or withdraw without penalty. The participants were given a chance to proceed with the study questions or choose to opt out at any time during the survey questionnaire. The Qualtrics survey system was utilized to collect the data for the study. At the start of the online survey via Qualtrics, the survey information details were outlined as were the objectives of the study. The survey also included check boxes asking whether the respondent would be interested for a copy of a short executive summary findings. Information was presented at the beginning on the first webpage on the survey.

Once the potential respondent agreed that they had been informed about the survey, they then were able to participate. The elements of the informed consent included the following:

1. A statement of purpose regarding the research; the expected duration and frequency of the participants' participation; a description of the procedures to be followed or activities to be undertaken, and an outline about the intended dissemination of the research findings;

2. A statement of the participants' responsibilities with respect to the research;

3. A statement describing how confidentiality or anonymity will be maintained and private information identifying the participants will be dealt with;

4. A statement that the participants' participation is voluntary, that refusal to participate did not involve any penalty or loss of benefits to which the subject was otherwise entitled, and that the subject may choose to stop participating at any time without penalty;

5. The name and contact details of the researcher, as well as the name and contact details of the MBRSG Ethics approval reference number were all provided.

If the participant chose to exit, the participant was directed to a new page that thanked the participant for his/her time. Furthermore, an email address was attached for any questions and queries within the information area of the survey and when the participant exited the survey. At the end of the survey, a check box was provided for those participants interested in receiving a short executive summary of the results of the study.

3.2.8 Instrument Distribution

To be more specific, conducting online surveys or questionnaires were best suited for this type of study as they are more structured and direct, and focus on the research to be more objective (Smith & Albaum, 2010; Frankfort-Nachmias & Nachmias, 2008). The advantages of the survey method as the measurement instrument in terms of validity and reliability, included being inexpensive; reasonably elevated measurement validity for well-constructed and substantiated surveys; superior to measuring attitudes and obtaining insights; and useful for exploration in addition to hypothesis testing research (Christensen, Johnson & Turner, 2011; Creswell, 2009). The use of the internet as the means of collecting the data were highly effective for the study. The advantages of employing the electronic surveying method for the study were cost effective; they did not require postage, printing and/or interviewees' face-to-face involvement. It had been estimated that electronic surveys cost about one-tenth of the cost of a comparable mail survey (Anderson & Kanuka, 2003). It is important to factor that the respondents effectively are representative of Internet users in the UAE, not the whole population (which includes those who use the internet or not). In other words, the actual respondents to this survey, in best-case scenario, are representative of the 93% of the UAE's population. Given the research question (which is relevant to the whole population, not just internet users), this then posed as a limitation. Due the nature of this preliminary report's research methods, further research will be conducted via phone calls, face to face and focus groups to account for non-internet users.

Another advantage of conducting surveys online was to have an access to a wider audience, regardless of the geographical location. In addition, the researcher was able to export the data via spreadsheets from the secured database Qualtrics system. Therefore, the time and cost of hiring research assistants for data entry was eliminated. The data were collected and stored using the highest level of encryption within the Qualtrics survey system which was password protected.

The relevance of using an electronic survey method that was structured and directed for the study (in relation to the research questions), included the idea of obtaining descriptive information and facts needed to answer the research questions. Such a survey method can be specific in that there were well-formulated survey questions to obtain the required information in the most systematic and orderly manner. It also assisted in reducing memory error (Smith & Albaum, 2010). Furthermore, using this method counteracted the cultural sensitivities, especially in the United Arab Emirates (Moonesar, 2015).

3.3 Data Protection and Handling

The data were secured and collected via the Qualtrics survey system with a designated username and password-protected account. The researcher was the only person with access to the data account. During the research project, the survey system stored and was accessed via one computer only which was located in an office, which could only be, accessed a key. On the completion of the research project, the survey system was stored and accessed on the same computer located in the office. The data will be held securely for a minimum of five years after this completion of the research project. The research project did not involve obtaining identifiable information.

3.4 Data Analysis

Qualtrics software was used for collecting the data of the survey. Qualtrics software provided the flexibility to design the survey. The data collected was exported in file formats such as SPSS, Microsoft Word, and Microsoft Excel and were exported in both forms as coded values or coded text. Within the Qualtrics survey system, the data were exported in a format as the Statistical Package for the Social Sciences (SPSS). Data cleaning and screening procedures were applied to the exported SPSS survey data. One way that the data were cleaned was through the scanning of data for errors or unexpected characters through the checking of the 'frequencies' for each variable (Tabachnick & Fidell, 2007, p. 92). The data was also screened using the 'Crosstabs' function within the SPSS program; this function displayed a matrix of the frequency of the study variables. The resulting descriptive statistics and frequency tables are illustrated in results section.

The preliminary data analysis resulting in frequency tables and descriptive statistics was carried out through SPSS. The frequency tables summarized the categorical data and provided insight into the agreement and disagreement levels of respondent on various questions asked in the survey. On the other hand, descriptive statistics provided the measures of central tendency (Mean and Median) and dispersion data (Standard Deviation). In addition, correlations between dependent variable (DV) (overall satisfaction) and IVs (all aspects of quality, affordability, accessibility, and responsiveness) were calculated to determine the level of association between the variables under consideration.

Besides preliminary data analysis involving frequencies, descriptive statistics and correlations, a multi-step data analysis process was employed to derive meaningful results from the data collected and to facilitate researchers to answer the research questions and hypothesis earlier.

To answer the first research question, that is, whether or not there are significant differences between perceptions of respondents regarding various dimension of healthcare delivery in the UAE of groups based on their demographic profiles, a single-

factor Analysis of Variance (ANOVA) is conducted. The high F-statistic and a p-value less than the significance level will suggest statistically significant differences between the perceptions of the groups under consideration. For example, with respect to affordability, the perceptions of females may be very different from those of males. The single factor ANOVA is able to highlight such differences across different socio-demographic groups.

To answer the second research question, a two-step analysis is employed. First Principal Component Analysis (PCA) is used followed by multiple regression. Each aspect of healthcare service delivery has multiple questions, with an exception of affordability. The correlations between IVs were positive, moderately high and statistically significant at a 2% significance level, highlighting interdependence between IVs and therefore a need for dimension reduction. Accordingly, PCA with three a priori factors are used with 'varimax rotation'; in other words, is used to simplify the expression of a particular sub-space in terms of just a few major items each. The three extracted factors relate to quality, accessibility and approachability and responsiveness. Since the affordability dimension comprised one question only, it was excluded from the PCA. The dimension reduction ensured that the potential of multi-collinearity in estimating a model is reduced. Lastly, multiple regression was used to estimate the association between overall satisfaction with healthcare delivery, and affordability, quality, accessibility and responsiveness.

Multiple regression was chosen as the preferred method to model the relationship between the dependent and IVs because it not only accommodates multiple IVs and study has more than three measurement variables where one is the dependent (Y) variable and the remaining of the variables is the independent (X) variables. The multiple regression technique evaluated whether the model provided a reasonable fit to the data and the contribution of each of the IVs to the DVs (Tabachnick & Fidell, 2007, p. 26).

3.4.1 Considerations for Multiple Regression

The following is a summary checklist of data analysis plans for the standard multiple regression of the study (Tabachnick & Fidell, 2007, p. 172):

Issues

a. Ratio of cases to IVs and missing data

b. Normality, linearity, and homoscedasticity of residuals

c. Outliers

Major analyses

a. R^2 and confidence levels, F-statistic

b. Adjusted R^2 and overall proportion of variance in the dependent variable accounted for

c. Significance and magnitude of regression coefficients

d. Regression equation

3.4.2 Ratio of Cases to IVs

With a minimum of 3,382 potential respondents and 6 IVs, the number of cases were well above the minimum requirement of 110 (104 + 6) for testing individual predictors in standard multiple regression. There was potentially no missing data.

3.4.3 Normality, Linearity, and Homoscedasticity of Residuals

The normality of the variables was assessed through two components, skewness and kurtosis that was achieved from statistical and graphical methods (Tabachnick & Fidell, 2007). Linearity was considered since the Pearson's r only captured the linear relationships among the variables (ibid.) and was assessed through scatterplots inspection. The homoscedasticity or the assumption of homogeneity data of variance was considered since one of the variables was discrete and the other was continuous (ibid.).

3.4.4 Outliers

Outliers in the dependent and IVs were examined using output from Mahalanobis distance in SPSS, which is a commonly used procedure identifying outliers and calculating the distance of specific scores based on the remaining cases within the centre cluster (Tabachnick & Fidell, 2007). Bivariate outliers were detected via scatterplots (Tabachnick & Fidell, 2007). Lastly, multivariate outliers identified using the transformed IVs as part of an SPSS regression run in which the Mahalanobis distance of each case, to the centroid of all cases were computed. Extreme cases were deleted.

3.4.5 Adjusted R^2 and Confidence Interval, F-Statistic

The adjusted R^2 is considered to be an appropriate measure with respect to multiple regression. While R^2 is commonly referred to indicate the percentage of variability in dependent variable by the combined effects of the IVs[21], adjusted R^2 is considered to be a more robust measurement for explaining the variability in dependent variability due to IVs under consideration as it indicates the appropriateness of all variables included in the model.

3.4.6 Regression Equation

The multiple regression formula for the study was as follows:

$$Y = \alpha + \beta_1(X_1) + \beta_2(X_2) + \beta_3(X_3) + \beta_4(X_4) + \varepsilon$$

Y = the value of the predicted score for the dependent variable (Overall Satisfaction)

X_1 = the value of the first independent variable (Quality)

X_2 = the value of the second independent variable (Accessibility and Approachability)

X_3 = the value of the third independent variable (Responsiveness)

X_4 = the value of the fourth independent variable (Affordability)

$\beta_{1,2,3,4}$ = Coefficients of each independent variable mentioned above

α = the constant

ε = error term

3.5 Threats to Validity

Threats to internal validity included subject characteristics or selection bias, attitudes of subjects, instrumentation and statistical regression.

Selection bias: the respondents for the study differed from each other in terms of age, level of education, gender, nationality and years of work experience. Furthermore, the study invited UAE public citizens and residents as respondents to the survey, which meant that any findings were used only for that particular group. Randomization of the sampling minimized the threats of internal validity for selection bias.

21. The rule of thumb for R2 ~ .30 is a good relationship for social sciences which was referenced (Tabachnick & Fidell, 2007).

Attitudes of subjects: the healthcare service factors involving input from public to explore the perceived satisfaction levels of healthcare services in the context of the UAE has not been explored and/or developed (Chapman et al. 2014) in previous research studies. The sample population of participants were recruited for the statistical analyses.

Survey instrumentation: the survey instrumentation was a constant application and scoring of variable items. Furthermore, based on the review of literature on healthcare services evaluation instrumentations, there were no set surveys for this region. Therefore, the survey instrument was developed. The researcher was mindful in specification and control of the measurement procedures, including standardizing the survey instrument and the data collection procedures.

3.6 Ethical Procedures

One of the ethical considerations included the procedures that were consistent with creditable research designs. The survey instrument had no identification marker to the respondent; therefore, privacy was maintained as another ethical consideration. The research design has no potential risk to the participant. An Ethics Screening committee application was submitted after the approval of the written proposal had been obtained. Within the ethics approval (reference number: REC-04-017), the research addressed the foreseeable ethical issues; highlighted any risks and how they will be minimized, and included documents such as the research ethics planning worksheet, participation information sheet and confidentiality forms. The following were the list of items that were addressed in the ethics clearance application:

- General description of the research.
- Community research stakeholders and partners.
- Potential risks and benefits.
- Data integrity and confidentiality.
- Potential conflicts of interest.
- Data collection tools.
- Description of research participants.
- Informed consent.
- Final checklist and electronic signatures, where applicable.

There was an equitable selection of participants, where the survey was disseminated to approximately 7,000 UAE public citizens and residents for a minimum sample size of 3,382 respondents; total number of responses were 6,200 and after data cleaning, resulted in completed 5,855 responses. Therefore, the overall response rate was 88.5%. The data were collected using survey system software entitled Qualtrics. The collected data were exported and stored electronically with a secure password to the laptop and the data file. All the data were presented in aggregate manner in results section.

3.7 Summary

An exploratory research design was used to generate evidence on public perceptions of healthcare in the UAE; this project will evaluate how people living in the UAE perceive healthcare in terms of quality, affordability, accessibility and responsiveness. Given the recent mandatory healthcare insurance coverage for all employees, this study will focus on the public perception's appropriateness and application of the current healthcare practices and policy implications in the UAE. The sample size of the study was 5,855 citizens and residents of the UAE. A survey instrument was adopted and adapted for the context of the UAE using two languages: English and Arabic. The final survey was approved; this was then disseminated to the participants for their responses. The data were collected via online survey system, Qualtrics. Ethical procedures followed and adhered to the ethics guidelines and the ethics application was submitted.

Chapter 4: Data Analysis Results and Outcomes

The aim of the study is to evaluate the association between respondents' perceptions of overall satisfaction from the health delivery system in the UAE concerning factors such as affordability, quality, accessibility and responsiveness. The sample size for this study is sufficiently large (n=5855). The preliminary data analysis included frequency, descriptive statistics and correlations.

4.1 Frequency Tables

The frequency tables were created for all socio-demographic and perceptions related data as illustrated as follows.

Table 8
Descriptive Statistics for Socio-demographic variables.

Socio-demographic Variables		Frequency	Percent
Gender	Male	3462	59.1
	Female	2393	40.9
	Total	5855	100.0
		Frequency	Percent
Age (years)	Below 20	268	4.6
	20-35	3072	52.5
	36-50	2010	34.3
	51+	505	8.6
	Total	5855	100.0
		Frequency	Percent
Nationality	Emirati	829	14.2
	Non-Emirati	5026	85.8
	Total	5855	100.0

		Frequency	Percent
Employment Status	Public Sector	1089	18.6
	Private Sector	2743	46.8
	Semi-government	480	8.2
	Non-governmental organization	91	1.6
	Family Business	138	2.4
	Self-employed (including free-lancers)	349	6.0
	Student	433	7.4
	Unemployed	532	9.1
	Total	5855	100.0

		Frequency	Percent
Emirates of Residence	Dubai	2839	48.5
	Abu Dhabi & Al Ain	1501	25.6
	Ajman	398	6.8
	Sharjah	876	15.0
	Umm al-Quwain	105	1.8
	Fujairah	50	.9
	Ras al-Khaimah	86	1.5
	Total	5855	100.0

		Frequency	Percent
Family Size	1-3	2339	39.9
	4-6	2752	47.0
	7-9	542	9.3
	10+	222	3.8
	Total	5855	100.0

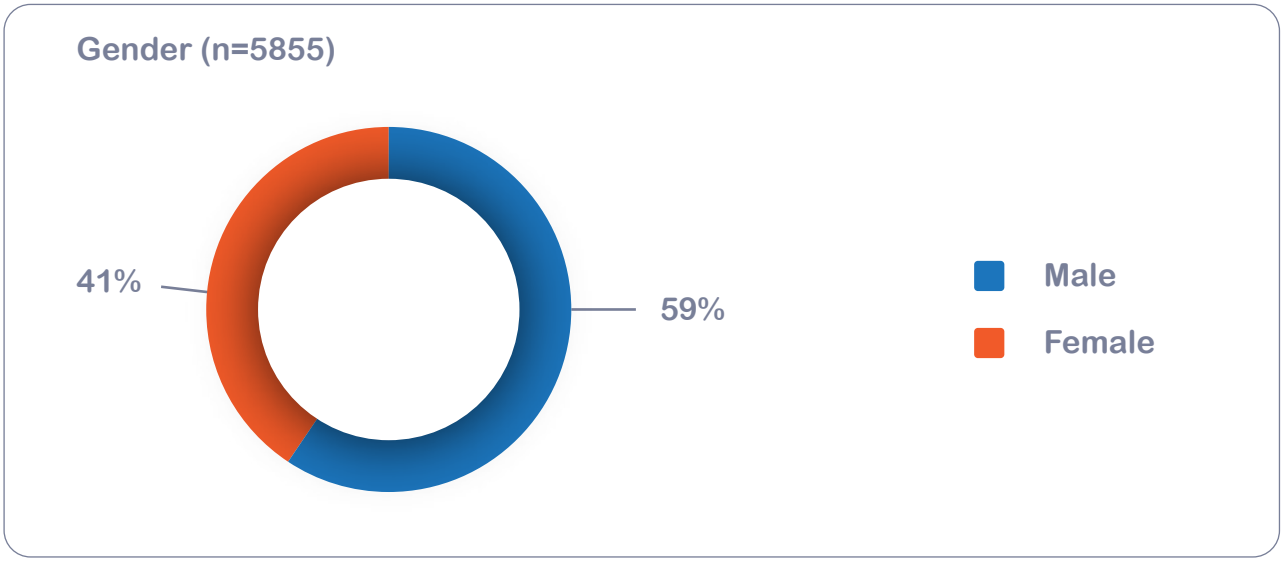
		Frequency	Percent
Level of Education	Doctorate (Ph.D.)	226	3.9
	Master's degree	1159	19.8
	Postgraduate Diploma	835	14.3
	Bachelor's Degree	3086	52.7
	Other	549	9.4
	Total	5855	100.0

		Frequency	Percent
Monthly Household Income (Dirhams)	0-5000	1262	21.6
	5001-10000	1253	21.4
	10001-15000	904	15.4
	15001-20000	678	11.6
	20001-25000	438	7.5
	25001-30000	360	6.1
	30001-40000	328	5.6
	40001-50000	238	4.1
	50001-60000	127	2.2
	60001+	267	4.6
	Total	5855	100.0
		Frequency	Percent
Type of Insurance Plans Held	Individual Plans	1569	26.8
	Family Plan	1237	21.1
	Group Plans I	1966	33.6
	Group Plans II	919	15.7
	Traveler Plans	164	2.8
	Total	5855	100.0
		Frequency	Percent
Regular Family Doctor/ General Practitioner	Yes	1989	34.0
	No	3866	66.0
	Total	5855	100.0
		Frequency	Percent
Medical Visit in Last Three Years	Yes	4694	80.2
	No	1161	19.8
	Total	5855	100.0
		Frequency	Percent
Preference for Going Back Home for Medical Consultation	Yes	2991	51.1
	No	2864	48.9
	Total	5855	100.0

4.1.1 Gender

The sample consisted of 59% male and 41% female participants as illustrated in the table as follows:

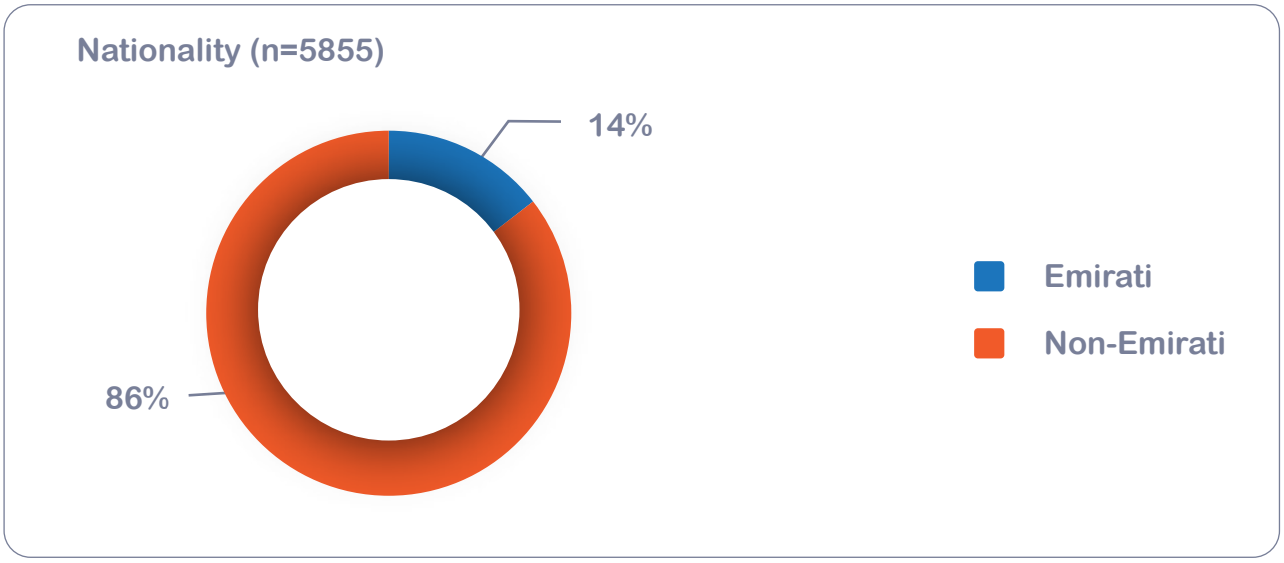
Figure 2: Gender Distribution



4.1.2 Nationality

The Emiratis represented approximately 14% of the sample. According to the FSCA and other worldwide entities such as United Nations estimates of 2015 expatriated comprise more than 85% of the total population and the composition of the sample appears to reflect the population distribution.

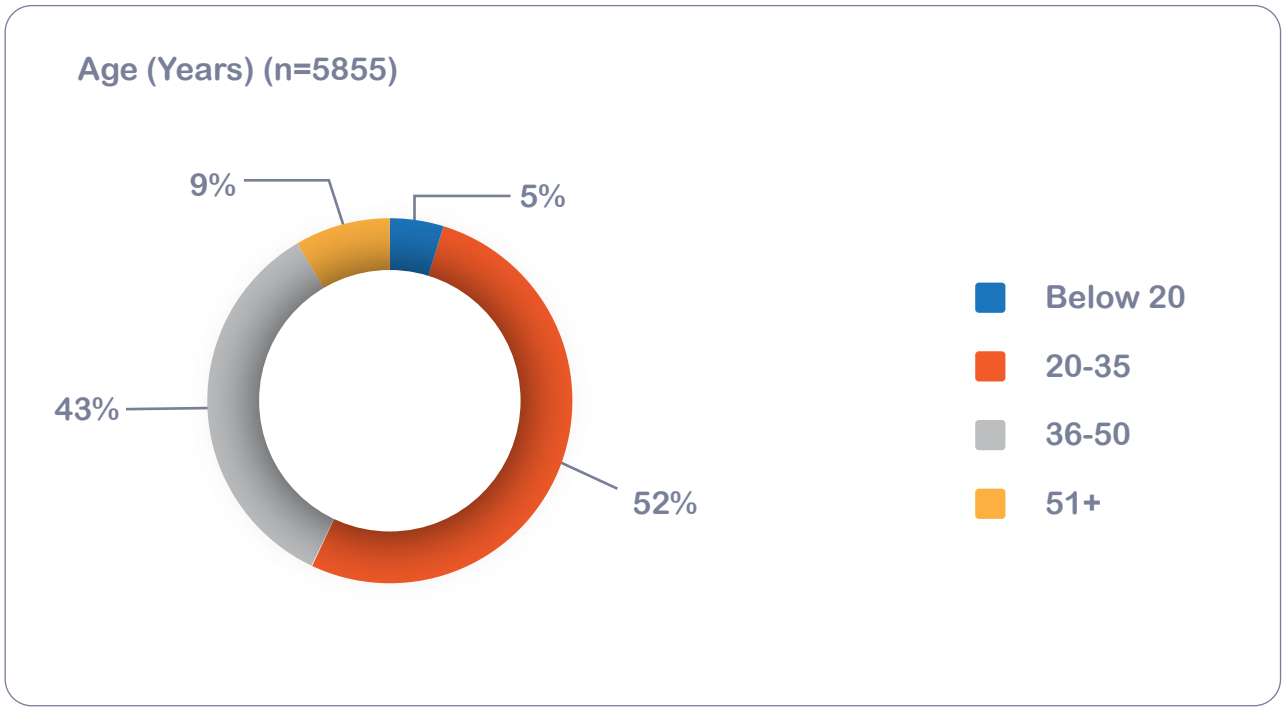
Figure 3: Nationality Distribution



4.1.3 Age Group

Approximately 87% of the sample was within the age bracket of 20 to 50 years, which is indicative of the young population of the UAE (FCSA, 2017).

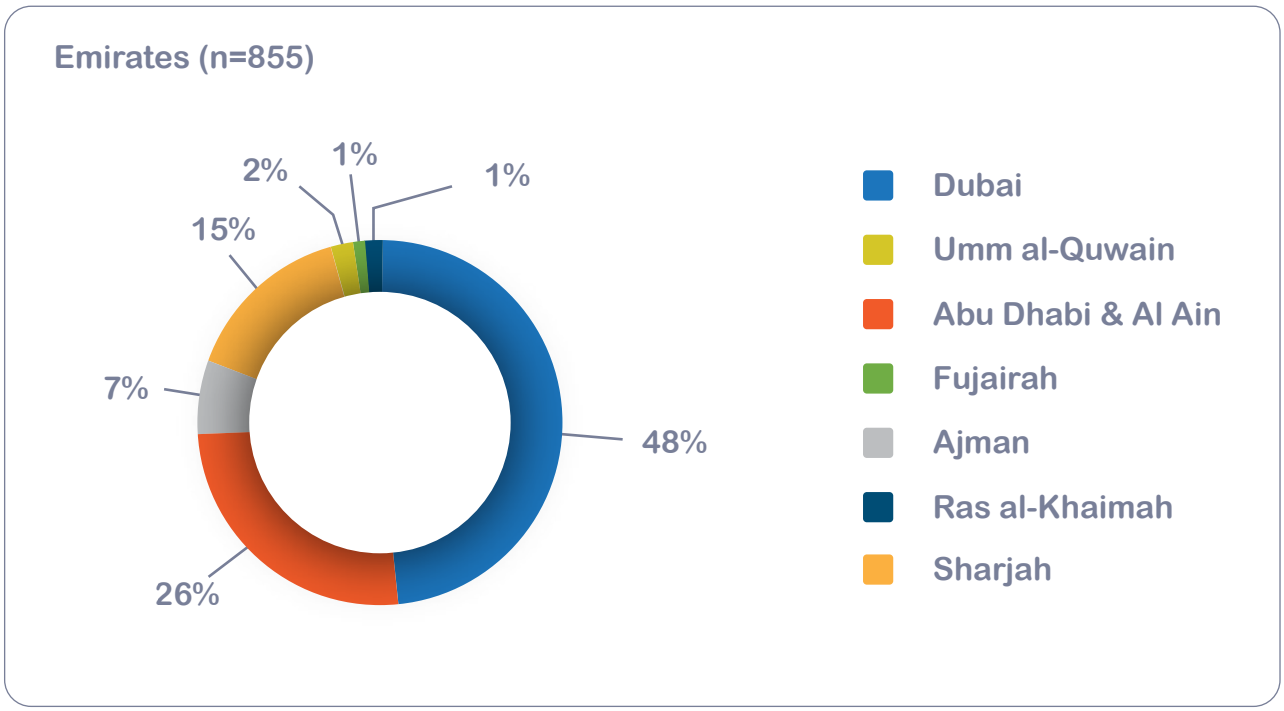
Figure 4: Age Group Distribution

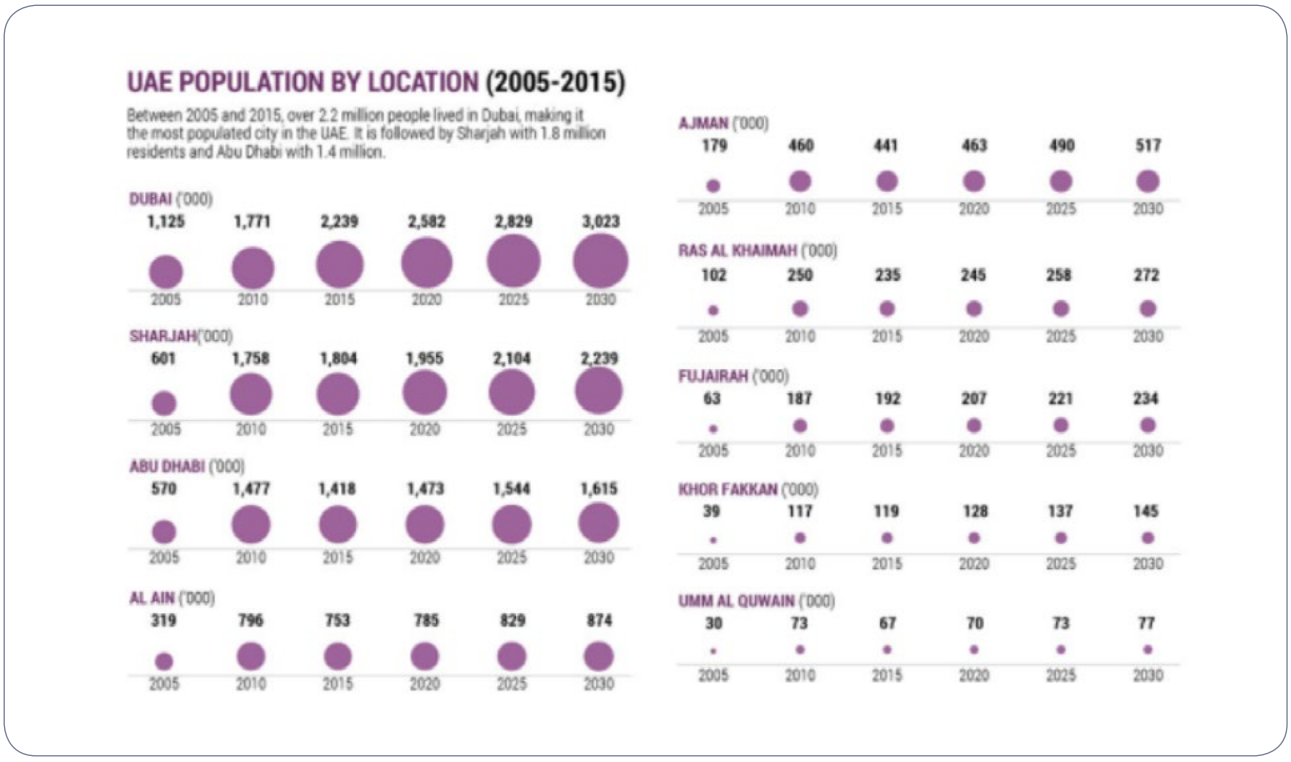


4.1.4 Emirate of Residence

Nearly 48.5% and 26% of the respondents indicated being the residents of Dubai and Abu Dhabi respectively, followed by residents of Sharjah (15%). The remaining 11% of the sample represented the residents of other four emirates. The vast majority of UAE residents will continue to live in the cities, but the rural population is set to remain surprisingly steady at just under 20 per cent of the total (Gulf News, December 21, 2017). The expatriate proportion looks likely to remain around 80 per cent, which in the remote future of 40 years and beyond will give comfort to the growing Emirati population because they will be able to seek employment in their home country through natural replacement (Gulf News, December 21, 2017).

Figure 5: Emirates of Residence Distribution



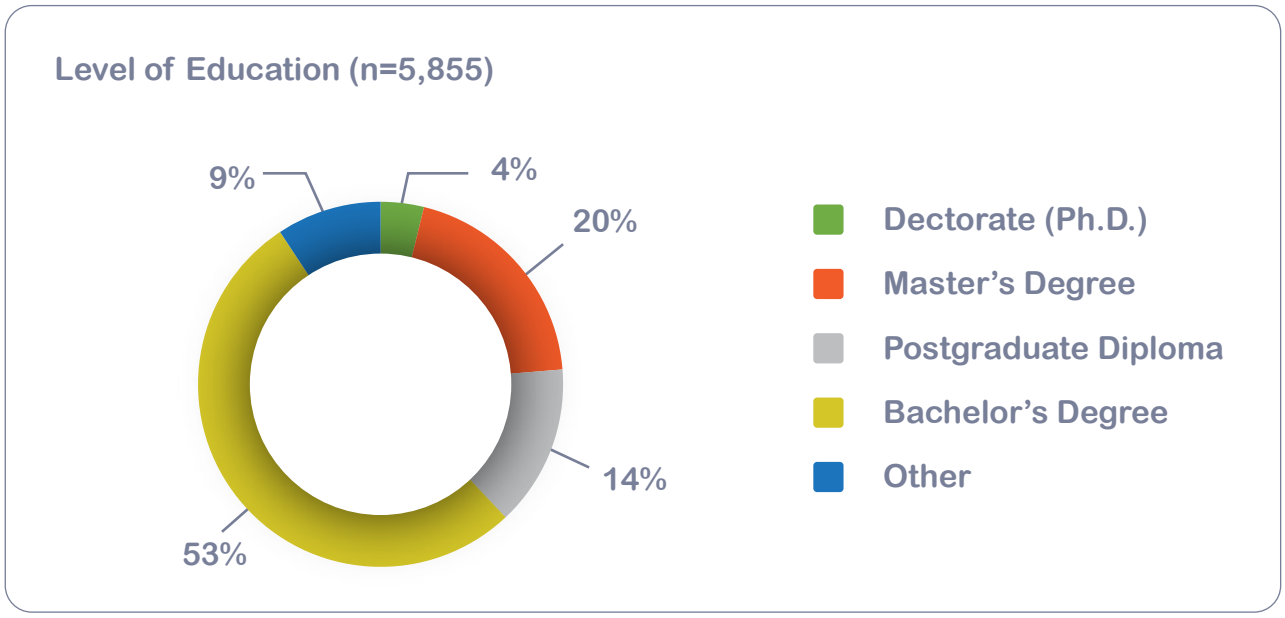


Source: Gulf News, 2017

4.1.5 Education

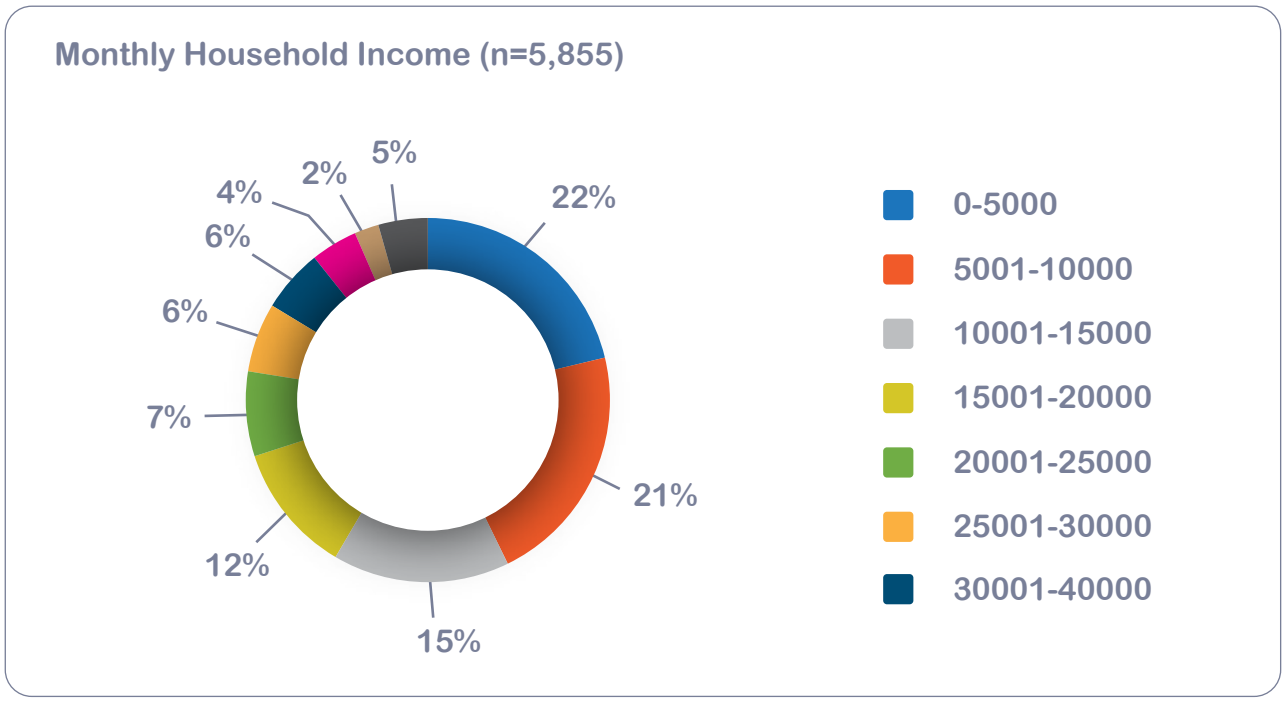
Around 53% of the participants indicated having a Bachelor's degree and approximately 34% indicated having some form of postgraduate education (Master's Degree or postgraduate diploma).

Figure 6: Highest Level of Education Distribution



4.1.6 Household Income

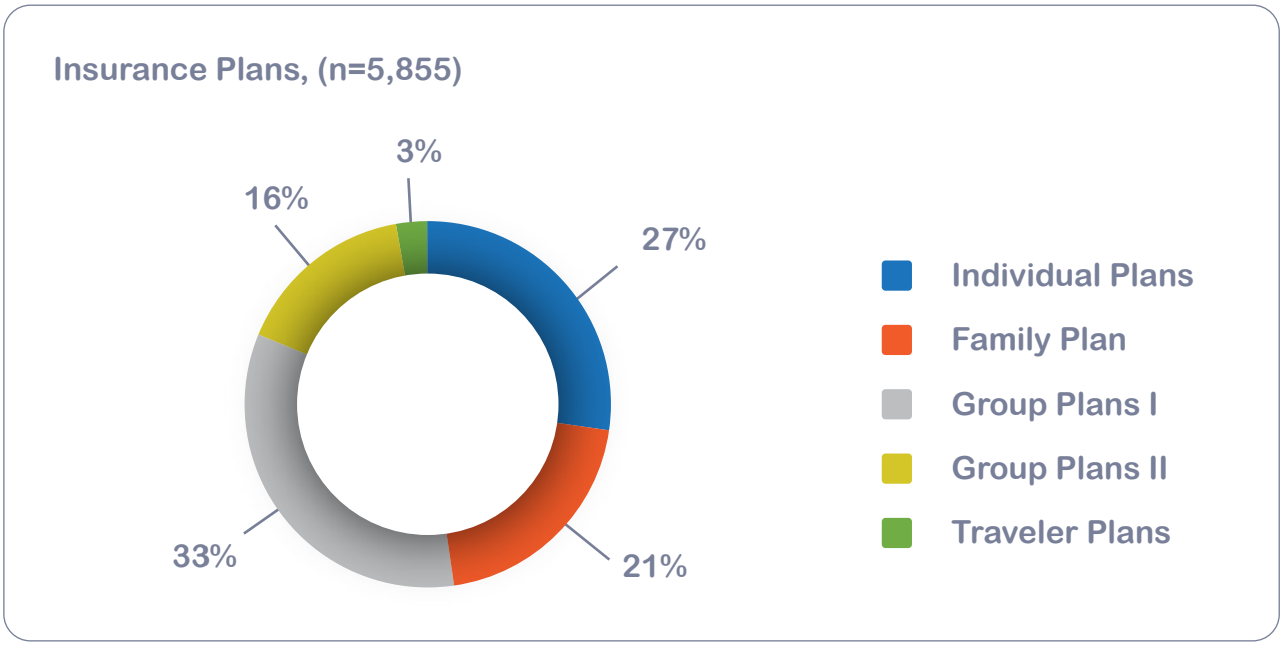
With respect to income distribution, 78% of the respondents had monthly income of AED 25,000 or less.



4.1.7 Health Insurance Plans

Approximately 48% indicated having an individual or family insurance plan (Individual: 26.8%; family 21.1%).

Figure 8: Health Insurance Plans Distribution



4.1.8 Regular General Practitioner and Medical Visits

Only 34% of the respondent indicated having a regular general practitioner or a family doctor, while 80% participants indicated that they have a medical visit at least once in last three years.

Figure 9: Regular General Practitioner Distribution

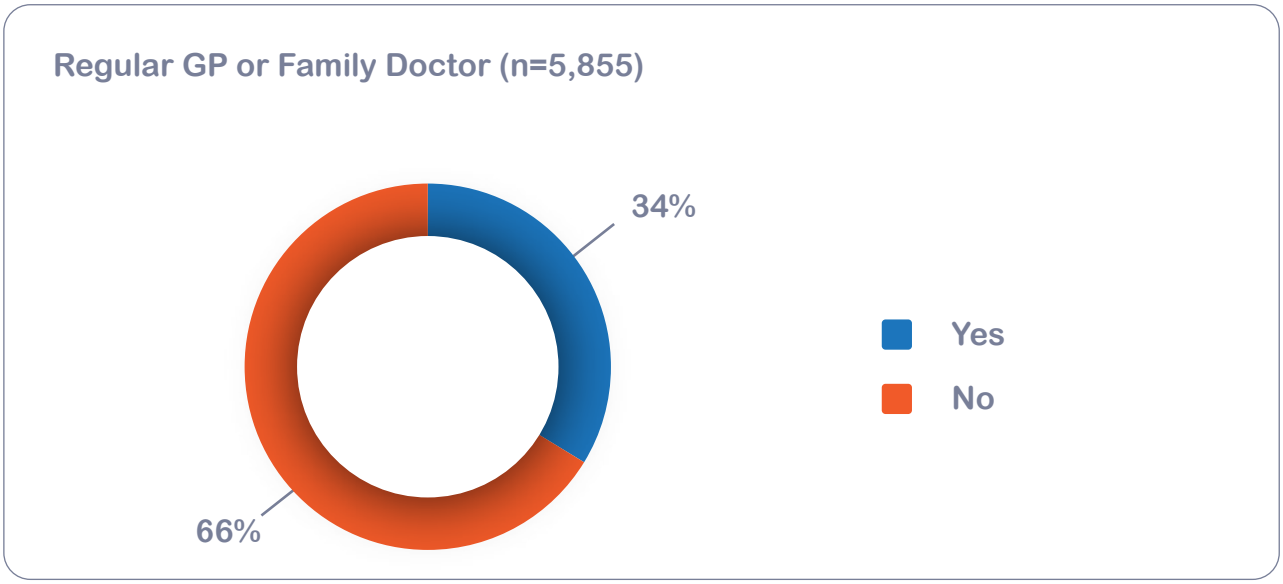
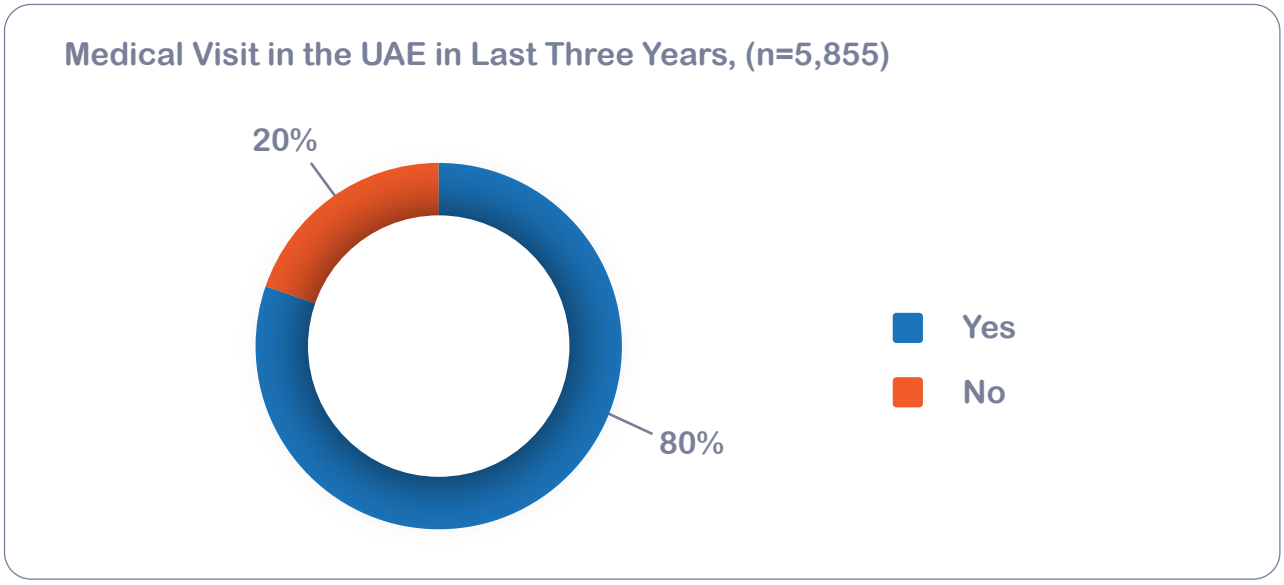


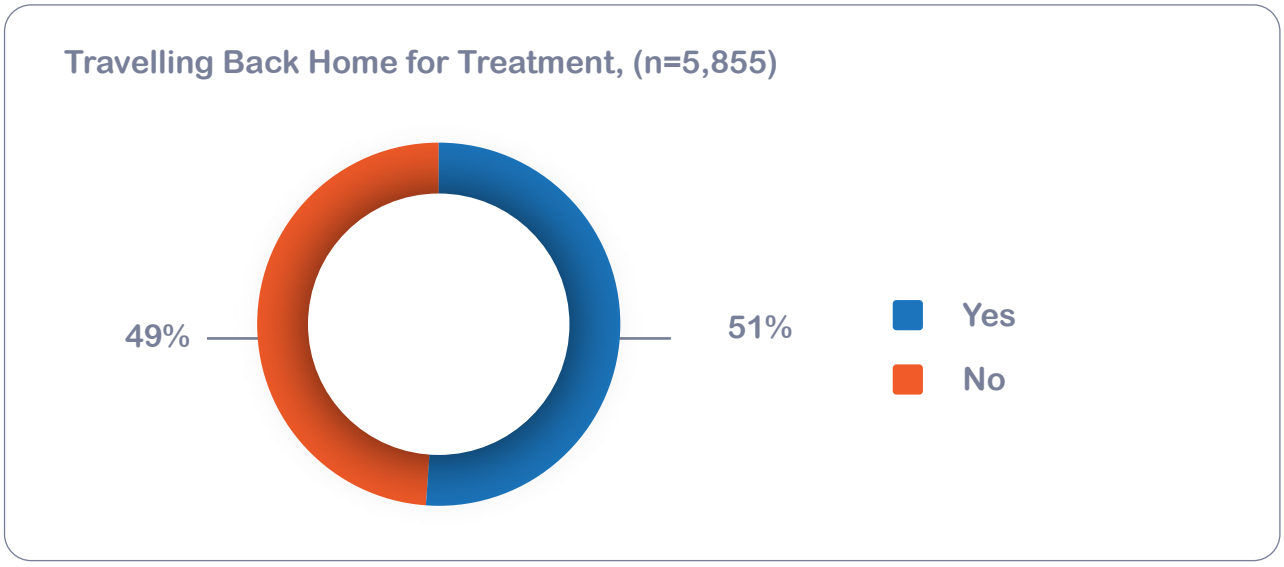
Figure 10: Medical Visits in the Past three years Distribution



4.1.9 Preference for Medical Consultation in Home Country

Interestingly, more than 50% of the respondents indicated that they would prefer to go back home for medical consultation.

Figure 11: Home Country Medical Consultation Distribution



4.1.10 Health Services Factor Variables

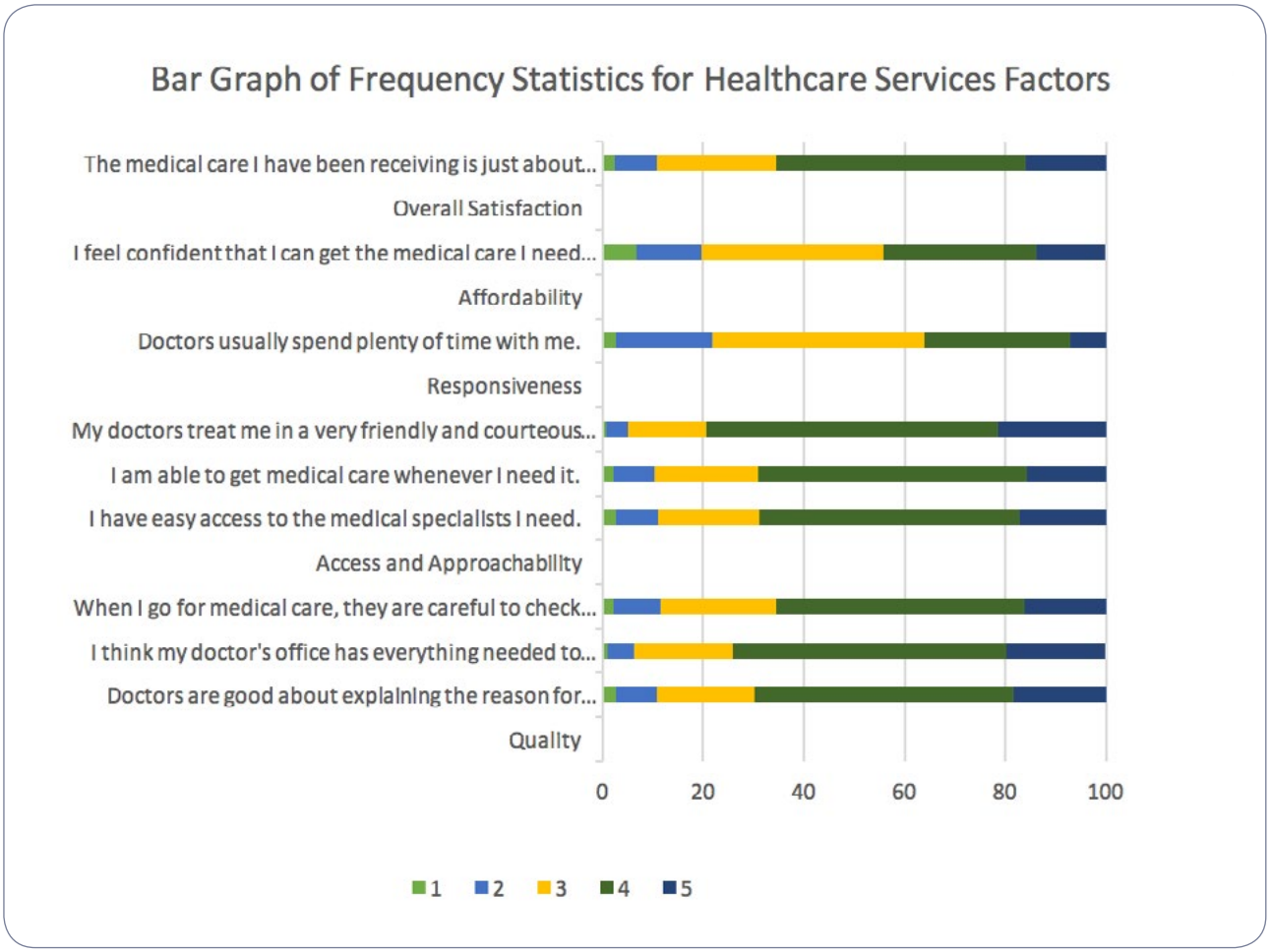
The respondents were asked to respond to questions related to affordability, quality, accessibility and responsiveness in the UAE healthcare delivery and were also asked to rate their overall satisfaction with the healthcare services on a 5-point Likert scale, whereby 1 indicated 'Strongly Disagree' and 5 indicated 'Strongly Agree'. The validity of the survey was ensured by asking questions in both affirmative and negative forms. For the data analysis purposes, nine questions were considered, which were then reduced to four factors relating affordability, quality, accessibility and responsiveness, and were regressed against the dependent variable of overall satisfaction.

While the overall agreement (agree and strongly agree) on most factors was greater than 60%, two factors related to affordability (44%) and responsiveness (36%) clearly stood out whereby the overall agreement was significantly low as compared to other factors. These two factors also indicated significantly higher neutral responses (affordability: 36%; responsiveness: 42%). This may be as a result of indicative of respondents concern related to decreasing affordability (increasing cost of healthcare in the context of the UAE). In addition, the higher disagreement and uncertainty (or high percentage of indifferent/unresponsive responses) associated with the responsiveness factor may suggest participants' displeasure that the doctors do not spend sufficient time with their patients, which may foster future investigations into the responsiveness factor.

Table 9
Frequency Statistics for Healthcare Services Factors

Healthcare Services Factors	Likert Scale (%)				
Quality	1	2	3	4	5
Doctors are good about explaining the reason for medical tests.	2.7	8.1	19.5	51.4	18.4
I think my doctor's office has everything needed to provide complete medical care.	1.0	5.3	19.6	54.4	19.6
When I go for medical care, they are careful to check everything when treating and examining me.	2.1	9.3	23.0	49.5	16.2
Access and Approachability					
I have easy access to the medical specialists I need.	2.6	8.4	20.2	51.7	17.1
I am able to get medical care whenever I need it.	2.2	8.0	20.7	53.4	15.7
My doctors treat me in a very friendly and courteous manner.	0.8	4.3	15.5	58.0	21.4
Responsiveness					
Doctors usually spend plenty of time with me.	2.6	19.1	42.2	28.9	7.2
Affordability					
I feel confident that I can get the medical care I need without being set back financially.	6.7	12.9	36.3	30.4	13.6
Overall Satisfaction					
The medical care I have been receiving is just about perfect.	2.3	8.6	23.6	49.6	16.0

Scale: Level of agreement of medical care
1 = Strongly Disagree; 2 = Disagree; 3 = Uncertain; 4 = Agree; 5 = Strongly Agree

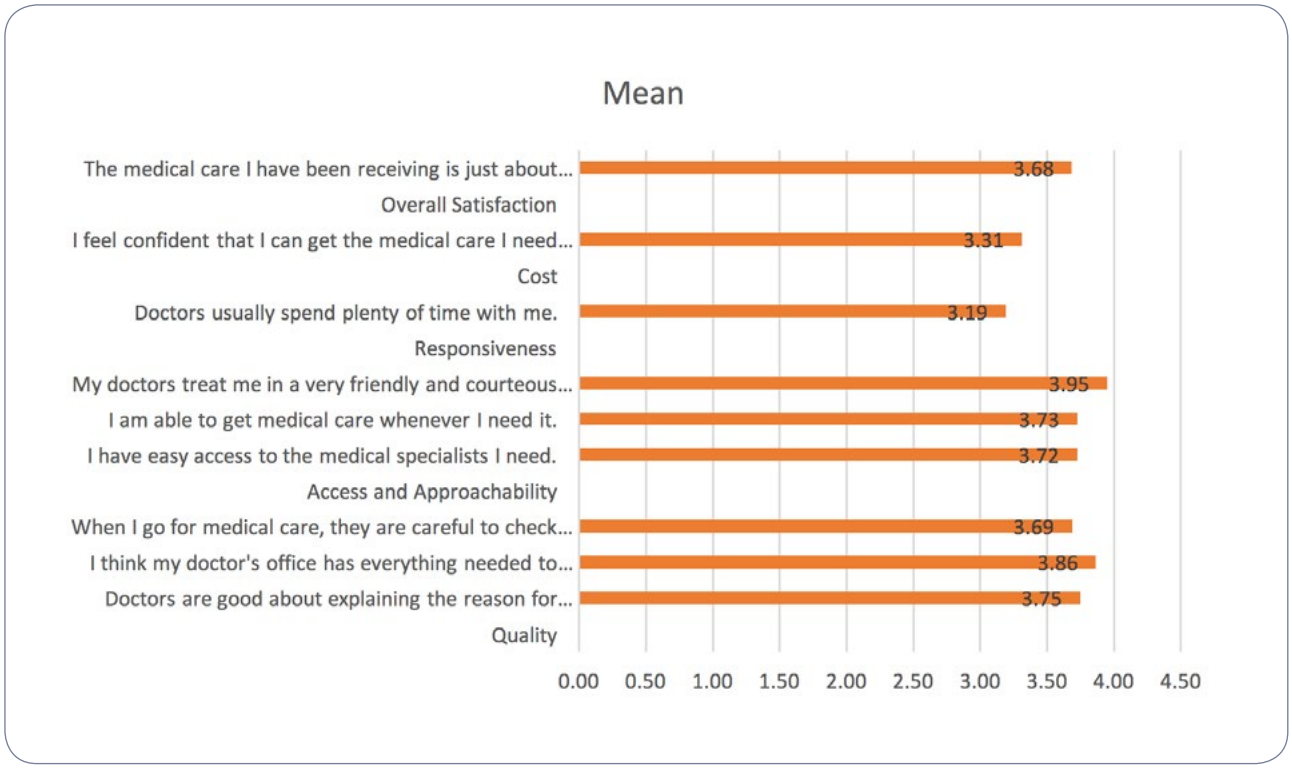

Bar Graph of Frequency Statistics for Healthcare Services Factors
The medical care I have been receiving is just about...
Overall Satisfaction
I feel confident that I can get the medical care I need...
Affordability
Doctors usually spend plenty of time with me.
Responsiveness
My doctors treat me in a very friendly and courteous...
I am able to get medical care whenever I need it.
I have easy access to the medical specialists I need.
Access and Approachability
When I go for medical care, they are careful to check...
I think my doctor's office has everything needed to...
Doctors are good about explaining the reason for...
Quality
0
20
40
60
80
100
1
2
3
4
5

4.2 Descriptive Statistics Analysis

Descriptive statistics were extracted to evaluate the mean values and dispersion of data as follows in Table 10. The descriptive statistics also reflected the participants' perceptions of affordability and responsiveness, whereby the mean and median of both factors were close to 3 with relatively high standard deviations (SD); indicating significant dispersion of data [Affordability: Mean 3.31 and SD 1.07; Responsiveness: Mean 3.19 and SD 0.91]. It was evident that affordability derived mixed results despite all participants indicating having some form of insurance plan coverage. This notion may require further investigations into the scope and magnitude of mandatory health insurance coverage that is being provided by employers to employees. In addition, health insurance coverage, or the lack of it for family members, may also be assessed and investigated by researchers in the future.

Table 10
Descriptive Statistics for Healthcare Services Factors

Healthcare Services Factors	Descriptive Statistics (n=5855)		
Quality	Mean	Median	SD
Doctors are good about explaining the reason for medical tests.	3.75	4.00	0.94
I think my doctor's office has everything needed to provide complete medical care.	3.86	4.00	0.82
When I go for medical care, they are careful to check everything when treating and examining me.	3.69	4.00	0.92
Access and Approachability			
I have easy access to the medical specialists I need.	3.72	4.00	0.93
I am able to get medical care whenever I need it.	3.73	4.00	0.90
My doctors treat me in a very friendly and courteous manner.	3.95	4.00	0.78
Responsiveness			
Doctors usually spend plenty of time with me.	3.19	3.00	0.91
Affordability			
I feel confident that I can get the medical care I need without being set back financially.	3.31	3.00	1.07
Overall Satisfaction			
The medical care I have been receiving is just about perfect.	3.68	4.00	0.92



Bar Graph of Mean Statistics for Healthcare Services Factors

The highest mean value of 3.95 is observed on 'My doctors treat me in a very friendly and courteous manner', which also has the lowest standard deviation (0.78). The mean of the other factors ranges between 3.69 (When I go for medical care, they are careful to check everything when treating and examining me) to 3.86 (I think my doctor's office has everything needed to provide complete medical care). The mean values closer to 4 on quality, access and approachability dimensions indicate higher levels of satisfaction with these aspects. It appears that the participants are largely satisfied with the quality of healthcare provision in the UAE and have adequate access to various healthcare facilities. However, the affordability and responsiveness factors relegate the overall satisfaction of the respondents with respect to the healthcare service provision in the UAE.

4.3 Correlations

Correlations (Refer to Table 11) were calculated to assess the level of correlation between all the variables used in the study and ensure that the potential of multi-collinearity is reduced while using appropriate data analysis techniques.

Statistically significant positive correlations ($\alpha = 0.01$) were observed between the dependent variable (overall satisfaction) and IVs related to various aspects of healthcare provision in the UAE. This suggested that overall satisfaction is moderately correlated with the perceived affordability, quality, accessibility and responsiveness. Hence, the overall satisfaction is derived from better perceptions of healthcare in terms of affordability, quality, accessibility and responsiveness within the context of the UAE (refer to Figure 12).

Figure 12: Determinants of Overall Satisfaction in the UAE Healthcare Service Delivery

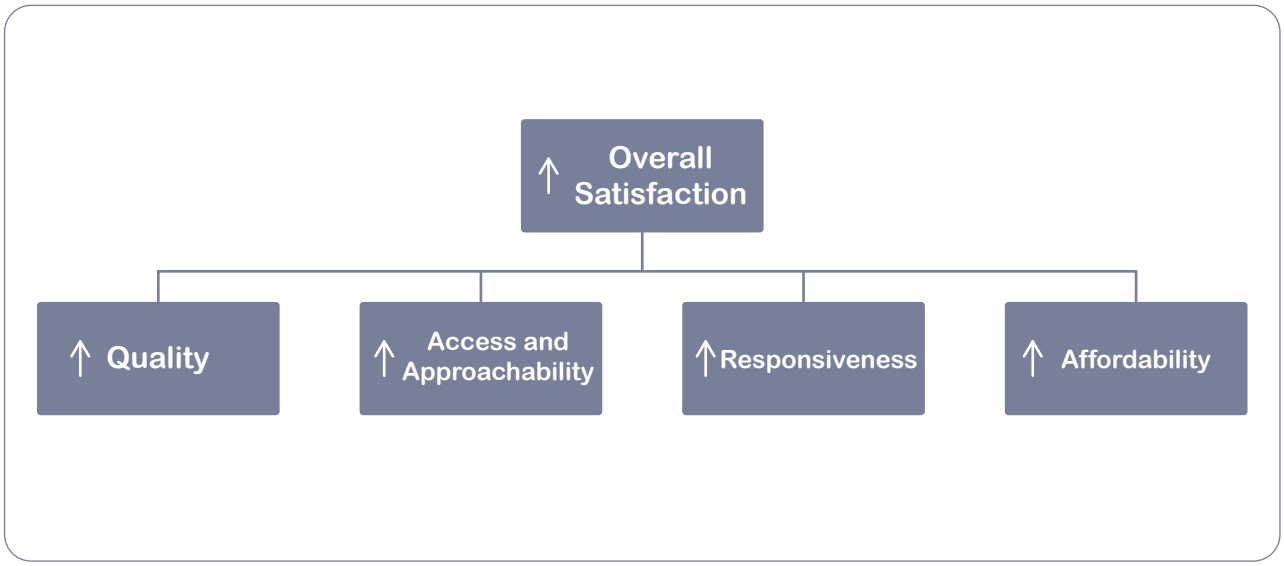


Table 11
Correlations of Health Services Factors

Healthcare Service Variables	Doctors are good about explaining the reason for medical tests.	I think my doctor's office has everything needed to provide complete medical care.	The medical care I have been receiving is just about perfect.	I feel confident that I can get the medical care I need without being set back financially.	When I go for medical care, they are careful to check everything when treating and examining me.	I have easy access to the medical specialists I need.	My doctors treat me in a very friendly and courteous manner.	Doctors usually spend plenty of time with me.
I think my doctor's office has everything needed to provide complete medical care.	.532**							
The medical care I have been receiving is just about perfect.	.623**	.566**						
I feel confident that I can get the medical care I need without being set back financially.	.440**	.385**	.488**					
When I go for medical care, they are careful to check everything when treating and examining me.	.510**	.481**	.555**	.458**				
I have easy access to the medical specialists I need.	.438**	.449**	.504**	.407**	.481**			
My doctors treat me in a very friendly and courteous manner.	.427**	.395**	.451**	.312**	.417**	.401**		
Doctors usually spend plenty of time with me.	.371**	.304**	.370**	.342**	.367**	.322**	.356**	
I am able to get medical care whenever I need it.	.356**	.378**	.436**	.364**	.401**	.491**	.405**	.326**

**Correlation is significant at the 0.01 level (2-tailed)
The highlighted cells indicate correlation between overall satisfaction and all aspects of healthcare service provision on the UAE

4.4 Analysis of Variance (ANOVA)

Table 12 highlights the results of ANOVA. It is evident there are statistically significant differences between groups with respect to the overall satisfaction and perceptions regarding various aspects of healthcare service delivery based on the socio-demographic attributes of the respondents. With respect to affordability, statistically significant differences were observed across all socio-demographic groups. Statistically significant differences between groups were observed with respect to some aspects of healthcare service delivery in the UAE based on gender, nationality, employment status, family size, income, types of insurance plans held and medical visit in last three years. However, as highlighted in Table 12, statistically significant differences between groups based on age, emirate of residence, education, having a regular family physician/doctor and preference for going back to home country for treatment were observed on all aspects of healthcare service delivery across the UAE.

The ANOVA results draw attention to several points that require further investigation. For example, statistically significant differences were observed between different age groups. While the ANOVA results did not highlight which age groups were different, they did indicate that the structure of the healthcare service delivery needed to be examined. Is there a situation whereby certain age groups feel excluded from healthcare provision or the mandatory health insurance does not cover some age-related health issues adequately?

Similarly, more than 50% of the respondents indicated that they would prefer to go back to their home countries for medical consultation. Although the perceptions about quality and accessibility amongst respondents appeared to be relatively positive, the factors that determine the preference for going back home for treatment remain unexplored.

Moreover, significant differences were also observed among the perceptions of residents of various Emirates with respect to all aspects of healthcare services delivery. For example, while the accessibility of healthcare facilities in the larger Emirates (such as Abu Dhabi and Dubai), appears to be adequate, this may not be applicable to the other Emirates. Accordingly, there is a need to further assess whether the quality, accessibility and other aspects of healthcare provision differ greatly across the seven Emirates.

The groups with different levels of education also indicated significantly different perceptions on all aspects of healthcare services delivery in the UAE. Further investigation may be required to determine whether perceptions of respondents with higher levels of education are somehow related to presumed higher levels of awareness. The highlighted columns in Table 12 suggest that statistically significant differences between groups were observed on all aspects of healthcare provision.

The ANOVA results indicate that there is enough evidence to reject the null hypothesis and conclude that there are significant differences between the perceptions of socio-demographic groups with respect to quality, accessibility and approachability, responsiveness and affordability.

Approximately 20% of the participants indicated that they did not have a medical consultation

in last three years. The ANOVA results indicted statistically significant differences between the respondents who had medical consultation in last three years and those who did not, on the following aspects:

1. Quality: I think my doctor's office has everything needed to provide complete medical care.
2. Accessibility: I have easy access to the medical specialists I need.
3. Accessibility: I am able to get medical care whenever I need it.
4. Responsiveness: My doctors treat me in a very friendly and courteous manner.

It appears that for those who have not had a medical consultation in the last three years, the prime consideration is the accessibility to the healthcare service or the lack thereof. Their responses on the other two factors (quality and responsiveness) may not divulge a lot of information as the lack of access to healthcare services limits their ability to determine the quality and responsiveness in healthcare provision in the UAE. It was observed that 61% of those respondents who did not have a medical consultation in last three years had a monthly income of AED 10,000 or less (38% belonged to the income bracket of AED 0-5,000).

Table 12: ANOVA

Socio-Demographic factors	Gender	Age	Nationality	Employment Status	Emirates of Residence	Members in the Family	Education	Income	Insurance Plans	Regular GP	Medical Visit in Last Three Years	Going Back to Home Country for Treatment
Health Services Factors	F-Statistics and Significance											
Quality												
Doctors are good about explaining the reason for medical tests.		30.9 **	45.6 **	5.3 **	8.6 **	3.1 *	8.9 **	2.4 **	18.6 **	119.5 **		155.8 **
I think my doctor's office has everything needed to provide complete medical care.		18.2 **	16.8 **	3.3 **	5.6 **		5.0 **		5.9 **	99.5 **	30.4 **	94.2 **
When I go for medical care, they are careful to check everything when treating and examining me.	5.5 **	14.9 **			6.6 **		6.4 **		5.0 **	109.4 **		94.9 **
Access and Approachability												
I have easy access to the medical specialists I need.		12.1 **	18.8 **	2.7 **	4.0 **		6.3 **	3.0 **	7.9 **	119.7 **	9.5 **	98.5 **
I am able to get medical care whenever I need it.		10.3 **	30.9 **	2.0 *	4.8 **		11.3 **	3.2 **	5.4 **	70.5 **	13.4 **	88.7 **
My doctors treat me in a very friendly and courteous manner.		7.4 **	26.4 **		4.6 **	3.3 **	8.0 **	2.5 **		61.1 **	63.9 **	74.9 **
Responsiveness												
Doctors usually spend plenty of time with me.	15.1 **	16.4 **	35.0 **	2.0 *	3.7 **	5.4 **	5.2 **	4.2 **	13.9 **	98.3 **		30.3 **
Cost												
I feel confident that I can get the medical care I need without being set back financially.	23.4 **	19.7 **	81.0 **	4.7 **	12.7 **	5.7 **	5.7 **	3.3 **	8.6 **	86.6 **		170.2 **
Overall Satisfaction												
The medical care I have been receiving is just about perfect.	3.8 *	26.1 **	31.9 **	3.4 **	31.9 **		10.1 **		14.7 **	123.1 **		219.5 **

* α = 5% ; ** α = 2% The highlighted columns suggest that statistically significant differences between groups were observed on all aspects of healthcare provision.

4.5 Principal Component Analysis and Multiple Regression

The data was further analyzed to draw clear associations between DV and IVs; however, to ensure the parsimony of the regression model, PCA was employed for dimension reduction. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) of 0.88 indicated the suitability of employed PCA for dimension reduction purpose. Accordingly, three factors were identified a priori and these three factors (quality, accessibility and approachability, and responsiveness) explained nearly 71% of cumulative variance. The affordability factor was excluded from the PCA as it had only one question and it was then included as a separate independent variable in the multiple regression equation. Table 13 presents the results of PCA.

Table 13
Results of Principal Component Analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.88
Chi-Square - Bartlett's Test of Sphericity	12,039.35
df	21.00
Sig.	0.00
Quality	
Eigen Value	3.47
% of Variance	49.63
Access and Approachability	
Eigen Value	0.74
% of Variance	10.63
Responsiveness	
Eigen Value	0.73
% of Variance	10.36
Cumulative %	70.6

It is evident from the results that the quality of healthcare service delivery in the UAE has the highest Eigen value (>3) and explains the nearly 50% of the total variance. The other two factors are also important; however, the Eigen values are less than one and the percentage of variance explained by them is approximately one-fifth of that of the quality aspect and ranges between 10-11%.

This may indicate that the quality of healthcare provision in the UAE may be of key concerns to the respondents and may therefore have the greatest impact on their overall satisfaction.

In the last step of analysis, four aspects (quality, accessibility and approachability, responsiveness and affordability) were included in multiple regression analysis. The estimated model was statistically significant (F-statistic 1764.265; p-value 0.000), R^2 0.547 and adjusted R^2 of 0.546. The R^2 and adjusted R^2 values indicate that nearly 55% of the variability in the perceived overall satisfaction (dependent variable) can be explained by the 4 factors included in the model as IVs. There is a negligible difference between R^2 and adjusted R^2 values suggesting that the specification of the model is appropriate and all the IVs are relevant in estimating the model. Table 14 provides the specifications of the model.

Table 14
Results for Multiple Regression Analysis

		B	Std. Error	t-Stat	p-value
	Intercept	α 3.32	0.031	107.149	0.00
X^1	Quality	β^2 0.51	0.009	56.573	0.00
X^2	Accessibility and Approachability	β^3 0.28	0.009	32.545	0.00
X^3	Responsiveness	β^4 0.18	0.008	21.416	0.00
X^4	Affordability	β^5 0.11	0.009	12.08	0.00

All the IVs are statistically significant with p-value of 0.00 (α = 0.05). It is evident that quality has the highest coefficient (t-stat 56.57; p-value 0.00) followed by accessibility and approachability (t-stat 32.55; p-value 0.00), responsiveness (t-stat 21.42; p-value 0.00) and lastly affordability (t-stat 12.08; p-value 0.00). The positive coefficients indicate that better perceptions related to all the four factors would lead to higher overall satisfaction. While affordability has the lowest coefficient among the four aspects of healthcare delivery in the UAE, this calls for further investigation as the UAE government has made it mandatory for all employers to provide insurance to the employees, regardless of the size of organization. The insurance arrangements with respect to deductibles, co-payments, and co-insurance need to be examined in order to understand the aspect of affordability in the UAE healthcare system.

Based on the results of multiple regression, the model can be presented as:

Overall Satisfaction from the Healthcare Delivery in the UAE = 3.32 + 0.51 (Quality) + 0.28 (Accessibility and Approachability) + 0.18 (Responsiveness) + 0.11 (Affordability)

The results of multiple regression indicate that there are statistically significant relationships between the dependent and IVs under consideration and therefore there is enough evidence to reject the null hypothesis.

Chapter 5: Policy Recommendations and Future Directions

On the international scale, Bloomberg produces a comparative international survey of countries health systems based on the 'efficiency' of their health-care systems. The methodology included ranking on three criteria: life expectancy (weighted 60%), relative per capita cost of health care (30%); and absolute per capita cost of health care (10%). In the latest survey, the UAE was ranked 9th out of the 51 countries that were examined as being the most efficient health care, and the top in the region, followed by Saudi Arabia in the 16th place. On a global level, Singapore was ranked as the most efficient followed by Hong Kong and then Italy.

Therefore, with reference to Figure 12, the overall satisfaction is derived from better perceptions of healthcare service delivery in terms of affordability, quality, accessibility and responsiveness within the context of the UAE. While it is vital to acknowledge that the UAE's healthcare service delivery is endeavoring at positive satisfaction levels overall for healthcare service delivery, in the UAE National Agenda 2021 and Global goals (SDGs) the health specific the mission towards providing the best world-class healthcare and promoting good health and well-being for the UAE, below are some policy recommendations for continual improvement and enhancements:

5.1 Policy Recommendation 1

In terms of quality and access: Tremendous progress has been made over the past decade in developing methods for measuring and monitoring quality of government service provision and applying those methods in a variety of settings and public reporting about the results across the world. Such progress is particularly evident in areas where quality measurement is routinely applied and reported. However, significant deficits exist in the structural elements of care, processes of care and outcomes in the public health sector. Over the past decade, several nations have explored and made efforts toward better public health management through innovative applications quality measuring. Societal and government health policy transformations in Arab countries, where its citizens and health systems are a key enabler, are proving to be of significant importance for the development and implementation of public policy, the business community and civil society.

While it appears that the UAE has actually initiated a ranking scheme that assesses and rates healthcare facilities such as hospitals, clinics, labs and pharmacies; it is still striving to broaden the scope of this assessment beyond its capital and prime city, the Emirate of Dubai. A pilot ranking plan has already been taken in Dubai under the patronage of the DHA; following a two-year preparatory project of a similar sort took place in Abu Dhabi. With respect to the latter, ranking results are expected to be officially published in the beginning of 2018. However, the Northern Emirates are not practicing the same exercise. The healthcare sector in the Northern Emirates is influenced by people's perceptions on the overall quality of the medical care provided there. At times, the developing nature of the services has led to a lack of trust, pushing many people to travel to the capital or Dubai – and even abroad – to get what is perceived as superior treatment. Experience from elsewhere tells us that the most effective way to ensure patients are assessing the quality of the health care on offer is to make each hospital's track record available. This ambition has been hampered by insufficient transparency when it comes to the quality of health care in most of the Northern Emirates. Many hospitals do not make public details about the safety and quality of their services, including waiting times, infection prevention measures, survival rates after diagnosis, intensive care mortality rates and overall patient experience (Koornneef, 2017). With such information made available, hospitals will be incentivized to earn high rankings and ensure patients' trust in them.

5.2 Policy Recommendation 2

In terms of affordability: It was evident that affordability derived mixed results despite all participants indicating having some form of insurance plan coverage. This notion may require further investigations into the scope and magnitude of mandatory health insurance coverage that is being provided by employers to employees. In addition, health insurance coverage, or the lack of it for family members, may also be assessed and investigated by researchers in the future. Both the government and stakeholder health authorities across the UAE need to quantify the magnitude and scope of the term "basic mandatory health insurance". The provision of such figure would allow for the clear distinction of the minimum cost quotation of medical coverage given to employees. Based on the disclosure of such quantification, the government should encourage the application of "pool insurance" granted to employees, where family members affiliated to the latter earn the privilege of being medically covered at nominal premiums. With a larger reservoir of insured beneficiaries, both the average and marginal costs will diminish according to the laws of economies of scale. This application would actually contribute to better risk management and reap the benefits of risk-diversification; where the allocation of insurance capital will reduce the exposure of risk of every single insured individual.

Limitations

Research limitations faced in this study pertained to the possibility of not comprehensively including non-internet users in the respondents' sample. As the survey used was an online one, a particular segment of non-internet users, or presumably those who affiliate to a lower income-bracket; such as laborers and maids, were not covered. This however, does not undermine the importance of representing this segment. To ensure the latter coverage, face-to-face interviews or manually administered surveys would have guaranteed their inclusion in the research. However, despite the absence of this segment, the research has confidently ensured the representation of internet users in the UAE population, which comprise 93% (Salem, 2017).[22]

Another limitation addresses the pre-assumption, which implies that public perception on low responsiveness is related to the doctors' unwillingness to expend sufficient amount of time with patients, due to the commission-based compensation schemes they are paid by. To overcome this limitation, it will be necessary to validate this pre-assumption by investigating the current pay-scale structure of general practitioners and physicians, in order to develop a comprehensive report that identifies the minimum salary bracket earned by the latter. Such investigation would confirm; or ultimately refute, the pre-assumption that doctors spend minimum time possible to maximize on the number of patients consulted, and hence aggrandize their paychecks accordingly.

Future Research

The research outcomes explored in this report provide a natural guide to future research. Typically, a new domain for responsiveness of healthcare will initially be studied, after which research on the domain will gradually move to deeper levels. Future research areas will encompass the verification of the correlation assumed to prevail between the responsiveness of doctors and their compensation schemes. A more focused study aiming at examining the existence, if any, of this relationship will render itself conclusive to the assumption that health practitioners tend to maximize on their pay-check, by minimizing on their time allocation with patients; due to the commission based salary schemes they belong to. If a direct relationship proves to be in existence, this would justify the responsiveness rate that was revealed in this report's investigation. In case the assumption is refuted, the low perceptions of responsiveness will just be justified by other factors that will need further investigation.

22. Salem, F. (2017). Social Media and the Internet of Things towards Data-Driven Policymaking in the Arab World: Potential, Limits and Concerns.

In addition to the above, another realm of study could be explored with respect to the affordability of healthcare services in the UAE. New tax policies are to be introduced in the wake of 2018, exempting the provision of medical services from tax charges, but not insurance premiums. The introduction of a value added tax (VAT) is expected to influence the cost of medical care in an indirect manner; and hence public perceptions may thereby change accordingly to the expectations in cost-increases. The correlation between affordability and the public's perception may be interrupted and a new set of variables may need to be tested to assess the extent of influence this change may impose.

Furthermore, the comprehensive inclusion of a wider representation of non-internet users and low-income bracket earners could very much render itself useful if the perception of the latter is to be explored. With a new set of data collection tools administered specifically for those who cannot access an online survey, and presumably belong to a certain income segment (below dirhams 5,000 per month); the perception of such a population could provide ample evidence for the true experience such community segments witness with healthcare.

Appendix A: Health in the UAE- Past Present and Future

Year	Milestones
1938	Under the British rule, a medical officer was appointed for the Trucial Coast and sent
1939	An Indian physician was sent by the British rulers to serve in a dispensary in Dubai.
1943	It was the beginning of healthcare for Dubai with opening of a small healthcare centre in Al Ras area.
1949	The British government built Al Maktoum Hospital, a small hospital in Dubai and appointed a British physician from the Indian Medical Service to initiate modern medical service.
1951	Under the patronage of His Highness the late Sheikh Saeed bin Maktoum, the first phase of the Al Maktoum Hospital is built by the British government.
1950s - 1960s	The American Mission hospitals were established in Sharjah, Al Ain, and Ras al Khamiah.
1952-1973	The construction of the Al Maktoum Hospital is completed with 157 beds
1965	The Abu Dhabi government employed one physician; three others were in private practice.
1966	Health Centre (clinic) in Abu Dhabi for outpatients services only.
1967	Dr. Philip Horniblow OBE, who was Director of Health in Abu Dhabi between 1967 and 1971.
1969	Small Hospital 10 beds, 1 doctor and 10 nurses.
1971	Field Hospital 1, Al-Ain
1972	The Ruler of Dubai establishes the Department of Health and Medical Services (DOHMS).
1972	His Highness Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, UAE Minister of Finance is declared to be the President of DOHMS.
1972	During the same year, RASHID is opened in Dubai, complete with 454 beds.
1975	Seven Community clinics opened in Dubai with the aim of reaching out to the people living in the different areas of the Emirate.
1976	The Military Hospital, Abu Dhabi, at the Al- Nahyan Barracks.
1976	The UAE had 774 doctors
1978	There were 1,500 hospital beds

1979	The Central Services Complex, a designated complex for stores, laundry, CSSD and the engineering division, is established. The Central Services Complex provides essentials to Dubai's health facilities and handles the supply of drugs and equipment.
1983	Field Hospital 2, Sharjah
1984	The Department of Health and Medical Services (DOHMS) moves into its new headquarters located near Rashid Hospital.
1985	A state-of-the-art hospital is inaugurated in Diera, known as the Dubai Hospital, equipped with 625 beds.
1986	Zayed Military Hospital, Abu Dhabi; fully-equipped modern hospital.
1986	Falah Modern Hospital, Sharjah, fully-equipped modern hospital.
1986	There were 2,361 physicians, 6,090 nurses, 242 dentists, and 190 pharmacists, almost all of whom were foreigners.
1988-1995	Al Wasl Hospital, a 374 bed specialised maternity and paediatric hospital, is inaugurated. On 4th of January, 2012, as per the orders of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, the name of Al Wasl Hospital is changed to Latifa Hospital, to pay homage to the loving memory of his late mother Sheikha Latifa Bint Hamdan bin Zayed Al Nahyan. The federation's first hospital specializing in pediatric and maternity care, the 374- bed Al Wasl Hospital in Dubai.
1998	His Highness Sheikh Mohammed issued this directive on the sixth anniversary of his accession as the Ruler of Dubai
1998	The UAE had forty public hospitals with 3,900 beds and 119 clinics.
2000	Six community health centres are opened across Dubai to serve the people living in the areas.
2007	The concept of primary healthcare is established and adopted in the line with the philosophy of the World Health Organization’s motto "Health For All by the Year 2000".
2017	20 health centres are opened across Dubai to ensure access to basic primary healthcare.
2017	The number of hospital beds has increased from 1421 in 1990 to 2048 in 2000.
2000	The Dubai Health Authority (DHA) was formed under the directives of His Highness Sheikh Mohammed Bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE, and Ruler of Dubai.
2007	Today, there are more than 16,000 doctors.
2017	Today, there are more than 11,000 hospital beds.
2017	Today, there are more than 11,000 hospital beds.

Sources: Health Systems Profile- UAE Regional Health Systems Observatory- EMRO; Young Vision; Etihad Museum; Beshyah & Beshyah, 2012;

Appendix B Survey Instrument

UAE Public Perception of Healthcare Delivery Survey

You are invited to take part in a research study, which is investigating the level of perception of healthcare delivery across the UAE in terms of quality, cost and access to care. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

The lead researchers on this project are Dr. Immanuel Azaad Moonesar R.D., who is an Assistant Professor of Health Policy at Mohammed Bin Rashid School of Government (MBRSG), Dubai, United Arab Emirates, is conducting this study, in conjunction with an MBRSG faculty, Dr. Mona Mostafa Elsholkamy, Assistant Professor of Public Finance and Education Policy.

UAE Public Perception of Healthcare Delivery Survey Information

Background Information:

The goal of the study is to generate evidence on public perceptions of health care in the UAE; this project will evaluate how people living in the UAE perceive health care in terms of cost, availability/access and quality. Given the recent healthcare insurance coverage for all employees, this study will focus on the public perception's appropriateness and application of the current healthcare practices and policy implications in the UAE.

Procedures:

If you agree to be in this study, you will be asked to identify the level of agreement on the statements in the questionnaire that people say about medical care. Please read each one carefully, keeping in mind the medical care you are receiving now in the UAE only. (If you have not received care recently, think about what you would expect if you needed care today.) We are interested in your feelings, good and bad, about the medical care you have received in the UAE.

We would appreciate you taking a few minutes (4-5) to complete the survey questionnaire.

Voluntary Nature of the Study:

This questionnaire is strictly for research purposes and anonymity of answers is assured. Only grouped data will be reported. No response you make in this survey will be connected or identified with you. This study is voluntary. Everyone will respect your decision of whether or not you choose to be in the study. No one at the Mohammed Bin Rashid School of Government will treat you differently if you decide not to be in the study. If you decide to join the study now, you can still change your mind later. You may stop at any time, by clicking on the 'X" button of the webpage.

Risks and Benefits of Being in the Study:

Although there could be risks of strong emotional response, taking the survey is on a strictly voluntary basis. Being in this study would not pose risk to your safety or wellbeing.

The benefits of this study will go to the UAE society in general, as it will assist in realizing the need for improved policy-making processes across the healthcare arena; and in understanding the need for improvement across aspects such as quality of care, cost and access to care. Furthermore, healthcare professionals' improvement and equity for each and every mother, father and child, and acquiring an overall understanding of healthcare professional interactions and perceptions can help policy makers identify policy recommendations for reforms that will ultimately strategize ways to implement successes.

The benefits for participants in the survey, although not conclusive, may include feelings of happiness, relief, and constructive contribution. Participants may be happy that their experiences and feelings are being given attention. They may be very relieved that past tensions, climatic shifts, and general regard are being studied.

Payment:

There is no payment or gifts associated with your participation in the survey.

Privacy:

Any information you provide will be kept anonymous. In addition, the researchers will not include your name or anything else that could identify you in the study reports. Data will be kept secure by encrypted software procedures. Data will be kept for a period of at least 5 years, as required by the university.

Contacts and Questions:

You may ask any questions you have now. Or if you have questions later, you may contact the researcher via phone: +97143175533 or e-mail: immanuel.moonesar@mbrsg.ac.ae. Mohammed Bin Rashid School of Government approval number for this study is REC-04-017 and it expires on 7th May, 2018. Please print or save this consent form for your records.

Statement of Consent:

I have read the above information and I feel I understand the study well enough to make a decision about my involvement. By returning a completed survey, "I consent", I understand that I am agreeing to the terms described above.

I am very grateful to the Mohammed Bin Rashid School of Government for their encouragement and support for this study. At the end of the survey, you will be given the opportunity to provide your contact information should you like to receive a summary report of the findings from the survey. These details will be aggregated separately from the survey question responses and no third party will have your respective information.

Thank you for your interest in our initiative.

Select ☐Yes OR ☐No to consent to participate in the survey.

Demographics

Personal Details

Q1 Gender (please select your gender)

- ☐ Male
- ☐ Female

Q2 Age (years)

- ☐ Below 20
- ☐ 20-35
- ☐ 36-50
- ☐ 51+

Q3 Nationality

- ☐ Local/ Emirati (Native to UAE)
- ☐ Non-local/Expatriate (Non-native to the UAE), Please specify: .....

Employment

Q4a. Which of the following sector best characterizes your current job roles, responsibilities and scope?

- ☐ Public Sector
- ☐ Private Sector
- ☐ Semi-government
- ☐ Non-governmental organization (NGOs) including non-for-profit organization
- ☐ Family Business
- ☐ Self-employed (including freelancers)
- ☐ Student
- ☐ Unemployed

Q4b. If selected Private sector, please select type of private sector organization:

- ☐ Multinational Organization
- ☐ Regional
- ☐ Local

Q6 Which of the following best describes your level of work?

- ☐ Professional/Senior Managerial/Director/CEO
- ☐ Junior Professional/Managerial
- ☐ Administrative/Secretarial

- ☐ Skilled
- ☐ Semi-skilled
- ☐ Service

Q7 Please indicate the Emirate in which you are currently residing:

- ☐ Dubai
- ☐ Abu Dhabi & Al Ain
- ☐ Ajman
- ☐ Sharjah
- ☐ Umm al-Quwain
- ☐ Fujairah
- ☐ Ras al-Khaimah

Q8 Which category best fits your overall household number?

- ☐ 1-3
- ☐ 4-6
- ☐ 7-9
- ☐ 10+

Q9 Which category best fits your overall monthly household income (dirhams)?

- ☐ 0-5000
- ☐ 5001-10000
- ☐ 10001-15000
- ☐ 15001-20000
- ☐ 20001-25000

- ☐ 25001-30000
- ☐ 30001-40000
- ☐ 40001-50000
- ☐ 50001-60000
- ☐ 60001+

Q10 Please indicate the type of UAE Health Insurance Plans, you currently have.

1. Individual Plans {You are paying solely for this individual plan for a comprehensive UAE medical insurance plan}
2. Family Plan {You are paying solely for this family plan for a comprehensive UAE medical insurance plan}
3. Group Plans 1 {Your company or sponsor is paying solely for a comprehensive UAE medical insurance plan, with a co-payment}
4. Group Plans 11 {Your company or sponsor is paying solely for a comprehensive UAE medical insurance plan, with no co-payment}
5. Traveler Plans {You are paying solely for this traveler plan for a comprehensive UAE (including outside) medical insurance plan who travel very frequently}

- ☐ Individual Plans
- ☐ Family Plan
- ☐ Group Plans 1
- ☐ Group Plans 11
- ☐ Traveler Plans

Q11 Level of Education

Please indicate your highest level of Education

- ☐ Doctorate (Ph.D.)
- ☐ Master's degree
- ☐ Diploma Post University (Postgraduate Diploma)
- ☐ Bachelor's Degree
- ☐ Other, please specify:.....

Q12 Education Specialization

Please indicate your area of specialization that matches the highest level of education selected in the previous question.

- ☐ Arts & Design
- ☐ Engineering
- ☐ Information Technology
- ☐ Business & Economics
- ☐ Education
- ☐ Foreign languages
- ☐ Environment & Health Sciences
- ☐ Medical Sciences
- ☐ Communication & Media Sciences
- ☐ Sciences
- ☐ Sharia & Law
- ☐ Human & Social Sciences
- ☐ Foundations
- ☐ Other _____

Q13 How strongly do you AGREE or DISAGREE with each of the following statements?

(Select one level of agreement/disagreement on each statement). The scale is as follows:

Strongly Agree (5)	Agree (4)	Uncertain (3)	Disagree (2)	Strongly Disagree (1)

Statements	5	4	3	2	1
Doctors are good about explaining the reason for medical tests.	☐	☐	☐	☐	☐
I think my doctor's office has everything needed to provide complete medical care.	☐	☐	☐	☐	☐
The medical care I have been receiving is just about perfect (how can the word “perfect” be defined?.	☐	☐	☐	☐	☐
Sometimes doctors make me wonder if their diagnosis is correct.	☐	☐	☐	☐	☐
I feel confident that I can get the medical care I need without being set back financially.	☐	☐	☐	☐	☐
When I go for medical care, they are careful to check everything when treating and examining me.	☐	☐	☐	☐	☐
I have to pay for more of my medical care than I can afford.	☐	☐	☐	☐	☐
I have easy access to the medical specialists I need.	☐	☐	☐	☐	☐

Q14 How strongly do you AGREE or DISAGREE with each of the following statements?

(Select one level of agreement/disagreement on each statement). The scale is as follows:

Strongly Agree (5)	Agree (4)	Uncertain (3)	Disagree (2)	Strongly Disagree (1)

Statements	5	4	3	2	1
Where I get medical care, people have to wait too long for emergency treatment.	☐	☐	☐	☐	☐
Doctors act too businesslike and impersonal toward me.	☐	☐	☐	☐	☐
My doctors treat me in a very friendly and courteous manner.	☐	☐	☐	☐	☐
Those who provide my medical care sometimes hurry too much when they treat me.	☐	☐	☐	☐	☐
Doctors sometimes ignore what I tell them.	☐	☐	☐	☐	☐
I have some doubts about the ability of the doctors who treat me.	☐	☐	☐	☐	☐
Doctors usually spend plenty of time with me.	☐	☐	☐	☐	☐
I find it hard to get an appointment for medical care right away.	☐	☐	☐	☐	☐
I am dissatisfied with some things about the medical care I receive.	☐	☐	☐	☐	☐
I am able to get medical care whenever I need it.	☐	☐	☐	☐	☐

--The End---

Arabic Survey

استبيان عن الانطباع العام عن مستوى الخدمات الصحية المقدمة في دولة الامارات العربية المتحدة

انتم مدعوون للمشاركة في دراسة بحث يدرس الانطباع العام عن مستوى تقديم الرعاية الصحية في دولة الإمارات العربية المتحدة من حيث الجودة والتكلفة وسهولة الحصول على الرعاية. هذا النموذج هو جزء من عملية تسمى «الموافقة المستنيرة» لشرح هذه الدراسة قبل اتخاذ قرارك بشأن المشاركة.

الباحث الأول د/ ايمانويل ازاد مونيسار استاذ مساعد –السياسات الصحية-كلية محمد بن راشد للادارة الحكومية-دبي-الامارات العربية المتحدة يجري البحث بالتعاون مع د/ منى مصطفى الشلقامي- كلية محمد بن راشد للادارة الحكومية.

معلومات استبيان عن الانطباع العام عن مستوى الخدمات الصحية

معلومات اساسية:

الغرض من الدراسة هو ايجاد معلومات عن الانطباع العام عن الرعاية الصحية في دولة الامارات العربية المتحدة؛ سيقيم هذا البحث كيف يقيم السكان مستوى الرعاية الصحية المقدمة في الدولة من حيث التكلفة، توفر الخدمة/ سهولة الحصول على الخدمة، والجودة.نظرا لتقديم خدمة التامين الصحي الجديدة والمقدمة لكافة الموظفين، ستركز هذه الدراسة على مدى ملاءمة تصور الجمهور وتطبيق ممارسات الرعاية الصحية الحالية والآثار المترتبة على السياسات الصحية في دولة الإمارات العربية المتحدة.

الإجراءات:

في حال موافقتك على الاشتراك في هذه الدراسة، سوف يطلب منك تحديد مدى الموافقة على العبارات التالية والمتداولة بين الافراد عن الرعاية الطبية. يرجى قراءة كل جملة بعناية، مع الأخذ في الاعتبار الرعاية الطبية التي تتلقاها حاليا في دولة الإمارات العربية المتحدة فقط. (إذا لم تتلق رعاية صحية مؤخرا، فكر في ما تتوقعه إذا كنت بحاجة إلى الخدمة اليوم). نحن مهتمون بمشاعرك، الجيدة والسيئة، حول الرعاية الطبية التي تلقيتها في دولة الإمارات العربية المتحدة.

نشكركم على اخذ 5-4 دقائق من وقتكم للاجابة عن اسئلة الاستبيان

الطبيعة التطوعية للدراسة:

هذا الاستبيان مصمم لأغراض البحث فقط ويضمن سرية الإجابات. سيتم الاعلان عن البيانات المجمعة فقط. هذه الدراسة تطوعية. سيحترم الجميع قرارك سواء اخترت المشاركة او عدم المشاركة. لن تتغير طريقة معاملة موظفي كلية محمد بن راشد لك إذا قررت عدم المشاركة في الاستبيان. إذا قررت الانضمام إلى الدراسة الآن، يمكنك تغيير رأيك لاحقا و التوقف التوقف في أي وقت، من خلال النقر على زر «X» من الصفحة.

مخاطر وفوائد الاشتراك في الدراسة:

المشاركة في الاستبيان تطوعية تماما. المشاركة في الاستبيان لا تشكل خطرا على سلامتك أو امنك.

ستعود فوائد هذه الدراسة إلى المجتمع الإماراتي بشكل عام، حيث ستساعد في تحقيق الحاجة إلى تحسين عمليات صنع السياسات في مجال الرعاية الصحية؛ وفهم الحاجة إلى التحسين عبر جوانب مثل نوعية الرعاية والتكلفة وسهولة الحصول على الرعاية. واكتساب فهم شامل للتفاعلات والتصورات المهنية للرعاية الصحية تساعد واضعي السياسات في تحديد توصيات السياسات و الاصلاحات المطلوبة لوضع استراتيجيات ناجحة

رغم ان فوائد المشاركة في الاستبيان غير حاسمة، ولكنها قد تحتوي على مشاعر السعادة، الراحة والمساهمة البناءة. قد يشعر المشاركون بالسعادة لان تجربتهم ومشاعرهم لاقت اهتمام. قد يشعرون براحة كبيرة لعلمهم ان التوتر السابق واسبابه تتم دراستها.

المكافاة

لايوجد مقابل مادي او هدية للمشاركين في الاستبيان

الخصوصية:

كل المعلومات سرية. لن يستخدم الباحث الاسم او اي معلومات اخرى قد تدل على شخصية المشارك في تقارير البحث. يتم تامين المعلومات عن طريق برامج متخصصة. تحتفظ لاكلية بالمعلومات لمدة خمس سنوات كما تنص متطلبات الكلية.

الاسئلة والاتصال

تستطيع طرح اي اسئلة الان. او الاتصال لاحقا بالباحث على 97143175533 او ايميل: Immanuel. moonesar@mbrsg.ac.ae

موافقة كلية محمد بن راشد لهذه الدراسة هو0000 وتنتهي صلاحيته في 7 مايو 2018. برجاء طباعة وحفظ بيان الموافقة للعلم.

بيان الموافقة:

لقد قرات المعلومات السابقة واشعر اني افهم البحث جيدا لدرجة المشاركة فيه. بتعبئة الاستبيان اقر باني اوافق على الشروط المبينة اعلاه.

اشكر كلية محمد بن راشد على تشجيعها ودعمها لهذه الدراسة. في نهاية الاستبيان ستتاح لك الفرصة لكتابة معلومات الاتصال الخاصة بك في حال رغبت ان نرسل لك نسخة من نتيجة الاستبيان. هذه المعلومات ستكون سرية ومنفصلة عن معلومات الاستبيان ولا يستطيع اي طرف اخر الحصول عليها.

شكرا لاهتمامك بمبادرتنا.

اختر نعم ☐ او لا ☐ للموافقة على المشاركة في الاستبيان

البيانات الشخصية

س 1 الجنس(برجاء اختيار النوع الاجتماعي)

☐ رجل

☐ انثى

س2 السن

☐ اقل من 20

- ☐ 20-35
- ☐ 36-50
- ☐ +51
- ☐ س 3 الجنسية
- ☐ مواطن دولة الامارات العربية المتحدة
- ☐ من غير مواطني دولة الامارات العربية المتحدة: برجاء تحديد الجنسية .....

الوظيفة

س 4 أ اي من التالي يوصف دورك، مسؤلياتك ، وتخصصك الحالي

- ☐ القطاع العام
- ☐ القطاع الخاص
- ☐ شبه حكومي
- ☐ مؤسسة غير حكومية بما فيها المؤسسات غير الربحية
- ☐ عمل عائلي
- ☐ اعمال حرة
- ☐ في مرحلة الدراسة
- ☐ عاطل عن العمل

س4 ب في حال اختيار القطاع الخاص، برجاء تحديد نوع القطاع

- ☐ مؤسسة عالمية
- ☐ مؤسسة اقليمية
- ☐ مؤسسة محلية

س 6 اي من التالي يصف طبيعة عملك

- ☐ مهني / إداري / مدير / رئيس تنفيذي
- ☐ مبتدئ / إداري
- ☐ إداري / سكرتارية
- ☐ حرفي
- ☐ شبه حرفي
- ☐ خدمي

س7 برجاء تحديد الامارة التي تعيش بها

- ☐ دبي
- ☐ ابوظبي/العين
- ☐ عجمان
- ☐ الشارقة
- ☐ ام القيوين
- ☐ الفجيرة
- ☐ راس الخيمة

س 8 عدد سكان المنزل

- ☐ 1-3
- ☐ 4-6
- ☐ 7-9
- ☐ 10+

س 9 الدخل الشهري بالدرهم

- ☐ 0-5000
- ☐ 5001-1000
- ☐ 10001-15000
- ☐ 15001-20000
- ☐ 20001-25000
- ☐ 25001-30000
- ☐ 30001-40000
- ☐ 40001-50000
- ☐ 50001-60000
- ☐ +60001

س 10برجاء تحديد نوع تغطيتك التامينية في دولة الامارات العربية المتحدة

1. خطة تامينية فردية (انت تقوم بالدفع بالكامل لهذه التغطية التامينية الشاملة في دولة الامارات)
2. خطة تامينية عائلية (انت تقوم بالدفع بالكامل لهذه التغطية التامينية العائلية الشاملة داخل دولة الامارات)
3. خطة تامينية جماعية 1(شركتك او كفيلك يدفع بالكامل لهذه التغطية التامينية الشاملة مع جزء تدفعه انت داخل دولة الامارات)
4. خطة تامينية جماعية 2(شركتك او كفيلك يدفع بالكامل لهذه التغطية التامينية الشاملة داخل دولة الامارات)
5. خطة المسافرين (انت تدفع بالكامل لهذه التغطية التامينية الشاملة داخل الامارات (وخارجها) للافراد الذين يسافرون باستمرار

- ☐ خطة تامينية فردية
- ☐ خطة تامينية عائلية
- ☐ خطة تامينية جماعية 1

- ☐ خطة تامينية جماعية 2
- ☐ خطة المسافرين

س 11 مستوى التعليم

برجاء تحديد اعلى درجة علمية حصلت عليها

- ☐ o الدكتوراه
- ☐ o الماجستير
- ☐ o الدبلوما
- ☐ o البكالوريوس
- ☐ o اخرى- برجاء التحديد.....

س 12 التخصص الدراسي

برجاء تحديد التخصص الدراسي المرتبط باعلى درجة علمية حصلت عليها كما هو مذكور سابقا

- ☐ الفن والتصميم
- ☐ الهندسة
- ☐ تكنولوجيا المعلومات
- ☐ الأعمال والاقتصاد
- ☐ التعليم
- ☐ اللغات الأجنبية
- ☐ البيئة والعلوم الصحية
- ☐ العلوم الطبية
- ☐ علوم الاتصال والإعلام
- ☐ العلوم
- ☐ الشريعة والقانون

☐ العلوم الإنسانية والاجتماعية

☐ أخرى----------

س 13 ما مدى موافقتك على الاتي؟

أعترض بشدة (1)	أعترض (2)	غير متأكد (3)	أوافق (4)	أوافق بشدة (5)

Statements	5	4	3	2	1
الاطباء يجيدون شرح اسباب طلب اجراء التحاليل الطبية.	☐	☐	☐	☐	☐
اظن ان مكتب طبيبي المعالج به كل الامكانيات لتقديم العناية الطبية	☐	☐	☐	☐	☐
العناية الطبية التي تلقيتها حتى الان مثالية (كيف تفسر كلمة مثالية).	☐	☐	☐	☐	☐
احيانا اشك في تشخيص الاطباء	☐	☐	☐	☐	☐
انا متأكد من قدرتي على الحصول على العناية الطبية التي احتاجها بدون مروري بضائقة مالية.	☐	☐	☐	☐	☐
عندما أذهب للرعاية الطبية، يحرص المعالجون على فحص كل شيء.	☐	☐	☐	☐	☐
للحصول على الخدمة الطبية اضطر الى دفع مبلغ اكبر من قدراتي المادية	☐	☐	☐	☐	☐
استطيع الوصول بسهولة الي الطبيب المتخصص الذي احتاجه.1	☐	☐	☐	☐	☐

س 14ما مدى موافقتك على الاتي؟

أعترض بشدة (1)	أعترض (2)	غير متأكد (3)	أوافق (4)	أوافق بشدة (5)

Statements	5	4	3	2	1
ينتظر الناس وقتا طويلا لعلاج حالات الطوارئ في المكان الذي اعالج فيه	☐	☐	☐	☐	☐
الأطباء يتصرفون بشكل عملي وغير شخصي معي	☐	☐	☐	☐	☐
اطبائي يعالجونني بشكل مهذب ودود	☐	☐	☐	☐	☐
احيانا مايسرع المعالج بشكل زائد	☐	☐	☐	☐	☐
احيانا ما يتجاهل الطبيب ما اقوله	☐	☐	☐	☐	☐
لدي بعض الشك في قدرات الاطباء المعالجين	☐	☐	☐	☐	☐
عادة ما يمضي الطبيب وقت كبير معي.	☐	☐	☐	☐	☐
من الصعب الحصول على موعد طبيب فورا	☐	☐	☐	☐	☐
انا غير راض عن بعض الاشياء في الخدمة الطبية التي اتلقاها	☐	☐	☐	☐	☐
استطيع الحصول على العناية الطبية في اي وقت احتاجها	☐	☐	☐	☐	☐

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