

PAPER 1: DEVELOPING SINGAPORE AS THE COMPELLING HUB FOR HEALTHCARE SERVICES IN ASIA

AIM

1. The HSWG was tasked to review and recommend strategies to enhance Singapore's competitiveness as a medical hub. This is an interim paper to survey the potential market demand in our region and recommend strategies to pursue the opportunities identified.
2. In estimating the demand for this paper, the Working Group referred to third-party reports and proxy indicators. However, we have commissioned a market survey to be ready by the end of June 2002 to strengthen the quantitative aspect of our study.

REGIONAL HEALTHCARE MARKET

3. **Healthcare demand is related to population size, life expectancy and purchasing power. On all these counts, the potential growth in regional demand for healthcare services is promising.**
4. Asia's population will expand from 3.2 billion in 2002 to 5.6 billion in 2050 (60% of world population)¹. In line with this trend, consumer expenditure on healthcare services and healthcare goods is expected to double from US\$90 billion in 1999 to US\$188 billion in 2013 (see Table 1). Consumer expenditure is preferred as the market indicator instead of total healthcare expenditure, so as to exclude government payments which are typically captured by domestic government owned healthcare facilities. The total healthcare expenditure is projected to reach US\$207 billion² by 2004.

Table 1: Consumer Expenditure on Healthcare Services and Healthcare Goods (US\$mil)

	Y1999	Y2013
China	25,422	64,593
India	11,423	26,343
Indonesia	1,992	3,058
Malaysia	739	1,678
Philippines	1,259	2,173
Thailand	4,591	7,868
Vietnam	1,516	2,696
S Korea	16,484	30,586
Hong Kong	4,786	8,505
Taiwan	19,274	36,759
Singapore	2073	3,930
Japan	301,085	421,974
Total (Asia excluding Japan)	89,559	188,189
Total (Asia including Japan)	390,644	610,163

Source: Euromonitor International Marketing Forecasts 2001

5. While there is no reliable estimate on the actual market size of Asian patients seeking healthcare services overseas, a reasonable proxy is the

¹ Human Population: Fundamentals of Growth, Population Reference Bureau 2002

² Freedonia Group

4.8 million high-income Asian households (see Table 2) with income above US\$50,000 p.a. This number will continue to grow, considering the medium-term growth outlook of 3-5% for Southeast Asia and 5-7% for China and India.

Table 2: Number of Households Earning US\$50,000 P.A. or more ('000)

	Y2000	Y2005	Y2010
India	1,109	1,540	2,275
Australia	1,157	1,344	1,586
China	1	3	25
Hong Kong	482	702	912
Indonesia	0	0	0
Malaysia	76	96	145
Philippines	37	51	69
Singapore	241	394	559
South Korea	492	802	1,281
Taiwan	1,170	1,285	1,624
Thailand	42	63	116
Japan	28,388	23,468	25,701
Total (Asia excluding Japan)	4,807	6,280	8,592
Total (Asia including Japan)	33,195	29,748	34,293

Source: Asian Demographics

SINGAPORE'S FOREIGN PATIENT³ MARKET TODAY

- Based on Singapore Tourism Board (STB)'s overseas visitors' surveys, there were approximately **150,000 foreign patients⁴** seeking treatment in Singapore in year 2000. They incurred about **S\$345 million a year⁵ in healthcare expenditure**. As a reference point, foreign patients travelling to the US for medical treatment generated some US\$915 million of "export" revenues in 1998⁶. Equally useful is the fact that its regional medical hubs see a large number of out-of-state patients. For example, Mayo Clinic's patient load comprises 30% out-of-state patients and 5-6% foreign patients each year.
- MOH has administrative records of all hospital admissions for inpatient and day surgery⁷. Based on MOH's data (see Figure 1), the number of foreign patients dipped significantly during the Asian financial crisis. Whilst the market has rebounded, it has not caught up with the pre-1998 growth trajectory⁸.

Figure 1

³ Foreign = Non-resident

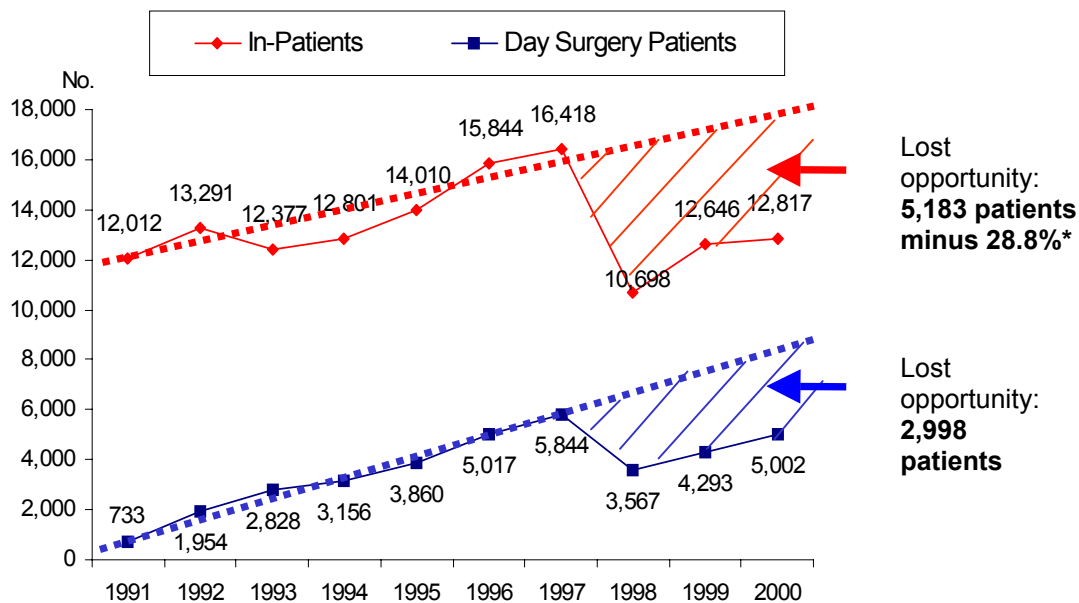
⁴ STB surveys 10,000 visitors at airport departure lounges. The result of the survey is extrapolated to the entire 6 million visitors to Singapore, by road, sea and air.

⁵ Calculated based on data collected from STB's overseas visitors' survey.

⁶ US Trade and Industry Outlook 2000

⁷ Foreign patients can be viewed as three categories: *inpatient*, *day surgery* and *outpatient*.

⁸ In line with the industry trend towards ambulatory surgery, day surgery patient numbers have expanded at a faster pace since 1991 compared to inpatient admissions.



* Based on year 2000 projected data against current data
 Source: STB overseas visitors' survey and MOH administrative records

- The dip could be related to our reliance on traditional markets which were affected by the regional crisis. **Indonesians and Malaysians** account for 70-85% of Singapore's foreign patients (see Table 3).

Table 3: Foreign Patients by Nationality

Nationality	MOH inpatient data	STB Survey
Indonesia	45.0%	74.0%
Malaysia	23.7%	10.0%
US/ Canada	4.1%	NA
India/ Pakistan/ Sri Lanka	3.2%	NA
Brunei	1.7%	NA
Other Nationalities	22.3%	16.0%

Source: MOH inpatient admissions (average from year 1996-2000) and STB survey (year 2000)

9. On the bright side, there is still a positive perception of Singapore's healthcare services among patients and professionals in the region. STB's survey showed that **72% of foreign patients chose Singapore for its high quality**, whilst 31% of patients were recommended or referred to seek treatment here⁹.
10. **Singapore is a broad-based medical hub.** Foreign patients chose a wide range of specialty areas for both in-patient and day surgery treatment. Relative to the region, we have expertise in Cardiology, Oncology, Urology and Obstetrics, as shown by the proportionately higher foreign patient attendance in these specialties. Foreign outpatient cases spanned gynaecological consultation, physical examination, and eye check-up.
11. **Singapore's healthcare providers have capabilities throughout the continuum of services**, from primary to secondary, tertiary and quaternary care. Both restructured hospital clusters, SingHealth and National Health Group, span the whole continuum, whilst the two leading private healthcare groups, Parkway and Raffles Medical, focus mainly on primary to tertiary services.

TARGETS AND THE ECONOMIC BENEFITS

12. In year 2000, we estimate that Singapore captured less than 1% of the well-heeled Asian market for healthcare services. We aim to **expand our market share to 2% by 2007 and 3% by 2012** (see Table 4). Taking into account the projected growth in the number of Asian households with more than US\$50,000 income, this suggests a total of 1 million foreign patient visitors per annum by 2012 with 100,000 foreign patient admissions. This would generate S\$3.0 billion in healthcare expenditure or close to S\$2.6 billion in value-added to the Singapore economy, and could create some 13,000 jobs¹⁰, a significant proportion of whom would be for paramedical and nursing manpower.

Table 4: 2007 and 2012 Targets (T)

	Y1996	Y2000	Y2007 (T)	Y2012 (T)
Share of Asian market	-	^1%	2%	3%
Foreign Patients				
Total	89,000	147,000	500,000	1,000,000
Inpatient/day surgery	21,000	18,000	50,000	100,000
CAGR of Total	-	+13%	+28%	+16%
Expenditure				
Total	-	\$430 mil	\$1,500 mil	\$3,000 mil
Foreign patients		\$350 mil	\$1,200 mil	\$2,400 mil
Accompanying tourist		\$80 mil	\$300 mil	\$600 mil
Value Added				
Total	-	\$370 mil	\$1,300mil	\$2,600 mil
Healthcare		\$320mil	\$1,100 mil	\$2,200 mil
Tourism		\$50 mil	\$200 mil	\$400 mil
% VA contribution to GDP				
Total	-	0.25%	0.65%	1.10%
Healthcare		0.20%	0.55%	0.95%

⁹ STB overseas visitors survey

¹⁰ This assumes that healthcare sector productivity stays constant.

Tourism		0.05%	0.10%	0.15%
Cumulative Healthcare jobs creation	-	Base year	5,100	13,000

13. The targets are feasible, since it means that each specialist will only be seeing 2 foreign patients per day in year 2012, compared to 0.4 in 2000. There is also adequate bed capacity, as private sector hospitals currently have occupancy rates of less than 50%.
14. In addition to the direct economic contribution, a vibrant healthcare services industry would be a key strand of a multi-faceted, mutually reinforcing Services sector. For instance, foreign patients are usually accompanied by close ones. STB estimates that each S\$1 spent by a visitor generates \$0.63 to the Singapore economy. Hence, this could generate an additional \$578 million of tourist expenditures per annum or \$364 million of VA by 2012. **In total, the 1 million of foreign patients would bring about more than \$3 billion in expenditures, contributing more than 1% in value-added to Singapore's GDP.** Moreover, the doctor-patient relationship is "sticky" i.e., it would generate a higher proportion of repeat visits.
15. A vibrant healthcare services industry also **anchors Singapore's initiative to develop and expand the Biomedical Sciences sector.** To maintain Singapore's leadership position and reputation for excellence in healthcare services, our clinicians need access to the latest and most advanced therapies and diagnostics. Likewise, biomedical product development will be successful only if it solves clinical problems and can be translated from the laboratory to the clinical setting. This requires a close synergy between the clinicians and the biomedical researchers.
16. In addition to attracting high net-worth foreign patients to Singapore, Singapore healthcare providers should **pursue opportunities in the region** to capture the big and growing Asian middle class market that seek healthcare services locally (as opposed to travelling overseas). There is **potential to build Singapore MNCs** in this sector. Parkway and Raffles Medical Group are already in the list of top 15 healthcare service players in Asia (including Australia) (see Table 5). This list excludes SingHealth and National Healthcare Group.

Table 5: Internationalization of Singapore-based Healthcare Enterprises

Rank	Company	Country	Sales (US\$)	Market Cap (US\$)
1	Health Care of Australia	Australia	553.7	638.7
2	Nichii Gakkan	Japan	535.1	3,768.1
3	Parkway Holdings	Singapore	228.3	1,003.6
4	Australian Hospital Care	Australia	193.2	53.9
5	Ramsay Healthcare	Australia	156.6	57.1
6	Sonic Healthcare	Australia	107.5	610.3
7	Prasit Patana	Thailand	51.5	0.6
8	Healthscope	Australia	65.0	5.9
9	Alpha Healthcare	Australia	59.2	219.8
10	Bumrungrad Hospital	Thailand	42.6	5.7

11	Bangkok Dusit Medical	Thailand	36.3	15.1
12	Pantai Holdings Berhad	Malaysia	30.1	186.3
13	Samitivej Public	Thailand	27.9	5.2
14	Raffles Medical	Singapore	31.4	279.3
15	KPJ Healthcare Berhad	Malaysia	28.3	40.8

Source: Economic Intelligence Unit Healthcare Asia Report - 1st Quarter 2000

REGIONAL COMPETITION

17. Since the Asian financial crisis, other countries have aggressively marketed themselves as medical tourism destinations. **Singapore may have lost market share** as shown by the shaded area in Figure 1. The likely reasons are:

- (a) Improvement in the capabilities and management of our competitors, narrowing the gap compared to Singapore. For example, a growing number of regional hospitals are now managed by experienced foreign operators.
- (b) Bumrungrad Hospital in particular, has gone on a marketing blitz all over Asia. Thai tour operators have also participated in this boom, offering “check-in and check-up” packages with their usual fare.
- (c) Low cost. Their marketing messages consistently emphasise that their prices are cheaper than Singapore. In Malaysia’s case, a 1998 bill to safeguard against over-charging at private hospitals and clinics have also helped¹¹.

18. Nevertheless, **Singapore is still perceived to set the standard for quality healthcare**. Our clinicians and hospitals have achieved some well-publicised medical breakthroughs such as the separation of the Siamese twins, cord blood transplantation, etc. Doctors from the region also continue to refer their patients to Singapore.

RECOMMENDATIONS: HOW TO COMPETE

POSITIONING

19. Develop a compelling hub with two mutually reinforcing elements

- (a) **Clinical Medical Hub**: Extend our lead over regional competitors in terms of medical expertise, to differentiate Singapore from the competition. Institutions such as Mayo Clinic exemplify the Clinical Medical hub, with an enduring brand name built on service, research and educational excellence. As a result, it has extensive market reach of about 10,000 patients from 120 countries, generating \$5.5 billion worth of revenues a year¹². Its reputation for cutting edge medicine allows it to command a price premium for even primary care services, for example, charging \$25,000 for a general medical examination.

¹¹ The Private Health Care Services & Facilities Act 1998.

¹² Sources: ST, 14 December 2001; Mayo website

- (b) **Economic Medical Hub:** Attract large volume and high throughput of patients for economic impact and economies of scale. The bulk of the demand is for “bread and butter” secondary care, relative to tertiary or quaternary care. “Amortising” investments in expensive equipment and scarce medical expertise over a larger number of patients reduces the average cost and enhances cost-competitiveness. Furthermore, this provides the critical mass for management initiatives to focus on productivity and process improvements.

NATIONAL MARKETING INITIATIVE:
TO REGAIN MINDSHARE AS THE REGION’S MEDICAL HUB

20. A key factor behind Bumrungrad Hospital’s rapid growth is arguably its aggressive marketing. With rising consumer affluence and the growing competition, it is necessary for Singapore to undertake a coordinated marketing initiative to attract foreign patients, and build robust facilitation processes and referral networks in the region. This would include the following:

- (a) **Review the regulations in the Public Hospitals and Medical Clinics Act (PHMCA)** with a view to relax restrictions on responsible, institution-based advertising locally and abroad.
- (b) **Establish and communicate an internationally recognisable quality brand** for Singapore’s healthcare services sector emphasising trust, safety and excellence. This would complement the marketing efforts of individual healthcare institutions.
- (c) **Strengthen price transparency** by publishing data on professional fees charged by various specialists, estimated hospital bill size, and the prices of drugs and other items.
- (d) **Establish one-stop centres in key regional markets** to make it more convenient for foreign patients to come to Singapore. The centres would assist potential patients with visa applications, finding suitable doctors and accommodation in Singapore, etc. The one-stop centre would also market Singapore’s healthcare services to target groups such as expatriates; organise medical trade missions; and host “familiarisation” trips for regional doctors to visit Singapore. London Medicine and AusHealth are two organisations set up for similar purposes.
- (e) **Streamline the immigration process** to meet the needs of medical visitors e.g. pre-approved visas for elective surgery cases, and expedited approval for emergencies.
- (f) **Expand the regional referral network** by:
- Leveraging on doctors from the region who have trained in Singapore
 - Hosting international / regional medical conferences and exhibitions and training visits. For instance, in 2000, Singapore played host to 31 such healthcare events.
 - Investing in regional hospitals and clinics.

REDUCE MANPOWER SUPPLY RIGIDITIES:
TO ENHANCE COST-COMPETITIVENESS

21. Manpower expense is the major cost component in the healthcare industry, accounting for about 44% of the industry’s operating expenditure¹³. Unless manpower supply or efficiency increases in tandem with the growth in demand, cost pressures will mount, thus further eroding our competitiveness vis-à-vis neighbouring countries.

(a) Various studies including the Medical Education Review Panel have concluded that there is a need to **increase the supply of doctors** in Singapore. Short-term responses include a re-opening of the medical register (the list of recognised medical degrees) to the pre-1993 list¹⁴; and establishing clear processes for accreditation of foreign doctors. A longer term solution would be to increase the number of doctors trained in Singapore via the proposed NUS-SGH Graduate Medical Programme.

(b) **Optimise the use of limited medical expertise.** There is currently a shortage of doctors relative to patient load in the public sector compared to the private sector (see Table 6).

Table 6: Distribution of Doctors and Patients in Singapore

	Private		Public/Restructured	
	<u>% of total</u>	<u>Number</u>	<u>% of total</u>	<u>Number</u>
Total Doctors	52%	2,809	48%	2,586
Specialists	45%	856	55%	1,036
Inpatient Admissions	21%	82,500	79%	305,532
Average inpatient admissions per specialist	96		295	

Source: MOH, Singapore Accreditation Board

- To address this, a common practice in Australia is for **doctors to hold dual appointments in the public and private sector**, thus catering to the needs of both cost-sensitive patients and comfort-conscious patients. Visiting Consultants¹⁵ and the Faculty Practice Plan¹⁶ represent positive steps towards this. Such arrangements should be implemented on a wider scale to even out the manpower distribution impactfully, e.g. by allowing every public sector doctor to work up to a specified proportion of their time, say 30%, in the private sector.
- **The Government could make greater use of private practitioners to provide public healthcare services to Singaporeans.** For example, under the Primary Care Partnership Scheme, public polyclinics engage private GPs to provide outpatient healthcare services to needy elderly. The patients pay polyclinic charges and the government provides a subsidy to participating GPs.

¹³ Source: Department of Statistics, for Year 1999

¹⁴ After 1993, the number of officially recognized foreign medical schools was reduced from 178 to 28.

¹⁵ Private practitioners spend a portion of time in the public sector

¹⁶ Public sector doctors spend a portion of time in the private sector. By giving public sector doctors “the best of both worlds” it may help to retain them in the public sector.

This model can be progressively extended to inpatient services in the future. Patients are subsidised up to a fixed amount, with which they can choose to be treated in public or private hospitals. Conceptually, this will represent a repositioning of the Government's role from being a provider of healthcare services to that of a buyer of services for its citizens.

Added benefits include lower prices and better service for consumers arising from the greater competition. Enabling subsidized patients to choose their care providers, albeit with varying levels of co-payment, would also help to neutralize the concern regarding the "demonstration effect"¹⁷.

- (c) **Attract a larger supply of nursing and paramedical manpower**, with more progressive career paths. Restructure their functions with a view to optimise their roles so as to enhance efficiency and job satisfaction.
- (d) **Facilitate recruitment of foreign nursing and paramedical manpower.**
 - To retain nursing and paramedical manpower, the income criteria for granting such applicants Q1 employment passes should be relaxed. This would enable their family to live in Singapore.
 - Empower approved healthcare providers to recruit qualified paramedical manpower and be responsible for their standards. This would streamline the employment pass application process by removing the need for the Ministry of Manpower to seek MOH's inputs.

FISCAL INCENTIVES

22. We recommend the introduction of

- Group relief
 - Concessionary tax rate for income generated from the provision of healthcare services to non-resident patients
 - Zero-rating on GST for healthcare services
 - Removal of withholding tax on fees earned by visiting specialists, as well as
 - Institutional zoning for land occupied by hospitals.
- These fiscal incentives together with the recommendations in para 21 above will help enhance our cost competitiveness.

CONCLUSION AND NEXT STEP

23. Regional demand for healthcare will rise in tandem with the projected trends of rising population, life expectancy and purchasing power in Asia. We aim to expand Singapore's share of this growing market from just under 1% today to 3% by 2012. This would represent 1 million foreign patients contributing some \$2.6 billion of VA to our GDP.

¹⁷ The "demonstration" effect refers to the concern that subsidized local patients may demand the public sector to provide the levels of care and convenience that non-subsidized foreign patients receive in the private sector.

24. Singapore can compete by emphasizing the twin aspects of being a Clinical Medical Hub and Economic Medical Hub, which interact in a synergistic way. A national marketing initiative and the restructuring of supply rigidities to enhance cost-competitiveness, are key imperatives.
25. HSWG will submit a second paper to the ERC to address the implications of our medical hub ambition on other national objectives. These include:
- (a) The concern that the promotion of healthcare services to attract foreign patients could inadvertently spur demand for unnecessary services by local patients, and cause local healthcare costs to rise;
 - (b) The concern that subsidized local patients may demand the public sector to provide the levels of care and convenience that full paying foreign patients receive in the private sector;
 - (c) The need to ensure that an increase in the supply of doctors to respond to the rising demand does not impact negatively the Government's effort to have an even spread of Singapore's indigenous talent pool to the different professions and jobs; and
 - (d) The need to ensure that healthcare R&D continues to be supported so that Singapore healthcare services sector can excel and be a source of competitive advantage. This objective of being a Clinical Medical Hub is also synergistic with the national thrust to develop the research-intensive Biomedical Sciences industry as a key pillar of the Singapore economy.

END

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