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SMA NEWS

Demography of Healthcare Services in Singapore

Gathered at the morning tea break. (L-R) Prof Sir Peter Morris, President, Royal College of Surgeons of England (RCSE), Dr Colin Song, Chairman, Chapter of Surgeons, Dr Balaji Sadasivan, Minister of State for Health and Transport, Prof K Satku, Director of Medical Services, Dr Leela Kapila, Vice President (RCSE), Dr Gerard Panting, Communications & Policy Director, Medical Protection Society, UK.

Editorial Note:
We reproduce the speech by Minister of State for Health and Transport, Dr Balaji Sadasivan, at the Combined Meeting of the Chapter of Surgeons, Academy of Medicine, Singapore, with the Royal College of Surgeons of England, on 27 May 2004.

Health services in Singapore are built on a solid British foundation which was laid when our medical school was opened 99 years ago when Singapore was a part of the British Empire. Successive generations of our graduates upon obtaining the M.B.B.S. degree would proudly register with the General Medical Council in England and many like me have journeyed to the United Kingdom to obtain our post-graduate fellowships in the Royal Colleges. We are therefore deeply honoured to host this first Combined Meeting of the Chapter of Surgeons, Academy of Medicine, Singapore, with the Royal College of Surgeons of England. I would like to welcome all our English surgical colleagues and our foreign guests to Singapore and hope your stay in our country will be a memorable one.

Unlike the usual surgical topics that are incisive and sharply focused, I have asked to give this keynote address on a very wide topic – the Demography of Healthcare Services in Singapore. Since the breadth and depth of this topic is enormous, I will try and give a helicopter view of our healthcare services and then highlight some of the challenges we face.

Singapore is a small city-state with a resident population of slightly over four million. The Ministry of Health works in partnership with medical professionals, healthcare providers and statutory boards to improve and safeguard the health of Singaporeans.

We have a public-private partnership system of healthcare delivery. The private practitioners provide primary healthcare services to 80% of the population while the government polyclinics serve the remaining 20%. For the more costly hospital inpatient care, it is the reverse situation with 80% of the hospital care being provided by the public sector and the remaining 20% by the private sector.

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Singapore had 6,292 registered doctors in 2003. This gives us a doctor to population ratio of 1:700. Almost half of the doctors are in the public sector. Four out of every ten doctors are trained specialists with postgraduate medical degrees and advanced speciality training. This includes over eight hundred surgeons.

BURDEN ON HEALTHCARE SERVICES

Like most of the developed countries in Europe, America and Asia, we are now faced with a growing realisation that demographically our population on the whole is ageing. This was brought about by an increase in life expectancy combined with a declining birth rate. The average life expectancy at birth for Singaporeans has increased from 63 years in 1970 to 78.5 years in 2003. At the other end of the spectrum, the birth rate has been declining with the crude birth rate reaching 11.4 births per 1000 population in 2003, which is half of what it was in 1970. By 2030, 18% of our population will be above 65, compared to 8% in 2003.

As people are living longer, many will suffer from the chronic conditions associated with ageing, thereby flooding the healthcare system with patients and presenting a clinical challenge for medical practitioners and the healthcare system. Older people frequently suffer from concurrent illnesses and disabilities and hence coordination of their medical treatment will also be a challenge.

Besides this demographic shift, we are also undergoing an epidemiological shift. In the 1950s and 1960s, infectious diseases like tuberculosis and gastroenteritis were among the top leading causes of death in Singapore. Today, diabetes, stroke, ischaemic heart diseases and cancer are the major conditions affecting Singaporeans, accounting for more than 60% of all deaths.

However, this does not in any way reduce the importance of the ever-present threat of major infectious diseases such as tuberculosis and HIV/AIDS. The SARS outbreak and more recently, the avian flu outbreak, have sensitised us to the human and economic impact that infectious diseases can have. In addition to natural infections, we also have to be prepared for the possible deliberate spread of infectious agents such as anthrax through acts of bioterrorism.

The healing process of healthcare is itself evolving and increasingly, it is dependent on expensive technology and expensive drugs. Modern medicine has come to the point that it offers much more than what societies can afford. The community therefore depends on the medical profession to make choices and discriminate between advances that improve the well being of patients and advances that are no more than frills which are of little or no medical value. Our healthcare professionals must stretch their abilities to include skill sets that will allow them to make these judgments and advise patients on cost-effectiveness issues.

All this is happening against the background of a population that is more informed and has higher expectations than previous generations. With the internet, everyone has virtually unrestricted access to medical information from across the world as well as to much misleading misinformation which is also on the net.

CHALLENGES AND SOLUTIONS

I will now highlight some of the specific areas where demography poses challenges. In responding to these challenges, I believe the medical profession must follow three principles:

First, the profession must be willing to adapt to change. During the SARS outbreak, doctors, nurses, allied healthcare workers and hospitals showed amazing flexibility in changing their work processes. So I am confident we have the ability to adapt.

Second, medical care should be holistic. Too often, specialists are like the proverbial blind man feeling a small part of the elephant and mistaking that part for the whole. Hence, specialists are sometimes unable to appreciate problems beyond their specialty. So for good holistic care, family physicians are important. Patients benefit when their medical care is coordinated by a family physician who will serve as their friend, medical advocate and doctor, helping them navigate their way through a complex and changing healthcare system.

Third, what patients want is "quality of life", that is, the ability to live as long as possible with some reasonable enjoyment of that life. Healthcare systems too often concentrate on "quality of care" which is often technologically driven and measured using raw data such as mortality or survival rates. "Quality of care" often does not take into consideration the pain and suffering those patients have to endure, or the quality of life of the patient. We are here to serve patients. Therefore, what is important to the patient, that is, "quality of life" should be more important than "quality of care" in making medical decisions.

Let me now discuss some of the demographic challenges we face and I will begin at the very beginning of life, that is, birth. In 1957, when the crude birth rate was 43 per thousand, Singapore had less than 25 O&G specialists. In the 60s, the old KK Hospital held the world record for having the most babies delivered in a year. Given this high birth rate, the Obstetrics and Gynaecology services had to be geared up. Today, we have more than 10 times the number of O&G specialists. The register shows 253 O&G specialists but the birth rate is only one quarter that of 1957 – about 11 per thousand population. What are the consequences of this relative over-supply of professionals dealing with birth? Fortunately, O&G specialists have an alternative and they are doing more gynaecological work as the obstetric work decreases. Other specialists involved with birth may have to make greater changes. We have excellent neonatalogists who have been doing an outstanding job saving newborn babies. As a neurosurgeon covering the neonatal unit, I have seen tiny babies less than 1 kg in weight miraculously saved by our neonatalogist. Unfortunately, some of these babies

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have brain injury and need life long care. I am told that every month, about 4 babies with brain damage leave the neonatal ICU in Singapore. In general, a country should have about 1 neonatal bed for every thousand births a year. We have more than 60 neonatal ICU beds for the 36,000 births a year. Clearly we have more than adequate resources for neonatal care. What we need are more community resources to help the 50 or so brain-damaged infants leaving our neonatal ICU each year. Currently, after a certain age, these brain-damaged children are discharged from follow-up. Suddenly, parents find that their child has been discharged even though these children need a lifetime of care. Human life is not an electronic device with a warranty date after which there is no responsibility. These parents need help and they need a champion in the community to look after the needs of the brain-damaged children throughout their lifetime. I am heartened that our neonatalogists are taking a holistic approach and championing the needs of these children.

Moving on to healthcare services for children and young adults, our main emphasis is preventive medicine. Immunisation coverage is the key to achieving this. The national childhood immunisation programme has resulted in control of most vaccine preventable diseases such as polio, diphtheria, rubella and measles. We are now focusing on another dangerous but vaccine preventable disease – hepatitis B. Hepatitis B is the commonest cause of chronic liver diseases and hepatocellular carcinoma in this part of the world. The National Immunisation Programme for hepatitis B was initiated in 1985. This programme has been quite successful in eliminating the hepatitis B carrier state in children below 15 years age. However, in a survey done in 2001, it was found that there is still a large proportion of the population who has no immunity, especially those in the 18-29 years age group where only 28% are immune. In view of this, we have initiated a four-year intensive hepatitis B immunisation programme for students in secondary schools, junior colleges, and tertiary institutes. These students were born before the start of the national programme.

The next group of our population, who form the majority, are the adults in the 20 to 65 years age group. This group carries the economic and social burden of our society. Young adults consume the least health resources. But sometimes, they do fall ill and need expensive treatment. Where a treatment can save their life and return them to a productive life in society, we should find a way to provide that treatment even if it is expensive. This is what my Ministry has done with regard to right lobe liver transplant. We have allowed our public restructured hospitals to buy this service from the private hospitals for subsidised patients in the public hospital so that this treatment is available to all young Singapore adults if they need it.

We can provide better care for people if as a society we adopt a socially efficient approach to helping each other. HOTA, or Human Organ Transplantation Act, is an example of social efficiency in providing better healthcare. Every year, many patients die from a lack of cadaveric organs for transplantation. The waiting time for a transplant can be shortened only if there is an increase in the number of organ donors available. HOTA, enacted in 1987, allowed for the kidneys of Singaporeans and Permanent Residents aged between 21 and 60 years old who die in hospitals from accidents to be used for the purpose of transplant to kidney failure patients, unless they have specifically objected to this in their lifetime. However, given the high incidence of end stage renal disease as well as need for other organs such as liver, heart and cornea, HOTA was revised earlier this year to allow the use of these organs in addition to the kidneys and to extend the statute to deaths from non-accidental causes. The passage of the amendments to HOTA gives hope to the many that are on the transplantation waiting list and makes us a more socially efficient society.

As the young adults grow older, they are more prone to developing chronic conditions such as diabetes, ischaemic heart diseases and stroke which are linked with preventable risk factors such as obesity, hypertension, hypercholesterolemia, unhealthy diet, smoking and lack of physical activity. Recognising the importance of prevention, we started strengthening our existing policies and programmes to promote healthy lifestyles. At the recent 57th World Health Assembly, the WHO Global Strategy on Diet, Physical Activity and Health was unanimously endorsed by the member states and this report has cited Singapore as one of the few countries with successful interventions in reducing rates of chronic non-communicable diseases.

Another problem that affects our younger adult population today is HIV/AIDS. The first case of HIV infection in Singapore was reported in 1985. Last year, a record 242 people were diagnosed with HIV/AIDS. The record number diagnosed could be due to an actual increase in the number coming forward to be tested. On the other hand, it could represent an actual increase in the number of people being infected. The majority of HIV/AIDS patients are males in the 30-49 age group, working in blue collar jobs and who have unprotected sex with sex workers in foreign countries. Recently, I read the comments by some of these Singaporean sex tourists in the newspaper. One gentleman thought that people with AIDS can be detected because they have black dots on their skin. Another said: "I think poor people are safe from AIDS." A third said: "I'm not homosexual so I can't possibly get it." It is quite evident that there is still ignorance about AIDS in our society. Our main AIDS prevention message has been abstinence from sex outside marriage. This message is not having an effect on this high-risk group. The newspapers quoted one gentleman as saying: "The government tells us not to fool around but it's very hard for men." Another said: "Men will still go find hookers, like a cat will definitely eat a fish." We are unlikely to improve the morals of this high-risk group. Nevertheless, we must reduce their risk of catching AIDS because they pose a treat to women in Singapore and

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may pass on their infection to their wives or girlfriends. Our healthcare challenge is to teach safe sex to this high-risk group without sending a message to the community that we are condoning their behaviour.

Coming to the other end of the spectrum of life, let us look at the problem of the elderly. Prior to the 20th Century, average life expectancy was about 45 years. Life-span, which is the maximum age individual members can live to within the species, is between 90 and 100 years for humans. In ancient times, only a few individuals lived beyond 90. Today, more than half of our population will live beyond 75 and many will reach the age of 90. Some of the elderly will be disabled. Intuitively, it may appear that to solve the health needs of the elderly we need more geriatricians and nursing homes. Unfortunately, the problem is more complicated. I recently received feedback on geriatric care. A primary care physician wrote to me to complain that geriatricians are very hospital based and overly investigate patients leaving families with high healthcare bills. He gave an example of a visiting geriatrician who consulted on his patient. Even though the family had agreed that because of the low quality of life, treatment should be conservative, the geriatrician insisted on very aggressive investigation and treatment. Geriatricians and family physicians need to work more closely as both have their strengths. The geriatrician usually has more specialised knowledge but the family physician usually has a more holistic approach because he generally knows the patient and his family much better. Another reason why family physicians are important in geriatric care is that the elderly require geriatric care that is near to or at their homes. Family physicians are therefore in a better position to provide geriatric care. The ideal situation would be one where the family physician would look after the elderly and the geriatrician serves as a resource whom the family physician can consult with in complicated cases.

The majority of nursing homes in Singapore are run by voluntary welfare organisations or VWOs. There are 4,900 VWO nursing home beds and 2,300 private nursing home beds to accommodate the elderly. The nursing homes also provide day care services so that the elderly can stay at home and receive rehabilitation treatment as an outpatient. While inpatient services for subsidised beds are utilised at the rate of 90%, the outpatient services are utilised only at 40%. Earlier this week, I was talking to several journalists who asked me what incentives the government was going to give to encourage outpatient care for the elderly. I pointed out that if the elderly could stay at home and receive outpatient treatment, their quality of life would be better. Families should want what is best for the elderly and I asked them if we have incentivised behaviour that encourages admission of the elderly to nursing homes even if it was not necessary. The journalists laughed which could mean either yes or no. But I think the point to note is that it is important that we ensure that the elderly get the correct management that gives them the best quality of life. The elderly must not end up spending their lives in nursing homes just because it is the financially cheaper option.

The last phase of life is death itself. The major causes of death in Singapore are cancer and cardiovascular diseases. The primary goal of maximising the quality of life should continue for the terminally ill so that they can die with dignity, free from pain and other distressing symptoms. A large majority of patients who receive palliative care in Singapore are cancer patients.

As a civic society, we must ensure that we have sufficient trained manpower to ensure that the dying do not have to suffer avoidable pain and distressing symptoms, and to provide emotional and spiritual support to the patient and his family. The Advanced Medical Directive is a mechanism for patients and families to ensure that they do not end up on a respirator for days before dying and that death will be with dignity. Death is not a subject that people are comfortable talking about. Despite this general public discomfort to talk about death, doctors need to do more in educating families and the public about death and the options families have in dealing with death.

The last area that I would like to highlight today is the need for our healthcare system to be prepared to handle the impact of emerging and re-emerging infectious diseases. The SARS epidemic last year, followed by avian flu this year, has made it clear that infectious diseases can spread from one part of the world to the other in matter of days. The only way to minimise the impact of these diseases is to be on a constant vigil with the help of advanced disease surveillance and outbreak response systems. The Regional Emerging Diseases Intervention Centre, or REDI Centre, which was inaugurated earlier this week at Biopolis is a Regional Collaborative Centre set up jointly by my Ministry and the Communicable Disease Centre, Atlanta, in order to promote regional cooperation, manpower and infrastructure capacity building, and cutting edge research in the area of infectious diseases. We hope that through such collaborations, and by collaborating with the World Health Organization, Singapore can contribute to the regional and global efforts to deal with existing infectious diseases and better prepare ourselves to handle future outbreaks of new diseases.

CONCLUSION

In conclusion, I believe that although the state of health in Singapore is good by international standards and we have come a long way in improving our health status and standard of medical service, we still face many challenges caused by the changing demographic and epidemiological profile of the population. If we take a pro-active stance, we can put in place effective strategies to deal with these challenges before they overwhelm us. We must be willing to continually take stock and revise our strategies as necessary in order to keep Singaporeans healthy. As healthcare professionals, this is our duty and our calling. ■