

The Singapore Family Physician



**The
College of General
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Editorial

1979 – The International Year of the Child

The Greatest Gift

The greatest gift any nation can bestow on children is the provision of an environment which permits healthy growth and provides every opportunity for them to reach the full potential of their genetic endowment.

Such an environment implies certain preconditions in political and socio-economic terms. The prevailing climate in the Indo-Chinese countries – war, famine and diseases – displays the very worst in terms of an environment for existence let alone for growth.

Freedom from want (food, clothing and shelter) and the ravages of infectious diseases are things we take for granted in Singapore. It behoves us to be reminded that these did not just come about. They had to be fought and bought with effort – sweat always, blood not infrequently and tears when overwhelmed.

The Logo

The General Assembly of the World Health Organization decided last December that 1979 be observed as the International Year of the Child. In Singapore because our environment for the child lacks nothing in terms of basic needs, we can afford to celebrate the event with cultural and social activities throughout the year. We even commemorated the event in stamps.

The official logo of the International Year of the Child depicts two embracing figures to symbolize the close relationship between the adult and the child. As the logo shows, the child's environment is his mother and there is no closer and more intimate relationship than that between a child and his mother.

Adjusting to the Environment

No organism other than man requires such a long period of adjustment to the environment. He is protected in the mother's womb for nine months. After birth he is totally dependent on the

mother to satisfy its every want whether this be hunger, thirst or love. Independently it cannot seek shelter from cold or heat. The chick on hatching can immediately move about and its actions are goal directed. A child however lies where it is put, at least for the best part of the year. He has to be helped in many ways and for a long time if he is to survive.

Growth as far as the child is concerned is not merely physiological growth but the twin processes of adaptation and assimilation of the environment. In the early years of his existence his environment is that of the parents, in particular the mother. The mother plays a fundamental role in this respect. A "primary affection hunger" is often spoken of to stress the child's need of mother love and other emotions connected with the mother-child relationship. In general terms, the higher the ultimate level of learning capacity reached by a species, the slower is the learning in infancy.

Outside the Human Environment

It is seldom realised that a newborn baby is asocial and that he grows up as a human-being because he is brought up by human-beings. Stories of children brought up by animals have been recorded. The legend of Romulus and Remus is well known in literature. In modern times there are stories that tell of infants put out to die being rescued and brought up by animals. When they have been found later, their adjustment to human life has been well nigh impossible.

Psychologists speak of "behavioural imprinting" that cannot be effaced. The report on the two girls, Amala and Kamala who were found in a wolf's lair in India is illustrative. A number of unusual behaviour patterns have been observed. They never learn to walk upright. When they move they do so on hands and knees. They run on hands and feet. Language-wise they have none in the human meaning of the word. They make sounds similar to those of the animals they live with. Their senses, sight, hearing and smell are highly developed. They

see remarkably well in the dark. Their emotional reactions are restricted. They can register great rage and impatience but lack the capacity to laugh or weep when such reactions seem natural.

Members of the Trobriand tribe are found to be far more peaceful than the belligerent Kwomas. Studies indicate that in the Trobriand tribe children are given the breast until they gave up on their own accord. Amongst the Kwomas breastfeeding is usually suddenly and strictly terminated. The different temperaments of the two tribes attest to the statement that childhood experiences have a bearing on the personality of the adult. As advocates of breastfeeding we are indeed encouraged with the above finding.

Harlow H.F. has shown the importance of early maternal care to rhesus monkeys by separating the young from their mothers. In some cases artificial mothers in the form of skeletal frameworks which can dispense milk were offered to the young. Monkeys deprived of maternal care have at maturity great difficulty in interpersonal relationships with other monkeys. They rarely mate. When they do produce offspring the quality of maternal care they themselves provide is low. When the young monkeys were offered a choice between an artificial mother covered with soft material which did not provide milk and a skeletal framework without covering which did, they spent most of their time cuddling the soft "motherly" figure and approached the skeletal figure only for milk. The experience of being "mothered" in the normal way is clearly very important for the later development of appropriate sexual and parental behaviour.

There are no parallel long term studies involving human beings but there are indications that maternal deprivation during early life both slows down immediate behavioural development and has effects on later social adjustment. John Bowlby has adduced evidence that delinquents often show a pattern of separation from their mothers in early life.

Emotional deprivation in the first year of a baby's life is said to affect language and abstract functioning more than deprivation in later years. Prolonged and severe deprivation extending three years from the first year of life usually leads to severe effects in both intellectual and personality function. These effects are said to be irreversible.

Implicit in these findings is the notion not only that early learning can affect later learning but that some things must be learned early as otherwise they may never be learned at all. This is referred to as the "critical learning period".

The Critical Learning Period

Konrad Lorenz has described several species of birds notably ducks and geese which will follow the first moving object exposed to them (imprinted on them) immediately on hatching. Under

normal circumstances, this first moving object will be the mother. The effect of substituting at this time a moving inanimate object or even the human observer is startling. The birds continue to follow the imprinted object in preference to members of their own kind. In time they direct towards the object responses such as mating, normally reserved for other birds.

Lorenz described one particular jackdaw which attempted to feed him continually with worms in an apparent attempt to gain his affections. It is very likely that in all animals and even in man there are periods of shorter or longer duration in which there is a heightened aptitude for certain sorts of learning.

If a congenital cataract is not removed by a certain age, the human child will remain blind. If a deaf child is not taught to speak at a certain age, it will be very difficult to teach him. If a cleft palate is not repaired by a certain age, speech will remain defective. There is thus a distinct possibility that the foundations for certain tastes and interests as well as patterns of behaviour may be experiences of comparatively short duration imprinted during early childhood.

Technology of Child Raising

The technology of child raising is still being debated but what is beyond dispute is that in the absence of a growth permitting environment the child cannot hope to reach the full potential of his genetic endowment. The wise parent will not expect or require his children to attain high standards of specific performance at an early age in school. He should rather provide them with rich learning opportunities so that there may be interaction between them and these opportunities. Jean Piaget has based his development theory largely on the premise that the child endowed with biological functions interacts with the environment.

The emphasis on the child's immediate environment has led to the creation of a specially devised cot called the "baby box". The technologically created "box" is intended to make possible the detailed control of the child's physical environment. It is claimed that the environment created by the box produces a more rapid and generally more satisfactory development of a young child than is possible with more traditional methods and environments. This may be our trouble; that we should think that the machine can outdo the mother. Even Harlow's monkeys know better.

Poetic Epilogue

The poet has a knack of disclosing aspects or depths of reality which we do not ordinarily see. In his most profound moments he presents something really significant about nature and man —

something that the prosaic scientist is incapable of doing. Kahlil Gibran writes:—

*" . . . Your children are not your children.
They are the sons and daughters of Life's
longing for itself.*

*They come through you but not from you,
And though they are with you yet they belong
not to you.*

*You may give them your love but not your
thoughts.*

For they have their own thoughts.

*You may house their bodies but not their
souls,*

*For their souls dwell in the house of tomorrow,
which you cannot visit not even in your
dreams.*

*You may strive to be like them, but seek not to
make them like you.*

*For life goes not backward nor tarries with
yesterday . . ."*

Officially the International Year of the Child ends on the last day of 1979 but the significance of the message intended should be perpetuated. Singapore's environment for the Child, not by accident but by design, is comparable to the best in any part of the world. It remains for the individual not to regard his/her child as a side effect of a sexual act or a belonging to be used and abused but as a divine guest in the passage of his/her adult time as Kahlil Gibran inspiring suggests. Today's child is tomorrow's adult and he can only care in the manner in which he has been cared.

L.V.C.

(Views expressed in the Editorial are not necessarily the official views of the College)

Art in Medicine

The Second Sreenivasan Oration

Dr. Koh Eng Kheng
M.B., F.R.C.G.P.

This is a true story that needs to be told and I am grateful to the College not only for the honour of letting me deliver the Second Sreenivasan Lecture but also for providing such a distinguished audience to hear me.

Hock San is a nice quiet boy. He is twelve years old and he lies in a ward for adults in the General Hospital. His companions in the ward for some weeks now are either old or very ill patients. Some three weeks before his admission to the ward he had a cough. His parents brought him to see a general practitioner. The cough did not get better, so they took him to another G.P. Despite medication the cough got worse. In desperation they took him to a third G.P. By this time it was obvious that the boy was in respiratory distress so the G.P. sent him into the hospital.

An X-Ray picture taken in the hospital showed pleural effusion and a big opaque mass in one of his lungs. He also had enlargement of the liver and spleen. All this now added up to a very grave outlook for the boy. He had a growth in the chest. This condition was very rare, but for Hock San however it was also very real and very sad.

The story of Hock San is not a new one. As doctors we have all seen it before, though fortunately on rare occasions. As doctors too we often think we have an answer for every thing that comes our way. In Hock San's case unfortunately we do not. How did the growth get there? We do not know. Could the outlook have been better if he had been sent into hospital earlier? We do not know. Can radiotherapy or cytotoxic agents help? We do not know. What should we tell the parents? We do not know.

Yes, there are a lot of things we do not know and cannot supply the answers. This is where a clinician like Dr. B.R. Sreenivasan would have been able to help. Besides being a good clinician he was also the complete physician. His experience, his wisdom and knowledge made an art of the practice of medicine.

Is there such a thing as art in medicine? Lord

Platt says there are three kinds of clinical scientists. The first group are good clinicians and use all the skills they have been endowed with. The second believe that the whole of medical teaching should be based on clearly demonstrable scientific principles. The last group are the "hard boiled" scientists, "who pale at the very idea that a concept as woolly as the art of medicine should even exist in present day thinking, or, if they concede its existence, they think that what it means is that the scientist should have a human and compassionate approach to his patients."

Art in medicine comprises much more than good bedside manners and a ready to wear dextrified smile. Like all art one is either endowed with it or for those of us who are not so gifted, we have to cultivate it. Is there anything we should cultivate?

We can begin by sharpening our sensory acuties. By hearing more acutely, seeing more sharply, touching more frequently, we will soon learn to immediately recognise patterns. The human brain is a master computer, it quickly learns to recognise and interpret patterns. In clinical practice we call this ability to recognise patterns in a flash, spot diagnosis.

When I was a student making a spot diagnosis was frowned upon and perhaps rightly so because a medical student did not have sufficient clinical experience to be able to make one. But ideas once seeded take a long time to eradicate and there are many doctors who after long years of practice still hesitate to make a spot diagnosis because they have all been taught it was not the proper thing to do.

Not all clinical teachers frowned upon making a spot diagnosis. Sir Gordon Ransome used to tell the story of the street urchins in London who could immediately tell whether a plane was friendly or not during the blitz by listening to the drone of its engines. Lord Platt tells us that many boys can tell you instantly the make of almost any motor car on the highway at a glance.

He goes on to say, "These superb qualities of

pattern recognition which man, and all other animals possess, are of the kind which are usually instantaneous in action and correspond with what we know as spot diagnosis, a term derided by a certain kind of clinical scientist who sneers at spot diagnosis in his colleagues and students but exercises these wonderful qualities of the human computer every day in his garden and in his motor car and almost in the whole of his daily life . . . The cultivation of similar qualities . . . in the medical student seems in recent years to be in danger of falling into desuetude. Yet this is the real art in medicine."

This neglect of the art in medicine has come about because of our present day thinking that all medical problems can be resolved by science alone. We try to explain all pathology on an organic and therefore scientific basis. This led almost to a feeling of guilt and uncertainty amongst general practitioners when they found they could not explain most of the illness seen in their clinics in organic terms. In 1958 the Research Committee of the British College of General Practitioners, led by Crombie and Pinsent showed that in only 55 per cent of consultations could doctors make a "firm diagnosis" in pathological terms.

Because we seek an organic cause for illness our doctors these days tend to become too dependent upon medical technology to make a diagnosis. Where results from the laboratory do not shed light our doctors feel uneasy about forming their minds about the case. Clinical experience and observation alone can often provide the answer where biomedical data cannot. Any doctor I am sure can tell whether a patient is angry or frightened by merely looking at him even though the serum cortico-steroid levels or the catecholamine assay show both conditions have similar readings. An experienced doctor by looking at the palor of a patient can also tell whether he is having a colic, is anaemic through blood loss, or is suffering from a chronic renal ailment. It is possible even to detect a case of hepatitis before the appearance of bile pigments in the urine.

Keen observation thus forms one of the cornerstones in the art of medicine. One should not only look closely at the patient but also those who accompany him into the clinic. In this way a lot of valuable information may be gleaned even without one word having been spoken. Dr. B.G. Dudley has this observation to make. "A boy of 11 or 12 coming on his own alerts one to the danger of neglect. On the other hand, the appearance of mother with a young man of 18 - 20 seems to indicate over-protection or over-dependence. The sight of a teenage girl, appearing with a

friend of either sex, always set alarm bells ringing in my mind; the story of a missed period and the possibility of pregnancy is frequently heard." I am sure we can all readily attest to the truth of Dr. Dudley's observations.

Dr. Dudley goes on to say that one of the diagnostic pointers usually ignored by books, is the voice. The changes of voice in people with depression he feels is the commonest voice abnormality in general practice. Some patients too have changes in their voice with upper respiratory tract infection like influenza or in asthma. The change is often quite out of proportion to the severity of their illness.

Voice changes are not the only things to listen for amongst the patients. A good G.P should learn to pick up para-language as well. This is the language within a language. Often what is spoken is mere verbalisation and the innuendoes have to be looked for if the message is to be properly understood. In English for example, "good evening" is a normal form of salutation. "Good day" however can carry a different meaning altogether. A person who says curtly "And a good day to you Sir" shows that he wants to terminate the conversation immediately. To give another example. If your wife for instance requests you to accompany her to the supermarket and if she notices you are dragging your feet, she may turn round to you and say, "Oh! Don't bother. You needn't have to go." You may have to read the para-language here. It isn't that she does not want you to go. "Don't bother" reads that you had better bother. "You needn't have to go", means you had better go along, or else . . . Doubtless similar examples can be found in the context of local dialects. A lot is lost if a patient speaks in a language he is not completely at home in.

Our pre-occupation with science has also meant that the art in medicine in many instances is being transformed into social sciences. I think enough controversy has been made about social science in the local press lately and I do not wish to add to this. What many experienced GPs take for granted as experience and skill are now dished up in many teaching universities as social science subjects like behavioural studies, communication with patients, management of the sick and many others. I suppose words like psycho-cybernetics, micromomentaries, spatial kinesics lend authority to old ideas in this new age of the sciences. I really do not know whether making a science out of an art is really improving matters. The important thing however is at long last someone is taking a hard look at things which we doctors have long neglected.

Now we can be sure, I hope, that more people are awakening to the fact that computer read-outs alone are not going to solve all our medical problems in the future. Hock San lying quietly in the ward is not merely an unfortunate member of the species *Homo Sapiens*. He is a young boy with a medical problem. He has a family who love him and he loves them too. So the medical problem is compounded with a social problem, an emotional problem, an economic problem and so on. Science alone will not be able to solve all these problems.

Osler once said, "Medicine is a science of uncertainty and an art of probability." No one seems to heed this very much these days. The fact that science alone does not hold all the answers seems to escape many medical schools who still insist that those who intend to take up medicine must produce first grades in the sciences, physics, biology, chemistry or mathematics. No one bothers to ask whether a student is proficient or interested in any of the liberal arts like music, art or drama, or any of the humanistic subjects. Is it important?

Dr. Sreenivasan thought so. In the First College address which he delivered in 1972 he said that as early as 1224 the medical school at Salerno insisted that medical students undergo three years of general studies as a preparation for the medical course which lasted another 4 years. Even at that time a general education was considered not only desirable but necessary. A well educated man must be versed in the classic languages as well. In England the physicians knew Latin and therefore considered themselves one rung above the bar-

ber-surgeons who did not.

General practice has once been cynically described as "the ability to be therapeutically effective in the absence of scientific data." Whoever made that statement obviously did not think much of the G.P. as a scientific man. Does it matter all that much? The Chinese Vice-premier Deng Xiao-peng said, "It does not matter whether it is a white cat or a black cat so long as it catches mice." I think we should not be put off by critics who say we are unscientific in our approach to medicine. The important thing is to cure, or if that is not possible, at least care for the patients in our charge.

Let us not forget the Litany of Sir Robert Hutchinson.

"From putting knowledge before wisdom, science before art, and cleverness before common sense,

From treating patients as cases and from making the cure of a disease more grievous than its endurance,

Good Lord deliver us."

That is why our little boy who lies quietly in the ward has a name, and does not carry merely an anthropological tag. And his name is Hock San.

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Master and apprentice*

D.E.C. Mekie

F.R.S.E., M.B.Ch.B.(Edin.), F.R.C.S.(Edin.), F.R.C.P.(Edin.),
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Those who have previously delivered this Memorial Lecture to Sir John Fraser were his contemporaries. They spoke of him as one who had been a trusted surgical colleague, as a friend whom they had honoured and respected. To me was given the privilege of being his student, house surgeon, tutor and assistant. Whatever I may have achieved personally as surgeon and as teacher I owe to the training I received from him. He set a standard on which his students could pattern their future, to his assistants he extended graciously his friendship. It is as a mark of respect, of gratitude, but above all as a token of affection that I chose as my title "Master and Apprentice," and the theme that of some aspects of the training of a surgeon.

There is a long tradition of teaching in the Edinburgh surgical school but the golden age began towards the end of the eighteenth and early nineteenth centuries which such men as John Bell, Lizars, Liston, Thomson and Knox were attracting students not only locally but also from England and abroad. It was in 1803 that the Regius Chair of Clinical Surgery was established and James Russell appointed the first incumbent. James Syme 1833, Joseph Lister 1869, Thomas Annandale 1877, Francis Caird 1908 and Harold Stiles 1919, each in turn succeeded to the Chair and each as a surgeon and teacher maintained and enhanced the tradition. To this galaxy of talent in his time John Fraser added lustre.

The reputation of the teachers in those days rested upon their skill of exposition since the formal course of lectures was the principal vehicle of instruction. This in large part can be attributed

to the costliness and paucity of textbooks but it was also an expression of a characteristic of Scottish education that the pupil should be well grounded and indoctrinated in the basic principles of his subject. The teachers, whether at the level of the village school or in the more academic sphere, were alike to be judged by their skill as instructors. It could hardly have been otherwise for the Scottish Universities with their democratic place in the life of the country and their close link with the Presbyterian Kirk drew their main student body from those who had been from childhood habituated to the sermon and were aware of the close criticism by their elders which was passed on ministerial orations both in terms of substance and of style.

Teaching is an exercise in communication and the lecture is its most stylised form. Any who heard John Fraser exercising his art as a lecturer would appreciate his merit and his skill. To some the art of effective lecturing comes easily but to others it can be acquired only by application and practice. The basis of the success achieved by John Fraser rested equally on his own extensive knowledge and the care with which he prepared. In his inaugural address he spoke of the need to teach analytically. The subject was broken up into parts: the anatomy, the pathology, the clinical presentation, the management. With equally fastidious care the content of the lecture was precisely determined by the inclusion of only that which was essential to a logical and comprehensive whole.

To acquire the art of lecturing requires experience. It is with more than nostalgia that the demise of the School of Medicine of the Royal College is to be regretted for it afforded the younger members of the Edinburgh School the opportunity to practise the techniques of teaching. Since success was measured by the number who attended and inadequacy promptly demonstrated by dwindling fees, the lesson was obvious to the lecturer himself. He was speedily aware

*Acknowledgment:

This is The Seventh Sir John Fraser Memorial Lecture which was delivered by Professor D E C Mekie in the University of Edinburgh on 21 April 1969. It was published in the Journal of the Royal College of Surgeons of Edinburgh 1969 Volume 14, page 241. It is reprinted here by kind permission of the Editor of the Journal of the Royal College of Surgeons of Edinburgh.

of the judgment of that most critical of juries, the student audience. Perhaps it was this example which prompted the recent proposals anent university remuneration by Aubrey Jones!

Quite a few of the most distinguished university professors served their pedagogical apprenticeship in the School of Medicine—Lister was one of these—and here too John Fraser and David Wilkie jointly conducted a course of surgery. It may be added that the competition of the extra-mural school not only ensured worthy successors to the professoriate but also exercised beneficial effects upon the standards set within the university departments.

In the same context may be regretted the decline of those classes organised as private ventures by still more junior teachers in Edinburgh. Coaching is open to criticism but for many students, undergraduate and postgraduate alike, these classes proved of value and the standard of teaching must have been of merit when one can recall that it was from such that Aird's "Companion of Surgical Studies" was born. The present lack of suitable tutorial classes reflects both the official frown of academic authority and the relative affluence of the junior staff. I quote John Fraser's inaugural lecture: "I would welcome the more extended use of the revision and tutorial class."

To-day the didactic lecture is denigrated by many, on the grounds that it encourages dogmatism, and it has been replaced by other forms of presentation, the symposium, the seminar, the clinico-pathological conference and discussion group, on the grounds that these give opportunity for greater audience participation. None, however, can achieve the clear logical exposition of the prepared lecture and it has been expressed to me that on occasion, while the conference or symposium has been interesting, the student remained in perplexity. Whatever the defects of formal didactic teaching, it served for the young surgeon one paramount function. It was a major part of our own training to participate in undergraduate instruction for as we taught we learned ourselves and acquired that basic fund of knowledge to which we could add as our experience grew. We acquired the habit of selection and logical arrangement together with a conscience for words which had clarity and precision.

It would be wholly wrong to equate the reputation of this Surgical School solely with the oratorical skill of its teachers. It is part of the essential tradition of a profession that the older members are under obligation to impart their knowledge and teach their skills to those who

will in turn succeed them. Training by apprenticeship is hallowed by age-long custom and amongst the earliest records of the Guild of Surgeons and Barbers of Edinburgh are references to this practice. It was no casual employer/employee arrangement but a close personal bond between master and apprentice, sealed and confirmed by legal document in which the obligations resting both on the master and on the apprentice were set forth in the quaint legal jargon of those days.

The indenture of William Borthwick to James Borthwick, Chirurgeon/Burgess of Edinburgh, and dated 22nd February 1653, is the oldest of these documents available for reference. The apprentice is bound "prenteis and servant . . . for the days, space, years and termes of five years to serve ye said James Borthwick, his master, leillie and trewlie, night and day, holy day and week day, in all things godly and honest, and sall not know nor heir of his said master's skeath," whilst on the master the document "binds and obleisses him to ken, learne, teach and instruct in all poyntes, practiques and ways of his sd art and calling of Surgerie and barbor craft and pharmacie, and sall not hyd nor conceal na poynt nor pratique heir-of fra him but sall do his utter and exact diligence to cause him conceive, learne and understand ye same so far as he is able and can do himself." The relationship was shown to be even more personal for in the early minutes of the Guild of Surgeons and Barbers there is an entry in which it is enjoined that the master should encourage the apprentice to marry his daughter and it was also recorded that the young lady's virtue should, if possible, be warranted by her father. The essential personal character of the relationship is described at a later date by Joseph Lister who, while assistant to Syme, in one of his letters to his father, wrote: "The more I see of James Syme the more I feel his value as a magister. The stream of surgical instruction and Syme's continuing kindness continues to flow steadily and, if possible, increasingly." And we might note that Lister followed the old tradition and married Syme's daughter. Later still John Fraser refers to his association as assistant to Harold Stiles as working with one who became his "guide, philosopher and friend."

The attraction of the master to the pupil rests on many things. It may be the reputation for outstanding scientific work or his skill in the technical and clinical fields but more important is the character of the man himself. It was during the long vacation of my second year that I first met John Fraser. It was late one Saturday night and I

had been attending the Surgical Out-Patient Department. About midnight an emergency case was admitted. As the only student available, I was given the task of preparing him. Having elicited from the house surgeon what this demanded, I was at least able to perform my first task as a barber-surgeon, then when I got the patient to the theatre, in the absence of any other, I was told to give the anaesthetic. I disclaimed any knowledge of what was entailed and then the surgeon came forward and demonstrated to me what I would have to do, assuring me that he would keep his eye on things and that all would be well. In spite of anaesthetic handicaps, the operation was expeditiously completed and then John Fraser thanked me for my help and told me that since it was my first experience in the theatre I had done very well. To a very junior student who was acutely conscious of his inadequacy, to be thanked was a gracious and kindly gesture. It was typical of John Fraser. Whatever may have been my previous concept of what branch of medicine I had imagined I might wish to follow, this brief incident, those passing words, determined for me my future career and above all, it determined for me the master from whom I would wish to learn and whose example I would wish to follow.

But while the student, undergraduate or post-graduate, may find the master of his choice, on what basis did the master choose his apprentice? At the time of which I speak the house surgeon at the Royal Infirmary was selected personally by the chief. The selection was based upon a personal knowledge of how the student had done during his period in the wards but especially while he had been acting as junior house surgeon. This was a voluntary exercise by the student, for which there was much competition. The tasks were menial but the junior learned much, the elements of nursing care and side-room work, but the real prize was that it afforded the opportunity, however humble, of being one of the team, of being in closer association with the surgeon, and of attending the unofficial ward rounds and emergency work. Harold Stiles spoke about his period as clerk to John Chiene thus: "I well remember how proud I was to be able to be at my chief's elbow when he made his preliminary canter round the wards. It was then I realised the joy and privilege of coming so closely under the influence and magnetism of a master-mind."

Just as the house surgeon was selected from amongst those who had "junioried," so the tutor was selected from those who had held the house appointments. That a chief could appoint housemen and tutor without advertisement or the aid

of a selection committee may savour of nepotism. It is easy to point out the failures of personal selection and it would be idle to pretend that mistaken judgment did not occur. This is but a reflection on the unreliability of human assessment. We can, however, recall that even divine selection of disciples carried an error of one in twelve! But we should consider by contrast that so many of the holders of the Regius Chair have been men who had in their time been personally selected by their predecessors. The basis of the criticism indubitably rests upon the fact that less attention was apparently paid to the result of class examinations and scholastic distinction. I do not underestimate academic ability but what must be known in selecting an assistant is something of the man's honesty of purpose, his determination and above all his capacity for loyalty. These are matters upon which opinion can be formed only as the result of long, personal and close observation. To-day, when the practice of surgery is a team effort, these personal attributes become even more significant. The choice of an assistant who is acceptable not merely to his master but who will collaborate with his colleagues is essential for the successful working of the team. Anyone who is deficient in this respect is a source of grievous weakness not only resulting in personal unpleasantness but in lowering the standard of the work of all. The only way to be a good team member is to serve "leillie and trewlie."

The selection of an assistant by a chief is a matter of greatest concern for he is personally involved. His own reputation will later be determined, in part at least, by the quality of those whom he has trained, not only in their technical skills, but also by the impact he has had on the character of his assistants. Sir James Paterson Ross recently put it: "Although the pupil can benefit greatly from his master's technical skill, he will learn even more from his behaviour, the manner in which he conducts his daily duties. The pupil absorbs from his master the habits of thought, technique, and of personality. Often enough we know the master of the past generation by the pupils of the present."

To advance beyond the stage of tutor was always a matter of uncertainty for, in spite of any support we might have earned from our chief we had entered a highly competitive branch of our profession. Addressing the junior staff shortly after his appointment as Principal, Sir Thomas Holland referred to this. He said that in his experience junior members of university staff frequently were all too anxious about the future but if a

man made himself adequately qualified the opportunity inevitably occurred. Put in another way, we all start life with the same fund of good luck. The difference is that some are equipped to take the opportunities which arise, and do so. This indeed was the spur for trainees of those days for in the ultimate issue it was on our own record and our own qualifications that we would have to depend for advancement.

Surgical training to-day must be subject to change to meet the challenge of increasing knowledge and alteration in conditions of hospital practice.

There are factors which are tending to reduce the close personal relationship between chief and apprentice. In accord with modern concepts of what is acceptable in a public and—to use a hackneyed word—democratic service, the assistant of to-day is seldom the result of personal selection. There is a somewhat naive belief that a computer can assess character or alternatively that after even the briefest interview a selection committee can make the proper choice. This can be a potential source of lessened loyalty on the part of the assistant and there is certainly a reduction in the likelihood that master and apprentice will have that close accord of thought and purpose which personal selection is more likely to secure. It was one of the privileges of the house officer of John Fraser to receive directly from him his instructions and to report directly to him on matters concerning patients in the ward. With the interposition of senior house officers, registrars, senior registrars, the chain of command is longer and it is inevitable that the junior house officers find themselves to be separated from the chief with whom they serve. One junior house surgeon commented to me that he only had to carry out the residual routine tasks which were left to him after the other not very much more senior members of staff had had the opportunity to select what was most interesting to do, and that his responsibilities were to the registrar and not to the chief. It would, of course, be wrong to say that this is the common pattern but nonetheless that such comment can be made indicates a weakness in present arrangements. It may be questioned whether or not it is practicable, in one unit, to have so many intermediate grades of junior officer and yet ensure that all have the necessary close contact with the chief.

Specialisation is not a new phenomenon for we read that Hammurabi in the year 2000 B.C. had at his court 700 physicians each of whom dealt with only one disease. During the past 50 years there has been an acute recurrence of this

phenomenon. Traditionally in British medicine the specialist was one who, on a broad basis of knowledge, concentrated his attention on a narrow field but he remained a generalist with a special interest; indeed he practised thus. In contradistinction to the pyramidal form of specialist development there is to-day the concept that the young graduate should from early in his career limit his field of studies. It is evident too that each specialty as it develops seeks to acquire an independent existence isolated from the general field and from other specialties. The lines of demarcation of the different specialties come to be regarded as rigid with a fervour which suggests the advocacy of a Trades Union official. The lack of communication between the specialties, the lack of feed-back, certainly is the source of grievous difficulty in the basic training of the surgeon of the future. In the major hospitals to-day, although there are units which are still designated as "general surgery," the spectrum of disease seen therein is limited by the fact that from the whole field each of the specialists has already abstracted his cases. The trainee therefore will have but limited opportunities for training and experience. To meet this situation rotational programmes are practised. The young doctor works for a limited period in the different specialties in turn. In each he receives a deep short intensive exposure to the sub-discipline but, on the termination of each of his "special courses" as we may designate them, he will turn to other fields of study and thereafter see none of the specialist work on which he had been concentrating. His knowledge of this special subject following a biological law, undergoes disuse atrophy and his overall training remains fragmented by reason of the manner of its presentation and acquisition. The rigid demarcation of specialists is attributable in part to the practice in British hospitals of having a multiplicity of small architecturally isolated units. Careful consideration should be given to the development of larger forms of services in which the different sub-specialists participate and of which they would be part. This secures—and I speak from personal experience—that constant association of all members of the staff affording to the junior the opportunity for broader training and experience, and to the more senior members, a continuing contact with other specialist fields.

During the past decade there has been an upsurge of interest in postgraduate medical education. In consequence there has been a mass of reports dealing with both the content and the standards of education and the methods of im-

plementation. These have come from the Royal Colleges, special committees, from Government departments and, finally and most important, from the Royal Commission. It is inevitable that such reports are a compromise and contain much which is orthodox. It is interesting to note that the general plan of medical education in the report of the Royal Commission, hailed by many as new and revolutionary, is but a faithful if modernised version of the Ordinances of the Guild of Barber-Surgeons of London dated 1556. These set out that, following the apprentice period of 7 years, there was an examination entitled "The First Petition of Grace" (how much more picturesque than "The Final Professional") which permitted limited practice. There followed a phase of study under different masters during which there were six-monthly reports of progress at the end of which, the man's skill having been found satisfactory, he was awarded the higher diploma of Surgeon and Master Anatomist and received a licence to practise, not from a mundane G.M.C. but from a Bishop. Thereafter continuing education was secured by compulsory attendance at quarterly demonstrations of anatomy.

It would have been gracious had the Royal Commission acknowledged the source of its inspiration.

Not the least of the handicaps under which these reports have been drawn up is that the proposals required to be generally applicable and acceptable. The needs and wishes of the majority require to be met and therefore it is the highest common factor rather than the best which is the target. The emphasis comes to be on uniform good achieved by collective organisation rather than excellence resulting from encouragement of individual initiative, endeavour and innate ability. Such views are particularly attractive to those who are more fearful of their own vulnerability in open competition—always a majority. Medicine has not escaped the cloying influence of presently accepted social habit, assuming that organised practice in a nationalised service should provide a uniform standard. We see this at the upper level in the uniformity of the consultant grade where individual merit must be cloaked, personal distinction being rewarded without disclosure, and for the younger man his training in the future will follow programmes designed on a national basis.

Were the planning of postgraduate education a voluntary exercise permitting variation to meet the needs of the individual, the programmes of training suggested in many of these reports would be acceptable as guide-lines but present proposals are that these training requirements in each branch

of medicine will be enshrined in formal legal statute and regulation, and for their implementation a prescribed administration established. By its very nature every statute and regulation necessitates definition of terms and a clear indication of the process by which these purposes are to be achieved. The administrator seeking to achieve impartiality must follow the letter of the law for he is concerned more with process than purpose.

The task of posting each doctor appropriately to meet his educational needs and at the same time to meet the service requirements will be as complex as arranging a railway timetable. Clearly, the allocation of junior staff will be an administrative exercise with but little choice of variation—of that flexibility to which we presently pay much lip-service — to meet either the wishes of the chiefs or the inclinations of the young doctors. We may achieve an efficiency dear to the heart of the Minister of Employment and Productivity but at variance with the requirements of medical education.

Since it is clear that the young doctor's future career can only lie in the National Health Service, the opportunities of achieving a satisfactory career, in other words the promotion prospects, can be calculated with considerable accuracy. The number of those who can be accepted for specialist training in each branch will be determined by the opportunities ahead, a point which has been emphasised in comments made by the Royal College of Physicians of London. Indeed it will be one of the duties of those who counsel the young graduates to indicate what are the prospects in any particular sphere. If we accept this concept that there is to be but little competition for promotion at the later stages of training, that there is almost to be some guarantee of success to every junior trainee, we may be achieving a degree of security but we certainly will be lowering standards for it is by competition at every stage in a man's career that eventually the most capable reach the top of their profession. It is a curious comment on modern thinking that in the Report of the Royal Commission the assumption is made that the vast majority of those who enter a training programme will achieve the necessary standards. It stated that at the end of the period of vocational training "we expect that as all the candidates will have gone through a planned series of training posts . . . a very high proportion will receive the certificate."

Those who have a special interest in medical education welcome the interest which is being exhibited in the problems to-day. We look forward to improved facilities for those who are in training,

the greater time which will be available for study, the improved opportunities to gain experience and to participate in research. These things we welcome but there are many unsolved problems. Rightly in the epilogue of the Report of the Royal Commission this comment is made: "For every question we have tried to answer, however, there are others that still demand attention." It is the task then of the profession at the moment, surely to examine with care those many proposals, testing them against the great principles which have been established and whose merits are known. We should seek to adopt and adapt that which is good, criticise and reject those points which seem to be disadvantageous. It is in accord with the great obligation placed upon Universities and Colleges that the best minds must be given the greatest opportunity to develop and indeed are spurred on so to do. We must not sacrifice individual quality for quantity. Our task is with the individual doctor as the doctor's is with the individual patient. Medical education must never

be designed as a production line in an engineering workshop, ensuring an output of standardised surgeons of uniform pattern. It is essential that we should point out in how far the development of new systems enshrined in legislation will materially interfere with the liberty of the individual, in how far it may impair proven methods.

Perhaps we have sought too much to find a panacea. Our present task should be rather to analyse the many interwoven problems, seeking to solve each in turn in the light of established principles, appreciating that, because a principle is traditional, it is not necessarily wrong. In his inaugural lecture Sir John Fraser chose as his title "De Novo" and developed his concept of "my educational ideals." He briefly and succinctly indicated what would be his approach to any problem and I would be content were his words the motto of the educationalist to-day: "Here is the problem. Let us pull it to pieces. The synthesis will look after itself."

Limits of Family Medicine: Pruning and Updating

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Every thinking Family Physician has at some time in his professional career paused to ponder: What is Family Medicine? In what way is it similar or dissimilar to Primary Medical Care and General Practice? How does one define it? What are its contents? What are its limits, in a three dimensional sense, particularly if it is evaluated in the light of exponential growth of medical knowledge?

There is a global struggle to establish Family Medicine as a separate, viable and credible speciality, not by accident but by design, as an *equal* to its sister peer specialities, not in a patronising manner but with a healthy mutual respect for each other. This discursive paper is not a mere posturing to pay homage to our alter ego but to analyse, discuss and seek your views on how an integrated study can be undertaken by a high powered commission/panel appointed by an international body like the present one to define the limits, bearing in mind:—

- (i) its **contents**
- (ii) its **width and what main disciplines it encompasses**
- (iii) its **upper limits** beyond which is definitely specialist or secondary care, or tertiary care
- (iv) its **lower limits** below which, either in quantity and breadth, and quality, one cannot claim to practise the speciality of Family Medicine.

A useful starting reference point for study are the documents:—

- (a) Essentials for Graduate Training in Family Practice by the American Board of Family Practice
- (b) The Core Content of Family Medicine by American Academy of Family Physicians
- (c) The Processes and Contents of General Practice by Prof Neil Carson of Australia, and
- (d) Specialisation in Primary Medical Care by the Malaysian College of General Practitioners and Family Physicians.

We must, however, bear in mind that the standards expected, set and achieved are, to a large extent, influenced by socio-economic levels of the community, sophistication of the people, activated public opinion of the health needs, governmental support and commitment, the availability of high calibre full departments of Family Medicine in Medical Schools (as shown by Dr Beck E.P., et al 1977) both at undergraduate and postgraduate levels, increasing percentage of brighter young graduates opting into Family Medicine residency programmes and becoming full-time clinical teachers and research workers, the availability of a *career structure* and career prospects in Family Medicine/Primary Medical Care in the public sector with *equal* attractions to that of the glamour specialities like Medicine, Surgery, Obstetrics & Gynaecology, etc. These are the general organisational factors that have a bearing on the contents, level and as a consequence, limits of Family Medicine.

On a personal level of the individual Family Doctor, the factors that have bearing on the limits of Family Medicine are: the type of medical students selected to enter medical school, his IQ, his 'A' level results, his personality factors like perfectionism, maturity, thoroughness, perseverance, an analytical, critical and creative mentality and a *genuine aptitude for medical care*. All these have a variable bearing on his capacity to maintain standards and limits in any speciality including Family Medicine. At the postgraduate level, personal motivation for clinical competence, willingness to teach and perceived enthusiasm for keeping up-to-date, are closely associated (Prof Parkhouse, Manchester University 1978). At present the prime motivating evolutionary force that maintains standards and its consequential limits are prestige and self-fulfilment, which are best obtained by the use of students and trainees

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as instruments of continuing education for the General Practitioner by their presence, their influence and their demands. Any draconian perceived need that involves practice audit and compulsory re-certification merely indicates a temporary failure in natural evolution. Note that this is essentially a British view which is in contrast to the American attitude of compulsory practice audit and recertification of Family Practice.

Perhaps the most important factor is a comprehensive structured postgraduate training programme which controls quantity and quality of teaching, minimum period of residency posting, both in the relevant hospital specialities, and in Family Practice within hospital and on an outpatient basis in approved practices (Parkhouse). There should be validated examinations that provide assessment and accountability of Family Physicians to the public, that they are sufficiently trained and have updated current core knowledge and are competent professionally. In the words of Dr John Hubbard, Emeritus Professor of the National Board of American Medical Examiners: "Evaluation of the product thus provides evaluation of the process," and indeed its limits.

It is relevant, at this juncture, to introduce little discussed psychological and physical health factors of the Family Physician which have a bearing on the limits of Family Medicine. It is common knowledge expounded by leading psychologists, that the period of learning and absorbing at maximum levels is for the first two hours and thereafter it tapers off to a low plateau of absorption (Prof Eysenck and Prof A.J. Ayer of London University). This has a bearing on the volume, depth and breadth of the contents of Family Medicine, particularly in a comprehensive continuing care, un-preselected type of practice. Further, the middle-aged idealistic Family Physician is often exposed to strains and stresses of diseases like heart disease, ischaemic heart disease, high blood pressure, diabetes mellitus and, in addition, natural aging, all of which bear a significant toll on the amount, frequency and enthusiasm of updating current core knowledge. Since all these factors have a bearing on the limits of Family Medicine they should be carefully evaluated and integrated in studying the limits of Family Medicine, so that a realistic, rigorous standard and limits are set which is reasonably achievable, bearing in mind provision of opportunity for leisure, family life, hobbies and continuing medical education. If too high an idealistic standard and limits are set there is a danger that it will be an Utopian ideal garbed in fraudulent

pomposity. On the other hand, if too low a standard is set, it will attract patronising smirks of other senior sister specialities, like the one by Sir Max Rosenheim, Past President of the Royal College of Physicians of London that, "General Practice is a refuge of failures in Medicine and the scrap-heap of mediocrity."

So far we have considered the factors that influence the limits of Family Medicine. We can now discuss substantively what is Family Medicine? How it first started, its course and status through history, all of which have a bearing on the evolution and establishment of a viable, credible and equal discipline in the health care delivery system.

From the very beginning of human habitation of our planet earth, there was Family Medicine. As humans gained understanding of their environment and diseases, there emerged even in pre-historic settlements, individuals who were interested in disease and possessed skills in therapeutics. Their ability rested in occult knowledge, herbal remedies and faith in magic, and more importantly, in the sick person's belief that these people had special powers of healing. As human beings have not altered much despite the passage of time and the advent of scientific discoveries and technology, the doctor/patient relationship had not changed fundamentally either, based even today on faith, empathy and care.

A systematic approach to disease and treatment developed in the third millennium BC in Egypt, Summerian Valley (Mesopotamia), India and China. The earliest recorded case was found in a stone slab in the surrounding tombs of Cheops, Chephren and Mycerinus of the fourth Dynasty (2723 to 2563 BC). The Hieroglyphics indicate a man by name of Iry, chief of the Court Physicians; his other titles were Eye Doctor of the Palace, Doctor of the Abdomen, Guardian of Royal Bowel Movement, he who prepared BM (probably an important medicament) and knows the inner juices of the body, thus indicating not only depth in knowledge but also a holistic approach by a generalist — in short a General Practitioner.

At the time of the Renaissance, as well as the rebirth of the Arts, there was also rebirth of the knowledge of Medicine. Medical science flourished in Alexandria and Padua, followed by Paris, Lyden, Vienna, Edinburgh and London. Despite the blossoming of knowledge of Anatomy, Physiology, Pathology, therapeutics would take a long time to catch up with other subjects, still being mired in the quicksand of superstition and empiric-

al therapeutics.

The 19th century in Europe was a great age of the General Practitioner. He alone with his forebears was an unwitting partner of whole person medicine. He diagnosed often, cured sometimes and comforted always. In the absence of potent therapeutic agents, the doctor's major role was to support the patient through his illness.

Vienna made a large contribution to the increase in medical knowledge of the 19th century with teachers like Rokitansky, Virchow and Semmelweis. Sigmund Freud and Carl Jung were the founders of modern Psychiatry and Psychology. It was not until the 1950's that this tool was applied to General Practice and in 1957, Michael Balint produced his book "The Doctor, His Patient and the Illness". In 1967, the U.K. Royal Commission on Medical Education suggested the inclusion of Behavioural Sciences into the undergraduate medical curriculum.

Meanwhile in the United States the predominant theme of Medicine in the 20th century, as in many other countries, was an increasing trend towards specialisation and sub-specialisation both in medical education and clinical practice. In 1917 Ophthalmology became the first speciality to be recognised. By 1948, 18 other speciality boards were established. Between 1930 and 1970 the ratio between General Practice and Specialists was completely reversed from 80% General Practice to 20% Specialist in 1930, to 20% General Practice and 80% Specialist in 1970. This resulted in setting up the American Board of Family Practice in 1969 as the 20th speciality in American Medicine.

In UK, in the 60's, the Todd Report recommended the setting up of General Practice as a separate speciality. This recommendation was reinforced by the Merrison Report, which further implied the setting up of a specialist register. This was followed by the foundation of the Canadian, Sweden, Denmark, Netherlands, Australian, Philippine, South African, Rhodesian, Singaporean, New Zealand, Malaysian, Hong Kong, Indian and Sri Lankan Colleges of General Practitioners. What lessons can we learn from these trends?

Historically it can be said that specialities have evolved largely by a fragmentation of General Practice by the exponential growth of medical knowledge and catalysed by an activist doctor operating from a power base of a teaching unit of a hospital, and who wishes to carve a place in the sun for his proposed speciality. He justifies it on the grounds that there is too much knowledge in the previous speciality to be adequately mastered by a single person. It can

thus be seen that there is an over-lap between General Practice and many of the specialities. General Practice is best thought of as a speciality in **breadth** and characterised by **comprehensiveness** and **continuity**. Whereas, traditional specialities are best considered as specialities in depth and episodic. Although the elements of all specialities are a legitimate part of General Practice, some specialities in terms of **volume** of cases are still as much the province of General Practitioners as the specialists themselves, e.g. paediatrics, adult medicine. Thus, those specialities that have evolved are best classified as:—

- (i) behavioural specialities — Psychiatric, Psychological and Psychosomatic diseases
- (ii) procedural specialities — Obstetrics & Surgery
- (iii) age defined specialities — paediatrics and geriatrics
- (iv) minor specialities — ENT, Dermatology, Ophthalmology.

We can therefore see the chequered course of primary medical care/family medicine as it passes through phases of history from an initial intuitive process followed by an era of rationalisation, and followed by an age of technology and scientific advancement. We should learn from the past and resolve phoenix-like to create from the ashes of the past, a viable and credible speciality. A considerable portion of the ground work has been done by developed countries like the United States and the United Kingdom and Australia. A good start has been made by the United States by establishing Family Practice as a speciality in 1969. Most of the initial organisational issues have been decided successfully. What are the challenges facing Family Medicine in 1979? It is clear that notwithstanding the setting up of the speciality of Family Medicine in developed countries, the development of any speciality is a long term evolutionary process. In 1966, Prof I.R. McWhinney, Professor of Family Medicine, Chairman of the Department of Family Medicine, University of Western Ontario, noted astutely in the *Lancet*, four essential criteria for the definition of any academic discipline:—

- (1) a distinguishable body of knowledge
- (2) unique field of action
- (3) an active area of research
- (4) the training which is intellectually rigorous.

We should in the light of these guidelines strive to avoid the pitfalls of the past which had allowed the evolutionary fragmentation of General Practice. On the contrary, we should define the limits of our discipline, and by virtue of the expo-

ponential growth of knowledge, we should periodically prune and update knowledge to ensure that we have a vigorous and viable discipline. Invariably, we should consider the first criteria of Prof McWhinney, that is, "a distinguishable body of knowledge", by defining it and delineating its boundaries, decide *how* and to *what* extent and *how* frequently we should prune and update our knowledge, bearing in mind the personal factors of practising Family Physicians. Once this has been resolved we should have guidelines that will ensure our discipline is viable and vigorous and an equal speciality based on a unique field of action, have an active area of research and a training that is intellectually rigorous.

In defining Family Medicine, it is pertinent to take note of geographic, socio-economic and other variations but nonetheless, they are important prerequisites in arriving at a decision of its limits.

A working definition is as follows: Family Medicine is best defined as the provision of primary (in a generic sense), personal, comprehensive, preventive and continuing total health care to individuals of either sex, families and those with whom they interact in family, occupational, and social environment. It looks after the individual's physical, psychological and social well-being. If the need arises the Family Physician can request for relevant investigations, ask for ancillary and allied medical help like medical social workers, nurses, physiotherapist and occupational therapist, and if in doubt he should seek a consultative/specialty opinion. He will know *when* and *how* to intervene through *treatment, prevention and education* and *promote* the *health* of his patients and their families. If the patient needs secondary or tertiary care like surgery or radiotherapy, the Family Physician shall refer him to the appropriate specialist/consultant.

In considering such definitions, we must consider what is specially peculiar and unique — and that is, its **comprehensiveness** and **continuity**; and basically, it is a discipline in **breadth** in contra-distinction to other specialties which are disciplines in depth. Further it is a speciality of function in the family and community setting, with *enhanced primary care*/Family Practice. To give it a three dimensional concept, it must be quantified with a maxima and minima range. Amongst other things it must consist of **at least any three of the five major disciplines**, that is, Adult Medicine, Paediatrics, Surgery, Obstetrics & Gynaecology, Psychological Medicine, with Adult Medicine as an invariable compulsory component. The upper limit and width must be considered as essential because with changed socio-economic circum-

stances like retirement, our specialist colleagues (i.e. Paediatricians, Physicians, Surgeons & Obstetricians) may conveniently opt into Family Medicine and make a mockery of our speciality. What is worse we may attract over-zealous specialists in the in-depth specialties advocating for various reasons that Family Medicine is but a watered down variation of their discipline. A upper limit is thus obvious. It is also necessary to maintain uniformity of standard and correct Dr J Tudor Hart's concept of deprivation, which stated, "that patients in the most depressed areas with the greatest need of good health facilities often received the worst facilities." Further, apart from uniformity and a relatively high upper limit of knowledge, it is necessary to attract peer respect and prestige by fulfilling the fourth criteria of Prof McWhinney, "rigorous intellectual training". To achieve this, it must be mandatory for candidates of certification diplomas to have compulsory vocational training and/or residency programmes. Note should be taken of the fact that because of the unique width of our discipline, the **depth** of any one of the three elective components must necessarily be less than any one of the specialties, to allow for a convenient **total mass of knowledge**, no less than that of any one of the in-depth specialties, which can be mastered by an averagely good new breed of Family Physicians, based on a cult of excellence. On the other hand, merely claiming to know too much, bearing in mind the stressful diseases that can affect the Family Physician, his powers of concentration and learning in the context of middle and advancing years is a masquerade. Claiming to know too little does not in itself attract emotive epithets but merely makes a mockery and farce of our claim that our discipline is a speciality; thus a fine balance has to be achieved by a standing commission of our **own** experts, sensitive to the changing needs of the community and based on a academic back-drop of research from full time departments of Family Medicine around the world. As Bertram Young says in the guest editorial of June 1969 issue of the New Zealand Family Physician, "We need more research into the job definition of General Practice, its structure, its processes and what actually we do and why we do it."

With the exponential growth of knowledge it is inevitable that the discipline of Family Medicine will become unwieldy and cumbersome, unless it is periodically pruned to exclude obsolete and useless knowledge. Moreover, there is a danger that it will become an amorphous mass from which new specialties will fragment off again as in the past. Further a more important reason is to ensure

that as a result of pruning, the size of the mass of knowledge which constitutes Family Medicine is such that it may be mastered by an averagely good Family Physician. In addition, a pruned discipline allows for a vigorous and healthy growth of new knowledge and allows enough elbow room to update core knowledge which is really the quintessence of a viable and creditable speciality. The really difficult question of how much to prune and how often, has to be carefully evaluated by an expert panel/commission of our **own** peers. I have outlined a three dimensional concept of Family Medicine, and with this background, we also know that various experts have stated that the half-life of new knowledge has been estimated to vary from six months to five years. Therefore between these two limits of time we should select an optimal interval to prune obsolete knowledge and update in such a manner that there is a continuing, expanding challenge to explore, research and teach the new dimension of whole person Medicine.

An incidental but nonetheless important point in this three dimensional delineation of the body of knowledge that constitutes Family Medicine is the upper cut-off line of Family Medicine. If it is clearly delineated, both the Family Physician and the Secondary Care Doctor will have clearly etched in their minds what portion of care falls into the ambit of secondary care. This clearly has medico-legal implications of setting standards of care, skill and competence. It also facilitates acceptance of us as equals, by our sister peers in secondary and tertiary care specialities without arousing their fear that we are elbowing our way into their economic cake.

A more difficult question and indeed one that needs the wisdom of Solomon is to decide what knowledge should be added to the body of Family Medicine. Without doubt it can be said that this should be an active continuous process and not left to chance or convenience, and has to be decided on by a panel of our own experts and not by our sister specialists in their individual tunnel-like in-depth disciplines. We should certainly seek their opinions if the need arises but the decision should be solely and wholly ours backed up by research in institutionalised departments of Family Medicine who have the organisational facilities and the academic back-drop to carry out independent statistically validated research. The guideline which is offered for consideration is that knowledge that is updated should not be too esoteric, but more basic in nature and should have built-in guidelines to evoke the reasoning and applied talents of the practitioner.

It should be broad enough to cover the likely roles the Family Physician will be called upon to perform and flexible enough to prepare him to adapt to the unpredictable advances in medical science and technology. A useful scaffolding for updating knowledge is as follows:—

SECTION:

- (1) basic principles of medical science like Anatomy, Physiology, Biochemistry, Behavioural Sciences, Pathology and Pharmacology. Note the comparative similarity to Part I Examination of other specialities like Medicine, Surgery, Obstetrics & Gynaecology, Ophthalmology, ENT & Anaesthesia.
- (2) clinical disciplines like Adult Medicine, Paediatrics, Psychological Medicine, Surgery, Obstetrics & Gynaecology, Ophthalmology, Dermatology, ENT and Laboratory medicine.
- (3) Pure speciality knowledge of our own discipline, that is, FAMILY MEDICINE, bearing in mind its uniqueness of comprehensive and continuity of care of either sex. Regional variations in the domain of geographic, and socio-economic imperatives can be incorporated to suit **regional** needs. Segments of Public Health, social medicine, community medicine including occupational medicine which have a relevance to Family Medicine should be included in this section.

This particular division helps to define our discipline as a speciality discipline according to the second criteria of Prof McWhinney, that is, "a unique mode of action."

It is important in updating knowledge to have these three **sections** so that our sister disciplines, in evaluating and appraising us, will have a healthy respect for our speciality.

In conclusion, the question of limits of Family Medicine, pruning and updating, is really a challenging one that requires a panel of our own experts or a commission to constantly and at regular intervals, prune and update knowledge of the discipline of Family Medicine, so that it is a viable, healthy and vigorous speciality, worthy to attract the respect and interest of the public, our sister specialities and indeed, government commitment.

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'Instant' laboratory investigations in a general practitioner's office

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Introduction

Laboratory investigations provide information for the diagnosis, prevention, or treatment of disease and the clinical laboratory provides the facilities for the examination of materials from the human body for such purposes (Conn, 1978). The general practitioner's clinical acumen is complemented by such tests, particularly when the symptoms of disease are vague and the signs few. To have convenient accessibility to laboratory facilities is an asset which has been recognised for a considerable time (Collings, 1950). In Singapore, the setting up of more clinical laboratories by pathologists in recent years has improved the situation. However, few general practitioners use these laboratories frequently because of the inconvenience and the cost. Referrals are made only for special biochemical tests.

Besides the use of commercially available strip-tests and pregnancy tests on urine, few general practitioners in Singapore perform laboratory investigations in their own clinics. Acheson (1978) stated that 47% of the general practitioners in his United Kingdom survey never performed any laboratory tests on their own. This state of affairs is unfortunate, as many useful tests are easy to perform and the results immediately available. It is a misconception that general practitioners are unable to perform these tests either from lack of time or from a misguided sense of inadequacy. The purpose of this paper is to show that much useful information can be obtained by simple tests carried out in the general practitioner's office at minimum time and cost. Diagnosis becomes more definite, management of the illness more specific and reassurance can be given with more confidence. In addition, the practice of medicine becomes more interesting.

Methods and results

The apparatus required for the setting up of a "Mini-lab":—

- a. Microscope
- b. Microscope slides and cover slips
- c. Haemocytometer pipettes
- d. Neubauer counting chamber
- e. Haemoglobinometer (Sahli) or spectrophotometer
- f. Diluting fluids eg Thoma's solution
- g. Stains eg Leishman's, Gram's.

Tests which may be easily done in the "Mini-lab":—

1. Urine tests
2. Blood tests
 - a. Haemoglobin concentration
 - b. Total white blood cell count and differential count
 - c. Peripheral blood film, thick and thin
 - d. Red blood cell count
 - e. Platelet count
3. Vaginal smears
4. Skin scrapings
5. Stool smears

1. Urine tests

All general practitioners are familiar with the various ingenious strip-tests commercially available and use them daily. Yet it does not take more time to put a drop of fresh urine on a slide, cover it with a cover-slip and look at it on low power under the microscope. We are fully convinced that this is the best confirmation for a urinary tract infection. More than 5 cells on low power or the presence of any pus cells on high power microscopy is significant.

The presence of motile bacilli may be easily seen with high power microscopy. Wilks (1979) showed that patients with urinary tract symptoms and absence of pyuria on fresh urine scanning

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usually do not have positive urine cultures. With this test a clinical decision can be made in minutes, while the patient is still in the consultation room. Sending a urine sample for examination and culture on the other hand, means a delay of several days and added costs. The presence of cellular casts, red blood cells, crystals and even monilia buds have been readily identified this way.

2. Blood tests

a. Haemoglobin concentration

Pallor is a clinical sign which is often looked for. Many patients volunteer that they "lack blood". Whether this is so may be checked using an inexpensive gadget, the Sahli's Haemoglobino-meter. (Hunter and Bomford, 1959). This pocket-sized apparatus does not need electricity. The results obtained are comparable with those obtained using the expensive spectrophotometer. Whilst the Sahli's method converts haemoglobin to acid haematin, the spectrophotometer method converts haemoglobin to cyanmethaemoglobin. Table 1 shows some results obtained using both methods simultaneously. The percentage error of the Sahli's method is within 5%.

Table 1

Haemoglobin Estimation: Comparison of Sahli's Method with the Cyanmethaemoglobin Method by the Spectrophotometer

| Cases | Cyanmethb. Method (gm%) | Sahli's Method (gm%) | % Error |
|-------|-------------------------|----------------------|---------|
| 1 | 10.2 | 10.4 | + 2.0 |
| 2 | 14.0 | 13.6 | - 2.9 |
| 3 | 10.3 | 10.8 | + 4.8 |
| 4 | 14.0 | 13.8 | - 1.4 |
| 5 | 11.7 | 11.9 | + 1.7 |
| 6 | 14.3 | 13.9 | - 2.8 |
| 7 | 13.0 | 13.4 | + 3.1 |
| 8 | 11.7 | 11.8 | + 0.8 |
| 9 | 10.7 | 10.5 | - 1.9 |
| 10 | 10.3 | 10.1 | - 2.0 |

Table 2 shows the different causes of anaemia encountered in our practice on 700 patients who had their haemoglobin concentration measured. 67 patients had levels which were less than 10gm%. There is an exceptional number of pregnant women in this group because we estimate haemoglobin in all our antenatal patients. Latent iron deficiency is present in about 1/3 of Singapore women in the reproductive period of life and the

added demands of pregnancy often lead to anaemia (Chang, 1973).

Table 2

Causes of anaemia: 67 patients (with haemoglobin less than 10 gm.%) out of 700 patients studied

| Causes | No. of Patients | % of 67 |
|-----------------------------------|-----------------|---------|
| 1 Pregnancy | 52 | 77.6 |
| 2 Blood disorders | 6 | 8.9 |
| Acute Leukaemia (2) | | |
| Iron def. anaemia (2) | | |
| Thalassaemia major (1) | | |
| Haemoglobin H (1) | | |
| 3 Malignancy | 3 | 4.5 |
| Carcinoma stomach (1) | | |
| Carcinoma colon (1) | | |
| Carcinoma corpus uteri (1) | | |
| 4 Chronic Blood loss | 3 | 4.5 |
| Abortion (1) | | |
| Menorrhagia (1) | | |
| Bleeding peptic ulcer (1) | | |
| 5 Chronic Renal Failure | 2 | 3.0 |
| 6 Subacute Bacterial Endocarditis | 1 | 1.5 |
| Total No. | 67 | 100 |

b. Total White Blood Cell Count

Infections, both bacterial and viral, are seen daily. Most times clinical judgement suffices and antibiotics are prescribed when needed. In the majority of cases there is no need to perform a laboratory test. In some instances however, the illness does not progress as expected. At such times, it is reassuring to be able to check on the patient's Total White Blood Cell (WBC) count and to know that the results are forthcoming within a few minutes. Table 3 shows results of Total WBC count obtained in patients who presented with upper respiratory tract infection and fevers lasting for more than 3 days. From the results, it may be seen that the majority of patients had a viral illness. The low or normal counts, together with the clinical picture, gave us the confidence to persist with symptomatic treatment instead of reaching out for antibiotics. The Total WBC count has been invaluable in the diagnosis of Acute Appendicitis in children particularly. Abdominal colics are very often encountered among children. Clinical signs of an acute abdomen may not be easily elicited in small children. The Total WBC count is usually raised in Acute Appendicitis and sometimes markedly so. We have also used this test to monitor the leucopenic effects of cytotoxic drugs eg Methotrexate.

Table 3

Total white blood cell (wbc) count in 70 patients presenting with upper respiratory tract infection and fever for more than 3 days.

| Total wbc count/c.mm | No. of patients | Mean total wbc count/c.mm. | Range | % of total |
|----------------------|-----------------|----------------------------|----------------|------------|
| <5,000 | 38 | 3,365 | 1,600 – 4,950 | 54.2 |
| 5,000 – 9,000 | 27 | 6,679 | 5,050 – 8,950 | 35.3 |
| >9,000 | 8 | 10,275 | 9,500 – 12,000 | 11.8 |
| Total No. | 70 | | | 100.0 |

c. Differential Count and Peripheral Blood Film

While the Total WBC count takes a few minutes to perform, the differential count and peripheral blood film takes a while longer because of the staining required. We use Leishman's stain. A glance at the peripheral film gives one immediately an idea of the red blood cell series, the white blood cell series and the platelets. The presence of abnormal looking cells, the preponderance of one cell type above the others is at once noted. The actual differential count may be performed at leisure. 2 cases of Acute Leukaemia were picked up this year. Both presented with pallor but neither had the classical symptoms or signs of the disease. Similarly, a 6 month old child was diagnosed as Thalassaemia Major from the blood picture of fragmented red blood cell, target cells, hypochromia and microcytosis. The diagnosis was confirmed by electrophoresis.

Thick blood films have on a few occasions been required for the confirmation of Malaria.

d. Red Blood Cell (RBC) count and Platelet count

The RBC count may be used in conjunction with the haemoglobin concentration and the haematocrit for the investigation of anaemia.

The platelet count has been used for confirmation of thrombocytopenia in Dengue Haemorrhagic Fever and for Idiopathic Thrombocytopenic Purpura.

3. Vaginal Smears

Vaginal discharge with or without vulval pruritus is a common complaint in general practice. The clinical diagnosis of vaginal discharge is unreliable. A drop of vaginal secretion diluted in normal saline and placed on a microscope slide with a cover slip is necessary in the management of all patients presenting with vaginal discharge. It is our observation that many women complain of vaginal discharge but pathological discharges form only a percentage of the total. In other words, some of those

who complain of discharge have physiological discharge and require no active treatment other than advice and explanation. A look at the vaginal smear is needed to rule out Moniliasis, Trichomoniasis and bacterial infections. Table 4 shows the results of vaginal smears in 80 patients who presented with vaginal discharge. Of the pathological discharges, we find that Monilia infection forms the largest group. This figure is comparable to that of Couchman (1974) who reported that 30% of the nonspecific vaginitis met with were due to vaginal candidiasis. While Monilia buds may take some experience to find, the actively swimming Trichomonads present no difficulty. Showing the organisms to our patients has ensured better patient cooperation on the treatment.

Table 4

Results of vaginal smear in 80 patients presenting with vaginal discharge

| | No. of patients | % of total |
|-------------------------|-----------------|------------|
| Normal finding | 31 | 38.7 |
| Monilia | 23 | 28.7 |
| Trichomonas | 9 | 11.3 |
| Non specified infection | 7 | 21.3 |
| Total No. | 80 | 100.0 |

Though we stain vaginal discharges with Gram stain in patients suspected of Gonococcal vaginitis, and have confirmed our clinical suspicions, we feel that the diagnosis is best made with a culture.

4. Skin Scraping

Making a skin scraping in 10% Potassium Hydroxide is both simple and invaluable in the confirmation of superficial mycosis from other forms of dermatosis. The fungal hyphae appear as thin, branching strands, faintly green and light refractile. Spores may be detected especially in Monilia and Malassezia furfur infections.

5. Stool smears

Stools may be examined in the consultation room from a direct smear made from a finger stall. In amoebic dysentery, the Entamoeba may be seen moving sluggishly. Parasitic ova have been identified in stool specimens.

Conclusion

From the observations made in our practice, we

feel that there is a great advantage in all general practitioners owning "Mini-labs", wherewith they may be able to perform simple laboratory tests on their patients. Bethel (1979) advocates that general practitioners should back up their clinical acumen with a microscope. We agree that the microscope is invaluable and together with the Haemoglobinometer provides a range of investigations that is useful, simple to perform and inexpensive. With practice, any general practitioner is able to master the techniques, and with a little patience, may also teach his ancillary staff to perform them. It is to be stressed that to perform any of these tests takes only a few extra minutes. The information obtained far outweighs the extra time spent on each patient. More specific treatment may be given, unnecessary medication avoided and all these add up to better patient care.

We feel that there is inadequate training given to medical students in this aspect of medicine. The sophisticated laboratories they are exposed to and the highly specialised tests they learn of, make them forget that in general practice there may be

constraints preventing the frequent utilisation of specialised laboratories. During such situations, and especially in rural practices, the student or doctor must be able to conduct simple laboratory investigations himself. It is hoped that in general practice vocational training programmes, doctors may be provided with opportunities to learn or re-learn some of these skills.

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On Examinations

"Examinations were a great trial. The subjects which were dearest to the examiners were almost invariably those which I fancied least: I would like to have been examined in history, poetry and writing essays. My examiners, on the other hand, were partial to Latin and Mathematics, and their will prevailed. I should like to have been asked to say what I knew. They always wanted to ask what I did not know. When I would willingly have displayed my knowledge, they sought to expose my ignorance."

Winston Churchill (1959)

The concept of mental health

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INTRODUCTION

Mental disorders have many local synonyms/ epithets such as "Gila" or "Cockoo" in Malay, "S'ng Ching Ping", "Seow", or "Teen" in Chinese, "Paythiam" in Tamil as well as mad, crazy or neurotic. It is interesting to note that disorders of mental health were known decades ago as mental illness and in the last century as insanity and lunacy. Mental health includes a wide spectrum of variations in human behaviour and personality. The recognition of subtle early changes is difficult or impossible. The problem is made worse by the fact that the diagnosis cannot be corroborated by physical examination, chemical analysis or even autopsy.

THE EARLY DAYS

In the early days when thoughts of men were dominated by fatalism and superstition, it was natural to imagine that those afflicted were fated to be so or were possessed by evil spirits and devils. These beliefs found expression in and dominated the methods of treatment and cure of mental illness. The believer in fatalism rushed to the temples with offerings to enchant urgent prayers to his Lord or Prophet to side-track the fate of his relative or friend whose mind was afflicted; or he rushed to the astrologer to seek advice or to forecast as to when the moon or Saturn, which is supposed to influence the mind, would change its horoscopic stance so as to cease its malevolent effect and begin its benevolent influence on the mind of the victim.

Quite often the witch doctor was approached and he attempted to exorcise the evil spirit or the devil by either uttering some magical incantation

or, in the case of a stubborn spirit, by violent physical punishment on the patient, believing that the devil will get the brunt of the trauma and that the patient himself would be free from any pain or disability.

The more enlightened healers subjected their patients to sudden shocks in the form of loud noises and cold showers. Misbehaving patients were punished as if they were fully responsible for their actions. The restless and agitated were restrained with chains or were put in straight-jackets. Even as late as the last century, physicians with few sedatives and tranquilisers at their disposal, were still using straight-jackets. It is indeed horrifying now to hear of such inhuman treatment of mental patients in those days. But even then, there were people who believed that humanity, compassion and common sense offered the best hope for the treatment of mental patients.

THE MODERN ERA

In the early stages, patients were injected with cerebral stimulants which caused fits. Few years later the same result was achieved by passing an electric current through the temples of patients. The introduction of Electro-Convulsive-Therapy (Shock treatment) and the discovery of new drugs including phenothiazines, monoamine oxidase inhibitors and tricyclic antidepressants made patients more accessible to treatment, reduced their violent behaviour and paved the way for an open-door method of treatment in the mental hospitals. The E.C.T. which has given dramatic relief to the depressed was introduced in the mid 1930s. Later still the treatment was modified

and given under anaesthesia and muscle relaxants as well as oxygen resulting in freedom from side effects.

The operation pre-frontal leucotomy introduced in 1935 had its own risks including epilepsy and personality changes ranging from dangerous irresponsibility to permanent inertia. But modified and used only for carefully selected patients, it offered a prospect of improvement to those who previously would have been considered beyond all hope.

For the treatment of Psychotic disorders especially in the maintenance therapy of Chronic Schizophrenia, patients who are unreliable in taking their oral medication and also those who absorb their oral phenothiazines such as Chlorpromazine (Largactil), Trifluoperazine (Stelazine) or Thioridazine (Melleril) in inadequate amounts, newer and long acting drugs such as Fluphenazine enanthate (Moditen) or Fluphenazine decanoate (Modecate) in sesame oil given as deep intramuscular injection in the gluteal region under the direct supervision of the physician has revolutionised treatment of many hitherto uncontrollable patients. Once a month dose of Modecate 1 ml or 25 mg (range of two weeks to five weeks in some) after an initial test dose of 0.5 ml (0.25 ml for those under 12 or over 60 years of age) has helped millions of sufferers around the world to acquire a normal life style without much side effects, except for less than 10% of patients who may require anti-Parkinsonism drugs and still fewer numbers who may require constant monitoring and therapy for fluctuations in their blood pressure. In the treatment of anxiety states Insulin hypoglycemia has been replaced by tranquilisers belonging to the Benzodiazepine group like Diazepam and Chlordiazepoxide and recently with beta adrenergic blockers such as Propranolol, Acebutalol etc. Lithium carbonate (Priadel) in the treatment of acute manic or hypomanic episodes or for the prophylaxis in manic depressive disorders, recurrent mania or recurrent depression is yet another important mile stone in therapy.

Modern methods of management also include appetising meals, decent clothing and living standards, programme of recreation including organised games, film shows, music, and dance as well as occupational and industrial therapy.

All these have led to an open door system of management.

While a few serious cases might require hospitalisation, the vast majority of the mentally unhealthy would only require advice and care from qualified personnel. Yet this vast majority do not get the psychiatric advice and care, either because they fail to realise the need for such care or because they are psychologically hesitant to approach the expert from fear of being considered by others as mad or insane. Thus public prejudice still remains the greatest stumbling block to the treatment of many mentally unhealthy people. The stigma of going to Woodbridge Hospital is still regarded as a journey to hell by some Singaporeans.

CIVIL RIGHTS AND SAFEGUARDS

Rules and regulations governing mental health evolved in stages. The early laws for commitment under judicial and police custody came into existence a century ago leading to segregation of the mentally ill from the rest of the population to the extent of their loss of legal and civil rights. In 1959 an Act by the Royal Commission on the law relating to mental illness and mental deficiency enabled the mentally ill to be treated as far as possible in the same footing as those with physical illness. It also stressed that treatment should be as far as possible on a purely voluntary basis; compulsory detention being reserved for acute emergencies, that too as a last resort. Major advances in the concept of social and psychological influences on mental health and mental illness lead to greater integration of psychiatric and medical services in many parts of the world. Evolution of modern therapy and change in attitude of the general population at large paved the way for treatment of psychiatric patients in general hospitals, district hospitals or the outpatient clinics. Further safeguards were spelt out under the declaration of Hawaii on Psychiatric Ethics 1977 which insisted among other things that compulsory detention or treatment of anyone on psychiatric or psychological reasons, if and when needed must be under the direct supervision of an independent and neutral body of appeal. It moreover emphasised that every such patient should be entitled to know the existence of such an appeal body, as well as his right to appeal to them personally or through a representative, without external influence or interference.

PROGRESS AND PROBLEMS

Various factors which create mental pressures on man could contribute to mental ill health e.g. bereavement, disappointment in love affairs, rising prices, unemployment, resettlements due to rapid urbanisation, political turmoils, and even anxiety about falling on earth of the earth satellites such as the "sky lab". Many young Americans who were sent to Vietnam to fight a war they did not like, lost their minds and resorted to drugs.

In our Republic we are making rapid progress in industrialisation and urbanisation. Progress often brings a train of problems too; but we cannot give up progress to prevent these problems. The government has spent great effort and money in the various fields of developments including better homes and services, more palygrounds, parks, swimming pools, libraries and sports complexes for a healthy living. The fair price shops and supermarkets did help to stabilise the prices of food-stuff and other essential goods. These factors directly or indirectly may help to minimise the

mental pressure built up by some of the changes in our life style. Above all, in order to maintain a balanced mental health amongst us, the need for a comprehensive mental health service dispensed at outdoor clinics and Community Centres as freely and easily as the other excellent medical services cannot be overemphasised.

CONCLUSION:

Peace and happiness are essential to foster mental health in any society. In a country as small and densely populated as ours, with a hard working population responsible for its progress and prosperity, with inevitable exposure to the stresses and strains of life, it becomes important to condition life in such a way as to consciously uplift mental peace and mental health. Perhaps the recent national campaign on courtesy is one way to bring out a happier living amongst our people.

References and further reading: please contact the author.

Fifth Convocation and Dinner & Second Sreenivasan Oration

This year's Fifth Convocation and Dinner, and Second Sreenivasan Oration fell on 10 November 1979. Held at the grand French Ballroom of the Equatorial Hotel, the large turnout of members and friends witnessed the graduands, Fellows and Council Members in their colourful robes. Following a brief welcome by the Chairman of the Organising Committee, the President of the College, Dr Victor L Fernandez, gave his address, touching on various aspects of Family Medicine/General Practice, in particular the need for vocational training by Family Physicians/General Practitioners.

Fellowships were conferred on Dr James Chang Ming Yu, Dr Leong Vie Chung and Dr Frederick Samuel. The following seven successful members in the recent MCGPS examination received their Diplomate degrees:

Dr Chok Ching Chay
Dr Khoo Beng Hock, Michael (in absentia)
Dr Kong Kum Leng
Dr Lim Meng Eng (in absentia)
Dr Soh Cheow Beng
Dr Tay Soi Kheng
Dr Yeo Siam Yam

For the first time, awards of appreciation were presented. Dr Evelyn Hanam received the prestigious Albert Lim Award, a rightful testimony for the dedicated role she had steered the Examination Board. For the first time also, for recognition of services rendered to the College, Certificates of Appreciation were presented to four doctors and to a fifth person who is a friend and great benefactor of the College. They are:

Dr Chan Sing Kit

Dr Feng Pao Hsii
Dr Khoo Oon Teik
Dr Tan Keng Wah, Jerry
Mr Toh Kian Chui

Book prizes were presented to the following three medical students who had excelled at the General Practice Examination, 1979:

Miss Chan Kit Yee
Mr Benjamin Ong Kian Chung
Mr Koh Dow Rhoon

The occasion of the evening was the Second Sreenivasan Oration, a tribute to a man "whose first love was Medicine, and to this he devoted most of his time, talents and energy". After the citation by Dr Frederick Samuel, Dr Koh Eng Kheng gave the oration "Art in Family Medicine". In his eloquent and humorous speech, he laments the increasing reliance on the laboratory, rather than on our senses, in reaching a diagnosis and handling of patients which is the basis of the Art of Medicine.

During the dinner which followed the Convocation and Oration, the President of the College, Dr Victor L Fernandez proposed a toast to the guests amongst whom were Prof Seah Cheng Siang, Prof Wong Poi Kwong, Dr Chow Khuen Wai, Dr Allan Ng, Dr Adrian Tan, Dr George Tay, Prof Lim Pin and other dignitaries. In reply, the Head of Medical Unit II, Singapore General Hospital, Prof Lim Pin proposed a toast to the continued growth of the College of General Practitioners Singapore. The night concluded with dancing to the music of The Teresa Khoo Trio.

T.T.C.

News from the Council

1. At the Fifth Convocation held on 10 November 1979 at the Rouge et Noir, Equatorial Hotel, three of our most distinguished Family Physicians/General Practitioners were awarded the Fellowship of the College. They were:—
Dr James Chang Ming Yu
Dr Leong Vie Chung
Dr Frederick Samuel
2. The Board of Censors has announced that at the Seventh Examination held on 20 October 1979, seven candidates were successful and have been awarded the MCGP(S) at the Fifth Convocation. They were:—
 1. Dr Chok Ching Chay
 2. Dr Khoo Beng Hock, Michael
 3. Dr Kong Kum Leng
 4. Dr Lim Meng Eng
 5. Dr Soh Cheow Beng
 6. Dr Tay Soi Kheng
 7. Dr Yeo Siam Yam
3. Dr Evelyn Hanam was a deserving recipient of the First "Albert Lim Award".
4. The Research Committee of our College has just completed preparation for a research project "Surgical Intervention in General Practice". Members would be invited to take part in the project.
The next research project would be "Pertussis Prevalence and Morbidity".
5. The Council has decided to hold a Donation Draw in 1980 for our "Research and Development" projects. Members would be asked to help to get Donations and Prizes and to sell the tickets.

Medical News

Triumph of the odd couple

They share a Nobel Prize for pioneering the CAT scanner

They had never met, never corresponded. But on opposite sides of the Atlantic, U.S. Physicist Allan Cormack, 55, of Tufts University, and Research Engineer Godfrey Hounsfield, 60, of the British firm EMI Ltd., brooded over the same mathematical puzzle and independently reached the same solution. The puzzle: how to produce an X-ray image of tissue at any depth within a patient. The result the CAT (for computerized axial tomography) scanner, a medical marvel now used in hospitals round the world. Last week the two scientists learned that they have something else in common: they will share the 1979 Nobel Prize in Physiology or Medicine and its accompanying cash award of \$190,000.

Cormack took the first step. A native of Johannesburg, South Africa, he became intrigued in 1956 by the difficulty doctors had in obtaining X-ray pictures of the brain. Because the cranium is so thick, they could make an X-ray beam "see" an abnormality only by injecting a patient with tracer dyes or air bubbles. When Cormack immigrated to the U.S. that year (he became an American citizen a decade later), he began exploring the physics of how X-rays pass through differing body parts. Dividing this passage into cross-sectional slices, he found he could calculate the absorption of an X-ray beam by varying densities of tissue in any one of the slices. Cormack published his findings in 1963 but did not pursue a practical application of his idea.

Five years later, Hounsfield attacked the same puzzle for EMI, solved it in much the same way and applied it first to a prototype computerized head scanner, then to a body scanner, both of which EMI patented. These devices were able to distinguish soft tissues and organs and spot abnormalities by producing television images shaded according to the density of the tissue. Since then, widespread use of the scanner has drawn critics who argue that the machine's hefty price — up to

\$700,000 and more — drives up the cost of medical care at hospitals that could get by with cheaper methods. But the Nobel Committee declared: "No other method within X-ray diagnostics has led to such remarkable success in such a short time."

Time, Oct 22, 1979.

Problems from a panacea

Ginseng has long been used as a panacea (panax) and, despite a choice of 22 related plants, usually means *Panax ginseng*. Readily available in health food stores there may be as many as 6 million users in the United States, according to Ronald K. Siegel (*Journal of the American Medical Association* 1979, **241**, 1614). The active principles are a mixture of glycosides, consisting of steroid saponins, bound to various sugars; certain of these may act as central nervous system stimulants and also cause hypertension whilst others have a tranquilizing effect and produce hypotension. Carbohydrate metabolism may be altered and some of the side effects are similar to those caused by corticosteroids.

Of 133 ginseng users who had been taking the drug for at least a month, 93 had a feeling of well-being and 89 noted increased motor and cognitive efficiency. Adverse reactions included morning diarrhoea (47), skin eruptions (33), demulcent effect on throat (26), sleeplessness (26), nervousness (25), hypertension (22), euphoria (18) and oedema (14). The Ginseng abuse syndrome (GAS) defined as hypertension, nervousness, sleeplessness, skin eruptions and diarrhoea was present in 14 users, of whom 5 also had oedema. The most common psychological finding was an elevation of mood and 10 patients with GAS became 'euphoric, restless, agitated and insomniac'. Abrupt withdrawal of ginseng precipitated hypotension, weakness and tremor. Long-term usage of ginseng should be avoided 'as even a panacea can cause problems when abused'.

The Practitioner, July 1979.

Place of tetracycline in gonorrhoea therapy

Atlanta — Tetracycline has officially become one of the four first-line drugs for the treatment of uncomplicated gonorrhoea in the U.S. as per the 1978 Recommended Treatment Schedules of the Centre for Disease Control (CDC) here.

In addition to aqueous procaine penicillin G (APPG), the three alternatives are: tetracycline hydrochloride (0.5 g four times a day for five days, total dosage: 10 g); ampicillin or amoxicillin; and (for patients who are allergic to penicillin and cannot tolerate tetracycline) spectinomycin hydrochloride.

A review of the literature since the 1974 CDC Recommendations showed all four drugs to be equally acceptable, and none to be ideal.

The 1978 statement does specifically recommend penicillin for men with anorectal infection, and, for patients "unlikely to comply with the multidose regime," single-dose treatment is preferred. Dr Harold W. Jaffe and his research team for the 1976 National Gonorrhoea Therapy Monitoring Study found that tetracycline in non-compliant patients may actually increase gonococcal antibiotic resistance.

Echoing the words of Dr St. John, they conclude, "Clearly the ideal drug for gonorrhoea therapy has not yet been found."

GPs can screen for GI tract cancers

Nottingham — General and family practitioners can effectively and inexpensively screen for

cancers of the gastrointestinal tract by testing high-risk patients' stool specimens for occult blood, Prof. J. D. Hardcastle, of the department of surgery at Nottingham University, told a session here of the Scientific Meeting of the British Medical Association. High-risk patients include those over 45 years of age, those with a family history of GI cancer, a previous history of adenomatous polyps, colorectal carcinoma, or ulcerative colitis, Dr Hardcastle said.

If, when examined by a doctor or a nurse, the stoolslide is found to be positive for occult blood, the patient is asked to repeat the test, after excluding red meat, etc., from the diet for three days. If still positive, the patient is examined by proctosigmoidoscopy and referred to hospital if necessary.

This approach was worked out in a trial conducted by the department of surgery in conjunction with local physicians.

(In this trial, Haemoccult slide, made by Eaton Laboratories, The Broadway, Woking, Surrey, U.K., was used to test the stools of participating patients in Nottinghamshire.)

The trial picked up colorectal carcinoma at the rate of 1.2 per 1,000 patients, and detected several patients with nonmalignant disease of the GI tract.

Using this simple screening method can reduce significantly the average time delay, nine to 10 months, between the onset of warning symptoms and the initiation of treatment for GI cancers.

Asian Medical News
Tuesday, Aug 29, 1979.

GENERAL PRACTITIONER IN THE FOREFRONT OF MEDICINE

Karel Frederik Wenckebach 1864–1940

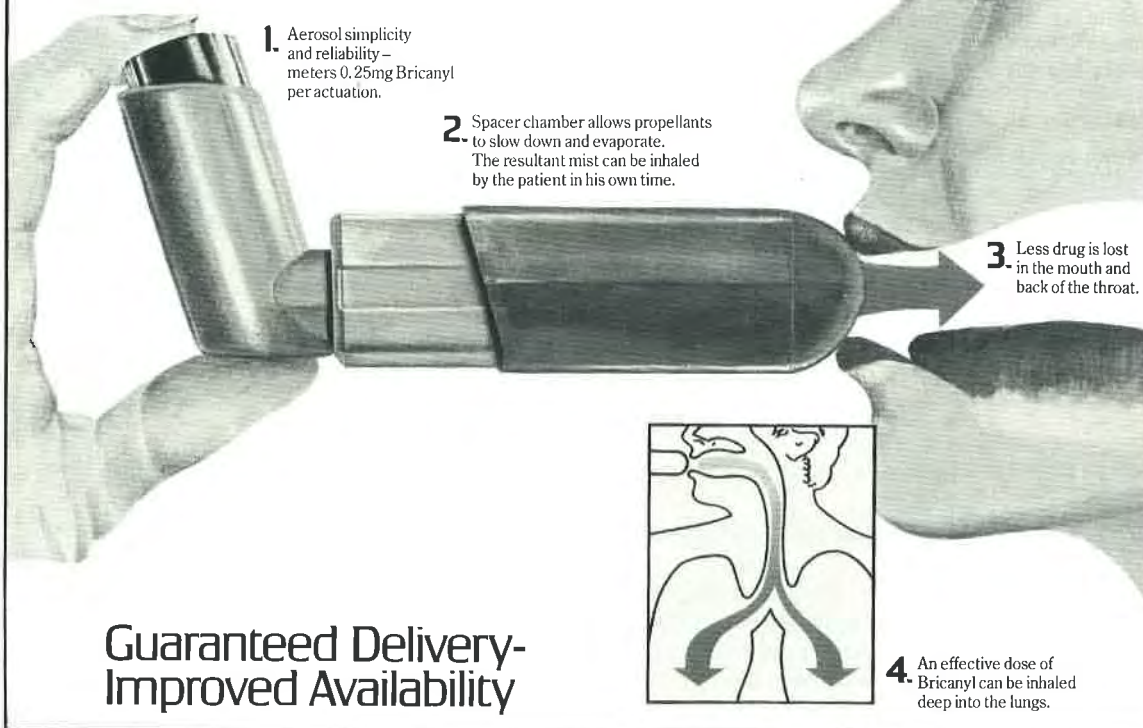
Wenckebach was born on 24th March 1864 in the Hague. He studied medicine at Utrecht and gained his doctorate in 1888. He engaged in general practice but had a special interest in cardiology. He did considerable research on cardiac activity. In 1900 the University of Groningen offered him the chair of internal medicine. However, it was in 1894 when he was an active general practitioner that he discovered the cardiac arrhythmia known today as the Wenckebach period. This specific type of partial heart block is characterised by a prolongation of the conduction time from one beat to the next in a series of heart beats. These groups or series of beats are separated from each other by a pause due to the dropping out of a ventricular systole.

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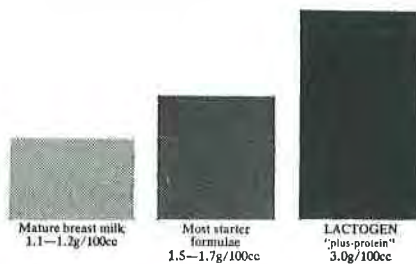
"Present day practice in infant feeding"
Dept. of Health and Social Security, U.K. 1974

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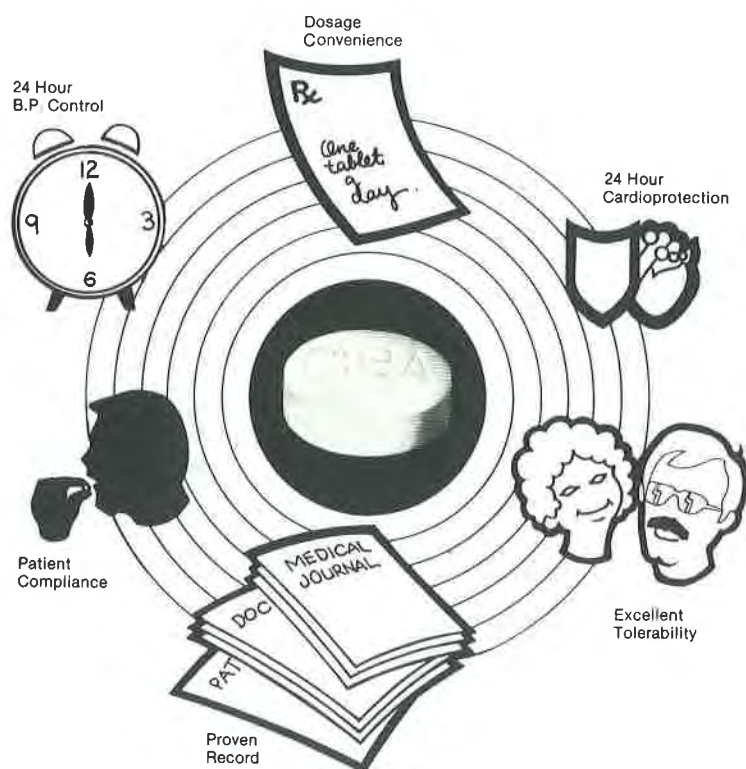
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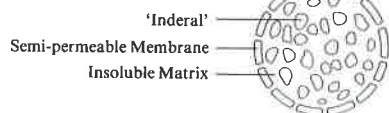


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