

THE DOCTOR'S ROLE IN A HIGH-TECH WORLD

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(Lecture presented at the 23rd SMA National Medical Convention)

SINGAPORE MED J 1992; Vol 33: 347-351

When Dr Giam invited me to deliver this year's SMA Lecture, I told him that I did not feel old enough or wise enough to accept his invitation. But he would not take no for an answer ... What really swayed me, in the end, to accept the invitation was the fact that I thought I may have something significant to say in these turbulent times for the medical profession.

How we yearn for the "good old days" when the role of the doctor was so clear-cut! We did our best for our patients - relieved suffering, cured the disease whenever possible, and if incurable, gave comfort to the patient and his loved ones⁽¹⁾. I do not remember having to worry about overcharging, overtesting, or overtreating the patient. I certainly did not have to worry about whether the patient was going to complain against or sue me.

Now all that has changed. A better-educated public and the availability of high-tech equipment have changed and expanded the role of the doctor. Medicine is now a "technology-driven profession: intensive care, renal dialysis, open heart surgery, organ transplantation, computerized tomography (CT Scan), magnetic resonance imaging (MRI), linear accelerator, pacemakers, serum channel autoanalysers, diagnostic radio-isotope studies, percutaneous transluminal angioplasty, lithotripsy, endoscopy surgery, and now Positron emission tomography (PET)⁽²⁾.

The doctor is today expected not only to comfort and cure but also to:

- 1 Be wary about the cost-effectiveness of the investigations and treatment;
- 2 Avoid overservicing (ie overinvestigating and overtreating) the patient⁽³⁾;
- 3 Protect himself against patients who will not hesitate to complain against or sue him;
- 4 Display his charges so that all patients are aware of his fees⁽⁴⁾;
- 5 Avoid overcharging the patient;
- 6 Make sure that the patient is not kept waiting too long;
- 7 Spend more time with the patient, and explain fully all the advantages and disadvantages of the procedure⁽⁵⁾. High-tech medical procedures require more time, not less, to be explained to patients.
- 8 Practise preventive medicine, and teach the patient how to lead a healthy lifestyle, and how to detect early signs of disease;

- 9 Participate in public health education;
- 10 Keep up-to-date with the latest developments in technology. Participate in Continuing Medical Education (CME) programmes to accumulate enough CME points every year⁽⁶⁾;
- 11 Maintain a well-equipped clinic. "If a doctor does not have machines, he is not found in many quarters to be competent"⁽²⁾.
- 12 Participate in "Quality Assurance", "Peer Review" and "Medical Audit" Programmes⁽³⁾;
- 13 After treatment, rehabilitate the patient, so that he can resume normal life;
- 14 Co-ordinate with the other health care workers⁽¹⁾;
- 15 Decide on whether the quality of life is worth preserving. Is quality of life more important than quantity of life? Are we prolonging life or prolonging dying^{(2)?}

I do not wish to delay the evening's programme any more than is necessary, and will therefore highlight only the more important issues.

Progress

For those who yearn for the good old days, I am afraid they will never return. Progress is a fact, and, indeed, a sign of life. "The history of man since his emergence on the planet Earth can be summed up by one word: progress", wrote Konosuke Matsushita⁽⁷⁾. If we oppose progress, we will be going against the tide of history and the ascent of man. But we should be able to determine the direction in which we are making progress. Voltaire was very wise when he said, "It is not enough to make progress: we must make it in the right direction".

Standard Of Health Care

There is no doubt that Singapore has made tremendous progress in terms of the health of its citizens⁽⁸⁻¹⁰⁾. There is no need for me to quote data to prove this. They are generally well-known and frequently quoted. You can also see for yourself the many foreign patients who seek medical treatment in Singapore. The American journalist, Stan Sesser, writing in a recent issue of the "New Yorker" stated that "Even low-income Singaporeans have access to high-quality medical care; doctors at public hospitals in the United States might look enviously at the public wards of Singapore General Hospital"⁽¹¹⁾.

"The local doctors have succeeded in making western medicine acceptable to the population at large, so that modern health service demand has greatly increased in quantity and the service has improved in quality" (Dr Gwee Ah Leng)⁽¹²⁾.

Health Care Costs

Health care costs are increasing rapidly in every country. There is again no need to quote you the data^(13,14), which are generally well-known. But what is not generally well-known is that "By far, the most important factor - in common with most branches of industry - is the wage bill, which accounts for 70 - 80% of the overall costs of the National Health Service" (Sir R Hoffenberg)⁽¹⁵⁾.

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The situation is the same in Singapore, and this was confirmed by the Minister for Health, Mr Yeo Cheow Tong in Parliament on 17th March 1992. He said that it costs more to run the Singapore General Hospital (SGH) than the entire MRT System, and that 70% of the costs went to the staff who were often highly skilled, and the rest to medical equipment, drugs and maintenance. SGH has 4,000 trained staff and requires S\$270 million a year to run. This works out to be about three-quarters of a million dollars a day.

High Technology

There is no doubt that technology has improved the quality and duration of life. The sword of technology, however, is double-edged⁽¹⁶⁾. Technology has become a major part of today's health care costs. If we do not restrain these costs, technology could consume all of our resources. The question is how much can the State really afford to spend on health care? If no citizen should be denied quality health care because of money, where do we draw the line? Should every citizen who requires renal dialysis, or intensive care be provided with it? "In her book, *Technology in Hospitals*, Russell stated that controlling costs means deciding that some things although beneficial, are not beneficial enough"⁽¹⁷⁾. Should suffering and dying be prolonged by "life-supporting" measures? Should very premature, sickly and damaged new-born babies be saved to become mentally retarded, spastic handicapped children who will spend much of their time in hospitals demanding expert attention? It is a difficult decision to make, whether to spend limited resources on protecting the weak or caring for the healthy. It is an acid test of every nation's resources. "The test of a civilization is in the way it cares for its helpless members" (Pearl S Buck).

There is another undesirable effect of high technology. We should know that machines can never replace the human touch. But I fear that with so many machines around us, we will place more emphasis on findings and tests from these machines than on clinical findings, and neglect patient - physician relationships. "Listen to the patient - he is trying to tell you the diagnosis" said Sir William Osler. With so much emphasis on technological advances, however, new slogans have emerged:

"As a last resort, go examine the patient".

"If the X-rays and laboratory data are negative, how can this patient be sick?"⁽¹⁵⁾

Modern medicine and high technology cannot replace the personal care that we provide for our patients. No matter how well-equipped we are, patients will still need that personal touch. As F John Gillingham said "The secret lies in the end in the personal care of the doctor for his patient. It is 'as it was in the beginning, is now, and ever shall be'"⁽¹⁸⁾. Many memorable speeches have been made to this effect, including the opening address of the 20th Singapore-Malaysia Congress of Medicine by President Wee Kim Wee: "The medical profession must continue to uphold its noble image of being caring, considerate and compassionate."

The News Media

The problems of high technology are compounded by a news media that sensationalises. The public is misled into believing that:

- 1 The new form of treatment is the best;
- 2 The new form of treatment has no complications;
- 3 Everyone has the right to benefit from the new treatment⁽⁹⁾;
- 4 Technology works wonders; "some believe even death can be defeated"⁽¹⁹⁾.

Patients who are razzmatazzed see their doctors demanding the latest treatment. The lay public do not realise that

many of the new forms of treatment are untested sufficiently, of limited value and usually much more expensive. Few technologies live up to their initial expectations. Another frequent target of sensationalism is the "black sheep doctor". The news media continue to "bash" doctors, giving the public the impression that the whole medical profession's ethos is degenerating. Patient expectations rise, complaints increase, and doctors are forced to practise "defensive medicine", resulting in overservicing of patients and increasing health care costs.

I think the Singapore Medical Association (SMA) should hold a forum with the local press and discuss the role of the news media in a high-tech world. I think our local news media has great potential to play a key role in public health education on the use and abuse of high-tech medicine.

Specialisation

The effect of medical specialisation on health care costs is seen in the USA, where 85% of practising doctors are specialists⁽²⁰⁾. With the growth of medical specialisation, and the introduction of medical insurance schemes like "Medicare", greater public education, rising patient expectations and purchasing power, the cost of health care has escalated. At the same time, the number of general practitioners declined, as a result of which people did not have access to primary care, and sought treatment in the hospital emergency departments.

This problem of overemphasis on specialisation has been noted by the Health Care Review Committee on National Health Policies, headed by the Minister of State for Health, Dr Aline Wong. The Committee has recommended greater emphasis to be placed on primary health care, and that "the proportion of doctors who are specialists should remain at about the present level of 40%"⁽²¹⁾.

The National University of Singapore is also revamping its medical course to stress primary health care. This was reported by the Straits Times in an interview with the Dean of the Medical Faculty, Prof Edward Tock, in March 1992⁽²²⁾.

Upgrading General Practice

What I am about to say is based on a report by the SMA Adhoc Committee on General Practice⁽²³⁾, published in February, 1987 during my term of office as President of SMA. This report was prepared by Dr Patrick Kee, Dr Chan Kah Poon, Dr Neo Eak Chan and Dr Wong Wee Nam, with "the aim of catalysing the development of a primary health care par excellence in Singapore". It is a searching and in depth study of primary health care in Singapore, including a review of the British National Health Service.

When I talk about upgrading general practice, I am not thinking about how the General Practitioner (GP) can make more money. My primary concern is how he can better serve the patient. The motto of the SMA is "JASA UTAMA" which is "Service before Self". If ever the SMA should violate its motto of "Service before Self", then I will be the first to resign.

Major Role

General Practice plays a major role in our health service to Singaporeans. Table I shows that the majority of the doctors in the private sector are General Practitioners. Assuming that a GP sees only half the number of patients his colleague in the OPD Clinic sees, the number of patient-attendances in GP Clinics = 11.6 million per annum. Table II shows how this figure is arrived at. The majority of Singaporeans still see the GP when they are ill.

The Problems Of GP's

Many speeches and articles can be found in SMA journals and newsletters describing the hardships of GP's. They go back

Table I - Private Medical Practitioners by Type of Practice, 1989

Type of practice	No.
General Practice	912
Individual	525
Group	387
Specialist Practice	427
Individual	274
Group	153
Working for Private Companies/Commercial/Industrial Organisations	32
Working in Private Hospitals	51
Locum	98
Working in Non-medical Fields	6
Total	1526

Table II - Calculation of number of patients seeing GP's

Annual Clinic Attendances in OPD Clinics = 2.3 million
There are 85 doctors, 5 of whom are part-time
Maternal and Child Health Clinics : 31 doctors handled
747,626 attendances
Total Clinic Attendances = 3 million per annum
Each doctor saw about 70 patients daily. (some OPD doctors see 99 patients a day)
There are 912 General Practitioners
Assuming the GP sees only half the number of patients seen by his colleague in OPD :
Number of patient-attendances = $\frac{1}{2} \times 70 \times 912 \times 365$
= 11.6 million
The majority of patients still see the GP

twenty years⁽²⁴⁻²⁶⁾. More recently, in September 1991, the then President of SMA, Dr W Rasanayagam, wrote a letter to all doctors, again highlighting these problems and beseeching them to try again to reduce some of these problems⁽²⁷⁾. The problems are well known - long working hours, increasing competition, poor job satisfaction, difficulty in getting a locum to cover leave, lack of academic stimulation and loss of self-esteem. These problems adversely affect patient care.

The Solo GP

Table III shows that the majority of GP's work in HDB estates⁽²⁸⁾, are in solo practice and work very long hours. It has been worked out that to make ends meet, the GP needs to see 1,000 patients per month, ie 30-40 patients a day, charging at \$12.00 per patient. Most GP's, however, are charging less than \$12.00 per consultation, inclusive of medicine⁽²⁹⁾, and would therefore need to see more than 40 patients a day. They also reduce or even waive their fees for those patients who cannot afford to pay them.

High HDB Rental

The HDB Rental is determined by tender. There is overtendering by doctors due to over-concentration of doctors in some areas (Table III). There is no designation of HDB premises for clinics, resulting in clustering of clinics in many areas.

Table III - Distribution of Primary Health Care Practitioners by New Town HDB Estate

*New Town HDB Estates	No. of PHC Practitioners			+PHC Practitioner: Population Ratio
	++Government PHC Practitioners	Private GPs	Total	
Ang Mo Kio	8	40	48	1:4400
Bedok	6	54	60	1:3800
Bishan	2	8	10	1:4900
Bukit Batok	3	23	26	1:4300
Bukit Merah	11	58	69	1:3600
Bukit Panjang	2	3	5	1:9600
Choa Chu Kang	-	3	3	1:5800
Clementi	7	34	41	1:2500
Geylang	4	24	28	1:5200
Hougang	4	27	31	1:4000
Kallang/Whampoa	5	30	35	1:4300
Jurong East	3	21	24	1:3500
Jurong West	6	55	61	1:2400
Pasir Ris	-	1	1	1:2800
Queenstown	7	22	29	1:4900
Serangoon	2	8	10	1:5700
Tampines	5	28	33	1:5100
Toa Payoh	7	19	26	1:6500
Woodlands	-	12	12	1:8100
Yishun	2	32	34	1:5600
Total	84	502	586	1:4300

* Based on the HDB New Town Zoning.

+ Based on the estimated population in the HDB Annual Report, 1988.

++ Based on geographical proximity and population served. A polyclinic may attend to patients from more than one HDB estate

The Yishun clinics are a good example. They were highlighted in a report in the Straits Times, October 22, 1990.

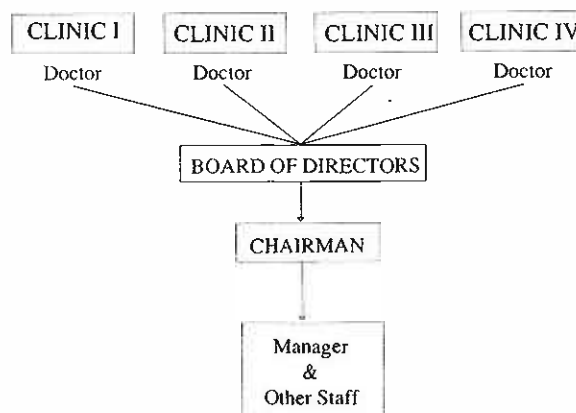
Undercharging

As a result of over-concentration and clustering of doctors, there is fierce competition. Patients doctor-hop, comparing prices. The GP's are also exploited by companies. Incredibly low quotations for contract practices are well-known - such as \$5.00 consultations, and \$7.00 wound dressings.

Lack of Co-operation

Because of fierce competition, there is a lot of suspicion among colleagues, and it has been impossible to bring doctors together to help improve situations. For example, they could share overheads, such as time-sharing the services of the extra nurse or cleaner; they could combine to buy drugs and stationeries in bulk; they could set up joint facilities. They could set up limited companies. Fig 1 shows such an example⁽³⁰⁾.

Fig 1 - Structure of Group Practice



Long Hours

To make ends meet, and to compete with their colleagues, most GP's work more than 60 hours a week. Patients demand to see the doctor anytime they wish. The doctor's physical, mental and social well-being must suffer. He neglects his family. There is no time for continuing medical education. Tired and overworked, he loses interest in his work, and the care of his patients deteriorates.

The solo GP has difficulty taking any leave, even when he falls ill. Locums are expensive. He is expected to be on call 24 hours a day. He is also expected to make house-calls 24 hours a day.

Poor Job Satisfaction

Because of the above problems the GP feels frustrated. There is no recreation, poor family relationship, and he feels isolated. The intense competition encourages commercialisation, and there is no academic stimulation, and no professional satisfaction.

Possible Solutions

1) *Task Force for General Practice*

SMA can form a Task Force with MOH to upgrade general practice.

2) *Community Health Centres*

One of the functions of the Task Force will be to establish "Community Health Centres". MOH and HDB could introduce licensing of medical centres in HDB Estates. HDB predesigned medical centres can be leased out to groups of GP's. This should not be difficult to do, since the doctors are already in clusters.

In February 1992, the Review Committee on National Health Policies recommended that the "Government can reserve land or shop spaces in HDB estates for general practitioner clinics"⁽²¹⁾. This would encourage group practice, and facilities would improve. Night Clinics can be shared and the participating doctors can then close their individual night clinics and take turns to work in the group's night clinic. The scheme can be extended to include weekends, public holidays and perhaps even the afternoons. If such centres are well publicised, they would relieve the congestion in the A & E Departments.

This concept has the support of our Guest-of-Honour, Dr Tan Cheng Bock, when he spoke in Parliament on 18th March, 1992 about the establishment of "Community Health Centres"⁽³¹⁾.

3) *Integration*

We should study how General Practice can complement the Government Polyclinics and other primary health care services such as the Home Nursing Foundation Day Care Centres. The Review Committee has also recommended Community Hospitals, where GP's can admit and follow-up their patients.

4) *SMA Help*

SMA can help in organising locum services. It can also help by running a 24-hour emergency service for urgent cases which the GP is unable to attend to, similar to the French SOS Medecins⁽³²⁾, and the British Contactors' Bureau Service, which has radio-cars for doctors.

Quality Assurance

"Rapid advances in medical technology and the growing opportunities for medical intervention are accompanied by pub-

lic questioning of the appropriateness and adequacy of medical care... This has led to the need for a more systematic evaluation of the quality and effectiveness of doctors' work"⁽³³⁾.

The methods of quality assurance, or peer review, or medical audit range from simple reviews of selected cases to national surveys:

- 1) Review of randomly selected cases;
- 2) Study of specific activities, such as waiting-time, investigations done, and staff rosters;
- 3) Review of complications encountered;
- 4) National surveys of outcomes, such as of Maternal Deaths, Perioperative Deaths, Pathological Laboratory Results, and Availability of Facilities for Renal Dialysis.

The random selection of cases is a simple way of initiating quality assurance, and the following aspects of a case can be reviewed:

- 1) Adequacy of documentation;
- 2) Appropriateness of investigations;
- 3) Errors in prescribing;
- 4) Sufficiency of discharge summary;
- 5) Incidence of complications;
- 6) Delays in referral and action;
- 7) Record of communications with the patient and relatives, and other medical and ancillary services;
- 8) Quality and speed of despatch of reports and discharge letters.

"Most American authorities maintain that only about 10% of the deficiencies revealed by criteria auditing are matters for continuing education. 90% of deficiencies have little or no bearing on the doctor's knowledge or lack of it but are due to failures of hospital management or organisation, resident staff and systems failures, or to poor performance or the genuine human error of simply forgetting to do something. Other studies here pointed to deficiencies in resources, expertise or adequate documentation"⁽³⁴⁾.

Updating the Code of Ethics

The SMA Code of Ethics deals mainly with the doctor - patient relationship, such as doing the patient no harm, respecting individual dignity, and protecting the confidentiality of medical communication⁽¹⁸⁾.

The Code is quite silent as regards our social responsibilities, ie the doctor-society relationship. I would urge SMA to add a chapter on the responsibility of the doctor to society. This could include the following:

- 1) "I will do whatever I can to prevent disease or injury and to promote good health.
- 2) Conscious always that the cost of health care is borne by the people, I will do nothing wasteful or without justification.
- 3) With utmost effort I will attempt to keep myself well informed on advances in medical knowledge.
- 4) As a socially conscious citizen, I will be alert to health hazards of the environment, join with others to eliminate such hazards, and do everything possible to advance the welfare of all the people.
- 5) I will serve cooperatively with other health workers, in the interests of effective provision of health service.
- 6) As a research worker, I will subsume personal ambition, and resist the pressures to present premature results with excessive enthusiasm⁽²⁰⁾."

The SMA Code of Ethics is taught to students in our medical school. Prof Edward Tock, Dean of the Medical Faculty, told the Straits Times in March 1992 that ethical, legal and economic issues are more crucial with high-tech medicine. "We have to give students a good education in ethical principles⁽²²⁾". They need to be taught the appropriate use of high-tech equipment for cost effectiveness.

It is hoped that with these amendments, medical students will gain a greater sense of social responsibility.

Recap

Mr President, I have made several practical suggestions which, I hope, you will include in your Council's agenda:

- 1) Update the SMA Code of Ethics to include the doctor's social responsibilities;
- 2) Upgrade General Practice by forming a Task Force to establish "Community Health Centres", integrate with other primary health care services, run a 24-hour SOS emergency service, and organise locum services;
- 3) Hold a forum with the local news media on "The Role of the News Media in a High-Tech World".

Conclusion

Mr President, do not let these tumultuous times discourage us. I believe we are in the throes of creating a great health care system. I would like to think that as doctors in Singapore we are not just earning a living, but helping to create one of the best health care systems in the world.

May I conclude with some words of inspiration from Dr Benjamin Mays:

"The tragedy of life does not lie in not reaching your goal. The tragedy lies in having no goal to reach. It isn't a calamity to die with dreams unfulfilled, but it is a calamity not to dream. It is not a disaster to be unable to capture your ideal, but it is a disaster to have no ideal to capture. It is not a disgrace not to reach the stars, but it is a disgrace to have no stars to reach for. Not failure, but low aim is sin."

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