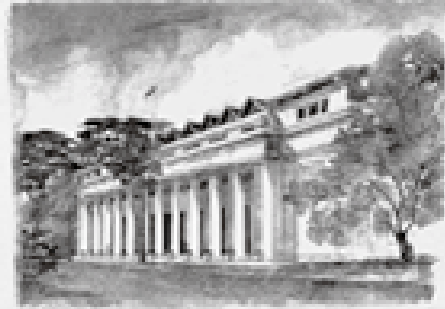


A brief introduction to the evolution of Medicine as a specialty in Singapore

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In this and future articles on the medical history of Singapore by the author, many quotations from primary sources will be incorporated. This makes for more interesting reading than merely a re-hash of the results of his research. The Straits Settlements, comprising Singapore, Penang and Malacca, were British possessions for more than 130 years. Penang and Malacca are now constituent states in Malaysia, and Singapore is an independent sovereign republic.

In 1786, Sir Francis Light acquired Penang from the Sultan of Kedah. On February 6, 1819, Sir Stamford Raffles hoisted the Union Jack over Singapore, and in 1824, by the Anglo-Dutch Treaty, Malacca transferred over to the British in exchange for Bencoolen on the west coast of Sumatra. Thus, by 1824, the three British settlements were established; and in 1826, were known as the Incorporated Settlements of Prince of Wales Island, Singapore and Malacca, with Prince of Wales Island (Penang) as its capital. In 1832, the capital was transferred to Singapore because of its strategic position and rapid growth.

Sir Stamford Raffles arrived in Singapore on January 28, 1819 with a detachment of European and Indian troops in seven ships. One medical man, Sub-assistant Surgeon Thomas Prendergast was responsible for the health of this contingent. In May 1819, the 2nd Battalion of the Regiment garrisoning Singapore arrived to relieve the 1st Battalion. The Medical Officer of the 2nd Battalion was Assistant Surgeon William Montgomerie, and he became responsible for the medical care of the young settlement. Over the years, other regimental medical officers took over the duties whenever they were posted to Singapore.

Thus, the first doctors who practised in the Straits Settlements were all Medical Officers in the Army of the East India Company. They came when their regiments were posted from India. These army doctors were assisted by a few medical subordinates in the performance of their duties. In the early years,

these duties were both military and civil, and if a greater portion of their duties was civil, the doctors were also known by the designation of their civil posts, e.g. Senior Surgeon in the Straits or Residency Assistant Surgeon. Later on, Army Medical Officers could also be appointed to the civil side of the Government Medical Service. There was then a separation of duties: the Civil or Residency Surgeon in Government employed at each settlement did not do military duties, and the Garrison or Cantonment Surgeon only looked after the troops and their families. (The term "Surgeon" indicated a rank or a post, not that the title-holder was a surgical specialist).

The headquarters of the Civil Medical Department was in Penang where the Senior Surgeon had his official residence. The Government Medical Services were very modest. There was a Senior Surgeon (sometimes called the Superintending Surgeon) who was the professional and administrative head of the Service at Penang, and an Assistant Surgeon at each of the three Settlements. The Senior Surgeon left Penang when the headquarters of the Medical Department was transferred to Singapore in 1835.

Over the years, the Straits Settlements, especially Singapore, prospered and its Medical Service gradually expanded and improved. The doctors in the Medical Service were not "specialists". They were expected to be "all-rounders", and they performed whatever duty was expected of them. They worked in hospitals. They dealt with outbreaks of smallpox and cholera. They treated cases of leprosy, tuberculosis, malaria, fractures, wounds and injuries, among other illnesses. They performed minor and major operations, post-mortems, and did medico-legal work. Public health duties were also within their purview, e.g. quarantine, port health and vaccination. They were also responsible for the care of the local prisoners and convicts from India (the Straits Settlements then was a penal colony for Indian convicts), and had time for private practice. And they served in all the three Settlements. They were transferred according to the exigencies of the Service and for promotion prospects.

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On April 1, 1867, the Straits Settlements were transferred from the India Office to the Colonial Office, and they became a Crown Colony. From then on, appointments to the Medical Service were made by the Colonial Office in London. The titles of the doctors were changed. Senior Officers became known as the Colonial Surgeon and Assistant Colonial Surgeon, and later as the Principal Civil Medical Officer and Chief Medical Officer.

In this article, the term "Medical Officer" does not have the same meaning as used in modern-day Singapore. In the present-day Singapore medical service, "Medical Officer" is the designation of a junior doctor whose rank is one grade higher than that of a "House Officer". During colonial times, the Medical Service terminology was similar to that of the Army. There were "officers" and "other ranks" (subordinates). Those were the days when people spoke of the "officer class".

When a British doctor joined the Medical Service, he joined as an officer (not as a subordinate) and was designated a Medical Officer (just as lawyers were known as Legal Officers in the Legal Service), and was known as one throughout his career. He could be promoted to Senior Medical Officer or Chief Medical Officer. (Later, when non-British doctors joined the Service, a new inferior grade was created, that of "Assistant Medical Officer". They were also known as "Assistant Surgeons".)

When a Medical Officer held a special post, he was designated accordingly, e.g. Medical Officer in charge of Tan Tock Seng Hospital (MO i/c TTSH) or Chief Medical Officer, General Hospital (CMO, GH). There was no multiplicity and complexity of ranks and grades as in the present-day Medical Service, which would bewilder any layman or even a doctor not in the service, e.g. House Officer, Medical Officer, Medical Officer (Specialist), Registrar, Senior Registrar, Associate Consultant, Consultant, Senior Consultant, Visiting Consultant, Emeritus Consultant, Medical Director, Chairman, Medical Board.

Appointments made by the Colonial office in London were all as Medical Officers. The doctors were expected to have only a basic medical degree, e.g. MBBS, MBChB, MRCS, LRCP, and later when it was realised that a knowledge of tropical medicine was essential, the Diploma in Tropical Medicine and Hygiene (DTM & H) was created. They had on-job training and could rise to the higher echelons of the Medical Service, i.e. the medical administrative posts.

Even as late as 1880, there were no specialists. All doctors were generalists. When Dr M F Simon (who later became the Principal Civil Medical Officer – the equivalent of Director of Medical Services today)

was appointed Resident Medical Officer, General Hospital, was allowed to practise dentistry in addition to his main medical duties.

It was the founding of the Medical School in Singapore in July 1905, which gradually led to the appointment of specialists in the Government Medical Service and the Medical School. The Medical School (later College), until the foundation of the University in 1949, was not autonomous. It was a branch of the Government Medical Service, and Medical Officers were posted to serve there. Dr G D Freer, a senior Medical Officer, was appointed Principal of the Medical School on June 1, 1905, and Dr R D Keith, another Medical Officer, was appointed Physiologist and Assistant Pathologist, the next year. The post of Principal of the Medical School was not a very senior one. Dr Freer left in January 1909 when he was promoted to be Senior Medical Officer, Selangor, and Dr Keith succeeded him.

Most of the other members of the teaching staff, however, were doctors in the government service, army doctors and general practitioners. There was no specialist in medicine, and Dr G D Finlayson, a pathologist, and Dr D Galloway, a private practitioner, taught medicine to the medical students. Although the Medical School was founded in 1905, there were no "clinical students" until 1907, when those who had cleared the pre-clinical hurdles were introduced to hospital practice.

In 1907, introductory classes in clinical medicine and clinical surgery were held at the General Hospital, but "in 1908, Tan Tock Seng Hospital being better staffed, the wards were for clinical purposes thrown open to the students of the Medical School who were not slow in availing themselves of the opportunities offered to improve their professional knowledge by attending the clinical demonstrations and the operating theatre, as well as assisting in the dressings and clerking in the wards."⁽¹⁾

Tan Tock Seng Hospital thus became the teaching hospital of the Medical School. "..... during 1909 Major E M Pilcher, RAMC, FRCS, DSO, conducted classes in systematic, clinical and operative surgery. To him and to Dr Finlayson, MA, MB, ChB, MRCP, who superintend the work of the students in the wards of Tan Tock Seng Hospital, the School is much indebted for their thoroughness and enthusiasm in teaching clinical surgery and clinical medicine respectively. These gentlemen in superintending the clinical work of the fourth and fifth years' students at a critical stage in their training, have set them on right lines, and have taught them a thoroughness of method which will be of the greatest

assistance and advantage to them in their future careers. To all the teachers (all part-time) the School is deeply indebted for their ungrudging devotion to their duties, and in many cases, for sparing to the school valuable time, which might otherwise have been given to private work.⁽²⁾

The surgeons were the first to develop into a clinical specialty in Singapore. In 1911, it was announced that a Surgical Lecturer would shortly be appointed in the Medical School⁽³⁾. In 1912, the Governor informed the Secretary of State for the Colonies that there was a crying need for a Surgical Specialist, and proposed that a post of Surgical Specialist be created in Singapore. This was approved, and Dr Whittle, a Medical Officer, who had had a lot of experience in surgery, was appointed Surgeon to the Singapore hospitals, on condition that he sat for and passed the FRCS examination when next on leave in England. From then on, Surgery gradually became a specialty.

Where "Medicine" was concerned there was no great urgency to create "specialists", as the authorities were of the opinion that any doctor could deal with "medical problems"!

1919 was an important landmark in the history of the Medical School and the Medical Services of Singapore. The Medical School produced its first graduates in 1910, and in 1916, its diploma of Licentiate in Medicine and Surgery (LMS) was recognised by the General Medical Council of the United Kingdom (GMC). However, teaching standards began to fall, and in July 1919, the GMC sent a warning to the Government that if the high standards of teaching and examination were not fully maintained, the Council would re-consider the recognition of the Licence of the Medical School.

Falling standards were mainly due to the fact that very few members of the teaching staff were full-time and permanent. The rest were part-time teachers who were in private practice or in the army, and they changed often to the detriment of the students. Other teachers were Medical Officers, some quite junior, in the government service, who could be transferred at any time. There was hardly any organised teaching.

On receipt of the stern warning from the GMC, the Governor instructed the Principal Civil Medical Officer, Straits Settlements, the Principal Civil Medical Officer, Federated Malay States, and the Principal of the Medical School to study the problem carefully and come up with concrete proposals for improving the status of the School and the efficiency of its teaching. One of the weaknesses identified was the lack of specialised teaching, and to remedy this,

they recommended the creation of a number of full-time Chairs, the Professors to be paid on a scale that would attract and keep good men, and ensure them the prestige properly enjoyed by staff of a good Medical School. One of the Chairs to be created was that of Professor of Medicine.

The proposals were put before the Legislative Council and were unanimously approved. The Director of Medical and Sanitary Services said at that meeting: "..... The filling of the appointments in connection with the School to which the Secretary of State has agreed. should be of the greatest help to us in maintaining and improving it as a teaching body. I believe that with careful guidance and encouragement there should be a great future for the King Edward VII Medical School, and that in the course of time it may become one of the most important Medical Institutions in the Far East.

No arrangements have yet been possible for the institution of post-graduate study at the Medical School and Hospitals of Singapore. I am anxious that this should be done since the facilities for locally qualified men to refresh and increase their professional knowledge in later years are very limited."

Dr John Sutton Webster, a Medical Officer in Government Service, was appointed the first Professor of Medicine in March 1922. Dr J S Webster MBChB, was appointed a Medical Officer in June 1909⁽⁴⁾, and arrived in Singapore on August 5, 1909. He served in various capacities in the Straits Settlements Medical Service⁽⁵⁾. In 1921, he worked as the Radiologist in the General Hospital, Singapore. When he was appointed Professor of Medicine, he asked for permission to continue practice in Electrology and Radiology if it did not interfere with his work as Professor of Medicine. He had already passed the part I examination of the Cambridge Diploma in Radiology and Electrology (DMRE). This was agreed to⁽⁶⁾. On his next leave in April 1926, he passed the final examination⁽⁷⁾.

At about the same time, Dr Richard Brunel Hawes, MRCS, LRCP, a Medical Officer, who was on leave in England, asked for extension of leave in April 1926, as he was to take the MBBS London examination in November 1926 and the MRCP London examination in April 1927⁽⁸⁾. This was approved.

The new General Hospital (to replace the one in use since 1882) was opened on March 29, 1926. One consequence of this was the greatly increased volume of work in the Radiology Department. Dr Webster found it difficult to cope with this in addition to his professorial duties. A new specialist post of Radiologist, General Hospital, was created in July 1926⁽⁹⁾.

Dr Webster was more interested in Radiology than Medicine, and he then decided to give up his post as Professor of Medicine to work full-time as a Radiologist as he already possessed the Cambridge Diploma in Radiology and Electrology. His transfer was approved and he was appointed Radiologist, General Hospital, on April 23, 1927⁽¹⁰⁾. Dr Richard Brunel Hawes, who had obtained the MBBS London and the MRCP London during his last leave, was promoted Professor of Medicine on the same day⁽¹¹⁾.

Under Professor Hawes, teaching and patient care improved, and research was conducted. Some examples will be mentioned (1930-1936). All this inspired and influenced his students and local staff to aspire to be specialists. Of course, they did not have a chance until the end of the War with Japan with the gradual "Malayanisation" of the Medical Service (when the locals took over the senior posts held by the British) in the last days of the colonial era.

In 1930, "A ward at the large free hospital, Tan Tock Seng Hospital, has been converted into laboratories, lecture hall and X'ray Room. An X'ray plant, presented by Mr Chee Swee Cheng, was installed and will prove of very great benefit to the hospital as well as for teaching students. In the two adjoining wards, are kept 80 picked clinical cases, chosen from the 1,000 beds of the hospital, to be studied and examined by the students, who also assist in carrying out treatment there. A children's ward was opened during the year, and it is possible to do part of the teaching of the diseases of children, but the number of patients was too small to give a full course⁽¹²⁾. (A course of children's diseases was given at the General Hospital by the Professor of Medicine.)"

Professor Hawes also had a Medical Unit at the General Hospital. His staff there in 1930 were as follows⁽¹²⁾:

Professor RB Hawes	Senior Physician
Dr V H Norris	Physician (Dr Norris was a member of the local medical service)
Dr C E Smith	House Physician to the 1 st and 2 nd Class wards
Dr E S Monteiro	House Physician to the 3 rd Class male wards
Dr B H Sheares	House Physician to the 3 rd Class male wards
Dr R G Gunatilaka	House Physician to the 2 nd and 3 rd Class female wards

Some of the names will be familiar to the more senior doctors in Singapore today. (In later years, Dr Smith became the Senior Chest Physician, Tan Tock Seng Hospital; Dr Monteiro, the Professor of

Clinical Medicine; Dr Sheares, the Professor of Obstetrics and Gynaecology, and then President of the Republic of Singapore.)

In 1931, Prof Hawes and his staff carried out investigations on: cholesterol, liver function tests, nephritis and beri-beri, tried to find an antidote for procaine poisoning, and tested various drugs⁽¹³⁾. At the beginning of 1932, three local graduates were appointed Clinical Assistants, and a Medical Officer was attached as a special assistant to the Professor of Medicine for duty in the Medical Unit at Tan Tock Seng Hospital. These appointments led to an extension of clinical teaching and a large number of cases could then be investigated thoroughly, and this proved beneficial to the students, graduates and patients. The wards of the Department of Medicine were also increased to five, making the total number of beds available 174⁽¹⁴⁾.

During the year, Prof Hawes carried out investigations to assess the value of the newer drugs including Atebrin. An attempt was made to find an antidote for tuba root poisoning because of the increasing incidence of suicide by tuba root, but it was not successful. Research on yaws was also carried out. Research continued in 1933 and 1934 into nephritis, gastric ulcer, diabetes mellitus and cholesterol⁽¹⁵⁾. In 1935, an electrocardiography machine was installed. Investigations on metabolic rate were carried out.

When the Governor in November 1935 proposed the creation of a new post of Physician and Registrar of the General Hospital, Singapore, he informed the Secretary of State for the Colonies that "the Medical side of the General Hospital has only one specialist, the Professor of Medicine⁽¹⁶⁾." (Evidently, he did not consider Dr Norris, an Eurasian, a specialist.) This was approved, and Dr J V Landor, who had been appointed a Medical Officer in 1927, and had passed his MRCP examination in 1932, was promoted to this new specialist post⁽¹⁷⁾. The title of this post was changed to "Physician, General Hospital" in 1941⁽¹⁸⁾.

One important clinical trial in 1936 was the treatment of cardiac beri-beri by injection of Vitamin B1. The number of cures was remarkable as previously the mortality was 100%⁽¹⁹⁾. Another outstanding piece of research was the discovery of unusual sources of lead poisoning. Investigations revealed that the poisoning was caused by lead in Chinese face powders, Chinese wines, water and chandu (opium) dross. Goldsmiths, tinsmiths, plumbers, printers and Chinese female actresses in Chinese operas ("wayangs") had been admitted to hospital suffering from lead poisoning. This revealed a neglect

in occupational medicine and hygiene, and a brochure of occupational risks was prepared. This was the very modest start in Occupational Medicine in Singapore. This was followed by a list of common animal and vegetable poisons in use in Malaya.

In December 1936, the creation of a new post of Associate Professor of Medicine, College of Medicine, specialising in Neurology, was approved⁽²⁰⁾. Gordon Arthur Ransome, MRCS, LRCP, MRCP London, was appointed in 1937⁽²¹⁾. He was also to be responsible for the teaching of Pharmacology and Therapeutics.

After the War with Japan, senior local doctors who had worked in the Medical Units went to the United Kingdom to sit for the examinations for post-graduate degrees (MRCP, MRCPE, FRFPS) and they returned to become specialists. This was followed by the selection of promising young doctors (now in their late 60s and 70s!) as "Trainees" and when they were ready, sent on scholarships to the United Kingdom to acquire post-graduate degrees and experience (later some went to Australia for the MRACP). They became the nucleus of today's large body of medical specialists in Singapore.

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