

EARLY YEARS OF THE OUT-PATIENT SERVICES, SINGAPORE (1880 – 1946)

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ABSTRACT

This article traces the history of the Out-patient Services from its humble beginnings in the late 19th Century to just after World War II. The class of patients catered for, the disease pattern, the work done and benefits accrued are recorded.

Keywords: Sick poor, outpatients, preventive medicine,

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(This article has many quotations from primary sources. The author believes that this mode of presentation is more interesting than a re-hash of the results of his research).

In the 1870s, the sick and injured in Singapore relied on two groups of people to care for them, namely doctors trained in Western Medicine and practitioners of Traditional Medicine (Chinese, Malay and Indian).

Those who were admitted to hospital (eg General Hospital, Tan Tock Seng Hospital, Lunatic Asylum) were managed by methods of Western Medicine only.

The fees of the doctors in private practice were relatively high, and the great majority of the people could not afford to consult them, even if they had a preference for Western Medicine.

Reason for starting the Out-patients Service

The Principal Civil Medical Officer (PCMO), Dr T Irvine Rowell, believed that the large numbers of patients admitted to hospital in the late and incurable stages of disease could be reduced if they had the chance to benefit from Western Medicine when treated early as out-patients, either with no charge or for a nominal fee.

So, in 1880, he submitted a proposal to Government:

"... There is a want in the Department to which I would wish to call the attention of Government with a view to its supply.

I refer to the necessity there now exists for the establishment of one or two Civil Charitable Dispensaries in Town where the poorer classes of the community could obtain outdoor medical relief free of charge One at about the Central Police Station one at Kampong Glam."

There was opposition from those who did not think that there was a need for these outdoor dispensaries (public out-patient clinics). The Governor, however, supported the proposal and wrote the Secretary of State for the Colonies on 20th April 1881, stressing the need and for permission to establish them.

First Outdoor Dispensary (ODD) at Victoria Street and work done

This was approved and a house was rented in Victoria Street as an Outdoor Dispensary late in the year. But as many arrangements had to be made, and also due to the serious illness of Dr Kerr, the Medical Officer who was to be in charge, the Dispensary could not be opened by the end of 1881.

The Dispensary was opened on 13th February, 1882, with Dr Kerr in charge. He was assisted by rotation by the following apothecaries: Messrs Wheatley, Leicester, LaPorte and Norris.

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The work done was considerable. This Dispensary was the first institution of its kind opened in the Straits Settlements, and was to some extent, an experiment. After the first year, the Medical authorities did not consider it an unsuccessful one.

The number of patients treated during this period was 322, who made in all 1,176 visits. Seventy-nine patients with 327 visits were treated free as they could not afford to pay. The number of attendances of this class of patients nearly equalled one-third of the whole.

The average number of attendances per patient was 3.6, and the average daily attendance 4.2.

The greatest number of attendances in one month was 169 in July, and in one day, 16, on 14th December, 1882.

Some Tables from the first Annual Report are reproduced as they are informative and of historical interest in showing the number of male and female patients, the nationalities, the then disease classification, the minor operations performed and the income derived.

Table I – Summary of Diseases treated

<i>General Disease:</i>		
Sub-division A (Febrile Group)	34	
Sub-division B (Constitutional Group)	113	147
<i>Local Disease:</i>		
Nervous system	13	
Eye	7	
Ear	1	
Nose	1	
Circulatory system	4	
Respiratory system	14	
Digestive system	48	
Urinary system	26	
Generative system	18	
Locomotive system	5	
Cellular system	6	
Cutaneous system	29	172
<i>Injuries:</i>		
Accidental	11	11
Surgical operations	10	10
Grand Total		340

Table II

Number of patients during the year	322
Number of visits during the year	1176
Number of pauper patients	79
Number of pauper visits	327
Average number of visits per patient	3.6
Average number of visits per diem	4.2
Number of males	248
Number of females	74
Receipts for the year	\$204.30
Average per visit	17.37 cents

Table III

Nationality	Male	Female	Total
European	20	26	46
Kling	83	7	90
Chinese	74	10	84
Portuguese	16	9	25
Eurasian	16	13	29
Bengali	16	0	16
Malay	13	4	17
Arab	8	4	12
Singalese	1	0	1
Punjabee	1	0	1
Jew	0	1	1
Total	248	74	322

Table IV – Minor operations

	Number	Result
Paracentesis Hydrocoele	5	Cured
Paracentesis Haematocoele	1	Cured
Fistula-in-ano	1	Cured
Reduction Dislocation of Lower Jaw	1	Cured
Operation for Phimosis	1	Cured

One patient was sent to the General Hospital and operated on for double cataract successfully."

It will be seen that the number of diseases was greater than the number of patients treated. This was due to the fact that, in some instances, a patient suffered from two or more diseases simultaneously.

The PCMO (Dr Rowell) predicted that in future the Tables of the ODD would be of value as statistics as they gave a fair idea of the diseases prevalent among the 'lower classes'. They would be even more valuable if epidemics were present, as the foci of disease could be at once located, and means adopted to prevent a further spread.

But he was less confident about the results of treatment:

".... Many of the diseases are easily cured and probably are so, but few of the patients ever take the trouble to return and state the results of the treatment adopted in their cases; others again are incurable, while a third class only received temporary benefit.

Taken as a whole, however, I should not hesitate to say that many cures have been effected and much suffering mitigated ..."

In 1883, the Dispensary was under the sole charge of Dr Kerr until July, when he was assisted by Dr Tripp. When Dr Kerr was transferred to Penang later, Dr Tripp alone performed the duties.

The Returns submitted were gratifying, and proved the growing popularity and usefulness of the institution.

The number of visits, compared with the previous year, was nearly double. Of the 598 patients seen, 269 received advice and medicine gratis, while the remainder paid for their treatment, which amounted to \$312.90 (against \$204.30 for 1882), an increase in the receipts of \$108.60.

The Chinese and Indians formed the large bulk of the patients. Three more nationalities, compared with 1882, attended, namely Armenian, Negro and Turk.

Once again, the PCMO (Dr Rowell) mentioned:

"It is difficult to state the exact number who may have been actually cured and relieved by outdoor treatment, as only few have paid regular visits so as to enable the progress of disease to be watched, whilst others have never returned to

show the result. A few were sent to the General Hospital as they were not suitable for outdoor treatment."

ODD moved to Hill Street

During the first 9 months of 1884, patients were seen in the premises at Victoria Street, where the Dispensary was originally started, but on 29th September, it was moved to a building in Hill Street, at the foot of Fort Canning, adjoining the Masonic Lodge.

The new site had the advantage of being central and easily accessible to all classes of the population. It also had accommodation for both an Apothecary and a Dresser. This enabled the poor to come for medical and surgical treatment at almost any hour of the day, and this facility once lacking was greatly appreciated.

The regular hours of attendance were between 8 am and 4 pm daily except Sunday.

The work done during the year exceeded considerably that of the previous year. Not only was there an increase in the number of patients, the nature of the cases presenting themselves for treatment was of a more severe type. The serious cases were persuaded to go either to the General Hospital or Tan Tock Seng Hospital; some agreed while others from prejudice refused. Five cases in all, too severe for outdoor treatment, were thus disposed of.

Though there was good reason for congratulation on the achievements so far, the Surgeon in charge was of the opinion that

"we have not yet succeeded in getting fully at the hearts of the poor, and that much in this direction has yet to be accomplished, which only time and patience can effect.

Considering, however, that this is the first institution of the kind which has been opened in the Straits, it has unquestionably met with success."

The number of patients seen during the year was 849 as against 598 in 1883.

During the year, more 'subordinates in Government employ' (junior Government servants) availed themselves of this Dispensary, 58 as against 6 in 1883. Sailors in the Sailors' Home awaiting employment, and suffering from trivial ailments also attended in increased numbers.

As regards nationality, the Chinese and Indians once again predominated.

The number of operations performed also markedly increased. Fifty-eight minor operations were performed, as against 9 for the previous year.

The common diseases treated were rheumatism, fevers and intestinal disorders.

The receipts were a little short of that for the previous year due to the larger number of paupers treated.

The Apothecary, Mr De Silva, was commended by the Surgeon in charge and the PCMO 'for his interest in the welfare of the institution, and in his efforts to make it popular.'

An attempt was made to obtain accurate statistics, but it was found to be difficult, as many patients did not pay regular visits to enable the progress of disease to be observed and recorded. From the meagre information available, it was estimated that there were 'Cured and Relieved' 832; 'Not Improved' 15; and 'Died' 2.

'Medical Sheets', such as those used in the various Outpatient Departments of the London Hospitals, were introduced, and it was hoped that by these means more accurate conclusions would be obtained the next year.

Dr Tripp left for England on 14th December, 1885, and his duties were undertaken by Dr Leask, who personally attended the Dispensary between the hours of 1 and 2 pm daily, Sunday

excepted. Outside these hours, patients were seen by the resident Apothecary. Mr Apothecary De Silva held this appointment till March 1885, when Mr Apothecary Gibbs took over. In addition to the Apprentice, voluntary assistance in the compounding room was rendered by a Hokien youth, who was trying to learn the work.

As some difficulty was experienced in treating serious cases, a small ward containing two beds was asked for, and approval was granted in early 1885. The object was to detain as long as required patients who needed constant observation and attention but not immediate admission to hospital. A small building with tiled roof and raised plank flooring was built for this purpose.

A similar room was also erected as quarters for the Apprentice attached to the Dispensary.

Another highlight of 1885 was:

"Telephonic communication also now exists between the Dispensary and the General Hospital which has on several occasions throughout the year proved most useful.

Similar communication, it is hoped, will soon be established between the Dispensary and the Lunatic Asylum and the Pauper Hospital where it is often required."

The appearance of the Dispensary was much improved by the addition of a wooden railing in front with two gates, from the posts of which hung two large sign boards indicating the hours of attendance in different languages.

Another improvement was the raising and turfing of the low compound at the back of the Dispensary which in rainy weather was converted into a pond. Surface brick drains were laid round the building to remove the waste water.

The work load more than trebled that of 1884, the number of patients attending was 1,826. The locals comprised the bulk of the patients, being 4.5 to every European. The average daily attendance rose from 6.8 in 1884 to 21.4 in 1885, and more than four times as many males as females attended. It was double in 1884.

The number of 'paying patients' was about the same, being only 78 in excess of 1884. Under this category were included 'the poorer of the Municipal servants, the prescriptions of their Medical Officer being compounded here, while the cost of their medicines is defrayed at the end of the year by the Municipality.'

Among the non-paying patients were Government servants and their families, sailors awaiting employment at the Sailors' Home and paupers.

Two hundred and seventy-two Government servants attended during the year.

The paupers who made visits consisted of destitute locals and the poorest classes of Eurasians and Portuguese. The PCMO stated:

"The great benefit to the suffering poor is testified by the fact that over 1,000 paupers attended during the year, receiving medicines and advice gratis."

The diseases seen were also generally more severe than in 1884, and were rheumatism, fevers, chest and bowel complaints, ulcers, ringworm and gonorrhoea.

Twenty cases were severe enough to be sent to hospital for admission, 16 to the General Hospital and 4 to Tan Tock Seng Hospital.

The number of operations also far exceeded that for 1884. They included excision of fibroma, lipoma, cystic tumour of the throat and naevus of the lip; iridectomy, lancing of boils, extraction of teeth and tapping of hydrocoele. All in all, 121 operations were performed as compared with 58 in 1884.

From the 'Medical Sheets' introduced the previous year, it was found that 1,796 patients were cured, 24 relieved and 6 not improved.

More patients, superstition and professional rivalry

The increasing number of attendances showed that the Authorities had gained the confidence of the poorer classes of the local communities. However, the number of Chinese patients were fewer than expected, but the PCMO was certain that when the benefits became better known, more Chinese would attend.

Superstition and professional rivalry also had to be combatted:

"Dr Tripp believes that a great many are kept away by the reports circulated by their own physicians to the effect that our drugs are chiefly composed of different portions of the human frame. How far such a prejudice may thus exist, it is difficult to say."

Dr Tripp returned from England in June 1886, and in July it was arranged that Dr Leask should attend the Dispensary from 9 to 10 am daily, and Dr Tripp from 1 to 2 pm. Mr Gibbs remained the Apothecary in charge. Dresser West who had been transferred to Penang, returned and resumed duties in June. The voluntary services of the Hokien apprentice were dispensed with as he had failed to show progress.

The wooden railing in front of the Dispensary was replaced by an ornamental iron one. New painted sign boards stating the hours of attendance, etc in the different languages spoken in the Colony were hung up on the railing. Three of these in the Chinese language were kindly presented by Mr Tan Beng Gam.

There was a further increase in the number of patients. Two thousand eight hundred and seven paid 8,702 visits.

The sum of \$120 paid by the Municipality did not cover the cost of medicines supplied to the Municipal servants (\$130), and it was recommended that this amount be increased to \$150 per annum.

Medical benefits of Government servants

It may not be out of place to record here the medical benefits of Government servants in the early 1880s. When the Dispensary was first started in 1882, it was ruled that Government servants drawing a salary of \$30 per month and under, could obtain treatment on payment of the usual fee; those drawing over \$30 had to go elsewhere for their treatment. Later orders, however, over-ruled this, and entitled all Government servants to medicine and advice free.

In 1885, there was another entitlement when it was decided that all members of the family of a Government servant residing in the same house were entitled to free medicines and treatment at any Government Dispensary.

In 1886, revisions were made to the scale of charges. For the general public, there was a reduction in the rate to encourage more patients to attend:

Fee for the first visit	20 cents
For each subsequent visit	5 cents

For Government servants, the change was to their disadvantage. Only those earning a salary of less than \$30 a month were entitled to free treatment. Those drawing \$30 and above had to pay the same rate as the general public.

Four hundred and thirty-four Government servants attended during the year.

The average daily attendance rose from 21.43 in 1885 to 29.06 in 1886. The ratio of males to females also rose from 4 to 1 to 5.5 to 1. Among the cases attended, 24 were severe enough to require admission into hospitals. Twenty-two were transferred to the General Hospital, and 2 to Tan Tock Seng Hospital.

The most common diseases treated were rheumatism, fevers, chest and bowel complaints, ringworm, scabies, primary and secondary syphilis. These alone accounted for 1,789 patients.

The number of operations exceeded that of 1885 by 35. In all, 156 operations were performed during the year. One hundred and twenty-nine operations were classified as 'minor' and they included

the opening of abscesses and buboes, lancing of boils, extraction of teeth and tapping hydrocoeles. Twenty-seven operations were 'not so minor' and were for iridectomy, removal of cataract, phimosis, paraphimosis, harelip, fistula of external ear, naevus of lips, lipoma, circumcision and enucleation of eye ball.

Success and ODD at the old Gaol, Victoria Street

The PCMO (Dr Rowell) was vindicated and he reiterated that "the confidence of the poorer classes of the native communities has been well secured. The Chinese have more than doubled their numbers for 1885. ... When these Dispensaries were first (in 1880) recommended by me to be started, the feeling was strong against there being any necessity for them in the place. The contrary has proved to be the case, for not only is the work done in them increasing by rapid strides every year, but they are, moreover, almost self-supporting. The boon they have proved to the indigent poor of the Settlements is almost incalculable."

A large number of cases of gonorrhoea and primary syphilis attended during the year. The Surgeon-in-charge was of the opinion that most of these had not been infected at any of the registered brothels, and that there was a great deal of private and clandestine prostitution. It was proposed that from the beginning of 1887, statistics and relevant particulars should be kept of venereal diseases cases.

On 28th May, 1887, the Dispensary was removed from Hill Street to the old Gaol, Victoria Street. The new Dispensary, though not quite so central in location, was in every way better suited for its purposes, being cooler, larger and able to accommodate more patients at a time. In addition to the outpatients' waiting area, there was an operating room as well as a ward for four patients. This was for ophthalmic cases operated on at the Dispensary.

In 1887, fewer patients attended the Dispensary, 2,643 against 2,807 in 1886. The reason was that the Dispensary had previously been abused by the Government servants because of free treatment:

"The only reason I can assign is that the charging of Government servants drawing salaries ranging from \$30 a month and upwards put a stop to their making a convenience of the Dispensary. In previous years, for every trifling ailment they visited and consequently ran up the number of attendances."

Another puzzling fact was that the number of paupers attending in 1887 (392) was about one-fifth that of 1886 (1,669). The explanation, however, was simple and shows how misleading statistics can sometimes be:

"This at first sight appears startling. It is, however, easily explainable. In 1886, the admission fee was 50 cents, and for each subsequent visit 15 cents. In 1887, this was reduced to 20 and 5 cents respectively. Many of those who in 1886 could not pay the larger fee and were classed as paupers, were able to easily pay the reduced rates, hence the great reduction in the number of paupers."

As a corollary, the number of paying patients was about three times as large as that for 1886. Two thousand and ninety-seven paying patients attended. These comprised 48 Municipal servants, 98 Government servants drawing salaries of \$30 and upwards, and 1,951 members of the public. The number of paying patients in 1886 was only 688.

Once again, a large number of gonorrhoea and primary syphilis patients attended during the year. An attempt was made to ascertain whether these diseases were contracted from registered prostitutes or not, but proved futile, as the patients invariably refused to give any information as to whether the prostitutes were registered or not. Neither would they divulge the residences of

these women.

The PCMO (Dr Max Simon, acting) in 1888, commenting on the Dispensaries in the Straits Settlements said:

"The Outdoor Dispensaries in all the Settlements have done good work during the year. The charge made for medicines (when any charge is made at all) is exceedingly small, and brings European medical treatment within the reach of those who, without being paupers, are not in positions to pay medical practitioners. The intention of the Government is not to make money by these Dispensaries, but the degree of favour with which they are looked upon by the people may be, to a certain extent, gauged by the amounts received ..."

In Singapore, Dr Tripp resumed charge of the Dispensary on 14th September, and attended the Dispensary daily in the morning, and Dr Leask attended in the afternoon. Three Apothecaries, Messrs Gibbs, Aeria and Morrison, performed duties there by rotation.

The work done during the year was not as great as that of the previous year. Two thousand five hundred and twenty-two patients attended, and paid 7,015 visits, a falling off of 121 patients and 1,400 visits as compared with 1887. The causes of the decrease were believed to be (a) as in 1887, the charging of Government servants drawing salaries of \$30 and upwards for medicines supplied to them; and (b) the unusual dryness of the year which made the Settlement more healthy.

Large number of venereal disease cases

A very large number of cases of gonorrhoea, bubo, primary and constitutional syphilis attended. These diseases constituted 14% of the total attendances. The number of cases of syphilis was two and a half times that of 1887.

In 1889, the hours during which the Dispensary was open were altered. It was closed for 2 hours in the middle of the day, being open from 8 to 11 am and from 1 to 4 pm.

In consequence of some irregularities connected with the management of the Dispensary, Mr Boyer, the Apothecary, was allowed to resign, and Dresser West was dismissed.

In 1890, the most common diseases met with were the same as in previous years, namely, rheumatism, syphilis, bubo and gonorrhoea, ulcers, fevers, ringworm, and affections of the respiratory and digestive systems. The percentage of cases of venereal diseases to the total number of cases, however, increased markedly. In 1888, it was 14%; in 1889, it stood at 26%, and in 1890 at 27%.

The percentage of patients attending for venereal diseases was 30% in 1891.

In 1892, this percentage increased to 38.8% of the 3,788 patients who attended.

In 1893, the number who attended was 4,226, an increase of 438 over 1892. They paid 16,081 visits, equal to an average daily attendance of 54.32. Seven hundred and sixty of the patients were women (in 1890, there were 403 female patients, and in 1891, 520).

And the PCMO (Dr Max Simon) reported:

".... The large amount and increased work done at the Outdoor Dispensaries throughout the Settlements points, I think, to the appreciation in which these institutions are held by the public, and to the good work done by them. There can be little doubt that they are the means of alleviating much suffering, and might with advantage be increased."

The PCMO's (Dr Max Simon) comments in 1894 were on venereal diseases in hospitals and Outdoor Dispensaries:

".... I have the usual serious statement to make about the prevalence of venereal disease. The number of cases admitted

to the various hospitals in the Colony ... was over 2,000, and the number of deaths credited to secondary and tertiary syphilis was 76. ... The number I have given does not include cases treated at the Outdoor Dispensaries, nor the numerous cases of disease of undoubtedly syphilitic origin "

The number of patients kept on increasing year by year. However, from their comments, the PCMO and other doctors had no doubts about the usefulness and popularity of the Outdoor Dispensary:

"... It is satisfactory to note that the number of patients is yearly increasing. Dr Tripp suggests a slight increase of one or two cents subsequent to the first visit, the entrance fee remaining as it is now, viz. 20 cents. He thinks this charge will not be felt by the patients. ..." (1895)

"... The amounts charged are very small, the institution being intended to benefit people too poor to pay the ordinary charges for medical attendance and medicine, but people value a thing a great deal more if they have to pay even a small sum for it than if they get it for nothing. ..." (1896)

"... The work carried out in this Dispensary has been satisfactory. There has never been a falling off in the number of attendances made by the poor, for whose special benefit this institution is maintained. ..." (1897)

"... Apart from admissions to hospital, European medical practitioners know very little about the prevalence of sickness among the native population, and can only judge of it by the number and causes of the deaths registered; and the causes of death, as registered, are very unreliable. ..." (1898)

During 1899, 1900 and 1901, the pattern did not change. The steady increase in the work done at the Dispensary continued. More patients were treated:

"... As in previous years, the majority of the patients were Chinese, being slightly over 51% of the total, then came Natives of India 23%, Eurasians, Malays, persons of other nationalities and lastly Europeans ..."

In 1901, the diseases treated according to their order of frequency were:

Ulcer	1026 cases
Venereal affections	781
Injuries	697
Skin diseases other than ulcer	676
Fever	573
Rheumatism	553
Malarial fever	288

A very large percentage of ulcer cases was due to neglect of small wounds. 'In the latter half of 1901, there were a large number of cases of fever accompanied with pain in the joints resembling Dengue. Most of the cases of Malarial Fever were among Natives of India.'

Need for another ODD

By 1903, the average daily attendance was 81.93, and the PCMO (Dr McDowell) recommended:

"... I think that in Singapore there is room for another Outdoor Dispensary in the Chinese part of the Town; in any case, should the Government at any time take up the question of restricting unqualified private practice, the preliminary steps would be the starting of more Outdoor Dispensaries. ..."

In 1904, the average daily attendance was 94.12, in 1905, 103.11; in 1906, it was 105.18, and in 1907, 120.66.

In 1908, the number of patients who attended the Dispensary was 11,095, an increase of 603 over the number for the previous year. The average daily attendance was 118.62.

The principal diseases treated were: malaria 3,007; venereal

disease 1,676; ulcers 996, bronchitis 608; injuries 530; dyspepsia 375 and rheumatism 332.

The nationalities of the patients were: Chinese 4,711; Indians 4,349; Malays 803; Eurasians 646; Europeans 62; Jews and others 524.

These figures did not include policemen treated by the Police Surgeon in the Outpatient Room at the Central Police Station.

ODD at North Canal Road

In 1909, the building of a new Outdoor Dispensary in Singapore in a more central part of the Town was sanctioned for 1910, and a site in North Canal Road was selected for the purpose. The Governor in his Address to the Legislative Council on 1st October, 1909, said:

"... In 1910, the more important services which it is proposed to undertake are, in Singapore, the construction of a Government Outdoor Dispensary in North Canal Road, where it is expected to be of great service to the large Chinese population of the district. In addition to this, in the following year, it is proposed to erect a Dispensary in the northern part of the Town, and to abolish the existing Dispensary in Victoria Street and dispose of the site. It is hoped that by making these Dispensaries more accessible, relief will be afforded to our hospitals and some improvement made in the public health ..."

The new Outdoor Dispensary in North Canal Road was nearly completed by the end of 1910.

On 17th June, 1911, the Dispensary was transferred from Victoria Street to the new site, North Canal Road. Mr F Clarke was the Assistant Surgeon in charge. There was a decrease in the number of patients attending in 1911, 744 fewer than in 1910. This decrease occurred during the latter half of the year, as was expected, a consequence of the transfer.

The building of a second Outdoor Dispensary at Jalan Klapa was approved in 1911, the work to commence in 1912.

In 1912, a study of Malaria was conducted at the ODD:

"... Since June last, blood films from all cases of fever were examined for malarial parasites by Dr Finlayson, the Government Pathologist, and 586 were returned as positive. Of this number, 331 were of the Subtertian type, 205 Benign Tertian, and 50 Quartan.

202 or 35% of the positive cases gave a history of having been infected previous to arrival in the Settlement, and the following are the places from whence they came: Johore including Cucub and Pulo Tekong 107; neighbouring Dutch islands 30; Selangor 17; Perak 16; Pahang 3; Kelantan 5; Negri Sembilan 5; Patani 1; Malacca 6 and India 12.

In 107 cases, the residence in Singapore at the time of their first visit to this Dispensary was less than one week; in 27 less than two weeks; in 15 cases less than three weeks; and in 53 cases less than one month.

The nationalities were Indians 379, Chinese 140, Malays 38, Arabs 6, Japanese 13, Eurasians 9 and Jews 1. The preponderance of Indian patients over the others may be accounted for by the fact that a large portion of them have had malaria before arrival in the Colony ..."

One thousand four hundred and thirty-eight patients were treated for venereal diseases, an increase of 186 cases over the 1,252 in 1911. The majority of these were cases of secondary syphilis, who had not been properly treated in the primary stage of the disease. The patients with primary syphilis as a rule ceased attending as soon as the chancre was healed, to return again when secondary symptoms developed. Even in the secondary stage, they attended for as long as there were active manifestations only, thus remaining infective for an indefinite period. (A familiar story to doctors who treat patients with venereal diseases.)

Twenty-seven cases of congenital syphilis were also treated.

Ulcers showed an increase of 299 cases, 1,786 as against 1,487 in 1911. The greater number of these were the result of improper treatment of minor injuries. One redeeming feature was that many of them came for treatment in the early stages; and also that more patients came for treatment of minor injuries.

The comments on infants are worth quoting verbatim:

"... 225 children below one year were treated during the year. Of these, 58 suffered from gastric and intestinal complaints arising out of faulty feeding. It is regrettable to observe the rapidly growing tendency to adopt bottle feeding among native mothers. Condensed milk or sometimes a cheap brand of skimmed milk is invariably given and in not a single case was a mother or an amah who accompanied the child able to state the proportion of milk to water used. Bottles of every description are seen frequently with rubber tubing 18 inches in length with a piece of bamboo attached to it inside the bottle. The commonest stopper is a reel with one end shaved off. ..." (Reel = wooden cylinder for holding wound thread).

There were two other events in 1912 worth recording. During the latter half of the year, some of the Municipal Midwives voluntarily rendered help in their spare time. They were of great assistance in the treatment of children, and in persuading local women to submit to gynaecological examination when necessary.

And two final year students from the Medical School were posted to the Dispensary for duty. Evidently the authorities had decided that there was much to learn at the Dispensary. They were also very useful extra pairs of hands.

The Police were not the only Government department with its own Dispensary. The Port Health Office had the responsibility of treating its own staff and those of the Marine Post Office and Veterinary Department. They had their own Dispensary in order to avoid the long journey to the Government Outdoor Dispensary.

In 1913, the work at the Dispensary showed an increase, 11,505 patients as against 10,493 the previous year, an increase of 1,012. The average daily attendance was 145.42. The total receipts for the year amounted to \$3,467 as against \$3,234.55 in 1912.

The pattern of disease and the nationalities of patients were the same as in previous years.

Two final year medical students were posted to the Dispensary. This posting had become a permanent part of the curriculum.

In addition to his regular duties, the Assistant Surgeon in charge of the Outdoor Dispensary was required to assist the Police Surgeon in treating policemen at the Central Police Station, which was close by.

Second ODD at Jalan Klapa

A second Outdoor Dispensary in Singapore was opened on 22nd September, 1913, at Jalan Klapa, a Malay district of the Town. It was hoped that the Malays would take advantage of the opportunity of obtaining medical assistance on Western lines. A good and promising start was made, and the Assistant Surgeon in charge (Mr P C Fernandez) reported:

"... The Dispensary was open for 82 days. The number of patients who attended was 588; the average daily attendance being 27.86. The total receipts from the time it was opened up to the end of the year amounted to \$197.70.

The principal diseases treated were: Malaria 41; Chronic Malaria 43; Pyrexia 26; Rheumatism 25; Venereal Diseases 103; Bronchitis 35; Ulcers 76 and Injuries 25.

The nationalities of those treated were as follows: Eurasians 20; Chinese 203; Malays 243; Indians 112; Others 10; Total 588. The number of Malays formed 41.32% of the total treated."

In 1914, the number of patients who attended the North Canal Road Outdoor Dispensary fell by 1,818 from 11,505 in 1913 to 9,687. This decrease was due to the opening of the new Jalan Klapa Dispensary and a Dispensary for Government servants and their families at Kandang Kerbau Hospital.

One thousand one hundred and thirty-nine cases of malaria were treated during the year. The majority of the cases gave a history of having been infected prior to their arrival at Singapore, and they were mostly from Johore, neighbouring islands, Malacca, Federated Malay States and India.

Those infected in Singapore were chiefly from Keppel Harbour, Tanjong Pagar, Sepoy Lines, Havelock Road, Geylang, Serangoon, Bukit Timah, Tanglin, Pulo Ubin and Pulo Brani.

One thousand and eighty-eight cases of venereal disease were treated. All received free treatment. According to their statements, 98.17% of the males contracted the diseases in brothels. Of the 104 females treated, 98 were from brothels (prostitutes).

The majority of these were cases of secondary syphilis, who had not received proper treatment in the primary stage of the disease. Many patients with primary syphilis generally ceased treatment as soon as the chancre healed.

More patients attended the Outdoor Dispensary at Jalan Klapa in 1914, and being situated in the Malay quarter of the Town, its main function was in introducing Western medicine to the Malays.

Of the 2,929 males treated, 1,200 or 41% were Malays (including Arabs, Javanese, Boyanese and Bugis); and of the 793 females, 465 or 58.63% were Malays.

The pattern of disease was the same as that of the North Canal Road Dispensary. The chief diseases treated were malaria, venereal diseases, ulcers, bronchitis and fever. Certain portions of the annual report are quoted:

"... Blood films and sputa were examined only in suspected Malaria and Phthisis cases. ... It is satisfactory to note that a large number of cases of minor injuries attended for treatment promptly with the result that the majority were cured within a few days. The larger ulcer cases presented themselves only after native remedies had failed. ...

Ninety-one children under one year old were treated during the year and of these, 37 suffered from lung diseases (Bronchitis, Bronchopneumonia and Lobar Pneumonia) and 26 from intestinal complaints, the other 28 suffered from Fever, Convulsions, Scabies, Eczema, etc.

The practice of native mothers in using bottles with long rubber tubing for feeding their children (as described in 1912) is still persisted in with the result that many infants suffer from Diarrhoea and other intestinal complaints. The only reason given for the use of these feeders being the facility with which the child can be left with the bottle whilst being fed, so that the mothers may attend to their daily duties either in the kitchen or at the wash-tub. ..."

ODD for Government servants at Kandang Kerbau Hospital

1914 saw the opening of an Outdoor Dispensary for Government servants and their families at Kandang Kerbau Hospital. At that time, Kandang Kerbau Hospital was a hospital for pauper women and also for the treatment of venereal diseases in women, mainly prostitutes.

Two thousand four hundred and seventy-one Government servants and members of their families attended this new Dispensary in 1914.

Venereal diseases (VD) were still very prevalent in 1915. The PCMO (Dr Ellis) stated:

"... Venereal Diseases are treated at all Outdoor Dispensaries

free and every encouragement given to patients to attend until completely recovered. ..."

As analysis of the 642 VD patients treated at the North Canal Road Dispensary is as follows:

	Males	Females	Total
Syphilis, Primary	224	53	277
Syphilis, Secondary	87	19	106
Syphilis, Tertiary	17	0	17
Gonorrhoea	41	3	44
Soft chancre	81	6	87
Bubo	94	17	111

97.4% of the males stated that they had contracted the disease in brothels.

At the Jalan Klapa Dispensary, of the 367 patients with venereal disease, there were 239 cases of syphilis, 165 of which were of the secondary type. Two hundred and fifty-two of the patients had contracted the disease in brothels.

Many cases of malaria were also treated at the Outdoor Dispensaries. At the North Canal Road Dispensary, 465 cases were treated, and at Jalan Klapa, 493. Over half of these cases gave a history of having been infected previous to arrival at Singapore.

Of the ulcer cases treated, a great number were 'phagedenic', the result of improper treatment, and a few had to be sent to hospital. (Phagedena—a severe destructive eroding ulcer). At the Jalan Klapa Dispensary, however, many of the cases of minor injuries came from the neighbouring saw-mills and pineapple factories. They sought treatment immediately on receipt of the injury and consequently the results were very satisfactory, the majority of the wounds healing within a week.

Of the children treated at both Dispensaries, they suffered mostly from fever, chest complaints, intestinal complaints and skin conditions, eg scabies, furunculosis, eczema, and round worms.

To complete the record, the principal diseases treated at the North Canal Road Dispensary during 1915 were:

Ulcers	1641
Venereal diseases	642
Parasitic skin diseases	616
Malaria	465
Bronchitis	328
Fever (unspecified)	310

And at the Jalan Klapa Dispensary:

Minor injuries	580
Malaria	493
Venereal diseases	367
Pyrexia	226
Bronchitis	189

In 1916 and 1917 there were increasing attendances at the Dispensaries. There was no change in the pattern of diseases treated. The principal diseases were malaria, venereal diseases, ulcers and injuries, bronchitis, unspecified pyrexia and skin diseases. Children were treated mainly for chest and intestinal complaints, pyrexia, round worms and skin diseases including boils.

As in previous years, the majority of malaria cases had been infected outside Singapore, and the great majority of venereal diseases cases had been infected in brothels.

Influenza Epidemic

There was a marked change in 1918 when the Influenza Epidemic occurred. At the North Canal Road Dispensary, 325 patients were treated for this condition. During the epidemic, free treatment and medicines were given to those who came to the Dispensaries. At the Kandang Kerbau Dispensary for Government servants and their families, more than 500 sick certificates for influenza were

issued to Government servants alone.

The PCMO (Dr S Lucy) had this to say about the epidemic:

"... In June and July, the Colony was subjected to a wide-spread epidemic of the disease in a comparatively mild form. There was a heavy sick rate but the mortality was not heavy. In October, there was a second and serious outbreak of the disease which lasted with great intensity for about three weeks. The disease was characterised by the frequent occurrence of Bronchopneumonia of extreme virulence and productive of a heavy mortality. It may be said that Influenza caused the death of approximately 3,500 persons. This figure is arrived at by attributing to Influenza and its many complications the excess deaths registered under 'Pneumonia', 'Bronchitis', 'Phthisis', and 'Fever not specified' ..." (The estimated population of Singapore in 1918 was 370,000).

The number of patients attending the Outdoor Dispensaries dropped in 1919. At the North Canal Road Dispensary, 5,219 patients attended as against 6,187 in 1918, and at the Jalan Klapa Dispensary, 2,791 as against 3,618 in 1918. The greater number of patients and visits in the previous year could be accounted for by the influenza epidemic 'which occurred in the autumn of that year.' As a prophylactic against a recurrence of the epidemic, 'during the year 1919, potassium permanganate gargle was freely given away to anyone who brought an empty bottle.'

In 1920, the Assistant Surgeon in charge of the North Canal Road Dispensary (Mr K C Sinha) reported on his additional duties:

"... In addition, there were also examined 6,167 police outpatients and a number of Chinese sent by the Assistant Protector of Chinese with a view to repatriation to China; some boys preliminary to their admission into the Reformatory; and a number of medico-legal cases. ..."

Specialty Treatment of Venereal Diseases

In 1921, preliminary steps were taken to organise the treatment of Venereal Diseases on a 'Specialty basis'. Outdoor treatment was tackled first. The PCMO (Dr S Lucy) had this to say:

"(a) a free part-time anti-venereal clinic especially for seamen was opened at Tanjong Pagar on 1st July.

Since that date printed notices inviting seamen with venereal diseases to attend this dispensary have been distributed to every incoming ship. (It is reported however that Captains seldom circulate these notices amongst their crew.)

Venereal case cards are given to seamen treated, to be retained and shown to Medical Officers in charge of Anti-Venereal Clinics at other ports.

The Tanjong Pagar Clinic was until the end of the year in the charge of a Royal Army Medical Corps Officer, who has since been relieved by a Medical Officer of our own Service.

The attendance for the half year, only 304, was disappointing.

I am not in favour of having any other special Outdoor Dispensaries for sufferers from Venereal Diseases, but advocate their treatment in separate rooms at our ordinary dispensaries. There is both a saving in cost and an absence of the stigma attached to patients who attend a dispensary labelled 'Venereal'.

(b) Women and children are attended by the Lady Medical Officer at the Outdoor Dispensary, Kandang Kerbau. (This Clinic for women and children in the Outdoor Dispensary was opened on 30th June, 1921.)

(c) Alterations are in progress at the North Canal Road Outdoor Dispensary to provide facilities for giving modern treatment there.

(d) Two dispensaries are being erected in rural areas on Singapore Island, in both of them there will be separate

accommodation for treating patients with Venereal Diseases.
(e) A few patients are treated at the General Hospital and Tan Tock Seng Hospitals. ..."

ODD at Jalan Klapa closed

The Dispensary at Jalan Klapa was closed on 19th February, 1921, and the building converted into a teaching centre for Sanitary Inspectors. The first course started on 1st May, 1921.

The number of patients treated at the North Canal Road Dispensary was 14,112 (including 5,436 policemen) as against 11,553 (6,167 policemen) in 1920. This increase was due to the closure of the Jalan Klapa Dispensary where 2,868 patients attended in 1920. Policemen were also seen at the Outpatient Room at the Central Police Station by the Police Surgeon.

Women and Children's Clinic at the Kandang Kerbau ODD

The Kandang Kerbau Hospital Outdoor Dispensary (as stated earlier) was for Government servants, their wives and children, and indigenous males. On 30th June, 1921, a Women and Children's Clinic was started in this Dispensary with a Lady Medical Officer in charge.

The attendances at this Clinic steadily increased from 51 in July to 296 in December. The nationalities of the patients were: Eurasians 234, Chinese 116, Tamils 64, Malays 29, Jews 19, Sikhs 4, Others 3.

Rural ODDs and special VD Clinics

In 1921 five rural outdoor dispensaries were planned for Singapore.

By 1922, there were two special Venereal Diseases Clinics functioning with Drs R B MacGregor and R B Hawes in charge.

The Clinic at Tanjong Pagar Dock was in operation for the whole year every afternoon except Sundays. Of the 477 patients treated, only 52 were seamen.

The Clinic at the North Canal Road Outdoor Dispensary was opened on 18th July, 1922. Six hundred and seventy-five patients were treated from that day until the end of the year.

Some details are quoted:

"	Syphilis	Gonorrhoea	Other VDS
Tanjong Pagar	292	96	89
North Canal Road	495	62	118

Wassermann Tests were done when necessary by the Government Pathologist.

Syphilis. In addition to Mercury and organic Arsenical preparations, Tartrate of Bismuth was extensively tried; 157 individuals receiving 513 injections of this drug. It was found that patients almost invariably ceased to attend when their symptoms disappeared; though probably non-infective such cases cannot be regarded as cured."

At the Kandang Kerbau Hospital Outdoor Dispensary, Assistant Surgeon F Rodriguez treated Government servants and their families. The number treated in 1922 was 4,493, of whom 3,812 were new cases. He also made 283 visits to patients in their own homes.

The Women and Children's Clinic was also very popular. Out of the total of 9,474 outpatients seen, 4,948 were new cases, and of these, 2,506 were children. There were 139 cases of syphilis and 90 of gonorrhoea.

The Lady Medical Officer, Mrs L S O'May made these comments:

"... **Child Welfare.** More than half of these outpatients are children. ... The current practices among the population in general are quite appalling and to a great extent they represent simple ignorance with only conservatism behind it rather than a system of superstitions which would be a still more tedious obstacle. Ever since the Dispensary was opened, a very great proportion of the time spent with outpatients had

been directed to giving information concerning the diet suitable for children and the avoidance of causes of unnecessary bad health."

Health education is not something new.

Paya Lebar Outdoor Dispensary

The Outdoor Dispensary, Paya Lebar, was the first of the five projected rural dispensaries to be completed, and was opened on 8th November, 1922, with Assistant Surgeon NN Mitra in charge.

It proved an instant success. The number of patients seen during the 7 weeks (ie from opening to the end of the year) was 533, and the number of attendances 1,463. The daily average was 33.2.

The principal diseases treated were: malaria 62; syphilis 12; ulcers 65; worms 45; minor injuries 54.

In all 'fever cases', blood films were taken and the slides sent to the Tan Tock Seng Hospital laboratory for examination. Public health measures were also taken:

"A separate book is kept for malarial cases on which the patients' addresses are noted down. The Sanitary Inspector then visits the localities affected and takes the necessary action."

An attempt is being made to induce people to come in for early treatment of venereal diseases, and to impress upon them the dangers of concealment."

Three more rural outdoor dispensaries were started in 1923, at Bukit Timah, Joo Chiat Road and Pasir Panjang.

Bukit Timah Outdoor Dispensary

The Outdoor Dispensary, Bukit Timah, was opened on 17th January, 1923. The Dispensary was open for 283 days during the year. Two thousand seven hundred and ninety patients were treated with 6,268 attendances. The daily average attendance of patients was 32.01.

Some comments by the Assistant Surgeon in charge (Mr V P Menon):

"... **Malaria.** 1,274 cases were treated during the year under report and the majority came from Bukit Panjang district and Jurong Road. The number of cases from Bukit Timah district was comparatively small. ... The names, addresses, and the place where the Malaria was probably contracted were noted in a book and the Sanitary Inspector visited such places and took action.

In connection with the above, a rough spot map for Malaria and a monthly chart of the cases of Malaria treated at the Outdoor Dispensary were prepared.

Syphilis 135 cases were treated during the year, and 185 intravenous injections of N.A.B. were given, some of the patients receiving weekly injections for two or more weeks.

Reformatory. Visited twice weekly and 80 visits were paid during the year. There were no serious cases of illness to report; two cases of chicken-pox of mild type and a few cases of scabies occurred. Severe cases of scabies were sent to the hospital for treatment, while mild cases were isolated and treated at the Reformatory. The general health of the boys was good.

I made several visits to the villages and estates to make the acquaintance of the people and to induce the sick to come to the Dispensary.

The average daily attendance shows a slow but steady increase. ..."

Outdoor Dispensary, Joo Chiat Road

The Outdoor Dispensary, Joo Chiat Road (Mr Lee Kek Soon, LMS, i/c) was opened on 1st October 1923. The number of patients who attended during the last three months of 1923 was

824, and the total number of attendances was 2,524. The average daily attendance was 44.6.

The principal diseases treated were the same as the other Outdoor Dispensaries, namely malaria, venereal diseases, bronchitis, parasitic diseases, wounds and injuries, ulcers and beri-beri.

Outdoor Dispensary, Pasir Panjang

The Outdoor Dispensary, Pasir Panjang, was opened on 23rd October 1923, and was in the charge of a Dresser, Mr Allapitchay. The number of patients who attended till the end of the year was 77, and the total number of attendances was 92. (Compare with ODD, Joo Chiat Road, above)

The established Dispensaries, namely North Canal Road, Paya Lebar, Venereal Diseases Clinics (North Canal Road and Tanjong Pagar), Kandang Kerbau Hospital including the Women and Children's Clinic, continued their good work.

One comment by the Assistant Surgeon in charge of the Paya Lebar Outdoor Dispensary will be mentioned to emphasise the working conditions then:

"... The water supply from the Dispensary well was fairly satisfactory, except for a short period in October, when there was acute scarcity of water throughout the district. ..."

In 1924, there were no drastic changes in the work done by the Outdoor dispensaries. The Outdoor Dispensary, Pasir Panjang, evidently was not as popular as the rest because it had no doctor and was rather inaccessible:

"... The number of patients treated to the end of the year was 523, and the total number of attendances was 736 as against 77 patients and 92 attendances in the previous year.

It is hoped to remove the present outdoor dispensary to a more popular site next year when an Assistant Surgeon will be put in charge. ..."

Social Hygiene Branch

In 1925, a landmark decision was made regarding the treatment and control of Venereal Diseases:

"... No whole-time staff was available for these Venereal Diseases Clinics, which worked up to the limit of their capacity. ..."

A comprehensive scheme, providing for a Social Hygiene Branch of the Medical Department, with two whole-time European Medical Officers and a number of Assistant Surgeons and subordinates was drawn up in July 1925, and has since received the general approval of the Secretary of State for the Colonies. Under it several whole-time clinics will be operated in 1926, and propaganda will be undertaken to attract and retain patients. ..."

A separate Social Hygiene Branch of the Medical Department was formed under the charge of Dr W M Chambers on 1st March, 1926. Dr Chambers, who had just returned from England, had spent the previous six months in the study of modern social hygiene methods in England, Denmark, Germany and France. To give a more accurate impression of what was envisaged, part of Dr Chamber's report as the Chief Medical Officer, Social Hygiene, will be quoted:

"... All the existing V.D. Clinics were placed in charge of the Branch and a whole-time staff appointed for the treatment of venereal diseases. A new Clinic, specially designed for the treatment of V.D. was completed during the year at Bencoolen Street, and was opened for treatment on 18th December, 1926.

Facilities for treatment

The following facilities are now available for the free treatment of all nationalities in Singapore:

A. Male Clinics

1. Bencoolen Street V.D. Clinic

2. North Canal Road V.D. Clinic

3. Tanjong Pagar V.D. Clinic

4. General Hospital V.D. Clinic

5. Kandang Kerbau Outdoor Dispensary

6. Joo Chiat Road Outdoor Dispensary

7. Bukit Timah Outdoor Dispensary

8. Paya Lebar Outdoor Dispensary

B. Female Clinics

1. Kandang Kerbau Women's Outdoor Dispensary

2. Bencoolen Street V.D. Clinic

3. North Canal Road V.D. Clinic

C. Hospitals

1. General Hospital (male and female)

2. Tan Tock Seng Hospital (male)

All the clinics are open daily for the treatment of V.D. patients, and at three of the male V.D. Clinics, special evening sessions from 6 pm to 8 pm are provided, and have attracted many patients who cannot leave their work during the day. All examinations and treatment in the Female Clinics are carried out by a qualified Chinese Lady Assistant Surgeon.

Wassermann reactions for all clinics are carried out at the King Edward VII College of Medicine.

Treatment of Seamen

The Clinic at Tanjong Pagar caters for men of the Mercantile Marine and conforms to the International Agreement by treating seamen of all nationalities free of charge. The Clinic supplies sufficient therapeutic agents for treatment during the voyage to the next port of call, carries out diagnostic tests, and provides introductions to Clinics in other ports in the East. The Personal Card (Form V. 44) approved by the International Agreement is used and given to each seafaring patient. ...

Treatment by Private Practitioners

A scheme was put into operation during the year whereby approved private practitioners were enabled to treat poor patients at reduced fees, the necessary therapeutic agents being supplied by Government free of charge. ..."

(No more mention will be made of the V.D. Clinics in this article as they ceased to be part of the Outpatient Services on 1st March, 1926.)

Travelling Dispensary and Rural Child Welfare Service

Two new services were started in 1927. The first was the inauguration of a Travelling Dispensary, and the second, the inception of a Child Welfare Service in the rural areas. (There were already Infant and Child Welfare Services conducted by the Municipality of Singapore and the Singapore Child Welfare Society in the urban areas.)

The rural Infant and Child Welfare Services used the facilities afforded by the Outdoor Dispensaries and the Travelling Dispensary.

The first proud report reads as follows:

"The Travelling Dispensary, which is a chassis with a locally-built coach work, cost \$4,500 and started work in May 1927. To it, a Dresser is attached, and the services of an Assistant Surgeon have been supplied when available. The work carried out has been extremely valuable, and the record of attendance ... shows that it has won the increasing confidence of the rural public.

Infant Welfare Clinics were started at the Government Outdoor Dispensaries at Joo Chiat Road (Monday and Saturday), and at Paya Lebar, Upper Serangoon Road (Wednesday and Saturday), and were held from 9 am to 11 am.

The home visits were done as far as possible in cooperation with the Travelling Dispensary. Each day, one of the Sisters follows the Dispensary route, and also calls at all police stations en route to obtain the recent birth notifications. At many of these stations, the police have been extremely kind in helping to locate the houses of the newly born children, and their assistance is gratefully acknowledged. Sincere thanks are also due to the Nestle's Swiss Milk Company for their generous donation of weighing machines, cases of milk, feeding bottles, etc.

There is a Chinese Amah attached to this Branch who has been an invaluable help in interpreting. From the opening of the Branch in May to the end of the year, 13,837 visits were paid by the Sisters, and 1,533 attendances were recorded at the two clinics – a very creditable start. ...

Treatment of the newly born is carried out in their homes, but other patients are referred to the Travelling Dispensary, to which many infants are also sent for vaccination.

Roadside advice is also given to mothers and children who collect at points on the scheduled routes. ..."

In 1928, there were 18,415 attendances at the Travelling Dispensary.

The Travelling Dispensary also cooperated in the work of the School Health Service in the rural areas. The School Health Officer would arrange for the Travelling Dispensary to visit the schools he or she had inspected, and to treat the children. Medicines were distributed and blood films taken when necessary by the Assistant Medical Officer or the Dresser in charge.

By 1931, the following statistics were available on outpatients. The figures did not include those treated at Social Hygiene Clinics, Infant Welfare Centres, or at school inspections. The outpatients were classified under three headings:

At Hospitals (The Hospital Units had their own follow-up clinics)	11,380 (outpatients) 21,382 (attendances)
At Outdoor Dispensaries	67,959 (outpatients) 145,888 (attendances)
At Travelling Dispensary	14,771 (outpatients) 16,759 (attendances)

Outpatient Department at General Hospital

An Outpatient Department was started in the General Hospital, Singapore, with plans to include Specialists' Clinics:

"An Outpatient Department was started on 1st July, 1931. The accommodation was provided by using the former admission ward which has been sub-divided.

This is quite adequate for the present work of the department, which is still in its infancy.

An attempt is being made to build up specialists' clinics in this department, but progress is naturally slow, and the policy followed has been to let the department develop gradually, and to make no special attempt to attract patients to it.

The numbers treated in the Outpatient Department during the half year were 2,978 with 8,691 attendances. ..."

This Department was not part of the Outpatient Services, and also separate from the Follow-up Clinics of the Hospital Units.

The help rendered by the Outpatient Service to the School Health Service was mentioned again in 1932:

"... As in former years, parents have been encouraged to take their children to private practitioners for treatment, but for very poor children free treatment was obtainable at the Government Dispensaries and hospitals. ... Treatment was carried out at special hours at all the Outdoor Dispensaries and the General Hospital. Since the beginning of 1932 ... free inpatient treatment of school children was at the General

Hospital where there are better facilities for treatment at the hands of specialists.

The Travelling Dispensary visited during its usual itinerary the schools en route and treatment was given to the pupils free of charge. ..."

In 1933, the number of new patients attending the Outpatient Department, General Hospital, almost doubled that of 1932. There were 14,237 new patients and a total of 34,651 attendances.

In 1937, there was a proposal by the Principal of the College of Medicine and the Director of Medical Services that the Outpatient Department of the General Hospital be utilised for the teaching of medical students. There was no objection to this. But their suggestion that the Outpatient Services be expanded was opposed by the General Practitioners of Singapore.

During the war with Japan and during the Japanese Occupation of Singapore (December 1941 to August 1945), the Outpatient Services carried on as best they could.

During the period of the British Military Administration (5th September 1945 to 31st March 1946) some of the hospitals were still being used by the military, eg the General Hospital. However, all the available hospitals and clinics were rapidly organised on an emergency basis to reach as many of the neglected population as possible. At Tan Tock Seng Hospital, 27,755 received treatment in the Outpatient Department, at Kandang Kerbau Hospital (at that time, a general hospital) the outpatients numbered 87,936; at St Andrew's Hospital, 6,819 were treated in the Outpatient Department.

The period of the Civil Government commenced on 1st April, 1946. From that date till 31st December, 1946, what remained of the original Outpatient Services were two ill-equipped Outdoor Dispensaries at Paya Lebar and Bukit Timah, and the pre-war Travelling Dispensary, which was still available for the Rural Areas.

Work done at the Travelling and Outdoor Dispensaries for the period of 9 months from April to December, 1946 was:

	<u>New cases</u>	<u>Re-visits</u>	<u>Vaccinations</u>
Travelling Dispensary	2,668	3,876	5,254
Bukit Timah Dispensary	4,779	8,739	2,732
Paya Lebar Dispensary	6,411	9,469	3,061

Patients, of course, continued to be treated at the Outpatient Departments of Tan Tock Seng and Kandang Kerbau Hospitals.

Future plans for the Outpatient Services

Soon after, a Medical Plan for Singapore was formulated. Parts concerning the upgrading and re-organisation of the Outpatient Services are quoted:

"Apart from two urban dispensaries and a travelling rural one under the control of Dressers, only two crowded and very unsatisfactory general hospital outpatients departments are in touch with the adult population at the moment. In fact, the existing Outpatient Services can be said to be totally inadequate in every way, however strenuously the depleted medical and nursing staff working in these sections strive. ... Thus the majority of the people cannot get minor medical attention. ... That many an unfortunate, both adult and child, who might bring his disease in a curable stage to a proper outpatient system, is barred from health, and even life, by prevailing conditions is all too clear. ...

Re-organisation in the Rural Dispensary Services has already started by the provision of two Travelling Dispensaries in the 1947 Estimates, and the gift of one by the Rotary Club of Singapore. ...

Two static dispensaries exist at Bukit Timah and Paya Lebar. Three more are essential in the more outlying and densely populated areas. ..."

The development and success of the Outpatient Services after World War II will be recorded in another article.

APPENDIX – DOCTORS AND OTHERS WHO SERVED IN THE OUTDOOR DISPENSARIES.

This list is not complete as members of the staff of the Outdoor Dispensaries are not always mentioned by name in the reports.

When Singapore was a British colony, depending on which period of time, British doctors were designated 'Surgeons' or 'Medical Officers' while non-British doctors were known as 'Apothecaries', 'Assistant Surgeons' or 'Assistant Medical Officers'.

1881	Medical Officer: Dr T S Kerr.	1916	No report
1882	Medical Officer: Dr T S Kerr. Apothecaries: Messrs Wheatley, Leicester, LaPorte, Norris.	1917	A.S., North Canal Road ODD: Dr E E Aviet. Jalan Klapa ODD: Dr Goh Tong Sin. Kandang Kerbau ODD: Dr F Rodrigues.
1883	Medical Officers: Drs Kerr & Tripp.	1918	A.S., North Canal Road ODD: Drs F Clarke & Goh Tong Sin Jalan Klapa ODD: Drs Goh Tong Sin & Oon Sim Kong & Lee Ee Liat.
1884	Medical Officer: Dr Tripp. Apothecary: Mr De Silva.		Kandang Kerbau ODD: Dr F Rodrigues.
1885	Medical Officers: Drs Tripp & Leask. Apothecaries: Messrs De Silva & Gibbs.	1919	A.S., North Canal Road ODD: Drs Goh Tong Sin & Lee Kek Soon. Jalan Klapa ODD: Dr Lee Ee Liat.
1886	Medical Officers: Drs Leask & Tripp. Apothecary: Mr Gibbs.		Kandang Kerbau ODD: Dr F Clarke.
1887	Surgeon: Dr Leask. Apothecary: Mr Gibbs.	1920	A.S., North Canal Road ODD: Drs K C Sinha & Lee Kek Soon. Jalan Klapa ODD: Dr Lee Ee Liat.
1888	Medical Officers: Drs Leask & Tripp. Apothecaries: Messrs Gibbs, Aeria, Morrison.		Kandang Kerbau ODD: Dr F Rodrigues.
1889	Medical Officers: Drs Tripp & Leask. Apothecaries: Messrs Gibbs, Boyer, Reardon.	1921	A.S., North Canal Road ODD: Dr K C Sinha Kandang Kerbau ODD: Dr F Rodrigues L.M.O., Women & Children's Clinic, KK: Dr L S O'May.
1890	Medical Officers: Drs Tripp & Leask. Apothecary: Mr Reardon.	1922	North Canal Road ODD: A.S. Dr K C Sinha. Kandang Kerbau ODD: A.S. Dr F Rodrigues. Paya Lebar ODD: A.S. Dr N N Mitra. V.D. Clinics Dr S R B MacGregor & R B Hawes
1891	Honorary Visiting Surgeons: Drs Tripp, Von Tunzelmann, Middleton. Apothecaries: Messrs Reardon, Gibbs, Angus.		KK Women & Children's Clinic Dr L S O'May.
1892	Honorary Visiting Surgeon: Dr Tripp. Apothecary: Mr W R Angus.	1923	North Canal Road ODD: A.S. Drs Rasiah & Sinha Paya Lebar ODD: A.S. Dr N N Mitra. Bukit Timah ODD: A.S. Dr V P Menon Joo Chiat ODD: A.S. Dr Lee Kek Soon. Pasir Panjang ODD: Dresser Allapitchay. Kandang Kerbau ODD: A.S. Drs Rodrigues, De Cruz, Sinha. V.D. Clinics Dr R W C Kelly.
1893	Honorary Visiting Surgeon: Dr Tripp. Apothecary: Mr Angus		KK Women & Children's Clinic Dr L S O'May
1894	Honorary Visiting Surgeon: Dr Tripp. Apothecaries: Messrs Angus, Reardon, Leicester.	1924	North Canal Road ODD: A.S. Dr Rasiah. Paya Lebar ODD: A.M.O. Dr N N Mitra. Bukit Timah ODD: A.M.O. Dr V P Menon & S Thambipillay.
1895	Honorary Visiting Surgeon: Dr Tripp. Apothecaries: Messrs Angus, Leicester, Reardon.		Joo Chiat ODD: A.S. Dr Lee Kek Soon.
1896	Honorary Visiting Surgeons: Drs Tripp & Fowlie. Apothecary: Mr Angus.		V.D. Clinics: Dr R W C Kelly.
1897	Honorary Visiting Surgeon: Dr Fowlie. Apothecaries: Messrs Angus & Bateman.	1925	KK Women & Children's Clinic Dr L S O'May.
1898 to 1902.	No doctor named in reports.	1926	KK Women & Children's Clinic Dr C H Duke.
1903	Assistant Surgeon, ODD: Dr C V Norris.	1927	KK Women & Children's Clinic Dr C H Duke.
1904	Assistant Surgeon, ODD: Dr N A Wray.	1928	KK Women & Children's Clinic Dr E M Bird (LMO)
1905	Assistant Surgeon, ODD: Dr J V Pestana.	1929 to 1946.	No reports on individual ODDS.
1906	Assistant Surgeon, ODD: Dr J V Pestana.		
1907	Assistant Surgeon, ODD: Dr J V Pestana.		
1908	Assistant Surgeon, ODD: Dr J V Pestana.		
1909	Assistant Surgeon, ODD: Dr F Clarke.		
1910	Assistant Surgeon, ODD: Dr F Clarke.		
1911	Assistant Surgeon, ODD: Dr F Clarke.		
1912	Assistant Surgeon, ODD: Dr J V Pestana.		
1913	A.S., North Canal Road ODD: Dr F Clarke. Jalan Klapa ODD: Dr P C Fernandez.		
1914	A.S., North Canal Road ODD: Dr F Clarke. Jalan Klapa ODD: Dr P C Fernandez. Kandang Kerbau ODD: Dr F Rodrigues.		
1915	A.S., North Canal Road ODD: Dr P C Fernandez. Jalan Klapa ODD: Dr E W De Cruz. Kandang Kerbau ODD: Dr F Rodrigues.		

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