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Classification and Comparison of Niche Services for Developing Strategy of Medical Tourism in Asian Countries

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Medical tourism is a new trend in medical service. It is booming not only in Asian countries but also in European and South American countries. Worldwide competition of medical service is expected in the future, and niche service will be a "trademark" for the promotion of global medicine. Niche service also functions for market segmentation. Niche services are usually surgical procedures. A study was carried out to compare different strategies for developing medical tourism in Asian countries. The role of a niche service is evaluated in the initiation and further development of medical tourism for individual countries. From this study, a general classification was proposed in terms of treatment procedures. It can be used as a useful guideline for additional studies in medical tourism. Niche service plays the following roles in the development of medical tourism: (1) It attracts attention in the mass media and helps in subsequent promotion of business, (2) it exerts pressure on the hospital, which must improve the quality of health care provided in treating foreign patients, especially the niche services, and (3) it is a tool for setting up the business model. E-Da Hospital is an example for developing medical tourism in Taiwan. A side effect is that niche service brings additional foreign patients, which will contribute to the benefit of the hospital, but this leaves less room for treating domestic patients. A niche service is a means of introduction for entry into the market of

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medical tourism. How to create a successful story is important for the development of a niche service. When a good reputation has been established, the information provided on the Internet can last for a long time and can spread internationally to form a distinguished mark for further development. Niche services can be classified into 3 categories: (1) Low-risk procedures with large price differences and long stay after retirement; (2) high-risk procedures with less of a price difference, and (3) banned procedures that are not allowed legally in home countries of foreign patients, such as stem cell therapy. In establishing a niche service, a high-quality, nonmedical segment should be integrated as well.

Key words: Niche service – Global medicine – Asia – Classification

Several difficulties in the development of medical tourism have been identified: (1) It would be much more comfortable to have major surgery near home with family members at the bedside than to travel overseas for surgery and experience culture shock in a developing country, (2) patients and their family are often frustrated when communicating with foreign doctors and nurses because of barriers in language and customs, and (3) patients often worry about their health and are uncertain about the quality of health care in another country. They are always fearful about traveling far from home and cannot trust the medical quality of health care organizations in destination countries. In this situation, "trust" should come from "reputation," which is built on the previous record of health care quality and niche services as presented to the public.

However, there are still several reasons for development of international health travel[1–5]:

1. *Saving money*—it is an important concern in international medical tourism.
2. *Efficiency*—the niche service promoted by a certain country should include an efficient standard operating procedure (SOP) for diagnosis and treatment of a particular disease.
3. *Convenience*—it provides convenience and high quality of service.
4. *Special disease*—treat special diseases, such as Chiari syndrome.
5. *Banned therapy*—patients seek procedures that have not been approved by the law in their home countries (*e.g.*, stem cell therapy for advanced heart and neurologic disorders). The effects of these therapies have not been proved in the developed countries, but patients still want to try even when there is little hope of success.
6. *Privacy*—patients who are the leaders of very important organizations or chain businesses do not want to leave a record in home countries, such as health examination or cosmetic surgery.
7. *Life of retirement*—patients seek long stay after retirement.
8. *Vacation*—a less important factor is the vacation part of the trip.

In 2007, 3 million people in the world left their home countries and sought health care in other countries.[6] Overseas medical treatment included open heart surgery, aesthetic surgery and reconstruction, health examination, treatment for infertility, and other operations. In 2005, 1.25 million foreigners entered Thailand for medical travel at a total expense of US $860 million. The Indian government predicted an annual income of US $17 billion from medical travel over the next 6 years. In Singapore, patients beyond borders increased from 270,000 patients in 2005, to 400,000 patients in 2007, and total income in 2007 was US $1.5 billion. In fact, in some hospitals in Singapore, 40% of the revenue in 2008 was derived from treating foreign patients.

In India and Dubai, many medical cities have been established, including hospitals, affiliated hotels and recreation areas, spas, research units, shopping malls, travel agencies, and so forth. Now, 28 countries in 4 continents are devoted to promoting international health travel.[7,8]

A niche service is established over years of practice to earn a worldwide reputation and to win the trust of people. It is necessary to convince people to come over from other countries for health care. In addition to updated facilities, organizational success depends on trust built by doctors, nurses, and paramedical personnel who provide remarkable service experience.

A niche service meets one or several of the criteria listed below:

1. *Safety*—it is always a big decision for an individual patient to seek medical treatment in

a foreign country. Patients want to minimize a certain inherent risk before they go ahead. For example, India is famous for open heart surgery with a mortality of 0.9% for nonemergent cases. These data are even better than those of the average American hospital. In the United States, Blue Cross and Blue Shield (South Carolina) was the first American insurance company to provide medical care overseas. This insurance company studied thoroughly the niche services of various countries to provide safe treatment and avoid legal problems afterward. However, most countries do not have the American attitude toward physicians and institutional liability.

2. *Price difference*—niche services usually can be offered more quickly at a lower price by Asian countries.
3. *Facility availability*—facilities should be available with enough capacity to provide the service in time (*e.g.*, operations for tumors).
4. *Skills needed*—skills needed for some niche services are available to provide high-level medical treatment.
5. *Definitive procedures*—definitive procedures can be performed to get a good result within a reasonable period of time.

Method

During a literature review, important facts were found regarding the development of various niche services among different Asian countries. On the basis of the analysis, a classification was proposed as a guide to the study of development of medical tourism for Asian countries. The target Asian countries mainly include Malaysia, Korea, Thailand, Singapore, and India. Afterward, a story of medical tourism for Taiwan will be presented to explore the development of niche services.

In our classification, niche services are divided into 3 categories: (1) Category I includes long stay after retirement (Category Ia) and low-risk procedures with large price differences (Category Ib); (2) Category II consists of high-risk procedures with less of a price difference but of high quality and much better in terms of convenience; and (3) Category III is made up of banned procedures that are not allowed legally in home countries.

The history of developing niche services for medical tourism in each country is different because of variations in geography, social and economic conditions, safety, cultural differences, language, level of medical care, and so forth. Niche services are compared on the basis of efficacy in this study. The niche service provides the basis for subsequent development of a business model and then maintenance of a cluster of services.

Results

Every country has different conditions and selects different niche services. The following niche services were noted in the literature.[6,9–14]

Malaysia

Long stay in Malaysia is favored by rich Chinese people and Singaporeans. Chinese people invest in Malaysia, but Singaporeans like it because of its proximity to Malaysia and its low cost of living. Because of the large potential for profit from cosmetic procedures, Malaysia has established another cosmetic city in Penang. Generally speaking, the niche services provided by Malaysia belong to Category I in our classification.

Indonesia and Philippines

Generally speaking, Indonesia and the Philippines are less often considered as the first choice for long stay because of concerns about social stability.

Korea

Korea promotes its cosmetic surgery through actors in famous movies, which are promoted successfully in the theaters of other countries. More than 10,000 women per year go to Korea for aesthetic procedures. Generally speaking, the niche services of Korea belong to Category I in our classification.

Thailand

The cost of health care in Thailand is only 30% of that in the United States. Major items of medical service include cosmetic surgery and dentistry. In 2003, Thailand treated 730,000 foreign patients with US $488 million of income. These figures increased by 16% by 2005. In 2006, medical tourism had brought about an annual income of US $700 million for Thailand. About 15% of these patients come from the United States and Canada. Thailand is also famous for trans-sexual operations.

Bumrungrad International Hospital has been recognized as one of the top 10 most internationalized hospitals in the world. It is affiliated with

Diethelm Travel Agency and Thai Airway to provide services combining medical care and sightseeing. The Bumrungrad International Hospital has passed Joint Commission International (JCI) accreditation with an international standard of medical service. JCI is an international standard of health care quality for the insurance company to document and to pay. The other famous hospital is Bangkok International Hospital.

The trust spectrum that we saw from the history of medical tourism in Thailand emerged in this order: Spa experiences, denture procedures, cosmetic procedures, and finally full surgery. When we want to win the recognition of a niche service, we should pay attention not only to the articulated needs but also to the unarticulated needs. Namely, both medical and supportive services for patients and their attendants are important. Generally speaking, the niche services of Thailand fall into Categories I, II, and III in our classification.

Singapore

In 2003, the Singaporean government focused on medical travel through the combined efforts of various organizations, including those for economic development, tourism, and the development of international enterprise, which promote medical services with tourism. Major services provided are high-tech medical service, health examination, and cosmetic surgery. In 2007, Singapore treated about 400,000 patients from other countries. This number will be increased to 1 million patients from abroad in 2012. Generally speaking, the niche services of Singapore belong to Categories I and II in our classification.

India

India was famous for its success in conjoined twin surgery. Then the government promoted heart surgery and joint replacement. India has several privileges for development of medical travel. Numerous Indian physicians and surgeons are being trained in the United States and the United Kingdom. Some of them stay in these countries and others go back to India. They form a strong army to provide good service and strong follow-up for international patients. In addition, English is a commonly used language in India. The Indian government is the most important backup for the development of medical travel. Generally speaking, the niche services provided by India belong to Categories I and II in our classification.

Japan

Japan so far has not promoted medical tourism on a large scale because of its already high cost of health care and has offered little or no price difference. However, it has high potential for developing Category II medical tourism with patients from other Asian countries.

Classification of niche services for Asian countries

Niche service is concerned with 3 main factors: (1) The capacity of the medical staff, especially of physicians with advanced technology in particular subspecialties, (2) the price difference between the country providing service and the patient's own country, and (3) the reputation of the service in the destination country.

Other general factors that support the niche service include the following:

1. *Safety, insurance coverage, stability of the country, ensured service quality by some certified institution such as JCI, and efficiency of various arrangements.*
2. *Friendliness*—attitudes of people toward foreigners—friendly or not.
3. *Living cost*—economic conditions of the people and living standards of the destination country.
4. *Convenience in daily life*—languages spoken by most people in that country, cleanliness of the environment, facilities, and resources of sightseeing.
5. *Availability of activities and richness of culture*—relation with other countries in its past history, religions, culture, and tradition.
6. *Ease of entry or exit*—ease of obtaining a visa, transportation, proximity to the destination country, and availability of follow-up.

According to the number of cases and the severity of disease, niche services are divided into 3 categories (Fig. 1).

Category I indicates lower severity of disease and larger numbers of cases such as long stay (Category Ia) and health examinations, dental care, cosmetic surgery, and so forth (Category Ib). This category tends toward service orientation.

Category II indicates higher severity of disease and smaller numbers of cases such as trans-sexual operations, treatment of heart disorders, and so forth. This category tends toward technique orientation.

Category III indicates highest severity of disease and smallest numbers of cases, such as stem cell therapy for advanced heart and brain therapy (but not recognized internationally). This category usually involves some disputed techniques that could be banned at a specific period in some countries.

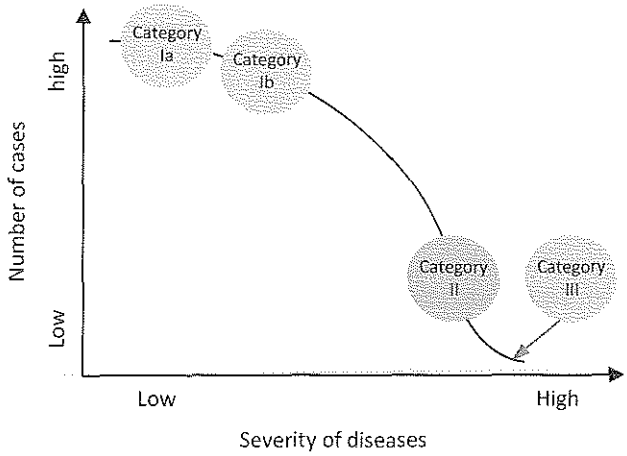


Fig. 1 Three categories of niche services.

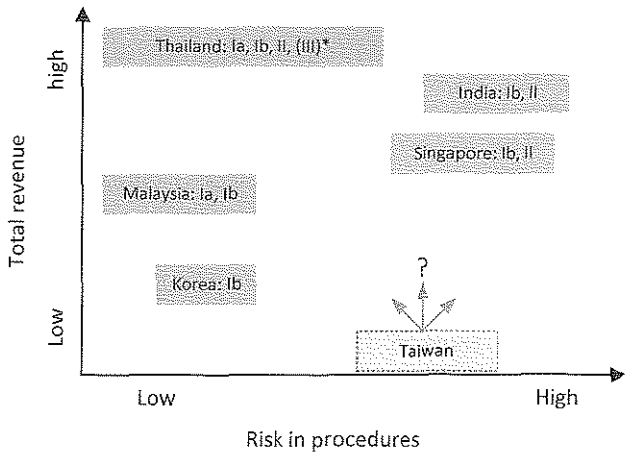


Fig. 2 The relationship between total revenue and risk in procedures.

Because each country has different context and resources, each will select a combination of different niche services to obtain its revenue. Each country may choose 1, 2, or 3 categories as its niche services area (Table 1).

In terms of changes in the medical tourism market, Asian countries with the greatest amount of revenue from global medicine currently are Thailand, India, Singapore, and Malaysia. These countries adopted their own niche services to get the market and total revenue of medical tourism (Fig. 2). The relationship between total revenue and risk in procedures is sketched according to the present status of the medical tourism market share.

For Thailand, niche services are those with low demand on technology, such as health examination. It deserves to be mentioned that the niche services of Thailand have changed from Category Ia and Ib to Category II and Category III over time. For Singapore, the niche service consists of high technology, such as neurosurgery.

When a country wants to start medical tourism, what niche services will it select? Let's see a successful story of medical tourism in Taiwan.

A Successful Story of Medical Tourism in Taiwan

E-Da Hospital is the hospital affiliated with I-Shou University, located at Yanchao Township of Kaohsiung County in South Taiwan. E-Da Hospital has 1200 beds and the most modern equipment. In recent years, a medical city has been established that includes the hospital, a 5-star hotel, which is the second largest hotel in Taiwan, a hot spring area, a large shopping mall, a European street, a golf course, and so forth.

Story beginning from a country in South America

Since the opening of this hospital, many fellows from various countries have come here to learn reconstructive surgery. One of the fellows visited

Table 1 Summary of niche services among Asian countries

	Category I			
Country	Category Ia	Category Ib	Category II	Category III
Malaysia	Long stay	Cosmetic surgery		
Korea		Cosmetic surgery		
Thailand	Long stay	Health examinations Dental care Cosmetic surgery	Trans-sexual operations	Stem cell therapy[a] for heart and brain therapy
Singapore		Orthopedic surgery Ophthalmology	Neurosurgery Cancer treatment	
India		Knee replacement	Heart surgery Conjoined twin	

[a]Not recognized internationally.

this country and gave a lecture in South America. He was consulted for a very severe case of lymphedema praecox. He decided to transfer the patient to E-Da Hospital because he knew that E-Da Hospital was able to treat the patient well because it had a large amount of previous experience.

The patient had a huge lower limb and had suffered from severe primary lymphedema of the right lower limb for 26 years. This got worse and caused cardiomegaly through the progressive increase in lymphatic load. If this problem were left unsolved, it would become intractable within a short time. Therefore E-Da Hospital sent an attending staff from emergency medicine to escort the patient to Taiwan on November 9, 2007, because he could speak Spanish and was able to perform resuscitation during the trip whenever necessary.

Presenting problems

This patient had the following major problems in her daily life:

Severe swelling of right thigh, leg, and foot and inability to squat down. This was so heavy that it caused a remarkable disturbance in walking. Every time the patient got up from bed, a lot of blood and lymph would be pooled into her right lower limb, and the sudden decrease in effective intravascular volume would make her dizzy. On the other hand, when the leg was put back on the bed, the suddenly increased circulatory volume would make her uncomfortable, like a dumping phenomenon of blood and lymph entering the general circulation. Retrospectively, it was found that the right lower limb had 47 kg of extra tissue, which had been removed during surgery. This was the cause of the circulatory disturbance.

Osteoarthritic change in right calcaneus. Osteoarthritic change in the right calcaneus was due to the heavy load of the right lower limb. It caused the formation of a large bursa beneath the calcaneus, which was removed during surgery.

Appearance of black plaques and induration of the skin over right lower limb like elephant skin. The blood supply to the tense skin was severely impaired. This further rendered the limb susceptible to trauma and infection.

Frequent infection (cellulitis) of the right lower limb and toe infection with very bad smell. The condition would interfere with social life. Infection of the right lower limb was frequently treated with antibiotics in the hospital.

Two major ulcers of skin in the right lower limb with frequent lymph leakage. It could be water clear or milky in appearance following a meal, just like an oak tree leaking from a hole cut in its trunk. Accompanying the lymph leakage was protein loss, so that the patient had hypoalbuminuria on admission.

Remarkable decrease in sensation in the right lower limb. However, sensation in the right foot sole was preserved.

Problem for the passage of urine. The urine often spilled to her right thigh, which was so large as to extend across the midline. The urine went into the deep skin creases and presented difficulty in personal hygiene.

Worse condition after 2 operations. The patient had been operated on twice in her home country, but the condition became worse regardless of these operations.

Joblessness and withdrawal from all social activities. She could not go to work and withdrew from all social activities.

Course of treatment: Interdisciplinary team work

The patient was admitted to the ward of plastic surgery before operation. An intravascular supply of albumin was provided. Members from a total of 15 departments in the hospital were consulted and got together to design a detailed treatment plan. These specialties and related departments included plastic surgery, cardiology, pulmonary medicine, vascular surgery, metabolism, infectious disease, psychiatry, rehabilitation, hematology and oncology, radiology, the nutrition department, a social worker, intensive care unit (ICU), nursing, especially in the operating room, and administration.

The operation was carried out on November 16, 2007. Cardiac output and other hemodynamic conditions were intensively monitored by a cardiologist and an anesthesiologist during the entire operation, which was finished in 8 hours. The diseased tissue removed measured 47 kg, which was equivalent to the body weight of a nurse taking care of this patient.

After surgery, the patient was put in the ICU for 1 week, with continuous monitoring of PICCO, endocrine function, and electrolyte and cardiopulmonary functions; measures to prevent deep vein thrombosis; rehabilitation; and psychological adaptation to new body images.

Results of operation

The patient felt that her right lower limb became much lighter after surgery. She was so happy and was moved to tears when she first saw the new shape of her leg after waking up from anesthesia. It

had been a great torture to her for 26 years. After surgery, she began to have a new life. All the nurses treated her very nicely and learned from her how to speak some Spanish.

She had only 1 tooth left in the upper gum with obvious difficulty in chewing. She used to take a soft diet and had difficulty digesting hard food. The government also provided free dental implants for her to improve her quality of life.

On behalf of the government of her home country, a diplomat frequently phoned E-Da Hospital to inquire about her condition. This showed great care regarding her treatment in Taiwan. He came to see this patient and expressed sincere appreciation to the Taiwanese people.

The patient went home as a different person, having good legs and good teeth with dramatic improvement in life quality. The success in treatment was also a benchmark of intimate collaboration among team members in the hospital. It was an example of patient-centered care. In the treatment course, the Department of Health and Ministry of Foreign Affairs provided help to this patient. This successful story was achieved through the combined efforts of all possible resources. It not only offered an experience of humanitarian rescue but also formed the basis for development of medical tourism.

Consequence of the successful story

The information spread through the newspaper, television, and the Internet. Since then, E-Da Hospital has treated many international patients, not only those with lymphedema or extremity deformities, but also those with various kinds of diseases needing procedures such as aesthetic surgery. The number of patients beyond borders is increasing. According to Singaporean colleagues, a country that wants to enter the market of medical tourism must take action in accepting international patients through the promotion of niche service.

Discussion

Common characteristics of niche services in medical tourism are as follows:

1. *Good service or results*—good service or result perceived by the patient:
   a. Small incisions (mini-invasive surgery), endoscopic procedures, and robotic surgery (*e.g.*, prostate surgery to preserve sex function).
   b. Better function (*e.g.*, prostate surgery to preserve sex function), obvious deformity well corrected or reconstructed.
2. *Lower cost*—price one-third that in home countries.
3. *Minimal waiting time before scheduling procedures.*
4. *Service not available in home countries.*

It has been proved that medical outsourcing is effective to decrease expenditures for many countries in Europe, the United States, and Canada. It is more cost-effective than increasing the facility and personnel of hospitals in these countries. However, countries providing international health services must be able to provide evidence to prove their competence, especially regarding safety, convenience, and best quality of treatment, such as JCI accreditation, before they can be considered for medical outsourcing.

People in most countries do not have the same attitude as Americans toward physician and institutional liability.[15–19] If legal recourse is a major concern of a particular patient, the patient is not encouraged to go abroad for medical treatment. The recent economic crisis seems to have worsened the economic condition of the developed countries and increased the need for medical tourism.

Concerning long stay, safety and cost are regarded as the most important factors for consideration. The requirement of savings in the bank is lowest in Thailand—about US $20,000 for 1 year. The highest is in Australia, which requires US $400,000 of investment, in addition to a US $8000 processing fee. Next for consideration are medical services, traffic conditions, the landscape, and the cultural content.

Japanese would list the following criteria for evaluation before deciding the long stay: Medical service, social stability, price of basic living, weather, food, language, a variety of options for sightseeing, living environment, interpersonal relationship (no prejudice for foreigners), ease of stay, and distance from the home country. Thailand provides very good service for long stay, including the following items: Application, rental houses, transportation from the airport, language translation service 24 hours a day, health examinations, arrangements for language learning and other activities, meeting people from other countries, helping to merge into local societies, introducing housekeepers who speak the mother tongue, and so forth.

Niche services strategies adopted by Asian countries

The literature includes 3 strategies: Cost leadership, differentiation, and focused cost leadership and differentiation strategies (Fig. 3).

Thailand offers the general advantage of low-cost labor. Therefore its strategy belongs to cost leadership

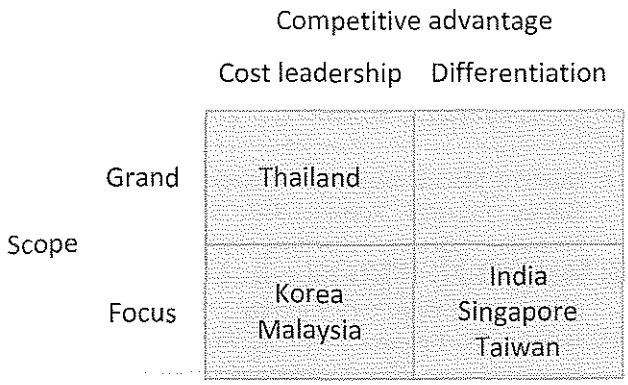


Fig. 3 Strategies for niche services.

on a grand scope. Thailand has 3 categories for its niche services in the study, and niche services in Thailand have been changed over time from Category Ia and Category Ib to Category II and Category III. Malaysia offers the general advantage of low-cost labor. Korea focuses on cosmetic surgery, which is a lower-risk procedure when compared with the difficult procedures of open heart surgery performed in India.

India has adopted a differentiation strategy with a focus on open heart surgery and joint implants. Singapore shares this strategy. It seems better for Taiwan to follow the same policy as well, but it offers a low price difference at this time. Of course the market is dynamic, and a country can move from one strategy to another in the future, depending on available resources.

Business model

A business model is the combination of strategies used to gain competencies. It can be pursued through both differentiation (unique value to patients) and cost leadership (lower cost structure). A business model that reaches the value creation frontier could achieve above average profitability. From the value creation frontier view, the niche services proposed by Asian countries will pursue different strategies (Fig. 4).[20]

Cluster of services

Regarding changes in the global medicine market, in 2008, the Asian countries with the largest revenues from global medicine were Thailand, India, Singapore, and Malaysia. If Taiwan is going to launch into this market, thorough study and careful planning should be done. The shortcomings of Taiwan are the lack of marketing and integration of business offered by the government. Just to have high quality of health care is not enough—it must be recognized

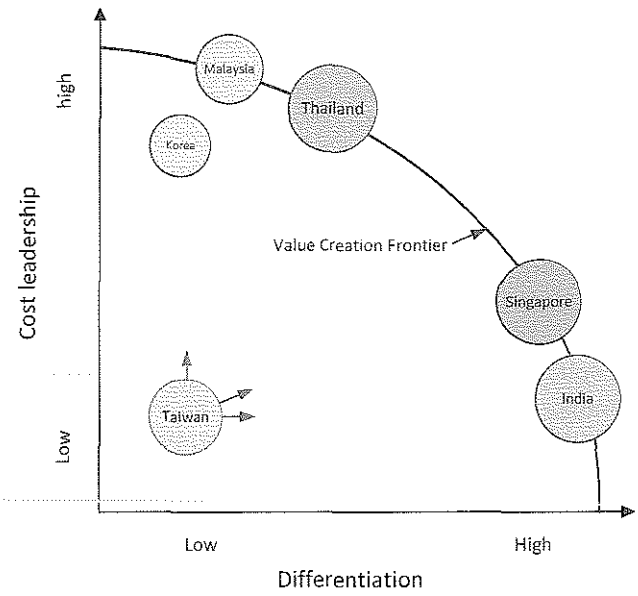


Fig. 4 Strategies proposed by Asian countries.

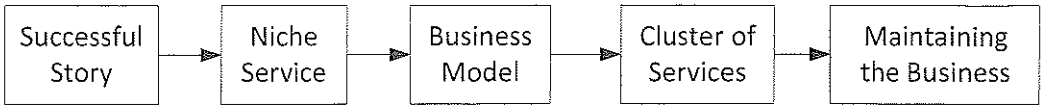
in the world. When language is a barrier, the target market can be defined as the Chinese-speaking population, hence to develop a niche service with attraction to that population.

Since December 15, 2005, large-scale communication between Mainland and Taiwan has been initiated, and numerous tourists have come to Taiwan for sightseeing. However, only a few have come for health care. Apparently lack of marketing and convenience is a problem, but language barrier is not an issue. Probably people from Hongkong and Macao should be defined as the first target market because of visa issuance and the price gradient. Creation of successful stories based on the niche service paves the way to marketing.

In Taiwan, medical travel is expected to be more important than medical tourism. Various deformities are far more obvious than disorders of internal organs such as those of the heart and brain. Therefore deformities of the body, such as craniofacial deformities and severe cases of lymphedema treated in hospitals in Taiwan, attract more attention and publicity. Successful stories apparently attracted a lot of attention after the spread of information through various mass media. They show the high standard of health care and increased cooperation among members of the hospital.

Conclusion

From the successful stories, a new business can be established in the following order:



For a country to develop medical tourism, the target market should be defined first based on the above considerations. Then try to design something different, and propose a niche service (or services). Medical as well as nonmedical services should be emphasized at the same time. When hospitals in Asian countries build their business model, they may offer a cluster of services and maintain the business to gain a sustained competitive advantage.

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