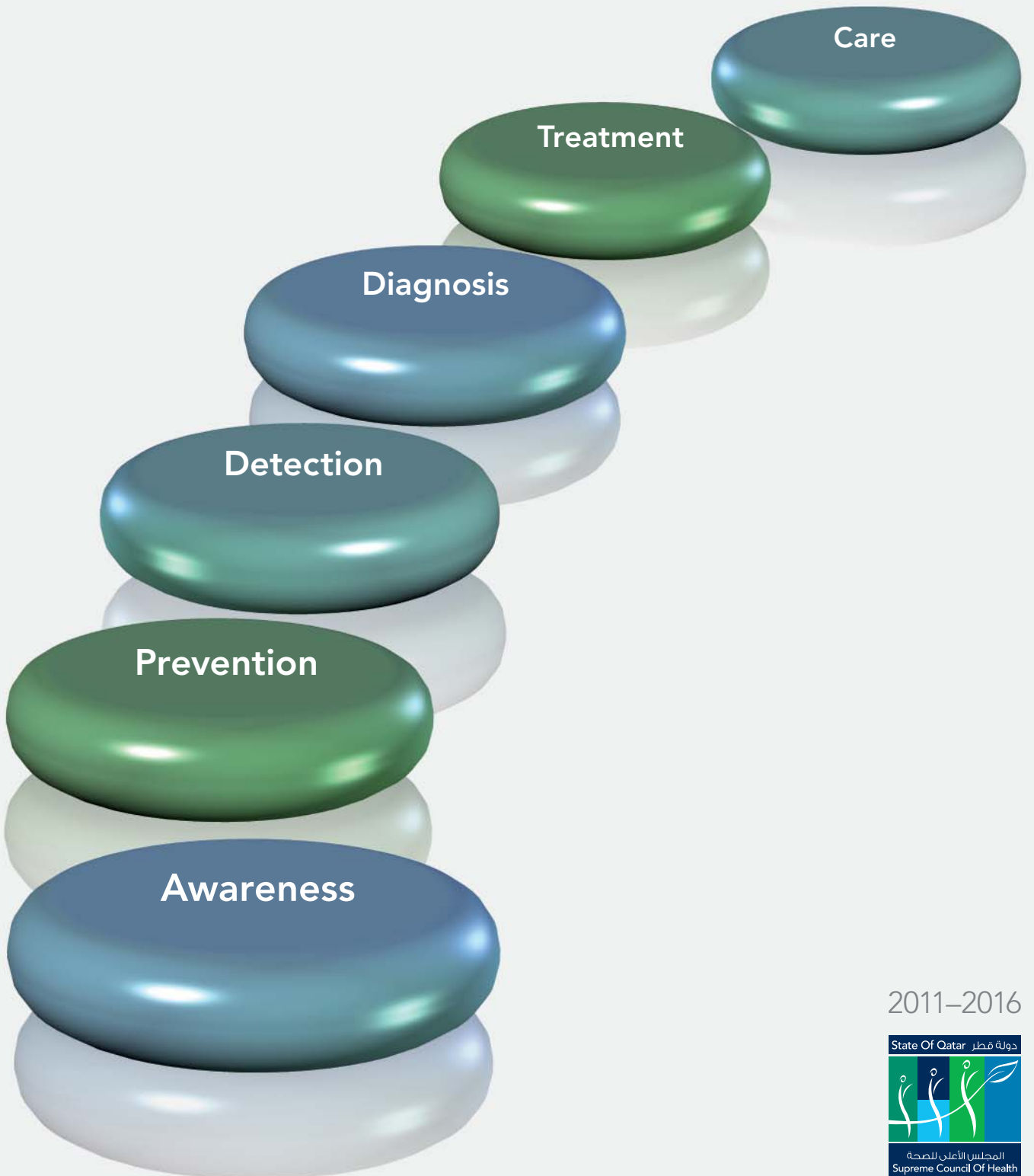


National Cancer Strategy

The Path to Excellence



2011–2016

Contents

Foreword by Her Highness Sheikha Moza bint Nasser	3
Foreword by His Excellency the Minister for Health	4
Foreword by Lord Darzi	5
Executive Summary	6
1. Introduction	10
2. Cancer in Qatar Now and in the Future	11
3. Education and Understanding	13
4. Prevention	15
5. Early Detection	19
6. Rapid and Definitive Diagnosis	24
7. Treatment	27
8. Ongoing Care	36
9. Measuring Performance	43
10. Workforce	45
11. Research	48
12. Next Steps	50
Annex A Table of Recommendations	53
Annex B List of Indicators	58
Annex C Membership of the National Cancer Stakeholder Committee	61
Annex D Deliberative Events	61
Annex E A Cancer Registry Policy	62
Annex F Questions from the 2010 UK Cancer Patient Experience Survey	63
Annex G Summary Investment Plan	65
Acknowledgments	66

Foreword by Her Highness Sheikha Moza bint Nasser



Cancer causes great sadness in Qatar. It affects most of us – 86% of the population knows someone who has had cancer, such as a friend or family member.¹ It is a disease that brings pain and suffering, primarily to those afflicted by the disease, but also to their families. However, cancer does not always win the battle. I am filled with pride and humility when I meet survivors here in Qatar and across the world. I hear stories of the different ways in which they tackled this disease, each individual having their own unique account and advice to share.

I want each cancer sufferer to get the very best care and to do this, we must improve healthcare and education. The healthcare component is obvious, as cancer is a significant cause of death in Qatar and we need the best possible treatment to deal with cancer when it has developed.

The importance of education may be less apparent, but increasing the understanding of cancer amongst the people of Qatar is vitally important. Doing this will remove any misplaced stigma associated with cancer, will help people do what they can to prevent cancer and will encourage people to attend screening. Effective education to reduce the cancer burden is as important as excellent healthcare for those with cancer.

With this strategy, I believe we can ensure that cancer is not a neglected issue in Qatar. Instead Qatar should stand out, within the Gulf region and further afield, as providing ideal cancer care.

I fully endorse this first National Cancer Strategy and will work to see its implementation completed.

Her Highness Sheikha Moza bint Nasser

¹ Survey of Public Sector Workers carried out online April–May 2011



Foreword by His Excellency the Minister for Health



I welcome the publication of our first ever National Cancer Strategy. I believe it will make a significant difference to the quality of cancer care in Qatar. I am grateful for the efforts of Lord Darzi and the Supreme Council of Health (SCH) team in producing this strategy and also want to thank everybody in Qatar – including those at Hamad Medical Corporation (HMC), Primary Health Care (PHC) and the wider health sector – who contributed to making this a truly representative strategy. The strategy has also been unprecedented in directly asking the people of Qatar, through polling and deliberative events, what they want to see change.

On the one hand, this strategy recognizes that in treatment terms ‘cancer’ is too generic – there should be specialization focusing on different cancer sites such as breast and colorectal. On the other hand, its recommendations are applicable to other chronic disease – for instance measures to prevent cancer and support cancer patients’ wider needs, should reduce the occurrence of other diseases and provide support for their sufferers.

The National Health Strategy 2011–2016 set the high-level policy for improving health in Qatar. It anticipated more detailed disease and service specific strategies or plans being published,¹ the first of which is this National Cancer Strategy. This strategy covers the same time period (2011–2016) and several of the recommendations in this strategy expand on, or relate to, the 35 projects in the National Health Strategy.

The recommendations contained in this strategy build on a solid foundation – the good work already done in Qatar in the recent years to improve cancer care, infrastructure and practice. Examples include the construction of a PET-CT scanner, the greater use of colonoscopies and work on sub-specialization in urology and breast cancer care.

So we will continue to improve cancer services, unceasing in our commitment to this task. I look forward to overseeing the implementation of this strategy, a process where the nurses, doctors and people of Qatar will once again be at the forefront.

HE Abdullah Khalid Al Qahtani
Minister of Health and Secretary General, Supreme Council of Health

¹ Supreme Council of Health, National Health Strategy 2011–2016, April 2011, p.10

Foreword by Lord Darzi



I was born in Iraq, grew up in Ireland, and have spent my working life in the UK – now I feel like I also have a new home, here in Qatar, where I am made very welcome on my frequent visits. I have been delighted to be able to use my experience of over 25 years as a cancer surgeon to benefit the people of Qatar by leading the development of a National Cancer Strategy for Qatar.

This strategy aims to put Qatar’s cancer services at the forefront of international best practice. Its successful implementation should mean that instead of Qatar’s going abroad for cancer care, people from the Gulf region, and even further afield, will want to come to Qatar for cancer treatment.

The strategy draws on the latest available evidence and has been tailored to the needs of the people of Qatar. It is not an external strategy, but one developed and owned by the Supreme Council of Health.

I would like to acknowledge the many people in Qatar and elsewhere who have made this strategy possible. First, it was an honor that Her Highness Sheikha Moza bint Nasser asked me to look into improving cancer services in Qatar. In taking on that commission, I am grateful to His Excellency Abdullah Khalid Al Qahtani for the support and advice he has given me in producing this strategy.

All the members of the National Cancer Stakeholder Committee have been hugely helpful in refining my proposals.¹ In particular, Dr. Faleh Mohamed Hussain Ali, Dr Juliet Ibrahim and the Planning and Strategy team at the SCH have played a crucial role in supporting the formation of the strategy, including organizing deliberative events.² And I would like to acknowledge all those who came along to the deliberative events and gave their thoughts, especially cancer patients and survivors. The staff at HMC, PHC and private providers have also contributed significantly to this document.

This strategy is just the start of improving cancer care in Qatar. Now comes the most important phase – implementing the recommendations contained within this document. I look forward to working with the people of Qatar to make that happen, to ensure Qatar has the internationally respected cancer services it deserves.

The Rt Hon. Professor the Lord Darzi of Denham PC, KBE

¹ Members of the National Cancer Stakeholder Committee (NCSC) are listed in Annex C.
² Details of the Deliberative Events are included in Annex D.



Executive Summary

This strategy was developed from international evidence on what excellent cancer care looks like, which was then applied specifically to Qatar. The people of Qatar were asked what changes they would like to see in a series of deliberative events, where proposals in the strategy were presented and debated. At the first deliberative event, one answer stood out as it highlighted the importance of this strategy:

Question: “What one change do you believe will make the biggest difference to improving the quality of cancer care in Qatar?”

Answer: “Have a clear [national] strategy that brings together primary, secondary and tertiary care with community involvement.”

—*Deliberative event participant*

So this document seeks to provide that strategic clarity, involving all levels of healthcare provision and the people of Qatar.

This is important because cancer, already a major cause of death in Qatar, will only become a bigger problem in future. A comprehensive approach is needed to tackle cancer, from preventing it where possible, through to quality care for those suffering from the disease.

That means increasing **Education and Understanding** of cancer through myth-busting campaigns, education in schools, cancer awareness events and a comprehensive Qatar-specific cancer information website.

It requires a renewed focus on **Prevention**. The expansion of projects set out in the National Health Strategy to reduce smoking and to increase exercise and a good diet, have the potential to significantly reduce cancer incidence.

Early Detection is also vitally important as, for most cancers, it increases the chance of successful treatment. A comprehensive Qatar cancer screening program is therefore required, following clear screening guidelines, making use of the latest technology and delivered in convenient locations by a range of providers. It is recommended that this be overseen by a new permanent body, the Qatar National Screening Committee. People also need to be aware of the symptoms of cancer so they can seek early help from health professionals and an awareness campaign will be developed, starting with prostate and bladder cancers.

When cancer is suspected, this needs to be confirmed or ruled out with a **Rapid and Definitive Diagnosis**. This will require training for primary care clinicians on their role in cancer treatment, fast referral times to specialist clinics and improved diagnostic capacity and capability.

Following diagnosis, **Treatment** needs to be patient-centered at all times, considering not just the patient’s medical needs, but also their psycho-social requirements. To support this there will be the new role of Patient Pathway Coordinators and the use of tools such as the Distress Thermometer. Treatment will also be required to be multi-disciplinary, specialized, evidence-based and timely in nature, to deliver the best possible outcomes for patients. These changes will require new roles (Multi-Disciplinary Team Coordinators and Clinical Nurse Specialists), new clinical practice (clinicians focusing on specific cancer sites), more consistency through following national standards and systems for ensuring rapid treatment.

Ongoing Care for cancer needs to include palliative care, providing effective pain relief and support for both those patients who will be cured and those patients who will not. Cancer support groups should be supported further and encouraged to develop as a way in which the community can contribute to improved cancer care. There needs to be a focus on secondary prevention and follow-up to help cancer survivors return to normality and to reduce the chance of a recurrence. Cancer survivors can also be a valuable volunteering resource to help new patients.

To know whether cancer care in Qatar is improving, **Measuring Performance** will be vital. Systematic data collection will allow quantitative analysis of performance from an improved cancer registry and a new screening registry. This will be complemented by information from two surveys – one of the general populace’s understanding of cancer and how it can be prevented and one of cancer patients’ experiences of treatment. Crucially, performance in cancer care will be published to improve transparency and drive up standards.

A vital component of good quality cancer care is having the **right Workforce**. There needs to be more healthcare workers dedicated to cancer care at all levels – from primary care clinicians to managers overseeing the implementation of this strategy. There also needs to be more training and support in cancer care for existing staff.

Research into all aspects of cancer care needs to occur in Qatar to deliver benefits for patients. By involving the diverse research community and the people of Qatar, new insights will emerge that can enhance the recommendations within this strategy.

Finally, progress must be made on **Next Steps**. Organizations need to start putting the recommendations into action and they will be aided in this by the development of an implementation plan. To help ensure progress is made an international conference should be organized in a year’s time, a review of progress should occur during 2013 and the strategy should be refreshed in 2016.



The key aspects of the strategy are captured in this rich image (an illustration containing a lot of detail) which shows the patient as the pearl at the centre of high quality cancer services.



Image 1: The components of quality cancer care in Qatar

1. Introduction

The World Health Organization (WHO) recommends countries develop a cancer control program.¹ This strategy means Qatar has now joined international leaders in cancer care, such as France and Canada, in having a comprehensive plan for cancer services in place.

The strategy sets out a vision for how cancer services should be in Qatar. It looks across the cancer continuum and describes what needs to happen at every stage. The cancer continuum is represented in Figure 1.

Two themes occur at several stages of the cancer continuum. The first is awareness. People need to be aware of what cancer is. They need to know how they can prevent cancer. And they need to know the importance of early detection.

The second is access. People need to be able to easily access services leading to early detection and rapid diagnosis. Once a diagnosis is made, treatment and ongoing care also need to be accessible.

After an initial chapter setting out what we know about cancer in Qatar, this strategy is organized with a chapter on each of the stages of the cancer continuum. It then considers measuring performance, workforce and research, which underpin the whole continuum, before concluding with a chapter on next steps.

Throughout the strategy, key recommendations are made. They are identified by bold typeface, and all the recommendations are also drawn together in Annex A. Once the recommendations are implemented, Qatar will have internationally respected cancer services. Indicators of the quality of cancer care in Qatar will be needed to demonstrate this achievement. These are also included throughout the strategy, with all the indicators set out in Annex B.

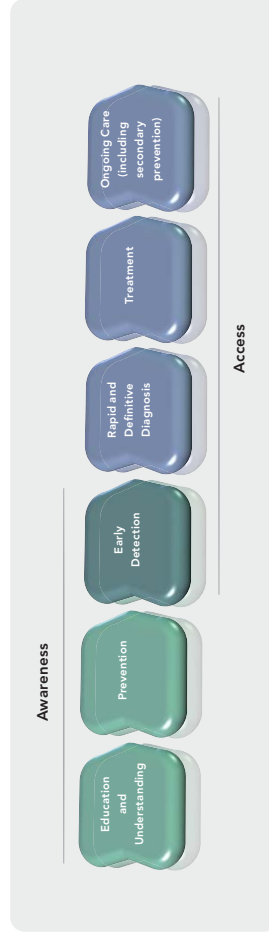


Figure 1: The Cancer Continuum

2. Cancer in Qatar Now and in the Future

Cancer accounts for 10% of all deaths in Qatar.¹ Whilst very significant, this is a comparatively low proportion of deaths – for instance in the UK, 27% of deaths are caused by cancer.² The major reason for this is that as cancer is a progressive disease that develops over time, the chances of developing cancer increase significantly as people age. In the UK, 75% of cancer is diagnosed in people over 60.³

Qatar has a young population at present, but this will change. So, whilst in 2010 the proportion of the population over 60 was just 2%, by 2050 this will have increased to 20%. An ageing and growing population will mean the incidence (new cases) of cancer in Qatar will more than double by 2030, as shown in Figure 2.

Box 1: What is Cancer?

"Cancer is a term used for diseases in which abnormal cells divide without control and are able to invade other tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems.

Cancer is not just one disease but many diseases. There are more than 100 different types of cancer. Most cancers are named for the organ or type of cell in which they start – for example, cancer that begins in the colon is called colon cancer."

Taken from the American National Cancer Institute's web-page: <http://www.cancer.gov/cancertopics/cancerlibrary/what-is-cancer/>

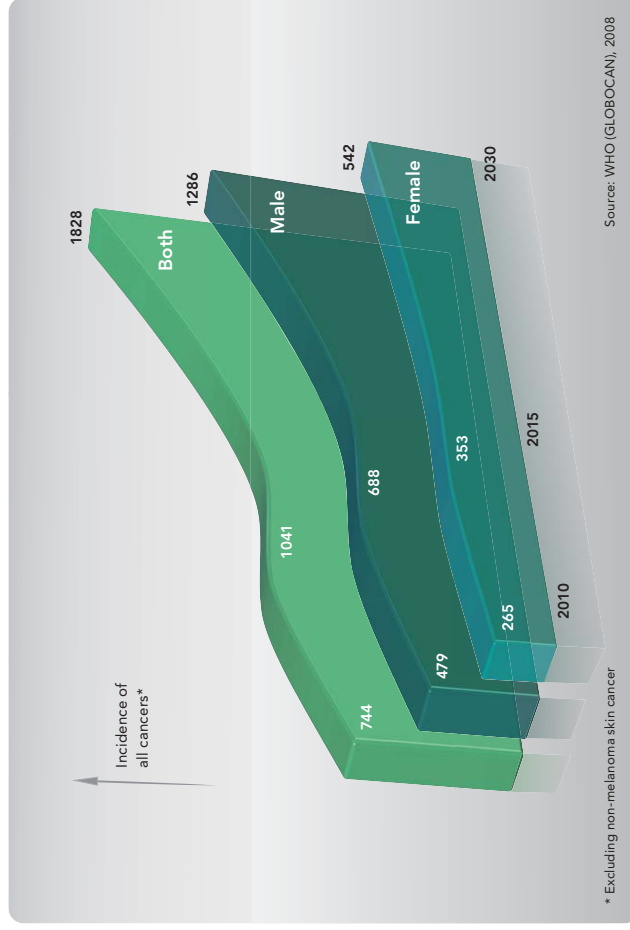


Figure 2: Estimated future incidence of cancer in Qatar

1 Supreme Council of Health, Annual Health Report 2008
2 Cancer in the UK – July 2010 available at: http://info.cancerresearch.org/prod_consump/groups/cr_common/@nre/@sta/documents/generalcontent/018070.pdf
3 Cancer in the UK – July 2010

1 WHO, National Cancer Control Programs: Policies and managerial guidelines, 2nd ed. (2002)

3. Education and Understanding

Indeed, Figure 2 probably understates the projected incidence as Qatar's population growth continues to exceed expectations. In 2008 it was projected that Qatar's population would reach 2.3 million, by 2050.¹ However, in 2010 the Qatar Statistics Authority estimated that this population level would be reached much sooner, by 2020. Now, with Qatar's success in winning the right to host the 2022 World Cup, some commentators are suggesting the population could even reach 4 million by 2020.² Therefore, the burden of cancer in Qatar will continue to grow and cancer services in Qatar need to be able to respond. Systematic provision of cancer care needs to be developed, with comprehensive services for all the major cancer sites. Figure 3 illustrates the major sites of cancer in Qatar.

The WHO information in Figure 3 seems broadly in line with the findings of Bener et al. with regard to cancer incidence – this study used Qatar cancer registry data from 1991–2006 and found that the leading cancers in men were lung, leukemia and lymphoma, whilst the leading cancers for women were breast, genitals and lymphoma.³ Unlike Figure 3, the study separated out gastrointestinal cancers (cancers of the gastrointestinal tract including colorectal and esophagus) and urological cancers (prostate, kidneys and bladder) otherwise these two categories would have been the two most prevalent in men.

As this strategy is implemented it makes sense to give the greatest priority to those cancers with the highest incidence in Qatar, according to the data we have available. Therefore, priorities in phase one of implementing this strategy should be breast, urological, gastrointestinal and hematological cancers (leukemia and lymphoma).

steward of the health of the people of Qatar. The campaign should look to recruit respected figures from Qatari society to give authoritative messages on cancer. This should include Imams, who would be provided with information to share with their congregations. Videos should also be developed for use in PHC center waiting rooms.

Alongside this, there needs to be more information about cancer. One way to reach a wide audience is through making cancer awareness part of the school curriculum. **It is recommended that all school pupils have a lesson on cancer, including how it can be prevented and what to do if they suspect they might have cancer.**

There should also be a source of information on cancer that is accessible to all of the population of Qatar when they need it. The internet provides the opportunity to develop such a comprehensive, readily accessible repository of information on cancer. Many good websites on cancer already exist, such as those shown in Figure 5.

The population of Qatar must understand what cancer is (see Box 1, p.11) and, even more importantly, what it is not. There are many myths about cancer that exist and the four main myths are summarized in Figure 4.

A survey of hundreds of public sector workers revealed that understanding of cancer is mixed in Qatar.¹ Only small numbers of people (less than 6%) associate the words infectious, foreign and unclear with cancer. However 46% of people connect the word fatal with cancer, the same number as associate the word curable.

Therefore a high profile campaign is needed, using a range of media, to refute these myths, as they are dangerous. The different myths can lead to fatalism, to stigmatization and to complacency. They can all adversely affect the success of cancer care. The campaign should be led by the Supreme Council of Health in its role as the

1 Survey of Public Sector Workers carried out online April–May 2011. There were 602 complete responses. This public survey is referred to elsewhere in this document.

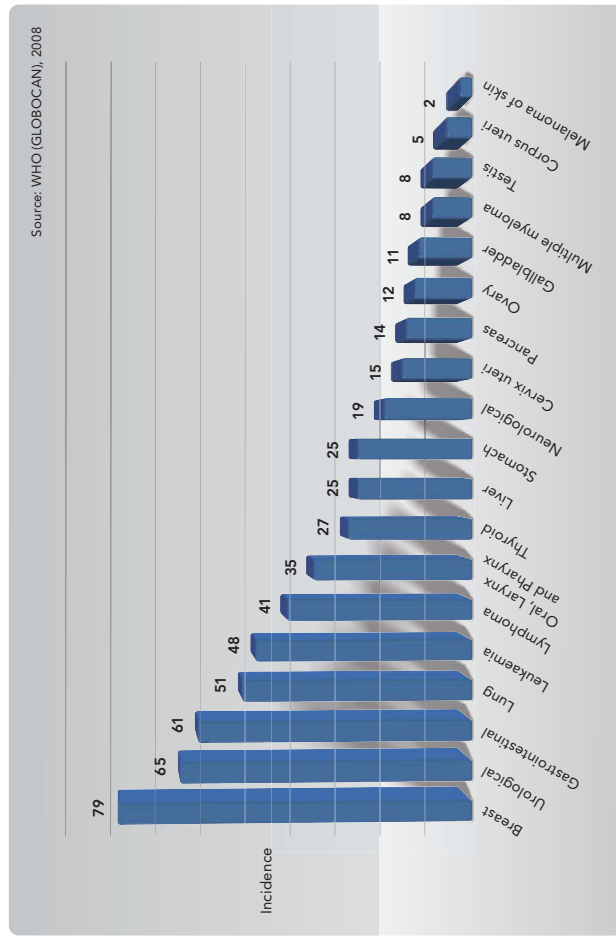


Figure 3: Incidence of cancer in Qatar by site

3 Bener, A. et al., Patterns of cancer incidence among the population of Qatar: A worldwide comparative study. *Asian Pacific Journal of Cancer Prevention*, 8, (2007) 19–24. Some caution must be applied to these figures as the Qatar cancer registry has not been comprehensive and the single largest group of cancer diagnoses were unspecified and not attributed to a site.

1 World Population Projections 2008
2 Mark Proudhon, "The 2022 Effect," *The Edge*, Vol.3 No.1, January 2011

Myth 1: Cancer is always fatal

Reality: Cancer treatments are improving all the time and more people are being cured of cancer. For instance, over 90% of women in the United States survive more than five years after being diagnosed with breast cancer.² Survival chances increase the earlier a cancer is detected, yet fear of cancer can delay diagnosis.³

Myth 2: If a relation has cancer, I am very likely to develop it.

Reality: Only a very small percentage of cancer (5–10%) is related to a genetic predisposition.⁴ Lifestyle factors such as smoking are much more important. See Chapter 4 for more information on genetic testing.

Myth 3: Cancer is contagious

Reality: Cancer is known as a non-communicable disease. It cannot be caught, although two infections, Hepatitis C and Human-Papilloma Virus, can increase the chances of liver and cervical cancer respectively.

Myth 4: Cancer is a "western" disease not common in Qatar.

Reality: As indicated in the previous chapter, hundreds of people in Qatar are diagnosed with cancer each year. Cancer is not linked to any one part of the world – indeed the first documented cases of cancer come from Ancient Egypt about 1600BC.⁵

Figure 4: Four Cancer Myths

2 Survival rates available at: <http://visualization.geblogs.com/visualization/breast-cancer/>
3 National Patient Safety Agency, *Delayed Diagnosis of Cancer: A Thematic Review*, March 2010, p.12
4 <http://www.cancer.med.umich.edu/living/genetics.shtml>
5 The Edwin Smith Papyrus details chest tumors. It can be viewed at: <http://archive.nlm.nih.gov/proj/flash/smith/smith.html>

4. Prevention

Finally, it is suggested that Qatar develop a yearly program of activities to increase understanding of cancer. These should be aligned with international cancer days/months such as 4 February (World Cancer Day), 31st May (World No Tobacco Day) and October (Breast Cancer Month). Other days, weeks or months for specific cancers should be designated within Qatar. Canada provides an example with a yearly schedule of awareness occasions.³

The voluntary sector in Qatar have already taken the lead in organizing cancer-related activities – for instance Think Pink Qatar organizes a successful breast cancer awareness walk in October, whilst members of the Hayat Cancer Support group speak in schools and businesses: their experience should be recognized with a formal leadership role in this area, with additional support and administration provided by the SCH and other public sector bodies.

However, it is important to have a Qatar-specific website which can provide information on what to do if a person suspects they have cancer and the treatment options available in Qatar. It is therefore recommended that the website of the Qatar National Cancer Society be developed so that it provides such a source of information. This will then be accessible to all the people of Qatar with access to the internet – estimated to be 436,000 in 2009.⁴ For those people who do not have their own web access, it is recommended that this website be accessible on government consoles in communal locations such as shopping malls and primary healthcare centers.⁵ As people are increasingly accessing health information through smartphones and tablet PCs like the iPad, SCH should also consider the potential to develop a range of interactive Apps (applications) that can inform and support the people of Qatar.

Many cancers can be prevented. The World Health Organization emphasizes that 40% of cancer is preventable if the risk factors that lead to cancer are tackled.¹ Some factors that are a risk in other countries (such as excessive alcohol intake) are not a significant problem in Qatar. The four major risk factors for cancer in Qatar are:

1. **Smoking** (the prevalence of smoking among males in Qatar is 32.7 per cent).²
2. **Obesity** (thirty-two per cent of those resident in Qatar are obese or morbidly obese – among Qataris, 40 per cent).³
3. **Unhealthy Diet** (not quantified, but anecdotal evidence of unhealthy diet).⁴
4. **Lack of Exercise** (over 50 per cent of the population do not engage in any regular physical activity).⁵

There is clearly inter-relation between the factors, as poor diet and lack of exercise can lead to obesity.

In addition, lifestyle choices such as physical inactivity are major causes of other non-communicable diseases such as diabetes and chronic heart disease, so tackling these will have wider health benefits to the population of Qatar than simply reducing the incidence of cancer.

Work by Danaei et al. has estimated the burden of cancer attributable to the major cancer risk factors⁶ and these are outlined in Table 1.

As can be seen, risk factors play a much larger part in causing some cancers (e.g. lung, esophagus and cervix) than others (e.g. leukemia, pancreatic).

The National Health Strategy has already introduced projects on smoking cessation (3.3) and nutrition and exercise (3.2). It is vital that these projects are effectively resourced and implemented. However, the projects can go further.

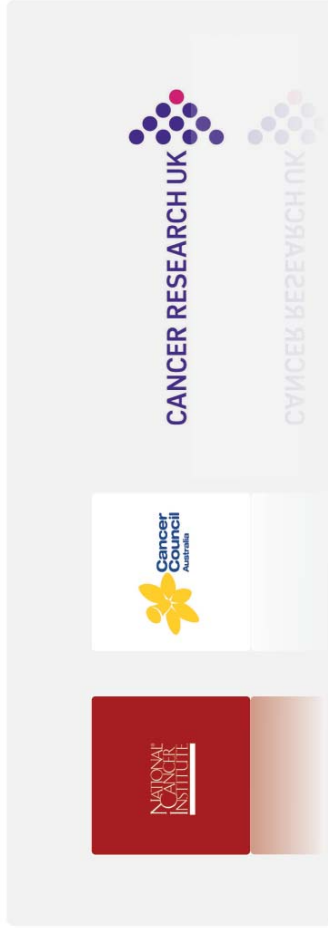


Figure 5: The logos of organizations, from different countries, which each provide excellent information about cancer on their websites.

Cancer Site	Percentage of deaths and number of worldwide deaths (1,000s) attributable to a risk factor	Total percentage of deaths due to joint risk factors
Mouth and Oropharynx Cancer	Alcohol use (16%, 51), Smoking (42%, 131)	52%
Oesophageal Cancer	Alcohol use (26%, 116), Smoking (42%, 184), Low fruit and vegetable intake (18%, 80)	62%
Stomach Cancer	Smoking (13%, 111), Low fruit and vegetable intake (18%, 147)	28%
Colon and Rectum Cancers	Overweight and obesity (11%, 69), Physical inactivity (15%, 90), Low fruit and vegetable intake (2%, 12)	13%
Liver Cancer	Alcohol use (25%, 150), Smoking (14%, 85), Contaminated injections in a healthcare setting (18%, 111)	47%
Pancreatic Cancer	Smoking (22%, 50)	22%
Trachea, Bronchus and Lung Cancers	Smoking (70%, 856), Low fruit and vegetable intake (11%, 135), Indoor smoke from household use of solid fuels (1%, 16), Urban air pollution (5%, 64)	74%
Breast Cancer	Alcohol use (5%, 26), Overweight and obesity (9%, 43), Physical inactivity (10%, 45)	21%
Cervix Uteri Cancer	Smoking (2%, 6), Unsafe sex (100%, 235)	100%
Bladder Cancer	Smoking (28%, 48)	28%
Leukaemia	Smoking (9%, 23)	9%

Table 1: Impact of risk factors on specific cancers

- 1 WHO. *Preventing Chronic Disease: A Vital Investment*, (2005), p.18
- 2 World Health Survey, WHO 2006
- 3 WHO. *Global Infobase BMI Estimates 2005–2015*. Qatari data from WHO Qatar 2006 World Health Survey.
- 4 See for instance <http://www.nytimes.com/2010/04/27/world/middleeast/27qatar.html>
- 5 Regular activity is defined as 30 minutes of exercise at least three times a week. Figure from WHO Qatar World Health Survey, 2006.

6 Danaei G. et al., Causes of cancer in the world: comparative risk assessment of behavioural and environmental risk factors, *The Lancet*, Volume 366, Issue 9499, Pages 1784–1793, 19 November 2005

3 See the Canadian Cancer Society website at: http://www.cancer.ca/canada-wide/about%20us/cw-awareness%20weeks%20and%20months.aspx?sc_lang=en

1 <http://www.internetworldstats.com/me/ga.htm>
2 There is already free Wifi access on the Corniche in Doha.

Smoking

Smoking is a major contributor to cancer, especially lung cancer. Qatar has recognized this by becoming one of the first signatories of the WHO Framework Convention on Tobacco Control.¹ However, more progress is needed to turn these good intentions into reality. The National Health Strategy 2011–2016, project 3.3 outlines actions related to tobacco control, summarized in Box 2.

Box 2: Project 3.3 of the National Health Strategy on Tobacco Cessation

- Developing tobacco awareness and cessation support services that deal with smokeless products as well;
- Linking to School Health Initiatives;
- Making available venues that are 100 per cent smoke free;
- Adopting Framework Convention on Tobacco Control (FCTC) guidelines;
- Increasing taxation on tobacco products and using the funds to support health initiatives;
- Issuing pictorial health warnings on tobacco products;
- Imposing restrictions on Sheesha consumption;
- Enacting and finalizing tobacco laws (including those for smokeless products); and
- Enhancing enforcement of tobacco laws.

It is recommended that these existing actions be extended by:

- Decreasing the number of exemptions granted from the law banning smoking in public places.
- Imposing meaningful penalties for businesses that violate smoking laws (big fines, closure or both) with very strong action against those that sell to children.
- Banning children from any indoor smoking premises.
- Exposing the harm of using waterpipes (Sheesha) through a campaign. A WHO Report has calculated that one Sheesha session can be the equivalent of smoking 100 cigarettes.² However, Sheesha is often misleadingly presented as a healthy alternative to cigarettes. The reality should be made clear and misleading health claims about Sheesha prohibited.
- Offering smoking cessation clinics at all Primary Healthcare Centers – so far only one (Al Gharaffa) has a clinic, although three more are planned in 2011.
- Checking patients' smoking status at every contact with a health professional, with appropriate referrals to smoking cessation clinics.
- Commissioning a study into the extent to which exposure to environmental tobacco smoke (ETS) or 'passive smoking' is an issue in Qatar.

1 Qatar signed in June 2003. See: http://www.who.int/fctc/signatories_parties/en/index.html

Obesity, Unhealthy Diet and Lack of Exercise

These inter-related risk factors contribute significantly to cancer as demonstrated in Table 1. The National Health Strategy project 3.2 makes sensible recommendations (see Box 3) around school education, employer involvement and dietary labeling.

Box 3: Project 3.2 of the Qatar National Health Strategy on Nutrition and Physical Activity

- Health promotion in schools to educate students on nutrition and physical activity, aimed at establishing healthy habits including making nutritious food available in schools and increasing sports activities.
- Wellness promotion in the workplace, with government offices taking a lead in establishing workplace health promotions such as annual health checkups, in-house gyms and healthy food in workplace cafeterias.
- Media awareness campaigns for nutrition and physical activity. These campaigns should be continuous and leverage multiple media channels.
- Implementation of prevention guidelines for healthcare services to identify at-risk patients
- Promotion of healthy food options (in restaurants and key retail outlets) by educating consumers on how to make sound food choices from menus and by providing sufficient product information to make healthy choices possible (e.g. through improved calorie labeling such as that adopted by New York in 2008).¹

These recommendations can be made even more comprehensive by:

- Publishing a ranking of employers based on their performance in improving the wellbeing of their staff.
- Launching a campaign to encourage the consumption of 5 servings of fruit and vegetables a day.
- Having free football coaching in the evenings in the run-up to the World Cup – this could be linked to the current sports development and community sessions run by ASPIRE Academy for Sports Excellence.²
- Testing out incentives to increase gym usage.
- Ban the use of so-called trans-fats (partially hydrogenated unsaturated fats), as has been done in Denmark and Switzerland. A longitudinal study of nurses' health found that replacing trans-fats with healthier fats reduced the risk of chronic heart disease by 53%.³

1 Dumanovsky T, et al., Consumer Awareness of Fast-Food Calorie Information in New York City After Implementation of a Menu Labeling Regulation, *Am J Public Health* 2010; 100: 2520–2525 found that consumers saw the calorie information and that in some instances it altered their food choices.

2 For more on Aspire see: <http://www.aspire.qa/inthecommunity.aspx>

3 Hu FB, et al. Dietary fat intake and the risk of coronary heart disease in women. *New England Journal of Medicine* 337 (21), (1997): 1491–1499

5. Early Detection

Exposure to Carcinogens

Although environmental exposure, at work or domestically, to harmful substances (carcinogens) that can cause cancer is a significantly smaller contributor to cancer incidence than the four factors already considered, very little is known of the extent to which contact with agents such as crystalline silica, diesel exhausts, radon and asbestos is a problem in Qatar. **Therefore it is recommended that a study be commissioned into environmental exposure to carcinogens to report by early 2012.** This study should make recommendations on any actions that need to be taken to reduce exposure to carcinogens and it should link with the requirement under project 3.9 of the National Health Strategy that all developments which could affect public health are required to carry out an Environmental Health Impact Assessment.¹

HPV Vaccine

The major cause of cervical cancer is infection with the human papilloma virus (HPV). There are many strains of HPV, but two strains (16 and 18) cause 70% of cervical cancers.² It is also possible to vaccinate against these strains and many countries – including Greece, Norway and New Zealand – have implemented a vaccination program for pre-adolescent girls.

Cervical cancer is not currently a very common cancer in Qatar, but the opportunity to reduce it further should be taken. **It is recommended that from 2013 the HPV vaccine be made available to those families who wish to vaccinate their daughters.** It is envisaged that more families will choose to vaccinate as cancer awareness is improved and the benefits are explained. In time, the HPV vaccine should be incorporated into the national vaccination program.

Genetic Testing

As noted in Chapter 3, only a small percentage of cancer is linked to genetic factors. Nonetheless, it is suggested that Qatar develop the capacity to do genetic testing for gene mutations that have been identified as significantly increasing the risk of developing cancer, such as the mutations to BRCA1 and BRCA2 genes, which are linked to the development of breast cancer, or the mutations to DNA mismatch repair genes which cause Lynch Syndrome, increasing the risk of suffering from colorectal cancer.

To ensure such a service is focused only on those most at risk, criteria should be developed by the National Screening Committee (see next chapter). People who meet these criteria (e.g. many cases of the specific cancer amongst their family members) should then be offered a confidential genetic testing and counseling service.

As well as being aware of what cancer is and how it can be prevented, the people of Qatar need to know that it is important to detect cancer as early as possible. As cancer develops, it moves through four stages (see Box 4) increasing in severity and becoming harder to treat. There is clear evidence that early detection of cancer increases the chances of successful treatment.¹ For instance, in the US, five year survival rates for colorectal cancer are over 90% if the cancer is detected at stages 1 and 2, but drop to 11.6% if the cancer has reached stage 4 and metastasized.² There are two main methods for detecting cancer early – screening for particular cancer types and early diagnosis through identifying cancer signs and symptoms.

Box 4: The Stages of Cancer

- **Stage 1** usually means a cancer is relatively small and contained within the organ it started in.
- **Stage 2** usually means the cancer has not started to spread into surrounding tissue, but the tumor is larger than in stage 1. Sometimes stage 2 means that cancer cells have spread into lymph nodes close to the tumor. This depends on the particular type of cancer.
- **Stage 3** usually means the cancer is larger. It may have started to spread into surrounding tissues and there are cancer cells in the lymph nodes in the area.
- **Stage 4** means the cancer has spread from where it started to another body organ. This is also called secondary or metastatic cancer.

Taken from Cancer Research UK website, available at: <http://www.cancerhelp.org.uk/about-cancer/cancer-questions/how-many-stages-of-cancer-are-there/>

1 Jose M Martín-Moreno and Guðjón Magnússon, "The causes of cancer: policies for prevention" in Coleman et al., *Responding to the challenge of cancer in Europe*, (2008), p.63

2 See National Cancer Institute's Surveillance Epidemiology and End Results (SEER); <http://seer.cancer.gov/statfacts/html/colectrct.html>

Screening

Screening for cancer involves testing large numbers of apparently healthy people without symptoms, to establish if they have early stage cancer. This then opens up the possibility of treatment whilst the cancer is not very advanced.

Qatar's National Health Strategy has already called for the establishment of a national screening program (project 3.6) in priority areas, including breast screening. The international consensus, based on available evidence, is that screening is recommended for three cancer sites – breast, bowel and cervix.¹ However there is less international uniformity on the target population and how frequently screening should occur, as Table 2 shows for breast screening.

There are similar international differences in the screening coverage for colorectal cancer (broad consensus that greatest benefits for 55–70 age group, but often extends beyond this) and cervical cancer (normally sexually active women up to the menopause, but actual ages vary).

Current Screening in Qatar

Currently some breast, colorectal and cervical cancer screening is available in Qatar. For instance, cervical cancer screening has been carried out in well woman clinics in PHC for over ten years. However this screening is opportunistic (relying on people self-presenting), rather than comprehensive (targeting the at-risk population and inviting them to be screened through a call-recall system). This is not sufficient, as opportunistic or non-organized screening initiatives will miss many people (typically those most at risk²) and cannot be easily monitored or systematically evaluated for clinical and diagnostic quality. Coverage rates are also low – a study in 2009 found that only 22.5% of women in Qatar had accessed a breast screening mammogram,³ whilst a survey in 2008 found that just 39.4% of eligible women had received a cervical cancer Pap smear test.⁴

There are no Qatar-wide guidelines as to who should be screened and how frequently for colorectal or cervical cancer. For breast cancer screening, guidelines were agreed in 2009, but these do not cover a call-recall system or a referral pathway. More clarity is required, as one PHC clinician commented that there is a need for “clear adopted guidelines so that doctors know when and where to refer patients.”⁵

Country/Organization	Recommended Age-Range for Screening	Frequency of Screening
American Cancer Society	40–70	1 year
Canadian task force on preventative health care	50–69	1–2 years
European Union/ International Agency for Research on Cancer	50–69	2 years
United Kingdom National Screening Committee	50–69 (with plans to extend to 47–73 age range)	2–3 years
US Preventative Services Task Force	50–74	2 years

Table 2: International Recommendations on Breast Screening Coverage and Frequency

- 1 M Hakama et al., “Cancer Screening”, in Coleman et al., *Responding to the Challenge of Cancer in Europe* (2008)
- 2 Anttila A et al., *Cervical cancer screening programs and policies in 18 European countries*, 2004, p.935–941
- 3 Bener, A., et al., (2009), “Do we need to maximise the breast cancer screening awareness? Experience with an endogamous society with high fertility.” *Asian Pacific Journal of Cancer Prevention*, 10, 1–6.
- 4 Fahiya Mohamed Al-Meer, *Knowledge, attitude and practice of cervical cancer screening amongst women visiting primary health care in Qatar*. This survey was of women seeking healthcare at PHC centres and therefore more likely to be amenable to screening; the screening rates within the general population are likely to be lower still.
- 5 Dr. Hamad R., Al-Madhki and Dr. Mohamed Ghaieth Al-Kuwari, *Health needs assessment regarding the prevention and control of breast and colorectal cancer in PHC*, January 2011, p.5

Clear Guidelines

To develop existing guidelines and to establish them where they do not exist, it is suggested that a **Qatar National Screening Committee be established as a permanent body**.

This committee would oversee the establishment of a national screening program (project 3.6 from the National Health Strategy) and sub-committees would produce guidelines on who should be screened and how frequently for all diseases. The sub-committee for cancer should be established by July 2011. The guidelines it produces should take into account Qatar-specific information – for instance there may be merit in having early colorectal cancer screening in Qatar as 45 out of the 141 cases of colorectal cancer identified between 2000 and 2009, were in the under 50s.

Breast Screening

Considerable work has already been done on specifying the age range and frequency of breast cancer screening in Qatar. To avoid delay in implementation, it is proposed that comprehensive screening should be introduced for the 40–69 age group (with an initial focus on women over 50, where the benefit is most established) and occur every two years. Subject to the recommendation of the National Screening Committee the frequency could be increased at a later stage, if appropriate.

Breast cancer screening should use digital mammography, which is quicker and has been shown to have improved accuracy for women with radiographically dense breasts or women who are pre/perimenopausal.¹ Results should be returned within 5 working days.

Colorectal Screening

Colorectal Screening will use a mixture of Faecal Occult Blood (FOB) testing and flexible sigmoidoscopy.² Sigmoidoscopy is the use of a flexible imaging tube to examine the lower bowel for polyps (which can sometimes turn cancerous) and remove them. A clinical trial in the UK identified that the widespread use of flexible sigmoidoscopy should prevent 10,000 cases of bowel cancer each year.³ Sigmoidoscopies could be performed at HMC or at some PHC centers, once staff have developed the necessary skills. FOB testing is currently conducted at PHC centers and this program should be expanded to achieve comprehensive coverage amongst the target population.

Cervical Screening

A screening program for cervical cancer should be introduced. This will use Liquid Based Cytology testing. Results should be available in 5 days.

If uptake of the HPV vaccination is high (see Chapter 4), then it could be argued that this screening program is not required. However, vaccination will not benefit the present adult female population of Qatar, nor will the majority of the immigrant female workers who come to Qatar have been vaccinated. So it is required, but given the much higher incidence of breast and colorectal cancer in Qatar, this should have the lowest priority of the three screening programs.

- 1 Plano E et al., *Diagnostic Performance of Digital versus Film Mammography for Breast Cancer Screening – The Results of the American College of Radiography Imaging Network (ACRIN) Digital Mammographic Imaging Screening Trial (DMIST)*, NEJM, published online September 16, 2005 and in print on October 27, 2005.
- 2 This strategy suggests using FOB testing and flexible sigmoidoscopies for colorectal screening rather than colonoscopies as colonoscopies require more specialized staff, take longer, are more expensive and more uncomfortable than sigmoidoscopies (http://www.genetichealth.com/CRC_Colonoscopy_Versus_Sigmoidoscopy.shtml). However, the balance between the methods should be considered by the National Screening Committee.
- 3 Akin W et al. (2010), “Once-only flexible sigmoidoscopy screening in prevention of colorectal cancer: a multicenter randomised controlled trial”, *Lancet* 375: 9726, 1624–1633

Screening of other Cancer Sites

There is not yet sufficient evidence to warrant screening for other cancer sites. However, trials are ongoing (e.g. screening for prostate cancer) and it is recommended that the National Screening Committee keep abreast of international screening recommendations so that new screening programs can be introduced as and when there is compelling evidence of their benefit.

Screening Coverage

To be effective the WHO recommends that at least 70% of the target population be screened.¹ Computerized mechanisms will need to be established for people in the target populations to be called for screening as required. This will need to include proactive communications to all the target population, such as letters, e-mails or text messages, calling people to attend screening. **It is recommended that this be done centrally by the SCH which should co-operate with the Ministry of the Interior to use their population databases to establish a comprehensive screening call and recall system.** Further information on assessing screening performance can be found in Chapter 9.

Encouraging People to Attend Cancer Screening

It is unlikely that 70% coverage of the target population will be achieved without a concerted effort to encourage people to attend screening sessions. At the second deliberative event, people felt that the most important factor in encouraging screening attendance was providing people with information about screening, so they can understand its benefits. Very positively, only 1% of respondents said they would not attend cancer screening. The results are shown in Figure 6. More detailed studies are being carried out into factors that could affect screening attendance – see Chapter 10 for more information.

Convenient Locations

The second most important factor in encouraging screening attendance identified at the deliberative event was a convenient location. Therefore accessibility needs to be considered as screening programs are developed. There is a desire for screening to be provided in primary care by the people of Qatar – 55.4% of women surveyed expressed a preference for cervical cancer screening to be provided at PHC clinics.² This is in line with the international experience, that screening should be provided in accessible community locations (this could include mobile units) and not be concentrated in highly medicalized environments which can be off-putting and adversely affect coverage.

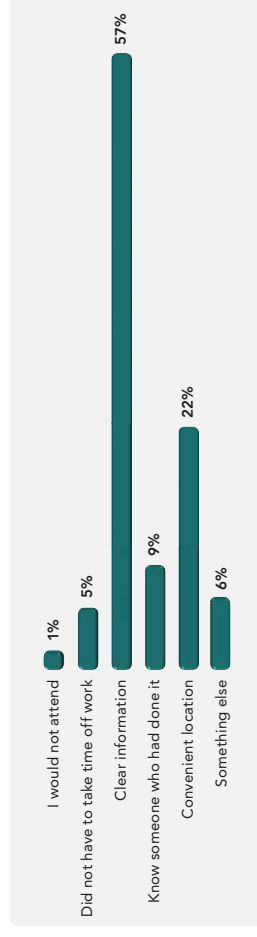


Figure 6: What would be most important in encouraging you to attend cancer screening?

A Range of Providers

Competition in the provision of screening services is likely to lead to better quality services in convenient locations. **Therefore it is recommended that any providers can offer screening services as long as they offer community accessibility, comply with timeliness measures and facilitate smooth referrals to secondary care.** The SCH should run an open tender for screening services.

Early Diagnosis

The majority of cancers are amenable to early diagnosis, with only a few such as lung and ovary, where evidence has shown no difference to survival rates. Once the awareness campaign on refuting the myths around cancer has been completed, **it is recommended that a second awareness campaign begins focused on early diagnosis, making the people of Qatar aware of the signs and symptoms of potential cancers.**

Failure to recognize symptoms can lead to delays in treatment. It has been suggested that as much as 60% of the total delay in treatment for breast and gynaecological cancers is because women have not recognized the possible symptoms.¹

Therefore a symptom awareness campaign will be highly beneficial. The campaign (carefully worded to ensure people are not unduly frightened or worried) will emphasize that if a resident of Qatar suspects they may have cancer they should go to a Primary Healthcare Center as soon as possible for examination and testing.

The first campaign should start with one symptom type. Given that urological cancers are the second most common form of cancer in Qatar (breast, the most common, will have a screening program in place) **it is recommended that prostate and bladder cancer should be the subject of the first campaign.**

Early Detection Success

It will be important to measure progress in early detection – so an indicator on early detection outcomes should be utilized. This will be the proportion of cancers diagnosed in stage 1 and 2. A baseline of this information is not currently available, so the first task will be to establish a baseline by the end of 2012. Then, from that baseline, **there should be a 30% increase in cancers diagnosed at stage 1 and 2 by 2016.**

Site of Cancer	Common Symptoms
Breast	Lump in the breast, asymmetry, skin retraction, recent nipple retraction, blood stained nipple discharge, eczematous changes in areola
Cervix	Post-coital bleeding, excessive vaginal discharge
Colon and rectum	Change in bowel habits, unexplained weight loss, anaemia, blood in the stool (rectal cancer)
Oral cavity	White lesions (leukoplakia) or red lesions (erythroplakia), growth or ulceration in mouth
Naso-pharynx	Nosebleed, permanent blocked nose, deafness, nodes in upper part of the neck
Larynx	Persistent hoarseness of voice
Stomach	Upper abdominal pain, recent onset of indigestion, weight loss
Skin melanoma	Brown lesion that is growing with irregular borders or areas of patchy colouration that may itch or bleed
Other skin cancers	Keratosis (lesion or sore on skin that does not heal)
Prostate	Difficulty (long time) in urination, frequent nocturnal urination
Retinoblastoma	White spot in the pupil, convergent strabismus (in a child)
Testis	Swelling of one testicle (asymmetry)
Urinary bladder	Pain, frequent and uneasy urination, blood in urine

Table taken from WHO, *Cancer Control – Early Detection*, (2007), p.9

1 WHO, *Cancer Control – Early Detection*, (2007), p.7

2 Fathiya Mohamed Al-Meer, *Knowledge, attitude and practice of cervical cancer screening amongst women visiting primary health care in Qatar*

1 National Patient Safety Agency, *Delayed Diagnosis of Cancer: A Thematic Review*, March 2010, p.11

6. Rapid and Definitive Diagnosis

It is important when cancer is suspected to achieve a rapid and definitive diagnosis to allow treatment to begin promptly.

Referral to a Specialist Clinic

All patients should be referred to a specialist clinic (e.g. urology) for their particular cancer site if initial examinations, screening and/or diagnostics indicate suspected cancer. The benefits of specialization are outlined further in Chapter 7.

Some referrals to specialist clinics may come from the emergency department or from other secondary care treatment. However, as this strategy is implemented, the two principal referral routes should become via screening and from primary care.

Referral via Screening – When one of the screening programs identifies an individual as possibly having cancer, they will automatically be referred to a specialist clinic.

Referral via Primary Health Care (PHC) – Where an individual has identified suspicious symptoms, they will normally be seen in Primary Health Care. If a family physician concurs (perhaps following initial diagnostics such as x-ray and ultrasound) they will refer the patient on to a cancer clinic. To help speed up diagnosis, a family physician will also be able to directly access an MRI test or colonoscopies for a patient who requires further investigation of possible cancer. Other referrals will also come from PHC e.g. if a family physician or nurse identifies potential cancer when treating a patient for another ailment.

To improve the rapidity and accuracy of diagnosis, all referrals should be made using a standardized referral process. This should be developed in consultation with both primary and secondary care and include information on tests already carried out, to avoid duplication. Referrals will go directly to secondary care providers from PHC and (although patients will still get copies of their referral letters) the existing practice of patients being expected to take the only copy of a referral letter to the hospital themselves, will be discontinued. In the short-term, referrals will be done via paper forms, whilst in the longer term they will become part of the IT solution being implemented across PHC and HMC.

Referral Management in HMC

It is intended that all suspected cancer referrals and any requests for follow-up made to HMC from primary care will be routed to a central point. HMC will set up a dedicated cancer administration office staffed by booking assistants to manage the booking of cancer-related appointments. It is important that this cancer office works in partnership with the wider appointments office for HMC as there will be some cross over between cancer and surgery.

Referral Timing

Participants at the second deliberative event wanted rapid appointments with a hospital specialist once they were suspected of having cancer by a primary care doctor as illustrated by Figure 7.

It is suggested that a trajectory of performance for cancer referrals be introduced. This would have the following stages so that all cancer referrals are seen within:

- Two weeks by the end of 2012.
- One week by the end of 2013.
- 48 hours by the end of 2015.

These referral targets are ambitious (the UK has remained with a 2-week maximum time between referral and being seen) but are achievable given the resources at Qatar's disposal. However, it will require suspected cases of cancer to be prioritized over conditions that are not so time critical.

Definitive Diagnosis in Secondary Care

To achieve a definitive diagnosis in secondary care requires three components as outlined in Figure 8.

Pathology Testing

Pathological samples need to be taken of either tissue (histopathology) or cells (cytopathology). The type of sample taken will vary depending on the cancer site.

Significant improvements have been made in recent years to Qatar's pathology capacity. Most tests are now performed in country and, for those that are not, plans have been put in place to build the appropriate facilities and skills. Nevertheless, there is an opportunity to accelerate the development of some cutting-edge methods such as molecular diagnostics.

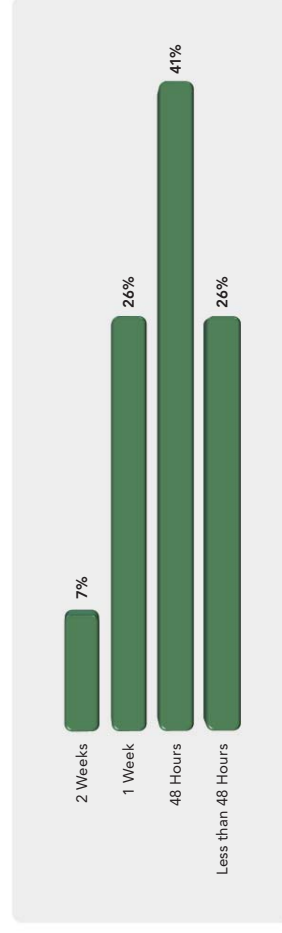


Figure 7: What would be a reasonable length of time to have to wait for an appointment with a hospital specialist for patients suspected of having cancer by primary care physicians?

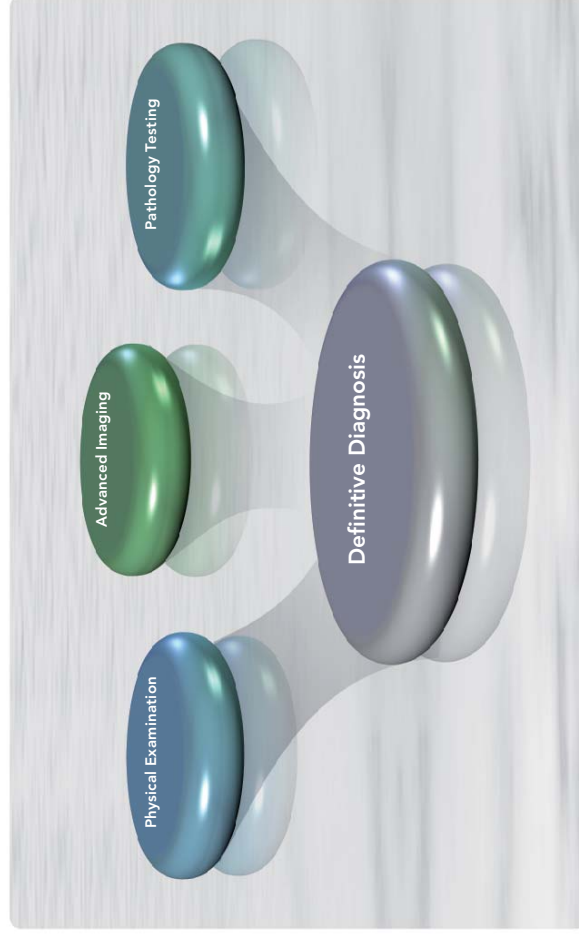


Figure 8: Components of a Definitive Cancer Diagnosis

7. Treatment

Cancer treatment must be patient-centered. In addition, to achieve the very best clinical outcomes treatment must also be multi-disciplinary, specialized, evidence-based and rapid, as illustrated by Figure 9.

Patient-Centered Care

Cancer treatment in Qatar needs to be patient-centered, with the patient able to make informed decisions and access the range of support they need. **To keep patients fully informed it is recommended that cancer information prescriptions be developed.** Information Prescriptions are comprehensive information sheets for patients about their type of cancer including potential treatments and possible side-effects.¹ Information Prescriptions should be accessible to all medical staff via computer, allowing them to select the relevant information of the patient they are seeing. They should help patients, in consultation with clinicians, make informed choices about their treatment.

Diagnostic Demand – A Key Issue

The requirement that a definitive diagnosis be reached within two weeks, coupled with the increased diagnostic requirements of comprehensive screening programs, means there will be a significant increase in the demand for diagnostic services.

Therefore, it is recommended that as part of the implementation of this strategy an analytical piece of work is carried out during 2011 to ascertain the likely increase in demand for diagnostics and how this relates to current capacity and capability constraints.

Constraints could include access to specific pathology tests or the availability of equipment such as MRI scanners. It will also be important to consider the issue of human resources, as initial investigations suggests that there are shortages of pathologists and radiologists in Qatar.

Once this work has been completed recommendations will be made on how providers need to strengthen their diagnostic services.

Advanced Imaging

MRI (Magnetic Resonance Imaging) and CT (Computerized Tomography) scans can be used to provide more detailed imaging results for a suspected cancer. Qatar's imaging capability is increasing further as a PET-CT scanner (which combines sophisticated 3D X-ray technology with Positron Emission Tomography, using a radioactive tracer in a patient) is being built at HMC and will be operational in the near future.

More detailed imaging will help with a definitive diagnosis as well as providing more information on the stage a cancer has reached.

To support sharing of imaging information, HMC are already developing a computerized system for capturing imaging results so they can be available in multiple locations at once, to facilitate multi-disciplinary team working.

Physical Examination

For some cancers – for instance, breast, skin, pharynx – a physical examination by a clinician may also reveal further symptoms that help with reaching a definitive diagnosis.

Timing of a Definitive Diagnosis

Just as time to referral is important, so is the length of time from seeing a specialist to having a diagnosis. **It is recommended that by the end of 2012 a definitive diagnosis be achieved within a maximum time of two weeks of a patient being seen at a specialist clinic.**

Communicating a Definitive Diagnosis

Once a definitive diagnosis has been reached then it is important that it be communicated to the patient in a sensitive but clear way. **It is recommended that a communication skills course be made available for all specialist cancer clinicians similar to the Connected Program developed by the UK National Cancer Action Team, to ensure that communication to patients is both effective and consistent.¹**

Delay in Diagnosing Cancer

Because of the importance of identifying cancer early, where there has been a delay in diagnosis for whatever reason (examples would include incorrect labeling of a pathology sample or the failure to contact a patient with results of tests) then this should be reported within a provider organization as a serious incident and investigated.

Once fully operational the Cancer Registry (see Chapter 9) should be able to identify the number and proportion of such cases nationally and publish these figures.

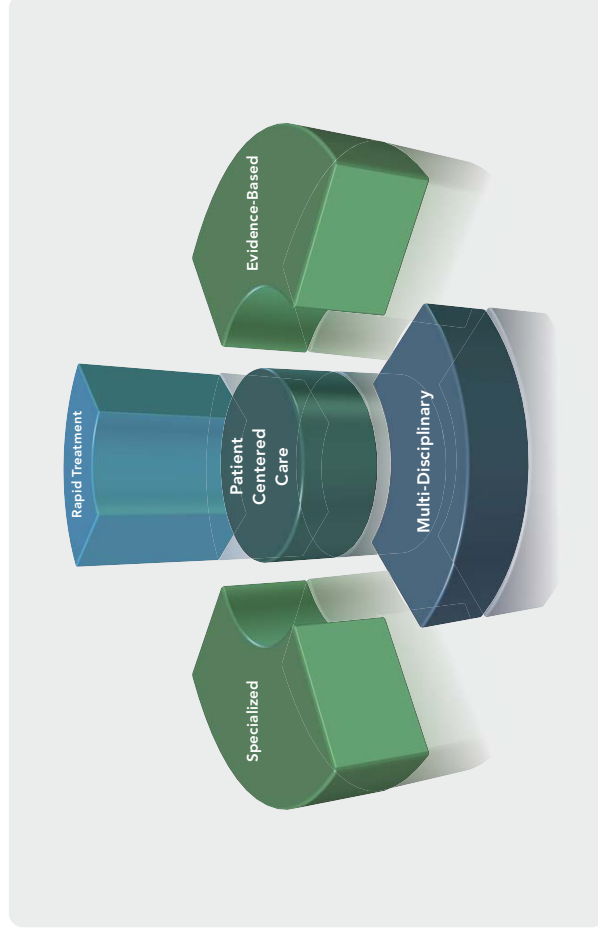


Figure 9: Aspects of Good Cancer Treatment

² Grasi L et al., "Psychiatric concomitants of cancer, screening procedures, and training of health-care professionals in oncology: the paradigms of psycho-oncology in the psychiatry field," from Christodoulou GN, ed. *Advances in psychiatry*, Vol II. Athens, World Psychiatric Association; 59-66 (2005).

¹ Sample information Prescriptions for cancer from the UK are available at: <http://www.nhs.co.uk/Planners/YourHealth/Pages/Information.aspx>

As well as these psychological problems, cancer treatment can lead to social, physical and spiritual issues. To ensure that these are identified and appropriate provision made, it is recommended that during treatment cancer patients be regularly encouraged to fill out the "Distress Thermometer" reproduced in Figure 10.¹ The Distress Thermometer was developed by the National Comprehensive Cancer Network, an alliance of 21 leading cancer hospitals in the USA.²

The results of this patient self-assessment should be acted on by patient pathway coordinators. This is a new role being introduced by this strategy and it is recommended that every patient with cancer in Qatar be given a named patient pathway coordinator who will be responsible for organizing their care.³ Patients should be able to contact their patient pathway coordinator by phone to discuss any issues with their treatment.

Patient pathway coordinators will be able to ensure that care for patients is holistic. This will mean that a patient undergoing surgery that will affect their appearance (e.g. a mastectomy) will have support on their self-image and they will have access to any equipment needed post-surgery and during adjuvant treatment (e.g. wigs following hair-loss or

temporary prostheses prior to plastic surgery). It will also mean that, where necessary, patients can access advice from dieticians on their specific nutritional needs both during and after treatment. Evidence suggests that having a named coordinator of care improves patients' perceptions of the care they receive. Results from the 2010 UK National Cancer Patient Experience Program found that patients with access to Clinical Nurse Specialists (who perform a coordinating role in the UK) were more positive about their treatment.⁴

One innovation that will support patient-centered care is the development of a single electronic medical record, detailing key information such as medication, allergies and diagnostic test results, which is accessible to all clinicians involved in a patient's care. This is planned as part of project 2.4 of the National Health Strategy, facilitated by the use of a unique Qatar identification number to avoid record duplication. HMC is currently procuring a new clinical information system to support implementation of the electronic medical record. Full implementation will take several years, but in the interim, progress should be made as quickly as possible to use the Qatar identification number in all possible cases and providers must work together to ensure easy access to each others' records.

Treatment Environment – A Key Issue

At the third deliberative event participants were critical of existing healthcare facilities for cancer, especially those at Al-Amal Oncology Hospital. A typical comment was "Al-Amal Hospital, as it stands now, is not suitable for cancer care." Criticism centered on two aspects. The first was that the current building lacked space for multi-disciplinary team meetings or facilities for video conferencing with international partners, which could affect the ability to meet the recommendations in this strategy. The second was that the hospital was not welcoming or friendly, lacking amenities for patients such as wifi, a children's play area, or an accessible cafeteria.

In light of these criticisms it is recommended that Al-Amal have a major refurbishment to address these issues. As much treatment as possible should be provided in Al-Amal, with people only having care elsewhere on the HMC site when care cannot be provided in Al-Amal. It should become, as one participant put it "one comprehensive [cancer] centre under one roof." There should be patient representation in the group deciding on the necessary changes, in line with a sensible suggestion at the third deliberative event. Given space constraints, a better solution to creating a pleasant space specifically for patients may be the development of a 'Maggie's Centre' (a comforting, architecturally-striking building offering support services to patients and their care-givers) in Qatar, and this should be considered. Finally, to recognize that a refurbished Al-Amal will be at the forefront of implementing this strategy, the hospital will be renamed the Qatar National Center for Cancer Care and Research.

The refurbishment of Al-Amal will be a medium-term solution for the next three to five years. As a longer term solution to cope with the rising incidence of cancer in Qatar and to provide comprehensive services, the creation of a new cancer hospital on the HMC site is recommended. Construction will begin within the timescale of this strategy. This will mean that the planned updating of this strategy in 2016 (see Chapter 12) can put this new facility at the heart of its plans for further improvements in cancer care in Qatar.

Multidisciplinary Care

The WHO recognizes the advantages of managing patients with cancer or suspected cancer within a multidisciplinary team (MDT) environment.² Typically an MDT will include surgeons, physicians, radiologists, pathologists, oncologists, clinical nurse specialists, palliative care specialists, radiographers and MDT coordinators. Depending on the cancer and co-morbidities it may also include Allied Health Professionals (such as dieticians and speech and language therapists), pharmacists and psychologists.

Participants were asked at the second deliberative event if they thought MDTs should be introduced in Qatar. As Figure 11 shows, over 90% agreed that they should.

Therefore, because of the international evidence – endorsed by the people of Qatar – it is recommended that all cancer patients in Qatar must be discussed via an MDT. This should happen regardless of who is responsible for the patient e.g. a surgeon at a private hospital or an oncologist at HMC. To maximize the time of busy clinicians MDTs may be undertaken virtually as long as all participants have access to the necessary diagnostic information.

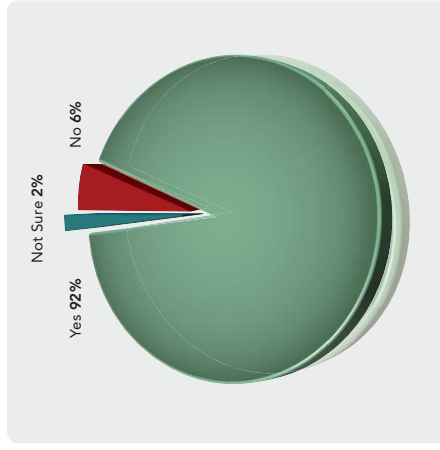


Figure 11: It is international best practice for all cancer patients to be managed by a team that combines different kinds of healthcare professionals. Do you think this multidisciplinary approach should be adopted in Qatar?



Figure 10: The Distress Thermometer

1 Clinicians at HMC supported the idea of the Distress Thermometer being used at regular intervals during treatment.
 2 For more information on the NCCN see: <http://www.nccn.org/about/default.asp>
 3 Patient pathway coordinators will have a nursing background. They will have some similarities to Clinical Nurse Specialists (CNS), but will have more of a focus on co-ordination and do less hands-on clinical work or training of other staff than CNSs.

4 Department of Health, National Cancer Patient Experience Survey Program: 2010 National Survey Report, December 2010, p.4

MDTs for urological, hematological, gastrointestinal and breast cancers have already been established. **MDTs for all types of cancer should be in place by October 2013.**

Treatment decisions, including plans for surgical treatment, oncological management and palliative care should be funneled through the MDT meeting, to ensure that a consensus is reached. Participants should be able to contribute freely and bring their particular expertise to the discussion. **To facilitate the use of MDTs, it is recommended that HMC recruit MDT Coordinators who will be responsible for the scheduling and smooth running of MDT meetings.**

MDTs recognize the multiplicity of treatment modalities that many patients will receive. The three major ones are:

- 1. Surgery** – To remove cancerous tumors and repair a damaged part of the body
- 2. Chemotherapy** – The giving of cancer drugs to destroy cancerous cells
- 3. Radiotherapy** – The use of ionizing radiation to destroy cancerous cells. HMC have some of the most advanced radiotherapy facilities in the GCC.

MDTs enable the effective co-ordination of these treatment modalities:

MDTs will deal with specific cancer sites (e.g. breast, hematology etc) as different cancer sites require different diagnostics and treatment. To ensure the effective running of the MDTs, they will be overseen by Tumor Boards. Tumor Boards will not manage the clinical care of individual patients, but look at overall performance of an MDT.

Specialized Care

Just as MDTs deal with specific cancer sites, so oncology staff should, wherever possible, specialize. This is because staff specializing in particular cancer sites (e.g. breast, colorectal) leads to better outcomes. For instance a study found that breast cancer patients who had been cared for by specialist surgeons had a 9% increase in their five-year survival rates.¹

The benefit of specialization is undoubtedly driven in part by the greater volumes of patients with a specific cancer that a specialist will see. Systematic reviews of the evidence have concluded that clinicians treating higher volumes have better outcomes, especially for pancreatic and esophageal cancer.²

So specialist clinicians treating higher volumes of patients in their chosen specialization is better for patient care. By seeing more patients with a specific type of cancer, specialists will be aware of different potential presentations, have a great understanding of treatment options – including their side effects – and be more proficient in delivering that treatment.³ **Therefore it is recommended that cancer clinicians in Qatar specialize.** This recommendation was supported by over 90% of participants at the second deliberative event, as demonstrated in Figure 12.

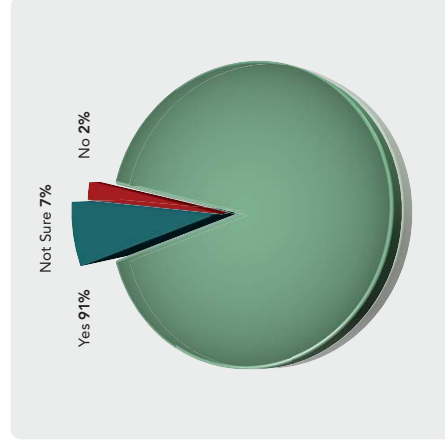


Figure 12: Evidence shows that the more clinicians specialize in specific types of cancers, the better the outcomes for patients. In view of this evidence, do you think this approach should be adopted in Qatar?

To support specialization it is recommended that secondary care providers of cancer treatment adopt a policy of privileging. This means that providers grant clinicians the right to treat particular cancers. If clinicians act beyond the remit of their cancer clinical privileges they could face disciplinary action from their employers.

Specialization in Nursing

Specialization is important amongst nurses, the largest single group within the cancer workforce. **To enhance nursing specialization, this strategy endorses HMC's plan to introduce Clinical Nurse Specialists (CNSs) in Qatar.**

CNSs are nurses with a post-registration cancer qualification who specialize in a particular aspect of cancer care. The speciality may be focused on a population (e.g. young people), type of care (e.g. palliative care), type of problem (e.g. lymphoedema), type of treatment (e.g. chemotherapy) or tumor type (e.g. lung cancer). As Figure 13 shows, the CNS role also supports the other aspects of good treatment outlined in this chapter, particularly in the provision of more patient-centered care and in the successful functioning of MDTs.



Figure 13: The Clinical Nurse Specialist Role¹

¹ Gillis CR, Hole DJ (1996). "Survival outcome of care by specialist surgeons in breast cancer: a study of 3786 patients in the west of Scotland." *Br. Med.J.* 312(7024): 145-148.

² Halm EA, Lee C, Chassin MR (2002). "Is volume related to outcome in health care? A systematic review and methodologic critique of the literature." *Ann Intern Med.* 137(6):511-520.
³ Robert Howard. "Organizing a comprehensive framework for cancer control." in Coleman et al., *Responding to the Challenge of Cancer in Europe* (2008), p.121

Best Practice Pathways

Even the most specialized clinician can benefit from following evidence-based pathways. The Qatar National Health Strategy highlights the benefit of adopting evidence-based guidelines.¹ Many countries have now adopted them for cancer – for instance Denmark developed guidelines for the 34 most common cancers and put them into action within a single year.

It is recommended that Qatar develops evidence-based pathways for the different cancer sites. Evidence-based pathways for the ten most common cancers have already been created and are published alongside this strategy. In addition, clinical guidelines are already used by some providers (e.g. HMC) for specific cancers.

To build on the current situation, it is suggested that Qatar procures the services of an organization with experience of developing clinical standards to consider what already exists and use this to produce comprehensive best practice pathways. **These will become National Standards, which should be followed by all cancer care providers. The first National Standards should be established by 2012. Compliance with these National Standards should be a key component of the performance agreements SCH has with public and private healthcare providers.** Once a National Standard is published, existing services should be reviewed against it within 6 months and a plan to tackle any deficiencies developed.

Timeliness of Treatment

The importance of avoiding delay in detecting cancer has been emphasized in earlier chapters, and the same urgency should apply to treatment. **Therefore, it is recommended that by the end of 2012, once a definitive diagnosis has been made, patients should begin treatment within 14 days.** This will mean that the total time from first referral to treatment is a maximum of 42 days. This will reduce further as the time from first referral to being seen in a specialist clinic declines, as shown in Figure 14.



Figure 14: Time from first referral to treatment

At the third deliberative event people were asked "If a patient's appointment is cancelled, we suggest that they should be offered a choice of an appointment with an alternative provider or a guaranteed rebooking within one working week – does this seem fair?" The vast majority (77%) said that it was. **This requirement should therefore be put into operation and the original provider should be required to pay the costs of the alternative provider.**¹ This will need to be included in the work to develop health insurance in Qatar (National Health Strategy Project 6.3).

Ensuring Quality Treatment

The American Institute of Medicine defines six principles of quality care – Safe, Timely, Effective, Efficient, Equitable and Patient Centered.² Some of these are explicitly dealt with in the strategy; others will implicitly be part of improved cancer services. To ensure such quality treatment is provided in Qatar a range of quantitative indicators will be deployed – further details are provided in Chapter 9. **To supplement this it is recommended that a process of Peer Review be established.** Peer Review involves a visit from cancer clinicians from elsewhere to examine cancer services. It has proved very successful in improving UK cancer services.³ A participant at the third deliberative event noted that "peer review is essential" in assessing performance of cancer services. Such peer review should be the responsibility of SCH and cover all providers of cancer treatment. One aspect of the Peer Review process should be the consideration of the minimum number of patients, for each site or type of cancer, which a provider needs to treat in order for clinicians to maintain the necessary skills and standards. This will reinforce providers' own privileging processes, outlined earlier in this chapter.

International Expertise – A Collaborative Partner

HMC are in the process of searching for a leading international cancer hospital that can become a collaborative partner with them. The collaborative partner will be expected to share their expertise (e.g. providing expert opinions on diagnostic results using tele-medicine) and help in the development of HMC's cancer clinicians and processes.

Treatment abroad

Some of the population of Qatar are unnecessarily travelling abroad for cancer treatment. Such travel can delay cancer diagnosis and treatment. As shown in Figure 15, the vast majority of attendees at the second deliberative event supported encouragement of treatment in Qatar wherever possible.

However our public survey found that only 27% of people would definitely choose to be treated in Qatar for cancer.⁴ 34% would choose abroad, with the remainder unsure. Whilst some of those wanting to be treated abroad are expatriates wanting to be close to their families, others appear to be motivated by a belief that the quality of Qatar cancer services, are not as good as those elsewhere.

So progress in implementing this strategy must be communicated to the people of Qatar, so that they will have confidence that the cancer care available in Qatar is of as high a standard as they can receive elsewhere and choose treatment in Qatar. One of the indicators of the success of this strategy will be that fewer people from Qatar are going abroad for cancer treatment.

Treatment in Qatar should be the case for the vast majority of cancers. Qatar's nearly 1.8 million population is sufficient to provide care for all but the most specialized of cancers. Where such specialized treatment is needed (e.g. proton beam therapy for rare childhood cancers or treatment of soft tissue sarcoma), then arrangements will be put in place for cancer patients from Qatar to access that specialized care abroad.

1 The assumption is that this would be a Qatar-based provider.

2 The Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st century*, March 2001, p.2

3 Robert Hayward, "Organising a comprehensive framework for cancer control," in

Coleman et al., *Responding to the Challenge of Cancer in Europe* (2008), p.129

1 Supreme Council of Health, *National Health Strategy 2011–2016*, April 2011, p.12.

Clinical Guidelines are output 2.1.2 of project 2.1 Quality Improvement

People coming to Qatar for Cancer Treatment

At the same time as reducing the number of Qatari residents travelling abroad, this strategy aims to encourage more people to come to Qatar for cancer care. Qatar should become a beacon of excellence for cancer care within the Gulf Region and, ultimately, for the whole of Western Asia.

Baselines for both the number of Qatari residents travelling abroad for cancer treatment and the number of people from the coming to Qatar for cancer care from abroad should be established by 2012. The National Cancer Stakeholder Committee has suggested that a 20% decrease in the former and a 20% increase in the latter by 2016 would indicate Qatar is making progress in becoming a preferred destination for cancer care.

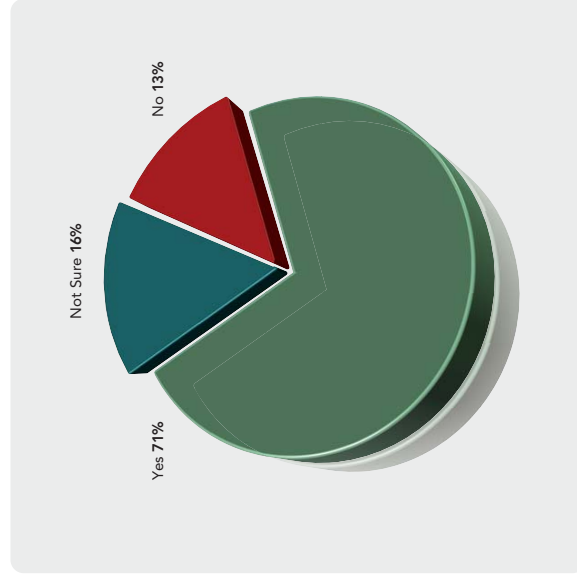


Figure 15: Should people who could have cancer be encouraged to use local services wherever possible rather than to travel abroad?

Pediatric Cancer

Cancer is predominantly a disease that affects adults. For instance, in the UK only 0.5% of cancer cases are amongst the 0-14 year old age group.¹ Childhood cancer incidence rates in Qatar are estimated to be about 12 per 100,000 children,² which is very comparable with the UK incidence of 14 per 100,000.³ These childhood cancers tend to be concentrated in a few sites, with over half the cancers being leukemia or brain tumors.

Given the far greater proportion of cancer amongst adults, that has been the focus of this strategy. However the vast majority of recommendations – such as the importance of rapid diagnosis, multi-disciplinary care, following evidenced-based pathways and specialization – equally apply to the care of children with cancer.

Pediatric cancer will be treated at the new Sidra Medical and Research Center, scheduled to open in December 2012. Sidra will have the responsibility for implementing the recommendations related to treatment and ongoing care for children with cancer. In this the new hospital will be aided by international expertise – Sidra has a link established with HMC and their partners, The Hospital for Sick Children in Toronto which has the first pediatric specific Cancer Genetics Program in North America and, since 2008, has been developing the Garron Family Cancer Center.⁴ Sidra will also work with community services to support ongoing care for children and young people when they are discharged home.

Four additional aspects should be considered with regard to pediatric cancer care. The first is education. Services should be organized to minimize disruptions to children's education. Patient pathway coordinators for children will therefore have additional responsibilities in liaising with schools to reduce disruption to a child's education.

Second is that the consideration of family wishes, although an important part of care for adults with cancer – see Chapter 8 in particular – are of even greater weight for children. Families need to be more involved in treatment decisions.

The third is the need to ensure appropriate arrangements are in place to ensure there is a seamless transition of the care of young people with cancer from children's to adult services.

Fourth and finally, consideration must be given to maintaining cure rates whilst reducing the long term toxicity of cancer care, as children who survive cancer should have many years of life ahead of them. One in every thousand adults is a survivor of childhood cancer and they must have as normal a life as possible post-treatment.

The SCH should work with Sidra to ensure that the requirements of this strategy (such as the cancer patient experience survey, outlined in Chapter 9) are implemented in an age-appropriate way. To support this, there should be a pediatric representative on the National Cancer Stakeholder Committee, who can lead a pediatric cancer working group composed of all organizations with an interest in children's cancer care.

1 See: <http://info.cancerresearchuk.org/cancerstats/childhoodcancer/>
2 Bener, A. et al., Patterns of cancer incidence among the population of Qatar: A worldwide comparative study, *Asian Pacific Journal of Cancer Prevention*, 8 (2007), 19–24.
3 See: <http://info.cancerresearchuk.org/cancerstats/childhoodcancer/incidence/#Overall>
4 For more information on SickKids see: <http://www.sickkids.ca/index.html>

This rich image represents in pictorial form how Mohammed's experience will change if the recommendations in this strategy are implemented, whilst the next text box tells Mohammed's story in 2016.



Image 2: The future uro-oncology pathway

9. Measuring Performance

To assess the success of this strategy in improving performance across the cancer continuum, indicators are needed. Some indicators will apply to specific parts of the continuum (e.g. screening coverage rates), whilst others will be influenced by the totality of this strategy (e.g. cancer survival rates). The indicators will enable comparison both internationally and within Qatar – for instance between different MDTs. In choosing indicators for Qatar we have taken into account work done in 2001 to develop cancer indicators by a group of more than 130 experts.¹ For a full list of the indicators, please see Annex B.

These indicators need to be collected in a robust way and this will require the establishment or development of surveys and registries. This chapter details two surveys and two registries that will be needed to identify successes and highlight areas for improvement:

- **Cancer Registry** – This will collect epidemiological indicators such as cancer incidence, mortality, prevalence, survival, stage of diagnosis, etc.
- **Understanding of Cancer and Prevention Survey** – This survey of the people of Qatar will measure their understanding of cancer and their lifestyle habits.
- **Screening Registry** – This will identify the comprehensiveness and impact of screening programs.
- **Patient Experience Survey** – This will survey cancer patients in Qatar to understand their views of the quality of treatment and support they have received.

Cancer Registry

International best practice suggests that a cancer registry must have a record for each cancerous tumor that a person has or has had – so an individual unfortunate enough to have two tumors in different parts of the body would have two records. Otherwise, there is no way to understand cancer incidence, cancer prevalence (the number of people with cancer) or cancer survival rates (the number of people alive at a set point after diagnosis with cancer).

Mohammed's journey in 2016

Mohammed is having problems going to the toilet and frequently needing to urinate in the night. He sees in a newspaper advert that this is a symptom of prostate cancer, so he goes to see a doctor at the Primary Healthcare Centre. Initial tests suggest Mohammed might have prostate cancer, and after a discussion of the test results with Mohammed, the doctor arranges an appointment at a specialist clinic at HMC's Uro-oncology Unit in two days time, to fit round Mohammed's work commitments. Mohammed attends the clinic and a sample of tissue is taken. The test results come back rapidly and Mohammed is told that he has intermediate risk localised prostate cancer, which has been caught before it can develop further. At a multidisciplinary team meeting doctors and allied health professionals discuss Mohammed's care and decide there are two treatment options – surgery or radiotherapy. The risks and benefits of each are explained in a consultation interview to Mohammed – who also receives clear information he can refer to later and show to his family – and, following some time to think, he chooses surgery. His surgery is booked in for ten days time. Mohammed is introduced to his patient pathway coordinator, who he can contact at any time. Mohammed is asked to assess himself using the distress thermometer, which suggests he is experiencing depression. His patient pathway coordinator arranges for Mohammed to have some counseling whilst waiting for his surgery. The surgery goes well and Mohammed has a stay of a week in hospital during which he gets excellent pain relief organized for him by the palliative care clinicians. He is sent home and then has follow-ups at one week (to check initial impact of surgery), three weeks (to remove his catheter, this happens at home) and six weeks (to check Prostate Specific Antigen (PSA) levels, an indicator of the presence of cancer). The surgeon ensures that his primary healthcare doctor knows what has happened with Mohammed's treatment and Mohammed is given advice on how to alter his lifestyle to reduce the chances of a recurrence. He continues to have three monthly follow-ups for the first year.

In these two vignettes, the outcome of treatment is ultimately the same, but Mohammed has a much better patient experience in the second vignette. In another case delays in diagnosis and treatment might have made the cancer inoperable and the discrepancy would have been starker.

Having considered what difference might be made for one individual patient, Chapter 9 now explores how we can assess the overall performance of cancer services across Qatar.

Although Qatar already has a cancer registry, it is not currently collecting sufficiently comprehensive information. It is recommended that all existing reporting processes (including pathology, imaging results, diagnoses and death certificates) be aligned to produce good quality information. An indicator of success in this will be that Qatar's information is accepted and published in Cancer Incidence in 5 Continents², seen internationally as recognition of a high quality cancer registry.

A key source of information for the registry will be the MDTs. It is recommended that one of the MDT coordinators' key roles be to ensure newly diagnosed patients are entered into the registry with information on the site and stage of cancer, as well as potential co-morbidities.

Patients who are being treated abroad and funded by SCH will be approved through the Medical Abroad Committee and their details entered into the registry at that point. Patients whose treatment abroad is not publicly funded will be harder to track – they will hopefully be picked up through the taking of medical histories during other healthcare treatment.

Collecting this information and, crucially, quality assuring it, requires adequate resources. The Northern Irish Cancer Registry covers a comparable population to Qatar (1.6 million people) and has a staff of fifteen. They provide analysis of the data and also ensure that records are not duplicates or missing vital information. **It is therefore recommended that a small team be established as part of SCH to run the cancer registry.** This will also allow the registry to not simply be a mechanism for counting, but also to feed information back to clinicians, for instance on the survival rates of their patients.

More details on the operation of the Cancer Registry are included in Annex E.

Understanding of Cancer and Prevention Survey

Building on the national survey conducted to inform this strategy and questions from the WHO world health survey (last conducted in Qatar in 2006) **it is recommended that an annual survey of a representative sample of the population be undertaken so that changes in public understanding of cancer can be identified and lifestyle behaviors measured.**

¹ European Cancer Health Indicator Project

² For information see: <http://cis.iarc.fr/>

10. Workforce

The quality of cancer care is hugely dependent on the staff providing that care. Implementing this strategy will require both more human resources dedicated to cancer and greater cancer training for existing clinicians.

In terms of capability, it is recommended that a training program be developed for PHC clinicians on their role in achieving the National Cancer Strategy. This will be overseen by the management of PHC, and may involve the procurement of training from an external source. The initial training program (to be delivered mid-2011 to mid-2012) should be backed up by support and resources for family physicians as they seek to put it into practice.

There are more community pharmacies than any other healthcare location in Qatar and they are frequented by a wide sector of the population. Therefore, they can be an important way of disseminating information on cancer, including how to prevent it and when to attend screening. Efforts should be made to work with pharmacists to provide them with the necessary training and materials to fulfill this role.

Once this initial training is completed it is recommended that family physicians can develop a special interest in cancer. They would receive additional training and education and, along with the PHC specialist cancer nurses, would create a real body of expertise in primary care. They would work closely with cancer clinicians in secondary care as patients are referred back to PHC following treatment. This should ensure continuity of care and help to create a cancer network across what can be a primary/secondary care divide.

Primary Healthcare

If primary healthcare is to play an effective part in ensuring Qatar has internationally respected cancer services there needs to be an increase in its capacity and capability. A recent survey of PHC doctors found that the most significant barriers to greater breast and bowel screening were lack of staff, lack of time and lack of training.¹ Of those surveyed, 24% said they had had “no training in the early detection of breast and colon cancer,” whilst others commented that training had been a long time ago or not yet detailed.

This strategy therefore strongly endorses the recommendations made in the National Health Strategy project 1.1 on Primary Care as the foundation, for extra investment in infrastructure and family physicians. There were 22 primary healthcare centers when the population was 380,000 and there are 22 as it approaches 1.8 million, so new facilities are needed and doctors recruited to staff them. Specifically for cancer, it is recommended that each PHC center appoint a specialist cancer nurse. These nurses will facilitate early detection and referral from primary care, will help increase cancer knowledge amongst their clinical colleagues and can also support suspected cancer patients waiting for their specialist appointment.

Publishing Performance

Publishing performance measures can be helpful to patients in enabling them to make informed choices in their treatment. It can also act as a powerful spur to providers to improve their services. At the third deliberative event participants were asked “should performance indicators be made available to the public, so that they can see how well different cancer care services are performing?”. An overwhelming majority (90%) said yes.

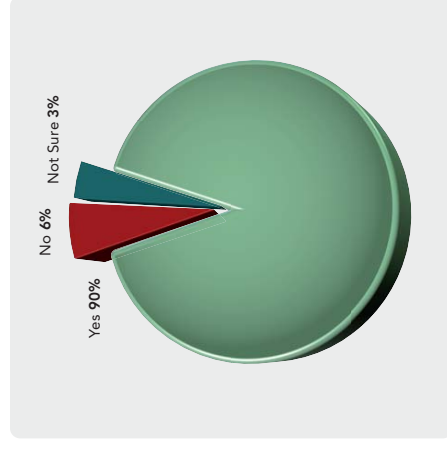


Figure 18: Should performance indicators be made available to the public, so that they can see how well different cancer care services are performing?

This feedback fits with SCH's desire to increase transparency in healthcare delivery. Therefore, from 2013 it is recommended that performance data is published showing how well providers are doing on meeting the access targets and how well each hospital's cancer patients view their experiences.

Comprehensive Performance Measurement

Taken together, the registries, surveys and reporting of access targets should provide the information needed to satisfactorily measure the performance of Qatar's cancer services. They will enable assessment of whether the recommendations set out in this strategy are improving cancer care in Qatar. They will sit alongside other performance measures introduced in the National Health Strategy such as measures of staff satisfaction (included in project 4.2 on Recruitment and Retention).

These lifestyle behaviors such as smoking rates, consumption of fruit and vegetables and levels of exercise, will also provide crucial information on the risk factors for other significant diseases affecting the population of Qatar, such as diabetes and cardiovascular disease.

Responsibility for carrying out, or commissioning, the survey will sit with SCH. The first survey should be undertaken in 2012.

Organized Screening Registry

To monitor the success of screening, it is recommended that screening registries be established for each of the three screening programs. As per WHO advice, the key indicator they will measure will be the coverage of the screening program. It is suggested that there be 70% coverage of the target population by 2014 for breast, 2015 for bowel and 2016 for cervix. However, there are a range of other useful indicators that should be collected including the screening detection rate and the likelihood of avoiding false positive screening results. To ensure the comprehensiveness of the screening registry it should be maintained by SCH.

Cancer Patient Experience Survey

The importance of having patient-centered cancer care was highlighted in Chapter 7. The best way of understanding whether this is being achieved is to ask patients themselves. Therefore, it is recommended that a Qatar cancer patient survey be developed.

As a starting point, it is suggested that the cancer patient survey created in the UK in 2010 is tailored to the needs of Qatar and then refined.¹ The 67 questions in this survey are contained in Annex F. All cancer patients – identification will be possible via the cancer registry – should be surveyed annually, with the first survey being carried out in 2012. Responsibility for the survey will sit with the SCH and survey results should be reported back to providers and remedial action taken if necessary.

Access Target Compliance

Providers should collect information on the three stages of timeliness in treatment (referral to specialist appointment, specialist appointment to diagnosis and diagnosis to treatment) and report their performance to SCH.

1 Dr. Hamad R. Al-Madiki and Dr. Mohamed Ghaiti Al-Kuwari, Health needs assessment regarding the prevention and control of breast and colorectal cancer in PHC, January 2011, p.9

2 Responses in Figure 18 do not sum to 100% due to rounding.

In other instances, this strategy introduces completely new roles (illustrated in Figure 19) that are vital to achieving key recommendations.

The introduction of these new roles accords with project 4.4 of the National Health Strategy which calls for the optimization of skill mix, through the use of new roles such as nurse practitioners like CNSs.¹

The costs of these new posts and roles have been included in the Investment Plan for this strategy, summarized in Appendix G.

Whilst new staff and roles are important, this strategy will be unachievable without the skill and dedication of existing cancer clinicians. Investing in their training and development will be important in helping them achieve the recommendations in this strategy, such as the effective universal use of MDTs.

Supreme Council of Health

The Supreme Council of Health will have responsibility for overseeing implementation of this strategy. To do this effectively will require a dedicated National Cancer Strategy Implementation Team within the SCH. This team – four people should provide a sufficient starting point – will have the responsibility for leading implementation of the Strategy.

Recruitment and Retention – A Key Issue

As outlined in the National Health Strategy, recruitment and retention in healthcare generally and in SCH specifically are significant problems in Qatar. Projects 4.2 (Recruitment and Retention) and 5.1 (SCH Capacity Building) will need to be implemented in tandem with this strategy so that Qatar has the workforce it requires to deliver internationally respected cancer care. This will need to include consideration of remuneration levels sufficient to attract the best staff, exemptions for the healthcare sector from HR laws, and allowance for continuing professional development at all grades.

Development of Cancer Nurses in Qatar

It is anticipated that a lead cancer nurse (to oversee the nursing changes required by this strategy) and the first CNSs will need to be recruited from abroad to get staff with the necessary clinical expertise. However, a CNS development program should also be established in Qatar so that local nurses can become CNSs in training, gradually assuming greater levels of responsibility under the mentorship of qualified CNSs as part of a Masters level specialist training program. This arrangement is represented in Figure 20.

The intention is that ultimately Qatar will train all the CNSs it needs and can thereby ensure a sustainable source of CNSs who are culturally sensitive and Arabic speaking.

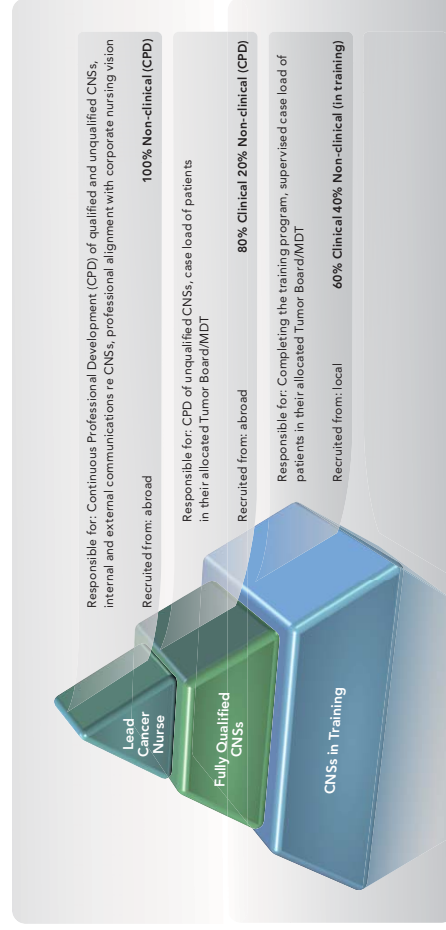


Figure 20: The tiers of cancer nursing roles in Qatar

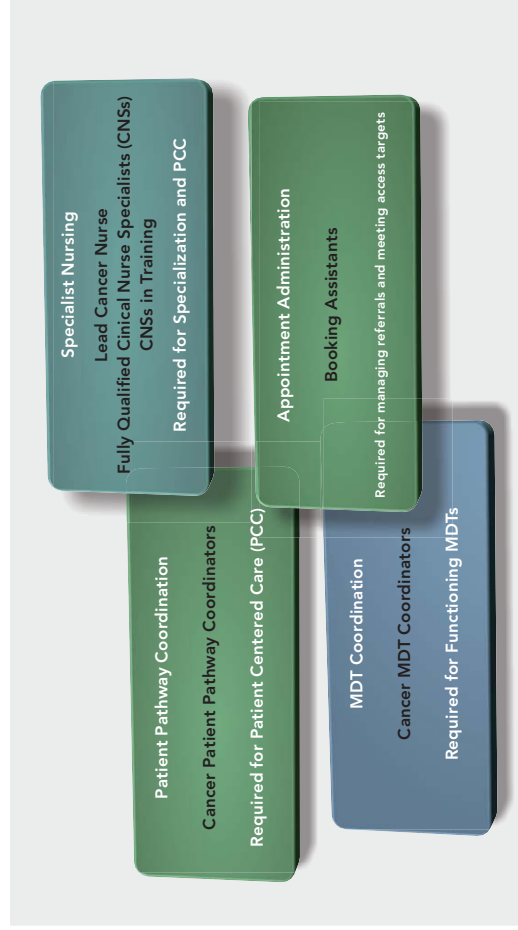


Figure 19: New roles introduced by National Cancer Strategy

1 Supreme Council of Health, National Health Strategy 2011–2016, April 2011, p.38

11. Research

“Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.”

— Marie Curie

Advances in cancer care are occurring at a rapid rate. For instance myeloma (cancer of the blood plasma) had very poor survival rates but new drugs have become available in the last 5–10 years which significantly improve survival and quality of life for myeloma patients. This is not an isolated example, as new targeted therapies are becoming available and it is estimated that more than 50% of new drugs in development are for treating cancer.¹

It is essential that Qatar keeps pace with the latest cancer research. **To do this it is recommended that a program focusing on translational research (research which leads to realizable benefits for patients) be developed.** This translational research needs to span the cancer continuum – including improved diagnostics, genetic profiling, development of targeted treatment, epidemiology, behavior change and clinical trials of new technologies etc. Key to the success of any research program is having a research focus, a conducive environment, the right people and effective collaboration – nationally and internationally.

The program needs to encompass and build on the current cancer research expertise in Qatar, namely:

- Technology
- Bioinformatics
- Screening
- Biobanks/epidemiology
- Therapeutics – proteomics and genomics
- Prevention/education/awareness
- Wellbeing/behavioral interventions

This program should be hosted by the Qatar Foundation and be a partnership between HMC, PHC, Qatar Science and Technology Park, Qatar University, Weill Cornell Medical College, the University of Calgary–Qatar, the Collaborative Partner mentioned in Chapter 7 and other relevant partners. A Cancer Research Steering Committee is being established to develop and implement the research program which will focus on Qatar’s research strengths and priorities.

Such a research program should directly benefit patient care and the health of the population. Evidence exists that treatment in a hospital that takes an active part in clinical trials results in improved outcomes.² Clinical trials are designed to test the safety and efficacy of therapeutic interventions.³ Participation in clinical trials will give access to new treatments that offer benefits to patients who previously had no hope of cure or delay in their cancer’s progress. They, of course, require willing participants and those seem to be available in Qatar. At the third deliberative event 72% of those questioned indicated they would be willing to participate in clinical trials.⁴

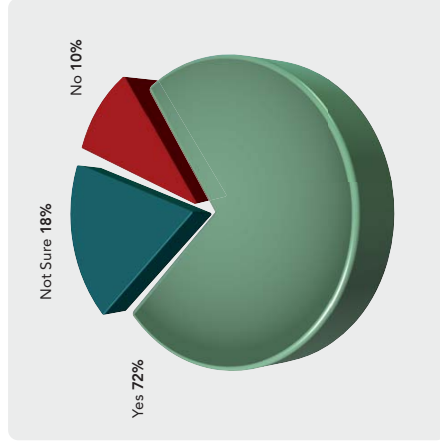


Figure 21: Clinical trials test out new drugs and therapies for treating cancer. If you had cancer and doctors told you a clinical trial was the best option, would you take part?

A greater research focus should also have benefits for recruitment. This was emphasized by deliberative event participants who argued that “creating a research environment will attract scholars.” The use of workforce enhancements such as research sabbaticals, funded international study visits, the development of post-doctoral education and cancer fellowships will help to overcome the recruitment and retention issues highlighted in the previous chapter.

Health research should not simply be limited to new treatments. As this strategy has demonstrated, to prevent cancer and catch cancer early requires changes in human behavior, such as exercising more and choosing to attend screening clinics. In recent years there has been lots of research into what does and does not work when changing the behavior of citizens in Western Europe and the United States,¹ but we cannot be sure the same principles will be effective in Qatar. **So the cancer research program should include a behavioral research component to see how healthy behaviors can be encouraged in the population of Qatar.** Some work in this area is already underway, as a pioneering study by the University of Calgary–Qatar into factors affecting women’s take-up of breast screening started in 2011.²

Clinicians must fully explain the benefits and risks of a trial and put patients’ needs and desires first. If done appropriately, this should lead to greater patient involvement and increased participation in clinical trials will be an indicator of success in promoting cancer research in Qatar.

Instigating an expanded program of clinical trials and research within HMC, will be a step in enabling it to achieve its ambition of becoming an Academic Health Science Center (AHSC) in partnership with Weill Cornell Medical College, by bringing together academic and clinical expertise. International examples of AHSCs include Johns Hopkins Medicine in the US, Karolinska Institutet in Sweden and Imperial College London in the UK.

² Fayer D et al., Systematic review of barriers, modifiers and benefits involved in participation in cancer clinical trials (CRD Report 31), York, UK, Center for Reviews and Dissemination, University of York (2006).

³ The Academy of Medical Sciences, A new pathway for the regulation and governance of health research, January 2011, p.14

⁴ The nature of the participants (many from medical backgrounds or existing cancer patients) is likely to mean this figure is higher than for newly diagnosed cancer patients, but it is still encouraging.

¹ UK Department of Health, Cancer Reform Strategy (2007), p. 23

¹ See for instance A. Darnton, Reference Report: An overview of behaviour change models and their uses, July 2008

² Study being led by Dr Tam Truong Donnelly

12. Next Steps

This strategy is the first stage in improving Qatar's cancer care to be the very best in the world. It must be followed by action, have its progress reviewed and, ultimately, be updated.

An Accessible Strategy

Now that this Strategy has been developed it is vital that people are aware of its existence. At the third deliberative event people were asked what was the best way to make the strategy accessible. The most popular response (62%) was to make key messages clear in the media.

The SCH have sought to do this by organizing extensive media coverage of the strategy's launch. Copies of the strategy will also be available in waiting rooms in PHC centers and at HMC (recommended by 22% of respondents).

Implementation Plan

This strategy has sought to offer a compelling vision for how cancer care in Qatar must change, backed up by robust recommendations. However, further work is needed to ensure delivery of the recommendations by breaking them down into clear milestones and clarifying who will be responsible for their implementation. **So an Implementation Plan – informed by the responses of PHC, HMC and other secondary care providers to this strategy – will be published shortly.**

The detailed implementation work will also expand on the additional resources needed to put this strategy into action. A high-level summary of initial indications of the costs of implementing this strategy is contained in Annex G.



Figure 22: Which of the following actions would be most important to make the strategy accessible to those who need to read it?

Implementation Governance

Figure 23 shows the accountabilities for implementing the National Cancer Strategy.

Much of the implementation will need to be done via the provider organizations that see patients. Some implementation has already begun, with the setting up of structures such as Tumor Boards within HMC, which will facilitate achievement of the recommendations set out in this strategy. **Given that HMC provide the vast majority of cancer treatment in Qatar, it is suggested that they provide quarterly reports on implementation progress to SCH.**

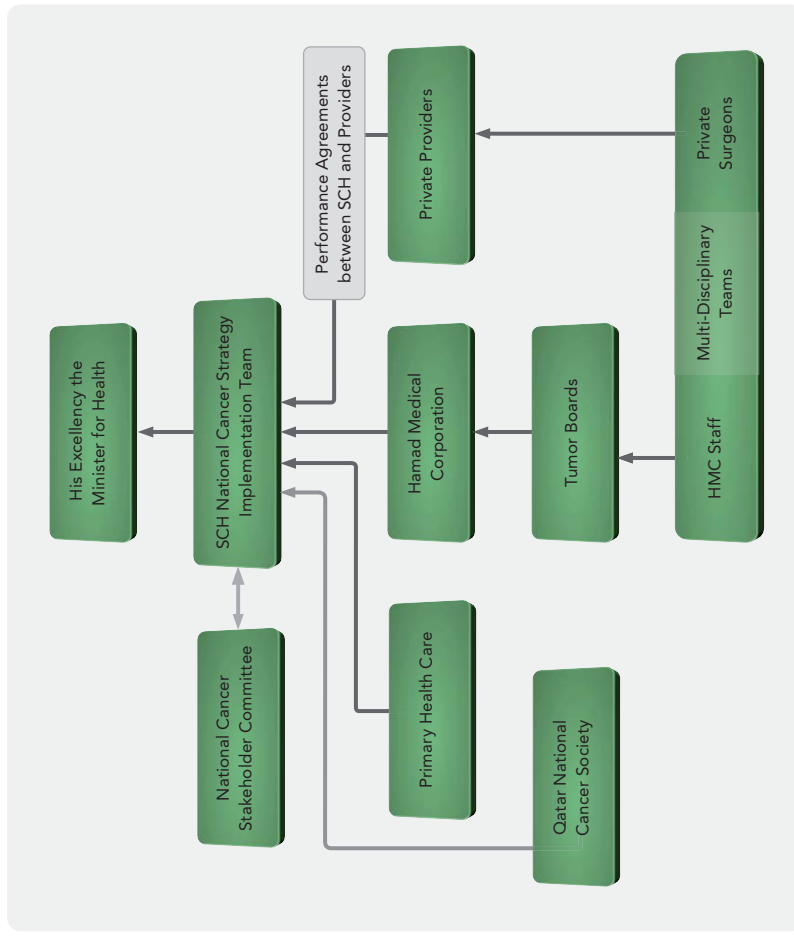


Figure 23: Governance Structure for Implementing the National Cancer Strategy

Annex A Table of Recommendations

Recommendation Number	Recommendation Description	Implementation Responsibility	Potential for Procurement (L, M, H)
Chapter 3 – Education and Understanding			
3.1	Myth-refutation campaign starting in 2011.	SCH	M – campaign coordinated by SCH but elements will need to be procured
3.2	Education sessions on cancer at schools. Begin in next academic year.	SCH and Supreme Education Council	L
3.3	Qatar National Cancer Society website becomes comprehensive cancer information resource.	SCH and Qatar National Cancer Society	M – some content could be used from other reputable sites
3.4	Develop a yearly calendar of cancer awareness days and months, with associated activities, many led by the voluntary sector.	SCH and Qatar National Cancer Society	L
Chapter 4 – Prevention			
4.1	Package of measures to strengthen efforts on tobacco cessation.	SCH	M – potential to procure some aspects (e.g. smoking cessation interventions)
4.2	Extensions to current plans on promoting healthy eating and exercise.	SCH	M – potential to procure some aspects (e.g. after school football coaching)
4.3	Carry out study into carcinogens in the environment by early 2012.	SCH	H – could be conducted by independent organization with expertise in this area
4.4	HPV vaccine to be made available for those families who wish it from 2013.	SCH	H – could be procured as a stand-alone service
4.5	Establish clear criteria on use of genetic tests for cancer. Then confidential genetic testing and counseling instigated.	SCH, National Screening Committee and providers	L
Chapter 5 – Early Detection			
5.1	Establish a Qatar National Screening Committee to give clear guidelines on screening including the target population and frequency. Cancer sub-committee to be in operation in 2011.	SCH and PHC	L
5.2	Introduce comprehensive screening programs (underpinned by population databases and proactive communications) for breast cancer, colorectal cancer and cervical cancer.	National Screening Committee and SCH working with Ministry of the Interior	L
5.3	SCH to run an open tender for the provision of screening services. PHC and other providers to respond.	SCH	H

One-Year-On Conference

To help ensure momentum is maintained in implementing the National Cancer Strategy, it is suggested that a one-year-on conference is held in Spring 2012. This will be a chance for the Qatar cancer community to take stock of what has been achieved. The conference will also help to raise Qatar's profile as a leader in cancer care internationally, by involving global cancer experts including Bruce Barraclough and Murray Brennan, members of the International Advisory Panel supporting this strategy.

Revisiting the National Cancer Strategy and Reviewing Progress

As new treatments emerge and the burden of cancer changes, this Strategy will need updating. The Danish government published their first Cancer Plan in 2000 and then produced a follow-up in 2005.¹ Given that the recommendations within this strategy should come into effect within five years, it is recommended that this strategy be revisited in 2016 and an update produced then.

However, because such rapid progress is envisaged within those five years, it is also recommended that a formal review of progress is carried out during 2013. This review will need a degree of independence to provide assurance on progress. If sufficient progress is not being made the review will also consider the case for developing alternative cancer treatment provision.

The SCH will hold the providers to account to implement the strategy's recommendations and achieve its key indicators through the performance agreement mechanism. At the third deliberative event participants were asked what would be the best method to ensure providers comply with the recommendations in this strategy and the results are set out in Figure 24.

Indicating that a loss of face is more powerful than financial incentives, the most popular response (45%) was that non-compliant providers should have to explain to His Excellency the Minister why this is the case. Therefore this approach should be implemented from 2012, with the potential, where appropriate and practical, for the removal of the license to treat cancer patients if no improvements occur following this ministerial meeting. Fining of providers for failing to comply with the strategy is not recommended.

Beyond monitoring provider compliance, the SCH will be taking the lead in recommendations relating to the early part of the cancer continuum such as prevention. They will also provide the secretariat to the National Cancer Stakeholder Committee which will provide advice on implementation, will use its senior figures to drive forward progress and will have a particular focus on implementation issues requiring joint work by two or more providers.

The National Cancer Strategy Implementation team will report upwards on progress in implementation to His Excellency the Minister for Health.



Figure 24: Which of the following actions would be most likely to ensure healthcare providers are compliant with the recommendations set out in the Strategy?

¹ Robert Haward, "Organizing a comprehensive framework for cancer control," in Coleman et al., *Responding to the Challenge of Cancer in Europe* (2008), p.115

Recommendation Number	Recommendation Description	Implementation Responsibility	Potential for Procurement (L, M, H)
5.4	Campaign on prostate and bladder cancer to highlight symptoms in 2012 – to be followed by other site specific campaigns.	SCH to tender. PHC and other providers to respond.	M – potential to involve external organizations in design and delivery of the campaign
Chapter 6 – Rapid and Definitive Diagnosis			
6.1	Referrals to specialist clinics via a standardized process with those with suspected cancer seen within 14 days (2012), 7 days (2013) and 48 hours (2015).	PHC and Secondary Care Providers	L
6.2	Once a patient is seen, a definitive diagnosis should be reached within 14 days using a combination of imaging, pathology and physical examinations.	Secondary Care Providers	M – potential for procurement of pathology and imaging capabilities
6.3	A review of diagnostic demand and capacity should be completed in 2011.	SCH working with providers	L
6.4	Diagnosis should be communicated clearly and sensitively, with clinicians able to attend a communication course.	Secondary Care Providers	H – Could procure existing courses.
6.5	Delays in diagnosing cancer should be reported and investigated.	Secondary Care Providers	L
Chapter 7 – Treatment			
7.1	Cancer Information Prescriptions developed containing all key information for a patient in one place.	Secondary Care Providers and SCH	M – Possible to use pre-existing information
7.2	Patients' psychosocial needs should be considered through use of the Distress Thermometer and support services such as psychological counseling and nutritional advice made available.	Secondary Care Providers	L
7.3	Patient pathway coordinators become a patient's first point of contact and help ensure patient-centered care.	Secondary Care Providers	L
7.4	To support the move toward electronic medical records, the Qatar Identification number should be used wherever possible and efforts made to allow access of records between providers.	Secondary Care Providers and PHC	L
7.5	Develop the treatment environment at Al-Amal through a major refurbishment and possibly the development of a Maggie's Centre.	HMC	M
7.6	Begin building a new cancer hospital during the next five years.	SCH and HMC	M
7.7	All cancer patients to be cared for as part of Multi-Disciplinary Teams (MDTs) by October 2013.	Secondary Care Providers	L

Recommendation Number	Recommendation Description	Implementation Responsibility	Potential for Procurement (L, M, H)
7.8	Cancer care to be specialized, with clinicians focusing on particular cancer sites.	Secondary Care Providers	L
7.9	Providers designate which clinicians can treat which cancers (privileging).	Secondary Care Providers	L
7.10	Introduce Clinical Nurse Specialists as a new advanced practitioner role to improve cancer care.	Secondary Care Providers	L
7.11	Evidence-based pathways should be developed that become National Standards of cancer care, applicable to all providers. First national standards in place by 2012.	SCH	H – Suggested that an internationally respected standards organization could be contracted to do this
7.12	By the end of 2012, treatment should be within 14 days of diagnosis.	Secondary Care Providers	L
7.13	If patient's appointment cancelled, guaranteed rebooking within one week or choice of appointment elsewhere (paid for by original provider).	Secondary Care Providers	L
7.14	Peer Review process is instituted to ensure excellent quality care.	SCH	H
7.15	Patients encouraged to be treated in Qatar.	SCH, PHC and Secondary Care Providers	L
7.16	To support the age-appropriate application of this strategy, there should be pediatric representation on the NCSC and a working group on this issue involving all relevant parties is established.	Sidra and SCH	L
Chapter 8 – Ongoing Care			
8.1	Introduce a Palliative Care Directorate at HMC.	HMC	L
8.2	All palliative care patients to have a care plan by 2012.	Secondary Care Providers	L
8.3	Build a new specialist palliative care center and strengthen care at home.	HMC and PHC	H
8.4	Regular follow-ups should occur with cancer survivors – 3 monthly initially and then decreasing to annual over time and as clinically appropriate.	Secondary Care Providers	L
8.5	Develop a cancer transitions program to help survivors return to normality once their treatment is completed and to support secondary prevention.	SCH, PHC and Secondary Care Providers	M – Content could be procured from existing programs available in other countries and adapted for Qatar
8.6	Encourage and develop membership of Cancer Support Groups.	SCH and Qatar National Cancer Society	L

Recommendation Number	Recommendation Description	Implementation Responsibility	Potential for Procurement (L, M, H)
8.7	Establish a volunteer coordinator post within Qatar National Cancer Society to make use of survivors and other volunteers.	SCH and Qatar National Cancer Society	L
Chapter 9 – Measuring Performance			
9.1	Introduce a fully resourced Cancer Registry to record all cancer cases treated in Qatar and abroad.	SCH	L
9.2	Instigate an annual understanding of cancer and prevention survey of a representative sample of the population. First survey in 2012.	SCH	H – survey could be commissioned from reputable external organization
9.3	Create a comprehensive screening registry to aid recommendations 5.1–5.3.	SCH	L
9.4	Beginning in 2012, carry out an annual survey of patient experience amongst all cancer patients.	SCH	H – survey could be commissioned from reputable external organization
9.5	From 2012, providers report on their compliance with the access requirements (e.g. diagnosis to treatment) to SCH.	Secondary Care Providers	L
9.6	Performance information (e.g. on access requirements and cancer patient experience survey) for providers is published from 2013.	SCH	L
Chapter 10 – Workforce			
10.1	Training and support of community pharmacists so they can play a role in cancer awareness, prevention and early detection.	SCH working with Qatar University	L
10.2	PHC increases its capacity through recruitment of more staff, improved facilities and the appointment of cancer nurses.	PHC	L
10.3	Develop a training program for PHC clinicians on their role in achieving the National Cancer Strategy.	PHC	M – Possible procurement of training program
10.4	Develop family physicians with a special interest in cancer.	PHC and Secondary Care Providers	L
10.5	Recruit more clinical staff to allow specialization and develop services such as palliative care.	Secondary Care Providers	L
10.6	Establish a National Cancer Strategy Implementation team at the Supreme Council of Health.	SCH	L
10.7	Introduce a Clinical Nurse Specialist training program within Qatar.	HMC	L

Recommendation Number	Recommendation Description	Implementation Responsibility	Potential for Procurement (L, M, H)
Chapter 11 – Research			
11.1	Qatar Foundation should host a program of translational research involving key partners.	Qatar Foundation	L
11.2	Research should include clinical trials, behavioral change and interventions.	Qatar Foundation and SCH	L
Chapter 12 – Next Steps			
12.1	Develop and publish an implementation plan with detailed milestones.	SCH	L
12.2	HMC report to SCH on a quarterly basis on their progress in implementation.	HMC	L
12.3	From 2012, providers non-compliant with the strategy have to explain why to HE the Minister of Health. If progress on compliance not made, license to treat cancer patients can be removed.	SCH	L
12.4	Organize a one-year on conference to assess performance in implementation.	SCH	M – conference organisation could be done externally
12.5	Commit to refresh the strategy in 5 years time.	SCH	L
12.6	Review progress on implementing the strategy during 2013.	SCH	M – a degree of independence would be useful

Annex B List of Indicators

Measuring	Indicator	Source	Indicator Performance by when
Cancer Awareness	Exact survey questions TBC	Understanding of Cancer and Prevention Survey	TBC, first year of data 2012
Preventing Cancer	Diet – Consumption of fruit and vegetables (% consuming 5 or more fruit and vegetables a day)	Understanding of Cancer and Prevention Survey	Baseline established 2012, 50% increase on this baseline by 2016
	Obesity – Body Mass Index distribution in the population	Understanding of Cancer and Prevention Survey	Reduce to 29% of the population being classified as obese by 2016 (latest figure 32%). ¹
	Physical activity – % undertaking regular activity is defined as 30 minutes of exercise at least three times a week	Understanding of Cancer and Prevention Survey	Increase to 60% by 2016 (latest available figure <50%)
	Tobacco Prevalence – Prevalence of tobacco smokers among adults	Understanding of Cancer and Prevention Survey	Reduce male smoking rates to 25% by 2016. The female smoking rate is reported as 2.2%, which is likely to be a considerable underestimate – work should be done to establish a more accurate baseline
Early Detection	Early Diagnosis – Percentage of cancers diagnosed at stage 1 and 2	Cancer Registry Information	Establish baseline by end of 2012. Then a 30% increase in proportion of cancers diagnosed at stage 1 and 2 by 2016.
	Coverage of the organised screening program The percentage of the target population that are covered by an organised screening program	Screening Registry	70% by 2014 (breast), 2015 (bowel) and 2016 (cervix).
	Screening detection rate The number of cancers detected in the screening program as a proportion of all the screening tests performed.	Screening Registry	Baseline established by 2013 and then suitable measure of good performance agreed.

Measuring	Indicator	Source	Indicator Performance by when
Rapid and Definitive Diagnosis	Seen within set time-frame following referral from screening and primary care	Provider reporting to SCH	2 weeks by 2012 1 week by 2013 48 hours by 2015
	Definitive diagnosis within two weeks of being seen by a specialist clinic	Provider reporting to SCH	From end 2012
	Rapid Treatment Treatment begins within 14 days of definitive diagnosis	Provider reporting to SCH	From end 2012
Treatment	MDTs	Identifying any cancer registry records not linked to MDTs.	From October 2013
	All cancer patients to be treated in an MDT	Patient Experience Survey	Patient Experience Survey to be implemented by 2012.
	Patient-Centered Care Exact questions to be defined.	Provider reporting to SCH	To be in place by end of 2012.
Ongoing Care	All Palliative Care patients to have a comprehensive care plan	International Observatory of End of Life Care (IOELC)	Qatar is categorized as having an integrated approach to palliative care (group 4, the highest classification) by the IOELC by 2015.
	Classification of Palliative Care in Qatar	Monitored by Cancer Research Steering Committee	Proportion of current cancer patients participating in trials established in 2012. Then increased % set for 2016.
	Increased Participation in Clinical Trials		

¹ This is in line with the target set in Qatar National Development Strategy, March 2011, p.113

Annex C Membership of the National Cancer Stakeholder Committee

- Professor the Lord Darzi of Denham (Chair)
- Dr. Faleh Mohamed Hussein Ali (Deputy Chair)
- Dr. Khareth Al-Khater
- Dr. Hanan Al Kuwari
- Dr. Mariam Abdul Malik
- Dr. Abdulla Al Ansari
- Elinor LeBaron
- Dr. Khalid Bin Jabor Al Thani
- Dr. Abdul Azim Abdul Wahab Hussain
- Sheikh Mohammed Al-Thani
- Dr. Juliet Ibrahim (Secretariat)

The NCSC met three times in the production of this strategy on 14 December, 23 January and 14 March.

Annex D Deliberative Events

Deliberative Events are large scale public discussions that enable the consideration of complex issues having taken into account available evidence. As part of the creation of this Strategy, three deliberative events were held.

The first event on 14 December 2010 was held as part of the launch of the creation of this strategy. Over 100 people attended this event and participated in table-top discussion, focusing on raising awareness and involving the people of Qatar in developing the strategy.

The second event on 6 February 2011 involved more than 130 people and considered issues of access and quality. There was both qualitative discussion of broad questions and quantitative polling on more specific issues.

The third and final event on 14 March 2011 was attended by more than 110 people and considered questions regarding resources and infrastructure. Like the second event, it mixed participant discussion and voting.

Ideas and polling results from the events are included throughout the strategy.

Measuring	Indicator	Source	Indicator Performance by when
Overall measures of Qatar having internationally respected cancer services	Survival Rates Improvement from baseline in 1 and 5 year cancer survival rates	Cancer Registry	If we are starting capturing in 2012, good 5 year rates will not be available until 2017.
	Cancer incidence rates This is the number of new cancer cases divided by the population being analysed.	Cancer Registry	Baseline established in 2012.
	Cancer prevalence proportions This is the number of people per 100,000 population who have a particular cancer at a given time.	Cancer Registry	Baseline established in 2012.
	Cancer mortality rates This is the number of deaths, with cancer given as the underlying cause of death, per 100,000 population during a year.	Cancer Registry	Currently 10% of deaths linked to cancer. Proportion may increase as cancer registry information improves
	Treatment in Qatar – Percentage of Patients being treated abroad declining	Cancer Registry	Baseline established in 2012. 20% decrease by 2016.
	Treatment in Qatar – Number of patients coming to Qatar from abroad rising	Manual Check	Baseline established in 2012. 20% increase by 2016.

Objectives of the Policy

Implementation of this policy will lead to Qatar having an accurate, reliable, complete and useful Cancer Registry. The Registry will have a validated record for each tumor for each member of the population who has cancer. The Registry will be a unique source of data for research into cancer epidemiology, the planning of cancer services and the investigation of cancer outcomes.

Responsibilities of healthcare providers

All healthcare providers that are licensed by the Permanent Licensing Committee of SCH, are to be required to submit data to the Cancer Registry in an electronic spreadsheet format as per a detailed specification provided by the Cancer Registry team, based on the type(s) of service offered within their facility. Submission of these data will be a necessary criterion for licensing or re-licensing.

Responsibilities of the Supreme Council of Health

The Supreme Council of Health will be responsible for ensuring the Cancer Registry provides a series of metrics and data, these will be made freely available through publications on the SCH website.

The Cancer Registry will set out a publication timescale – the length of time they expect publication of figures for any given year to take – and publish figures for each of the following, by cancer site (using ICD-10):

- Cancer incidence
- Cancer prevalence
- Cancer survival rates

They will also identify treatment patterns, feedback to MDTs and individual clinicians on, for instance, survival rates, and provide estimates for the completeness of data within the Registry – in particular by providing the percentage of Death Certificate Only (DCO) records and by using the ‘flow method’.¹

The Registry will also provide ongoing feedback to the providers of data, on how to improve the quality of data sent and to minimize the work required for submissions.

Sanctions for non-compliance

A list will be published bi-annually of data providers (and the named individual responsible) along with whether they have transferred the necessary data or not. If providers fail to supply the necessary data they will first be issued with a written warning. Reporting on which providers are not supplying data on an ongoing basis will form part of new periodic stock-takes. These will require providers to explain to the Minister why they are not complying with the policy.

Measures of success

We still need to determine what levels we expect these to be at and by when we expect them to be achieved, but possible metrics are:

- % of potential data received from data providers
- % of data received on time from data providers
- % of DCO records
- Publication timetable set out by Registry
- Publication on Cancer Incidence in 5 Continents
- Publication of 1 year survival rates (Jun 2013)
- Publication of 3 year survival rates (Jun 2016)
- Publication of 5 year survival rates (Jun 2018)

Resources

Additional resources will be provided to the Cancer Registry. This will include an initial investment for office space, hardware and new software and ongoing costs for additional staff (it is estimated 6.5 FTE will be required).

Over the longer term SCH will consider whether implementing a bespoke software solution (rather than using spreadsheets) for transferring data from data providers to the Cancer Registry is worthwhile for improving data quality and timeliness. If it is, it should be scoped out and paid for by SCH at a later date.

The length of time they waited for an appointment

1. Before you were told you needed to go to hospital about cancer, how many times did you see your GP (family doctor) about the health problem caused by cancer?
2. After your GP first told you that you would need to see a hospital doctor, how long did you have to wait before your first appointment with a hospital doctor?
3. How do you feel about the length of time you had to wait before your first appointment with a hospital doctor?
4. How long was it from the time you first thought something might be wrong with you until you first saw a hospital doctor?
5. Did your health get worse, get better or stay about the same while you were waiting for your first appointment with a hospital doctor?

Any diagnostic tests that were carried out

6. In the last 12 months, have you had diagnostic test(s) for cancer such as an endoscopy, biopsy, mammogram, or scan at one of the hospitals named in the covering letter?
7. Beforehand, did a member of staff explain the purpose of the test(s)?
8. Beforehand, did a member of staff explain what would be done during the test procedure(s)?
9. Beforehand, were you given written information about your test(s)?
10. Were the results of the test(s) explained in a way you could understand?

The explanation of their diagnosis

11. Who first told you that you had cancer?
12. When you were first told that you had cancer, had you been told you could bring a family member or friend with you?
13. How do you feel about the way you were told you had cancer?
14. Did you understand the explanation of what was wrong with you?
15. When you were told you had cancer, were you given written information about the type of cancer you had?

Their involvement in decisions about treatment

16. Before your cancer treatment started, were you given a choice of different types of treatment?
17. Were the possible side effects of treatment(s) explained in a way you could understand?

18. Before you started your treatment, were you given written information about the side effects of treatment(s)?
19. Were you involved as much as you wanted to be in decisions about which treatment(s) you would have?

Support from a Clinical Nurse Specialist

20. Were you given the name of a Clinical Nurse Specialist who would be in charge of your care?
21. How easy is it for you to contact your Clinical Nurse Specialist?
22. The last time you spoke to your Clinical Nurse Specialist, did she/he listen carefully to you?
23. When you have important questions to ask your Clinical Nurse Specialist, how often do you get answers you can understand?
24. The last time you saw or spoke to your Clinical Nurse Specialist, do you feel that the time you spent with them was too long, too short or about right?

Explanation of support that was available

25. Did hospital staff give you information about support or self-help groups for people with cancer?
26. Did hospital staff give you information about how to get financial help or benefits?
27. Did hospital staff tell you that you could get free prescriptions?

Explanation of treatment given

28. During the last 12 months, have you had an operation (such as removal of a tumour or lump) at one of the hospitals named in the covering letter?
29. The last time you went into hospital for a cancer operation, was your admission date changed to a later date by the hospital?
30. Before you had your operation, did a member of staff explain what would be done during the operation?
31. Beforehand, were you given written information about your operation?
32. After the operation, did a member of staff explain how it had gone in a way you could understand?
33. During the last 12 months, have you had an operation or stayed overnight for cancer care at one of the hospitals named in the covering letter?

Confidence and trust in their doctors and nurses

34. When you had important questions to ask a doctor, how often did you get answers that you could understand?
35. Did you have confidence and trust in the doctors treating you?

¹ Bullard J, Coleman M P, Robinson D, Lutz J-M, Bell J, Peto J. Completeness of cancer registration: a new method for routine use. *Br J Cancer* 2000; 82: 1111–1116

Annex G Summary Investment Plan

Implementing this strategy will not be cost neutral. More staff will be required within HMC, PHC and SCH. There will be capital costs to improve facilities and there will be additional costs such as the running of preventative campaigns.

However, expenditure does not have to be huge. The table below shows the costs of the strategy over the next five years.

Expense Item	Includes	Cost (over 5 years)
Staffing and Wage Costs	<ul style="list-style-type: none"> New staff at HMC including MDT co-coordinators, patient pathway coordinators, booking assistants and Clinical Nurse Specialists Specialist cancer nurses for PHC Team coordinating implementation of the strategy at SCH Cancer registry staff 	QAR 335 million
Operating Expenses	<ul style="list-style-type: none"> Costs of running the screening programs Stop smoking support and campaigns Research program at HMC 	QAR 962 million
Capital Costs	<ul style="list-style-type: none"> Refurbishment of Al-Amal including space for MDTs New Specialist Palliative Care Center ICT capital costs 	QAR 907 million
Total		QAR 2,204 million

This is the investment that is required to raise the standards of cancer care in Qatar up to the world's best.

As it impossible to be sufficiently precise without further scoping work, these estimated costs **do not** include the required spending on a new cancer hospital (recommendation 7.6) which will clearly represent a significant capital cost.

55. During the last 12 months, have you had chemotherapy at one of the hospitals named in the covering letter?

56. Did hospital staff do everything possible to control the side effects of chemotherapy?

Ongoing outpatient appointments with a cancer doctor

57. While you were being treated as an outpatient or day case, did hospital staff do everything they could to help control your pain?

58. While you were being treated as an outpatient or day case, were you given enough emotional support from hospital staff?

59. In the last 12 months, have you had an outpatients appointment with a cancer doctor at one of the hospitals named in the covering letter?

60. The last time you had an outpatients appointment with a cancer doctor at one of the hospitals named in the covering letter, how long after the stated appointment time did the appointment start?

61. The last time you had an outpatients appointment with a cancer doctor, was the time you spent with them too long, too short or about right?

62. The last time you had an appointment with a cancer doctor, did they have the right documents, such as medical notes, x-rays and test results?

Ongoing care from General Practice

63. As far as you know, was your GP given enough information about your condition and the treatment you had at the hospital?

64. Do you think the GPs and nurses at your general practice did everything they could to support you while you were having cancer treatment?

Overall Care

65. Did the different people treating and caring for you (such as GP, hospital doctors, hospital nurses, specialist nurses, community nurses) work well together to give you the best possible care?

66. How much information were you given about your condition and treatment?

67. Sometimes people with cancer feel they are treated as "a set of cancer symptoms", rather than a whole person. In your NHS care over the last year, did you feel like that?

36. Do you think the doctors treating you knew enough about how to treat your cancer?

37. Did doctors talk in front of you as if you weren't there?

38. If your family or someone else close to you wanted to talk to a doctor, did they have enough opportunity to do so?

39. When you had important questions to ask a ward nurse, how often did you get answers you could understand?

40. Did you have confidence and trust in the ward nurses treating you?

41. Did ward nurses talk in front of you as if you weren't there?

42. In your opinion, were there enough nurses on duty to care for you in hospital?

43. While you were in hospital did you ever think that the doctors or nurses were deliberately not telling you certain things that you wanted to know?

44. While you were in hospital, did it ever happen that one doctor or nurse said one thing about your condition or treatment, and another said something different?

45. Were you given enough privacy when discussing your condition or treatment?

46. Were you given enough privacy when being examined or treated?

47. Do you think the hospital staff did everything they could to help control your pain?

48. Were you treated with respect and dignity by the doctors and nurses and other hospital staff?

Information given to them before leaving hospital

49. Were you given clear written information about what you should or should not do after leaving hospital?

50. Did hospital staff tell you who to contact if you were worried about your condition or treatment after you left hospital?

Home support after being in hospital

51. Did the doctors or nurses give your family or someone close to you all the information they needed to help care for you at home?

52. After leaving hospital, were you given enough care and help from health or social services (For example, district nurses, home helps or physiotherapists)?

Staff doing everything possible to control their pain

53. During the last 12 months, have you had radiotherapy at one of the hospitals named in the covering letter?

54. Did hospital staff do everything possible to control the side effects of radiotherapy?

Acknowledgments

In addition to those mentioned in the foreword and the members of the National Cancer Stakeholder Committee (Annex C), the following people and groups played an important role in creating this strategy through their input and comments which deserves acknowledgement:

At HMC – Dr. Hanadi Rafil El Ayoubi, Dr. Saad Al Kaabi, Gary Needle, Andrew Castle, Rachel Harvey and Jennifer Jones.

At Supreme Council of Health – Samantha Page, Dr. Adenike Frances Ajani, Marc McGonagle, Michael Macdonnell, Steve Beales, Rachel Davies, Jenny Mansell and Peter Howitt.

Members of the Hayat Cancer Support Group, the Ladies of Harley.

Bruce Barraclough and Murray Brennan (The International Advisory Panel). Jane Allberry at the UK Department of Health.

Dr. Robert Merrifield (Document design).

Skriptorium Ltd (Translation and typesetting).



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