

## **Ophthalmology in the Emerging Asian Economies**

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**Dr Richard F T Tan, FRCS, FCOph, AM(S'pore)  
Senior Consultant Surgeon & Head  
Dept of Ophthalmology  
Singapore General Hospital**

The Minister of Health, Datuk Lee Kim Sai, the Director General of Health for Malaysia, Tan Sri (DR) Abdullah, President of the Malaysian Ophthalmology Society of the M.M.A., Dr Dunstan Fernandez, Distinguished ophthalmologists and friends. (slides)

The last 2 decades have seen the emergence of Asian Nations having a significant impact on the world economy. Japan's resurgence from the catastrophe of the last war led the way for Asian States like Malaysia, South Korea, Taiwan, Hong Kong and Singapore to exert themselves in the global economic scene. The last 20 years have also witnessed the impressive increase in GDP Growth rates and other economic indicators. Standards of living and health care delivery systems have improved, patient expectations have changed, the rising cost of health care, research and the demands of the ever changing medical technology are major issues which I will address.

Each Asian country has its problems. I will outline the state of Ophthalmology in those Asian countries where I have first-hand experience.

Indonesia, a vast country with an enormous population dispersed over a few thousand islands has tremendous potential and will no doubt have a major economic impact on SE-Asia and indeed the Asia-Pacific Rim economics. Ophthalmology has developed rapidly in the last decade with subspecialties in major hospitals, both private and public. State of the art in VR work, IOL implantation, orbital surgery, has been achieved in the last few years. A number of surgeons have spent time in various centers in the US for subspecialty training. However, these expertise and ever general ophthalmic care is available only in the cities. Ophthalmic service is still deficient in the countryside due to the vast expense of the nation. The 1982 National Survey in Indonesia showed a prevalence of blindness of 1.2% of the total population. In recent years through government approval, eye care is integrated through the Primary, Secondary and Tertiary Health Care Systems in the Country. Nutrition-related diseases, ocular infections and cataracts are the major causes of blindness. With increased economic development through the Government's educational programmes Indonesia will see a significant in ophthalmic care in the coming years.

Malaysia's 1990 GDO growth rate of 9.4 % is the star performance in SE Asia and with this the parallel improvement in the standard of living and ophthalmic health care services. The formulation and implementation of the National Eye Care Programme has borne fruit. Thailand and the Philippines are similar in many aspects. Ophthalmic care is advanced in the urban areas but inadequate in the rural where a vast population reside. In most SE Asia countries there is an uneven distribution of ophthalmologists programmes, health care organizations and volunteer services have assisted in giving quality care to the countryside. An Eye Care delivery system for the rural communities is somewhat a responsibility of Government.

In Thailand for example, I have seen excellent cataract surgery and state of the art Technology in hospitals in Bangkok, and state of the art technology in hospitals in Bangkok, the most up-to-date IOC's are being used with commendable results but in the rural, antiquated and indeed impermissible procedure eg couching for cataracts are still being used and complications are either left unattended or a minority may be referred to qualified surgeons in the towns. Like Thailand, the Philippines also experienced a vast difference in Ophthalmology when vast population unfortunately do not benefit from it. Two years ago I was invited as Course Director for a course on "Advanced Vitreoretinal Surgery" in Manila at the Philippine Academy of Ophthalmology Conference and at that time there were 3 Vitrectomy machines in Manila. Now they have 20 machines. Subspecialisation is being actively pursued a few years ago in the Philippines just like in

Indonesia, Thailand and Malaysia. Singapore has been classified as an NIE and being a small city State Quality Ophthalmic care is easily accessible to almost everyone. Development in subspecialisation is further and in the near future basic and laboratory research will be established. Government support and endorsement is crucial in this area of advancement.

Hong Kong is a little different where Government support is not so forthcoming and private enterprise influences the development of ophthalmology. Development of subspeciality has not really caught on in Hong Kong. Taiwan has been fully developed in Subspeciality fields and Institutions like the Chung Kang Memorial Hospital and the T Veterans Hospital have spearheaded subspecialty training and research.

South Korea is somewhat like Taiwan and has developed impressively in ophthalmic care in the last decade. Japan is a fully industrialized nation and has problems quite different from the Emerging Asian Economics.

No discussion on Asia is complete without mentioning China and India, 2 countries with fascinating contrasts. China and India have many things in common not just their population size. The China I know 5 years ago is very different from the China I know today. New equipment and technology has led to an improvement in Ophthalmic health care services. Microsurgical techniques are being acquired with the setting up of the institute of microsurgery in Tianjin. However, the general lack of equipment and proper training programmes for Ophthalmologists throughout China has hampered rapid development. The Cultural Revolution has set China back 10 years and perhaps the Tian An Man incident may also exert an adverse effect. Technics are generally antiquated and modern operating microscope, and technology eg Lasers and Vitrectomy machines are still not readily available in most Eye institutions. Surgeons in China are very dextrous in microsurgery and I have no doubt that they have enormous potential given the training and state of technology equipment. In recent years China has experienced a remarkable health care revolution; while the communists have yet to deliver on their promises to provide China with lives that are prosperous and free, they have achieved the feat of offering their people lives that are long and healthy. They have established a health care network that is widely regarded as a model for the 3rd world. A return of primary to tertiary referrals. It is interesting to note that life expectancy at birth in Shanghai is now 75.5 years compared to a life expectancy in New York of 73 years for whites and 70 years for non-whites. China spends only 5% of GNP on health expenditure compared to 11% in the US.

China spends money on health education programmes, to quote the Director of a Shanghai Hospital. "China is a poor country and we cannot afford a lot of equipment. Where the money has the biggest impact is in health education.

The rural community in India comprises 77% of the total population. A survey in 1988 showed a staggering backlog of 7.53 million people requiring surgery for mature cataracts (including Hypermature and Morgagnian cataracts).

In 1971 to 1974 cataracts accounted for 55% of the blindness, in 1981-86 cataracts accounted for 81% showing almost a 30% increase. Infection and malnutrition accounted for 2% of blindness in 1971-74 and only 0.04% in the 1981-86 survey. Infection has also decreased with Trachoma 5% in 1971-74 and 0.2% in 1981-86. The National Programme for the Control of Blindness has laid priority on the removal of cataract blindness and has instituted measures including mobile units, certified surgeons, assistance from voluntary agencies to undertake cataract relief work.

I will address some specific and current issues confronting ophthalmology in the Asia Pacific Region.

The Rising Cost of Ophthalmic Services.

A draft of new Medicare rules in the US says an "explosion of high-cost medical technologies" has made it necessary to consider cost in deciding whether to expand, continue or terminate coverage of specific services.

Since the inception of Medicare 25 years ago, federal officials have not decided whether to cover new services and procedures eg magnetic resonance imaging, and Excimer LASER on the basis of their safety and efficacy.

Now the government intends to consider another factor: whether an item or procedure costs more or less than alternatives already approved for use.

The overall cost of Medicare to reach US\$100 billion (S\$181 billion) this year. Asian countries are already heading in this direction.

Medical equipment plays a central role in ophthalmic services provided by doctors and hospitals.

One view says the new proposal is troubling because it lays a foundation for the "rationing of medical technology". Moreover, they question whether the government has the legal authority or the expertise to evaluate "cost-effectiveness" as a factor in deciding whether Medicare should pay for particular items and services. Asian ophthalmology will begin to face these problems in the very near future.

Expensive equipment such as the Excimer LASER, and the dye LASER may be useful but their prohibitive costs have yet to be fully justified. In most cases few benefit from the purchase of expensive equipment. Priorities have to be set in order. In India for instance, appropriate efforts are made to channel finances towards providing public education programme and cataract surgery other than on high cost capital equipment. Health insurance may be a solution in the more developed societies to combat rising cost of medical care.

### **Subspecialisation**

The last few years has seen an increasing interest and indeed a demand for subspecialisation. The demand varies in different Asian countries. With ever increasing knowledge and advancement in surgical technics in various fields there is no doubt a need for subspecialty training. Good primary and secondary ophthalmic health care must be achieved before tertiary level service can be developed. A critical mass of ophthalmic surgeons is necessary.

I feel however, that too early subspecialisation does not give an individual the necessary perception and experience in general ophthalmic care.

A specific subspecialisation training programme must be drafted based on the countries' national needs and the ophthalmic health care infrastructure.

### **Restructuring of State-Owned Hospitals**

The privatisation of State hospitals and health care systems is a situation evolved out of increasing government subsidy and to enable faster development and less bureaucratic constraints. Major institutions in the US have taken this route and are autonomous in their operations. The progressive restructuring of Singapore's public hospitals in the last 2 years is a modification of the American system. The results have yet to be fully evaluated.

Most of the Asia's ophthalmology is clinical and service oriented. In time to come research will be enhanced when the number of eye surgeons reaches a critical number. Research facilities are being actively developed in most East Asian countries and this will attract ophthalmologists interested in basic investigation.

In conclusion, what will happen in the next few years? Asia's "dragon economies will see declining growth over the next two years as exports weaken, and must restructure for the long term. The long-term outlook for economic growth in Singapore, Hong Kong, South Korea and Taiwan "will depend critically on the success of these economic restructuring moves" after a decade of export-driven expansion.

Barring major global economic influences the East Asia Economies will herald the Pacific era with Japan playing a principal role. Medical advances will be phenomenal, achieving standards equal to if not surpassing some major Western countries. Quality ophthalmic care will be more costly, government imposed Medisave or other health security programmes will be implemented to combat rising medical expenses. Health insurance will see a dramatic growth in the coming years when medical bills surpassed medisave accounts. Governments are beginning to feel the problem of providing good medical care for the lower income group and the poor. Can Governments continue subsidising their bills? I see a trend towards privatisation and restructuring of Public

Hospitals. We will see advances in research, teaching and training of our ophthalmologists and in time subspecialisation can be done within Asian countries. I see ophthalmology as an increasing challenging speciality with advancement in LASER technology, vitreo-retinal work, cataract and implant techniques and ophthalmic research.

The next decade belongs to the Asian Pacific Region and it will see ophthalmology, like their economic strength develop to unprecedented heights.

<b>Asia Development Bank Growth Projections GDP Growth Rates (%)</b>			
	1990	1991	1992
<b>NITEs</b>			
Hong Kong	2.3	3.5	4.5
South Korea	8.7	7.5	8.8
Singapore	8.3	5.9	6.5
Taiwan	5.1	5.9	6.0
<b>SOUTHEAST ASIA</b>	7.4	6.5	6.9
Indonesia	7.0	7.0	6.8
Malaysia	9.4	9.5	8.7
Philippines	2.5	2.1	4.1
Thailand	10.0	7.4	8.0
<b>WORLD</b>	1.7	1.0	2.7

<b>Economic Development has Improved Standards of Ophthalmic Services in East Asia in the Last 2 Decades</b>	
The Emerging Economies of Asia	
South East Asia	Newly Industrialised Economies
Indonesia	Hong Kong
Malaysia	South Korea
Philippines	Taiwan
Thailand	Singapore
Brunei	
Singapore	
<b>Subspecialisation in Ophthalmology Training and Research Exchange of Knowledge and Ideas</b>	

**Major Problems Exist**

- Inadequate number of trained eye care personnel
- Uneven distribution of ophthalmologists in urban and rural communities
- Lack of a comprehensive national eye care programme
- Government support
- Rising cost of ophthalmic services