DUBAI HEALTH CARE CITY: A World-class Innovation Evolving in a Dynamic Environment.

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Managing Medicine, Harvard Business School, February 27, 2007

Partially funded by the DUBAI INITIATIVE, Belfer Center for Science and International Affairs, John F. Kennedy School of Government, Harvard University

Purpose

Dubai Health Care City (DHCC) is the world’s first business park/cluster, 20 million square feet devoted to health care along the entire value chain from education, clinical care, wellness/CAM, spas, business (pharma/biotech), and health care entrepreneurship. Sheikh Mohammed, ruler of Dubai, intended to set DHCC as a regional center of excellence while improving the quality of health care delivery in Dubai. In addition, the DHCC model serves to be an opportunity to attract a significant amount of Federal Direct Investment into Dubai. Clustering health care has become an attractive model in developed and developing countries alike with India and Australia announcing their own health care cities. From its first days, DHCC has been successful in attracting a number of brand names including Harvard Medical School, Mayo Clinic, Johnson & Johnson, Wyeth, University of Pennsylvania, Boston University, American Academy of Cosmetic Surgery, and many more.

However, DHCC, despite its great potential for innovating health care delivery, is facing a number of challenges. This paper serves to explore the context of the Dubai Health Care City, a discussion of challenges, as well as potential recommendations.

Context

“To become the internationally recognized location of choice for quality healthcare and an integrated centre of excellence for clinical and wellness services, medical education and research” (DHCC vision statement)

Dubai, a tiny city-state, in the Arabian Peninsula has undergone an impressive transformation in the last decade, transitioning from a trade-hub to a regional and global center of financial services, media, IT, energy, tourism, and in the last three years: Health Care.

Dubai can attribute much of its economic success to the freezone/clustering strategy with the creation of JAFZA (Jabel Ali Free Zone Area) nearly 15 years ago, one of the world’s largest import/re-export port. This was quickly followed by the creation of Dubai Internet City, Dubai Media City, and Dubai Industrial City. Freezones serve to attract foreign investment by providing a tax-free
environment, 100% foreign ownership, and government liaison services.

It became clear however that as the region underwent its transformation, the health care sector was still struggling. As one government official puts it, “Dubai has become a leader internationally in a number of industries; however, Dubai’s health care arena was still in the third world.” The Gulf Cooperation Countries (GCC) (Saudi Arabia, Kuwait, Qatar, Bahrain, United Arab Emirates, and Oman) region was undergoing a health care overhaul itself. With Cornell’s entry to Qatar (thanks to a $750 million check from Sheikh Hamdan bin Khalifa Al-Thani) to establish a medical school, the race was on. Soon after, Abu Dhabi recruited John Hopkins and Cleveland Clinic.

In response, Sheikh Mohammed Al Makhtoum, then crown prince, set out to improve the quality of Dubai’s health care services. As everything else in Dubai was “for business”, health care development was to be no exception. The approach was innovative and unique: clustering health care within a freezone. This strategy would improve health care quality, increase FDI, and place Dubai as a hub for medical tourism. Dubai, not to be outdone by its neighbors, successfully attracted Harvard Medical School and Mayo Clinic as its first strategic partners, placing an Academic Medical Center (AMC) at the city’s core.

Creating a health care community, focused geographically in arms length, would provide a number of exciting opportunities in terms of quality, competition, and economic development for the government. As Professor Michael Porter explains:

Clusters affect competition in three broad ways: first, by increasing the productivity of companies based in the area; second, by driving the direction and pace of innovation; and third, by stimulating the formation of new businesses within the cluster. Geographic, cultural, and institutional proximity provides companies with special access, closer relationships, better information, powerful incentives, and other advantages that are difficult to tap from a distance. The more complex, knowledge-based, and dynamic the world economy becomes, the more this is true. Competitive advantage lies increasingly in local things—knowledge, relationships, and motivation—that distant rivals cannot replicate.

In addition, opportunities to invest in health care infrastructure were coming at a very opportune time. The investor profile was changing in Dubai. A majority of investments had been in the real-estate space; however, due to a saturated market, investors were now exploring other opportunities in more

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1 By law, all companies need to be at least 51% owned by a United Arab Emirates national
2 Interview with Shaher Bashir, Oct. 30, 2006 (Dubai, United Arab Emirates)
sophisticated sectors such as IT and Health Care.4

DHCC was an innovative approach to attract world-class operators in Clinical Care, Education, Research, Wellness, and Biotech/pharmaceuticals. Twenty million square feet of desert converted into a clinical, residential, and commercial health care community. Plots of land were sold to investors both in the Middle East and internationally for office buildings, hotels, private outpatient clinics, wellness centers, Complementary and Alternative (CAM) services, spas, hotels, education and research centers, and commercial outlets (banks, restaurants, pharmacies, etc.). At its finish, Dubai Health Care City is estimated to include over 17 independent hospitals and over 350 independent clinical operators. Dr. Martin Berlin, one of the architects of DHCC stated that the city was to provide quality health care in an integrated approach from diagnosis to rehabilitation, exploiting the complete value stream.5

While DHCC sold most projects to investors to develop, a portion remained in the hands of the Dubai Health Care City as a source of sustainable revenues, these included: a 5-star hotel, spa, clinical residences, Al Razi Outpatient office building6, and the Dubai University Hospital7. Yet, soon after this ambitious project with a budget in the billions of dollars was underway, challenges began emerging. The smorgasbord of projects, especially at DHCC’s infancy created an identity crisis. What the city’s mission: a real-estate broker like the other free-zones in Dubai? a quality police for the city’s operators? a medical tourism community promoting spas, hotels, and wellness centers?

Challenges

Dubai Health Care City offered an innovative approach towards health care delivery in a localized community, capitalizing on clustering various opportunities along the health care value chain. This model is now being replicated in emerging economies like India as well as developed countries like Australia.

Yet, Dubai is a fairly new player in the market with the majority of growth over the last decade. And while it does function as a company8 and is flush with cash, it can often be compared to a start-up with associated challenges.

Too many parents

Another challenge for DHCC is the owner(s) of the project, understanding this context is critical in understanding the culture that was created. The government of Dubai is in constant flux. Dubai is a semi-autonomous government who controls its own finances and economic and social policies, yet under

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4 Interview with Mohammed Suleiman, Nov. 3, 2006 (Dubai, United Arab Emirates)
5 Interview with Dr. Martin Berlin, Nov. 2, 2006 (Dubai, United Arab Emirates)
6 Providing 150 clinical operators outpatient office space for lease
7 $3 billion state-of-the-art hospital to serve as the Harvard Medical School Dubai Center affiliate teaching hospital

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8 “Dubai, Inc.”
the discretion of the federal government based in neighboring Abu Dhabi.

Sheikh Mohammed was not yet ruler when he envisioned the creation of a health care innovation in Dubai and mandated Dr. Martin Berlin, then chief strategist of The Executive Office, to develop this vision. This intent was to improve the health care quality of Dubai.

However, once Dubai Health Care City’s strategy was developed, Sheikh Mohammed put the implementation of the DHCC under the newly created Dubai Development and Investment Authority (DDIA) under the directorship of Mr. Saeed Al-Muntafiq. The mandate of DDIA was to be a vehicle for FDI into Dubai, therefore, the goal for DHCC under the leadership of DDIA was to attract investors from surrounding countries into the health care city.

The first goal in Saeed’s strategy was to partner with brand names in the USA in order to increase the attractiveness of investors leading to a sold out Phase I (4 million ft\(^2\)) in less than one year.

Dubai Holding was then created in 2005 also out of The Executive Office, which would serve as the holding company for Dubai’s many macro-projects putting hundred of billions of dollars under one management umbrella. In late 2005, the DDIA was dissolved and replaced by Tatweer which would manage Dubai Holding’s domestic projects including Dubai Health Care City, Dubai Energy, Dubai Mercantile Exchange, Dubailand, and others. Saeed Al-Muntafiq, previously of Director-General of DDIA, was placed as CEO.

Again, DHCC found itself under a new strategic imperative, one of profit making and sustainable revenues. The Dubai Health Care City had undergone in its first two years three transitions with different missions: improving health care quality, attracting foreign direct investment, and finally sustainable revenue streams into the future. During this time as well, managers were coming and going and the leadership of this fledging organization was in constant transition.

In addition to this challenge, DHCC was now part of Tatweer which had aggressive revenue targets across all the daughter companies. In fact, interviews indicated that Tatweer was planning go public with an IPO targeted in five years. Tatweer was announcing new mega-projects frequently. Bawadi was announced in summer 2006 which would lead to 30 hotels (30,000 hotel rooms) in a 2 km strip costing $27 billion. Dubai Health Care City suffered due to these new macro-projects. First, human capital resources were taken away from the organization especially the sales team who was now transferred to new projects while not being replaced at the DHCC. In addition, revenue targets were increased to compensate for the capital expenditure drain from the new projects. The Business Development team of DHCC was now in a race for revenue, looking into projects that were far removed from health care (including waste management and catering) in order to meet unrealistic targets.

**Recommendation:** DHCC now seems nestled in the Tatweer group for the coming years with no restructuring of Dubai Holding in the foreseeable future. With this understood, DHCC management need to establish a set of goals that are of the interest and
sustainability for the city. And these goals should be different then the other cities of Tatweer and Dubai Holding prioritizing governance, high quality health care delivery, attracting competent physicians, and training allied health staff, all of which will not lead to high revenues in the near future. Tatweer literally means “development” in Arabic and the DHCC should therefore stand as a symbol of the ultimate development initiative.

A Start-up’s Delimma

In addition, there was a management problem, Dubai itself was a start-up in a way, still in its infancy (decades) in development and moving at lightening speed. The human capital had not had appropriate time to catch up to the Dubai’s many ambitious projects. DHCC was no exception. The current management often had no previous experience in health care and often came from unrelated industries. How was a leader with little experience expected to manage such a variety of initiatives: from choosing hotel operators, to dealing with health care disputes, to implementing an IT infrastructure for the city, to creating an epidemiological research center, and to ensuring land sale and leasing targets?

In addition, another challenge in any early stage enterprise (but especially for DHCC) is the human capital requirements, especially with the technological innovations the DHCC hopes to establish in Dubai. Which nurses or technicians will have the proper training experience and know-how to effectively operate the DHCC projects including the ambitious, four hundred-bed teaching hospital. In addition, where will the ambitious volume targets come from? The CPQ will not approve medical licenses for any locally trained physician which has caused rifts between the DHCC and local physician communities, the same community that DHCC will depend on for referrals.

Recommendation: DHCC should focus on recruiting and human capital. There should be an initiative to recruit management who have medical backgrounds, especially in operations. In addition, in order to recruit top talent, DHCC needs to be prepared to create attractive employment packages.

A Different Kind of City

Unfortunately, DHCC was fundamentally different than the Dubai Media City, Dubai Internet City, or the Dubai Industrial City in 2 different ways: financial targets and regulations. DHCC was part of the newly formed holding company of Tatweer which was launching and managing Dubai’s multi-billion USD projects. Tatweer’s portfolio included Dubailand and most recently the Tiger Woods Golf Development. Tatweer was developing a strategy which would lead to an IPO in the next five to seven years. In order to accomplish this feat, Tatweer

9 Dubailand is an amusement park freezone that is two times the size of Walt Disney World, 3 billion square feet, and cost $20 billion USD

10 Tiger-Woods Dubai is a 25 million square foot golf community with a golf academy, 60,000 sq. ft. club house, residential villas, and a par 72 world-class golf course, 

would need to establish sustainable revenues. Until now, Tatweer daughter companies including the Dubai Health Care City did not concern themselves with sources of revenue. Once the Dubai Holding investment committees approved a particular project, the money was requested from Dubai Holding who would subsequently transfer the money to the appropriate company. However, with talks of an IPO, the daughter companies were now expected to be self sufficient with ambitious financial targets which were not only intended to establish financially sustainable entities but to also provide additional financing for new projects.

The DHCC which had been concerned with establishing a high quality health care center, was now mandated to reach ambitious revenue targets. Resources that had previously been prioritized in building the DHCC community including an advanced state-of-the-art teaching hospital, enterprises that were historically cost centers for Academic Medical Centers, were now turned towards catering centers, waste management, and leasing companies. And the pressure continued from top Tatweer management. Speed had always been a strategic advantage for Dubai’s economic development; however, unlike the other real estate companies of Tatweer and Dubai Holding, Dubai Health Care City needs time to establish the necessary frameworks to build a health care community and the necessary regulations.

A great deal of regulations would need to be drafted in terms of quality, clinical planning, medical licensure, among many others. In essence, DHCC was creating a health system from the ground up, which would require a different time table than the other Dubai clusters. However, senior management at the senior Tatweer and DDIA level placed very aggressive revenue targets on the DHCC business development team.

In order to ensure quality improvement, the DHCC created the Center for Planning and Quality (CPQ) that served as the licensing and governing body of the city. Any physician who intended to practice within the city would be required to apply for a license (which often required US or European trained and boarded physicians). In addition, any clinical or non-clinical entity that wanted to join the city would require CPQ approval in order to ensure that there was not a redundancy in services provided or over-representation.

The CPQ was also responsible for implementing two ambitious projects: an IT infrastructure linking the city’s hundreds of clinical operators in order to maintain quality, improve operational efficiency, and collect patient information. This project had its unique challenges including how did DHCC intend to mandate patient information via an IT-based system when each clinical operator would operate their own unique IT infrastructure? In addition, operators from different countries each come with unique patient confidentiality rules which may inhibit full participation in CPQ requirements. Finally, who would finance the necessary equipment that the operators would require to upload the necessary data to the central database.

11 Author’s interview with Saeed Al Muntafiq (CEO, Tatweer), November 1, 2006.
The second project included creating an epidemiological research center that would analyze the data collected from the IT system and publish papers on disease trends and treatment options for the United Arab Emirates. This would serve as a form of revenue for the DHCC, selling the reports to pharmaceuticals, government, and research centers. However, DHCC itself did not see patients nor did they have control over the patient data, rather the patients belonged to individual providers. However, the DHCC did not intend to share revenue streams from these reports and studies with the patient’s providers.

Finally, the contracts that operators were signing to be part of the DHCC did not fully layout the expected requirements. The wording was vague in the contracts and only stated that operators would be required to follow CPQ guidelines; however, no details were provided.

Recommendation: Academic Medical Centers (AMC) often do not produce attractive IRRs for investors while most attributes that make a top AMC tend to be cost centers for the organization. The DHCC AMC is no exception. In fact, DHCC’s financials are more strained than the other cities because of the high capital expenditure needed to create a to AMC from ground up. For this reason, the AMC needs to be financially distinct from other DHCC activities (i.e.-Hotel, Residences, spas) which are more profitable. The AMC should also explore options of UAE national government subsidization as one goal of the AMC is to provide quality care for nationals, so they will no longer need to be subsidized to travel abroad to Europe or the USA.

Unwelcome Neighbors

Another challenge that the Dubai Health Care City faced was the complicated relationships with the health care systems of the region. Dubai is part of a complex, highly political health care system. Currently there are three governing bodies in the UAE and Dubai: the Dubai Department of Health and Medical Services (DOHMS), the Ministry of Health (MoH), and the UAE General Authority of Health Services. Each governing agency licenses physicians independently according to their own medical requirements, in addition, each agency manage their own hospitals.

In Dubai, DOHMS is the most significant regulator, managing most of the Dubai’s government hospitals and is led by Sheikh Hamdan bin Rashid Al Maktoum, brother of ruler Sheikh Mohammed bin Rashid Al Maktoum. Sheikh Mohammed was appointed heir apparent despite being younger than Sheikh Hamdan. During this time, Sheikh Mohammed was in charge of establishing the various Dubai business park clusters including the Dubai Internet City, Dubai Media City, and eventually Dubai Health Care City. The DHCC stood in direct competition to the established DOHMS hospital. In addition, CPQ were refusing to license UAE trained physicians, the very same physicians that were practicing in Sheikh Hamdan’s hospitals. There were political tensions between the brothers and thus between each of their respective health care projects. As a consequence, to date, no communication has been

12 Sheikh Mohammed is the third oldest son of Sheikh Rashid and became ruler on Jan. 4, 2006.
exchanged between DHCC and DOHMS.

**Recommendation:** The DHCC should begin dialogue with DOHMS as soon as possible as their buy-in will be critical, especially in terms of referral from DOHMS physicians and hospitals.

**Conclusion**

The Dubai Health Care City is a true innovation for health care delivery, taking advantage of the entire health care value chain from education, diagnosis, treatment, and rehabilitation as well as business and leisure. The DHCC is Michael Porter’s clustering come to life. However, just like many other young enterprises, DHCC faces a number of challenges. While not an exhaustive list, this paper addressed a number of strategic points that DHCC should tackle in the near future. In addition, for future entrants and operators who intend to be part of the DHCC (and the list is growing at an astonishing rate), understanding not only the opportunities but challenges that DHCC faces will serve useful in strategies to acquire an address in the health care city.
**Regional Healthcare Market**

**Healthcare spend in the region by segment in 2001**

- Total spend: $76.6bn
- Relevant spend: $53.8bn
- Accessible spend: $3.6bn

- GCC spend: $15.5bn
- Region, excl GCC, outside: $3.6bn
- Region, excl GCC, abroad: $11.3bn

**Notes on graph**
- Total spend is based on World Health Organization 2001 figures. The breakdown is based on EY and GRMC research from October 2003.
- Relevant spend to DHCC is 70% of total spend (based on the breakdown of healthcare costs in the US).
- Accessible spend depends on the distance of travel, the socio-economic indicators and availability of healthcare services in the country.

**Estimated spend in the region & DHCC potential market share in 2008**

<table>
<thead>
<tr>
<th>Region</th>
<th>Healthcare Spend 2008</th>
<th>Adjusted for Relevance</th>
<th>Adjusted for Accessibility</th>
<th>Adjusted for Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>UAE</td>
<td>3.51</td>
<td>50%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>GCC</td>
<td>16.38</td>
<td>50%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>Region, excl GCC, outside</td>
<td>115.24</td>
<td>70%</td>
<td>15.5%</td>
<td>5.2%</td>
</tr>
<tr>
<td>GCC</td>
<td>68.5bn</td>
<td>100%</td>
<td>2.17%</td>
<td>0.49%</td>
</tr>
<tr>
<td>Region, excl GCC, abroad</td>
<td>97.6bn</td>
<td>100%</td>
<td>2.17%</td>
<td>0.49%</td>
</tr>
<tr>
<td>Total</td>
<td>137.29</td>
<td>96.75%</td>
<td>19.10%</td>
<td>2.01%</td>
</tr>
</tbody>
</table>

Source: WHO report, 2001; internal analysis

**Potential market share summary**
- Total regional healthcare spend in 2008 forecasted $137.29bn
- The total potential healthcare market available for DHCC in 2008 is $2.01bn

**Figure 1** (source: DHCC internal presentation)

**Overall Concept**

**Figure 2** (source: DHCC internal presentation)
Mission

DHCC has five major objectives:

Ensure that quality health care is accessible to the people of the UAE, the Gulf States, and the surrounding region.

Develop leadership in medical education

Develop a system to support research and development in the life sciences and health care.

Create an environment that supports both high-quality health care delivery and the well-being of families.

To establish an economically viable and sustainable integrated health community based on a comprehensive partnership of the private and public sector.

Figure 3 (source: DHCC internal presentation)

Value Proposition Model

Figure 4 (source: DHCC internal presentation)
CPQ is the Healthcare Regulatory Authority

CME to be moved to Harvard Medical School Dubai Center (HMSDC) after opening due to its medical education role.

Figure 5 (source: DHCC internal presentation)

Phase 2 Master Plan

- Phase II complements the healthcare service offerings of Phase 1.
- The two phases together aim to create a full healthcare continuum where patients can receive services from birth to death for most of their healthcare needs.

Figure 6 (source: DHCC internal presentation)
Figure 7 (source: DHCC internal presentation)