Saudi Journal of Health Systems Research

Review Article

Saudi J Health Syst Res
DOI: 10.1159/000535623

Received: August 17, 2023
Accepted: November 27, 2023
Published online: January 4, 2024

An Overview of the Medical Tourism in Qatar: Where Do We Stand?

Asrar AlBaz

International Medical Affairs Office, Hamad Medical Corporation, Doha, Qatar

Keywords

Global health · Health policy · Medical tourism

Abstract

Background: Since the early 2000s, the Qatari Government has been proactively trying to provide world-class healthcare for its population free at the point of use. The Qatar National Vision 2030 advocates developing a medical tourism industry, which would continue to provide world-class healthcare for its citizens and residents, provide high status employment, and expand its sustainable economic base. ***Summary:*** Currently, the outbound medical tourism appears to be higher than the inbound tourism in Qatar, but this trend may be reversed in the future given the publicity generated by the recent FIFA World Cup and the large number of people who visited and learned about Qatar as a safe and developed destination in the Middle East. In this review, an in-depth understanding of the complexity of medical tourism per se and, in particular, the complexity of medical tourism as a distinct niche market within the Qatari context is described. ***Key Message:*** Considering the tangible and intangible infrastructure, Qatar boasts a very high potential to place itself among the top medical tourism destinations in the region.

Introduction

Medical tourism is a growing niche market within the tourism sector which has expanded significantly since the start of the 21st century [1]. Medical tourism can generally be described as patients traveling far away from the area where they live and even overseas with the aim of receiving critical or optional medical treatment [2, 3]. The expression – medical tourism – has evolved from the tradition of citizens from developed countries traveling to developing parts of the world to buy a range of cheaper, potentially better medical services than those they can obtain in their home country.

A study by Radzi showed that medical tourism is frequently classified under three main categories from a country's perspective [4]. The first category is inbound, which means foreign individuals visiting or coming into a particular country seeking medical help based on the origin of travel. The second one is outbound, which refers to natives of a country traveling to a different country outside their environment seeking medical help. The third category is known as intra-bound, which represents a developed form of domestic tourism whereby natives visit different regions or cities of their country. Connell identified financial cost of care provided, value of treatment, application of medical technology, faster treatment, and confidentiality of the personal data of potential patients as key factors that

karger@karger.com
www.karger.com/sjh

Correspondence to:
Asrar AlBaz, aalbaz@hamad.qa

affect the nature of medical tourism [3]. However, Hodges noted that although medical tourism offers a number of advantages for the travelers, there are hazards involved with seeking medical help overseas [5]. These include the varying standards of hospitals and physicians and the follow-up process after completing the medical process, as patients tend to leave soon after treatment to return to their home country. Hall reports that many countries are currently creating pragmatic arrangements to service medical tourism [2]. Haseltine concurred stating that low-cost transportation, advanced incomes, information and technology improvements, and high-quality services all support the concept of travel to faraway countries for medical treatments [6].

On the other hand, various factors could be associated with patients' choice of destination for medical tourism. Personal traits including status of health insurance, income level, and age affect the decision of the patient to choose health services and destinations [7]. Other traits such as gender, income, education, insurance, and perceived risks have been noted as influencers of the relationship between loyalty and satisfaction of the customers based on their influence of customer perceptions of a service or product [8]. For example, a study by Klein et al. [7] contended that a tourist's income level is a crucial determinant of his/her choice of destination. Often, patients in the higher income bracket seek high-quality medical service and are keen on being offered the best quality care and service. Jun and Oh [9] found that tourists in the low-income bracket overlook service level but are keener on the cost of medical tourism. As for perceived risks, a study by Khan et al. [10] identified five major perceived risks in international medical travel such as risks concerning health at medical tourism destination, long flight risks, risks of medico-legal nature, recuperation and preoperative risks, and other risks related to the destination such as crime, racism, crime, and sexual assaults.

Healthcare Ecosystem in Qatar

Qatar is a fast-developing country and has one of the most stable and flourishing of the global economies. With Qatar's political stability and saving rate being higher than that of other countries within the Middle East, it has adopted one of the greatest sustainable development plans in the Middle East region [11]. Since 2003, Qatar started to focus on national savings in order to achieve sustainable development. Consequently, investments that ensure a high level of economic change, enlarge integration capability, and support private investments are widely encouraged by the Government of Qatar to assist in progressing the long-term aims of its economy [12].

The two Qatari national health strategies for 2011–2016 and 2016–2022 aimed to establish the pillars of the future of health in the State of Qatar [13, 14]. These plans required the development of a competitive and diversified economy, which can ensure a high living standard for all people in Qatar through the future [15]. The plans focused on maintaining a prosperous healthcare network, building a caring society that is founded on high ethical standards, and the ability to perform an important role in worldwide partnerships for development.

A study by Ram [16] stated that Qatar was the top developing healthcare market in the Gulf Cooperation Council (GCC) from 2008 to 2013 with a high compound annual growth rate (CAGR) of nearly 23% annually during that period. According to the International Business Publication in 2012, Qatari hospitals provided world-class treatment at 10–20% less than the cost of American hospitals. As a result, a rising number of patients around the world are making Qatar their preferred medical destination [17].

A landmark achievement for the medical care in Qatar was the establishment of the Extra Corporeal Membrane Oxygenation (ECMO) program in 2014 [18]. This was a strategic investment by the senior leadership of the health sector that proved successful by dropping the mortality rate for severe respiratory failure patients significantly, thereby increasing chances of patient survival [19]. In addition to that, robotic surgery in Qatar has developed over the past few years with more doctors meeting the skills criteria to carry out robotic surgery besides performing more conventional surgery using the most up-to-date technologies [20]. As a result, more people were encouraged to come and visit Qatar in pursuit of high-quality medical services [21]. Smith and Puczko [22] noted that Qatar is listed as an elective medical tourism destination and is identified as a center for cosmetic surgery for many travelers including obesity-related operations. With these huge investments into world-class healthcare facilities and medical services that the Qatari Government has made for its people, it is now considering how to best expand its nascent medical tourism industry as part of the government's plans to develop new, sustainable industries.

Most Qatari medical centers and hospitals are accredited by internationally recognized accrediting agencies. This is part of Qatar's rules that hospitals must be accredited by both the Qatari Ministry of Public Health and at least one international accreditation body. The Joint Commission International (JCI) is the main accreditation agency with the authority to accredit medical centers outside the USA [23]. The JCI has given accreditation to the Hamad Medical Corporation (HMC) in Qatar, which includes all HMC hospitals and other private hospitals in Qatar [24].

In developing countries, medical tourism is rising as a profitable sector of the economy. A report published by Market Research Future about the Global Medical Tourism Market showed an impressive CAGR of 21.4 percent for the medical tourism industry between 2018 and 2023 [25]. The forecast indicated that the Global Medical Tourism Market would reach USD 226,762.70 million by the end of 2023. The report also showed that Asia Pacific accounted for a 43.7 percent global market share. Investment in this business field is a way of generating income, getting better services, creating foreign exchange, generating an extra stability of trade, and improving tourism in general [26].

Although the medical tourism industry has been described as lacking "authoritative data on the number and flow of medical tourists between countries" [27], the International Healthcare Research Center estimated that the global medical tourist and patient flow was about 11 million individuals per year [28]. According to Hall, many countries have taken up the unique business opportunities that medical tourism offers [2]. Countries such as the UAE, India, and Thailand are considered to be new centers in comparison to the UK and USA which both are old centers in welcoming medical tourism [29]. An example of the rapidly developing medical tourism sector is India, where in 2015 it was valued at about USD 3 billion with a very optimistic forecast [30].

Since the beginning of the 21st century, Qatar started transforming into an international center for medical tourism with a broad variety of healthcare centers providing a range of medical services [22]. Although Qatar is a developing country, Cohen [31] and Smith and Puczko [22] argue that it is protected against many of the negative factors which most of the developing countries are suffering from. Such factors include inefficient power supply, lack of water, and infrastructure limitations, all of which impact upon the potential for creating a positive image favorable for the development of medical tourism. This is because these factors influence both the quality of services offered and customers' satisfaction. However, there are some other factors which might impact the performance of the medical tourism sector in Qatar. Some of these challenges identified back in 2011 include lack of coordination, concerns about possible complaints related to bad results of medical care, lack of strong and efficient human resource management, lack of staff training, complications within the customer services department, and lack of effective marketing schemes [32]. In a competitive market such as medical tourism, marketing is critical to the development of the sector. However, Qatar has come a long way since then with drastic reforms to the labor laws [33] and overall progress in the healthcare sector [34]. For example, primary healthcare is provided by health centers governed by Primary Health Care Corporation (PHCC). These centers have been accredited by Accreditation Canada International (ACI) and focus on providing high-quality services to all patients [35]. The number of centers increased from 22 centers in 2012 to 31 centers in 2023, providing care to more than 1.7 million registered patients covering the whole of Qatar [36]. The tertiary care delivered through HMC has also seen an exponential rise in the infrastructure and level of services provided from eight hospitals in 2015 [37] to fourteen hospitals in 2021 [38].

The Qatar Health Facilities Master Plan

The Qatar Health Facilities Master Plan (QHFMP) 2013–2033 is a 20-year road map, directing the improvement in the healthcare division in Qatar that illustrates how Qatar might build and sustain a world-class health structure via pioneering buildings and services and through the intelligent deployment of its resources [13]. While this plan might appear to be focused on construction and equipment, it is intended to improve the health of the people because designing a clear and efficient plan to develop the infrastructure is necessary to support a more effective healthcare system. Qatar's investment in the development of the healthcare sector is expected to contribute to the advancement of the healthcare market in the GCC. According to a report, Qatar's arrangement to enhance infrastructure expenditure reflected similar proposals in neighboring countries, mainly the UAE and Saudi Arabia [39]. These countries are central to the rapid development of globally competitive healthcare facilities in the Gulf Region especially in the UAE after the construction of their Health Care City, which has attracted people seeking medical interventions from different areas in the world [40]. Similarly, Qatar could attract medical tourists through partnerships with international healthcare associations in starting innovative services in Qatar, which could further catalyze the development of medical tourism in the country.

Hamad Medical Corporation

Hamad Medical Corporation (HMC) is the leading public tertiary healthcare provider for Qatar, established in Qatar since 1979 [41]. To meet the healthcare needs of Qatar's rising population, HMC has evolved into a flourishing and integrated holistic pre-hospital and tertiary healthcare provider which is able to provide effective diagnosis and treatment of diseases, many of which used to be treated in oversees medical centers, as well as medical education and research [24]. Currently, the health system in Qatar is considered to be one of the best within the Middle East according to the 2018 Legatum Prosperity Index [42].

HMC operates 13 hospitals and centers in addition to running the national ambulance service, a residential healthcare service, trauma system, continuing care, and an international medical affairs office [24]. Healthcare services are available to everyone residing in Qatar. While citizens can access all standard care in public hospitals such as HMC free of charge, they are required to pay 10 percent of the cost of treatment and their insurance pays the rest when they opt for private medical facilities [37]. For anyone who is permitted to reside in Qatar legally and have a valid health card, they pay between 10 and 20 percent of the total cost while receiving treatment at HMC. Any resident with a valid long-term visa but with no valid health card must pay for healthcare services in full [43].

As a part of its mission to provide quality care to all patients, HMC invites visiting consultants from multi-specialties throughout the year to provide consultancy and/or perform surgical procedures locally [44]. These visiting consultants are internationally renowned experts in their medical or surgical specialties and usually patients from the Gulf or Middle East travel longer distances to seek treatment by them. Hence by inviting them to HMC, Qatar also indirectly attracts regional patients and families to opt traveling to Qatar for accessing treatment, making it more convenient and reliable. The names of these international experts are usually announced ahead to the public through HMCs website and local media with guidance on how to book an appointment. Although the complete figures are not compiled in an official report, a quick Google search of previous announcements in the local media provides an estimated figure of around 50–60 experts invited annually to Qatar.

Qatar and the Growth in Healthcare Sector

According to the most recent data from the World Bank Group [45], Qatar had the highest per capita spend in healthcare in the Middle East at US USD1,807.15 and it was the fastest rising healthcare market in the GCC within the 6-year period 2013–2018. The 2012 GCC Health Care Industry Report identified that Qatar had one of the maximum growth rates of healthcare expenditures because of the development of innovative medical technologies and improved healthcare services [46]. The report also mentioned that healthcare sector employees in Qatar are paid the highest wages in the GCC region, which aids in staff recruitment and retention. This is particularly important in attracting those with a very high level of expertise to work in Qatar since the World Health Organization (WHO) predicted that the healthcare labor force scarcity will increase to 12.9 million employees worldwide by 2035 [47].

The Qatari State of Health and Regional Medical Tourism

The Qatar Foundation [48] works in cooperation with the Ministry of Public Health to help identify how incidences of preventable damage to patients could be decreased [49]. The 2016 GCC Health Care Industry Report [50] anticipated an increase in the healthcare market of each Gulf Cooperation Council country between 11 and 13 percent by 2020. The next report that was issued in 2020 highlighted the steady growth of the GCC medical tourism market within the healthcare industry since 2018 expecting to reach a value of USD 28 billion within less than 5 years [51].

Reviews of Qatar's medical tourism largely portray it as a source or origin of medical tourists more than a destination for medical tourism suggesting a lack of attention dedicated towards developing medical tourism. For example, neither medical nor health tourism is mentioned in key government tourism and health ministry documents nor are the terms health and medical captured anywhere in the annual tourism reports. Despite the lack of explicit attention that has been accorded to medical tourism, the Medical Tourism Index (MTI) ranked Qatar 30th globally in terms of appeal as a medical tourism destination with an overall score of 60.07, while Canada topped the list with an overall score of 76.62 [52]. Within the Arab nations, Qatar was ranked 4th out of the 13 countries considered.

The MTI computes the scores based on the three dimensions of destination environment, medical tourism industry, and quality of facilities and services. The environmental dimension was high, and this was attributed to Qatar's reputation, overall economic conditions, and political stability, thereby aiding in balancing out the lower scores that were recorded for the country with respect to culture similarity. With respect to medical tourism industry, Qatar was ranked sixth with notable efforts in continuous progress in building the country into a reputable, tourism-friendly country with proper infrastructure and numerous attractions. However, the absence of a proper cost structure was also noted and that developing one would enable Qatar to compete for patients better against rival medical tourist destinations. As for MTI's third dimension about facility and service quality among Arabic countries, Qatar ranked third and this was mainly attributed to international accreditations, medical staff recognition, and superior overall experience for patients.

FIFA World Cup 2022 and Medical Tourism in Qatar

Qatar had recently hosted a successful international sporting event, the FIFA World Cup 2022. It is considered the largest sporting event in the world that draws global attention and huge inflow of football fans [53]. To prepare for this event, Qatar maintained a steady rate of around 1–2% of the General Government Expenditure (GGE) for healthcare development [54]. This included providing medical professionals, building and commissioning new hospitals to increase the total number of available facilities, and pre-hospital health services to provide state-of-the-art facilities to patients inside Qatar and the expected fans for the FIFA event [55]. The event also drew extensive media coverage about the nation on both mainstream media and other major social media platforms [56, 57]. Qatari healthcare sector provided medical services to more than 61,000 fans during the tournament and the ambulance service responded to around 4,000 related calls [58]. This was in addition to the immaculate planning that was focused on pre-hospital services that would cover most of the expected medical events that do not require medical attention including mobile clinics around the stadiums and fan zone, mobile paramedics, and modern equipment to ensure easy and early access to all individuals [59]. Eventually, the event was concluded successfully without any major adverse medical events, thanks to the cumulative efforts of the healthcare sector [60]. These remarkable achievements in healthcare, in addition to the fan experience during the tournament, create a positive image about Qatar's ability to be a potential medical tourism destination. According to a recent evaluation study, five Qatari hospitals were among the top 250 academic medical centers in the world, which is the highest among the GCC states [61]. This, along with the economic boost and cultural publicity created by the FIFA World Cup, leverages Qatar as the first destination of choice for patients seeking medical treatment regionally and internationally.

Conclusion

The discussion above sheds light on Qatar's vision in its pursuit of sustainable development among all sectors. It shows that Qatar is a politically stable nation with impressive growth in its economy. The excellent HDI scores show that Qatar has been able to develop its human capital and invest in human capital. This, in the context of this topic, means that Qatar has been able to dedicate adequate resources for its residents and could be able to extend the same to the development of medical tourism. The economic prowess of Qatar means that the living standards are fit for medical tourists from different countries including developed nations and continents such as Europe and North America. Thus, Qatar would be able to compete with other renowned medical tourism destinations around the world in terms of investments in healthcare and supportive packages for medical tourism such as good hotels and infrastructure. Although Qatar has made significant developments politically, environmentally, economically, and in terms of tourism and healthcare sectors, there are evident gaps into addressing and growing medical tourism in line with the Qatar National Vision (QNV) such as lack of a clear regulatory and implementation framework for the development of medical tourism, infrastructural capacity to support medical tourism, and proper marketing to ensure competitiveness in the global market. The lack of clarity about the kind of medical tourism that Qatar should pursue in the six integral elements of National Health Strategy (NHS) and the QNV would also limit the development of medical tourism in Qatar. Despite this, evidence from external medical tourism rankings shows that Qatar has the potential to become a competitive medical tourism destination both globally and regionally among Arabic countries. One of the most outstanding challenges mentioned in such rankings is the absence of a proper cost structure to cater especially for medical tourists and a comprehensive understanding of the full scope of medical tourism. Overall, though, Qatar has the potential to grow its reputation as a tourist destination and a world-class provider of quality healthcare services.

Conflict of Interest Statement

The author has no conflicts of interest to declare.

Funding Sources

No funding was received for conducting this review.

Author Contributions

This work was conceptualized and completed solely by the author of this article.

References

1 Goyal A, editor. Innovations in services marketing and management: strategies for emerging economies. Hershey (PA): Business Science Reference; 2013.
2 Hall CM, editor. Medical tourism: the ethics, regulation, and marketing of health mobility. London, England: Routledge; 2017.
3 Connell J. In: Connell J, editor. Medical tourism. Wallingford, England: CABI Publishing; 2011.
4 Radzi SM, Bakhtiar MFS, Mohi Z, Zahari MSM, Sumarjan N, Chik CT, et al, editors. Theory and practice in hospitality and tourism research. London, England: CRC Press; 2014.
5 Hodges JR, Kimball AM, Turner L, editors. Risks and challenges in medical tourism: understanding the global market for health services. Westport (CT): Praeger; 2012.
6 Haseltine WA. Affordable excellence: the Singapore healthcare story. Washington, D.C. (DC): Brookings Institution; 2013.
7 Klein HJ, Simic D, Fuchs N, Schweizer R, Mehra T, Giovanoli P, et al. Complications after cosmetic surgery tourism. Aesthet Surg J. 2017;37(4):474–82.
8 Homburg C, Giering A. Personal characteristics as moderators of the relationship between customer satisfaction and loyalty?an empirical analysis. Psychol Mark. 2001;18(1):43–66.
9 Jun J, Oh KM. Framing risks and benefits of medical tourism: a content analysis of medical tourism coverage in Korean American community newspapers. J Health Commun. 2015;20(6):720–7.
10 Khan MJ, Chelliah S, Haron MS, Ahmed S. Push factors, risks, and types of visit intentions of international medical travelers: a conceptual model. Int J Healthc Manag. 2017;10(2):115–21.
11 Al Mallakh R. Qatar: development of an oil economy. London, England: Routledge; 2018.
12 Al-Khouri R, Dhade A. The role of savings in reducing the effect of oil price volatility for sustainable economic growth in oil based economies: the case of GCC countries. Int J Econ Finance. 2014;6(4).
13 Qatar national health strategy 2011–2016. World Health Organization; 2011. (cited 2022 Nov 2). Available from: https://extranet.who.int/nutrition/gina/sites/default/filesstore/QAT%202011%20National%20Health%20Strategy.pdf.
14 Ministry of public health: national health strategy 2018–2022. Gov.qa. (cited 2022 Nov 6). Available from: https://www.moph.gov.qa/english/strategies/National-Health-Strategy-2018-2022/Pages/default.aspx.
15 International Monetary Fund. Middle East and central Asia dept. Qatar: 2012 article IV consultation. Washington, D.C. (DC): International Monetary Fund; 2013.
16 Ram P. Management of healthcare in the Gulf Cooperation Council (GCC) countries with special reference to Saudi Arabia. Int J Acad Res Bus Soc Sci. 2014;4(12).
17 Inc Ibp. Qatar country study guide volume 1 strategic information and developments. IBP; 2016.
18 Hassan IF, Al Shaikh L. Qatar ECMO program: past, present, and future. Qatar Med J. 2017;2017(1):10.
19 Hassan IMF, Al Shaikh L. Building Qatar severe respiratory failure ECMO program. Qatar Med J. 2017;2017(1):2.
20 Wiseman AW, Alromi NH, Alshumrani SA, editors. Education for a knowledge society in Arabian gulf countries. Bingley, England: Emerald Publishing; 2014.
21 Wittek A, Nielsen PMF, Miller K, editors. Computational biomechanics for medicine: models, algorithms and implementation. 2011th ed. New York (NY): Springer; 2013.
22 Smith M, Puczko L. Health, tourism and hospitality: spas, wellness and medical travel. 2nd ed. London, England: Routledge; 2014.
23 About JCI. Jointcommissioninternational.org. (cited 2022 Nov 6). Available from: https://www.jointcommissioninternational.org/about-jci/.
24 Home. Hamad.qa. (cited 2022 Nov 6). Available from: https://www.hamad.qa/EN/About-Us/Our-Accreditations/Pages/default.aspx.
25 Market Research Future. Medical tourism market to show a massive growth with 21.4% CAGR till 2023 by worldwide top players Schoen-kliniken, gleneagles global hospitals group, Fortis healthcare. etc. Medgadget.com. (cited 2022 Nov 6). Available from: https://www.medgadget.com/2019/03/medical-tourism-market-to-show-a-massive-growth-with-21-4-cagr-till-2023-by-worldwide-top-players.html.
26 Botterill D, Pennings G, Mainil T, editors. Medical tourism and transnational health care. Basingstoke, England: Palgrave Macmillan; 2013.
27 Mathijsen A. Home, sweet home? Understanding diasporic medical tourism behaviour. Exploratory research of Polish immigrants in Belgium. Tour Manag. 2019;72:373–85.
28 International healthcare research center. Healthcareresearchcenter.org. (cited 2022 Nov 6). Available from: https://www.healthcareresearchcenter.org/.
29 Stolley KS, Watson S. Medical tourism: a reference handbook. Santa Barbara (CA): ABC-CLIO; 2012.
30 IMTJ. IMTJ analysis of 2017 India medical tourist data. laingbuisson; 2018. (cited 2022 Nov 4). Available from: https://www.laingbuissonnews.com/imtj/news-imtj/imtj-analysis-of-2017-india-medical-tourist-data/.
31 Cohen IG. Patients with passports: medical tourism, law, and ethics. New York (NY): Oxford University Press; 2015.
32 Todd MK. Handbook of medical tourism program development: developing globally integrated health systems. New York (NY): Productivity Press; 2011.
33 Alkhayareen A. Evaluation of the international labor organization project in Qatar. QScience Connect. 2023;2023(1).
34 Healthcare Sector In Qatar: Current state assessment series. Qatar Development Bank; 2021. (cited 2023 Jan 11). Available from: https://qdb.qa/en/Documents/Healthcare-Sector-in-Qatar-Current-State-Assessment-Series.pdf.
35 Ditta MA, Ahmed B. The development of a primary health care system in the state of Qatar. World Fam Med J. 2019;17(9):12–5.
36 Publishing and reports. Primary health care corporation. (cited 2023 Apr 20). Available from: https://www.phcc.gov.qa/AboutUs/Reports.
37 Goodman A. The development of the Qatar Healthcare System: a review of the literature. Int J Clin Med. 2015;6(3):177–85.

38 Naemi HA, Izuka K, Edquibal C, Al-Korbi N, Kuwari NA, Homaid MA. Quantitative assessment of medical waste management in Hamad medical corporation: Qatar. Occup Dis Environ Med. 2021;9(3):112–26.
39 Schwab K. The global competitiveness report 2014–2015. World Economic Forum; 2014. (cited 2022 Oct 31). Available from: https://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf.
40 Khan S, Alam MS. Kingdom of Saudi Arabia: a potential destination for medical tourism. J Taibah Univ Med Sci. 2014;9(4):257–62.
41 Gotting FJ. History of medicine in Qatar. University of Glasgow; 1995. (cited 2023 Jan 11). Available from: https://eleanor.lib.gla.ac.uk/record=b1541614.
42 Brien S. 2018 Legatum prosperity Index. Legatum Institute; 2018. (cited 2022 Oct 29). Available from: https://li.com/wp-content/uploads/2018/11/2018_Prosperity_Index.pdf.
43 Kaabi SAL, Varughese B, Singh R. Public and private healthcare system in terms of both quality and cost: a Review. J Clin Diagn Res. 2022;16(8):8.
44 Visiting Consultants. Hamad Medical Corporation. (cited 2023 Jan 10). Available from: https://www.hamad.qa/EN/Patient-Information/Visiting-Consultants/Pages/default.aspx.
45 World Resources Institute. CO2 emissions (metric tons per capita). World Bank; 2020. (cited 2022 Oct 29). Available from: https://data.worldbank.org/indicator/EN.ATM.CO2E.PC.
46 GCC healthcare industry report. Alpen Capital; 2011. (cited 2022 Oct 1). Available from: https://itac.ca/wp-content/uploads/2013/03/Alpen-Capitals-GCC-Healthcare-report-2011.pdf.
47 Abujaber A, Katsioloudes M. Impact of HR retention strategies in healthcare: the case of Qatar. Avicenna. 2015;2015(1):6.
48 About Qatar Foundation. (cited 2022 Jan 11). Available from: https://www.qf.org.qa/about.
49 Qatar Healthcare Facility Master Plan (QHFMP). Ministry of public health; 2018. (cited 2022 Nov 1). Available from: https://www.moph.gov.qa/english/strategies/Supporting-Strategies-and-Frameworks/Healthcare-Facility-Master-Plan/Pages/default.aspx.
50 GCC healthcare industry report 2016. Alpen Capital; 2016. (cited 2022 Nov 1). Available from: https://alpencapital.com/research/2016/GCC_Healthcare_Industry_Report_February_2016.pdf.
51 GCC healthcare industry report 2020. Alpen Capital; 2020. (cited 2022 Nov 1). Available from: https://alpencapital.com/research/2020/GCC-Healthcare-Report-November-2020.pdf.
52 2020–2021 Medical tourism index. 2020. (cited 2022 Nov 1). Available from: https://www.medicaltourism.com/destinations/qatar.
53 Ranking the biggest events in sports. Bleacher Report; 2019 (cited 2023 Feb 27). Available from: https://bleacherreport.com/articles/1247928-ranking-the-biggest-events-in-sports.
54 Global Health Expenditure Database. World Health Organization. (cited 2023 Feb 27). Available from: https://apps.who.int/nha/database/Select/Indicators/en.
55 Demir S, Tunçbilek Z, Alinier G. Prehospital emergency health services in Qatar. J Paramedic Pract. 2022;14(11):456–62.
56 One month on: 5 billion engaged with the FIFA World Cup Qatar 2022™ (Internet). FIFA. (cited 2023 Feb 27). Available from: https://www.fifa.com/tournaments/mens/worldcup/qatar2022/news/one-month-on-5-billion-engaged-with-the-fifa-world-cup-qatar-2022-tm.
57 Media coverage of World Cup Qatar 2022 "largest in history" (Internet). Doha: Gulf Times. (cited 2023 Feb 27). Available from: https://www.gulf-times.com/article/650806/qatar/media-coverage-of-world-cup-qatar-2022-largest-in-history.
58 51,809 fans received medical care during Qatar 2022 (Internet). Peninsula. (cited 2023 Feb 27). Available from: https://thepeninsulaqatar.com/article/12/02/2023/51809-fans-received-medical-care-during-qatar-2022.
59 Alinier G. Through the medical lens: FIFA World Cup Qatar 2022. Int Paramedic Pr. 2023;13(1):9–10.
60 Rizoli S, Thani HA. 2023 and the post-FIFA world cup era. J Emerg Med Trauma Acute Care. 2023;2023(1):2023.
61 Five Qatar hospitals have been ranked among the world's top 250 academic medical centers (Internet). Ministry of Public Health. (cited 2023 Feb 27). Available from: https://www.moph.gov.qa/english/mediacenter/News/Pages/NewsDetails.aspx?ItemId=646.