

# Jottings on the history of dentistry in Singapore

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Most of the history of Dentistry in Singapore has already been documented in the following publications: “Dental practice in early Singapore (1819-1869)”<sup>(1)</sup>; “Dental education in Singapore – first fifty years”<sup>(2)</sup>; “60 years of dental education (1929-1989)”<sup>(3)</sup>; “Dentistry in Singapore (1819-1996)”<sup>(4)</sup>. In my various pieces of research into the medical history of Singapore, I came across many references to dentists, dental practice and education. These were jotted down. These jottings and vignettes (with comments where relevant) are presented now to supplement and complement the above publications.

In the 19<sup>th</sup> century and early 20<sup>th</sup> century, there were no dentists in Government Service. In 1880, when Dr Anderson retired as Resident Surgeon, General Hospital, Singapore, the Governor recommended that the appointment be offered to Dr Simon (who later became the Principal Civil Medical Officer, the equivalent of today’s Director of Medical Services) including the special privileges of practising Dentistry:

*“In the event of Your Lordship deciding to appoint Dr Simon, I would suggest that he be allowed to practise Dentistry, but all other private practice should be prohibited. Dr Simon has for some years past, I understand, been studying this branch of his profession, and as its practice will not take him away from his post, he might be permitted without detriment to the interests of the Service, to continue it.”*<sup>(5)</sup>.

The Secretary of State for the Colonies agreed and Dr Simon was appointed to this post.

In the hospitals, dental patients continued to be treated by the Surgeons. In the Return of Diseases and Deaths in 1901 was the following item:” Gum Boil – 3 admissions; Caries of tooth – 5 admissions.”<sup>(6)</sup>, and in the 1910 Return: “Dental operations – Extraction of teeth 10, Alveolar abscess 1.”<sup>(7)</sup>

The 1907 Deleterious Drugs Ordinance was repealed in 1910 and a new ordinance passed to control the import, export, possession, sale and use of “deleterious drugs” (e.g. opium, morphine, cocaine, heroin and their derivatives.) Under this 1910 Ordinance, only “medical practitioners, dentists, veterinary surgeons and chemists (i.e. pharmaceutical chemists or pharmacists)” could be granted a licence. A dentist was defined in the ordinance as:

*“Any person who shall for a period of six months have been engaged in bona fide practice of dentistry in the Colony or in the Federated Malay States and whom the Governor in Council for special cause shown permits to be licensed under this Ordinance without examination.”*

and a dentist would be issued:

*“a licence to possess and use deleterious drugs and syringes in the course of his profession as a dentist.”*

The 1910 Ordinance came into force in October of that year, and in 1910, eight licences were issued to dentists. In 1911, 26 licences were issued and in 1912, a total of 78 licences were issued to medical practitioners, chemists and dentists. And it was decided that “in future, unqualified dentists will not be licensed.”<sup>(8)</sup>.

In November 1913, the Deleterious Drugs Ordinance 1910 Amendment Ordinance 1913 repealed the definition of “dentist” in the 1910 Ordinance and substituted the following:

(a) *“Any person holding a qualification recognised by the Governor in Council by notification in the Gazette as furnishing a sufficient guarantee of the possession of the requisite knowledge and skill for the efficient practice of dentistry or any person who had been engaged in the Colony or the Federated Malay States for a period of six months immediately prior to the passing of this Ordinance and whom the*

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*Governor in Council for special cause shown permits to be licensed under this Ordinance without examination."*

and (b) anyone who had been previously licensed under the 1910 Ordinance:

*"Any one who has been licensed as a dentist under the principal Ordinance (1910) before the commencement of this Ordinance and whose licence has not been cancelled may be so licensed after the commencement of this Ordinance."*

Ordinance XII of 1913 (King Edward VII Medical School) empowered the Council of the School to grant after such examination as it considered proper certificates of competency to dentists resident in the Colony. This was necessary because the 1913 Deleterious Drugs Ordinance made it illegal for unlicensed dentists to possess and use deleterious drugs in their practice. To be licensed they had to have a recognised qualification.

The Medical School arranged the syllabus and held classes at the School for candidates for the Certificate in Dentistry, as it was then compulsory for all unqualified or unlicensed dentists to take this examination for the licence to practise<sup>(9)</sup>.

In 1914, three dentists passed the first qualifying examination held by the Medical School. The records showed<sup>(10)</sup>:

*"Dental Certificate. The following were granted the certificate after a practical and viva voce examination conducted by Dr T O Naughton, D.D.S., and Mr Butler, L.D.S. (Eng):*

*R Nakayama, Shize Shinya, J Ikeda.*

*They all showed a considerable degree of knowledge of their work."*

In 1923, the Medical Officer i/c Boys' Schools had this to say:

*"..... Out of a total of 2,573 boys examined, 1,573, i.e. 61% were found to have caries ranging from that of a single tooth to that of the complete set. The Chinese I have found to be the greatest sufferers, which possibly may be due to one of the two factors, firstly errors in diet, and secondly neglect in the care of the teeth, or more probably a combination of both. Indians have in the majority of cases sound teeth."*

In the Girls' Schools, of 2,417 children examined, 50% had dental caries.

On June 30, 1924, the Dentists Registration Bill was read the first time in the Legislative Council; the second reading and committee stage were on

September 15, 1924; and the third reading when the bill was passed was on October 6, 1924<sup>(12)</sup>.

This Ordinance (Ordinance XIII of 1924) "An Ordinance for the Registration of Dentists" was the first ever legislation in Singapore to control and regulate the practice of dentistry. It came into force on December 1, 1924.

Among other things, the Ordinance defined "dentistry" legally as follows:

*"A person shall be deemed to practise dentistry within the meaning of this Ordinance who, for the sake of gain or otherwise holds himself out, whether directly or by implication, as practising or being prepared to practise dentistry or treats or attempts to treat or professes to treat, cure, relieve or prevent lesions or pain of the human teeth or jaws, or performs or attempts to perform any operation thereon, or inserts or attempts to insert any artificial teeth or appliances for the restoration, regulation, or improvement of the teeth or accessory structures."*

The Ordinance also constituted the Dental Board and established the Register of Dentists. It also stated who were the persons entitled to registration:

*"(a) any person who holds a degree or diploma of any examining body in the British Empire or in any foreign country that is recognised by the General Medical Council of Great Britain and Ireland as registrable in the Dental Register (i.e. the General Medical Council's Dental Register);*

*(b) any person who holds a degree or diploma of any examining body which may from time to time be recognised by the Dental Board as entitling the holder to registration under this Ordinance; and*

*(c) any person who has actually been engaged as his principal means of livelihood in the practice of dentistry in the Colony or Federated Malay States for a period of three years prior to the date on which this Ordinance comes into force: provided that such persons shall furnish evidence of good character which shall satisfy the Dental Board; and provided that such persons shall make application for registration under this Ordinance within six months after the date on which the Ordinance shall come into force."*

What is also interesting are the exemptions from the Ordinance:

*"The following persons shall be exempted from the application of this Ordinance:*

- (a) registered medical practitioners, who may extract teeth for the relief of pain or apply remedies for such purposes;
- (b) any licensed chemist (i.e. pharmacist) who may extract teeth when the case is urgent and when no registered medical practitioner or registered dentist is available; and
- (c) practitioners of an Indian, Chinese or other Asiatic system of dentistry who practise tooth extraction only: provided that such persons do not make use of any drug specified in Ordinance No. 124 (Deleterious Drugs)."

In 1925, there was a glimmer of the beginnings of a Government Dental Service and dental education. On receipt of the 1923 Annual Medical Report, the Secretary of State asked his Advisory Medical and Sanitary Committee for their comments. They commented on the high incidence of dental caries among school children and suggested that "provision should be made for a Dental Institute so that early treatment could be given ....." This advice was transmitted to the Governor<sup>(13)</sup>.

The Deleterious Drugs Ordinance was amended in 1925. In 1926, a Japanese dental surgeon (Mr K Honma) agreed to treat children with caries at reduced rates. Mr W Foune, a Chinese, also agreed to do so in 1928. The Deleterious Drugs Ordinance was consolidated and amended again in 1927 and 1928.

Some correspondence between the Governor and the Secretary of State in 1928 and 1929 will now be quoted:

**To S of S (21.5.1928)<sup>(14)</sup>:**

"Request necessary steps may be taken to fill the post of Professor of Dental Surgery. .... Particulars of appointment to be advertised in the British Medical Journal or other suitable periodical.

Applications have been received from Mr C F Mummery and Mr H Harley Clarke, practising dentists in Kuala Lumpur and Singapore respectively."

**To S of S (Telegram) (7.9.1928)<sup>(15)</sup>:**

"With reference to your telegram dated 27<sup>th</sup> August prefer to retain 3-year agreement for Professor of Dental Surgery. Students who were studying for the preliminary examination at the time my despatch was written have all unexpectedly failed to pass. Therefore regret that I consider it advisable to defer appointment of the Professor of Dental Surgery for the present."

**From S of S (20.9.1928)<sup>(16)</sup>:**

"Re telegram 7.9.1928 re vacant post of Professor of Dental Surgery, College of Medicine, Singapore, state approximately when post is to be filled."

**To S of S (4.1.1929)<sup>(17)</sup>:**

"Reference to Despatch 416 of 20.9.1928, request that steps may be taken to fill the vacant post of Professor of Dental Surgery about May 1<sup>st</sup> 1929. It is anticipated that several students will pass their first year's examination in March 1929, and the new Professor should, if possible, begin his first course of lectures on June 1<sup>st</sup>. It is essential that the Professor should be a successful teacher of Asiatic students, and I am advised that it would be unwise to offer a permanent appointment for the start, even though the probationary period may possibly deter a first class candidate from applying for the post."

**To S of S (20.3.1929)<sup>(18)</sup>:**

"Fill post of Dental Mechanic, College of Medicine. Professor of Dental Surgery to be asked to select and order before he leaves England, the chairs, instruments and other equipment, which he considers necessary, up to a maximum cost of £500. There is no suitable equipment available locally."

**To S of S (Telegram) (22.5.1929)<sup>(19)</sup>:**

"Reference my despatch of 4<sup>th</sup> January. May appointment of Professor of Dental Surgery be expected shortly."

**From S of S (15.7.1929)<sup>(20)</sup>:**

"Reference telegram 22 5.1929, selected Mr E K Tratman, BDS, for appointment as Professor of Dental Surgery."

**From S of S (17.5.1929)<sup>(21)</sup>:**

"Acknowledge receipt of despatch (8.12.1928) forwarding Annual Medical Report 1927. Comments of the Colonial Advisory Medical and Sanitary Committee: ....."

6. The Committee noted with regret that full advantage is not taken of the facilities provided for obtaining dental treatment and they hoped that efforts would be made to encourage pupils in the schools to seek advice on the subject of their teeth and obtain dental treatment where necessary. ...."

**To S of S (27.7.1929)<sup>(22)</sup>:**

"Reference despatch (17.5.1929). Memo by the Principal Civil Medical Officer regarding comments

of the Colonial Advisory Medical and Sanitary Committee on the high death rate for Malaria, etc. .... As regards para 6 of the despatch, the Principal Civil Medical Officer reports as follows:

A Dental School has been started in the College of Medicine. The early arrival of the Professor of Dental Surgery is expected. His advice will be taken as to the most effective method for the wide spread treatment of school children. The instruction of local students in Dentistry is calculated to raise the standard of dentistry and to improve greatly the facilities for dental treatment in the Colony.

I would add that the Director of Education has been requested to arrange for the pupils of the schools to be advised on the subject of their teeth and to obtain whatever dental treatment is necessary. ....”

**From S of S (26.8.1929)<sup>(23)</sup>:**

“Reference despatch (21.5.1928) re application of Mr H H Clarke for the post of Professor of Dental Surgery, inform him another has been selected. .... Mr C F Mummery who applied for the same post has been appointed Dental Surgeon, Federated Malay States.”

**From S of S (2.11.1929)<sup>(24)</sup>:**

“Re Tratman’s appointment. Wants to visit Dental Schools in Leeds, Manchester and London Universities.”

The 1929 Annual Report had the following remarks regarding Dentistry:

“..... Mr E K Tratman appointed Professor of Dental Surgery on 16<sup>th</sup> October 1929. .... The foundation of a school dental service is under consideration. .... The College has now a strong staff, and includes the only Dental School in the British Crown Colonies. ... The professorial staff was brought to full strength by the arrival of Mr E K Tratman, BDS, to fill the post of Professor of Dentistry on 17<sup>th</sup> November 1929. .... Mr G H Stephens assumed duty as Dental Mechanic on 2<sup>nd</sup> November 1929. ....”<sup>(25)</sup>.

**Remarks in the 1930 Annual Report<sup>(26)</sup>:**

“King Edward VII College of Medicine. .... There was an entry of 28 medical students and 9 dental students during the year 1930. .... General Hospital, Singapore ..... Dental Clinic. The most important addition to the work of the General Hospital during 1930 was the establishment of a Dental Clinic. This was opened during April, under the charge of Mr E K Tratman, Professor of Dental

Surgery in the College of Medicine. This clinic is housed in the 3<sup>rd</sup> Class section of the hospital, and its work has progressed steadily since the beginning of the year. The total number of patients treated this year is 662, and the total number of attendances 1,586. Details of the work are shown in Professor’s Tratman’s report (see below).”

This is the first report by Tratman of the Dental Clinic at the General hospital, Singapore (1930):

“The clinic was opened in the 3<sup>rd</sup> Class block in April. The need for the clinic is obvious from the figures given below. During the year, a dental committee appointed by the Honourable Principal Civil Medical Officer presented its report. Amongst the many points dealt with in the report, a dental hospital policy and a school dental service were outlined; the report now forms the basis for the future development of the clinic at the General Hospital and elsewhere in the Straits Settlements.

The equipment of the clinic is being rapidly completed, and arrangements have been made for the future extensions.

*Details of work done from April to December 1930:*

No. of first attendances	662
No. of other attendances	1,586
Fillings	930
Scalings	324
Dressings	668
Extractions	1,910
Other treatments	182

The clinic was closed from December 14<sup>th</sup> to 31<sup>st</sup>, inclusive, owing to the absence on leave of the staff.”

It was realised that the Dental Clinic had to be enlarged to cope with the amount of work. A Dental Officer was asked for. The post of Dental Officer, Singapore, was approved for 1931, and a request was sent to the Secretary of State:

“Request that the necessary steps may be taken to fill the new appointment of Dental Officer, Singapore. The officer selected should arrive here as soon as possible”<sup>(27)</sup>.

The Secretary of State replied on 2.6.1931:

“Selected Mr J M Coutts, Dental Surgeon, Falkland Islands, as Dental Officer, Singapore.”<sup>(28)</sup>.

The 1931 Annual Report had, among other things, progress reports on the Dental School and the Dental Clinic<sup>(29)</sup>:

“Mr J M Coutts was appointed Dental Officer, Singapore, on 4<sup>th</sup> September 1931. ....

School Hygiene. ..... In the cities where dental defects are serious, more children are now being sent to the dentists. There is now a dental clinic in Singapore under the charge of the Professor of Dental Surgery, who also treats school children, assisted by a Dental Officer. ....

King Edward VII College of Medicine. ..... There was an entry of 32 medical students and 4 dental students during the year 1931. ....

Dental School. Considerable progress was made in the organisation of the Dental School. The senior students entered their fourth year and made satisfactory progress. The junior students attended courses in practical dental mechanics and metallurgy in addition to their other subjects. The dental mechanics laboratory was extended. An additional surgery containing three chairs was completed. The personnel was increased by the appointment of a Dental Officer who assists the Professor of Dental Surgery in his hospital duties and is available for the supervision of the clinical work of the students.

Annual Report of the Dental Department of the General Hospital, Singapore.

The past year, 1931, has been a busy one for the Dental Department, the number of patients applying for treatment showing a marked increase over those of 1930 even after making due allowance for the fact that the department was only open for the last months of the earlier year.

The accommodation for students in the Dental Mechanics Laboratory has been increased from 5 to 18 by converting a wide verandah into an extension of the laboratory. The surgical part of the department was extended by the addition of a surgery containing three dental chairs and accessory fittings; at the same time, the department store was moved so as to be in the department and not a long distance from it.

The operating staff has been increased by the appointment of an European Dental Officer who assumed duties early in October; the staff of the mechanical laboratory has been increased by the appointment of an assistant (Chinese) dental mechanic in April.

In addition to the above, two students commenced treatment of patients on the surgical side from July 15<sup>th</sup> onwards; but though the students represent an increase in the operating staff, yet their presence has naturally meant that a larger portion of the time of the qualified staff that was formerly devoted to the treatment of patients has had to be devoted to the further training and supervision of students.

Another feature of the year has been the great increase in the number of in-patients of the Hospital, who have been sent to the department for examination and report on the condition of their mouths with a view to the relationship of the mouth's condition to the general condition; it has been surprising to find in the majority of cases that the mouth was in a bad condition, and this amongst classes of patients whom one would expect to be reasonably careful of their oral hygiene.

The financial state of the country has caused the temporary abandonment of the new out-patient department of the Hospital and, therefore, of the new dental department which was included in the plans of this proposed building.

The figures of the attendances for the year and the treatment given appear below; the figures include two cases of compound fracture of the mandible, several cases of fractures of the maxilla, and five cases of osteomyelitis of the mandible that have been treated in the department. In addition, the department has been called upon to make a number of special plates and moulds for radium treatment of the mouth, face and neck, and to make a special splint for a case of paralysis of the arm and hand. The attendances for dentures represent a total of 178 finished dentures either in the form of full or partial cases.

Number of first attendances	1,306
Number of other attendances	5,761
Fillings	1,713
Scalings	590
Dressings	3,045
Teeth extracted	4,625
Attendances for dentures	632”

Relevant extracts from the 1932 Annual Report reported further progress in the Dental School and Dental Clinic<sup>(30)</sup>:

“King Edward VII College of Medicine. .... There was an entry of 20 medical and 15 dental students during the year 1932. .... There were 140 students including 25 dental students at the college at the end of the year.

The Dental School. As a result of the work in former years becoming more widely known there were more applications for admission as dental students than could be accepted. 15 students entered in June 1932. The usual courses were given; the attendance at classes has been good and the general progress of the students has been satisfactory.

Regulations for a special three years dental course for medical practitioners and for a combined medical and dental course were approved. A short

course of instruction in dental surgery to final year medical students was instituted. The Dental School can now be regarded as firmly established.

*General Hospital, Singapore. .... Dental Clinic.* The work of this department continued to expand; there were 2,492 new cases, attendances numbered 12,969. ..

*Annual Report of the Dental Department, General Hospital.* The past year has shown a marked increase in the number of patients coming to or being sent to the department for treatment. It is perhaps well to emphasize that one of the aims of the department is to provide complete dental treatment for all patients attending there, it has never been intended that patients should come for emergency treatment only; the basis of treatment is that the patient attends for advice as to what treatment is necessary and he can then decide whether or not to undergo the treatment. If he agrees to the treatment recommended then the department proceeds with that treatment; if he does not agree then the department undertakes no treatment at all.

There have been no additions to the operating staff or to that of the mechanical laboratory. During the year several more students have progressed sufficiently to make artificial dentures for actual patients and this has enabled the department to deal with the very large increase in that side of its work.

Remarkable increase in the work of the department. .... The accomplishment of so much in the way of treatment has only been possible by the loyal co-operation of both staff and students, who, when the trying nature of the work is considered, have worked long hours throughout the year. The Clinic is open continuously on weekdays for over 7½ hours (Saturdays 4½ hours) and Sundays for emergency for an hour in the morning. Further, the hours over which the Clinic is open do not, by any means, constitute the full number of hours of work put in by staff and students.

Out of 2,492 new patients seen during the year, 922 or 36.9% were Government servants (including wives and families), so that approximately two-thirds of the patients are members of the general public.

On the financial side every effort has been made to collect revenue; but the class of patients of the general public and a large proportion of the Government servants accepted for treatment at the clinic are so poor that the low basic scale of fees can seldom be applied; this scale is based

on the actual cost of materials used and the two main items are fillings at \$1.00 each and dentures at \$1.00 per tooth."

In February 1933, Ordinance IV of 1933 amended the King Edward VII College of Medicine Ordinance to legally establish a School of Dentistry and to provide for the grant of a diploma in dental surgery as the College was soon to graduate its first batch of dental surgeons. Two important subsections were:

"Section 20 (2). The Council may grant to such students of the College of Medicine as have passed at the College of Medicine an examination in dental surgery, hereinafter called a qualifying examination, diplomas as licentiates of the College of Medicine in dental surgery."

"Section 23 (2). Every holder of a diploma as a licentiate of the College of Medicine in dental surgery shall be entitled to be registered under Ordinance No. 202 (Dentists' Registration) and to practise dentistry accordingly."

The 1933 Registration of Dentists Bill was read the first time in the Legislative Council on May 1, 1933. The second reading, committee stage and third reading were on July 31, 1933. This new more comprehensive Ordinance, XVI of 1933, "An Ordinance to provide for the Registration of Dentists" repealed the 1924 Ordinance.

Professor E K Tratman proceeded on leave on April 28, 1933. He returned from leave and resumed duty as Professor of Dental Surgery on December 22, 1933. During his absence Mr C F Mummery (on loan from the Federated Malay States) acted as Professor of Dental Surgery. Mr J M Coutts, Dental Officer, Singapore, was lent to the Federated Malay States to take Mummery's place<sup>(31)</sup>.

The first two dental graduates obtained their Diplomas during 1933. There were 151 students including 37 dental students at the College of Medicine in December 1933 as against 140 in December 1932<sup>(31)</sup>.

More extracts from the 1933 Annual Report<sup>(31)</sup>:

"*School Hygiene.* .... Regular dental treatment is offered to pupils and free transport is provided between the outlying schools and the dental clinic. ....

*General Hospital. Dental Clinic.* The work of this department continued to expand; there were 2,920 new cases with 15,119 attendances, compared with 2,492 new cases and 12,969 attendances in 1932. ....

*Annual report of the Dental Department. The past year has once more seen an increase in the number of patients attending the department for treatment over those of the previous year. The actual increase is approximately 17%.*

*Owing to the absence on leave of the Professor of Dental Surgery the clinical staff was reduced by one. Mr C F Mummery acted as Professor of Dental Surgery from the end of April till the latter part of December. One of the first two students to qualify, was employed from March onwards as an Assistant Dental Officer, his duties are those usually carried out by the European Dental Officer attached to the General Hospital.*

*The clinic is open for the treatment of patients daily from 8.30a.m. till 4.00p.m. continuously (Saturdays till 12.30p.m.) and on Sundays and all public holidays for an hour or more in the mornings. The work of the department was handicapped for part of the year by structural alterations (which were not completed to schedule). These provided for an extension of the mechanical laboratory and the provision of an additional surgery.*

*Out of 2,920 patients seen during the year, only 834 were Government servants or 29.12% – a marked decrease on the percentage of the previous year and also in the actual number. In spite of this, it is estimated that out of a total revenue of \$3,391, collected in small amounts, Government servants contributed at least two-thirds; so that in every way, it is the general public and not the Government servants who are deriving most benefit from the clinic. .... The vast majority of the patients pay nothing at all for extractions, fillings and scaling, or if they pay, the amount is very small. Dentures are paid for, as far as possible, on the basis of the bare cost of materials used, no charge being made, as a rule, for time and skill required in their production. In other words, the clinic is for the treatment of the poor and every effort is made to prevent abuse of the clinic by patients who can afford to go to private dentists. If the clinic could have collected fees on the basic scale for all the treatment that has been carried out, the revenue would be approximately \$15,000, a sum exceeding the total annual recurrent votes, exclusive of salaries, of the department.”*

In April 1934, a new post of Assistant Dental Officer for the Dental Clinic of the Outpatient Department, General Hospital, Singapore, was approved<sup>(32)</sup>.

Certain new appointments in the Medical Department related to Dentistry were asked for by

the Governor to be included in the 1935 Estimates:

- “1. *Inspecting Officer, Dental Board, Singapore.*
2. *Dental Officer and Lecturer in Dental Mechanics.*
3. *Secretary to the Principal, College of Medicine, because of more work including development of Dental School<sup>(33)</sup>.”*

Remarks from the 1935 Annual Report<sup>(34)</sup>:

*“King Edward VII College of Medicine. The College maintained a full curriculum of medical and dental courses during the year, and there was an entry of 18 medical and 17 dental students when the academic year commenced in June. The dental course is proving increasingly attractive to local students, and there are now 49 dental students in various stages of training. It is hoped that eventually a large number of the untrained and unqualified dentists now practising throughout Malaya will be replaced by properly qualified dental surgeons from the College of Medicine and that skilled dental surgeons will then be available for practice amongst the public in the smaller towns and areas not now so served. ....*

*Dental Clinic. The Dental Clinic at the General Hospital has developed rapidly during the year. ....*

*Provision has been made for the appointment in 1936 of an additional Dental Officer and Lecturer in Dental Mechanics. ....*

*King Edward VII College of Medicine. .... The Departments of Anatomy and Physiology provide full courses, and in Anatomy the Professor's duties include tuition of dental students and a special course in Dental Anatomy. .... A course in elementary dental surgery (to medical students) by the Professor of Dental Surgery. ....”*

By 1935, Penang was still behind Singapore in dental facilities. The Governor complained to the Secretary of State<sup>(35)</sup>:

*“The failure of the Government to provide such facilities in Penang is the more remarkable for the reason that in Singapore we have a Professor of Dental Surgery and a Government Dental Officer, and are proposing to equip a new and enlarged dental clinic and out-patients department at the Singapore General Hospital. ....”*

Tratman reported in the 1935 Annual Report as follows<sup>(34)</sup>:

*“The work in the Dental Clinic at the General Hospital has shown a further increase during the year. Since it was opened in April 1930, the number*

of attendances has increased from 2,248 in 1930 to 20,122 in 1934 and 21,798 in 1935. The clinic is in charge of Professor E K Tratman, Professor of Dental Surgery, and the patients are utilised for the practical instruction of students attending the dental course of the King Edward VII College of Medicine.

The accommodation which had been improvised at the inception of the Clinic from existing rooms and wards in the General Hospital is quite inadequate for the rapidly expanding needs of the clinic, and provision of a building to house the Dental Clinic and School has been approved and will be constructed during 1936. ....”

On August 2, 1936, the Governor informed the Secretary of State:

“The building of the new Dental Clinic will commence this year. When this building has been completed, the space occupied by the present Dental Clinic will be added to the Outpatient Department in the General Hospital, which will then occupy the whole ground floor of this section of the hospital. ....<sup>(36)</sup>”

In 1936, hopes were expressed that the dental diploma would be recognised by the General Medical Council in the near future. The building of the new Dental Clinic was reported to be delayed, and new staff were appointed:

“The standard of teaching and equipment both in the College and the teaching hospitals is high. .... The medical diploma is recognised by the British Medical Council. It is hoped that the dental diploma will also be recognised in 1939 after the next visit of the Inspecting Officer of the General Medical Council. ....

Various research investigations were carried out by the Professor of Dental Surgery. In June 1936, there were 66 dental students in the College of Medicine of whom 8 were women students. .... Owing the various delays work on the new Dental Clinic was not commenced before the end of the year.

The appointment of Lecturer in Dental Mechanics and Metallurgy was filled in January 1936, and an additional Dental Officer (Mr S W Harding) arrived in Singapore (4<sup>th</sup> July 1936). In October, a full-time Assistant Dental Officer was appointed. ....<sup>(37)</sup>”

Further steps were taken regarding recognition of the dental diploma. The Governor’s despatch to the Secretary of State requested:

“With reference to Sir Andrew Caldecott’s despatch No. 27 dated the 6th February 1935, I have the honour to inform you that the Council of the King Edward VII College of Medicine, Singapore, desire that the next Visitor from the General Medical Council should be invited to inspect the Dental School as well as the Medical School with a view to the recognition of the Diploma of L.D.S. Singapore. .... Any date after March 1938 would be suitable. ....<sup>(38)</sup>”

It was reported in 1937 that Mr S W Harding, LDS, Dental Officer, died at the age of 42 years. There were two new dental appointments: Lady Dental Officer (Miss M King) and Dental officer (Mr D Maclachlan). The construction of the new Dental Clinic at the General Hospital commenced. The staff of the department consisted of the Professor of Dental Surgery, the Lecturer in Mechanics and Metallurgy, one Dental Officer, one Assistant Dental Officer and the Instructor in Dental Mechanics<sup>(39)</sup>.

The Registration of Dentists Ordinance was amended in May 1938. This sub-section which allowed certain persons to practise dentistry without having been registered under the Ordinance was deleted:

“The practice of Indian, Chinese or other Asiatic systems of dentistry by persons practising tooth extraction only, provided that they do not make use of or administer or cause to be administered any deleterious drug or any anaesthetic, or use or cause to be used any hypodermic or dental syringe,”

The new and up-to-date dental clinic at the General Hospital, Singapore was completed and opened in June 1938. The old buildings were converted into an outpatient section of the hospital<sup>(40)</sup>.

The description of the new Dental Clinic is quoted verbatim as it is of great historical interest:

“The new building was completed and occupied in June 1938. The clinic is situated within the grounds of the General Hospital and adjacent to the Outpatients Department. The building was designed as a teaching unit wherein all the purely dental subjects are taught. It provides adequate accommodation and teaching facilities for the dental school; as teaching involves the treatment of patients it provides facilities for the treatment of some of the poor of Singapore. It was not designed as a clinic for treating school children though about one-third of the patients are children of pre-school or school age.

A central waiting hall gives access to all rooms used by general patients. Opposite the entrance is an office where necessary particulars of patients are taken and where records are kept. On the right is the 'unit' for extractions under general anaesthetics and for oral surgery. This consists of male and female recovery rooms. On the left the 'unit' is repeated for extraction and operations under local anaesthetics, but here there are two dental chairs.

On the left front is the examination room where all new patients are first seen and allocated to divisions for treatment. Here is also the 'conservation' or filling room devoted to fillings of all kinds. In this room are twenty-six units comprising a dental chair, spittoon and instrument cabinet. Four electric engines are available and a small laboratory for casting crowns, inlays, etc.

On the right front is the room for prosthetics (chairside procedures for making and fitting artificial dentures). This room is also used for orthodontic treatments. (Six dental chairs and spittoons are installed).

At the right end of the building are dark rooms for trans-illumination X-rays and photography (all are important for diagnostic and teaching purposes), a demonstration room and office for the Professor of Dental Surgery. In the basement all the complex plumbing necessary is open for inspection and therefore for easy repairs. The first floor is for students only, no patients. Cloak rooms for male and female students and staff.

The lecture room has tiered benches and forced ventilation so that the room can be used with the windows shut and darkened for showing lantern slides and films. The museum is primarily the dental pathology museum. There is a store, and a dummy room where the students work on dummy patients and complete a course in operative dental surgery before being allowed to treat actual patients.

Dental anatomy and dental pathology laboratory, with a small research laboratory. Classes of twelve students can be accommodated.

Laboratory for instruction on dental materials including their chemical and physical properties (commonly known as the metallurgy laboratory). The dental mechanics laboratory seats fifty-five students. Here the students practise making various types of artificial dentures and other mechanical appliances for the mouth. Dentures for actual patients are also made here."

In the course of the year, a number of newly-qualified and appointed medical officers

(locally appointed) received instruction in dental anaesthetics in the department.

During the Japanese Occupation of Singapore, the Government Dental Clinic was at Chuo Byoin (Kandang Kerbau Hospital, which was then used as a general hospital). The following were the senior officers: Dr Ito (Japanese head of department), Dr Lim Choon Guan, Dr Tay Teck Eng, Mr J A Jansen (then a dental student) as dental mechanic.

After the Japanese surrender, there was about six months of British Military Administration and the Civil Government of Singapore took over on April 1, 1946. Its first annual medical report (April 1 to December 31, 1946) had this to say about dentistry<sup>(41)</sup>:

*"It is regrettable that no Dental Service is available for Singapore's school children, as this service is very badly needed and the position is likely to get worse unless it is tackled immediately and on a large scale. In the course of routine School Medical Inspections, a high percentage of the children examined showed dental defects.*

*The Dental Department, in common with others, has functioned with a greatly reduced staff, partly drawn from the King Edward VII College of Medicine and partly from the General Hospital.*

*There has been a considerable increase in the number of cases of major disease and injury. Traffic accidents and to a less extent industrial accidents and gang fights have contributed to an increase in jaw injuries. It is estimated that the time spent on this type of case represents the half time of one officer. There is also a marked increase in the number of cases of serious injury resulting from unskilled interference; the use of modern drugs has prevented a high mortality in this type of injury.*

*Dental and oral disease affects not less than 90% of the school-going population.*

*A detailed scheme for the School Dental Service and the Dental Department has been put up by the Professor of Dental Surgery in conjunction with the Government Health Department to cover the next 10 to 15 years."*

How this scheme was implemented will not be covered in this article.

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