Susan G. Komen for the Cure
Global Initiative for Breast Cancer Awareness
Emirate of Abu Dhabi, UAE

2008 Community Profile
Summary of Findings

Abu Dhabi Island & Middle Region
Eastern Region (Al Ain)
Western Region (Al Gharbia)
March –July, 2008

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- Khalifa Medical Center
- Ministry of Economy Abu Dhabi
- National Health Screening Program for Woman & Child/ Ministry of Health Preventive Medicine
- Takatof
- Zayed University

Eastern Region:
- Abu Dhabi Chamber of Commerce, Al Ain Branch
- Al Ain Hospital
- Family development Foundation
- Higher College of Technology, Al Ain Branch
- Medical Services (Police Clinic)
- National Cancer Registry/ Tawam Hospital
- Police Department, Al Ain Branch
- Preventive Medicine Department
- Primary Health Care Department
- Social Support, Al Ain Police
- Tawam Hospital in affiliation with John Hopkins

Al Gharbia Region:
- Al Dhafrah School, Madinat Zayed
- Al Gharbia Medical Administration
- Health Education Department, Madinat Zayed Hospital
- Nursing Department, Madinat Zayed Administration
- Preventive Medicine Department, Madinat Zayed
- Primary Health Care Department, Madinat Zayed
- Social Support Center, Madinat Zayed Police

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Abu Dhabi Island and Middle Region
1. EXECUTIVE SUMMARY

Purpose, Goals, and Objectives
A community profile is also called a community needs assessment, and is a snapshot of a community. This profile looks specifically at the state of breast health and breast cancer in three communities in Abu Dhabi. The profile includes demographics, breast health statistics, an assessments of breast health services in the community, and a survey of the community's beliefs about breast health through key information interviews. This profile will help focus the efforts of the Global Initiative Abu Dhabi Team so that we can have the most significant impact in our future work. The community profile will facilitate a better understanding of breast health services for the six county services area by identifying and prioritizing the areas of most need.

The objectives of the community profile are to:
- Determine the demographics and breast health indicators of the three communities' services area of the Emirates of Abu Dhabi.
- Document the current breast health/cancer programs and services in the service areas.
- Identify and interview key informants throughout the service area to determine the gaps and needs in breast health services that exist.

The Emirate of Abu Dhabi is the federal capital of the UAE and the largest of all seven Emirates, with an area of 67,340 sq. kilometers, equivalent to 86.7% of the country’s total area, excluding the islands. Population according to 2005 census is 1,399,484. Abu Dhabi’s coasts stretch from Qatar in the west to the borders of the emirate of Dubai in the northeast and from Liwa valley in the south to the Al Ain oasis in the east. It is the most populated of all the emirates.

For administrative purposes, it is divided into three major regions; the first region encompasses the city of Abu Dhabi, federal capital and the capital of the emirate.

Abu Dhabi’s second region is known as the Eastern Region; its capital is Al Ain city, which is rich in greenery and has substantial groundwater resources.

Abu Dhabi’s third administrative sector is the Western Region, which comprises many villages; its capital is Madinat Zayed. The country’s main onshore oilfields are located here, as is the country’s largest oil refinery at Al Ruwais. There are also a number of important islands within the emirate where the main offshore oil fields are located.

1.1 Abu Dhabi Island & Middle Region

1.1.1. Demographics:
Abu Dhabi is the capital and second most populous city in the United Arab Emirates (UAE), after Dubai. It is also the seat of government of the emirate of Abu Dhabi. Abu Dhabi the greater City is composed of two parts: the Island and the mainland. The island located less than a quarter-kilometer from the mainland and is joined to the mainland by two bridges. Most of Abu Dhabi City is located on the island itself, but it has many suburbs on the mainland, so far this entire area outlines the urban part of Abu Dhabi. The Middle Region is the rest of mainland and is considered the rural part of Abu Dhabi. It is mainly composed many
residential areas, mostly inhabited by national families. Abu City is heavily populated, however there is marked growth in the rural part.

The total population of Abu Dhabi Island and Middle Region is 823,288, which is almost 60% of the total population of the whole emirate of Abu Dhabi. There is a predominant number of males, with the overall male to female ratio is 3:1. The area contains 291,549 women, 60% of them over the age of 20.

The total number of women aged 40-69 years is 45,468 (15.6% of all females). Of those, 36% are non-Emirate Arab, 34% Asian (mainly Indian, Pakistani, Bangladeshi and Filipino), 23% Emirate nationals and 7% other nationalities. They are largely located on Abu Dhabi Island. 19% reside in the Middle region and, of those, the majority is nationals. About 15% are illiterate and illiteracy was higher among Nationals compared to Non-Nationals. Only 30% of these women are employed.

The total number of females aged 20-39 years was 127,113 (43.4% of all female). The majority are Asian 41%, followed by non-Emirate Arabs 29%, nationals 24% and other nationality 8%. They are mostly located on Abu Dhabi Island. About 5% are illiterate and 43% are employed.

1.1.2. Breast Health Statistics:
Breast cancer is the most common among the top ten cancers in UAE. Cancer in general is the third leading cause of death in UAE and in the Abu Dhabi emirate. Data on breast cancer was limited; most of the data from the National Cancer Registry was expressed in numbers, not in rates, except for that from 2005. The breast cancer incidence rate for all UAE population in 2005 showed that rates for non-nationals was higher across almost all ages; however, in younger women (under 44 years) it was more common in nationals compared to non nationals.

Further breakdown by nationality for the breast cancer cases in Abu Dhabi Emirate during the period between 2005-2007 showed that breast cancer was common among Arabs; followed by other nationalities, Nationals and least were the Asian. Regardless of nationality, more than 64% of breast cancer cases from Abu Dhabi Emirate presented late either had regional extension of the breast cancer or metastasis to other organs. Breast cancer was common in Arabs, followed by Nationals and least in Asian.

Broadly speaking breast screening services available in this region are: Breast self exam (BSE) education for women starting at age 20 years, annual clinical breast exam (CBE) and bilateral - two view- Mammography every one-two years starting from age 40 years.

The National Breast Cancer Program started in 1997 in Abu Dhabi and extended to other emirates. In this Region, the participation of women in the program over the years 1999-2007 had been consistently low, with Asians participating the least. Reasons of under-utilization are complex. Barriers could be due to lack of awareness, fear, cultural barriers and misconceptions about breast cancer among other reasons.

1.1.3. Breast Health Programs and Services:
Health education is widely provided by almost all health care providers, yet still there is lack of community awareness. Most of healthcare providers offer mammogram, however majority are diagnostic. There is only one functional screening facility located on the Island, the National Health Screening Program for Woman & Child, which could serve as a model for the construction of future screening units. There are four facilities that provide breast cancer treatment; two of them are governmental tertiary hospitals. Nevertheless, not all treatment options are available in any one facility, with radiotherapy and plastic surgery as the services that
are most commonly lacking. Treatment is costly and not covered fully by insurance. Support services are scarce apart from Sheikh Khalifa Medical City Breast Cancer Support Group.

1.1.4. Key Informant interviews:
One hundred forty six key informants were interviewed, including health professionals, breast cancer survivors /co-survivors and community members who understand and represent their communities. In an attempt to capture an accurate community profile, key informants were chosen to represent different community segments; different nationalities (UAE Nationals, Arabs, Asians and from other nationalities), age groups (20-39 and 40-69 years), gender, locations (urban and rural) and employment status (housewives and employed). Key findings included:

- Women identified in great need for health services are women above 40, young women, school girls, women in rural areas and with low socioeconomic status.

- Major barriers that affect breast health services utilization, ranked in order of importance are fear, lack of awareness, and cultural barriers. Ignorance and delay due to busy schedules, cost and lastly accessibility.

- The recommendations to improve breast health falls in four themes: raise awareness, provide free or fully insured breast health services, improve healthcare services and provide support services for breast cancer.

1.1.5. Identified and prioritized gaps:
Gaps and assets in the community were identified according to community profile data. Community profile finding were presented to the participants, highlighting gaps. They were asked to choose ten gaps and rank them according to severity and ability to impact. Out of these ten, the three gaps that scored the highest were considered high priority. These are; ranked according to highest frequency:

1. Lack of community awareness
2. Late presentation of breast cancer
3. Fear due to misconception about breast cancer (it is a death sentence and requires losing a breast)

1.1.6. Strategic Goals and Objectives:
Goals were identified to address these gaps, the three main goals are:

1. Increase overall awareness of breast cancer and early detection among all nationalities
2. Increase screening rates among all women 40 and over
3. Reduce fear due to misconceptions about breast cancer
1.2. Eastern Region (Al-Ain)

1.2.1. Demographics

The Eastern Region represents about 35.5% of the total population of Abu- Dhabi Emirate and also represents 35.5% of the female population of Abu-Dhabi Emirate. The ethnic breakdown of residents in the Eastern Region is as follows: Nationals (40.7%), Asians (31.5%), Arabs (22.2%). Most females aged (20-69) are housewives. There is significant illiteracy (32.6%) among older age (40-69) National females.

1.2.2. Breast Cancer Statistics

No specific information is available about the Eastern Region, except for the fact that 30% of the Breast Cancer cases in Emirate of Abu-Dhabi are from Eastern Region in terms of residence frequency distribution.

1.2.3. Programs and Services

Breast Health services are available in Eastern Region among all the medical providers. Screening services are free for all females of different nationalities, even for un insured females, in addition to availability of highly advanced treatment for breast cancer cases at Tawam hospital, that is also free for all nationalities even the un insured.

There is lack of Community outreach education and awareness services.

1.2.4. Key Informant Responses

Two hundred and two (202) key informants who were interviewed to get their insight about breast health services and women in greatest need of breast health expressed the following concerns:
- Major health concerns
- Sources of health information
- Groups in greatest need
- Obstacles and barriers: access, cost, fear, education, awareness, culture/behavior
- Health care system (screening and treatment)
- Recommendations for improving the current health care system

1.2.5. Identified and Prioritized Gaps

Three gaps of high priority have been identified which are:
1. Lack of awareness and education
2. Under-utilization of available breast health services
3. Lack of communication and cooperation among providers

1.2.6. Strategic Goals and Objectives

Strategic goals and objectives have been addressed to the following:
1. Enhance utilization rate of all available breast health services in the Eastern Region
2. Increase awareness, knowledge and education related to breast cancer among the population under concern.
3. Encourage communication and cooperation among all breast health providers in the Eastern Region, Abu-Dhabi Emirate and the UAE in general.

1.3 Western Region (Al Gharbia)

1.3.1. Demographics
The Western Region, now officially named “Al Gharbia,” represents the western part of the Emirate of Abu Dhabi. It is considered as a whole a rural region of Abu Dhabi Emirate. It covers 70% of the UAE and 83% of the Emirate of Abu Dhabi. It includes many detached cities, villages and islands. The people of the region belong to Arab Islamic tribes. It is also one of the richest areas of the UAE in terms of oil and gas fields and is marked by agricultural and animal resources, particularly camels.

Regions under Al Gharbia include Madinat Zayed which is the capital of the region, Liwa, Marfa, Ghayathy, Silla, Al Ruwais (not included in this phase) and a number of islands such as Delma, Sir Bani Yas and Abu Al Abyadh.

The total population is 115,531, of which 78.4% are male and, 21.6% are female. Of the males, 87.4% are Non Nationals all part of the labor force of the region. The large proportion of male population in this region are due to the influx of male laborers in the farmlands and oil refineries.

13.9% of the total population are females 40 years and above, the target group for breast health screening; of these females, 53% are UAE National and 47% Non National. 21% of the female population are illiterate, of which 11.6% are Nationals and the remainder Non-Nationals. Also, 56.2% of females are unemployed. By nationality, Non-National Arabs constitute the largest population of Non-Nationals followed by the Asian Non-Arabs, then the “Bedoon,” a group with no nationality, originally from Iran.

1.3.2. Breast Health Statistics:
There are no breast cancer statistics for the population of Al Gharbia due to the fact that any suspected case will be referred to Abu Dhabi City and if proven to have breast cancer will be referred to Specialized Breast Cancer Centers where they will be registered under the referral centers that referred them; thus all are registered under Abu Dhabi.

1.3.3. Breast Health Programs and Services:
Only one hospital in Al Gharbia has a screening mammography unit but it is not in operation as there is no radiologist. There are no breast health clinics; instead clinical breast exams are conducted in Maternal and Child Health Clinics in the region of which there are 4, although only 3 are in operation. These services are severely under-utilized.

1.3.4. Key Informant Questionnaires:
Seventy-eight key informants were interviewed. Key informants were chosen from the community on the basis of their knowledge about community issues and if they were non-national, they must have resided in the region for at least 3 years and participated in community events. The nationalities differed, 52 were UAE nationals, 11 non Arabs and 15 Arabs. It was through their input and insight that we tried to understand the health needs of the various regions. Key findings were

- Cancer in general was on their list of most common health problems and ranked 4th.
• They believed that women over 40 were in most need for breast health services, but a large proportion of them were unscreened.
• The main obstacles preventing women from seeking breast health services include:
  • Inaccessibility to breast health services
  • Lack of insurance coverage for Non-Nationals needing cancer treatment
  • Lack of awareness among the population and health care personnel on breast cancer
  • Cultural factors such as modesty which prevented women seeking health care from male physicians.

1.3.5. **Identified and prioritized gaps:**

**Main Gaps:**
1. Relatively high illiteracy among the target group of females, more so in National females above 40.
2. Non-Asian population 40 years and above constitute 24% of the population. Their health needs have not been addressed.
3. The “Bedoon” population, a challenging issue with regards to health needs due to the fact that generally any Bedoon individual who does not hold a legitimate passport is not allowed a health card or Daman Health Insurance unless they are employed by a company. Employment requires legal papers and, since they do not usually have these, the majority are unemployed. As they do not hold any passports or legitimate ID cards from any country, they are only allowed emergency health services, Antenatal Care services until 27 weeks, CBE and screening mammography, and routine childhood and school immunizations. Apart from these services, they need to pay fees for any other health services.
4. Insurance does not cover the cost of advanced diagnostic procedures or treatment for Non Nationals
5. Lack of awareness towards breast health in general.
6. Absence of breast cancer statistics for the area.
7. Under-utilization of preventive health services such as clinical breast exam.
8. Absence of a functioning screening mammogram unit.

**Prioritized Gaps:**
1. Lack of awareness.
2. Absence of a mammogram unit.
3. Absence of breast health services in health facilities.

1.3.6. **Strategic Goals and Objectives:**

**i. To increase awareness towards breast health:**

**Objectives:**

a) To conduct Knowledge, Attitude & Practice study on breast health knowledge and practices, a minimum of 1000 females of the target population over the whole region within the next 6 months.

b) To conduct a minimum of two workshops on breast health for secondary level and college female students over a period of 9 months to cover at least 100 female students.

c) To conduct a minimum of 12 home visits where the target population can be addressed easily and openly, at least 2 families per visit in each city of Al Gharbia over a period of a year whether National or Non-National.
d) To target men by organizing informal meetings during evenings in the “Majlis” (an informal setting where men gather usually friends and family members to discuss community, financial, social or private family issues), a minimum of 12 per year over the region of Al Gharbia, targeting at least 120 men.

ii. To advocate efforts for the provision of a mobile mammogram unit to cover the needs of the whole region:

Objectives:

a) To contact within the next three months the Al Gharbia Development Council Administrative Director located in Abu Dhabi to organize financial purchasing totally or partially through coordination with other governmental sectors for a mobile mammogram unit for the region.

b) To direct a letter of request to the Al Gharbia Medical Region Director to nominate physicians, radiologists and nurses for training on breast health clinical examination, screening, mammography, ultra-sonography, biopsy and counseling at the National Center for Woman and Child Screening which has expressed its willingness to train them.

c) To organize two fundraising events over the next year. The proceeds will go to a HAAD account which will hopefully be established for Breast Cancer.

iii. To integrate breast health services for each city within the hospitals that the target population seek health services:

Objectives:

a) To direct a letter of request to the Al Gharbia Medical Director to establish at least three breast health clinics which will operate in the whole region over a period of 1 year.

b) To conduct two breast health training programs per year targeting a minimum of 20 female health care providers in the hospitals of the region through coordination with the Health Authority of Abu Dhabi.
2. Introduction of Susan G. Komen for the Cure Global Initiative for Breast Cancer Awareness

An estimated 25 million women around the world will be diagnosed with breast cancer over the next 25 years, and up to 10 million could die without a cure. Although breast cancer is a global disease, reaction and approach to its diagnosis and treatment vary greatly by a country’s cultural norms and economic means. Given that no single approach to breast health will prove effective around the world, local communities must implement innovative programs customized to address local needs.

With this in mind, Susan G. Komen for the Cure® launched the Susan G. Komen for the Cure Global Initiative for Breast Cancer Awareness. The Institute of International Education (IIE), one of the world’s most experienced global higher education and professional exchange organizations, designed and manages the Initiative through its West Coast Center in San Francisco, in collaboration with local partners in eight pilot countries: Brazil, Costa Rica, Jordan, Mexico, Romania, Saudi Arabia, Ukraine and United Arab Emirates.

The primary goal of the Initiative is to create a dynamic global network of dedicated activists with the skills, knowledge and vision to play a strategic role in shaping their country’s response to breast cancer. This is being accomplished by (1) Empowering diverse stakeholders with the training, tools and support needed to influence strategic country-specific programming and funding decisions around breast cancer; and (2) strengthening individual and organizational capacity to launch effective education, awareness and advocacy campaigns that will increase early breast cancer detection and reduce mortality.

At the core of the program is Course for the Cure™, a series of training modules that are based on Komen for the Cure’s experience in breast cancer awareness and advocacy. The training modules, which have been customized in each country, cover five key topics: Community Assessment, Volunteer & Organization Development, Awareness & Education, Fundraising, and Advocacy.

This Initiative combines Komen for the Cure’s experience with IIE’s leadership development expertise. Komen is the world’s largest grassroots network of breast cancer survivors and activists fighting to save lives, empower people, ensure quality care for all and energize science to find the cures. For the past 25 years, Komen has played a critical role in every major advance in the fight against breast cancer – transforming how the world talks about and treats this disease and helping to turn millions of breast cancer patients into breast cancer survivors.

For the past 90 years, IIE has been implementing international training programs, particularly through its close relationships with universities, government agencies and NGOs dedicated to human capacity development.

An integral component of the Initiative is the collaboration of local partners in each country – including organizations working on women’s rights, advocacy, public health and health education, as well as medical foundations, hospitals and universities. These partners help create national steering committees and nominate participants, who represent a wide range of breast health stakeholders, for the Course for the Cure™. In-country partners also support the locally-led collaborations that are integral to reducing breast cancer mortality through improved awareness and education.
2.1. Goal of the Community Profile

This Community Profile represents an assessment of the breast health needs and resources in a given community. It also serves to inform the work of breast health organizations and activists in their fight against breast cancer. Participants in the Course for the Cure™ workshops are trained on types of data collection, identifying and prioritizing gaps, and devising strategic long-term goals and short-term objectives. As part of the workshop follow up activities, participants collaborate with Global Initiative staff in each country to apply the community profile skills they are learning. By collecting and analyzing available data on breast health, participants identify and prioritize the community’s unmet needs or “gaps” in breast health. These gaps are areas where the available resources do not meet the needs of the community or specific segments of that community. These prioritized gaps form the basis for developing strategic plans for education outreach, awareness programs and advocacy efforts to improve breast health outcomes.

Demographic, statistical, and program and service provider data all play a key role in the development of the Community Profile. Additionally, data from Key Informants, formal and informal leaders in the community, provide insights into the attitudes and beliefs surrounding breast health and breast cancer. All this information is critical for identifying and addressing barriers to improving a community’s breast health.

The Community Profile is a living document. It should be used on an on-going basis to inform strategic planning in the community around breast health and to strengthen existing programs and services. As a living document, it also needs to be updated on a regular basis as circumstances change and new information becomes available.

This Community Profile Report details the findings of Course for the Cure™ participants in Abu Dhabi Island and Middle Region, Eastern Region (Al Ain), and Western Region (Al Gharbia and defines the priorities they have identified for these communities. How the data was collected and priorities identified are explained in the methodology section. In most cases, this report will represent the first time breast health data has been compiled for certain communities and should be made widely available to community members in need of this information.
2.2. COUNTRY OVERVIEW

2.2.1. Introduction:

The United Arab Emirates (UAE), established in 1971, is a federation of seven independent states lying along the east central coast of the Arabian Gulf. In the 1970s, it was known as the “Trucial Coast” and life in its hinterland was one of considerable hardships. In the towns, fresh water was scarcely available and often had to be drawn by oxen from deep wells, or even brought in barrels from neighboring islands by dhow.

The United Arab Emirates declared its independence on December 2, 1971 with the late Sheikh Zayed bin Sultan Al Nahyan elected as president and the late Sheikh Rashid bin Saeed Al Maktoum as vice-president. His Highness Sheikh Khalifa bin Zayed Al Nahyan has served as President since Sheikh Zayed’s death in 2004. The UAE is composed of seven emirates: Abu Dhabi, Dubai, Sharjah, Ajman, Umm AlQaiwain, Ras AlKhaimah and Fujairah. Abu Dhabi is the capital of the state. Each of the states has its own ruler.

The government of the UAE consists of several bodies. The Federal Supreme Council is made up of the seven Rulers for each emirate, the Crown Princes and the deputies. Members of the Cabinet consist of the Prime Minister and Deputies and remaining Ministers of which 5 Ministers are women: Minister of Foreign Trade, Minister of Social Affairs, and 3 Ministers of State. The Federal Supreme Council has legislative and executive powers, ratifies federal laws and decrees, plans general policy, approves the nomination of the prime minister and accepts his resignation. The Federal National Council, drawn from the emirates on the basis of their population, is responsible for examining and amending all proposed federal legislation, and may summon and question any federal minister regarding ministry performance.

Parallel to and interlocking with the federal institutions, each emirate has its own local government. The Executive Council is the central governing organ for Abu Dhabi and under it are separate departments, equivalent to ministries. A number of autonomous agencies also exist, of which the Abu Dhabi Health Authority (HAAD) is one.

2.2.2 Geographical Location:

The UAE lies along the east-central coast of the Arabian Gulf, north of the equator, located between latitudes 22 and 26.5° north and longitudes 51 and 56.5° east.

![Geographical location of UAE](image1)

**The UAE is bordered by the following:**

- The Arabian Gulf from the north
- Gulf of Oman and Sultanate of Oman from the East.
- Sultanate of Oman and Kingdom of Saudi Arabia from the South.
- Qatar and Kingdom of Saudi Arabia from the west.

The area of the UAE (with a total of 200 islands) is about 83,600 sq. km (32,400sq.miles), of which 97% is desert.

2.2.3 Basic Facts

**Natural Resources:** Petroleum and natural gas, 90% of which are in Abu Dhabi.

**Language:** Arabic is the official language and English the second language. Several Asian languages are widely used.

**Currency:** The Emirati Dirham is the unit of currency, tied to the US dollar at a steady rate of $ US 1 =Dh. 3.671.

**Religion:** Islam is the official religion and is practiced by 79% of the population, but all other religions may perform their religious rites freely. 9% of the population practices Christianity and 15% other religions.
Emirate of Abu Dhabi: The Emirate of Abu Dhabi is the federal capital of the UAE and the largest of all seven emirates, with an area of 67,340 sq. kilometers, equivalent to 86.7% of the country’s total area, excluding the islands. Population according to 2005 census is 1,399,484. Abu Dhabi’s coasts stretch from Qatar in the west to the borders of the emirate of Dubai in the northeast and from Liwa valley in the south to Al Ain oasis in the east. It is the most populated among all the emirates. For administrative purposes, it is divided into three major regions; the first region encompasses the city of Abu Dhabi, federal capital and the capital of the emirate.

Abu Dhabi’s second region, known as the Eastern Region, has as its capital Al Ain city, which is rich in greenery and blessed by substantial groundwater resources.

Abu Dhabi’s third administrative sector is the Western Region which comprises many villages; its capital is Madinat Zayed. The country’s main onshore oilfields are located here, as is the country’s largest oil refinery at Al Ruwais. There are also a number of important islands within the emirate where the main offshore oil fields are located.

Transportation: The Department of Municipalities and Agriculture is responsible for public transport. Provision of directly public related services is one of the most important aspects of the Public Transport Department duties. Among its duties is to create a developed and advanced network of transport means to link all the areas of Abu Dhabi emirate, to provide public transport lines operating around the clock for regular transportation of travelers, to cope with international development and support total growth, and to cooperate with similar departments to link with other transport networks at all other emirates.

One can also find private transport services in the form of taxis or 7-18 person buses. The local population does not prefer to use public transportation as this issue is culturally unacceptable in the Western Region. They prefer to travel in their private cars. Non locals who do not have private cars do travel using public transport. It is not a culture issue for the non locals.
2.2.4. Population Statistics:

Population trends

According to the preliminary results of the 2005 census, the total population of the UAE is 4,106,427. Ethnic Emiratis accounted for 825,495 (21.1%). The remaining 79.9% were non-nationals, of which 72% were males – many of these non-national immigrants immigrated to UAE for employment and participate in blue collar jobs. The previous census taken in 1995 showed the total population to be 2.4 million of which 75% were non-nationals.

The population trends identified in the latest census are not new. During the 1990s the population grew by an average of 5% a year, reaching 3.1 million in 2000 – an increase of almost 50% from the 1990 level.

UAE population distribution by age group, nationality and gender

Government estimates suggest that 60% of the people in the UAE are of Asian origin (India, Pakistan, Bangladesh and the Philippines). Westerners constitute less than 5% of the population while the remaining expatriates are made up mainly of Iranians and citizens of other Arab countries.

<table>
<thead>
<tr>
<th>Table 1: Population by age group, nationality and sex, UAE, 2005</th>
<th>Table 2: Percentage distribution of population Source: (UAE in Figures, 2005)</th>
</tr>
</thead>
<tbody>
<tr>
<td>As table 1 demonstrates, among females in UAE, women over 40 years of age constitute 14.9% (60,711) of the female citizen population. Among the non-citizen female population, women over 40 years of age constitute 15.7% (140,474) of the female non-citizen population. As for the total population, women 40 years of age and older constitute 15.3%.</td>
<td></td>
</tr>
</tbody>
</table>

2.2.5 Education

A rapid rise in population has necessitated a considerable investment in education. Today, the UAE offers a comprehensive education to all male and female students from kindergarten to university, with education for the country’s citizens being provided free at all levels. According to new regulations by ADEC (Abu Dhabi Education Council), Governmental schools allow a 20% non National rate of students at every level. Parents of the student will pay a fee for studying in these governmental schools which tends to be higher than the fees for private schools.

Much has been achieved since the early 1970s; efforts are now being made to improve the educational environment for all pupils. In particular, Abu Dhabi Education Council (ADEC) is spearheading privatization of the education sector in Abu Dhabi. Ninety five percent of all females and 80% of all males who are enrolled in the final year of secondary school apply for admission to a higher education institution in the UAE or abroad. Nationals can attend tertiary level institutions free of charge and have access to a wide and rapidly increasing range of private institutions, many with international accreditation, in addition to public sector institutions.
The Secondary level of education is the one most frequently achieved by all individuals regardless of gender or nationality (31.7% of locals and 24.7% of non-locals), followed by primary school in frequency (20.2% locals, 17.3% non-locals), then by preparatory school for locals (16.2%) and “Can read and write” (14.8%) for non-locals. The adult literacy rate is 91.2% (Country Profile, 2007). The number of individuals who have achieved university education is higher for females than in males in the year 2005 (16% for females and 11% for males). At the “Women Leadership Conference” held in Abu Dhabi under the patronage of Shaikha Salama Tahnoon Saeed Al Nahyan in May 2008, one of the presenters noted, interestingly, that the female to male ratio for UAE university graduates was 7:1. (AIESEC Abu Dhabi, 2008).

### Table 3: Percent distribution of population by highest level of education attained, nationality and gender - 10 years of age and over (UAE in Figures, 2005)

The Secondary level of education is the one most frequently achieved by all individuals regardless of gender or nationality (31.7% of locals and 24.7% of non-locals), followed by primary school in frequency (20.2% locals, 17.3% non-locals), then by preparatory school for locals (16.2%) and “Can read and write” (14.8%) for non-locals. The adult literacy rate is 91.2% (Country Profile, 2007). The number of individuals who have achieved university education is higher for females than in males in the year 2005 (16% for females and 11% for males). At the “Women Leadership Conference” held in Abu Dhabi under the patronage of Shaikha Salama Tahnoon Saeed Al Nahyan in May 2008, one of the presenters noted, interestingly, that the female to male ratio for UAE university graduates was 7:1. (AIESEC Abu Dhabi, 2008).

#### 2.2.6. Marital Status

Table 4 demonstrates that approximately half the citizen population of UAE is married, compared to a higher level (72.4%) of married non-citizens. Looking at table 2, this finding is consistent with the percentage population distribution according to age, 38% of UAE nationals are less than 15 years old (national statistics provide marriage statistics only for 15 years and over), while 51.1% of UAE citizens are less than 20 years of age, and the remainder are over 20 years old. Among non-citizens, 14.8% are less than 15 years old and 18.6% are less than 20. These differences in demographic distribution, coupled with the fact that the majority of non-citizens are male workers (Table 5), explains the difference here.

### Table 4: Distribution of population by marital status, nationality and gender. (UAE in Figures, 2005)

Table 4 demonstrates that approximately half the citizen population of UAE is married, compared to a higher level (72.4%) of married non-citizens. Looking at table 2, this finding is consistent with the percentage population distribution according to age, 38% of UAE nationals are less than 15 years old (national statistics provide marriage statistics only for 15 years and over), while 51.1% of UAE citizens are less than 20 years of age, and the remainder are over 20 years old. Among non-citizens, 14.8% are less than 15 years old and 18.6% are less than 20. These differences in demographic distribution, coupled with the fact that the majority of non-citizens are male workers (Table 5), explains the difference here.
2.2.7 Annual Income (Swiss Business Hub, Dubai, 2006)

<table>
<thead>
<tr>
<th>Annual Income (DHS)</th>
<th>%</th>
<th>Income Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 24,000</td>
<td>21</td>
<td>Lower</td>
</tr>
<tr>
<td>24,001-36,000</td>
<td>4.3</td>
<td>Lower</td>
</tr>
<tr>
<td>36,001-48,000</td>
<td>5.3</td>
<td>Middle</td>
</tr>
<tr>
<td>48,001-60,000</td>
<td>23.5</td>
<td>Middle</td>
</tr>
<tr>
<td>60,001-108,000</td>
<td>17.2</td>
<td>Middle</td>
</tr>
<tr>
<td>108,001-180,000</td>
<td>16.3</td>
<td>Upper</td>
</tr>
<tr>
<td>180,001-300,000</td>
<td>6.3</td>
<td>Upper</td>
</tr>
<tr>
<td>Above 300,000</td>
<td>6.1</td>
<td>Elite</td>
</tr>
</tbody>
</table>

Fig. 4: Annual Income, UAE 2006

N.B. DHS = Emirati Dirhams.

At present, there are no published National statistics for income, but data is expected from the Ministry of Economy in the near future. This chart, published by Swiss Business Hub in Dubai, shows an overview of the distribution of the population by annual income.

2.2.8 Labor Force

Table 5: Percentage distribution of population (≥ 15 years) by relationship to labor force, nationality and gender.

<table>
<thead>
<tr>
<th>Relationship to Labor Force</th>
<th>Total</th>
<th>Non Citizens</th>
<th>Citizens</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ملءة</td>
<td>متفرغين</td>
<td>ملءة</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Employed</td>
<td>75.0</td>
<td>35.1</td>
<td>60.3</td>
</tr>
<tr>
<td>Worked Below</td>
<td>0.9</td>
<td>0.9</td>
<td>1.0</td>
</tr>
<tr>
<td>Never Worked Below</td>
<td>1.6</td>
<td>2.2</td>
<td>1.3</td>
</tr>
<tr>
<td>House Work</td>
<td>12.3</td>
<td>44.5</td>
<td>0.0</td>
</tr>
<tr>
<td>Student</td>
<td>8.6</td>
<td>15.6</td>
<td>9.9</td>
</tr>
<tr>
<td>Unwilling to Work</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Unable to Work</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
</tr>
<tr>
<td>Over Age Not Work</td>
<td>0.6</td>
<td>1.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Not Stated</td>
<td>0.1</td>
<td>0.2</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Among UAE Nationals, almost 58% of males are employed, compared to 15% of females; both these figures are lower than those for their non-national counterparts. The percentage of males with student status is much higher for UAE nationals (almost eight fold higher than for expatriate males); among females, the percentage of student nationals is almost triple that of expatriate females. One important explanation for this is that the vast majority of the expatriate population is in UAE in order to participate in the workforce.

Figure 5 shows the female share of total labor force in comparison with males over time, which has gradually increased since 1980.
Figure 5: Female participation in labor force  
Source: Ministry of Economy, 2005
2.2.9 **Millennium Development Goals** (Millennium Development Goals UNDP Abu Dhabi, 2006)

The MDG report has 8 Goals, which have been agreed upon during the UN Millennium Summit in September 2000 and have been adopted by the government of UAE. Goals 2, 3, 5, and 6 in particular will play a role in the approach to women’s health.

- **Goal 1:** Eradicate extreme poverty and hunger
- **Goal 3:** Promote gender equality and empower women
- **Goal 5:** Improve maternal health
- **Goal 2:** Achieve universal primary education
- **Goal 4:** Reduce child mortality
- **Goal 6:** Combat HIV/AIDS, malaria and other diseases
- **Goal 7:** Ensure environmental sustainability
- **Goal 8:** Develop a global partnership for development

These goals should be met during a period of 25 years (1990-2015)

2.2.10 **General Description of the Health Care System:**

**Important UAE Demographic and Health Indices** (Human Development Report UNDP, 2006; UAE in Figures, Central Department of Statistics; Ministry of Economy, 2007):

- Human development index value (2004): 0.839 (49th).
- Crude birth rate (2005): 15.7/1000 population
- Crude death rate (2005): 1.54/1000 population
- Total fertility rate (2005): 2.07
- Gender ratio (2005): 216 males: 100 females
- Infant mortality rate (2005): 7.7/1000 live births
- Total fertility rate (2005): 2.07
- Life expectancy at birth (2006): M: 75.9 yrs.  F: 78.5 yrs
- MDG population with sustainable access to improved sanitation: 98%
- TB prevalence/100,000 people: 26

**Health Insurance System under HAAD in Abu Dhabi Emirate**

**A. The health insurance law:** issued by the Emirate of Abu Dhabi is the first step towards maintaining a global standard in health care and medical services for the capital. The new law will provide medical coverage for all expatriates working and residing in the Emirate. The new law will also cover all visitors staying legally for more than 2 months.

The health insurance scheme offers 3 kinds of policies for coverage:

- **Basic Health Insurance Policy** – for individuals with monthly salaries less than AED 4000 or AED 3000 plus housing allowance. The premium has been set at AED 600.

- **Enhanced Health Insurance Policy** – for all other individuals. These policies will include basic products plus additional coverage as per the agreement between the beneficiary and the insurance company.

- **Emergency Health Insurance Policy** – for all visitors to the Emirates in the event of an emergency. The premium will be set according to the duration of the visit and in consideration of the prices in the market.

The insurance policies will be valid for 1 year after the date of issuance and should be renewed annually (the insured are not entitled to claim back the premium). The health insurance scheme does not replace any existing obligation to procure insurance by way of Workers Compensation Coverage as per Law No. 8 for the year 1980. All employers and sponsors must still provide health insurance coverage as set within the Code of Regulations in excess to existing agreements with staff.
The Objectives of the Insurance Law are:

- To foster an efficient and competitive health insurance industry
- To protect the interests of all participants in the health insurance scheme
- To ensure the optimal utilisation of health insurance premiums for the level of benefits covered
- To promote the prudential safety of all participants in the health insurance scheme
- To provide appropriate health care for all participants in the health insurance scheme
- To support the private sector and encourage their active role
- To provide free choice of access to patients

B. Employer Obligations

All employers and sponsors are responsible for the procurement of health insurance coverage and possession of valid health insurance at all times for their employees and their families (1 spouse and 3 children under 18), inclusive of registration fees, as well as the cost of the policy and for the cost of all health care services that are provided to persons on his sponsorship in the event that such a person is not covered by a valid health insurance policy. Obtaining or renewing sponsorship of any resident expatriate will not be permitted without submitting evidence of a valid health insurance policy for the sponsored person to the relevant governmental organisations.

The law restricts the employer or sponsor from passing on the cost of providing health insurance to their employees and dependents, and such an act will be considered a violation of the law and shall hold the employer or sponsor subject to investigation and penalties. Complaints may be filed at the Complaints Unit at GAHS, if such a case occurs.

All companies within the Emirate of Abu Dhabi are expected to adhere to the health insurance law, given that due time and notice has been provided. A fair and severe list of punitive measures has been formulated and approved within the Code of Regulations for failure to comply with the law.

C. Insurance health program:

UAE Nationals

UAE Nationals started to enrol in the new health insurance program called “thiqa”. This insurance programme entitles UAE Nationals to a comprehensive range of healthcare services at all public and private sector healthcare facilities in the thiqa Network as of mid-2008. Enrolment in “thiqa” is free of charge for UAE Nationals of all ages. “thiqa” is managed by the National Health Insurance Company Daman and supported by the Health Authority – Abu Dhabi and SEHA.

For Expatriates:

In enquiring on the role of health insurance in relation to breast cancer from Daman Network Manager in Abu Dhabi, he explained that bearers of enhanced insurance were allowed free CBE and mammography starting from age 35 and above, once per year and that these services were conducted in three hospitals in Abu Dhabi; Al-Noor Hospital, Al Salama Hospital and Lifeline hospital, all private hospitals. In Al-Ain, two hospitals provided the same service for bearers with enhanced insurance; Al-Noor and Oasis Hospital, once again private hospitals.

Bearers with basic life insurance were not obliged these services free of cost.
The Health Authority Abu Dhabi (HAAD)

HAAD provides healthcare and establishes health policies in Abu Dhabi. HAAD expresses its vision as follows (www.haad.ae): “In the Emirate of Abu Dhabi, everyone has access to healthcare and freedom to choose their provider -

- An open system for all certified providers of health services delivers World-class quality care and outcomes in compliance with the highest international standards.
- A system encompassing the full spectrum of health - protecting, promoting, sustaining and restoring services across the territory of the Emirate.
- Quality driven by ambitious improvement targets set by the regulatory authority of the Emirate and reflected in the regularly monitored and published key performance indicators of the system.
- Providers are independent and predominantly private.
- The health system finances itself through a mandatory health insurance for all AD residents (more below).
- The financial system should be flexible in order to manage for change over time and the degree of subsidy should be managed as efficiently as possible.”

HAAD’s mission as a regulatory authority is stated as follows:

- “Ensure excellent quality healthcare for the community
- Define the strategy for the health system.
- Monitor & analyze the health status of the population and performance of the system
- Shape regulatory framework for the health system
- Inspect against regulations and enforce standards
- Encourage adoption of world-class quality & performance targets
- Plan capacities and service levels
- Drive programmers to improve societal health
- Define minimum standards for health service providers and health professionals
- Regulate scope of services and premiums & reimbursement rates of providers and payers.”
A. HAAD Health System - Overview:

In describing the health system adopted by the Health Authority Abu Dhabi, three main pillars are involved; the Population, the Providers and the Payer:

1. The Population: Understanding a person’s age, gender, nationality, health status and life expectancy as well as other indicators.
2. The Providers: Healthcare is delivered by licensed healthcare professionals in licensed healthcare facilities, collectively known as providers. Providers claim money from payers for the healthcare services they provide, and payers pay.
3. The Payers: Payers pay providers for healthcare services provided. Payers can be insurers, the government or patients themselves.

B. HAAD’s Public Health Functions (www.haad.ae/haad/tabid)

According to HAAD, Abu Dhabi has 3 main Public Health challenges:

1. Cardiovascular disease
2. Cancer
3. Road death (“Accidents” in Figure 6)

HAAD is responsible for promoting public health in Abu Dhabi. Public Health is the science of optimizing the overall health of a population based on continuous population health analysis. Many diseases are preventable through simple, non-medical methods like good sanitation, clean drinking water and food for communicable diseases, and health education on diet and exercise, legislations to ban tobacco smoking in public places, etc. for non-communicable diseases. Another aspect of public health is considering the impact of natural or built environments on human health. As such, public health authorities must address physical, chemical and biological factors that may impact human health or human behaviors. Occupational Health is a third sub-field of public health, which addresses the protection, health, safety and welfare of people at work and aims to promote and maintain the highest degree of physical, mental and social well being of workers in all occupations and to protect workers in their employment from risks adverse to their health. Lastly, Health Promotion - or helping people to improve their lifestyle and enabling them to have control in improving their health - is a very important responsibility that HAAD pursues in the realm of public health.

These functions are general to public health authorities in general, may differ from one country to another in contents according to finance and manpower. These same functions can be found under the MOH but programs differ slightly. HAAD is responsible for promoting these services in A.D.

C. HAAD’s Breast Cancer Work

HAAD envisions delivering world class breast cancer care to the residents of Abu Dhabi and is working to realize this vision through the patronage of her Highness Sheikha Fatima bint Mubarak as well as through international partnerships, such as with Susan G. Komen for the Cure and the Institute of International Education to implement the Global Initiative for Breast Cancer Awareness. International evidence-based studies have shown that effective screening has proven to save lives by detecting breast cancer earlier. In the UAE, at present, 64% of patients present with regional nodes and/ or metastases compared with 20% in the USA. It is planned that this percent will decrease with effective screening. To improve breast cancer outcomes, HAAD plans to:

1. Promote early detection through breast self exam (BSE) ( all women 20 years and above) and regular mammography screening once every 2 years from age 40 and above unless high risk, screening mammography is indicated once / year.
2. Increase utilization of mammogram machines for screening purposes and purchase additional units. HAAD calculated that seven mammogram units are required in the Emirate of Abu Dhabi to provide high-quality clinical care. Currently there are four in addition to other diagnostic equipment, although utilization is low. Increasing the utilization of the current capacity is a key priority.
3. To ensure high quality care, equip cancer networks to provide end- to- end capacity for diagnosis, investigation, treatment and follow up.
4. In regions with low population density, purchase and implement use of mobile units.
5. Invest in world-class treatment protocols.
MOH (Ministry of Health Annual Report, 2006; (www.moh.gov.ae)

The vision of the Health Ministry is, “Healthy individuals living in a supporting and sustaining health conscious and caring society.” Its mission is, “To provide a cost-effective, world-class standard of health care that is accessible to all people.” The MOH has federal responsibilities over the healthcare services for UAE as a whole, including managing the Northern Emirates healthcare system, excluding Dubai Emirate. The Minister of Health is His Excellency Humaid Al Qutami.

Curative services of the MOH are managed by the Central Departments at headquarters and corresponding departments in all medical districts. These departments prepare national plans and programs and supervise their implementation according to regulations and standards to ensure optimal performance.

Preventive services: The MOH also pays special attention to preventive and health promotion services through developing strategies and programs directed to mothers, children under five, as well as school children and other population groups at risk of certain health problems. Special programs have also been developed to cater to the prevention and control of infectious diseases in general and imported diseases and occupational health problems in particular. Health education and promotion is also given special attention to raise awareness and promote healthy lifestyles among the public. Some of the prominent programs included in preventive health services are the National Immunization program, which succeeded in eliminating polio completely from the country. They also include the Malaria Control program and Non-communicable disease program such as diabetes, cancer, cardiovascular, hypertension and obesity. The Sector also initiated a national tobacco control program to curb the tobacco use epidemic in the country MOH also offers Pharmacy and supply services as well as other supportive services.

In the past, the MOH supplied all UAE citizens and expatriates with a health card with which they could access medical services according to ministerial regulations. However, the health card no longer has a role in Abu Dhabi, since HAAD took over responsibility for public health in the Emirate and, as described above, as the health insurance under HAAD / SEHA are is now in effect. The only realms in which the MOH currently remains involved with the administration of medical services, regulation, and public health include theses services in the Northern Emirates i.e. Dubai, Shariqa, Fujairah, Ras AlKhatima, Umm AlQuwain and Ajman.

A. MOH Cancer Control and Prevention in UAE:

According to the MOH Annual Report, 2006, the four leading causes of death in the year 2005 were cardiovascular disease (21.8%), Accidental Injuries (17.4%), Cancers (8.8%) and Congenital Anomalies (6.2%). The top 4 cancers among the entire resident population in 2005 were Breast (20.2% of total cancer cases), Colon and rectum (9.7% of total cancer cases), Blood (9.2% of total cancer cases) and Bronchial (5.7% of total cancer cases). The most common 4 cancers among females in 2005 were Breast (38.6% of total cancer cases), Blood (7.2% of total cancer cases), Cervix uteri (6.7% of total cancer cases) and Colon and Rectum (6.1% of total cancer cases).

In light of these findings and earlier research on cancer death, the MOH has since the early 1980s encouraged screening and early detection of common cancers, and consolidated related programs into a National Cancer Program in 1997. This national cancer umbrella program currently includes a Breast Cancer Screening Program, a Cervical Cancer Early Detection Program, a Tobacco Control Program aiming to reduce Bronchial Cancer, and a health education program targeted at increasing awareness in the community about common health problems and risk-reduction.
The Breast Cancer Screening Program was implemented by the Federal Department of Maternal and Child Health in 1995 as a pilot project in a primary healthcare center in Abu Dhabi. It has since been expanded to Al Ain, Dubai, Sharjah, Western Region and Ras Al Khaimah. The program provides three levels of services: health education and training on breast self examination to all women eighteen years and older, annual clinical breast exam (CBE) screening of women 40 years and over, and a bilateral 2-view mammogram of women over 40 on a biannual basis. This program is completely free of charge for all women residents of UAE, regardless of their nationality or whether they have insurance.

Mammography Screening Centers are available in Dubai’s and Al Ain’s Preventive Medicine Departments and at the Abu Dhabi City National Screening Center for Women and Children. The number of women screened in UAE through the program from 1998 to 2004 gradually increased to 18,483 CBEs, and 18,166 mammograms in 2004. (N.B. These calculations are based on the total female population over 40 years of age in 2004, as reported in census data, and were not reported in the official MOH statistics). We would need the statistics from the Ministry of Economy to calculate the rate which we don’t have now. We can add that to the upgraded C.P. next year. The cancer detection rate for women ≥ 40 years was 6.00/1000. The highest cancer detection rate was in the 45-49 age group and ≥ 60 year age groups. On average 5% of women screened were referred to hospitals for further testing.

According to the MOH, barriers to breast cancer screening include

- Shortage in equipment and trained personnel.
- A curative rather than a preventive culture.
- Low propensity of physicians to advise women on screening for breast cancer.
- Low perceived breast cancer risk.
- Fatalistic beliefs.
- Fears of cancer.
- Misconceptions about screening.

2.2.10 Other Contributors to Healthcare

The private sector (At the moment, we don’t have such statistics. I imagine it might be obtainable but with difficulty. Also people tend to use both services depending on their income and insurance policies) plays a significant role in health care in UAE. In 2004, the private sector accounted for 56% of the overall health expenditures, and there were 1479 private clinics throughout the country. Table 6 below illustrates the number of hospitals and hospital beds administered by the private sector, as well as the number of individual medical staff members employed by the private sector, in 2004. The rows highlighted in yellow specifically reference data for the Emirate of Abu Dhabi – Abu Dhabi Island and City (“A.D.”), the Western Region of Abu Dhabi (“West”), and the Eastern Region of Abu Dhabi (“Al Ain”).

### Table 6: Number of hospitals, hospital beds and medical professionals in the private sector, UAE (Source - Ministry of Health 2005)

<table>
<thead>
<tr>
<th>District</th>
<th>Hospital</th>
<th>No. Beds</th>
<th>Manpower</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Doctrs</td>
</tr>
<tr>
<td>A.D.</td>
<td>7</td>
<td>285</td>
<td>455</td>
</tr>
<tr>
<td>West</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Al Ain</td>
<td>4</td>
<td>143</td>
<td>87</td>
</tr>
<tr>
<td>Dubai</td>
<td>13</td>
<td>421</td>
<td>356</td>
</tr>
<tr>
<td>Sharjah</td>
<td>3</td>
<td>140</td>
<td>164</td>
</tr>
<tr>
<td>Ajman</td>
<td>1</td>
<td>50</td>
<td>24</td>
</tr>
<tr>
<td>U.A.E.</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>R.A.K.</td>
<td>1</td>
<td>20</td>
<td>11</td>
</tr>
<tr>
<td>Fujaira</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Finally, other entities such as the Dubai Department of Health and Medical Services (established in 1972), the Dubai Healthcare City (established in 2002), and the Ministry of Defense’s Army Directorate of Medical Services all provide health care services to the specific populations under their jurisdiction.

2.2.11 The Higher National Committee for Breast Cancer Control in the UAE (HNCBCC):

The Higher National Committee for Breast Cancer Control was setup pursuant to the Ministerial By-Law No. 842 of 2006 as signed by H.E. the Minister of Health and promulgated on the 19th of October 2006.

The HNCBCC is made up of 16 women members drawn from and representing a number of governmental and semi governmental organizations and authorities.

The HNCBCC is privileged by the honorary Chairmanship of Her Highness Sheikha Fatima Bint Mubarak, may Allah protect and keep her.

VISION: To be the leading national committee in adopting and implementing an effective national program for breast cancer control according to internationally approved standards.

MISSION: To reduce breast cancer cases and deaths, and improve the quality of life of breast cancer patients in the UAE.

STRATEGIC OBJECTIVES: The HNCBCC affirms the following:

- Prevention of breast cancer
- Early diagnosis of breast cancer
- Provision of integrated treatment
- Provision of support services to cancer patient's and their families.
- Outreach to all population groups in UAE.

2.2.12 BREAST HEALTH AND BREAST CANCER STATISTICS

Breast Cancer Statistics

At the national level, breast cancer was the most common among the top ten cancers for the year 2005. It accounted for nearly 20.2% of all cancer and 38.6% of female cancers (Annual Report 2006, Preventive Medicine Sector, MOH).

The source of these breast cancer statistics is the National Cancer Registry at Tawam Hospital, in Al-Ain. All hospitals, both public and private, report directly to the Cancer Registry; however, it is suspected that this represents an under-reported number of cases. Most of the data were expressed in numbers and not in rates. Both of these factors limited the data collected for the community profile report.

The breast cancer incidence rate is the number of new cases of breast cancer in a population divided by the number of population over a given period. The available data on incidence rates provided by the National Cancer Registry was for the year 2005; there were no data available for 2006 or 2007 since there was not a true census.

Figure 7 shows female breast cancer incidence rates by age and nationality in 2005. Rates for non-nationals were higher across almost all ages; however in younger age groups, breast cancer was more common in nationals than in non nationals. Breast cancer incidence for national females peaked in the age group 40-44 years and above 60 years, with the highest rates reported among women 70-75 years old. Among non–nationals, the incidence rate increased steadily with age and peaked at 65-69 years.
Between the years 2005-2007, there were 628 new cases of breast cancer in UAE. Table 7 below shows the number of females and males affected with breast cancer during that period.

<table>
<thead>
<tr>
<th>Year</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2</td>
<td>242</td>
<td>244</td>
</tr>
<tr>
<td>2006</td>
<td>4</td>
<td>223</td>
<td>227</td>
</tr>
<tr>
<td>2007</td>
<td>4</td>
<td>153</td>
<td>157</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>618</td>
<td>628</td>
</tr>
</tbody>
</table>

Source: National Cancer Registry- Tawam Hospital in Affiliation with John Hopkins University
According to Figure 8, in the UAE, between the period 2005-2007 the majority of breast cancer cases resides in Abu Dhabi (46% of total number of cases of breast cancer in that period). This does not mean that breast cancer rate is higher in Abu Dhabi, but because, 38% of total population of UAE resides Abu Dhabi.

A. Stage at Diagnosis

Stage at diagnosis is a very important determinant of breast health as it affects the cure rate and treatment options. The earlier breast cancer is detected, the higher the 5-year survival rate.

The stages of breast cancer are classified as follows. *In situ* (Stage 0) cancer means there are malignant changes in cells but without penetration of the cell’s basement membrane or neighboring tissue. A *localized tumor* (Stage 1 and 2) means it is limited to the breast. A *regionalized tumor* (Stage 3) is a tumor that extends to other adjacent organs (skin above or muscle underneath) or lymph nodes. *Metastasis* (Stage 4) means the tumor has spread to remote organs such as liver, brain and others. If there is not sufficient information to determine the stage, it is labeled as “unknown.” A localized tumor is an early stage of the disease, and regionalized tumors and metastasis are considered late stages.

Unfortunately, out of all the breast cancer cases diagnosed in UAE between the years 2005 and 2007, more than 65% were presented for the first time at a late stage, whereas only approximately one-third were diagnosed at an early stage (see figure 9). There was no significant difference in the pattern of presentation between Nationals and non-Nationals.
Data on the distribution of breast cancer cases in the period 2005-2007 by emirate show that almost half (386) of the cases were women residing in the Abu Dhabi Emirate, one quarter in Dubai, and the rest in other emirates. The large load of cases from Abu Dhabi compared to other emirates could be due the fact that Abu Dhabi Emirate population makes up approximately 40% of the total population of UAE. In addition, the greater availability of functioning screening facilities might have led to increased cancer detection.

B. Cancer Mortality Rate:
Breast Cancer is a major health problem in UAE, representing the third leading cause of all population. It affects women in all age groups, including during the reproductive years.

There was no available data on mortality rates from the National Cancer Registry as there is no follow up; however, table 8 below shows reported deaths in 2005 and 2006 (Source: Annual Report 2006, Preventive Medicine Sector, MOH).

<table>
<thead>
<tr>
<th>Year</th>
<th>Age Group</th>
<th>15-44</th>
<th>45-59</th>
<th>&gt;60</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 Female</td>
<td>8</td>
<td>19</td>
<td>15</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>2006 Female</td>
<td>17</td>
<td>23</td>
<td>15</td>
<td>55</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Annual Report 2006, Preventive Medicine Sector, MOH

Breast Cancer Screening Services:
At the national level, the main provider of Breast Cancer Screening Service is the Ministry of Health. The Central Maternal and Child Health Department in the Ministry of Health took the initiative of introducing a National Breast Cancer Screening Program in 1995. Their mission was to reduce breast cancer mortality and improve the quality of life of affected females by delivering high quality breast screening to UAE females.

The program started in Abu Dhabi in 1997 as a pilot project. Expansion and installation of other Screening units took place in Abu Dhabi in 1997 at the National Health Screening Program for Woman and Child, in Al-Ain in 1998 at the Preventive Medicine Department PMD, in Dubai in 2001 at PMD, in Um El Quwain in 2006 at um AlQuwain Hospital, and in Sharja in 2006 at Mother and Child Health (MCH) Department.

Screening Guidelines
The National Breast Cancer Screening Program recommends the following screening guidelines:
1. Monthly self breast exam starting at the age of 20 years
2. Annual clinical breast exam (CBE) starting at the age of 40 years
3. Bilateral - two view- Mammography every 2 years for females 40 years and above
Females at high risk are entitled to closer surveillance; screening is started at 40 years or earlier and annual CBE and mammogram is recommended.

**Methods of recruitment of target women to the program**

- Referrals are mainly from Primary Health Care (PHC) centers and Mother and Child Centers (MCH).
- Recall
- Self referral
- Referral from other health institutions

**Recall and follow up**

- A computer system facilitates the recall of eligible clients on an annual or biennial basis.
- Women who need further assessment (positive screened cases) will be tracked and called for follow up until final diagnosis is reached, when they will either be discharged to normal screening rounds or referred to the hospitals for treatment

**Participation of target women 40 years and above**

The participation of targeted women in the screening program in UAE is very low. As shown in figure 10 below, only 10% of women in UAE have participated in the program. The overall goal of the program is to achieve a participation rate of 70% of target women by 2013.

**Figure 10: Participation rate of UAE targeted Women, 40yrs above, 1999-2006**

An overview of the National Breast Cancer Screening Program UAE, 2007

The bulk of participation in the program over the years comes from women in the Abu Dhabi Emirate, particularly Abu Dhabi City.

Figure 11 shows the number of CBE and screening Mammogram performed in different emirates.
Figure 11 Number of CBEs and Screening Mammograms performed in different Emirates, 2003-2007

An overview of the National Breast Cancer Screening Program UAE, 2007
3. COMMUNITY PROFILE METHODOLOGY

3.1. Community Profile Teams
Participants of the Course for the Cure™ in the three regions of the Emirate of Abu Dhabi played an important role in gathering data, especially for the Key Informant Interviews (KII), as well as information on breast health programs and services in their communities.
The HAAD Global Initiative Team facilitated the data collection process.

3.2. Segmentation
In order to focus the community profile, segmentation process was conducted as follows:
1. Three regions were identified in the Emirate of Abu Dhabi as the three target communities: Middle (including Abu Dhabi City), Eastern (Al-Ain), and Western (Al Garbeya) regions.
   This main segmentation was based on the unique characteristics of each region, which will be discussed later in detail. We believe that these unique characteristics are affecting identified gaps and their prioritization.
2. Further sub-segmentations within each community (region) have been conducted when applicable based on the following:
   - Geographic Distribution
   - Nationalities
   - Age
   - Employment
   - Educational Level
We believe these segments are affecting the outcome of the community profile of each region and will provide clear detailed description of the community in order to identify gaps.

3.3 Data Collection and Data Sources Overview

A. Demographic and Statistical data: This type of data was collected through available information from:
   - Ministry of Economy
   - Ministry of Planning
   - HAAD Statistical Department

B. Breast Health Programs and Services:
   - Some of this type of data was available through:
     - National Health Screening Program for Women and Child (Ministry of Health)
     - National Cancer Registry (Tawam Hospital)
     - HAAD, Public Health Department
   - Other information was gathered through a breast health providers’ survey, which was developed and conducted by the HAAD Global Initiative team and participants of the Course for the Cure™. The survey, conducted through one-on-one interviews, aimed to collect detailed information about the type of breast health services available at the specific provider.
     [See Appendix (I) Breast Health Provider Survey]

C. Key Informant Interviews (KII)
Key Informant Interviews (KII) were developed and translated into Arabic. The purpose of the KII and its questions was explained to the participants during a follow-up activity meeting. In addition KII’s also served to explain the criteria for being a key informant.
Key Informants were determined by the participants according to:
   - Their status in the community.
   - Their ability to have an impact and induce change.
   - Previous experience with them as sponsors or coordinators of events.

Key Informants include the following:
• Health professionals working in Breast Cancer field or other fields related to Breast Cancer, such as: Doctors, Nurses, Surgeons, Radiographers, Psychologists, etc.
• Survivors and Co–survivors
• Key persons and community leaders.
• Directors and Heads of Health Care Facilities (Governmental or Private) in each community
• University students, School Directors
• Housewives

Interviews were conducted by participants one-on-one in person or by telephone, or through a meeting with a group of key informants at the same time making them fill in questions after explanation.

[See Appendix (I), key informant interview KII]

Community’s Myths about Breast Cancer
This type of information was gathered through focus group discussions with participants of the Course for the Cure™.

3.4 Identifying and Prioritizing Gaps
From information gathered in the community profile, gaps were identified by reviewing the data: demographic and statistical data; breast health programs and services; and results from key informant interviews, surveys, and focus groups. Identification and summary of gaps follows. After collecting data, the HAAD Global Initiative team and Course for the Cure™ participants discussed how all the data fits together and combined the findings and to create a list of gaps from which the priorities were determined.

Discussions with participants within each community were conducted in order to organize and prioritize gaps. The team in each community determined which method they followed to organize, either by:

1. Program Area
   - Awareness & Education
   - Screening & Diagnosis
   - Treatment
   - Support groups & Services
   - Other Services
2. Community Profile Data Type
   - Demographics & Statistics
   - Program services & Assets
   - Qualitative data & Assets

After identifying the community gaps, the addressable issues were ranked through focus group discussions with participants in each community. Decisions had been taken in each community concerning the cut-off for number of priorities to be addressed in each community section.
The team in each community compared the severity of an issue to their ability to impact the issue. High priority gaps have a high rating for severity and a high rating for the teams’ ability to impact them.
Each team member identified what she considered to be the top issues based on the total number of issues the team agreed to identify. Each issue received a score based on the ranks given, which were averaged and then organized from high to low score. The top scores are the higher priorities.

3.5 Developing Goals & Objectives
After establishing the priorities, development of the strategic objectives and goals should follow to address the priorities identified.
The team developed one corresponding goal for each top priority
For each goal, objectives were identified fulfilling the following criteria:
  - Specific
  - Measurable
  - Attainable
  - Realistic
  - Time-bound
3.6. Limitations

- Time factor: If we had more time, we would be able to request further segmentation of the demographic data and to cover all Breast Health Providers in each community.
- Some of the data is not allowed to be collected according to Ministerial decrees, for example, population distribution according to nationality.
- Some problems were encountered in the Eastern Region in terms of collecting data related to Breast Cancer Statistics, which have been solved through sending official letters to heads of departments to request cooperation with participants from their organization.
- We faced trouble in data entry and analysis which delayed our progress in finishing community profile documents and submitting it at the appropriate time.
- All data related to Breast Cancer statistics from the National Cancer Registry are expressed in numbers not in rates, which make assessing trends of Breast Cancer difficult for the Emirate of Abu Dhabi.
4. COMMUNITY PROFILE FINDINGS

4.1 ABU DHABI ISLAND AND MIDDLE REGION
4.1.1 Overview of Community Context

**Abu Dhabi** literally means Father of gazelle.

Abu Dhabi is the capital and second most populous city in the United Arab Emirates (UAE), after Dubai. It is also the seat of government of the emirate of Abu Dhabi.

Abu Dhabi possesses 10% of the world's oil, 5% of its gas reserves, and produces 90% of oil in the U.A.E. The generated income has been purposely invested to create a first-class infrastructure and flourishing modern metropolis.

At the same time great effort has been taken to protect Abu Dhabi's natural scenic beauty and to preserve the authentic spirit of Arabia. The city is a unique mix of traditional Arabian charm and cosmopolitan sophistication.

**Economy:**

Key features of the economy in Abu Dhabi include the following:

- In 2005, the Emirate of Abu Dhabi experienced GDP growth of 11%.
- Abu Dhabi enjoys the highest income per capita in the world.
- No corporate, personal, income or withholding taxes are levied.
- No foreign exchange controls, quotas or trade barriers exist.
- Import duties are exceptionally competitive, with many products exempted.

**Urban / Rural Distribution:**

Abu Dhabi City is composed of two parts: the island and the mainland. The island is located less than a quarter-kilometer from the mainland and is joined to the mainland by two bridges: Maqta and Mussafah Bridges.

Most of the city is located on the island itself, but it has many suburbs on the mainland such as the Khalifa Cities, Between Two Bridges, and Mussafah Residential. So far this entire area outlines the urban part of Abu Dhabi.

The rural part is the rest of the midland which extends to Al Khatam toward the East (Al Ain) and Seih Al Shuaib towards the North (Dubai). This whole area is called the Middle Region. It is mainly composed of many residential areas, mostly inhabited by national families. These include Al Mafraq, Baniyas, al Wathba, Al Khatem, Al-Shahama, Al Bahia, Al Rahba, Ajban and others.

The urban part is heavily populated; however, Abu Dhabi’s rural population has grown faster than the city’s due to the expansion of residential units outside the city.
4.1.2. DEMOGRAPHICS:

Population Distribution

The total population of Abu Dhabi Island and Middle Region in 2005 was 823,288, (estimated in 2007 to be 993,241), which is almost 2/3 the population of the whole Emirate of Abu Dhabi (1,399,484). A large proportion of this population resides in Abu Dhabi Island.

Figures 4.1 and 4.2 show the population distribution by age, gender and nationality. It is evident that the nationals make up 28% of the total population compared to 72% non-Nationals. There are more males than females; the overall male to female ratio is 3:1. Among males, only 17% are nationals and the rest are non–nationals, mainly immigrant workers. About 23% of the population is under 15 years old. 76% of the population is between 15-64 years old, within the range of the labor force, and only 1% is above 65 years.

The total number of females in the population in this region was 291,549. Approximately 40% of them are under 20 years old. The target population for breast health services is women 20 years and older; therefore, the following demographic characteristics will focus on this group.

Women were further divided into two groups 20-39 years and 40-69 years for the profile due to different breast health needs. The National Breast Cancer Screening Program guidelines recommend that women aged 20 years and older should be educated about breast health and how to perform Breast Self Exams (BSE); women 40 years and older need to have regular breast screening (by mammogram) and clinical breast exams (CBE). The total number of women 20-39 years was 127,113 (43.4% of total female population) and the total number of women 40-69 years was 45,468 (15.6% of total female population).

The following figures (4.1 and 4.2) show the population pyramids of Abu Dhabi according to nationality and gender.

![National Population Pyramid]

Figure 4.1: Population pyramid of the national population, Abu Dhabi
Source: Health Statistics Department, HAAD, Census 2005
**Nationality and spoken languages:**

The following Table 4.1 shows the distribution of nationalities among our target population of female 20 years and above. It is obvious that Asians (mainly Indian, Pakistani, Bangladeshi and Filipino) are the largest proportion of this group (39%), followed by non-Emirate Arabs (31%), Emirate Nationals (23%) and other nationalities (7%). The “Other” category includes nationalities such as non-Arab African, North American, Central American and Caribbean, Oceanic or not-stated nationality.

<table>
<thead>
<tr>
<th>Nationality</th>
<th>20-39</th>
<th>% of total</th>
<th>40-69</th>
<th>% of total</th>
<th>Total</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>National</td>
<td>30,285</td>
<td>24</td>
<td>10,454</td>
<td>23</td>
<td>40,739</td>
<td>23</td>
</tr>
<tr>
<td>Arab</td>
<td>37,312</td>
<td>29</td>
<td>16,344</td>
<td>36</td>
<td>53,656</td>
<td>31</td>
</tr>
<tr>
<td>Asian</td>
<td>51,422</td>
<td>41</td>
<td>15,274</td>
<td>34</td>
<td>66,696</td>
<td>39</td>
</tr>
<tr>
<td>Other</td>
<td>8,094</td>
<td>6</td>
<td>3,386</td>
<td>7</td>
<td>11,438</td>
<td>7</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>127,113</strong></td>
<td><strong>100</strong></td>
<td><strong>45,468</strong></td>
<td><strong>100</strong></td>
<td><strong>172,581</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Health Statistics Department, HAAD, 2005 Census.

The total number of **women aged 40-69 years** is 45,468 (15.6% of all females). Of those, 36% are non-Emirate Arab, 34% Asian, 23% nationals and 7% other nationalities.
The total number of females aged 20-39 years was 127,113 (43.4% of all females). The majority are Asian 41%, followed by non-Emirate Arabs 29%, nationals 24% and other nationalities 8%.

Arabic is spoken as a mother tongue by nearly half of the women in this region, nationals and Arabs. Other common languages spoken include: Hindi, Urdu, Tagalog and Farsi. English is widely used by most nationalities as well. Knowing which the languages are spoken is important in order to prepare appropriate health education materials.

**Urban / Rural Distribution of Target Population:**

Abu Dhabi Island and its suburb areas are heavily populated. About 79% of our target women 20 years and older reside in the urban part of the region. 19% of women over 40 years live in the Middle Region (rural area), of whom the majority (70%) is nationals.

In the coming years, due to the rapid growth of the rural part of Abu Dhabi caused by the increase in annual tourist visits and residential units, one would expect the ratio of urban to rural women to change greatly.

**Educational Status:**

The percentage of illiterate women over the age of 20 was 7%. Illiteracy was higher in the older age group 40-69 years, 15%, compared to 5% in the group of women age 20-39 years. Among all women aged 40-69 years, illiteracy was higher among Nationals, (58%) than Non nationals (42%).

**Table 4.2.: Educational Status of female population 20 years and older, by age and nationality**

<table>
<thead>
<tr>
<th>Education Level</th>
<th>20 – 39 years</th>
<th>40-69 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>National N(%)</td>
<td>Non Nat N (%)</td>
</tr>
<tr>
<td>PhD</td>
<td>30285 (0.16)</td>
<td>96828 (0.2)</td>
</tr>
<tr>
<td>Master’s</td>
<td>169 (0.56)</td>
<td>1599 (1.7)</td>
</tr>
<tr>
<td>Bachelor’s</td>
<td>6335 (20.9)</td>
<td>22849 (23.6)</td>
</tr>
<tr>
<td>Higher Diploma</td>
<td>337 (1.11)</td>
<td>728 (0.75)</td>
</tr>
<tr>
<td>Diploma</td>
<td>2173 (7.2)</td>
<td>8050 (0.31)</td>
</tr>
<tr>
<td>Secondary</td>
<td>13655 (45.1)</td>
<td>29980 (31)</td>
</tr>
<tr>
<td>Preparatory</td>
<td>3675 (12.1)</td>
<td>9201 (9.5)</td>
</tr>
<tr>
<td>Primary</td>
<td>1579 (5.2)</td>
<td>6817 (7)</td>
</tr>
<tr>
<td>Can read &amp; write</td>
<td>1263 (4.2)</td>
<td>12171 (12.6)</td>
</tr>
<tr>
<td>Illiterate</td>
<td>1042 (3.4)</td>
<td>5227 (5.4)</td>
</tr>
<tr>
<td>Not Stated</td>
<td>13 (0.04)</td>
<td>17 (0.02)</td>
</tr>
</tbody>
</table>

Source: Health Statistics Department, HAAD, 2005 Census

This information is important to consider when designing appropriate health education and awareness programs, especially for the older group. Visual or verbal methods may be more useful in delivering breast health information.
**Marital status:**

As shown in the table below, a large proportion of women 15 years and older were married (64 %), while only 31% were single, and very few were widowed or divorced.

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Married</td>
<td>128525</td>
<td>64</td>
</tr>
<tr>
<td>Single</td>
<td>61298</td>
<td>31</td>
</tr>
<tr>
<td>Divorced</td>
<td>3826</td>
<td>2</td>
</tr>
<tr>
<td>Widow</td>
<td>5448</td>
<td>3</td>
</tr>
<tr>
<td>Not stated</td>
<td>995</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>291549</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Health Statistics Department, HAAD, 2005 Census

**Employment Status:**

Employment serves as a proxy for information on household income and insurance. All employed women, both Nationals and non-Nationals, are covered by health insurance. Only 40% of women 20 years and older were employed. The employment rate was higher among non-Nationals (30%) as compared to Nationals (17%). Only 30% of women in the age group 40-69 years were employed.

<table>
<thead>
<tr>
<th>Age group</th>
<th>20-39</th>
<th>40-69</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employment status</td>
<td>National N (%)</td>
<td>Non-Nationals N (%)</td>
<td>National N (%)</td>
</tr>
<tr>
<td>Student</td>
<td>4714(16)</td>
<td>4639(4.8)</td>
<td>7(0.07)</td>
</tr>
<tr>
<td>Employed</td>
<td>8318(27.5)</td>
<td>46672(48.2)</td>
<td>985(9.4)</td>
</tr>
<tr>
<td>Unpaid Housework</td>
<td>15552(51.3)</td>
<td>40938(42.3)</td>
<td>8477(81.1)</td>
</tr>
<tr>
<td>Unemployed and Previously Employed</td>
<td>183(0.6)</td>
<td>590(0.61)</td>
<td>119(1.14)</td>
</tr>
<tr>
<td>Unemployed and Never Previously Employed</td>
<td>845(2.8)</td>
<td>3016(3.1)</td>
<td>16(0.15)</td>
</tr>
<tr>
<td>Unable to Work</td>
<td>75(0.3)</td>
<td>425(0.44)</td>
<td>222(2.12)</td>
</tr>
<tr>
<td>Unwilling to Work</td>
<td>598(1.97)</td>
<td>548(0.57)</td>
<td>112(1.07)</td>
</tr>
<tr>
<td>&gt; 65 years old and Not Working</td>
<td>516(4.95)</td>
<td>506(1.44)</td>
<td>1022(0.5)</td>
</tr>
<tr>
<td>Grand Total</td>
<td>30285 (100)</td>
<td>96828 (100)</td>
<td>10454(100)</td>
</tr>
</tbody>
</table>

Source: Health Statistics Department, HAAD, 2005 Census
Insurance:

Data on health insurance policy and regulation in the emirate of Abu Dhabi was mentioned in detail in the country overview.

The percentage of insured females in this region is not available; however, knowing that about 99.8% of all the non-national population residing in Abu Dhabi emirate were insured by the end of last year 2007, we estimate that that majority, if not all, non-national women are insured (Health Statistics 2007, HAAD). Coverage policies vary and depend mainly on monthly income for main applicant.

Nationals have always been provided with free healthcare services, regardless of employment status. In mid-2008, a new health insurance policy was started for Nationals called “Thiqa,” which covers Nationals of all ages, regardless of employment status. This insurance policy also included a free annual health check, or “Weqaya,” which means in Arabic “prevention” or “screening” – through this check, patients are tested for cholesterol level, diabetes, blood pressure and body mass index.

In summary:

For the target population of women 20 years and older, the 2005 Census shows that:

- The total number of women aged 40-69 years is 45,468 (15.6% of all females). Of those, 36% are non-Emirate Arab, 34% Asian (mainly Indian, Pakistani, Bangladeshi and Filipino), 23% Emirate nationals and 7% other nationalities. They are largely located on Abu Dhabi Island. 19% reside in the Middle region and, of those, the majority is nationals. About 15% are illiterate and illiteracy was higher among Nationals compared to Non-Nationals. Only 30% of these women are employed.

- The total number of females aged 20-39 years was 127,113 (43.4% of all female). The majority are Asian 41%, followed by non-Emirate Arabs 29%, nationals 24% and other nationality 8%. They are mostly located on Abu Dhabi Island. About 5% are illiterate and 43% are employed.
4.1.3 BREAST HEALTH AND BREAST CANCER STATISTICS

Breast Cancer Statistics

The source of the breast cancer statistics that follow here is the National Cancer Registry at Tawam Hospital, in Al Ain. As explained earlier in the country overview, expression of most data was in numbers, not in rates, and this was a barrier to accurate analysis of the data.

In the Abu Dhabi Emirate, there were 386 cases of breast cancer in the period 2005-2007. Most of them were females and only two were males. Further break down of these cases by Abu Dhabi Emirate’s regions showed that 70% were from Abu Dhabi City and the remaining 30% from Al Ain City. There were no registered cases from Western region, and only one from the Islands. This does not mean that there is no breast cancer in these two regions; due to the lack of breast cancer facilities there, most suspected cases were referred to Abu Dhabi City and therefore were included in Abu Dhabi City’s statistics.

The break down by nationality for the 386 cases from Abu Dhabi Emirate is shown below in Figure (4.3). Almost half (48%) of the breast cancer new cases during that period were non Emirate Arabs, 26% were Emirati (Nationals and 19% Asians

Figure 4.3: Breast cancer by nationality, Abu Dhabi, 2005-2007

National Cancer Registry- Tawam Hospital in Affiliation with John Hopkins University
The incidence rate per nationality per year was roughly calculated, table 4.5. It is clear that the highest rate was among non Emirati Arabs, followed by other nationalities, then Emirati Nationals and the lowest rate was for Asian

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Total Female population</th>
<th>New Breast cancer cases diagnosed 2005-2007</th>
<th>Average number of new breast cancer case yearly</th>
<th>Rate per 100,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nationals</td>
<td>81,181</td>
<td>99</td>
<td>33</td>
<td>41</td>
</tr>
<tr>
<td>Arabs</td>
<td>76,229</td>
<td>185</td>
<td>62</td>
<td>81</td>
</tr>
<tr>
<td>Asian</td>
<td>98,471</td>
<td>73</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Others</td>
<td>17,588</td>
<td>29</td>
<td>10</td>
<td>57</td>
</tr>
</tbody>
</table>

Most of these cases (more than 64%) presented late, either with regional extension of the breast cancer (Stage 3) or metastasis to other organs (Stage 4).

There was apparently no difference in presentation stage between nationals and non nationals, as shown in figure (4.4)

Figure 4.4: Stage of breast cancer by nationality, Abu Dhabi 2005-2007

Cancer Mortality

Little information was available on breast cancer mortality; these statistics were mentioned in the country overview.

Type of screening services provided

Types of screening services differ by provider; please refer to Breast Healthcare Provider Directory, Appendix II A.
Broadly speaking breast screening services available in this Region are:

- Breast Self Exam (BSE) education for women age 20 years and above
- Annual clinical breast exam (CBE) starting from age of 40 years
- Bilateral - two view- Mammography every one-two years starting from age 40 years

Services tend to be concentrated in Abu Dhabi City, but are also available in some rural communities in the Middle Region, except the Mammogram.

**Frequency of breast cancer screening by Mammogram and CBE**

All the following data were obtained from the National Breast Cancer Screening Program, Abu Dhabi, the main provider of breast cancer screening services in the region.

In Abu Dhabi City, Island and the Middle region, through the years 1999 to 2007 there were 17,800 Clinical Breast Exams (CBEs) performed mainly by general practitioners or specialists at Primary Health Care (PHC) Centers and Mother and Child Health (MCH) Centers. 23,849 screening Mammograms were performed. Figure (4.5) show number of CBEs and mammograms performed over this period.

![Figure 4.5: Number of Women screened in Abu Dhabi City by CBE and Mammogram, 1999-2006](image)

As is apparent, the number of women receiving screening mammograms generally increased throughout the years 1999 to 2007. This could be partly due to the awareness campaigns organized by the program, which led to increased awareness of community members about breast cancer and the importance of screening mammogram as the best tool of early detection, as well as the natural increase in female population over the years.

PHC centers were the main channel for recruiting women to access screening. Due to the shift in the administration of PHC centers from the Ministry of Health to HAAD (then called the Abu Dhabi General Authority of Health Services), the number of CBEs was significantly affected and reduced.

However, the participation of targeted women in the screening program in Abu Dhabi was continuously very low, as shown in figure (4.6). The participation rate is the percentage of women screened out of the total target population (40 years and older). Barriers affecting uptake of screening will be discussed in detail later in the key informant findings section.
The participation rate per nationality of target women 40-69 years in the Central Region was calculated in order to visualize which nationality is utilizing the screening facility least. The participation rate is defined as the number of women screened of a particular nationality divide by number of target women (40-69 years) of the same nationality. Data of number of screened women by nationality group in 2005 were obtained from the National Breast Cancer Screening Program and participation rate per nationality was calculated. As shown in figure (3.7), the most common clients the Program in the year 2005 are Emirati women (8% of target Emirati women) followed by other nationalities, then non-Emirate Arabs. Asian women took advantage of the service least (3.2% of total target Asian women).

In this facility Hindi, Urdu and Tagalog are spoken by staff and screening is provided for all free. Two possible explanations for under-utilization by Asians could be a lack of awareness or accessibility difficulties, as they are more likely to be employed.
4.1.4 BREAST HEALTH PROGRAMS AND SERVICES

Early detection through breast cancer screening and effective early treatment is the best tool currently available to reduce deaths resulting from breast cancer. This section provides a snapshot of the breast health programs and the different public and private facilities that provide breast health care in Abu Dhabi’s Island and Middle Region.

A directory of breast healthcare providers was compiled and is available in Appendix II. Some information was collected by the participants of the Course for the Cure™ trainings in Abu Dhabi City using surveys; see Appendix I. However, time did not permit the collection of data from all healthcare providers as such we also relied on data collected by the HAAD Public Health team (HAAD breast cancer screening facilities 2007- Abu Dhabi).

Below is a map (figure 4.8) showing all health care providers in Abu Dhabi Emirate. Abu Dhabi the Island is magnified for better visualization

![Figure 4.8. Abu Dhabi Health Facilities location](image)

Source: Health Statistics 2007, HAAD

Health facilities were distributed according to population density. It is clear from this map that most health facilities are located on Abu Dhabi Island, a few are in the Middle Region and Eastern Region, and a small number are broadly scattered in the Western Region. Women may have to travel 30-90 minutes to reach some breast health services, including breast screening services or radiotherapy. Public transport is not widely used by women to travel long distances; either they will
wait to be taken by a relative (according to his schedule) or drive themselves all the way. This could form an accessibility obstacle.

The following sections provide an overview of the different components of breast healthcare in this Region: Education, Screening, Treatment and Support Services. Some related key informant comments were incorporated.

**Education**

Health education in Abu Dhabi is mainly limited to health care providers and a few other scarce sources such as universities or websites. This could be because most people trust doctors or nurses to provide health information and see them as credible sources. There is no consistent information or messages given by providers; information on breast health markedly varies especially with regard to the screening guidelines. Few healthcare providers such as hospitals and clinics (public and private) provide breast health education throughout the year; some only provide breast health education during October, the breast cancer awareness month, or during specific breast health campaigns.

The information provided by healthcare providers is mostly general information about breast cancer: how to perform breast self examinations and tools for early detection. There is less information on other breast providers, for example, where to go for a mammogram, what to do if you find a breast lump, how to find out about breast cancer treatment options, or how co-survivors can support a relative or friend with breast cancer.

Almost all the educational materials used are in Arabic or English. Since Asians constitute 39% of the target population (women 20 years and above), this is a gap, and future outreach efforts must take into account their language needs.

Common methods of disseminating information by healthcare providers include the use of educational printed materials, lectures, campaigns, and mobile clinics. However, these methods have only contributed so far to limited awareness-raising, as there evidenced by consistent underutilization of screening by target women. Other widespread methods should be considered, using various audio visual tools especially given the higher illiteracy rate among women 40 years and above or for women with special needs. Key informants described the currently used tools for education as classic methods and they would like to see more widespread methods such as TV, radio, SMS and Friday prayers being used to spread information about breast cancer.

Key informants (Emiratis, Arabs and Asians) have suggested the need to visit women at their workplace, in their neighborhoods or at their homes to inform them about breast cancer. The women (friends, family, and neighbors) could gather in a large living room (Majlis) to ensure their privacy to listen to stories from breast cancer survivors and information from female health professionals or health educators speaking in their own language. A similar Project is been conducted by the Family Development Foundation in Abu Dhabi "AlFurjan", in which local expert women disseminate different Health related issues, visiting different residential area (fareej) talking to the women in home-based setting.

Breast health education materials, in general, target women age 20 and above. Some key informants believe that adolescent and high school girls also need this information and feel that breast health information should be incorporated into school and university curriculums. These girls could also serve as messengers of breast health information to their mothers and female siblings.

Men need to be educated as well because men are often the decision makers in the family and will encourage and support the women in their family to go for regular checkups.

**Screening services**

Early detection is a key factor in improving the outcomes of breast cancer. The most effective tool for early detection is a screening mammogram. This section provides information on the facilities which provide screening mammography services.
A map of Abu Dhabi Emirate below (Figure 4.9) shows all the public and private facilities which offer mammography services. Most public and private hospitals offer diagnostic mammograms. Only a few provide screening mammograms. The green boxes below correspond to facilities that provide screening mammograms and the number shown (1 or 2) corresponds to the number of mammogram machines in the facility.

**Figure 4.9.: Health Providers, Abu Dhabi**

1 – at Marfa Hospital MCH (HAAD), not in use due to lack of staff training. Machine needs to be reassembled by General Electric

1 – at Madinat Zayed Hospital (HAAD), brand new but conventional type, not in use due to lack of radiographers & lack of radiologist training

1 – at Marfa Hospital MCH (HAAD), not in use due to lack of staff training. Machine needs to be reassembled by General Electric

1 – at NMC (private); diagnostic

1 – Al Noor Hospital (private); diagnostic

1 – at SKMC (HAAD); diagnostic

1 – Al-Salama Hospital (private); diagnostic

1 – Al-Nahyan Clinic, Central MCH (MOH); screening

1 – Al Bateen Clinic (HAAD), screening

1 – at Al Noor Hospital (private); diagnostic

1 – Corniche Hospital (private); diagnostic

1 – Al Nahyan Clinic, Central MCH (MOH); screening

1 – Al Bateen Clinic (HAAD), screening

1 – PHC ? (HAAD); not manned/not functional

1 – Tawam (private); diagnostic

1 – Corniche Hospital (private); diagnostic

1 – NMC (private); diagnostic

1 – Tawam (private); diagnostic

1 – Corniche Hospital (private); diagnostic


Screening mammogram is provided in two governmental facilities located in Abu Dhabi that serve the Island and Middle Regions. Other hospitals, both private and governmental, are providing mainly diagnostic mammograms.

Government screening facilities include:
1. The National Health Screening Program for Women and Children- under Central MCH Department , Ministry of Health ( Federal Organization)
2. Sheikh Khalifa Medical City (SKMC) Hospital and Al Bateen Clinic; both belong to Seha (Abu Dhabi Emirate government).

**The National Health Screening Program for Women and Children (NHSPWC):**

NHSPWC (referred in the map as Al Nahayan, Clinic) the main provider for screening services at the level of the Emirates and in Abu Dhabi. It is the only facility that has a proper screening program that includes clear guidelines for screening, assessment of positive cases and a recall system to track women. It provides screening services to all UAE residents, nationals and non-nationals, free of charge. The program has two conventional mammography machines; the theoretical capacity of the program is 8000 mammogram per year, but the actual utilization yearly is no more than 38% only.
Sheikh Khalifa Medical City- Hospital (SKMC)

There is an excellent digital Mammogram Machine in SKMC. However, it provides mainly diagnostic mammograms. Its screening service is restricted to Nationals and SKMC staff only. There is no recall or active follow-up. There is no self referral; women should be either referred by SKMC or PHC doctors. Mammogram is by booking only; there is no walk-in system and appointments are often delayed. Theoretically, it can perform 3,132 mammograms per year but the actual utilization is 197 per year, which is very low. The screening guideline recommends an annual mammogram beginning at age 40 years. CBE is not part of the services offered at the hospital.

SKMC- Al Bateen Clinic:

This is one of the Primary Health Care centers operated by SKMC. It has a digital mammogram machine and conditions are similar to the SKMC facility. The actual capacity is very low. All screening mammograms are sent to SKMC- Hospital for reading.

All healthcare providers providing screening or diagnostic mammograms (except the NHSPWC Program) require cash payments or insurance coverage. In October 2007, during the first National Campaign against Breast Cancer, some private facilities offered mammograms at discounted rates (50% - 90% cheaper). In April 2008, it was announced that women covered by the National Health Insurance Company, Daman, are entitled to receive free annual clinical examinations, radiology and laboratory investigations for breast cancer provided by certain healthcare providers within Daman’s network. Unfortunately, these benefits are only for women with an enhanced insurance plan (21% of insurance holders).

Taking into account the number of women over age 40, we need an estimated three mammography units in this region with a total capacity of 8,000 mammograms per year (Health Statistics Section HAAD; Public Health team analysis, 2007). Currently, there is only one functional unit (in view of the satisfaction of the minimum requirement for a screening facility). This unit, however, is underutilized.

Accessibility could be another reason for the low uptake of mammograms. The working hours of this unit are short and not accessible to those who live in the Middle region (travel time 30-45 minutes by car).

Many women are also unaware of the existence of this screening unit. Only a few key informants knew about this facility. Many informants did not know where to go for screening and some mentioned the private sector.

Culture is another major barrier but not the only one. According to key informants, the idea of screening is considered somewhat new, some health professionals and community members believe that if you are healthy there is no need to screen. The belief is that people should go for checkups only when they have some specific complaints or symptoms.

Shyness and unease when talking about cancer or female body parts, modesty and a fatalist attitude towards health are also factors that prevent women from going for regular checkups. These barriers were shared by many key informants of different nationalities. There are as well misconceptions, myths about breast cancer that add to the barriers.

The new HAAD plan in collaboration with Seha (Abu Dhabi Emirate government) to provide world-class breast cancer services was mentioned earlier in the discussion of the health care system in Abu Dhabi. To summarize, that plan includes a regional center in Tawam Hospital, Al Ain that provides screening and treatment, in addition to seven local screening mammography units distributed in the Emirate's Regions. The Western region will be provided with a Mobile unit for proper coverage of the area.
Treatment

In this region, there are four facilities providing cancer treatment. There are two facilities located in the Island; one is a public tertiary hospital, Sheikh Khalifa Medical City (SKMC) and the other is Al Noor private hospital. In the Middle Region, there is Al Mafraq hospital, which is a public tertiary hospital and Gulf International Cancer Center, which is private. There are several other private healthcare facilities that are not specialized centers and provide only surgical treatment. Zayed Military Hospital provides cancer treatment but only for military personnel and their families.

The types of services provided at each facility are mentioned in the directory (refer to Appendix II). None of the healthcare providers above offer the full range of cancer treatments. Radiotherapy and/or reconstructive surgery is not available most of the time.

Cancer treatment is very costly and is provided free only for Nationals. Non Nationals using government facilities are required to have Daman Insurance or pay out of pocket, which is not affordable for many patients. Some key informants said that low income expatriate women often either go back to their home country for cheaper treatment or seek local healers.

Cancer treatment in Abu Dhabi, in general, meets international standards. One UAE National informant said: "We are considered a rapidly developing country. The government is investing a lot of money to improve health services. We have experienced national staff. We bring in international experts and our hospitals and clinics are fully equipped.”

Some key informants, however, were not satisfied with the treatment provided. They cited a lack of expertise, lack of facilities, difficulty in getting appointments, long waiting times, a lack of female doctors, and a mistrust of the available healthcare services.

Some key informants, both Nationals and Non Nationals, said that they would prefer to go abroad for treatment because of mistrust of the healthcare providers or because they were not aware that treatment options are available in Abu Dhabi.

Support Services:

Support services for breast cancer patients are very limited. Support services are essential to breast cancer patients and their family but are sometimes regarded as a luxury. Providing support to newly diagnosed breast cancer patients can be a lifesaver not just physically but emotionally. Support services include the provision of child care, transportation to treatment centers, and many other services.

Survivors mentioned during interviews that they didn’t get help when needed. They had a lot of questions but no one to turn to for help and answers. They wanted to know why they had cancer, what the appropriate treatment options were, whether treatment was available in the UAE or they needed to travel abroad, what food they should eat, and what side effects they might experience and how to manage them. Support services should be incorporated into multidisciplinary treatment teams, and there should be other support groups that are not linked to the hospitals.

There are two support groups in Abu Dhabi. One is “SKMC Breast Cancer Support Group,” which belongs to Sheikh Khalifa Medical City (SKMC). They meet every third Thursday of the month at 11am. The other support group is Bosom Buddies, which works closely with Al Noor Hospital.

Breast prosthesis is only available at Al Mafraq hospital in the Middle Region.
4.1.5 KEY INFORMANT INTERVIEWS

The key informant questionnaire was developed by the Global Initiative for Breast Cancer Awareness team in Arabic and English; see Appendix I. 146 key informants were interviewed by the participants of the Course for the Cure™ in Abu Dhabi City from March-June 2008. Key informants were interviewed face-to-face or through telephone calls. Some data was collected as a survey questionnaire administered by participants at their workplace or in community meetings.

The key informants comprised health professionals, breast cancer survivors /co-survivors and community members who understand and represent their communities. There were 36 health professionals – doctors, nurses, health educators and technicians from the private and public sector, 10 survivors and co-survivors, one program/hospital administrator, two HAAD officials and 96 community leaders and members.

We attempted to capture an accurate community profile despite the time constraints. The community members interviewed were chosen to represent different community segments: different nationalities (UAE Nationals, non-Emirati Arabs, Asians and others), age groups (20-39 and 40-69 years), genders, locations (urban and rural) and employment statuses (housewives and employed).

The following are demographic characteristics of the key informants interviewed. Most of them are females (86%) and only 14 % are males. More than half (56%) of the key informant are between 20-39 years, 41% are between 40-69 years, and only 3% are 70 years and above. 31% are Nationals, 47% Arabs, 17% Asians and 5% are from other nationalities. The majority (83%) was employed and resides in the urban part. They have different level of education, varying from primary school to post-graduate degrees, and 4% are illiterate.

The information from the key informant interviews should not be generalized. They reflect the opinions of the informants and are helpful in identifying women with the greatest needs and gaps in breast health services. The findings are presented in the order that the questions were asked.

Health concerns:

Key informants were asked to identify the major health problem of concern in the UAE, especially in Abu Dhabi. The answers arranged in order of frequency include:

- Diabetes Mellitus
- Hypertension
- Obesity
- All Cancers
- Breast cancer
- Asthma/allergy
- Stress

Source of Breast Health information:

Key informants were asked about the community’s preferred source of breast health information.

- Doctors were mentioned by nearly all informants as a credible source of breast health information, followed by nurses, friends and family, survivors and co-survivors, Internet and TV. There was no significant difference in preference among different nationalities.

- Doctors were mentioned most frequently as the person someone in the community would seek for breast health information, followed by the media or internet, survivors and co-survivors, nurses, friends and family. Two key informants (illiterate housewives, one national and the other Arab and a breast cancer survivor) mentioned local healers as a source of breast health information.
TV was mentioned repeatedly as the most effective method of disseminating breast health information, followed by SMS, and an expert or a survivor speaking to women in their own language in women-only gatherings. Other methods mentioned included posters, brochures, newspapers and radio.

A unique comment made by a young, well-educated, employed National woman living in Abu Dhabi Island regarding methods of dissemination of breast health information was: "Booths located in the shopping malls wouldn't reach our target women 40 and elder, especially nationals, yet it is culturally not accepted and could be embarrassing even for younger women. Instead of reaching all women, one could consider partnership or cooperation with beauty salons, perfume shops or ladies’ clothing shops. Breast cancer awareness logo placed on various products or carrying bags and educational materials could be used”.

Groups in greatest need:

Key informants were asked to highlight groups of women within their communities whom they thought were in need of breast health resources. These women in need could be segmented based on age, nationality, socioeconomic status or geographic location. Age was frequently pointed out as a determinant of need. Other groups that were highlighted included women 40 years and older, young women 20 years above, schoolgirls, illiterate women, low income women, house helpers, housewives, women in rural areas, UAE National women and women at high risk of breast cancer.

Obstacles and barriers:

The reasons for the underutilization of health services and late breast cancer presentation in the UAE are complex. Several themes have surfaced and these are related to the accessibility of services, the lack of awareness, cost, fear or cultural factors. Each barrier was then further analyzed in order to identify the real barriers. Appendix III, describes the barriers in some of the identified needy segments.

Over all, the following barriers were identified by all key informants as the most important ones and were arranged according to severity:

- The biggest barrier was FEAR. Women fear being diagnosed with breast cancer and therefore losing their breast.
- Lack of awareness. Women are unaware about the screening service or that it could save lives and the locations of the facilities providing screening services. Awareness activities and campaigns are limited and do not reach targeted women.
- Cultural barriers. Women refused to be examined by male doctors, surgeons and radiologists. Pessimism and shyness were also barriers.
- Ignorance and delay due to busy schedule was a significant behavioral factor.
- Cost and accessibility was mentioned last.

Common myths and beliefs about breast cancer:

The question of myths and beliefs was added midway through the data collection process because the team and participants of the Global Initiative for Breast Cancer Awareness felt that this was a major barrier for utilization of breast health services, and that such information should be collected and addressed in designing awareness activities. As a result, only a few key informants answered this question. However, information from the focus group discussion with our participants, who are also key informants, is included here.

- Breast cancer is a death sentence
- Breast cancer treatment makes women lose their femininity and beauty as she could lose her breast and hair
- Breast cancer is contagious
- It is a test of faith
- It is a curse or punishment from God for doing bad deeds.
- Mastectomy is a disfigurement of God’s creation. It is preferable to die intact rather than to be treated.
- Breast cancer is caused by bad/evil eye caused by “envy”.
- Thinking or talking about breast cancer can evoke it
- Under wired brassieres or even an ordinary bra can cause breast cancer
• Repeated mammograms can cause breast cancer
• Daughters of women who have/had breast cancer will surely have breast cancer themselves and this affects the daughter’s marriage / chances of marriage
• A breast biopsy spreads the cancer or turns a benign lump to malignant.

About the Healthcare System

A. Screening services:

• Key informants were asked about methods of payment for breast health services in this region. The most frequent answers were that payments were fully paid by insurance or provided free; however, Asian women stated that women either paid from their own pocket or could not afford breast health services. Survivors speaking from experience said that breast health services require full-coverage insurance or else one has to pay from one’s own pocket. Housewives were not very clear on payment for breast health services but think that it is fully covered.

• Although the National Health Screening Program for Women and Children provides breast screening free of charge for all women, when key informants were asked where low income or limited insurance women go for screening, only a few, including healthcare providers, pointed to the program. The most frequent answers were government facilities but this is a general statement and could indicate that they don’t know. Interestingly, a young well educated Filipino women who work as a health worker said their first choice is to return to their country for cheaper service. “Mostly women who suspect to have a lump on their breast will first go back to their country to check with a doctor and perform investigations at a reduced price.” An Arab male middle aged doctor and an illiterate middle-aged Arabic housewife said that low income women probably would seek advice from local healers. Two Arab women, a survivor and a co survivor, said they sought screening from private healthcare providers.

• Nearly all the key informants believe that a large number of women 40 years and above have not had a mammogram.

B: Treatment

• The majority of key informants believe that breast cancer treatment is available in Abu Dhabi and the Middle Region.

• However they point out that treatment is not available to all women. The main reasons which explain why not all women receive treatment in Abu Dhabi were, according to severity, include:

1. Treatment of breast cancer is expensive
2. Insurance companies don’t fully cover cost
3. Deficient facilities
4. Late presentation of breast cancer
5. Mistrust of service providers

Arabs, health workers and survivors believe that the reason treatment is not available to everyone is cost. In the private sector, treatment is very expensive, and government hospitals require "Daman" insurance. Many insurance companies do not cover breast cancer treatment so patients have to pay out of their own pocket. Despite the fact that treatment is free for nationals, one National woman mentioned that due to a mistrust of local health care providers, she would rather go abroad for treatment if she was diagnosed with cancer.

A large number of key informants stated that the hospitals were deficient, and not all treatment options were available at one facility. Radiotherapy breast cancer patients have to travel to Tawam hospital in Al-Ain (nearly 150 Km away from Abu Dhabi) for treatment or pay from their own pocket to get treatment from a private hospital in Abu Dhabi.
C. Satisfaction of Healthcare system:

Key informants were asked to rate the present healthcare system in meeting community needs for breast health care and treatment. The majority of non nationals (70%) and Nationals (75%) believe it is “adequate” or “successful”. One National woman commented that "we are supposed to be a fast developing country and the government is spending a lot to improve health services. We have experienced national staff, bring in international experts and our hospitals and clinics are well equipped." Two Asian women comment that "the health care system achieves great so far."

However, some key informants expressed that they are less than satisfied with the healthcare system:

- A non National Asian, middle age nurse working in al Mafraq hospital said "The health system is trying to meet the demands of the increasing incidence and increasing number of breast cancer cases but the current situation is that there is a real problem of cost of treatment."
- A middle age National, illiterate housewife living in the Middle Region said "Healthcare system is successful, our hospitals are tidy and fully equipped but the problem is the language - no Arabic-speaking staff and ER should be improved."
- A 61 year old educated Arab housewife, who is also a survivor, said “From my experience Daman insurance failed to meet needs; it complicated the process of treatment approval and made treatment difficult in government facilities, besides shortage of staff and long waiting hours."
- A middle age Arab doctor said, "It is successful in screening but below average in treatment."
- A young, educated, employed National woman said, "Health promotion and awareness activities are not adequate."
- Some National women, housewives and employed, said they are satisfied with services provided but "Waiting hours at hospital are long."

D. Recommendations:

The recommendations of the key informants were summarized into four themes: raise awareness, provide free or fully insured breast health services, improve healthcare services and provide support services for breast cancer patients. The first two themes were mentioned frequently.

Informants’ recommendations:

- Raise community awareness about breast cancer and service providers. Awareness activities should target all community, school girls 15-18 years old, young and old, women and men.
- Reach women everywhere at home through talks or workshops held in homes. Reach women in the workplace. Involve employers in organizations with a large number of female staff and arrange free community service, send women to screening centers for CBE and free mammogram or arrange workplace training.
- Healthcare providers should be convinced about the importance of screening and early detection. Awareness and training should target healthcare providers as well.
- Make periodic breast cancer screening part of routine annual checkups for the renewal of insurance
- Breast cancer screening and treatment should be offered to all women and should be fully covered by insurance. Corporations, companies working in beauty products, or pharmaceutical companies could share the responsibility of covering expenses.
- Improve the healthcare system. Recruit more female doctors, bring in more experts, train healthcare providers, use international standards for care and have enough equipment.
- Hospitals providing treatment should have all specialties and treatment modalities available. Or at least provide transport and accommodation for patients when they are referred to other hospitals.
- Institute integrated breast cancer centers that provide full-service from screening to treatment and support service.
- Provide all kinds of support services to breast cancer patients and family: support groups, financial support, prosthesis and other.
- Fund research centers for breast and all cancers.
- Administer a database for breast cancer, including the statistics and genetics of breast cancer in the country.
4.1.6 IDENTIFIED GAPS AND STRATEGIC GOALS AND OBJECTIVES

This section highlights gaps and assets identified in the community profile, and describes the prioritization process of these gaps as well as suggested strategic goals and objectives. Gaps and assets were collected according to community profile data, section by section.

3.6.1. Identified Gaps

1. Demographic data showed that:

   • Asian women make up a significant proportion (39%) of non-Arabic speaking communities in our target population (20 years and above). These women represent several cultures and have different needs and methods of approach and communication. There are many different spoken languages in these communities; common ones are Hindi, Urdu, Tagalog and Farsi.
   • High illiteracy rate in target group 40-69 years old, especially common among National women. Methods used for disseminating health information should be designed particularly to overcome this problem.
   • Rural area heavily populated with nationals. Community outreach program should address nationals in this area.
   • The proportion of women in formal employment is low; this could affect the household income and coverage by insurance

2. Breast health and breast cancer statistics showed:

   • Difficulty in obtaining breast cancer incidence and mortality statistics. It is vital to have a proper national cancer registry that is up-to-date with all information, because it would be of great help in the interpretation of trends and would provide valuable information for planning and evaluation of early detection and treatment programs.
   • Female breast cancer incidence rate for non-nationals was higher across almost all ages; however in younger ages, it is more common in nationals compared to non nationales. Generally incidence increased with increasing age; for nationals the incidence rate peaked at 40-44 years and 60-64 years. It is worth considering breast screening at an earlier age, starting at 35 years (5 years before).
   • Analysis of Abu Dhabi female breast cancer cases by nationality showed that rates were highest among Arabs, followed by other nationalities, then Nationals, and was least for Asian women.
   • Regardless of nationality, more than 64% of breast cancer cases presented late, when the chance of being cured is low and mortality is high. Early breast cancer detection and effective treatment is the solution - it increases the 5 years survival rate and results in better quality of life.
   • There is marked underutilization of the available free services at the National breast cancer screening program, especially among Asian women. Reasons could be that women are unaware of the existence of this facility, it is too far for people in the rural areas to travel, or limited working hours exclude employed women’s participation, in addition to lack of awareness and cultural barriers.

3. Breast health program and services:

   • Information on breast health from different health providers markedly varies, especially with regard to the screening guidelines. There should be collaboration between these providers in order to coordinate and produce consistent messages and approved guidelines.
   • Health education is only intense during October, which leads to dramatic increase in number of mammograms in this month only and low in the rest of the year. Health education should be a continual process and addressing the whole community including young women and men
   • Use of culturally acceptable methods for breast health promotion and different methods that reach to all.
   • Fewer screening facilities than needed and only confined to the Island. More facilities needed accessible to all.
   • Screening and Treatment is costly, and should be included in all insurance plans.
   • Government facilities providing treatment accept only Daman insurance; otherwise patient pays from her own pocket. It is recommended considering variety of other insurance companies.
   • There is not one hospital or center that has all main treatment modalities in one place; patients have to travel to more than one center to have treatment.
• Support services are not considered in the plan of breast cancer health care. This service is very deficient in this area. Apart from the two support group existing; Sheikh Khalifa Medical City support group and Bosom Buddies, no other support services are available.

4. Key informant interviews:

It is important to draw attention to barriers, common myths on breast cancer and end users satisfaction on breast health care system in order to plan and deliver effective breast health care services.

• Barriers that affect utilization of breast screening services:
  o Lack of awareness of existing facilities, tools of early detection and importance of early treatment
  o Fear from diagnosis of breast cancer and losing the breast
  o Cultural barriers, shyness and refusal of examination by a male doctor, fatalistic, modesty and pessimism.
  o Ignorance due to busy life or work schedule
  o Cost of screening and treatment

• Common myths and beliefs on breast cancer: most prevalent are
  o Breast cancer equals to death
  o Breast cancer treatment affects women femininity
  o Breast cancer is a curse or due to bad /evil eye

• Dissatisfaction of breast health care was due to the following gaps:
  o Expensive services (screening and treatment) that are not covered by insurance
  o Lack of healthcare providers, doctors and nurses on breast cancer screening
  o Deficient facilities, in number, lack of female doctors providing breast health care, lack of expertise, lack of some specialties, lack of rapport and long waiting hours and appointment.
  o Distrust of providers

Assets:

• UAE is a rapidly developing rich country. Abu Dhabi Government invests a lot in improving health care system.
• HAAD’s approach and vision in delivering world class breast cancer care. Plan was discussed earlier in the screening section.
• UAE is the first Arab country implementing a National Breast Cancer Screening Program.
• The Screening facility at the National Health Screening Program for Women and Children can serve as a successful existing model to structure new screening facilities.
• The presence of four facilities providing breast cancer treatment in this region.
• The new insurance policy for Nationals, "Weqaya". One can include as well breast cancer screening in the routine checkups. Extension of this service to all insurance companies would serve our goal of free screening for all.
• There is a great attention drawn to the crisis of breast cancer from different organizations and individuals; most important is the support of Sheikha Fatima bint Mubarak- mother of the Emirates to the breast cancer initiative.
• The partnership with Susan G. Komen for the Cure and the Institute of International Education and implementation the program of "the Global Initiative for Breast Cancer Awareness."
• The partnership with local organizations in this Initiative can play an important role in advocacy efforts and the collaboration of multiple organizations.

Gap Prioritization:

Identifying gaps was achieved by a meeting with the participants of the “Course for the Cure™” in Abu Dhabi Island and Middle Region. A presentation was made on the community report findings, highlighting all gaps and assets in each section (demographics, breast cancer statistics, health services and key informant findings). Important gaps were then discussed and summarized. A total of ten gaps were chosen and participants were asked to rate them from 1-5 according to severity of the issue and our ability to impact them. The total scores were calculated and the highest three scored gaps were identified to have high priority. The strategic goals and objectives were then drafted.

The list of ten gaps identified by the participants was:
  1. Lack of community awareness on breast cancer, especially tools of early detection
2. Lack of health providers’ awareness or ignorance of importance of screening for early detection of breast cancer
3. Not enough screening facilities
4. Breast cancer awareness activities and campaigns are concentrated only in one month, during October
5. Under-utilization of existing services- women unaware about the location and free services available
6. Shyness of women aggravated by a lack of female health workers in screening and treatment
7. Fear due to misconceptions about breast cancer (it is a death sentence and requires losing breast)
8. Breast cancer treatment is costly
9. Lack of trust of healthcare system
10. Late presentation of breast cancer

Among all, the prioritized gaps were (arranged in rank):

1. Lack of community awareness on breast cancer, especially tools for early detection
2. Late presentation of breast cancer
3. Fear due to misconceptions about breast cancer (“it is a death sentence and requires losing breast”)

4.1.7 Strategic Goals and objectives:

Goals:

1. Increase overall awareness of breast cancer and early detection among all nationalities

Objectives:

a) Conduct "Workplace training," in six organizations with large proportions of female workers in Abu Dhabi City, both in Arabic and English within the next six months.

b) Collaborate with Family Development Foundation in "Ferjan" project to incorporate dissemination of breast health information to their plan. It includes visiting different residential areas, inviting a minimum of 30 women of the same area in one of the big famous family houses to conduct informal meetings or workshops by local experts or survivors, in six fareej areas in Abu Dhabi city and six in six residential cities in the Middle region, each within the next 12 months.

c) Conduct basic breast health workshops for three Asian communities: Indian, Pakistani and Filipino, with a minimum of two meetings per group over a period of one year, targeting 100 women of each community.

d) Conduct one-day courses on breast cancer for University/College female students in 12 Universities within the next 12 months.

e) Arrange with the Ministry of Islamic affairs to train a religious leader who conducts informal meetings with men once every Friday in different mosques for three months.

2. Increase screening rates among all women 40 and over

a. Advocate free or fully covered mammograms by contacting all insurance companies in the coming three months

b. Advocate including breast screening in the program of "Waqaya" for Nationals

c. A compulsory or accredited one day course for all health care providers (doctors and nurses), government and private, on breast screening. Target 30 providers in each workshop once every month for one year

d. Obligate each female PHC doctor to send a minimum of 30 women a month for screening by including it as a requirement in her annual evaluation report

3. Reduce fear due to misconceptions about breast cancer

a. Produce a short TV/Radio spot that discusses one myth on breast cancer and how to change it, inviting community members and experts for 15 minutes over three months and can be repeated periodically.

b. Recruit at least one female radiologist in each screening facility and women surgeon in each hospital in the next year

c. Use survivors as speakers in meetings or workshops
4.2 EASTERN REGION (AL AIN)
Introduction to Eastern Region (Al Ain) Community

4.2.1 Geography
Al Ain is a fertile oasis city located in the Eastern Region approximately 160 kilometers east of the Abu Dhabi City. Its name ("the spring" in Arabic) derives from its originally plentiful supply of fresh water, which makes its way underground across most of the plain lying before the Omani mountains. Covering 12,955 km2, Al Ain is surrounded by mountains from the East and Empty Quarter desert from the southwest.

Al Ain is linked to Abu Dhabi City and Dubai by six-lane dual carriageways, and travel to either city generally takes about one and a half hours.

Commerce and Industry
Al Ain is an important services centre for a wide area extending into neighboring Oman. There are two major shopping centers, Al Ain Mall and Al Jimi Mall, as well as traditional souks for fruit and vegetables and livestock. Industry is growing, but still small scale, and includes the Coca Cola bottling plant and a cement works. Service industries such as car sales, mechanics and other artisans are located in the area known as Sanaiya. Social and governmental infrastructure includes United Arab Emirates University, Higher colleges of Technology, well-equipped medical facilities, including the teaching hospital at Tawam and Al Ain Hospital.

Urban and Rural Areas of Eastern Region
The Eastern Region is divided basically into urban and rural areas. The Eastern region has thirty-one urban areas and twenty-three rural areas. Most of the rural areas are about 40-60 km from the centre of the Eastern region. On the other hand, most of the urban areas are close to each other; by about 10-20 km distance.

4.2.2 Demographic Findings
In 2005, the Eastern region female population was 446058 females. Table 4.2.1 shows that Eastern Region’s female population represents about 35.5% of the total female population of Abu Dhabi Emirate (2005 census).

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<th>Location</th>
<th>National Females</th>
<th>Non-National Females</th>
<th>Total</th>
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Table (4.2.1) Female Population of Abu Dhabi Emirate and Eastern Region (Census 2005) (Breakdown by nationality)

As mentioned in the methodology section, a breakdown of the total population by gender and age-group categories has been conducted. The main age-group categories considered for the purposes of this profile (see previous discussion of “target populations”) are 20-39yrs and 40-69 yrs.
Female Population of Eastern Region  
(Breakdown By Age Group & Nationality)

<table>
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<tr>
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Table 4.2.2: Distribution of female population in Eastern Region according to age group and nationality

Regarding Table 4.2.2, the total population for both age categories is 87,586 females; the younger age group (20-39) constitutes 77%, and the older age group (40-69) constitutes about 23% of the female population of both age groups in the Eastern region. (Census 2005.)

In relation to geographical distribution of female population, about 73.8% of females (aged 20-39) are living in the urban areas of the Eastern region, and only 26.2% are living in the rural areas. For females aged 40-69, the same applies, as most of them, 74.2%, are living in urban areas, and only 25.8% are living in rural areas. Refer to Table 4.2.3 and Table 4.2.4.
### Table 4.2.3: Eastern Region female population at the Urban Areas (Break down by age groups & nationalities), Census 2005

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**Table (4.2.4): Eastern Region female population at the Rural Areas (Break down by age groups & nationalities) Census 2005**

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Figure 4.2.2 below shows the Eastern Region female population broken down by nationality and age group. National females account for about 40.7% of total female population of both age categories, followed by Asians (31.5%) and Arabs (22.2%).

![Female Population of The Eastern Region (census 2005) (Breakdown by Age Group & Nationality)](chart.png)
In general, the illiteracy rate is higher among females aged 40-69 at 32.6% than in females aged 20-39 for whom the percentage is 19.7%.

According to the 2005 census, the illiteracy rate within 20-39 age group is much higher among the Non-National (24.7%) than the National females (2.7%). The reason is that most of Non-National females in this group are working as house workers and are not educated.

The case is the opposite within the (40-69) age group, as the percentage of illiteracy is higher among National females (41%), than the Non-National females (30.8%). The oldest National females are not educated and they are housewives, whereas the oldest highly educated Non-National females are mostly teachers or working in the universities and colleges.

The total percentage of highly educated (Graduate / Post Graduate) National females (18.4%) is higher than Non-National females (10%) of the age group (29-39). The case is the opposite in the older age group (40-69), where the Non-National females have a higher percentage (17.1%) of high education than National females (6.3%).

Please refer to table (4.2.5) which illustrates the educational status for the Eastern Region female population.

<table>
<thead>
<tr>
<th>Educational status</th>
<th>National</th>
<th>Non National</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>1382</td>
<td>42393</td>
<td>43775</td>
</tr>
<tr>
<td>Read/write</td>
<td>1721</td>
<td>34225</td>
<td>35945</td>
</tr>
<tr>
<td>Primary</td>
<td>3650</td>
<td>23712</td>
<td>27362</td>
</tr>
<tr>
<td>Preparatory</td>
<td>8303</td>
<td>24810</td>
<td>33113</td>
</tr>
<tr>
<td>Secondary</td>
<td>25755</td>
<td>29409</td>
<td>55164</td>
</tr>
<tr>
<td>Graduate</td>
<td>8899</td>
<td>16375</td>
<td>25274</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>296</td>
<td>917</td>
<td>1213</td>
</tr>
<tr>
<td>Not stated</td>
<td>3</td>
<td>9</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>50009</td>
<td>171850</td>
<td>221858</td>
</tr>
</tbody>
</table>

Table 4.2.5: Educational status for the Eastern Region female population

Please refer to figure 4.2.3 and 4.2.4, which illustrate the employment status for the Eastern Region female population according to age.
Employed National females represent 15.9% of National females aged (20-39yrs), and only 4.4% of those aged (40-69 yrs). In relation to employment status, most of the National females for both age groups do housework only.

The case is totally different for Non-National females, where the percentage of employment is 58% and 43.6% for the two age groups respectively. 32% of National females aged 20-39 yrs are students, where as only 4.7% of Non-National females are students of the same age group (20-39 yrs).
A health insurance system was implemented recently (April, 2008) for all UAE Nationals for the Emirate of Abu-Dhabi. Previously all health services were free for UAE Nationals.

The health insurance system is active for Non-Nationals since 2007 for the Emirate of Abu Dhabi. It is obligatory by law for all Organizations (Governmental or Private) to have health insurance coverage for all their employees. In addition they have to cover also the employee’s family if the monthly salary is equal to or greater than 4000 AED.

4.2.3. Breast Health and Breast Cancer Statistics

In reference to Breast Cancer Statistics of Abu Dhabi Emirate, it has been mentioned that 70% were from Abu Dhabi city and the remaining 30% from Eastern Region (Al Ain City).

No specific detailed breast cancer statistics related to the Eastern Region is available, so please refer to the section of Breast Cancer Statistics in the Introduction section. As noted there, cases are registered according to where the diagnosis is conducted rather than where the women reside, if no tracking of patients’ residency is conducted.

Information specific to the Eastern Region is available about the following:
- Types of available breast cancer screening services
- Frequency of breast cancer screening with mammography and clinical exams.

It will be presented on the following sections of Programs and Services and Directory of Programs and Services.

4.2.4. Programs and Services

Program and Services Overview

A. Governmental Health Facilities

Tawam Hospital – (in affiliation with John Hopkins),
It is a tertiary, Oncology hospital for all the Emirates, where Radiotherapy, Surgery, and Oncology departments are available.

A mobile Mammography Unit is available at Tawam Hospital. It was launched on April 2008 to target rural areas of the Eastern Region, in addition to other areas of Abu-Dhabi Emirate.

Recently, a Breast Health Care Centre was opened within Tawam hospital complex, with comprehensive services for Breast Health Care, including:
- Screening & Diagnostic Mammogram Unit (Conventional/ Lorad, Hological)
- Stereotactic Biopsy Unit
- Breast Ultrasound
- Spaces for clinical examination and psychological support consultations.

Breast Health Statistics
- Number of Mammograms conducted in 2006 was 1300 (Screening+ Diagnostic). The mammogram capacity is 20 patients/day.
- Please refer to table (4.2.6) for Breast Clinic Statistics at Tawam Hospital for the period (2001-2005), showing the total number of cases for screening, diagnosis and treatment seen at the clinic. The main role of Tawam hospital was as a tertiary hospital for diagnosis and treatment of positive cases of breast cancer, but during the last two years, there has been a shift toward prevention and screening services. That can explain the previous numbers as combined for screening, diagnosis, and treatment, without available separated information.
Table 4.2.6: Breast Clinic Statistics (Tawam Hospital) (2001-2005)
Number of cases seen in the clinic for Screening, Diagnosis and Treatment

<table>
<thead>
<tr>
<th>Month / Year</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
<th>2005</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>JAN</td>
<td>40</td>
<td>70</td>
<td>105</td>
<td>125</td>
<td>131</td>
<td>471</td>
</tr>
<tr>
<td>FEB</td>
<td>45</td>
<td>73</td>
<td>108</td>
<td>100</td>
<td>97</td>
<td>423</td>
</tr>
<tr>
<td>MAR</td>
<td>58</td>
<td>108</td>
<td>176</td>
<td>177</td>
<td>124</td>
<td>643</td>
</tr>
<tr>
<td>APR</td>
<td>58</td>
<td>99</td>
<td>127</td>
<td>150</td>
<td>108</td>
<td>542</td>
</tr>
<tr>
<td>MAY</td>
<td>17</td>
<td>64</td>
<td>129</td>
<td>112</td>
<td>176</td>
<td>498</td>
</tr>
<tr>
<td>JUNE</td>
<td>62</td>
<td>136</td>
<td>157</td>
<td>128</td>
<td>108</td>
<td>591</td>
</tr>
<tr>
<td>JULY</td>
<td>48</td>
<td>0</td>
<td>0</td>
<td>106</td>
<td>120</td>
<td>274</td>
</tr>
<tr>
<td>AUG</td>
<td>50</td>
<td>145</td>
<td>141</td>
<td>102</td>
<td>6</td>
<td>444</td>
</tr>
<tr>
<td>SEPT</td>
<td>68</td>
<td>110</td>
<td>103</td>
<td>92</td>
<td>122</td>
<td>495</td>
</tr>
<tr>
<td>OCT</td>
<td>51</td>
<td>99</td>
<td>142</td>
<td>104</td>
<td>96</td>
<td>492</td>
</tr>
<tr>
<td>NOV</td>
<td>73</td>
<td>110</td>
<td>144</td>
<td>60</td>
<td>126</td>
<td>513</td>
</tr>
<tr>
<td>DEC</td>
<td>57</td>
<td>82</td>
<td>196</td>
<td>88</td>
<td>123</td>
<td>546</td>
</tr>
<tr>
<td>TOTAL</td>
<td>627</td>
<td>1096</td>
<td>1528</td>
<td>1344</td>
<td>1337</td>
<td>5932</td>
</tr>
</tbody>
</table>

Al Ain Hospital – (in affiliation with Vamed Health Company and University of Vienna)

It is a well known hospital in the Eastern Region, and is still known by its former public name (Al-Jimi Hospital).

There is only one Diagnostic Mammogram Unit in place (Conventional/ Siemens MammoMat 300 model). The facility is used mainly for diagnostic purposes and does not have a screening program. Patients are referred for diagnosis by mammogram for any suspected cases of breast cancer by their physicians.

- Breast Health Statistics
  There are no official figures on the number of cases of diagnostic mammograms, but it is estimated to be around 200 patients for year 2006, according to informal information.

Preventive Medicine Department

This facility is the only facility with a properly functioning screening program in the Eastern Region. There is a screening MammoMat Unit (Digital/Senographe 2000D model). This facility is facilitating screening for all referral cases from different facilities in the Eastern Region. A Call-Recall system is implemented.

This facility lacks space and staffing as there is only one treating physician, one non-dedicated radiographer and four staff assigned for follow-up. The mammogram screening capacity for this available unit is around twenty females per day.

- Breast Health Statistics
  - Number of screened women in 2006 was 632
Table (4.2.7) and its explanatory graph shows Breast Cancer Statistics of the Eastern Region over the period (2003-2007), related to Preventive Medicine Department (PMD) and Primary Health Care Centers (PHCs) in the Eastern Region.

The statistics shows the following parameters which have been conducted among PMD and PHCs in the period between (2003-2007):
- Number of Health Education Sessions,
- Number of Clinical Breast Examination (CBE)
- Number of Mammography Appointments
- Number of Mammography conducted
- Number of Referred positive cases
- Number of Cancer cases

Comments:
- Health education sessions are conducted through one-on-one or small group education sessions with women and educators at the PHCs or PMD. The majority are conducted at the PHCs, where there are more females visiting these centers from all Eastern region areas.
- The number of screening mammograms conducted versus appointments made is striking, as most of the females do not go to their appointments, possibly due to the following:
  - Women are not convinced about the benefit of doing mammograms
  - Women have fears and worries about breast cancer and the risk of radiation
  - Long waiting list for the appointments
  - Some females are living far away from PMD where mammogram unit is available, restricting them from coming

Table 4.2.7: Breast Cancer Statistics Eastern Region 2003 -2007
Preventive Medicine Department (PMD) and Primary Health Care Centers (PHCs)

<table>
<thead>
<tr>
<th>Year</th>
<th>Health Education Sessions</th>
<th>CBEs</th>
<th>Mammogram Appointments</th>
<th>Mammograms conducted</th>
<th>Referred Cases</th>
<th>Cancer Diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>4964</td>
<td>2738</td>
<td>975</td>
<td>991</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2004</td>
<td>4822</td>
<td>1504</td>
<td>745</td>
<td>56</td>
<td>29</td>
<td>3</td>
</tr>
<tr>
<td>2005</td>
<td>3071</td>
<td>1020</td>
<td>858</td>
<td>122</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td>2006</td>
<td>4393</td>
<td>892</td>
<td>632</td>
<td>130</td>
<td>26</td>
<td>4</td>
</tr>
<tr>
<td>2007</td>
<td>4213</td>
<td>1455</td>
<td>927</td>
<td>236</td>
<td>23</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>21463</td>
<td>7599</td>
<td>4137</td>
<td>635</td>
<td>93</td>
<td>16</td>
</tr>
</tbody>
</table>
Primary Health Care Centers (PHCs)

There are about 21 Primary Health Care Centers (PHCs) in all areas of the Eastern Region, in addition to the Police Clinic and the Military clinic at Military Hospital. All of these PHCs and the two clinics have the following breast health services:

1. Health education services about BSE, importance of early detection, CBE and mammogram.
2. Clinical Breast Examination conducted by a health professional.
3. Arranging referral to Mammogram to the assigned facility and booking appointment, and later on communicating the result with the female.
4. Involved in the recall system for CBE and mammogram screening.

Breast Health Statistics
Statistics have been represented previously in the statistics related to Preventive Medicine Department.

Police Clinic (Medical Services – Ministry of Interior)
This clinic serves only Police department staff, and their families.
In this facility breast health services are available, including:
- Health Education about BSE and other issues related to breast health.
- Conducting Clinical Breast Examination by a GP female
- Referral for screening mammogram at Preventive Medicine Department.

Breast Health Statistics
- Number of CBE conducted in 2007 was 26.
- Number of women referred to mammogram screenings in 2007 was 26.
B. Private Facilities

There are two main private hospitals in the Eastern region with diagnostic mammography units. Both facilities have no screening program and no call-recall system; they are mainly for diagnostic purposes.

No further data is available about the availability of Breast Health Services in the rest of the Private health facilities in the Eastern region.

- Breast Health Statistics
  Number of diagnostic mammograms conducted in 2006 was 75 for Emirates International Hospital, and 6 for Specialized Medical Care Hospital.

4.2.4 Directory of Programs and Services

This section includes two directories: please refer to Appendix II

Directory (1): Programs and Services (with Mammogram Unit)
Directory (2): Programs and Services (without Mammogram Unit)

4.2.5 Qualitative Data Findings

Key Informant Interviews

Two hundred and two key informant interviews were conducted using an interview guide as was mentioned in the methodology section. Most of the key informant interviews were conducted in Arabic. Some were translated in English through the volunteer interviewers.

- 59.4% of the key informants were UAE nationals, 36.6% Arabs, and about 4% Asians. The fact that only four informants were from Asian nationalities was due to the fact that the interviewers (participants in the Course for the Cure) are Arabs and chose informants from their communities and that there was a language barrier. This segment will be further researched in future versions of the Community Profile.
- Two age categories were included: 20-39 and ≥40. 26.7% of respondents were forty and above and the majority (73%) was 20-39 yrs of age.
- 189 informants were community members and 13 were healthcare providers.

Key Informants were identified among the following categories:
- Health professionals working in Breast Cancer fields or other fields related to Breast Cancer, such as: Doctors, Nurses, Surgeons, Radiographers, Psychologist, etc.
- Survivors and Co-survivors
- Key persons and community leaders.
- Directors and Heads of Health Care Facilities (Governmental or Private) in each community
- University students, School Directors
- Housewives

Interviews were conducted by participants in one-on-one interviews (in person or by telephone conversation), or through meetings with a group of key informants and asking them to respond to questions after explanation.
Key Informant Responses:

Major Health Concerns

Key informants were asked about the major health concerns in the UAE. The most frequently mentioned issues, in order, were:

- (40.5%) - Diabetes
- (22.7%) - Cancer
- (20%) - Hypertension
- (17.8%) - Obesity
- (15.8%) - Asthma
- (9.9%) - Breast & cervical cancer
- (7.4%) - Cardiovascular diseases
- (6.4%) - Blood disorders
- (16.8%) - Others: Bone & joint diseases, Dyslipidemia, Renal failure, Genetic diseases, Immunity disorders, Allergic disorders, etc.

Sources of Health Information

Key informants were asked about which people are the most credible in their community to give health information or breast cancer information. The results were as follows:

- Doctors were mentioned as the primary and most credible people for health information in about 90% of all responses, followed by breast cancer patients (18.8%) and family members or friends (12.9%).
- Again doctors were mentioned most often as the person (85.6%), to whom someone in the community would most likely go to for breast health information followed by survivors and co-survivors and then by nurses.
- Booklets were mentioned most often (38.6%) as the most effective ways to disseminate breast health information, followed by television, posters, radio, SMS on mobiles, newspaper, internet, lectures and group discussions.

Groups in greatest need

Key informants were asked to identify which female groups have the greatest need for breast health services and thus should be focused on. The most frequently mentioned groups, in order, were:

- Women above 40 yrs of age
- Women in the age category of 30-39 yrs of age.
- Housewives
- Women in the age category of 20-29 yrs of age.
- Illiterate
- Women with Family History of Breast cancer.
- Women with limited income.

Obstacles & Barriers

Key informants were asked to identify which obstacles and barriers in their communities are restricting females from using available breast health programs and services. This has been summarized under five main categories including: access, cost, fear, education / awareness and cultural / behavioral.

The main results are as follow:

1. Access Barriers to access to breast cancer services included:
   
   - Working hours for breast health services are limited, especially for screening mammograms and for working women.
   - No public transport, especially for females in rural areas where it is too far to travel to available breast health providers, or no suitable transportation, as some rural females described: "Public
Transport is uncomfortable and insecure for us as females to use, as most of the users are working males and the distance is far.”

- Long waiting list for getting appointments for screenings or diagnostic mammograms.
- Language barriers for non-Arab and non-English speakers.
- No services for women with special needs.

2. Cost

- Cost of the services doesn't seem to be a problem in the community as screening services are free for all nationalities.
- However, there are still some ladies who are not aware of the free screening services or are not aware that screening mammogram is covered under insurance for insured ladies.

3. Fear

- Most of the informants reported that fear is one of the biggest obstacles or barriers to breast health services.
- Most common sources of fear, in order of prevalence, are as follows:
  - Fear of losing a breast due to cancer detection.
  - Fear of seeking medical help, going to the doctor.
  - Fear of discovering breast cancer.
  - Fear from previous experiences they heard about from other women in screening or treatment.
  - Fear that repeated mammogram causes breast cancer.

4. Education / Awareness

Most common mentioned obstacles to Education / Awareness, in order were:

- Awareness programs are not accessible to all.
- Majority of people are not aware about breast cancer and how serious it is, so they are not interested in updating their knowledge about this issue, nor will they seek screening or pursue risk-reduction.
- Majority of ladies are unaware of availability of breast health services: free screening, treatment options.
- Not aware about screening methods; to detect breast cancer in its early stages through regular screening.
- Absence of breast cancer awareness programs.
- Absence of breast cancer awareness programs in different languages, which is creating a barrier for large target groups such as Asian Females who do not speak Arabic or English.

5. Cultural / Behavioral

- Cultural and behavioral beliefs usually play a crucial role in acceptance of the community for breast health services.
- The most common beliefs which have been mentioned as obstacles, in order, were:
  1. Shyness (75.1%) of exposing the breasts, for clinical examination or for conducting mammography. In addition to that some females are shy about discussing any issue related to the breast.
  2. Pessimism (69.8%)
  3. Fatalism (57.4%)
  4. Unease talking about cancer, especially breast cancer.
  5. Delaying seeking help due to busy schedule.
  6. Seeking local healer help.
  7. Modesty, refusal to be examined by male doctor.
8. Husband or family objecting to examination.

- Some ladies mentioned some specific beliefs such as:
  - Belief that breast cancer is communicable disease, so they fear if they go to the doctor / center they will catch it.
  - Lack of confidence in female health professionals.
  - It is punishment from God, and they should not interfere.
  - It is inherited, so no need to interfere.

Health Care System (Screening & Treatment)

In this section, key informants were asked how the current health care system is meeting the needs for breast health care and breast cancer treatment.

- Most of the informants stated that breast health services are free.
- About all of the informants (99.5%) stated that low-income women or those with no or limited insurance can go to governmental health facilities for routine breast health care (screening mammogram and clinical breast examination).
- Most mentioned governmental facilities are: Governmental hospitals, Primary Health Care centers, and Preventive Medicine Department.
- Majority of informants (91.5%) stated that large numbers of women in the community who are over 40 yrs of age have not had breast screening. The most mentioned reasons for that were: fear of having cancer, shyness, lack of awareness, carelessness, and illiteracy.
- Most informants (86%) believed that treatment services for breast cancer are available in our country and (84.6%) of informants believe that it is available for all women.

Recommendations

- Common themes for recommendations to improve the current health care system include the following:
  - Increase awareness by conducting campaigns, distributing educational materials, advertisement in the media.
  - Conduct community out-reach programs, to reach out to all women especially in rural regions and housewives through qualified health professionals.
  - Implement policy for "compulsory" mammogram screenings for all females above 40 yrs of age.
  - Use of all the means of media to increase the knowledge of awareness of the community, in different languages.
  - Provide more screening services using mobile mammography to cover rural areas or low-income or low-level education women.
  - Encourage clinical trials and research for new advances in screening, diagnosis and treatment.
  - Establish support groups.
  - Address some of the cultural barriers through involving decision makers such as influential men and women who have strong positive impact on their communities.

Focus Group Discussion (Myths related to Breast Cancer)

Participants of Course for the Cure in the Eastern Region participated in a focus group discussion about myths related to Breast Cancer in the UAE, and specifically in Eastern Region (Al Ain Community). This discussion had been held over one hour during one of the workshop of the Course for the Cure; participants were informed in advance to search about myths related to breast cancer in their communities through interviewing some of key informants such as
This is a list of the common myths which have been mentioned:

- Some types of shower gel can lead to BC
- Exposure to Mammography more than one time can lead to BC
- Some types of oils and foods can lead to BC
- The barbecue meat like Chicken on Coal (Charcoal) can lead to BC
- Applying some ointment on the breast can cause BC
- Wearing bra all day and during sleeping can increase the risk of BC, especially bra with metal wire
- Putting perfumes on the breast can cause BC
- Use of deodorant and antiperspirant can cause BC
- Hit or burn on the chest can cause BC
- Breast cosmetic surgery can lead to BC
- Stopping or not breast feeding can increase the risk of BC
- Late marriage and late pregnancy can lead to BC
- Putting keys and money coins on the bra can lead to BC
- Taking contraception can cause BC
- Envy or bad eyes can cause BC
- It is a punishment from God
- Emotional attack or shock can lead to cancer anywhere in the body, especially breast cancer
- Some types of dress (non cotton), can lead to BC
- Canned foods can lead to BC
- Use of medicine continuously can lead to BC
- Removing the hair of the body by laser can lead to cancer
- Smoking for the ladies can increase the risk of cancer
- Inherited genes in the families lead usually to cancer
- Considering BC as a communicable disease
- Breast examination is shameful for women to do
- Mammography is painful
- A woman will die immediately once diagnosed with breast cancer
- Breast cancer only affects old women
- Breast cancer caused by bad luck or chance
- Breast cancer can be cured by herbs or holy water (Zamzam) or reading Quran

### 4.3.6 Identified Gaps and Assets

#### General Demographics

**Assets:**
- Percentage of literate females is higher than illiterates, across all nationalities and age groups.
- Good percentage of National females with high education.
- Insurance coverage for screening mammograms for insured females 40 years and older.

**Gaps:**
- 32.6% of National females over 40 are illiterate.
- 24.7% of younger age Non-National females and 30.8% among Non-Nationals over 40 are illiterate.
- Most common nationalities for females in the age group of (20-69) are Nationals (Emirates), Asians, followed by Arabs, which can create challenge in accessing these groups in their own languages.
- Most females aged (20-69) are housewives, not employed, which can create some difficulties in accessing medical services by them selves; most housewives are dependant on spouse or other family member in terms of their transport, income and other issues.

#### Breast Cancer Statistics

**Assets:**
National Cancer Registry is available at Tawam Hospital for all the Emirates of UAE

Gaps:
- No specific statistics are available for each region or community. Also no statistics by age, stage or nationality.
- Communication of Breast Cancer statistics and services between all providers is not adequate.

**Awareness and Education**

**Assets:**
- Awareness and education, services are available at most of the providers

**Gaps:**
- High percentage of female population is not aware of:
  - Seriousness of Breast Cancer
  - Importance of early detection techniques
  - Available Breast Health resources in the community (free screening services, treatment options)
- Rural area women have very low awareness of services.
- Asian women have low education level as most of them are house workers, which makes them harder to reach and less exposed to Breast Cancer educational information.
- Cultural beliefs and myths related to breast cancer especially fear.
- Community out-reach awareness services are not available.

**Screening and Diagnosis**

**Assets:**
- Free screening services are available for all nationalities.
- Mobile mammography unit started to be in use as of April 2008 for outreach screening, targeting rural areas of Eastern region, other rural areas of Abu Dhabi emirate in general, and women’s associations.
- There is National screening policy for breast cancer for UAE country

**Gaps:**
- Under-utilized services.
- Breast Cancer cases diagnosed at late stages
- Many women over age 40 have not had a mammogram.
- Rural area women have low rates of screening due to access barrier.
- Asians have low rates of screening services due to language barriers.
- Long waiting list for appointment.
- Strict morning screening hours are difficult for working females, females who don’t drive or who don’t take public transport
- Call- recall system is not available in all resources.
- There is lack of trained technicians and staff related to breast cancer screening and diagnosing services. In addition, there is a lack of qualified, trained female staff especially radiographers, which is a great barrier for females who don’t want to be seen by male health professionals due to cultural reasons.

**Treatment**

**Assets:**
- Highly advanced treatment options available in Eastern region, especially at Tawam Hospital.
- Treatment for breast cancer positive cases is free for all nationalities at Tawam hospital in the Eastern region, even for un-insured patients.

**Gaps:**
- Females are not aware about availability of free, good quality treatment options
- Some females do not trust treatment in the country, as they prefer to go abroad, as they don’t have good information about the available treatment.

**Support Groups & Services**

**Gaps:**
- Support groups are not available in Eastern region.
Some comprehensive treatment services just started to be available at Tawam Hospital (Breast Care Center), but this is still inadequate, and materials/services are only available in Arabic and English languages.

**Other Services**

**Assets:**
- All national females started to be under insurance from July 2008.
- Most Non National females are under compulsory insurance, and screening mammogram is covered by insurance for females 40 years and above.

**Gaps:**
- Special services for assisting those with special needs are not available.
- Some of Non National females are still not under compulsory insurance, but they can be targeted for free breast screening services for all nationalities, and free treatment for breast cancer patients at Tawam hospital, regardless of nationality or insurance status.

**Prioritization of Gaps**

These are the priority gaps that have been identified after discussion with participants of the Course for the Cure™, taking into consideration all findings of the Eastern Region community profile, especially findings of key informant interviews and assessments of available programs and services:

1. Under-utilization of Breast Health Services
2. Lack of awareness and Education.
3. Lack of communication and cooperation among providers.

4.3.7 **Recommended Next Steps: Strategic Goals and Objectives**

Prioritized gaps should be addressed in the Eastern Region through establishing strategic goals and objectives aimed at filling these gaps appropriately and effectively.

**Strategic Goals:**

A. Increase early detection through enhanced utilization rates of all available Breast Health services in the Eastern Region.
B. Increase awareness, knowledge and education related to breast cancer among concerned population.
C. Encourage communication and cooperation among all Breast Health providers in the Eastern Region, Abu Dhabi Emirate and UAE country in general, in order to adopt standard policies, update breast cancer statistics and information, maintain and share accurate breast health statistics.

A. **Enhance utilization rate of all available Breast Health services in the Eastern Region**

**Objectives:**

1. Increase community outreach screening services, especially to rural areas using Mobile Mammography available through Tawam Hospital. The following steps would be needed: determine specific sites for the visits, define working scheduling over specific period, be realistic in terms of manpower and time frame, cost and access, and establish assessment measures and feedback mechanisms.
2. Increase Mammogram referral rate from all PHCs in the Eastern Region to all facilities with screening Mammograms, by encouraging health professionals at PHCs to increase rate of CBE and Mammogram referral, which can be measured during the period from October 2008 to October 2009.
3. Communicate information about available Breast health services to all female population in the urban and rural communities within the Eastern Region. This would be done through the media and distributing directories of the providers with all needed information especially address and contact
details. We would need to collect all the needed data and review it, then print the booklets and leaflets through funds from Health care providers or sponsorship from business groups.

B. **Increase awareness, knowledge and education related to Breast Cancer among concerned population**

Objectives:

1. Provide health education for all nationalities, especially for monolingual residents in their mother tongue language, through training volunteers from the same nationality.
2. Conduct vast community outreach education and awareness services for female population in general, through targeting working females at different organizations and conducting TOT (train the trainer) awareness courses. These TOTs would allow trained female volunteers to train and educate their colleagues, costumers, and family members, in addition to targeting housewives and house workers through home visits.
3. Conduct focused educational and awareness programs for health professionals at all health facilities in the Eastern region, especially at all PHCs and rural areas. Focus on BSE, CBD, and Mammogram and referral policy.
4. Work on changing cultural beliefs and myths related to Breast Cancer, through media facilities, focused group discussion, advocacy work.
5. Enhance volunteerism and TOT programs conducting education and increasing awareness.

C. **Encourage communication and cooperation among providers**

Objectives:

1. Establish standard policies controlling screening, referral, diagnosis and treatment services among all providers in the Eastern Region, and among Abu Dhabi emirate and UAE country in general.
2. Enhance communication of all issues related to breast health services among providers, including updating statistics to National Cancer Registry, updating community profile data, identifying gaps in the services, and addressing possible solutions, through encouraging network building between different partners and providers.
3. Establish partnerships between providers in conducting short- and long-term activities related to breast cancer, through encouraging cooperation between them and establishing effective partnerships to advocate to decision-makers and leaders in the community.
4.3 WESTERN REGION (AL GHARBIA)
Introduction

4.3.1 About the Western Region:

The Western Region represents the western part of the Emirate of Abu Dhabi and is the largest region of the United Arab Emirates (UAE). It includes many detached cities, villages and islands, each with unique history, character, opportunities, and challenges. Some of towns are situated in the heart of the desert such as Mahader Liwa, Madinat Zayed, Baynounah, Ghayathi, Abu Rahmah and Abu Munzir. Other municipalities overlook the shore of the Arabian Gulf such as Al Marfa, Al Ruwais and Al Sila. In addition, there are many islands such as the over-populated Dalma Island, Abul Abyadh Island and Seer Baniyas Island, which is a beautiful natural reserve and popular tourist destination.

The people of the region belong to Arab Islamic tribes and are marked by their keenness on maintaining the original habits and traditions and conserving the heritage of their forefathers. The Western Region is one of the richest areas of the UAE in terms of oil and gas fields and is marked by its different agricultural and animal resources, particularly camels. Camels are bred with utmost care and attention from the inhabitants, with thoroughbred camels in particular demand. Other ethnic communities living in this region include non-Emirate Arabs, Asians (Indian, Pakistani, Iranian, Bangladeshi, Sri Lankan, Filipino, Ethiopian, Indonesian), and a small minority of British, Chinese and Americans.

The late Sheikh Zayed bin Sultan Al Nahyan dedicated particular attention during his reign to developing the region and improving the lives of its inhabitants. Thanks to his efforts and foresight, the Western region was turned into a stable place to live, with a diversity of oases, forests and farms, as well as service facilities including hospitals, schools, commercial markets, industrial areas, entertaining places and modern networks of roads that matched global specifications and connected the different cities and villages of the region. Power generating stations and water desalination plants, which supplied water and electricity to every place in the region, were also a key element of these development efforts.

The Western region also boasts unique cultural and archeological resources as well. Recently, geological deposits rich in fossils dating back to 6-8 million years ago were discovered in the Baynouneh region of Al Gharbia, and a four year joint project between Abu Dhabi Authority for Culture and Heritage and Yale Peabody Museum of Natural History at Yale University is to be commenced.

Geography:

The Western Region represents the western part of the Emirate of Abu Dhabi and is the largest region of the United Arab Emirates (UAE).
Al Gharbia covers 70% of the UAE and 83% (59,760 sq kilometers) of the total area of the Emirate of Abu Dhabi area (72,000 sq. kilometers). It is also home to an estimated 10% of Abu Dhabi’s population and generates an estimated 34% of Abu Dhabi’s GDP (approximately $15.5 billion).

**Regions under the Western Region:**

**Madinat Zayed:**
Madinat Zayed is the capital of Al Gharbia and the most significant city in it. It is approximately 170 km away from the capital Abu Dhabi City and midway between Liwa and the Arabian Gulf shores.

Formerly, tribes used to settle there during their migration throughout the vast desert of Al Dhafra. The late Sheikh Zayed bin Sultan Al Nayhan ordered the first residential complex to be built for the inhabitants of the region, thus creating the core of the first city in Al Gharbia.

By virtue of the existence of the Ruler’s Representative Court there, Madinat Zayed became a center for the different UAE local and federal departments as well as many public and private institutions and companies operating in the different fields of services.

**Liwa City:**
Liwa City is a beautiful oasis in the heart of Al Dhafra desert, near the boundaries of Al Rub’ Al Khali. Historically, the city hosted the tribes of this region and provided a refuge to them, thanks to the fresh water found abundantly in it. It is located in the southern side of the Emirate of Abu Dhabi by the borders of the Kingdom of Saudi Arabia and is approximately 230 kilometers away from Abu Dhabi.

Liwa now has many residential neighborhoods together with farms and forests in the different parts of its vast area.

**Al Marfa:**
On the beach sands of the Western Region lies Al Marfa town. In the past, it was an area where fishermen used to gather together and contained a market for distributing fish inside and outside the UAE territories.

It was also a gathering place where diving teams coming from the different villages and towns of the region used to take their sailing boats for the seasonal diving journeys.

Different development, economic and social projects were carried out in Al Marfa over the past ten years, rendering it a hub for attracting nationals from the neighboring islands and regions.

**Ghayathy:**
Ghayathy is situated at a distance of 320 kilometers from Abu Dhabi City. It is a desert area and historic home to the Bedouin; a long time ago, Bedouin tribes took shelter here to graze camels and sheep.

In the 1970’s, the government had a policy of encouraging Bedouins living in the region to settle in one place, and Ghayathy was selected as a hub for the project in 1974. This choice was based on a survey that covered the location, topography, soil, climate and water resources. Water was supplied through digging artesian wells, pulling water out by pumps. In addition, modern services were developed here, particularly for health and education, and farms were set up and distributed to Nationals.

As a result, Ghayathy changed very quickly into a city with a population numbering nowadays over 10,000 people, up from a very few some time ago.

**Silla City:**
This city is situated near the shores of the Arabian Gulf and the border with the Kingdom of Saudi Arabia to the west. It is approximately 320 kilometers far from the capital Abu Dhabi. Close to it is the Al Ghwaiifat border crossing, which is the main land exit connecting UAE with the overseas world. It is through this exit that the UAE receives arrival by land and bids farewell to those who depart it. In addition, most of the UAE’s imports and exports come and go through this exit.

Low cost houses were built for the inhabitants, along with health, education, entertainment and commercial facilities as well.

**Delma Island:**
Delma Island is situated at a distance of 210 kilometers west of Abu Dhabi City. This historical island has a long and proud heritage as the beating heart and starting point for all diving ships in search for pearls in the waters off its coasts. As a result of the slump in the pearl market, only a small number of families continue to live in Delma, down from thousands of
families in its heyday. Delma is regarded as a reduced model of a large city, containing everything that is available in capitals and cities in proportion to the number of its population and the nature of their life.

4.3.2 Demographics

The total population of the Western region is 110,419. (Ministry of Economy, Census 2005). This count is without Delma Island which is counted under the Islands of Abu Dhabi. Including the population of Delma, it totals 115,531. From Figure 4.3.2 and 4.3.3 below, shows the population pyramids of the national and expatriate populations in Al Gharbia region
Figure 4.3.3: Population pyramid of Al Gharbya Expatriate population Source: Ministry of Economy, 2005 census

In a review of population statistics compiled by the Health Authority Abu Dhabi’s Department of Planning and Economy, expatriates represent the largest proportion of the population compared to the other major regions, as is shown in the following figure:

**Figure 4.3.4: Population by region and nationality, 2007**

The population estimation for the Western Region does not include Delma which is counted with the "Islands" and not alone. The overall male:female ratio is 3.6:1. Breaking that down according to nationality, the National male to female ratio is 1.2:1 while the Non National male to female ratio is 5.3:1. About 16.1% of the population is below 14 years of age, while 82.5% is between 15 and 59 years of age. Of the total female population, 13.9% (3311) are 40 years of age or over and in the target population for screening services. Of these females, 53% (1755) are Nationals compared to 47% (1981) who are Non Nationals.

The target population for breast health services, including health education and breast self exam (BSE) is 20 and over, while the target age group for screening services, including BSE, CBE and mammography is 40 and above. As the overall
target age groups for breast health are women age 20 years and above, the following demographics will be directed towards this group of ladies in Al Gharbia community.

Table 4.3.1: Distribution of females age 20 and above by nationality, education and employment, Al Gharbia

<table>
<thead>
<tr>
<th>Educational Status</th>
<th>National 20-39 years</th>
<th>National ≥ 40 years</th>
<th>Non National 20-39 years</th>
<th>Non National ≥ 40 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
</tr>
<tr>
<td>Illiterate</td>
<td>266</td>
<td>2.29</td>
<td>1091</td>
<td>9.38</td>
<td>808</td>
</tr>
<tr>
<td>Primary</td>
<td>283</td>
<td>2.43</td>
<td>76</td>
<td>0.65</td>
<td>581</td>
</tr>
<tr>
<td>Preparatory</td>
<td>523</td>
<td>4.52</td>
<td>50</td>
<td>0.43</td>
<td>558</td>
</tr>
<tr>
<td>Secondary</td>
<td>1417</td>
<td>12.2</td>
<td>33</td>
<td>0.28</td>
<td>1050</td>
</tr>
<tr>
<td>Graduate</td>
<td>405</td>
<td>3.48</td>
<td>8</td>
<td>0.1</td>
<td>997</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Reads/ writes</td>
<td>325</td>
<td>2.8</td>
<td>250</td>
<td>2.2</td>
<td>1315</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>0</td>
<td>63</td>
<td>0.54</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>3219</td>
<td>27.7</td>
<td>1571</td>
<td>13.5</td>
<td>5333</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Employment Status</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Employed</td>
<td>405</td>
<td>3.48</td>
<td>35</td>
<td>0.30</td>
<td>3201</td>
<td>27.5</td>
<td>771</td>
<td>6.63</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2309</td>
<td>19.9</td>
<td>1517</td>
<td>13.05</td>
<td>2002</td>
<td>17.2</td>
<td>710</td>
<td>6.11</td>
</tr>
<tr>
<td>Student</td>
<td>505</td>
<td>4.34</td>
<td>4</td>
<td>0.03</td>
<td>130</td>
<td>1.12</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not stated</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>0.13</td>
<td>0</td>
<td>0</td>
<td>21</td>
<td>0.18</td>
</tr>
<tr>
<td>Total</td>
<td>3219</td>
<td>27.7</td>
<td>1571</td>
<td>13.51</td>
<td>5333</td>
<td>45.9</td>
<td>150</td>
<td>1.29</td>
</tr>
</tbody>
</table>


From this table it is apparent that 41.2 % of this age group is National females compared to 58.8% of their Non National counterparts. The overall proportion of illiterate females in this sector of the community is 21.2%; National females have higher rates of illiteracy among women 40 years and older. This is a point worth considering when targeting this group with educational or awareness programs concerning breast health. Illiteracy can play a significant role in shaping the attitudes and behaviors of women towards a suboptimal health lifestyle in general, needless to say concerning breast health. In general, illiterate women cannot read, thus have much more difficulty obtaining knowledge concerning health issues. They tend to depend on what they hear or learn through the senior women in the society, family or friends, which, if unguided by health care personnel, can be incorrect. The lower rate of illiteracy in the younger age group can be explained by the efforts of the government to encourage education among the total National population, as is apparent from the percent of students among the National females in the younger age group. Female students over 40 usually study in women’s associations such as the Family Development Foundation, and the younger age group is enrolled in the schools in the region. In the UAE, females who have dropped out of school and wish to return at a later age, regardless of the age they were when they dropped out or the age at which they wish to return, to their primary or secondary education are allowed to study at the Family Development Foundation. Thus, one may find 15 or 16 year olds with women in their 20s, 30s, 40s, or older in the same class, as they will be studying the same level.

The proportion of employed females in both age groups is much higher for Non National females compared to the National females. At working age (20 and above), Non National women in the UAE are either housewives residing in the country on their husbands’ work visa and eventually with time find a job; are themselves employed (the majority); or are studying in university (minority, as high university costs for Non Nationals mean that most return home to study). Whereas National females are citizens who are residing in their own country, either married (housewife) or in their families’ home, the issue of employment is not urgent as financial costs for living are not an issue. Employment is considered an opportunity for Non Nationals to support their families in the UAE, as the cost of living tends to be relatively high for Non Nationals; schooling for their children is not free nor are many medical services.
Employment status may not be a vital issue concerning National women in relation to breast health, in that all services (screening, diagnosis and treatment) are free of charge, *should a National woman seek these services*. On the contrary, Non National women rely heavily on their incomes in seeking health care in general. (For further discussion of this issue, please refer to the “Country Overview” in this document.) Breast cancer screening (Health education, BSE, CBE, Mammography) is free for Nationals, as are Antenatal care (ANC) and Preventive Pediatric services such as immunizations and Growth monitoring. Collectively, ANC and preventive pediatric health services are called Maternal and Child Health (MCH).

**Religion:** Demographics regarding religion follow the same pattern as the national ones (See “Country Overview” National Demographics).

**Annual Income:**
The Ministry of Economy has not yet released federal tables concerning the annual income. These tables are expected to be released in autumn 2008 and can be updated later in the Community Profile.

**Nationality:**
The following table from Health Authority Abu Dhabi was derived from the 2005 National Census and does not include Delma Island, which is counted among the Abu Dhabi Islands and thus does not have separate data.

Table 4.3.2: Distribution of female population 20 years and older by nationality and age group in AlGharbia excluding Delma Island.*

<table>
<thead>
<tr>
<th>Nationalities</th>
<th>20-39</th>
<th></th>
<th>40-69</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>UAE</td>
<td>3064</td>
<td>33.1</td>
<td>1186</td>
<td>37.9</td>
</tr>
<tr>
<td>Arab</td>
<td>2245</td>
<td>24.2</td>
<td>1060</td>
<td>33.8</td>
</tr>
<tr>
<td>European</td>
<td>15</td>
<td>0.2</td>
<td>13</td>
<td>0.41</td>
</tr>
<tr>
<td>Asian; non Arab</td>
<td>3264</td>
<td>35.2</td>
<td>735</td>
<td>23.5</td>
</tr>
<tr>
<td>African; Non Arab</td>
<td>345</td>
<td>3.72</td>
<td>16</td>
<td>0.51</td>
</tr>
<tr>
<td>North America</td>
<td>7</td>
<td>0.08</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Central America and Caribbean</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>South America</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Oceanic</td>
<td>4</td>
<td>0.04</td>
<td>6</td>
<td>0.2</td>
</tr>
<tr>
<td>Bedoon</td>
<td>274</td>
<td>3</td>
<td>103</td>
<td>3.29</td>
</tr>
<tr>
<td>Not stated</td>
<td>43</td>
<td>0.5</td>
<td>11</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>9261</td>
<td>100</td>
<td>3133</td>
<td>100</td>
</tr>
</tbody>
</table>

* Source: Statistics Department, Health Authority Abu Dhabi, 2005 Census.

From Table 5.3, it is apparent that the larger proportion of the population are Arabs and thus Arabic is their mother tongue. Another feature apparent is the relatively large proportion of Asians that are non Arab. There is no official data describing the nationalities of this group, but they are mainly from the Indian Subcontinent and from Southeast Asia. This issue of languages needed to communicate with these groups is important to consider, although the majority of Non Arabs can communicate fairly well in English (See Key Informant results).
The “Bedoon” category (literally meaning “without”) is a population living in the UAE who entered the country many years ago (some who are now adults were born in the country). They or their parents originally came from Iran, leaving their homeland due to hardships, and crossed the Arabian Gulf by boat with their families seeking a better life. They do not have any official identification apart from their birth certificates, for those born in the UAE. They are Iranians of Arabic origin, mostly coming from Arabistan in Iran and speak Arabic. In the UAE, Bedoons are covered by specific regulations: they are allowed free health services. Other health services, and schooling, must be paid for out-of-pocket, just as for any other Non National. They tend to be of lower socioeconomic status, their children of lower educational levels and lower employment chances – as a result, many are uninsured and the cost of accessing health care and health education is a barrier. Families of this group of the community live mainly in Al Marfa, but can be found all over the region.

**Insurance:**

Data conveying the number or percentage of insured individuals in the community could not be obtained for the population of Al Gharbia. “Daman” is an insurance company which covers the health services in general in Al Gharbia, as in the rest of the nation. In order to try to obtain data on the number and percent of the insured population in Al Gharbia and hopefully the number of insured females, the Global Initiative Program Manager personally went to the Daman Office in Al Gharbia and met with the Officer in charge of Daman who informed the Program Manager that they do not have such data nor do they list their clients according to any system. When asked if one could obtain this information from their central office in Abu Dhabi, Daman Officer said that they follow the same recording system as in Abu Dhabi and such categorization was not available at the moment.

**Demographics in the Six Regions in Al Gharbia**

The source of all demographics data is the Ministry of Economy, 2005 census. In the following tables and graphs, the percentage for the educational status is derived from the total of each age group per nationality while the percentages for the employment status are derived from the total population for that region.

**Madinat Zayed:**

The total female population over 20 in Madinat Zayed is 4196, of which 1674 are Nationals and 2522 are Non Nationals.

**Table 4.3.3: Distribution of National and Non National female population by age and education status, Madinat Zayed**

<table>
<thead>
<tr>
<th>Education</th>
<th>National 20-39</th>
<th>National ≥ 40</th>
<th>Non National 20-39</th>
<th>Non National ≥ 40</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>number</td>
<td>number</td>
<td>number</td>
<td>number</td>
</tr>
<tr>
<td>Illiterate</td>
<td>64 (5.7%)</td>
<td>321 (58.5%)</td>
<td>245 (12.6%)</td>
<td>83 (14.5%)</td>
</tr>
<tr>
<td>Primary</td>
<td>86 (7.6%)</td>
<td>31 (5.6%)</td>
<td>200 (10.3%)</td>
<td>40 (7%)</td>
</tr>
<tr>
<td>Middle</td>
<td>174 (15.5%)</td>
<td>22 (4%)</td>
<td>212 (10.9)</td>
<td>51 (8.9%)</td>
</tr>
<tr>
<td>Secondary</td>
<td>582 (51.7%)</td>
<td>15 (2.7%)</td>
<td>386 (19.8%)</td>
<td>128 (22.3%)</td>
</tr>
<tr>
<td>Graduate</td>
<td>129 (11.5%)</td>
<td>3 (0.5%)</td>
<td>351 (18%)</td>
<td>152 (26.5%)</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>7 (0.4%)</td>
<td>11 (1.9%)</td>
</tr>
<tr>
<td>Reads/writes</td>
<td>90 (8%)</td>
<td>103 (18.8%)</td>
<td>547 (28.1%)</td>
<td>81 (14.1%)</td>
</tr>
<tr>
<td>Not specified</td>
<td>0 (0%)</td>
<td>54 (9.8%)</td>
<td>0 (0%)</td>
<td>28 (4.9%)</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Number</td>
<td>1125</td>
<td>549</td>
<td>1948</td>
<td>574</td>
</tr>
</tbody>
</table>
From this table it is apparent that the female population over 40 constitutes 27.8% of the nationals and a large proportion (almost 60%) are illiterate. The reverse can be seen in the younger age group where about 66% of the female population has had some degree of formal education, mainly middle and secondary level.

Out of interest in this phenomenon, even before we collected these demographic data, one National female in her 60s, when asked why she didn’t know how to write her name, responded with, “What can I do? When I was eight years old, my father took me from school to graze the camels.” The situation is the same among the six regions, although illiteracy rates are now decreasing especially in Madinat Zayed, as it is the capital of Al Gharbia.

That was the tradition in the past and thus the large number of illiterate elderly females in this region will be noticed in almost all 6 cities. The shift in trend towards education, mainly through governmental support and the development of the region is obvious in the younger age group. In the past few years, very modern schools have been established; the classrooms are “smart classrooms” with very modern technology. Since 2005, governmental schools are now under the authority of ADEC (Abu Dhabi Education Council). Schooling is free for National UAE citizens in these schools. A 20% Non National student rate is allowed for each level in these schools for fees which tend to be much higher compared to private schools. Majority of Non National students attend private schools for which fees should be paid as well. Governmental employees have the advantage that the UAE government will pay part of the fees for 2 children for the Non National Employee. This issue is important when one wishes to conduct awareness and education programs for this group of ladies.

The following figure demonstrates the employment status in percentages of females, National and Non National.

Figure 4.3.5: Employment status in percent for National and Non National females by age group, Madinat Zayed

Source: Ministry of Economy, 2005

Figure 4.3.5 illustrates that approximately 33% of the National females are unemployed, compared to 22% of Non National females. Approximately 37% of Non National females are employed especially in the younger age group.

As a reminder, employment status is important for the Non National females in that breast health screening services are free of charge for all residents, whereas further diagnostic procedures for a suspicious mass discovered by screening and treatment - should she be found to have cancer - are not free of charge. Recent policy changes mean that a woman will not even be received in the hospital if she does not have an insurance card.
Liwa:
In this land of farming communities women are more scarce; the total population for this category of females is 615, National females 132, Non Nationals 483.

Table 4.3.4: Percentage distribution of females according to age, nationality and education status, Liwa City
Source: Ministry of Economy, 2005

<table>
<thead>
<tr>
<th>Education</th>
<th>National 20 -39 years</th>
<th>National ≥ 40 years</th>
<th>Non National 20 -39 years</th>
<th>Non National ≥ 40 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>10.7%</td>
<td>73.6%</td>
<td>9%</td>
<td>19%</td>
</tr>
<tr>
<td>Primary</td>
<td>8%</td>
<td>1.8%</td>
<td>8.7%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Middle</td>
<td>21.3%</td>
<td>7%</td>
<td>9%</td>
<td>12.4%</td>
</tr>
<tr>
<td>Secondary</td>
<td>44%</td>
<td>3.5%</td>
<td>28.8%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Graduate</td>
<td>4%</td>
<td>0%</td>
<td>25.4%</td>
<td>48.6%</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0%</td>
<td>0%</td>
<td>0.3%</td>
<td>0%</td>
</tr>
<tr>
<td>Reads/写</td>
<td>12%</td>
<td>10.5%</td>
<td>18.8%</td>
<td>2.9%</td>
</tr>
<tr>
<td>Not specified</td>
<td>0%</td>
<td>3.5%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>Total number</td>
<td>75%</td>
<td>57%</td>
<td>378%</td>
<td>105%</td>
</tr>
</tbody>
</table>

Once again, the same finding concerning illiteracy in the elderly Nationals is obvious. Liwa is a farming community and most of the National population is farmers.

Figure 4.3.6: Percent distribution of females by age, nationality and employment status, Liwa City.
Source: Ministry of Economy, 2005

In Liwa, a large proportion of Non National females are unemployed as this region is mainly farmland and employment opportunities are low. Most of the laborers are Non National males. There are just a few schools with limited facilities.
Mirfa:
The total population of females of this age category in this region are 2332, National females 796, Non Nationals 1536.

Table 4.3.5: Percent distribution of females by age, education and nationality, Mirfa City
Source: Ministry of Economy, 2005

<table>
<thead>
<tr>
<th>Female distribution according to age and education and nationality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Education</td>
</tr>
<tr>
<td>Illiterate</td>
</tr>
<tr>
<td>Primary</td>
</tr>
<tr>
<td>Middle</td>
</tr>
<tr>
<td>Secondary</td>
</tr>
<tr>
<td>Graduate</td>
</tr>
<tr>
<td>Postgraduate</td>
</tr>
<tr>
<td>Reads/writes</td>
</tr>
<tr>
<td>Not specified</td>
</tr>
<tr>
<td>Total number</td>
</tr>
</tbody>
</table>

The same regional pattern (in AlGharbia Region) concerning illiteracy for National females over 40 repeats itself. There can be noted as well a larger proportion of illiteracy for Non National females. Most probably, this can be explained by the larger number of Bedoon families who have settled in this city. The Bedoon are categorized as Non Nationals and due to the lack of ID cards, have a very difficult time registering their children in schools.

Figure 4.3.7: Percent distribution of females by age, nationality and employment status, Mirfa City
Source: Ministry of Economy, 2005

This figures shows that approximately 49% of females in this city are Non Nationals 20-39 years old. We could not obtain data on nationality breakdown, but those familiar with the demographic situation in this city suggest that it can be explained by the large number of Bedoon females who have very poor employment opportunities. As the Bedoon are included under Non Nationals, this elevates the total female unemployment for Non Nationals compared to the other cities in the region.
Ghayathy:
Total female population in this group is 2156, National females 960, Non Nationals 1196. The same trend in education status can be seen in the following table:

<table>
<thead>
<tr>
<th>Education</th>
<th>National</th>
<th>Non National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-39 years</td>
<td>≥ 40 years</td>
</tr>
<tr>
<td>Illiterate</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Primary</td>
<td>7.4</td>
<td>71.2</td>
</tr>
<tr>
<td>Middle</td>
<td>10.5</td>
<td>7.3</td>
</tr>
<tr>
<td>Secondary</td>
<td>17.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Graduate</td>
<td>39.5</td>
<td>1.5</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>15.3</td>
<td>0.7</td>
</tr>
<tr>
<td>Reads/writes</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Not specified</td>
<td>0</td>
<td>2.2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total number</td>
<td>686</td>
<td>274</td>
</tr>
</tbody>
</table>

Figure 4.3.8: Percent distribution of females by age, nationality and employment status, Ghayathy
Source: Ministry of Economy, 2005

From this figure it is apparent that a large proportion of younger National females are unemployed compared to their counterparts in the other cities in the region. The Ghayathy population is made up of a large number of National Bedouins who settled in this city many years ago. They are Bedouin by heritage and culture: Bedouins are a conservative people, and although their respect for women simply for being a woman is nonnegotiable, they tend to have a strong male ego in relation to the women in their families, whether they are sisters, wives or mothers. Their sense of responsibility to protect and provide for the women in their lives outweighs the more modern issue of employment and education for the women,
and although trends have changed towards education, this may not be the case in female employment. Further research into this aspect is required for a proper analysis.

**Silla:**
The total female population of this age group is 1407, National females 731, Non Nationals, 676.

**Table 4.3.7: Percent distribution of females by age, nationality and education, Silla**

*Source: Ministry of Economy, 2005*

<table>
<thead>
<tr>
<th>Education</th>
<th>National 20-39 years</th>
<th>National ≥ 40 years</th>
<th>Non National 20-39 years</th>
<th>Non National ≥ 40 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illiterate</td>
<td>15.8%</td>
<td>84%</td>
<td>33.5%</td>
<td>18.9%</td>
</tr>
<tr>
<td>Primary</td>
<td>9.5%</td>
<td>0.4%</td>
<td>10.2%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Middle</td>
<td>22.9%</td>
<td>1.3%</td>
<td>6.7%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Secondary</td>
<td>33.2%</td>
<td>2.2%</td>
<td>16.7%</td>
<td>10.4%</td>
</tr>
<tr>
<td>Graduate</td>
<td>6.7%</td>
<td>0.9%</td>
<td>16%</td>
<td>48.1%</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0%</td>
<td>0%</td>
<td>0.2%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Reads/writes</td>
<td>11.9%</td>
<td>11.1%</td>
<td>16.8%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Not specified</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0.9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
<tr>
<td><strong>Total number</strong></td>
<td><strong>506</strong></td>
<td><strong>225</strong></td>
<td><strong>570</strong></td>
<td><strong>106</strong></td>
</tr>
</tbody>
</table>

A very high percent of National females above 40 are illiterate as well as a larger proportion of younger Non Nationals compared to their counterparts in the other cities. Looking at figure 4.3.7, one can notice a very low student percent of the same population. The cause of this difference is unknown and will require more research. However, this reality should be taken into account when designing programs that target these women.

**Figure 4.3.9: Percent distribution of females by age, nationality and employment status, Silla.**

*Source: Ministry of Economy, 2005*

From this figure, it is apparent that almost 30% of the younger female population is unemployed with a low student percentage. Further population analyses should be conducted to assess the possible causes for this when considering conducting education/awareness programs to achieve successful outcomes.
Delma Island:

The total female population for this age group is 919, National females total to 497, Non Nationals 422.

Table 4.3.8: Percent distribution of females by age, education and nationality, Delma Island.

<table>
<thead>
<tr>
<th>Education</th>
<th>National</th>
<th>Non National</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20 -39 years</td>
<td>≥ 40 years</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Illiterate</td>
<td>9.6</td>
<td>71.2</td>
</tr>
<tr>
<td>Primary</td>
<td>6.8</td>
<td>4.4</td>
</tr>
<tr>
<td>Middle</td>
<td>9.6</td>
<td>2</td>
</tr>
<tr>
<td>Secondary</td>
<td>48.9</td>
<td>2.4</td>
</tr>
<tr>
<td>Graduate</td>
<td>16.4</td>
<td>0</td>
</tr>
<tr>
<td>Postgraduate</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Reads/writes</td>
<td>8.6</td>
<td>19.5</td>
</tr>
<tr>
<td>Not specified</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total number</td>
<td>292</td>
<td>205</td>
</tr>
</tbody>
</table>

Figure 4.3.10: Percent distribution of females by age, nationality and employment status, Delma Island.

A very high percent of the National females are unemployed, although it rates second after Mirfa in employment for National females. More than 30% of Non National females are employed with a high student proportion compared to their Non National counterparts in the other cities of the region.
To Summarize:

1. Although the largest proportion of the female population in Al Gharbia is Arab, Asian non Arab females rank second for both age groups. In considering design of breast health awareness and education programs, further breakdown of the nationalities in this group should be considered in order to be able to orient to their language, traditions, customs and beliefs as well as their health needs. At present, such information has not been located, but will be pursued in further research.

2. The percent of illiteracy tends to be relatively high in National females aged 40 and above, a factor of vital importance when developing any type of awareness/education program towards this target group of females in considering the tools to be used and the level and mode of communication with these women.

3. Unemployment among Non National females tends to be lower than among Nationals, although this factor may not be an obstacle to these ladies financially considering breast health; in contrast, employment status can often be of great importance for Non National females, given its effect on cost of health care. Screening breast health services (BSE, CBE, Mammography) for all nationalities are free, but further investigation to evaluate a suspicious mass or treatment for a proven breast cancer is not free for Non Nationals, nor does insurance cover the cost; thus income in such a situation is of vital importance.

4. The Bedoon female population requires a structured specific plan geared toward this community as many loopholes in social, educational and health services are an issue, and the culture and lifestyle are distinct from the other groups in the region.

4.3.3 Breast Cancer Statistics

Statistics in Al Gharbia Region:

Data on breast cancer statistics is not available for Al Gharbia region. The main reason for this is the fact that any woman who is diagnosed with a suspicious breast mass is referred to Abu Dhabi for further diagnostic procedures, follow up and management. In Abu Dhabi, should she be diagnosed with breast cancer, she will be referred to Specialized Breast Cancer Centers, mainly Tawam Hospital in Al Ain. Breast cancer cases are registered according to the region which referred or diagnosed them, namely Abu Dhabi, and not according to residence.

Breast cancer is the most common cancer among women in the UAE. To review breast cancer statistics in Abu Dhabi, please refer to the section on National Breast Health Statistics.

4.3.4 Program and Services Findings

The situation in Al Gharbia:

In Al Gharbia, there are no specialized breast health clinics or centers; instead screening breast health services for women are integrated for women 40 years old and above within the Maternal and Child Health (MCH) clinics, in which the main services are prenatal care and child health, including routine neonatal screening for genetic diseases, immunizations and growth monitoring. These clinics are usually separated from the central hospitals. Routine breast exam is conducted for all pregnant ladies attending for prenatal care.

There is one screening mammogram in Madinat Zayed Hospital, which is 80 kms away from Mirfa, approximately 200 km from Ghayathy, and approximately 320 km from Silla. For women to reach it, they will either need private transport (their own cars) or public transport which might require changing two buses. However, this mammogram unit is currently not in use, as there is no radiologist. In addition, there is no recall or follow-up system available for breast cancer screening.

In Al Gharbia, there are four MCH clinics covering all the cities except Delma Island, Liwa and as of Spring 2008, Ghayathy Hospital’s MCH clinic has been non-functioning due to recruiting the MCH physician as Master Trainer for the Global Initiative in Al Gharbia Region. Women who attend for screening breast health services will receive information and be taught how to conduct a BSE after which she will have a CBE by the attending physician. All of these clinics are governmental. All services in these clinics for women and children are free of charge unless the client needs a referral to
regional hospitals for further investigations where she will need her health insurance card for further follow up and evaluation.

When a CBE is done for women above 40 years of age, the client will be referred to Abu Dhabi City to the National Health Screening Program for Woman and Child where she will be booked for a screening mammogram. The distance between Abu Dhabi City and the Western Region communities varies, but is significant in all cases: 170 km to Madinat Zayed or Mirfa, 270 km to Ghayathy, and 350 km to Silla and Delma (whose residents need to cross the sea first and then continue from Ghayathy). Public transportation is available for those who wish to utilize it. The majority go to the center in Abu Dhabi using their own cars. The restrictions to mobility is that for Nationals, public transport is not favored and thus woman need to organize travel through male relatives, such as husbands, brothers, fathers, or whomever has time to accompany them. Given the absence of this service in Al Gharbia region, this center (Mother and Child National Health Screening Program) has cooperated with Al Gharbia region by allowing mammography without appointments on Tuesdays of every week provided the client is in the correct time for mammography according to her menstrual cycle. For menstruating women, mammography is preferred in the UAE to be conducted between the last day of the cycle through 4 days after the last day of the cycle, due to hormonal effects on the density of the breast tissue, which is the least on the last day of the cycle and the few days after that.

Plans for the establishment of Ambulatory Health Centers in Al Gharbia have just begun.
The main drawback for this process of screening breast health services in MCH (MCH includes ANC and Preventive pediatric services and clinics) is that the target group (women aged 40 and above), do not routinely attend these clinics unless they are accompanying their grandchildren attending for child health or their pregnant daughters attending for routine prenatal care.

Directory of Programs and Services:
The following table demonstrates the number of hospitals, centers, clinics as well as health care personnel in the three regions of Abu Dhabi.

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Facilities</th>
<th>Clinicians</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>1'031</td>
<td>14'642</td>
</tr>
<tr>
<td>Hospital</td>
<td>33</td>
<td>2'394</td>
</tr>
<tr>
<td>Center</td>
<td>389</td>
<td>6'345</td>
</tr>
<tr>
<td>Clinic</td>
<td>188</td>
<td>5'662</td>
</tr>
<tr>
<td>Pharmacy</td>
<td>358</td>
<td>3'384</td>
</tr>
<tr>
<td>Store</td>
<td>63</td>
<td>434</td>
</tr>
</tbody>
</table>

*Source: Health Facility Licensing Database, Health Authority Abu Dhabi, 2007.
AHP: Auxiliary Health Professionals
Clinics in which CBE is conducted:

<table>
<thead>
<tr>
<th>Name of Clinic</th>
<th>Contact Information</th>
<th>Key Contact Person</th>
<th>Services Provided</th>
<th>Hours/ days of service</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madinat Zayed MCH Clinic</td>
<td>Madinat Zayed 028846888</td>
<td>Dr. Shadya Mohammed</td>
<td>CBE</td>
<td>5 days/ week for 8 hours / day</td>
<td>Working hours are morning only</td>
</tr>
<tr>
<td>Marfa MCH Clinic</td>
<td>Marfa Hospital 028835000</td>
<td>Dr. Khadra AlAin, MCH Physician</td>
<td>CBE</td>
<td>5 days/ week for 8 hours/ day</td>
<td>Working hours are morning only</td>
</tr>
<tr>
<td>Ghayathy MCH Clinic</td>
<td>Ghayathy Hospital 028741666</td>
<td>------</td>
<td>None at the time being</td>
<td>5 days/week for 8 hours/ day</td>
<td>Working hours are morning only</td>
</tr>
<tr>
<td>Silla MCH Clinic</td>
<td>Silla Hospital 028721555</td>
<td>Dr. Wafa Abdul Rahman</td>
<td>CBE</td>
<td>5 days/ week for 8 hours/day</td>
<td>Working hours are morning only</td>
</tr>
</tbody>
</table>

Utilization of Breast Screening Health Services in Al Gharbia:
As mentioned, CBE is conducted as a screening health service by the MCH clinicians in this region. These clinicians are specialized doctors in Community Medicine or Public Health and have official training on CBE and documented clinical experience as clinical physicians.
Many health education lectures have been conducted in different sectors of the female community in Al Gharbia in the past few years highlighting the importance of breast screening and the goal of these health services. Still utilization of these services is very poor.

Table 4.3.10 demonstrates utilization rates of CBE in the target population of women 40 years of age and above in the various regions of Al Gharbia.

Table 4.3.10: Client encounter for screening breast health services in Al Gharbia by city in the region for the year 2007

<table>
<thead>
<tr>
<th>Client Encounter for Screening Breast Health Services</th>
<th>Madinat Zayed and Liwa</th>
<th>Al Marfa</th>
<th>Ghayathy</th>
<th>Silla</th>
<th>Delma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of encounters in MCH clinics</td>
<td>326</td>
<td>117</td>
<td>233</td>
<td>123</td>
<td>78</td>
</tr>
<tr>
<td>Total number of breast exams conducted in MCH clinics</td>
<td>326 (100%)</td>
<td>117 (100%)</td>
<td>233 (100%)</td>
<td>123 (100%)</td>
<td>39 (50%)</td>
</tr>
<tr>
<td>Total number of clients registered for Screening Breast Health (women ≥ 40 years)</td>
<td>42</td>
<td>102</td>
<td>03</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>Total number of women examined sent for Screening Mammography</td>
<td>42 (100%)</td>
<td>91 (89.2%)</td>
<td>02 (66.7%)</td>
<td>11 (45.8%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Number of females≥ 40 years of age**</td>
<td>1285</td>
<td>613</td>
<td>541</td>
<td>331</td>
<td>303</td>
</tr>
<tr>
<td>Percent from target population ≥ 40 years screened by mammography</td>
<td>3.3</td>
<td>14.8</td>
<td>0.37</td>
<td>3.3</td>
<td>0</td>
</tr>
<tr>
<td>Total number of diagnosed breast cancer</td>
<td>No info available</td>
<td>1</td>
<td>No info available</td>
<td>No info available</td>
<td>No info available</td>
</tr>
</tbody>
</table>

* Source: Calculated from the number of encounters for each clinic over the year 2007 in each region
** Ministry of Economy, Census 2005
• No MCH Center or physician in Delma Island.
• 30 were sent for diagnostic mammography or further procedures and not for screening mammography. All were symptomatic.
Madinat Zayed: this table shows that all of the clients who attended the clinic in Madinat Zayed for CBE were referred for screening mammography. Liwa does not have a MCH clinic due to its relatively close distance to Madinat Zayed (50 kilometers); all prenatal services are conducted in Madinat Zayed MCH clinic. Percent of women from the target population requesting CBE (42/1285) is 3.3% which is extremely low and which is the same percent of women referred for screening mammography (100%).

Marfa: The proportion of women registered for CBE from the target population is 16.6%. (The number of women ≥ 40 years registered for screening is 102, and the number of females≥ 40 years in Marfa is 613; thus only 16.6% of the target population in Marfa is screened 102/613 = 16.6%). A large proportion of them were referred for screening mammography, yet that only covers 14.8% of the target population. Although this percentage alone is low, it is still higher than similar statistics for other regions, which was surprising to health care providers in AlGharbia involved in this research. This could be because women in Marfa are much more responsive and receptive to health education programs and screening programs than anywhere else in AlGharbia. We believe that it is due to the fact that a considerable proportion is Bedoon, who are allowed these free health services and thus take advantage of them, perhaps to monitor their overall health status since other health services require payment. In order to answer this question accurately, further research, including perhaps a survey of attitudes and behaviors, is needed and would be helpful in illuminating the unique attitudes and behaviors toward health of this population.

Ghayathy: A relatively low proportion of clients were sent for screening mammography, although basically the number of women requesting screening services from the target population is very low (3 out of 541, or 0.6%).

Silla: 7.3% of the target population in Silla was registered for CBE, from these only 3.3% were referred for mammography.

Delma Island: ANC services are conducted by Specialized Gynecologists/Obstetricians. The number of breast exams shown in the table is not part of screening services, but due to symptomatic complaints from the patient herself. As is obvious in the table, there are no screening breast health services in Delma Island.

Breast cancer cases: This table shows that there is only 1 registered documented breast cancer case. This is not a true picture of the situation in Al Gharbia as the cases which are diagnosed with breast cancer are registered in specialized centers such as Tawam Hospital in Al Ain and not registered in Al Gharbia. There is no cancer registry in Al Gharbia.

4.3.5 Qualitative Data

Health Service Provider Survey

In the whole region of Al Gharbia, a total of 61 service provider questionnaires were distributed and collected; 18 from Madinat Zayed, 9 from Marfa, 9 from Liwa, 10 from Ghayathy, 4 from Silla and 11 from Delma Island. They were conducted in order to obtain the baseline opinion of the Service providers on what they felt was the quality of breast health services in their facilities. Service providers were administrative personnel (hospital directors) or physicians working with women such as gynecologists and obstetricians, MCH physicians, radiologists, laboratory employees and health education. Arabic ranked first among the mother tongues of the providers surveyed followed by Malayalam (4), English (2), Hindi (10), Sinhala (1) and other Indian languages (1). English ranked first for all those surveyed as “another language spoken” except for the native English speaker, who noted Hindi as the second language spoken.

According to the information obtained through the service provider surveys, all of the service providers agreed that their specified organization targeted the total population in the area and the majority (more than 75%) agreed that service provision required health insurance. The remaining stated that it was free for UAE Nationals.

A copy of the survey can be found in the appendix.

Services for women: more than 90% of respondents agreed that their organizations served women including those with special needs and of low literacy, regardless of the language spoken.
Health Education:

*Does your organization provide health education services for breast health?

Table 4.3.11: Response of Health Service Providers To provision of health education

<table>
<thead>
<tr>
<th>City</th>
<th>Yes</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madinat Zayed</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Liwa</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>Marfa</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Ghayathy</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Silla</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Delma</td>
<td>7</td>
<td>5</td>
</tr>
</tbody>
</table>

*What is the type of knowledge supplied?

Approximately 95% of these respondents agreed that their facilities provided medical information on breast cancer and how to conduct a BSE. However, their responses specifically regarding health education on the tools for early detection varied, ranging from 61% who agreed in Madinat Zayed to 9% in Delma, averaging to 22% in the remaining cities. Approximately 95% agreed that breast cancer as a general subject was discussed, covering risk groups and risk factors, treatment modalities and how to conduct BSE; again, opinion varied about how the topics concerning the tools for early detection such as CBE and mammography were explained to the public.

In Madinat Zayed, one of the Obstetricians wrote that they did not educate their patients on breast issues unless the patient herself requested information nor did they examine their breasts unless they specifically requested or were symptomatic. It was not a routine practice.

From those who agreed that health education services on breast health were provided (n=41):

* Describe the tools used in Health Education?

Leaflets/ booklets and posters ranked the highest among the choices for the respondents.

* What are the languages used in Health Education?

The following percentages represent the percentage of service providers in each region who agreed that Arabic – and then English – is used in educating the public.

Arabic ranked number 1 ranging from 94-86% of the respondents’ choices.

English:

- Madinat Zayed: 72.2%
- Ghayathy: 50%
- Liwa: don’t know
- Silla: 100%
- Marfa: 43%
- Delma Island: 100%

* Other languages: only 1 respondent from Madinat Zayed, Silla and Ghayathy agreed that health education was provided in Urdu through a translator and through 1 Hindi translator in Ghayathy.

In Al Gharbia region, the Health Education Department addresses many health issues, breast cancer being one of the topics which is of key importance. One of the main obstacles in delivering education services to the target population of women aged 40 years and older is mobility. These women are difficult to reach, as the major proportion of these ladies are housewives, and their transportation anywhere outside their homes depends on the presence of the male individuals in the household (the husband or the son), since it is not a commonly acceptable cultural practice for these women to travel by any other means and the majority of them do not drive themselves. Obtaining a drivers license requires literacy, and a large proportion of women in Al Gharbia region are illiterate (Demographic Section). Moreover, many of their spouses or sons work in Abu Dhabi or Dubai and do not return until the weekend, Friday and Saturday, when only emergency health services are available. With no way to travel easily, these women tend to not visit medical services in general, and any health education activity organized for this purpose is met with the most minimal attendance.
**Provision of breast health services:**
Numbers in these tables correspond to number of respondents and not percentages.

- **Does your organization provide clinical and diagnostic breast cancer services?**

  Table 4.3.12: Response of Service Providers to Provision of breast cancer services

<table>
<thead>
<tr>
<th>City</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madinat Zayed</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Liwa</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Marfa</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Ghayathy</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>Silla</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Delma Island</td>
<td>7</td>
<td>4</td>
</tr>
</tbody>
</table>

In Marfa, the Specialist Surgeon (who is a male) suggested that we need to encourage women to allow male physicians to examine their breasts just like any part of their bodies. However, currently, it is neither routine nor accepted by the local public to have men examine the breasts of women. Only female doctors provide CBE and mammography.

- **What services are provided?**

  Table 4.3.13: Response of Service Providers to type of breast health services present

<table>
<thead>
<tr>
<th>City</th>
<th>Screening only</th>
<th>Diagnostic only</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madinat Zayed</td>
<td>6</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Liwa</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Marfa</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ghayathy</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Silla</td>
<td>Don’t know</td>
<td>Don’t know</td>
<td>Don’t know</td>
</tr>
<tr>
<td>Delma Island*</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>

* Only symptomatic females who present with lumps.

- **What are the types of services?**

  CBE ranked the highest among all the cities apart from Liwa and Delma Island.

  Breast ultrasound (U/S): 13/15 respondents in Madinat Zayed and 2/6 in Ghayathy stated that breast U/S was conducted but not on a screening basis, more usually it is used to confirm the suspicion of a mass when the lady visits the surgeon complaining of a lump or pain.

  U/S guided biopsy: 6/15 in Madinat Zayed, 1/6 in Ghayathy and 2/7 in Delma agreed that this diagnostic procedure was used for suspicious masses.

- **iv. Treatment, Rehabilitive and Support Services for Breast Cancer:**

  All of the respondents denied the presence of these services in their respective cities unanimously.
**Key Informant Responses:**

The key informants chosen were individuals in the community who, if not UAE Nationals, were Non Nationals who have lived for at least 3 years in Al Gharbia Region.

They were chosen on the basis of their knowledge about community issues either due to their jobs, activity in community events and successful participation in previous community events, such as community celebrations, camel bazaars, or date festivals, or their representation of a minority group in the community.

The information conveyed by the key informants reflects their views on what they comprehend to be issues related to breast cancer in general in the Region. Their responses are not totally representative of the actual facts, but reflect a light on what these individuals consider to be obstacles to promoting breast health attitudes and services in their respective communities. These individuals were not assigned randomly but selected purposely, for the reasons stated above, thus one cannot generate their opinions or findings to the general population (due to selection bias). Another point to consider is that although a number of these informants were administrative personnel in the health sector, they were not aware of breast cancer or the presence of breast health services.

The total number of key informants who were interviewed in Al Gharbia Region was 78 informants.

Madinat Zayed: 35 Liwa: 8 Marfa: 12 Ghayathy: 8 Silla: 7 Delma: 8

Of the 78 interviewed, 11 were Non Arabs, 15 were Arabs, and the remaining 52 were UAE nationals. The majority of persons interviewed were male, as men tend to take a much more active role in the community compared to females, and are more aware of community aspects.

Of the Non Arabs, Key Informants were from the following areas:

Indian subcontinent: 8 Philippines: 1 British: 1 Bedoon: 1

**In your opinion, what are the major health problems of concern for women in the UAE?**

There were 35 health problems listed but the most common in order were:

- Diabetes Mellitus (DM) 69%
- Hypertension 51%
- Obesity 31%
- Cancer 24%
- Hypercholesterolemia 15%
- Asthma 14%
- Cardiovascular diseases 13%

The total number of Non nationals was 26, and they identified the top health problems as follows:

- 1. Diabetes Mellitus 57.7%
- 2. Obesity 46.2%
- 3. Hypertension 42.3%
- 4. Hypercholesterolemia 15.4%
- 5. Skin diseases 15.4%
- 6. Coronary heart disease 11.5%
- 7. Cancer 11.5%
8. Asthma/allergy 11.5%

9. Anemia 11.5%

10. Renal diseases, hepatitis, decreased health awareness; each separately is 7.7%

11. Breast cancer, metabolic syndrome, genetic diseases, pediatric infections, dental problems; each separately 3.8%

Sources for health Information:

- Medical Doctors were considered to be the most credible people for health information (90%) followed by nurses (28%), media (17%), family & friends (17%).

- In their choice of where one in the community would go for breast health information, the internet was their preferred choice. It should be noted, however, that not everyone has internet access, especially among Non Nationals. Only 64 out of the 78 informants answered this question; internet was followed by media (television and radio), then by nurses.

Non-nationals’ preferred answer for this question ("where would someone in the community go for breast health information") follows, in order of frequency: Doctors followed by breast cancer survivors/co-survivors, nurses, then internet and media equally, and last was specialized clinics.

- Overall, key informants believed that the most effective way to disseminate breast health information was by television, followed by brochures and leaflets, SMS, posters and newspapers.

Needs for resources:
The majority of informants expressed their belief that women 40 years and above were the group of women in the community most in need for breast health services.

Their immediate second choice was schoolgirls in the secondary level, advising that these services should be educational in nature keeping in mind all the cultural issues which are so deep rooted in Al Gharbia. For example, one should refer to the breast on a broad sense as it is considered a sex organ (taboo). It would be through these girls that the message can reach their mothers, who are the target group and are difficult to reach, because many of them don’t work, drive or even read and write.

Their third choice was to target illiterate women and low socioeconomic groups as the inability of the illiterate women to utilize written health resources and the difficult social and economical issues in the lives of the latter group would compromise their utilization of health services.
Obstacles and Barriers to Breast Health Services:
Issues such as accessibility of health services, cost, apprehension and fear, awareness, culture and behavior were raised.

♦ Accessibility of health services: the majority felt that there was no breast health services for ladies with special needs (contradicting the opinion of the service providers) and that breast health providers were too far with no public transport. Public transport is available in the form of buses run by the municipality which depart the bus station at specific timings, yet it is culturally unacceptable for National women to use this means of transport in Al Gharbia. Finally, that working hours were limited (no evening clinics they can attend when their husbands or sons return from work and can accompany them).

Table 4.3.14: Response of Key informants on accessibility of health services

<table>
<thead>
<tr>
<th>Concerning accessibility, rank of options (absolute numbers).</th>
<th>Accessibility</th>
<th>National</th>
<th>Arab</th>
<th>Asian (Indian, Pakistani, Iranian, Bangladeshi)</th>
<th>Filipina</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unavailable breast health providers, centers or hospitals</td>
<td>25</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Breast health providers are too far</td>
<td>32</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Working hours are limited</td>
<td>26</td>
<td>7</td>
<td>4</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No public transport</td>
<td>26</td>
<td>10</td>
<td>5</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No services available in languages other than Arabic/English</td>
<td>25</td>
<td>9</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>No services for ladies with special needs</td>
<td>32</td>
<td>11</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3.15: Response of key informants on Cost

♦ Cost: the three main issues under cost were that insurance doesn’t cover the cost of treatment, treatment services are not free (although breast health screening is free) and that transportation (private) is too expensive.

<table>
<thead>
<tr>
<th>Cost</th>
<th>National</th>
<th>Arab</th>
<th>Asian (Indian, Pakistani, Iranian, Bangladeshi)</th>
<th>Filipina</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Services are not free</td>
<td>25</td>
<td>12</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Insurance doesn’t cover the cost</td>
<td>31</td>
<td>11</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Transportation is expensive</td>
<td>26</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

♦ Concerning apprehension and fear: the majority agreed that women did not utilize breast health services as they feared to discover they might have breast cancer; moreover they feared that they might lose their breast if it were to be discovered. Visiting the doctor was also an issue they felt is an obstacle. Many of these women are fatalistic. The usual trend here is that one visits the doctor only if she is sick, thus going to see a physician simply for screening would raise questions about her health status in general among the general (local) community and for this reason, they prefer to leave it up to fate as well as believing that this is part of being faithful in their religious beliefs.
Table 4.3.16: Response of key informants on Apprehension

<table>
<thead>
<tr>
<th>Apprehension/Fear</th>
<th>National</th>
<th>Arab</th>
<th>Asian (Indian, Pakistani, Iranian, Bangladeshi)</th>
<th>Filipino</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiting the doctor</td>
<td>36</td>
<td>10</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Discovering to have breast cancer</td>
<td>44</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The idea of losing breast if breast cancer were detected</td>
<td>39</td>
<td>11</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pain due to compression during the procedure of mammography</td>
<td>25</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Previous experience of others in screening or treatment</td>
<td>31</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Repeated mammograms may cause breast cancer</td>
<td>20</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3.17: Response of Key informants on Awareness

<table>
<thead>
<tr>
<th>Awareness</th>
<th>National</th>
<th>Arab</th>
<th>Asian (Indian, Pakistani, Iranian, Bangladeshi)</th>
<th>Filipino</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unaware of available health services: screening &amp; treatment</td>
<td>47</td>
<td>9</td>
<td>6</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Absence of breast cancer awareness programs</td>
<td>40</td>
<td>10</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Awareness programs are not accessible to all</td>
<td>50</td>
<td>13</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Ignorance of the disease or its dangers</td>
<td>43</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Unavailable service with language other than Arabic/English</td>
<td>33</td>
<td>9</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Ignorance of preventive methods</td>
<td>44</td>
<td>11</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Visiting the doctor</td>
<td>36</td>
<td>10</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Discovering to have breast cancer</td>
<td>44</td>
<td>12</td>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>The idea of losing breast if breast cancer were detected</td>
<td>39</td>
<td>11</td>
<td>7</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pain due to compression during the procedure of mammography</td>
<td>25</td>
<td>5</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Previous experience of others in screening or treatment</td>
<td>31</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Repeated mammograms may cause breast cancer</td>
<td>20</td>
<td>5</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

♦ Awareness: the majority believed that the awareness programs were not reaching all sectors of the community. Also many women are ignorant of the early detection breast health practices such as BSE and are unaware of available breast health services such as CBE. Other factors are the ignorance of the existence of this disease. One of the Non Arab informants expressed her surprise about this issue, as the first time she had heard about breast cancer was during the interview. Another important issue regarding awareness was their belief that women of the target group were ignorant about the dangers of this disease. An interesting suggestion by a
company director in AlGharbia region explained that conducting education through workshops or formal gatherings was “frustrating”. He told the interviewer, “You see me sitting on this fancy chair? I am a Bedouin. I will sit here for 8 hours and then I go home, sit on the ground and go to my camels. If you want to succeed in educating the community, come to our gatherings in the ‘Majlis’ (a non formal gathering of men) in the evenings.”

♦ Culture and behavior: issues such as modesty and the refusal to be examined by a male doctor were considered to be the most common issue under this obstacle. The other factor which played a role they believed was their uneasiness to speak about cancer in general (if you talk about it, you might get it). Shyness was another issue believed to be a barrier as well as the belief that repeated mammograms may cause breast cancer in the future. Responses were similar among all cultures; the only difference was in whether they ranked “modesty and refusal to be examined by a male doctor” or “unease to talk about breast cancer” first.

<table>
<thead>
<tr>
<th>Culture &amp; behavior</th>
<th>National</th>
<th>Arab</th>
<th>Asian (Indian, Pakistan, Iran, Bangladesh)</th>
<th>Filipino</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shyness</td>
<td>39</td>
<td>10</td>
<td>7</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pessimism</td>
<td>32</td>
<td>7</td>
<td>8</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Unease talking about cancer issues, especially breast cancer</td>
<td>40</td>
<td>13</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Modesty, refusal to be examined by a male doctor</td>
<td>43</td>
<td>11</td>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Fatalistic</td>
<td>29</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Husband / Family does not allow</td>
<td>23</td>
<td>4</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Delay due to busy schedule</td>
<td>34</td>
<td>8</td>
<td>4</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Going to local healer</td>
<td>22</td>
<td>7</td>
<td>5</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

v. Treatment Options:
♦ Payment for breast health services: The question was “How do most women in the community pay for their breast health care services?” but not all gave a response. From the 61 who did answer, the majority agreed that screening services were free, but that women would need to be fully insured for treatment services. For non national ladies, insurance companies do not pay for treatment of cancer. A considerable number of the informants who responded stated that the ladies would need to pay after taking donations or charity, while others stated that the ladies (Non National) “could not afford it”.

♦ They believed that low income women would go to governmental hospitals for screening services as they are free or private clinics/ hospitals or that they wouldn’t know where to go. In Silla City and Madinat Zayed, respondents also listed local healers as an option to consider.

♦ A very large proportion of the informants thought that a large number of women have not been screened for breast cancer. Reasons given for why women have not been screened included: lack of awareness, which outranked the other causes, followed by cultural issues or negligence, and difficulty to access the services.
They also believed that breast cancer services are available but not for all women and the most common reason they expressed was that health insurance did not cover these services. Treatment services for breast cancer are not covered by insurance for Non Nationals.

Success of the present health care system in meeting the needs of the community:

<table>
<thead>
<tr>
<th></th>
<th>National: Non National</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successful</td>
<td>10:7</td>
</tr>
<tr>
<td>Average</td>
<td>14:3</td>
</tr>
<tr>
<td>Below average</td>
<td>7:9</td>
</tr>
<tr>
<td>Poor</td>
<td>10:5</td>
</tr>
<tr>
<td>Don’t know</td>
<td>10:3</td>
</tr>
</tbody>
</table>

When asked what they wished to improve breast cancer issues in the near future, the following were their main responses: raising awareness, improving health services, ensuring free service for all, or fully insuring treatment services for breast cancer.

The two wishes that all respondents from the six cities in Al Gharbia requested collectively were to raise awareness, topping the list for Marfa informants, and to improve health services, topping the list for Madinat Zayed informants. Implementing an obligatory screening policy topped the list of choices for Delma Island informants.

From the positive outcomes of these surveys with key informants, conveyed by the participants who interviewed them, most of the key informants were glad that such an issue was being raised and that they were willing to participate in any way, but just needed guidance. The most generous was Al Gharbia Development Council Director who suggested that they were willing to do anything for this cause even if it were to build a whole facility or purchase a mobile mammogram.

4.3.6 Identified and Prioritized Gaps and Needs

Identified Gaps:

Identifying gaps for Al Gharbia region was achieved by meeting with Al Gharbia participants and reviewing all the demographic data for the region, city by city, then reviewing the Key Informant results and the Service Provider’s input. Each group of participants in the different cities was asked to identify the gaps from their city according to the data they had. In general, the gaps identified were similar all over the region.

Issues which need to be considered in Al Gharbia are:

A. Demographics:

- Illiteracy is high generally in all the cities of Al Gharbia in the target group of women 40 years of age and older. This fact will require well programmed and constructed educational programs using attractive, informative, and non-text based tools for this group of women.

- The Asian Non Arab Category 40 years and older constitutes about 24% of the population and the highest Non Arab Nationality in the Region. This section of the community needs to be further analyzed to identify other demographic data for this group of ladies in order to address them properly.

- The “Bedoon” in Marfa city are an underprivileged category with multiple socio-economic, educational and health issues, many of them challenging and related to Governmental regulations.

- Although all Non Nationals carrying a residence visa either as part of the workforce or as dependants in UAE have health insurance, the insurance policies for non Nationals at present do not cover the costs of advanced diagnostic procedures or treatment for breast cancer.

B. Breast Cancer Statistics and Breast Health Services and Key Informant responses:

- Absence of any breast cancer statistics throws a very heavy shadow on prioritizing, advocating and emphasizing needs for breast health services in any specific city or category of females in Al Gharbia.
region. There is no feedback system between the referral center in Al Gharbia and the specialized breast cancer centers, most probably due to the fact that these ladies are registered according to the center which referred them which is Abu Dhabi. For the future, it is vital to be able to identify this group of ladies, although releasing such information even through administrative channels can be challenging in the UAE.

- Although CBE and teaching ladies how to conduct a BSE are health services present as early as the 1990s when health services were under the Ministry of Health, very poor utilization of these services remains a major issue. Many factors play a role in underutilization of services.

  I. Lack of awareness of the presence of these services as well as the importance of these preventive services, coupled with the ignorance of the dangers of the disease as identified by the Service Providers.

  II. Absence of mammogram unit and trained radiologists or ultrasonographers in the whole region, distance of screening centers and difficulty reaching them, as well as cost of transport all carry an accumulative negative impact on utilization of screening services. Many women are discouraged to come for CBE or to follow up annually due to this. After trying to encourage women in the older age groups to get CBE and explaining the process, they will ask us if we have a mammogram and feel that their efforts are futile since they can’t follow up by radiological screening. Then, they simply drop out.

  III. Preventive services such as CBE and education on breast health and BSE are carried out in MCH centers where the target population does not attend for health services. There are no Breast Health Clinics even on minimal Health Care Personnel basis in the Hospitals that the target population does visit for health services. Moreover, the physicians who provide the target population with their health needs and were identified by the key informants as the most credible people for breast health information, do not address breast health unless the patient herself requests it or is symptomatic. Furthermore, the ladies refuse to be examined by a male surgeon should a suspicious breast mass be discovered.

  IV. Very few service providers expressed that professional translators were provided for the Asian Non Arab population, which constitutes approximately 24% of the female target population in Al Gharbia should they seek health care services. However, very few Asian women (Bangladeshi, Indian Subcontinent) in the population cannot communicate in either language, and husbands who speak English or Arabic serve as translators.

  V. Cost and health insurance was not considered an issue by the key informants in obtaining screening breast health services, but these were considered significant issues should a suspicious breast mass be discovered by clinical exam.

- A number of cultural barriers like being pessimistic or fatalistic or preferring to go to local healers are issues which need to be addressed.

In light of these multiple gaps, many of which are very challenging and need extensive efforts, the next step was to prioritize these gaps.
Prioritized Gaps for Al Gharbia Region:
The team was asked to prioritize a number of gaps to draft Strategic Goals and 2-3 objectives to achieve these goals. The gaps were chosen by the ranking method provided by materials provided through the Susan G. Komen for the Cure Global Initiative for Breast Cancer Awareness.

They prioritized three main gaps:

1. Lack of awareness.
2. Absence of a mammogram unit.
3. Absence of breast health services in health facilities where the target population seek health services in general.

4.3.7 Strategic Goals and Objectives for Al Gharbia:

1. To increase awareness towards breast health:
   • Objectives:
     a. To conduct a KAP study on breast health knowledge and practices, including a minimum of 300 females of the target population within the next 6 months. A KAP study would be directed to the community itself (women), with the objective of trying to understand the depth of knowledge the target population has on breast cancer, what are their attitudes concerning breast health and lifestyle and practices. It would give a more in-depth picture of the defects or obstacles that might be hindering the target population from seeking breast health services.
     b. To conduct a minimum of two workshops on breast health for secondary level and college female students over a period of 9 months to cover at least 100 female students (across multiple cities). 100 students as a whole in AlGharbia region and not in one single workshop.
     c. To conduct a minimum of 12 home visits where the target population can be addressed easily and openly, at least 2 families per visit in each city of Al Gharbia over a period of a year, whether National or Non National. This option was chosen according to the request of an elderly National male family leader in AlGharbia. Neighborhoods in AlGharbia tend to segregate families together of a single tribe and thus meetings can be easily arranged for the women in the tribe leader’s home, who is highly respected and whose opinions are followed.
     d. To target men by organizing non formal meetings during evenings in the “Majlis” (a non formal setting where men gather usually friends and family members to discuss community, financial, social or private family issues), a minimum of 12 per year over the region of Al Gharbia, targeting at least 120 men.

2. To advocate efforts for the provision of a mobile mammogram unit to cover the needs of the whole region:
   • Objectives:
     a. To contact with in the next three months Al Gharbia Development Council Administrative Director located in Abu Dhabi to organize financial purchasing totally or partially through coordination with other governmental sectors of a mobile mammogram unit for the region.
     b. To direct a letter of request to Al Gharbia Medical Region Director to nominate physicians, radiologists and nurses for training on breast health clinical examination, screening, mammography, ultra-sonography, biopsy and counseling at the National Center for Woman and Child Screening who have expressed their willingness to train them.
To organize two fundraising events over the next year in partnership with HAAD.

Fundraising would help Non National women with breast cancer in A.D. obtain health services that are not within their financial ability, such as more advanced diagnostic procedures, treatment, breast prostheses, surgery…etc. All these services are not free for Non Nationals nor covered by insurance. HAAD cannot provide these services as it is against the regulations of the Insurance companies they have contracts with.

3. To integrate Breast Health Services for each city within the hospitals that the target population seek health services:
   - Objectives:
     a. To direct a letter of request to Al Gharbia Medical Director to establish at least three breast health clinics functioning in the whole region over a period of 1 year.
     b. To conduct two breast health training programs per year targeting a minimum of 20 female health care providers in the hospitals of the region through coordination with Health Authority Abu Dhabi.

This is the first Community Profile to be written and submitted for the Emirate of Abu Dhabi. It took tremendous effort to gather all the required data.

It is our hope that this document will be utilized in order to direct efforts not only by Health Authority Abu Dhabi, but all partners concerned, to develop educational and awareness programs which address the needs of each community. to assist in the development of breast health clinics and services where needed and to assist in gathering more in depth data regarding demographics and breast cancer statistics.

It is only to be expected that there would be similarities and dissimilarities between the three regions of Abu Dhabi. Abu Dhabi (Central Region) and Al Ain (Eastern Region) are similar to each other in terms of demography and breast health services, social lifestyles and education.

Al Gharbia differs from both regions in many aspects. The region is considered totally rural with all the issues rural areas contain socially, culturally, education wise adding to that the vastness of the geography which is all desert apart from the seashores. The cities in the region are relatively far from Abu Dhabi and public transport is not an issue welcomed in that region.

A main dissimilarity between Al Gharbia and the other two regions is that the population is Bedouin in nature; one can still find people living virgin lifestyles, and although this carries with it the beauty of human nature blending in with the environment, this aspect must be taken into consideration seriously when addressing the multiple gaps in this community so as to succeed. Illiteracy is high among the target population of women aged 40 and above, the “Bedoon” are an underprivileged population, deficiency of breast health services apart from CBE, decreased awareness not only among the general population, but the health care personnel who serve them towards breast cancer issues all have their negative impact on breast health.

In order to change the behaviors predominant at the present it is vital to address all the obstacles which were mentioned, not only those which were most common between the different regions, taking into respect that some factors ranked high in a region and other factors in other regions.

Working on this document was an awarding and educational experience in that it helped visualize and materialize defects in the health system and helped us identify the possible gaps that led to the failure of so many awareness and educational programs. It is our hope that we will succeed where our successors failed.
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APPENDIX I

A. KEY INFORMANT INTERVIEW QUESTIONS
B. HEALTH PROVIDER SURVEY
APPENDIX I

A. KI Interview Questions

First- Personal information

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<tr>
<td>Mother tongue</td>
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<td>Other language (s)</td>
<td></td>
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<td></td>
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<tr>
<td>Educational level</td>
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<tr>
<td>Contact</td>
<td></td>
</tr>
<tr>
<td>Tel:</td>
<td></td>
</tr>
<tr>
<td>E-mail:</td>
<td></td>
</tr>
<tr>
<td>Residence</td>
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Second- Health Issues

1. In your opinion, what are the major health problems of concerns in the UAE?

________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________
________________________________________________________________________________________

Third- Sources of Health information

1. Who are the most creditable people who provide health information in this community?

☐ Doctors  ☐ Nurses
☐ Family/ Friend  ☐ Patients
☐ Religious Leader  ☐ Local healers
☐ Other, specify:___________________________________________

2. Where is some one in this community most likely to go for breast health information?

☐ Doctors  ☐ Nurses
☐ Family/ Friend  ☐ Breast cancer survivors/ co- survivors
☐ internet  ☐ Media
☐ Local healers  ☐ Other, specify:________________________________
3. What is the most effective way to disseminate breast health information?

☐ Booklets/brochure    ☐ Radio
☐ Advertisement/posters ☐ Television
☐ Newspapers        ☐ SMS
☐ Other, specify:________________________________

### Forth- Need for Resources

1. In your opinion, which segments of women in your community have the greatest need for breast health resources and whom we should concentrate on?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

### Fifth- Obstacles and Barriers

What obstacles and barriers can you visualize that may impede utilizing breast health services and resources in your community and related to the following issue?

☐ Accessibility

• Unavailable breast health providers, centers or hospitals ☐ Yes ☐ No
• Breast health providers are too far ☐ Yes ☐ No
• Working hours are limited ☐ Yes ☐ No
• No public transport ☐ Yes ☐ No
• No services available in languages other than Arabic/English ☐ Yes ☐ No
• No services for ladies with special needs ☐ Yes ☐ No
• Other obstacles, pls. State:__________________________

☐ Cost

• Services are not free ☐ Yes ☐ No
• Insurance doesn’t cover the cost ☐ Yes ☐ No
• Transportation is expensive ☐ Yes ☐ No
• Other obstacles, pls. State:__________________________

☐ Apprehension/Fear

• Visiting the doctor ☐ Yes ☐ No
• Discovering to have breast cancer ☐ Yes ☐ No
• The idea of losing breast if breast cancer should be confirmed ☐ Yes ☐ No
• Pain due to compression during the procedure of mammography ☐ Yes ☐ No
Abu Dhabi Community Profile | 2008

- Previous experience of others in screening or management
  - Yes
  - No
- Repeated mammograms may cause breast cancer
  - Yes
  - No
- Other obstacles, pls.
  State:__________________________________________________________________
  ______________________________________________________________________
  ______________________________________________________________________
  ______________________________________________________________________

☐ Awareness

- Unaware of available breast health services: early screening and treatment
  - Yes
  - No
- Absence of breast cancer awareness programs
  - Yes
  - No
- Awareness programs are inaccessible to all
  - Yes
  - No
- Ignorance of the disease or its dangers
  - Yes
  - No
- Ignorance of preventive methods
  - Yes
  - No
- Other obstacles, pls.
  State:__________________________________________________________________
  ______________________________________________________________________
  ______________________________________________________________________

☐ Culture & behavior

- Shyness
  - Yes
  - No
- Pessimistic
  - Yes
  - No
- Un easy to address cancer issues, especially breast cancer
  - Yes
  - No
- Modesty, refusal to be screened by a male doctor
  - Yes
  - No
- Fatalistic
  - Yes
  - No
- Husband / Family does not allow
  - Yes
  - No
- Delay due to busy schedule
  - Yes
  - No
- Using herbal medicine
  - Yes
  - No
- Other obstacles, pls.
  State:__________________________________________________________________
  ______________________________________________________________________
  ______________________________________________________________________

Sixth- Screening and treatment services

1. How do most women in the community pay for their breast health care services?
2. Where do low-income or women with limited insurance go for their routine breast health care such as breast cancer screening and exams?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

3. Do you think that a large number of women in the community who are over 40 have not had screening? Why?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

4. Do you believe that treatment services for breast cancer are available in UAE?

__________________________________________________________________________________________
__________________________________________________________________________________________

5. In your opinion, is treatment for breast cancer available for all women? Why?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

6. How successful is the present health care system in meeting the needs for breast health care and breast cancer treatment?

__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

7. If you could wish for an improvement in breast cancer issues in the near future, what would you wish?

__________________________________________________________________________________________
__________________________________________________________________________________________
8. Do you wish to mention anything else?

________________________________________

Thank you for your valuable cooperation
B. Health Provider Survey

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<td></td>
</tr>
<tr>
<td>4. Type of funding support</td>
<td>• Government</td>
</tr>
<tr>
<td>5. Organization Director or Key Correspondance</td>
<td>Name: ____________________________</td>
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<tr>
<td></td>
<td>E-mail: ____________________________</td>
</tr>
<tr>
<td></td>
<td>Telephone: ____________________________</td>
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<tr>
<td>6. Physical Location(s)</td>
<td>Fax: ____________________________</td>
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<tr>
<td></td>
<td>Tel: ____________________________</td>
</tr>
<tr>
<td></td>
<td>e-mail: ____________________________</td>
</tr>
<tr>
<td></td>
<td>P. O Box: ____________________________</td>
</tr>
<tr>
<td>7. Date Organization Started</td>
<td></td>
</tr>
<tr>
<td>8. Intended recipient of services</td>
<td></td>
</tr>
<tr>
<td>9. Is the service provided:</td>
<td>☒ Free</td>
</tr>
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<td></td>
<td>☒ Require insurance</td>
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<td></td>
<td>☒ Other source (specify)</td>
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<td>10. Working hours</td>
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C. Survey of Breast Health Providers
11. Does the organization provide special services for women with

<table>
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<th>□ No</th>
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<td>Non Arabic nor English speakers</td>
<td>□ YES</td>
<td>□ No</td>
</tr>
<tr>
<td>Low literacy</td>
<td>□ YES</td>
<td>□ No</td>
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12. First: Health Education & Awareness

Does your organization provide Health Education & Awareness services

| □ Yes | □ No |

IF YES, what type of information given?

a) Medical information on breast cancer

| □ YES | □ No |

b) BSE- Education

| □ YES | □ No |

c) Tools of early detection: (Mammogram, CBE, BSE)

| □ YES | □ No |

d) Other breast health providers

| □ YES | □ No |

e) Other (s), specify:_______________________________________________________________

13. Health Education Tools

| □ YES | □ No |

a) Leaflets / Booklet

b) Posters

| □ YES | □ No |

c) Lectures

| □ YES | □ No |

d) Campaigns

| □ YES | □ No |

e) Audiovisual

| □ YES | □ No |

f) Others, please specify:__________________________________________________________________________

14. Language used for health education

| Arabic | □ YES | □ No |

| English | □ YES | □ No |

Other language, please specify_______________________________________________________________
### 15. Screening and Diagnosis Services

Does your organization provide Screening and/ or Diagnosis Services?  
☐ Yes  ☐ No  

If yes, what are the services?  
<table>
<thead>
<tr>
<th>Screening only</th>
<th>Diagnostic only</th>
<th>Both services</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>NO</td>
<td></td>
</tr>
</tbody>
</table>

### 16. In case of available breast screening services - what is the accredited used protocol (please, attach copy from the protocol)?

---

### 17. What are the breast screening and /or diagnosis services available?

<table>
<thead>
<tr>
<th>a) Mammogram</th>
<th>☐ YES</th>
<th>☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Clinical Breast cancer Examination - CBE</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>c) Breast Ultrasound</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>d) Ultrasound Guided Biopsy</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>e) Stereotactic Guided biopsy</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>f) Genetic Counseling</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>g) Genetic testing</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
</tbody>
</table>

Other Services, please specify:

---

### 18. Third : Treatment Services for breast cancer

Does your organization provide treatment?  
☐ Yes  ☐ No  

If yes, what are the services?  
<table>
<thead>
<tr>
<th>a) Surgery</th>
<th>☐ YES</th>
<th>☐ No</th>
</tr>
</thead>
<tbody>
<tr>
<td>b) Radiotherapy</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>c) Oncology</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
<tr>
<td>d) Plastic Surgery</td>
<td>☐ YES</td>
<td>☐ No</td>
</tr>
</tbody>
</table>
### 19. fourth: Support Groups & Services

**Dose your organization provide support services for breast cancer patients?**

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

If yes, what are these services?

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Support groups for Breast cancer patient</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Transportation during treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Provide child care services during treatment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Provide prosthesis and/or special ware</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Other Services, please specify:**

---------------------------------------------------------------------------------------------------------------------

---

### 20. What is the capacity of breast health services provide by your Organization/program?

---------------------------------------------------------------------------------------------------------------------

---

### 21. Rate of utilization of available services within last 5 years.(please attach table)

---------------------------------------------------------------------------------------------------------------------

---

**Thanks for your Valuable participation**
APPENDIX II

HEALTH PROVIDER DIRECTORY
<table>
<thead>
<tr>
<th>Service Provider</th>
<th>Region</th>
<th>Contact Tel</th>
<th>Working Hours</th>
<th>Breast Healthcare services</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Health Screening Program</td>
<td>Abu Dhabi</td>
<td>02 617501 to 02 6175036</td>
<td>7:00 am - 14:30</td>
<td>Yes Yes YES YES</td>
<td>Free for All women</td>
</tr>
<tr>
<td>Skills Khair Medical City</td>
<td>Abu Dhabi</td>
<td>02 6102000 or 050 6195125</td>
<td>8:00 - 16:30</td>
<td>Yes No YES Yes</td>
<td>Free for All women during October</td>
</tr>
<tr>
<td>AlFateh Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 666001</td>
<td>8:00 - 24:00</td>
<td>Yes Yes YES Yes</td>
<td>Free for All women during October</td>
</tr>
<tr>
<td>Khalifa A Center</td>
<td>Abu Dhabi</td>
<td>02 5551635</td>
<td>8:00 - 22:30</td>
<td>Yes Yes YES Yes</td>
<td>Not yet installed, free during October</td>
</tr>
<tr>
<td>AlMansoj Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 6554420 or 0655302</td>
<td>8:00 - 24:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>City Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 604500</td>
<td>8:00 - 22:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlMansoj Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 6104087</td>
<td>8:00 - 24:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlHteima Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 445202</td>
<td>8:00 - 22:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlMeshref Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 476853</td>
<td>8:00 - 22:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlZeinfa Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 4445762</td>
<td>8:00 - 22:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>New Dina Al Serjoum Clinic</td>
<td>Abu Dhabi</td>
<td>02 550500 or 02 5554561</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Mazuwah Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 555354</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlKhaman Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 564192</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Sanal Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 5621924 or 02 5620040</td>
<td>8:00 - 22:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>AlWethba Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 5633169</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Shahba Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 5631101 or 02 5622593</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Daayus Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 562005</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>alMuevis Health Clinic</td>
<td>Abu Dhabi</td>
<td>02 560720</td>
<td>8:00 - 22:30</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Zayed Military Hospital</td>
<td>Abu Dhabi</td>
<td>02 4051762</td>
<td>7:00 am - 14:00</td>
<td>Yes Yes YES Yes</td>
<td>Military Families Only</td>
</tr>
<tr>
<td>Private</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AlNour Hospital</td>
<td>Abu Dhabi</td>
<td>02 6265265</td>
<td>24 hours</td>
<td>Yes Yes Yes Yes</td>
<td>Free for Daman Enhanced network, 40% reduction during October</td>
</tr>
<tr>
<td>Qaff Diagnostic Center</td>
<td>Abu Dhabi</td>
<td>02 650300</td>
<td>8:00 - 10:00 &amp; 15:00 - 20:00</td>
<td>Yes Yes Yes Yes</td>
<td>require co-pay by insured payment</td>
</tr>
<tr>
<td>Life Bus Hospital</td>
<td>Abu Dhabi</td>
<td>02 5535252 Ext 210 or 2154</td>
<td>9:00 - 20:00</td>
<td>Yes Yes Yes Yes</td>
<td>Free for Daman Enhanced network</td>
</tr>
<tr>
<td>AlSamaa Hospital</td>
<td>Abu Dhabi</td>
<td>02 571220 Ext 1440</td>
<td>8:00 - 14:00 &amp; 18:00 - 22:00</td>
<td>Yes Yes Yes Yes</td>
<td>Free for Daman Enhanced network</td>
</tr>
<tr>
<td>New Medical Center</td>
<td>Abu Dhabi</td>
<td>02 535225</td>
<td>8:00 - 12:00 &amp; 18:00 - 21:00</td>
<td>Yes Yes Yes Yes</td>
<td>require co-pay by insured payment</td>
</tr>
<tr>
<td>Natasa</td>
<td>Al Ain</td>
<td>031 7663444</td>
<td>05:00 - 24:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Jalsil</td>
<td>Al Ain</td>
<td>031 7650171</td>
<td>24 hrs</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Wagan</td>
<td>Al Ain</td>
<td>031 7353282</td>
<td>24 hrs</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Mazroudi</td>
<td>Al Ain</td>
<td>031 7605200</td>
<td>08:00 - 20:00</td>
<td>Yes Yes No No</td>
<td></td>
</tr>
<tr>
<td>Service Provider</td>
<td>Region</td>
<td>Contract Tel</td>
<td>Working Hours</td>
<td>Breast Healthcare Services</td>
<td>Remarks</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------</td>
<td>--------------</td>
<td>---------------</td>
<td>----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Al Ain</td>
<td>Al Ain</td>
<td>03-7145110</td>
<td>08:00-23:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Khalidi</td>
<td>Al Ain</td>
<td>03-7666950</td>
<td>08:00-20:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Hill</td>
<td>Al Ain</td>
<td>03-7045328</td>
<td>08:00-20:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Murejji</td>
<td>Al Ain</td>
<td>03-7627777</td>
<td>08:00-23:00</td>
<td>Yes Yes Yes Yes</td>
<td>Newly installed, free during October</td>
</tr>
<tr>
<td>Zaidan</td>
<td>Al Ain</td>
<td>03-7060040</td>
<td>08:00-20:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Niddat</td>
<td>Al Ain</td>
<td>03-7688050</td>
<td>08:00-23:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Muqar</td>
<td>Al Ain</td>
<td>03-7684280</td>
<td>08:00-20:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Mazyad</td>
<td>Al Ain</td>
<td>03-7629706</td>
<td>08:00-23:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Yabur</td>
<td>Al Ain</td>
<td>03-7626172</td>
<td>08:00-23:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Flamah</td>
<td>Al Ain</td>
<td>03-7108211</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Maruz</td>
<td>Al Ain</td>
<td>03-7107151</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Shusab</td>
<td>Al Ain</td>
<td>03-7102002</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Faza</td>
<td>Al Ain</td>
<td>03-7131132</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Gha</td>
<td>Al Ain</td>
<td>03-7255185</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Khuzah</td>
<td>Al Ain</td>
<td>0230001230</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Sweihan</td>
<td>Al Ain</td>
<td>03-7141235</td>
<td>24 hrs</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Police Clinic</td>
<td>Al Ain</td>
<td>03-7690000</td>
<td>08:00-14:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>Military Clinic</td>
<td>Al Ain</td>
<td>03-7525950</td>
<td>08:00-14:00</td>
<td>Yes Yes No Yes</td>
<td></td>
</tr>
<tr>
<td>TAM Hospital</td>
<td>Al Ain</td>
<td>03-7074300</td>
<td>08:00-00:00</td>
<td>Yes Yes Yes Yes</td>
<td></td>
</tr>
<tr>
<td>Al Ain Hospital</td>
<td>Al Ain</td>
<td>03-7650300</td>
<td>08:00-00:00</td>
<td>Yes Yes Yes Yes</td>
<td></td>
</tr>
<tr>
<td>Emirati International Hospital</td>
<td>Al Ain</td>
<td>03-7653777</td>
<td>Morning 8am-6pm</td>
<td>Yes Yes Yes Yes</td>
<td>Free For Dames Enhanced network, 50% reduction for Men's mammogram</td>
</tr>
<tr>
<td>Specialised Medical Care Hospital</td>
<td>Al Ain</td>
<td>03-7652381</td>
<td>Morning 8am-6pm</td>
<td>Yes Yes Yes Yes</td>
<td>50% reduction for Men's mammogram</td>
</tr>
<tr>
<td>Cross Hospital</td>
<td>Al Ain</td>
<td>03-726121 or 704103</td>
<td>Morning 8am-5pm</td>
<td>Yes Yes Yes Yes</td>
<td>Free For Dames Enhanced network, 50% reduction for Men's mammogram</td>
</tr>
<tr>
<td>Al Muweiz Hospital</td>
<td>Al Ain</td>
<td>03-7657666</td>
<td>Morning 8am-5pm</td>
<td>Yes Yes Yes Yes</td>
<td>50% reduction for Men's mammogram</td>
</tr>
</tbody>
</table>

**Private**

<table>
<thead>
<tr>
<th>Al Ain</th>
<th>Al Ain</th>
<th>0200469000 (Dr. Shalaby), 0200544444 (Dr. Marzouk)</th>
<th>08:00-00:00</th>
<th>Yes Yes No Yes</th>
<th>Yes</th>
<th>Transportation for mammogram provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxx</td>
<td>Al Ain</td>
<td>0200500000</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
<tr>
<td>Obeid Al Nouria</td>
<td>Al Ain</td>
<td>0207741466</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
<tr>
<td>Endo Motorzawa</td>
<td>Al Ain</td>
<td>0207171051</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
<tr>
<td>Sbya</td>
<td>Al Ain</td>
<td>0208756555</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
<tr>
<td>al Amin</td>
<td>Al Ain</td>
<td>020701560</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
<tr>
<td>Liva</td>
<td>Al Ain</td>
<td>020822004</td>
<td>08:00-00:00</td>
<td>Yes Yes No Yes</td>
<td>Yes</td>
<td>Transportation for mammogram provided</td>
</tr>
</tbody>
</table>
Appendix III

Barriers for Women in need for breast health services- Abu Dhabi Island & Middle Region

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Access</th>
<th>Apprehension:</th>
<th>Awareness</th>
<th>Cost</th>
<th>Cultural/Behavioral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emirati Women</td>
<td>•</td>
<td>• Fear to discover the disease</td>
<td>• Awareness didn’t reach all women</td>
<td>Not issue</td>
<td>• fatalistic</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of losing breast if diagnosed</td>
<td>• Un awareness of providers</td>
<td></td>
<td>• Modesty</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of visiting the doctor</td>
<td>• Ignorance of disease</td>
<td></td>
<td>• Delay due to busy schedule</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Repeated Mammogram can cause cancer</td>
<td>• Ignorance of early detection tools</td>
<td></td>
<td>• Shyness</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td>• Unease address cancer issue, especially breast</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td>• Pessimism</td>
</tr>
<tr>
<td>Non Emirati Arabs</td>
<td>•</td>
<td>• Fear to discover the disease</td>
<td>• Awareness didn’t reach all women</td>
<td>Service not free</td>
<td>• Pessimism</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of losing breast if diagnosed</td>
<td>• Un awareness of providers</td>
<td>Insurance doesn’t pay cost</td>
<td>• Shyness</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of visiting the doctor</td>
<td>• Ignorance of disease</td>
<td></td>
<td>• Unease address cancer issue, especially breast</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Pain due to compression of mammogram</td>
<td>• Ignorance of early detection tools</td>
<td></td>
<td>• Delay due to busy schedule</td>
</tr>
<tr>
<td>Asian</td>
<td>•</td>
<td>• Fear to discover the disease</td>
<td>• Un awareness of providers</td>
<td>Service not free</td>
<td>• Modesty</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of losing breast if diagnosed</td>
<td>• Ignorance of disease</td>
<td>Insurance doesn’t pay cost</td>
<td>• Shyness</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of visiting the doctor</td>
<td>• Ignorance of early detection tools</td>
<td></td>
<td>• Pessimism</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Pain due to compression of mammogram</td>
<td>• Service not free</td>
<td></td>
<td>• Fatalistic</td>
</tr>
<tr>
<td>Women 40 years and older d older</td>
<td>•</td>
<td>• Fear to discover the disease</td>
<td>• Un aware of breast screening</td>
<td>Service not free</td>
<td>• Unease address cancer issue, especially Shyness</td>
</tr>
<tr>
<td></td>
<td>•</td>
<td>• Fear of losing breast if diagnosed</td>
<td>• Ignorance of disease</td>
<td>Insurance doesn’t pay cost</td>
<td>• Modesty</td>
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<td>•</td>
<td>• Fear of visiting the doctor</td>
<td>• Awareness program didn’t reach all women</td>
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<td>• Shyness</td>
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<td>• Pain due to compression of mammogram</td>
<td>• Un available information in language other than Arabic and English</td>
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<td>• Pessimism</td>
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<td>• Absence of awareness programs</td>
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<td>women</td>
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<td>• Fear to discover the disease</td>
<td>• Service not free</td>
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<td>• Fear of losing breast if diagnosed</td>
<td>• Insurance doesn’t pay cost</td>
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<td>• Fear of visiting the doctor</td>
<td>• Un aware of breast cancer early detection tools</td>
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