

Future Challenges in Medicine

No, No to the Commercialisation of Medicine

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We live in a fast changing world. Medical technology advances by leaps and bounds. Society is evolving rapidly. Doctors and their practice have no choice but to adapt to these changes. A singular change is already too evident in Singapore. It is the multitude of threats to professionalism posed by the corporatisation and the increasing commercialisation of medicine. It is critical that physicians reassert the profession's key advocacy role on behalf of patients.

We should not allow medicine, with its fundamentally altruistic and patient's welfare first philosophy, be replaced by a complex, profit-driven corporate system with capitalistic values⁽¹⁾. Only by maintaining a practice governed in the long-standing values of the profession will the health care needs of patients be truly served in an efficient and cost-effective manner. The inherent clash of values between business and medicine I now wish to highlight.

The 5 major capitalistic values emphasise the following; profit, competition, responsibility to stockholders, services driven by the market and standards set by external forces. In contrast, the 5 major values of the medical profession however have traditionally emphasised service, advocacy, altruism, services driven by the application of a specialised body of knowledge, and standards set and maintained internally. Further, capitalistic values stress on consumerism, short-term goals and giving society what it thinks it wants. On the other hand, the medical profession stresses humanism, long-term goals and meeting society's needs.

Let me contrast consumer and patient. Consumer comes from the Latin word "consumere", which means, "to eat completely". Physicians care for the suffering, not for those who consume. Physicians are not a commodity but professionals. William Osler had this to say in 1903, "the practice of medicine is not a business and can never be one... Our fellow creatures cannot be dealt with as man deals in corn and coal"⁽²⁾. The conflict about whether the practice of medicine represents, at its best, a special relationship between physician and patient, or a commodity that is subject to business transactions, reflects to some extent the clash of capitalistic and professional values. The challenge to us today is to ensure the preservation and strengthening of professional values that have defined the success of medical education and medical care. Failure to do so will abrogate our responsibility not only to the physicians we educate but also to the patients and society we serve. There will be increasing pressure on physicians to adopt business or trade strategies in the name of cost containment and of competition in the health care market place. These strategies run directly counter to the professional standards and are a potential threat to Medicine's status as a profession. The emphasis on finances must not erode Medicine's professionalism; medicine must not become deprofessionalised⁽³⁾. It is our responsibility to pass the torch of professionalism to the next generation of doctors.

What are the basic components of professionalism?

Paramount among these qualities is an ethical code more stringent

than society's legal code. This code demands that professionals place public interest ahead of self-interest. So a profession is by definition, a public trust. So long as a profession enforces its code effectively, society will grant the profession autonomy. Trades in contrast have a proprietary orientation, existing primarily to produce goods or services that will provide a livelihood for the trade members. Because trades by definition act from self-interest, society regulates trades.

A professional code of ethics compels members to adhere to high standards. In an ideal world, the phrase 'ethical professional' would be redundant: one must be ethical to be a professional. Trade workers have no implicit or explicit contract to serve society. Trade workers place financial interest above product quality; they may produce high or low quality products depending on which will generate the most money for themselves and their business. Their job is only a means of livelihood.

Trades use the corporate structure which is a hierarchical organisation with predetermined lines of authority and communication. Professions use the community structure which is a voluntary gathering of people united by a common goal. The engine powering health care reform is cost containment. Corporate structure has worked for business to control costs, so seemingly it should work for medicine but does it and can it?

Physicians have always needed to earn a living which means that financial considerations have always been part of medical decision making. But these proprietary interests have been balanced by Medicine's ethical code with the net result that physicians have functioned primarily as professionals. Currently there is a broad-based social mandate to constrain medical costs. Because medicine is a public trust, physicians are obligated to respond to this mandate from society, the same society that grants trust and autonomy to physicians. We need clear thinking physicians to discover solutions to constrain costs and preserve the essential aspects of high quality health care and professionalism.

Besides the required delicate balance between financial and professional considerations, we must also ensure the existence of an appropriate balance between the science of medicine and its art. Medicine is grounded in science much more now than ever before in history, and the core of medicine must remain as science and its clinical application. Nevertheless, science alone can never be enough. A solid exposure to the humanities is necessary to ensure a humanistic approach of doctors to the care of their patients and that their attitudes and values reflect a concern for human beings, their achievements and their sense of dignity. A special relationship exists between individual physicians and their patients. The provision of altruistic service is a hallmark of any profession, but this is especially true of medicine. Physicians today practise in a different environment but that environment cannot consist solely of a business model in which health care becomes a commodity and physicians become factory workers who depart promptly when it is five o'clock. It can never be "profits before patients", "money before medicine".

Doctors practising in Singapore take the Oath of the Singapore Medical Council. The corporate transformation of medicine will challenge many of the ideals that may make it difficult for young physicians to honour their oath. An enlightened medical leadership is essential for preserving professionalism and preventing a hollow mockery of the oath. The changes in our health care system make it essential for us to know, at the most fundamental level, who we are and what we do⁽⁴⁾. Our profession's values define who we are and what we do and those values must become the anchor that holds us to our core mission. William Osler in 1903 said, "The times have changed, conditions of practice altered and are altering rapidly, but the ideals which inspired our earlier physicians are ours today – ideals which are ever old, yet always fresh and new"⁽²⁾. The professional values of medicine provide a sense of continuity and can prepare us for the future because they endure. I would like to echo Osler's words in 1889 to the graduate class of the University of Pennsylvania when he asked them to develop imperturbability and equanimity⁽²⁾. "In the physician or surgeon, no quality takes rank with imperturbability... Imperturbability means coolness and presence of mind under all circumstances, calmness amidst storm, clearness of judgement in moments of grave peril". Osler pointed out that calm equanimity is very difficult to obtain. "One of the first essentials in securing a good natural equanimity is not to expect too much of the people amongst whom you dwell... Curious odd compounds are these fellow creatures, at whose mercy you will be; full of fads and eccentricities, of whims and fancies". In times of tumultuous change today and tomorrow, maintaining a sense of imperturbability and equanimity will allow us to preserve the importance of professional values in education and patient care.

In conclusion, we need to reinforce our caring role for and about our patients. People perceive that medicine is moving away from its principal focus on caring and they do not like it. As technology and economics intrude so prominently into the

innermost sanctum of medicine, the essential transaction between doctor and patient is threatened as never before. Patients feel shortchanged by the hurried pace and brevity of their encounters with doctors. They see medicine coming under the influence of big business and turning to assembly-line, clock-punching methods. That is not what they want. What they want is to have their doctors back.

Commercialism views sick or could be sick people not as patients but as consumers and doctors as providers and medical services as commodities. To care for our patients we need to defend medicine from the corrosive effects of commercialism and its failure to see beyond the cost containment dimension. Commercialism's fundamental flaw as a suitable paradigm for medicine is its motto: caveat emptor: buyer beware. Not trust, but wariness and suspicion. Medicine's response to commercialism must be the doctor's willingness to adhere to the altruistic canon of medical professionalism. No laws, no regulations, no patient's bill of rights, no fine print in insurance policy, no watch dog agency; nothing can substitute for trustworthy and doctors who care.

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Restorative Neurology – Making Patients Whole Again

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The nervous system has been Medicine's "Dark Continent". Seat of our personality, intellect and memories; but relatively intolerant of injury, with limitations for spontaneous repair. The disability from neurologic diseases is unmatched. Unfortunately, lack of knowledge and understanding have long hampered our therapeutic capability, at times reducing neurologists to chroniclers of fascinating neurologic syndromes, without being able to cure.

Parkinson's disease is characterised by degeneration of the dopaminergic neuronal system, in association with bradykinesia, tremor, rigidity and postural imbalance. Patients generally respond well to drug therapy in the initial years. But despite symptom relief, neuronal systems continue to degenerate with increased disability common during the later years of the disease. Following evidence of transplant graft survival and clinical improvement in the 6 hydroxyl lesioned "Parkinsonian" rat model, the first fetal ventral mesencephalic graft into the striatum of a patient with Parkinson's Disease was reported in 1989⁽¹⁾. About 200 patients have received intrastriatal grafts of fetal ventral mesencephalic tissue grafts worldwide over the last 10 years. Singapore's first experience was in mid-1999.

Parkinson's Disease human transplant studies have demonstrated that grafted dopamine neurons can survive for

many years and reinnervate the degenerating host striatum⁽²⁾. Increased [F18] fluorodopa uptake is a consistent finding in the majority of patients with surviving grafts, who typically show long term, significant, but incomplete clinical improvement⁽³⁾.

Neuronal cell transplants have reached Phase I trials for a number of other neurologic diseases, including Focal Epilepsy, with the intent of modulating inappropriate neuronal firing and Huntington's Disease, to repair the damaged striatum⁽⁴⁾. Proprietary cell lines as well as multiple fetal grafts are currently being studied. Phase II myoblast cell transplant studies for muscular dystrophy have been recently completed.

Xenotransplantation with porcine derived cells has the potential advantage of access to relatively abundant amounts of tissue for potential grafting. A Phase I study of porcine lateral ganglionic eminence cells to treat patients suffering from strokes has recently commenced⁽⁴⁾. Sophisticated techniques to reduce immunological rejection are already available, whilst safety issues such as the significance of porcine retroviruses continue to be explored.

New cases of spinal cord injuries are estimated at 12,000 per year in the USA, most from car accidents and sporting injuries, with lifetime estimates for care at about US\$750,000

per patient. Following evidence of rats regaining partial use of their paralysed legs, the FDA recently approved a Phase I clinical trial of spinal cord macrophage cell therapy for newly injured paraplegic patients. Other studies, including porcine spinal cord cells are in the preclinical stage. Prominent former "Superman" actor Christopher Reeve has done much to publicise the needs of the spinal cord injured, as well as to raise significant research funds, in the hope that paraplegics and quadriplegics can walk again.

In the nervous system, stem cells refer to a population of cells capable of extended self-renewal and the ability to generate multilineage (neuron and glia) cell types. Being of CNS origin, they have the capacity to survive within and integrate into host cytoarchitecture following grafting and may replace dysfunctional neural cells. Ex-vivo expansion to obtain sizable numbers has been achieved with immortalisation following retroviral transduction of oncogenes. However, simpler tissue culture manipulations with mitogens such as fibroblast growth factor and epidermal growth factor are sufficient for substantial stem cell amplification. Instructive cell differentiation by epigenetic factors such as ciliary neurotrophic factor and bone morphogenetic proteins towards astrocytic differentiation, contrast with insulin like growth factor and brain derived growth

factor which support neuronal differentiation⁽⁵⁾. A potentially limitless supply of conveniently available, wide range of CNS cell types, is anticipated to aid the future study of nervous system regeneration.

Neurologists dream of neuroregeneration, repair and patients becoming whole again. Advances in cell and molecular biology are beginning to make this dream real.

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Period of Transitions

The world and particularly Asia, is impacted by various transitions in the healthcare environment well into the next century. The world population reached its sixth billion mark recently and life expectancy is set to increase. With this phenomenon, we are faced with an increasingly aging population with its fair share of diseases. Degenerative disorders such as osteoarthritis, osteoporosis, and spondylosis etc are plaguing orthopaedic surgeons everywhere. With the elimination of poliomyelitis and other infective diseases, there is also an epidemiological transition faced by the orthopaedic field as well. Unfortunately, developing countries in Asia will still encounter 'diseases of the past' and has to bear the brunt of the 'old' and 'new' diseases. With a lack of resources for high technology gadgets, how then can the medical profession and especially orthopaedic surgeons take up these challenges and what are the opportunities available to counter this in the next millennium?

Technological improvement

The last decade of this century saw a tremendous breakthrough in the molecular and cellular field, leading to cloning of living organisms. Genetic engineering has become a reality. We await the implementation of this new technology in clinical practice in the next century. Orthopaedic surgeons will be able to replace the use of inert metals and plastics with compatible biological tissues in the theatres. Cancer, which is the number killer in almost every corner of the earth, will either disappear because of genetic manipulation or be cured by drugs; surgical intervention in cancer treatment will take a back seat.

Information explosion

Waves of information availability as well as the rapid development of information technology are the mainstay this century. The traditional classroom style of teaching will give way to teleconferencing and electronic simulators will replace bedside style clinical teaching. The present day skills training in surgery will also give way to the increasing use of virtual imaging technology. The challenges we face in the next century include: 1) the management of such information and minimising the pitfalls of advanced technology, and 2) the ability to retrieve the right information at the right time without distorting the facts. A checking system to test the credibility of such information needs to be developed to prevent wrong information being disseminated.

Is our surgery evidence-based?

The practice of evidence-based medicine in the field of surgery is becoming prevalent. Orthopaedic surgeons will face the dilemma of scientific rationality and outcome satisfaction when treating their patients. Technical perfection does not equate 'best result' and it is crucial that patient participation and co-operation in the rehabilitation process be encouraged. Empathy and humanity stems strong from the Asian culture and value system, and doctors must not lose sight of this in the sea of technology.

Lifestyle changes

Lifestyle changes are the root to the many diseases present today. Back pain, neck pain, degenerative arthritis, spondylitis and other forms of metabolic arthritis are some examples of diseases borne

out of lifestyle changes. Prevention and cure of these require some form of lifestyle alteration and behavior. Research in this area of study must be carried out to prevent the number of people afflicted from increasing.

Opportunities

Having discussed the future challenges that this profession will face, it is the responsibility of orthopaedic surgeons from in and around this region to join forces to combat such

problems. By preserving the social values and customs that guide our actions, putting human considerations and understanding as top priority, ahead of technological developments, we will be able to ensure a win-win philosophy without compromising the standard of care towards our patients.

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Alzheimer's Disease – The Rising Tide

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The most significant demographic change in the world in the next decade is the ageing of the population – this will affect both the developed and developing countries.

A devastating illness in late life is Alzheimer's disease (AD). At present there is no cure for this disease and we do not know much about the aetiology either. Several studies have indicated that the principal risk factors for developing AD are age and having a first degree relative with AD. Recent research has shown conclusively that there is an allelic association between the E4 isoform of apolipoprotein E and late onset sporadic AD.

Alzheimer's Disease is a major public health issue and the prevalence of the disease is similar in different countries and different cultures. Increased life expectancy and an ageing population will result in an increase in the number of people with AD.

In a study on the epidemiology of dementia in Singapore⁽¹⁾, the estimated prevalence of AD for Chinese men was 1.1% and Chinese women 1.8%. For Malay men and women, the rates were 1.2% and 1.5% respectively. In absolute numbers, there are about 3,200 cases of AD in Singapore today, and extrapolating to the future, we will observe a dramatic increase in the year 2030 (Fig 1). The greater number of women with AD is explained by the higher proportion of elderly women in the Singapore population.

The challenge of medicine in the next decade is to identify the cause and more importantly the treatment of Alzheimer's Disease. Basic science research has discovered new leads in molecular biology and neuropsychopharmacological studies have found new compounds to slow down the disease. There is cogent evidence to indicate that the cholinergic system has a vital role in AD and the principal focus of drug treatment has been on the acetylcholinesterase inhibitors eg. Donepezil and Rivastigmine.

Unfortunately, no drug has been proven to prevent AD. Treatment with aspirin and new steroidal anti-inflammatory drugs (not paracetamol) has been associated with a lower prevalence of AD⁽²⁾. Oestrogen replacement in healthy post menopausal women favourably affects mood and may have modest effect on cognitive function⁽³⁾. As free radicals have been implicated, anti-oxidants like vitamin E could have a preventive function.

Singapore is a city in transition and social changes often come in tandem with rapid economic and industrial developments. With fewer family care-givers, it is important to set up community services eg. day care, respite care and community homes to help the family cope with an elderly person with AD. In the planning of services it is crucial to have

multidisciplinary teams, community based services, day hospitals, liaison with both primary care and with social services⁽⁴⁾. The guidelines for services according to the Royal College of Physicians and the Royal College of Psychiatrists 1999⁽⁵⁾ state that for an elderly population of 30,000 in the United Kingdom, there should be 45 acute beds, 75 day hospital places and 75 continuing care beds. The cost of dementia care will increase in the decade to come as reported in the British studies⁽⁶⁾.

Future research on drugs should be directed at the underlying memo pathological changes in the brain. But drug treatment is only one aspect of a comprehensive management plan which should include support and education for the patient and family. Psychosocial interventions aimed at family carers are effective in delaying institutionalisation of AD patients, as well as alleviating the stress of the family care-givers.

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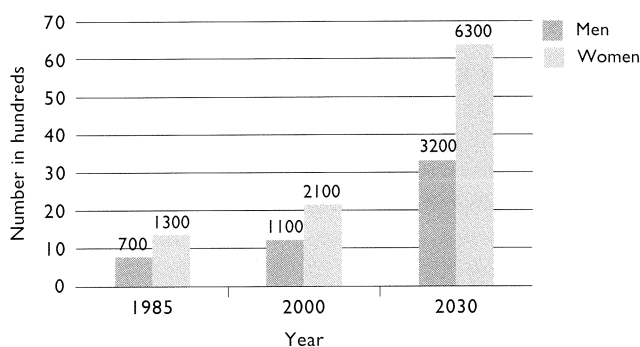


Fig 1 – Alzheimer's Disease in Singapore (estimated number of cases).

Challenges in Family Medicine

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ABSTRACT

Family medicine has matured over the last 30 years. It has become a discipline but acceptance as a specialty is still not universal. It needs to pay attention to developing intellectual vigour and capacity building to meet peoples' needs. Opportunities to do so abound, namely in preventive care, geriatric care and care of chronic diseases. Future challenges lie in capacity building in practice, teaching and research. The setting up of a vocational register for trained family physicians and charging an adequate fee are important mechanisms to improve its image.

INTRODUCTION

The World of Family Medicine

Family Medicine or General Practice has been established as a discipline in the last 30 years. Its recognition as a specialty is still not universal. It has its beginning as the family doctor of old who looked after the whole family and dealt with a broad range of problems. The development of medical science and the hospital at the turn of the century led to better understanding of man, disease and ways of dealing with medical problems but also resulted in specialisation of medicine, fragmentation of care and an impersonal approach.

The renaissance of family medicine in the 1950s and 1960s led by United States and the United Kingdom was a counter-culture to specialisation as some medical practitioners strove to bring back the holistic care and personal touch. Since then, family medicine at the world level has developed its body of defined knowledge; has a curriculum of training and accreditation; has a fraternity of like-minded practitioners and also research.

As a discipline, Family Medicine has also matured in the last thirty years. Three phases may be recognised, namely, the age of counter-culture in the 1970s, the age of parity in the 1980s, and the age of integration in the 1990s. The age of counter-culture was characterised by anti-specialist sentiments, the decrying of fragmentation of care and impersonal approach of specialist care. The age of parity that follows was characterised by the struggle to establish parity with the specialities, the cry that "we are as good as you hospital specialists" and the institutional struggle to establish independent departments or units of family medicine. The age of integration in the 1990s is an age of realisation that family medicine needs to work closely with hospital specialist medicine because each complements the other. Hospital based medicine is deep and narrow whilst family medicine is broad and general. Both are needed for the total care of the patient over time and the movement of the patient between them must be seamless. Family medicine also links together the two worlds of hospital based medicine and public health medicine. Family medicine has an important role of being the matrix that glues the various branches of medicine together.

SWOT Analysis

The strength of family medicine lies in the realisation that of all branches of medicine, it has the greatest potential of meeting

people's needs. A world strategic action forum was held in 1992 in Vancouver to brainstorm and define this strength of family medicine. Family medicine also serves to integrate the different branches of medicine.

The weakness of family medicine is the breadth of practitioners that it attracts and the lack of homogenous world views. The breadth of practitioners range from specialises retired from specialist practice or disillusioned with the deep and narrow impersonal type of work, to practitioners interested only in psychological aspects of care. Happily, there is now a more homogenous world view, thanks to the sharing of views through the key family medicine journals and the work of WONCA (World Organisation of National Colleges and Academies of Family Medicine).

Opportunities for family medicine abound. The desire for integration and less fragmentation of care brings the family doctor into focus as a co-ordinator of care. Also, with the move towards early discharge, the family doctor has to fill in the role of post-operating care. With the realisation of the importance of preventive care, the family doctor has another arena of work to hone. With the increase of elderly people worldwide, care of such people will become increasingly important. Geriatric medicine has its unique areas that need to be recognised. Examples are the "giants of geriatrics" namely, instability, incontinence, iatrogenic disease and intellectual failure. Attention to these are important to reduce morbidity and in some instances also mortality. The most important tenet of acute geriatric care is of course, the need to act quickly before the spiral of complications set in.

As countries move from young to mature populations, from developing to developed economies, their disease structure will change, the so-called 'epidemiologic transition' coined by Omran in 1971. He identifies three phases in this transition: the age of pestilence and famine, the age of receding epidemics and the age of degenerative and man-made diseases. Fries (1989) sees a solution out of this inexorable trend. He observes that "successful ageing" with lessened infirmity can be achieved if medical systems pursue vigorously the path of prevention rather than concentrating on developing sophisticated means of treating diseases after they have been recognised. In other words, prevention is still better than cure. And, the family doctor should be all in it.

Threats of family medicine come from both within and without. From within, there are disillusioned colleagues who see the call to intellectual rigour and capacity building as being pointless because the patient will not regard the family doctor as important in comparison to his specialist peer. We need to change the mindsets of our beleaguered colleagues. Then, there are threats from without by peers who feel that family medicine is "soft-medicine and airy-fairy". The truth of course, is that family medicine is an integration of 'soft medicine' focused on the behavioural sciences and sociological dimension as well as "hard medicine" founded on evidence based biomedicine. There is a need to change the mindsets of such colleagues too. There is a need to change the mindsets of patients too that the family doctor is as important as the hospital specialist. The relative importance at a given point of time depends on the stage and phase of disease and dis-ease.

FUTURE CHALLENGES

So what are the future challenges of family medicine as a discipline? The SWOT analysis provides some glimpses of light in this crystal ball gazing. The challenges can be described under the four headings of general recognition, practice, teaching and research.

General recognition

Family medicine activists have still to work hard to tell and sell to colleagues in and out of the family medicine fraternity, patients, families and society that family medicine is deserving of a place in the sun. It would have arrived if society willingly accords its practitioners a specialist status, except with a difference. The family doctor is a specialist in breadth and the hospital specialist is a specialist in depth. The way to differentiate the two meaningfully is to have separate vocational registers – a register to recognise trained family doctors and a separate register to recognise trained hospital based specialists. It is for this reason that the College of Family Physicians in Singapore is working towards the setting up of a vocational register of family physicians as a College endeavour.

A related recognition is the willingness to pay the family doctor for his work. Today, in the United States and in the United Kingdom, the pay differential of the family doctor and the hospital specialist ranges from parity, if the family doctor does procedural work to a factor of no more than two. In Singapore, the differential is a factor of three or more. What does that tell us of the family doctor status through the eyes and purse of the patient? It is important not to despair but to work hard to build the intellectual vigour, the capacity of skills and knowledge, the desire to work seamlessly with hospital based colleagues and to co-ordinate care. Above all, family doctors need to take pride in their work and to charge a consultation fee. For a start we need to rigorously expunge the attitude from our minds that, "Oh, my consultation is free, the fee I charge is for medicines." The family doctor needs to charge enough to be able to earn enough if the earnings from drugs are excluded. Trying to undercut company contracts by charging low consultation fees of \$3 – \$5 and trying to claw back money from drugs and more consultations will detract from the vitality of the image of the family doctor. We need to remove this threat from within. This is an immediate challenge facing the family physicians in Singapore and many countries around the world.

Practice

There is a need for capacity building to remain relevant to meet peoples' needs. Can we do more than colds and coughs? What about preventive care, geriatric care at the community level and domiciliary care? What about co-ordination of care, post-discharge care and integrated care? There will be less time for golf and less disillusion of practice if we are willing to add these to the agenda of capacity building and image building. This is a present and future challenge to every family physician.

Training

The desire to train comes only if there is a desire to improve one's image and capacity to meet the people's needs. This is of course, only one side of the coin. These must also be developed, the training organisation and resources. Singapore has a developed family medicine curriculum as a tripartite programme hosted by the Ministry of Health, the College of Family Physicians and the University leading to the Master of Medicine

in Family Medicine. In the last seven years, it has trained seven cohorts of postgraduate doctors aspiring to be family physicians. The road is however tough, the distractions many and the social support for trainees often lacking. Consequently, the drop-out rate has been big. Happily, this rate is dropping a little in the last 2 – 3 years. To date we have 112 doctors with the MMed(FM) degree. Eight are in the post-MMed programme organised by the College namely, the Fellowship by Assessment programme. They will complete the programme before October next year.

The second echelon of Family Medicine leaders is in the making. Recently, the College of Family Physicians did a review of its training programmes and a proposal is tabled to the Family Medicine Committee in the Graduate School of Medical Studies for a tripartite effort to implement the Diploma of Family Medicine (DipFM) for rank and file doctors who are family physicians. It is a two-year structured programme of self-directed learning, group learning activities and clinical training. Holders of the DipFM will fulfill part of the requirements for the MMed(FM). As one College Council member puts it, "There are two ways of scaling Mt Everest; one a continuous climb [MMed(FM)]; the other is more realistically divided into two phases, first the base-camp (DipFM) and then the summit [MMed(FM)]." Of course, there may be many who are content to be at the level of base camp (DipFM). Both will be eligible to be on the vocational training register as trained family physicians. What then is the extra struggle for the MMed (FM) for? Well, it is a higher level of capacity building and a stepping stone to the Fellowship programme of the College. And what is the Fellowship programme for? One may ask again. The answer is that Fellows will be the leaders of Family Medicine that will carry on the development, the training and the research so necessary to sustain the discipline into the future.

Research

Finally, we come to research as a future challenge in Family Medicine. It is clear that the future heights of Family Medicine as a discipline depends on research as the fountain of its vitality. It is important to point out that research is not just "bin-counting". It is not just cross-sectional studies. It must answer questions of family doctors. How am I doing with the care given to hypertensives, diabetics and asthmatics? Do we make any difference to them compared to those not properly managed? What are the number of smokers in a specific age band? And what is the uptake of anti-smoking cessation programmes? And why is the compliance so low? What are the ideas, concerns and expectations of those who continue to smoke? The list of questions can go on.

Broadly, family medicine research needs to be quantitative or positivist. But that is not enough. Quantitative research validates notions and provide statistical relationships. We also need a new kind of research that has become mainstream only in the last 10 years – qualitative research. The latter is an instrument for discovery. Through qualitative research we discover feelings, world-views and emotions about illness, suffering and response to health care. By integrating such information with quantitative research we will have real-world views on how we can meet people's needs better. And there is a third kind of research, namely health series research focused on cost effectiveness, quality assurance and inter-relationships between practice, economics and outcome. There is clearly much to be done, not only in doing research but more

importantly in setting up the organisation to undertake research. For research in general practice, experience worldwide has shown the importance of developing and sustaining the FM research network. There is also a need to teach critical appraisal and grounding in methodology. The family medicine fraternity needs champions for funds to put this in order first before it can get anybody to be interested to do FM research. And this explains why in the world general practice research is still under-developed and why FM research in Singapore is

nearly non-existent. The College is trying to get things going by setting up its research infrastructure.

CONCLUSION

Family medicine has come quite a long way. It has thirty years of deliberation, paradigm, experience in practice, teaching and research. More would be achieved in the next thirty years, provided we take up the future challenges highlighted in this Christmas crystal-ball gazing.