A Review on the Functionality of Medical Tourism Websites

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Abstract— The current interest in Health Tourism (HT) trend to focus on foreign patients or individuals travelling internationally for medical reasons or to enhance their state of well-being, typically paid out-of pocket. Specifically, Joint Commission International (JCI) and British Standards Institute (BSI) accreditation health care organisation in Brazil, Costa Rica, Hungary, India, Malaysia, Singapore, Thailand and Mexico started to perform high quality and safety health care worldwide in order to achieve a higher standard of patient care. In 2013, Malaysia was recognised as top five destination in the world for health tourism and Prince Court Medical Centre (PCMC) in Kuala Lumpur was selected as the top accredited hospital which provides medical tourists with outstanding care beyond standard clinical protocols. Reports estimated that Malaysia is welcoming 583,000 medical tourists and generated more than RM 600 million revenue by the end of 2012. Definitely, these positive statistics indicate a very promising and a bright future for Malaysia Medical Tourism Industry (MTI). Despite there is an increasing number of Medical Websites (*MTwebs*) used to introduce and promote health services to prospective patients, question still concern about the quality of *MTwebs* to deliver valuable health information resource in medical sector. Hence, a holistic Internet Marketing Strategy Framework (IMSF) is needed for Medical Tourism Programme in Malaysia (MTP). Therefore, this paper aims to discuss literature reviews on characteristic and functionality of *MTwebs*.

Keywords—Medical Tourism; Promotion; Internet Strategy; International Patient Tourists

I. Introduction

Health and tourism marketing is a process of communicating about a health product or service and distributing pre-purchase information that encourages prospective patients to use or purchase health tourism product or service, exclude communicate made about a drug or biologic [1] [2] [3]. Internet marketing is defined as full range of activities which is related to advertising, promotion, public relations and sales that organisation can undertake both on and off the websites since there is no true geographic boundaries [4].

Internet has been used as a mechanism for transforming medical care information to enhance communication and facilitate a wide range of interaction between patients and medical intermediaries in the Medical Tourism System [5][6][7]. Given the explosion of the internet as a mean to share and disseminate information about health and health care, it is not surprising that there is an increasing number of Medical Tourism Websites (*MTwebs*) emerged to introduce and promote health services to prospective patients [8][9]. Previous surveys estimated that as much as 60 per cent to 80 per cent of adults and world-wide-web users used internet for health care purpose [5][10]. As explained by Lunt [9], the various information of internet has created new demands and need for access to medical information about international and cross-border provision of health care services in Medical Tourism Industry (MTI). For instance, the current issues *MTwebs* are about the quality of online consumer health information and the misinformation of health information [9].

II. Medical Tourism

A. Concepts of Medical Tourism

Health tourism (HT) can be viewed from two different perspectives, medical and wellness [11][12]. Medical Tourism (MT) is used to describe the health practice of foreign patients or individuals who are sick travelling internationally with the express purpose to obtain health services, typically paid for out-of pocket [13][14]. Meanwhile, Wellness Tourism (WT) refers to people who are healthy travel internationally to enhance and maintain their state of well-being [15][16].

Common types of MT can be categorised into general care (knee and hip replacement, eye surgery), cosmetic surgery and dental care (root canals, implants etc) while WT refers to people traveling to spas, health resorts, hot springs, yoga etc for maintain their well-being and health improvement [15].
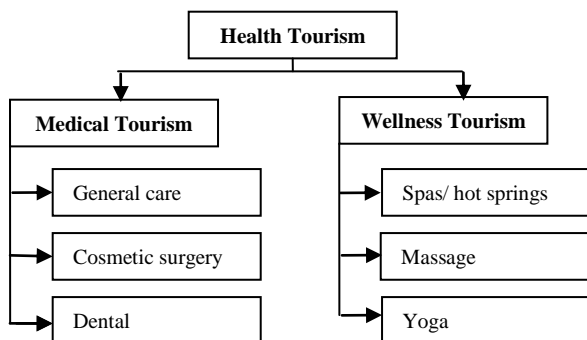

Fig 1: Health Tourism Branches [15]

According to Choi & Kim [17], there is a known as oriental MT. This concept is recognised as a preventive health care and treatment tourism for health improvement and treatment using oriental medical resources in tourism programs, services and facilities. The classification of MT resources can be divided into four categories, as below [18]:-

(1) Medical Service Resources

Medical technology (diagnosis, surgery, etc), hospital and clinic.

(2) Product Resources

Herb, medicinal hub, cosmetic material, massage and spa.

(3) Natural Resources

Herb, medicinal animals and plants.

(4) Tourist Resources

Herbal garden, festival, expo and museum.

B. Characteristic of Medical Tourism (MT)

The health and tourism sector incorporates both goods and services in medical services, adjacent services (logistics, hotel, hospitality and tourism services) and transport services [19][20]. Goods products are easier to test, measure and evaluate, while service products provide a greater challenge [21]. Prior to the unique characteristic of service products in MTI, MT attribute usually offers intangible services to the patients [22]. Pikkemeaat & Weiermair [23] observed that services offered in HT are becoming more and more intangible due to the increasing emotionality in the stage of services delivery by new and exotic forms of treatment like sound therapy [24] and the technological development of hardware applied in diagnostic such as digital radiology and treatment like hydro jet [22][24]. The complexity and plurality of choice has caused the buying decision for such service and products are associated with a high level of perceived risk [22][25]. In "marketing-based tangibilisation", Tarn [26] and Matzler [27] suggested that brands can be used to make service offerings at the moment of the buying decision more tangible to minimise perceived risk.

III.   Characteristics of Medical Tourism Websites

MTwebs can be divided into professional (government, universities, major medical centers), non-profit organization and commercial with regard to the basic of the information provided by the websites [9][28]. From previous literature reviews the *MTwebs* can be classified as below:-

(1) Commercial Portals

Open portals or provider portals that use a range of technical function with aimed to provide prospective patients to receive pre-purchase information to compare amongst the surplus of providers, e.g. video of treatments, patient testimonials, details of the establishment, virtual tours of facilities, staff qualifications and professional experience [9] [28].

(2) Media Websites

Websites that support the growing "media" presence and associated marketing of MT which offers a social networking for physicians, facilitators and insurance provider (e.g. sites showcase European and International Medical Tourist Associations) [9]. Commonly, it refers to the means of interaction among people sharing and exchange information like stories and interviews with industry interest, details of emerging market and new development in health industry [9]. Besides, there are also websites used to support Medical Tourist magazines and commercial interest involved in boarder marketing.

(3) Consumer-driven Websites

Discussion boards or MT debates where information is posted on the issues and experience of MT or produces by both lay interest and professionals [9] [28].

(4) Commerce-related Websites

Websites that provide information on commerce allied to MT e.g. overseas property sales websites regard geographical areas that linked with the MT development area such as Turkey and Costa Rica. MT trips travel insurance products, money saver, cost comparison websites and financial advice websites are linked together [9] [28].

(5) Professional Contributions

Professional, policy and regulatory focused websites that provided health information to the users [9] [28].

On top of that, there are some useful guideline (e.g. American Medical Association (AMA) websites principles, HON code guidelines and BAPRAS checklist) that can be used to examine the credibility and accuracy of the source to obtain quality health information [29]. For medical information provided by a medical institution or a government health agency generally the sources are more credible and can be trusted by the users [29].

Table 1: Types of Websites Publisher [29]

Publication	Description
.edu	An ending of ".edu" is published by an organization that is associated with an educational institution such as university.
.gov	An ending of ".gov" signifies that the web page belongs to a governmental organisation.
.org	An address ending in ".org" belongs to a nonprofit organisation.
.com	An ending of ".com" belongs to a for-profit company.

IV. Functionality of Medical Tourism Websites

The internet has become an important tool of e-marketing communication for patients and medical intermediaries to obtain valuable health information. Also internet is used as a means of promotion and a sales channel, whether in merchandise, services, travel or health [30]. Petch [31] said internet have benefiting patients to search health information, compare medical costs and making decision before use or purchase the health-related product and service. Besides, *MTwebs* provide an opportunity for medical intermediaries to easily reach potential patients by giving accurate health information and gain patients` trust to produce a sustainable competitive advantage [32]. As stressed by Lunt [9], a key element to the functionality of the *MTwebs* is to attract and sustain consumer interest. The main functionalities of *MTwebs* can be categorised into five main process [9], as the following:-

(1) Functionality as a gateway to medical and surgical information.

(2) Connectivity to related health services.

(3) Assessment or promotion of services.

(4) Commerciality

(5) Opportunity for communication.

A. Information

Health information are extremely useful to empower patients for making important health decisions [29]. The *MTwebs* can be seen as an encyclopedic information resources by providing a range of valuable health information for patients preparing for an upcoming health care visit or after a visit. Also this may help patients participate in health decision making during a visit [8][9].

The link to information on *MTwebs* via a keyword web search such as Google, Yahoo, e.g. "breast augmentation", "dental implant" etc can assure patients to have more understanding about procedural medical care, treatment cost and help them making an informed choice for their treatment at overseas [9].

There are a range of reasons for medical users to search for health and medical information via internet [33], including to:-

(1) Gather and collect more medically diagnosed disease or illness information.

(2) Find out about alternative medical treatments.

(3) Get a "second opinion".

(4) Resolving conflicting health information.

(5) Find relevant patient support groups or other internet users who have the same kind of medical disease or illness via online discussion forums or "chat rooms".

B. Connectivity

MTwebs may contain links and references to other useful websites maintained by third parties. Tourist information, general information and medical information about health care such as medical travel information websites, health insurance websites and other medical websites can also be obtained through third parties` websites [9]. The health information which collected from online sources for the sole use of patients planning to obtain medical procedure may available from official source such as clinical and public health systems for particular country or promotion of consumer services may be purely commercial or privatised over official organisations, institutions and cross-country legislation [9].

The type of business or health care package information usually available via *MTwebs* including information about involvement of businesses in booking air ticket or transport arrangement, arranged hotel accommodations, organised tours trips or other holiday excursions in addition to medical services [34].

Nowadays, many MT companies are seen conducting and marketing their business via internet. This shows that they are reliance on the internet as a medium for communication, marketing strategy and interaction with their clients or patients [35]. However, there is a claim stating websites which managed and maintained by third parties make webmasters have no control, disclaim any responsibility for the content of these external linked *MTwebs* for availability, accuracy, quality, performance, suitability of the products and services information that advertised through these third parties websites [36].

C. Assessment

In health care, information is constantly changing as a result of new research and new discoveries are made every

now and then [29]. Besides, online health information is a secondary data and relied on another person`s interpretation of data. According to Lambert [37], 60 percent of health information available through online is incorrect, only 40 per cent websites offered correct information. This means that *MTwebs* content can be unclear, incomplete and misleading [38], it is important to assess the quality and validity of the information [29]. Hence, information from online sources should be substantiated by more reliable sources of information and supported by evidence from scientific studies, facts and expert opinion or national organization specialising in the field [29], especially for the *MTwebs* which is accredited to an independent certification scheme supported by Department of Health are more trusted by patients [37]. For instance, the specific websites for Macmillan Cancer Support (www.macmillan.org.uk) are good for financial advice and information on benefits, other best websites to visit includes www.cancerresearchuk.org, www.nhs.uk, www.webmd.boots.com,www.bhf.org.uk and lastly www.ageuk.org.uk [37].

A set of principles that guide and evaluate health care web pages standards has established in 2000 by Pacanowski [39]. This includes web content, publicity and sponsors, privacy and confidentiality, web pages design, websites aesthetics and updating information [39]. Besides, in the UK, National Health Services (NHS) Choices [40] also stressed that the online health information should be:-

(1) Approved by a clinical expert;

(2) Reviewed and updated regularly;

(3) Unbiased;

(4) Non-commercial purposes (not trying to sell anything to online user);

(5) Non-claiming to replace the advice given by a doctor; and

(6) Not asking user to pay a full emailed diagnosis.

In fact, there have been numerous methods and tools used to evaluate quality of the health information that contained in the web pages such as Quatro [39]. Quatro system is a health metadata in XLM or RDF which could be integrated into Google or Yahoo search engines to allow the internet user to check whether the websites is certified and provide trustworthy health information[39].

D. Commerciality

Lunt [9] indicates that the commerciality of *MTwebs* is built on the profiling and data gathering of the individual as they navigate the website. Data is obtained in the form of cookies, surveys, newsgroup posting, web forums and during the consumer sign up to newsletters or register with the websites to access the full content [9]. Thus, in term of functionality, it is about attractive provision of services and elective procedures available in the websites rather than only to obtain reliable source of health information [9].

For instance, despite to some hospitals, there is a need for provision of elective surgical services to enable a sufficiently good quality of care advertised by clinical specialists [41]. However, for more complex, personal medical data and sensitive search term data (e.g. herpes or suicidal thoughts) it may be shared with third parties without patient`s knowledge [42]. Another example is there are 53 per cent of the popular commercial health websites, excluding government and professional medical group websites have used tracking cookie and reports to a third party about the user`s online behavior at current or subsequent websites [42]. Mukherjee [42] points out the collection of sensitive health data is usually used for commercial and advertising purpose.

In the US, although the Health Insurance Portability and Accountability (HIPAA) Act of 1996 prohibits the disclosure of personal medical information, it has no such restriction on the collection of health data for commercial purposes [42]. Therefore, it can not be denied that governments should enhance and restrict rule and regulation for privacy protection in disseminating health care knowledge and information.

E. Communication

Communication is the key to success, particularly with respect to ensure positive patient outcomes [43]. Lunt [9] indicated that *MTwebs* usually facilitate a traditional "paternalistic" model of relationship, where direct communication and assessment of a patient health is through a gate-keeper or mediator. This will establish a distance between medical professionals and their patients [9]. However, nowadays medical professionals are more familiar to use internet to communicate with their patients, not diagnose [44]. Likewise, the explosion of online communication has motivated patients to use internet communicate with their health providers (e.g. e-mail) or consulting with health professionals [44]. This is much more efficient than the traditional modes of communication like face-to-face visit and via telephone [44]. As indicated by Robinson [45] and Cline [46], the interaction of an individual (e.g. consumer, patient, caregiver or professional) through an electronic device or communication technology to obtain or transmit health information or to receive guidance and support on health-related issue has been increasing.

Unfortunately, Safran [47] said, automated message system in phone technology have frustrated many patients communicate with physicians, this causes dissatisfied with access to their health care provides. There is no doubt that online communication has appears a better option than traditional modes and strengthen the communication relationship between patients and providers in the health care industry [48]. In contrast to e-mail, the others benefit of web-based tool in clinical setting are to exchange and store information in structured, easily retrievable manner simultaneously the communication can be easily tracked, documented and evaluated in order for cost saving and reduce clinicians `s time with patients [47].

In brief, internet breaks space and time barriers of traditional information seeking processes and provide widespread dissemination, high volume and lower cost than conventional methods (e.g. print materials, face-to-face interaction, phone call and etc.) to inform and connect professionals and patients at remote areas [49].

v. Conclusion

As a result, it can be concluded that *MTweb*s internet offers high potential for greater equity in access to health information and opportunity for patients to interact interpersonally with health professionals and peers. The importance and functionality of *MTwebs* as an information source in the promotion of health and tourism allows health providers communicate with patients effectively rather than traditional modes, furthermore distributing pre-purchase health information via internet can helps patients making an informed choice for their treatment at overseas.

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