

# CALCULATING THE GP CONSULTATION FEE IN SINGAPORE: TOWARDS A RATIONAL COSTING APPROACH

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## ABSTRACT

**Purposes:** *The General Practitioner (GP) consultation fee in Singapore, unlike that of his specialist colleague, has been left very much undefined over the years. There is a need for an objective way of calculating the GP consultation fee.*

**Method:** *A proposed method of calculating the GP consultation fee based on the model of estimating the total cost of producing the service plus the doctor's remuneration is described. Known prevailing costs were used in the computation. This model allows us to work out the cost to the patient by dividing the total cost of producing the service by the number of patients (referred to as patient encounter load) seen by each duration of consultation – 4, 6, 10, 15 and 30 minutes. Different monthly remuneration levels for the doctor were used to compute the different consultation fees that would result for each of the duration of consultations.*

**Results:** *Using this method of calculation, for a doctor with a desired monthly remuneration of \$7000, and seeing a patient every 6 minutes over a 150-hour month, the consultation fee is \$13.00. This drops to \$11.00 if the doctor receives a remuneration of \$4000 per month. Using the same parameters, a 15 minute consultation will cost the patient \$30.00 and \$25.00 respectively.*

**Conclusion:** *This method can be used to derive a consultation fee for services requiring different durations and varying remuneration brackets for the doctor.*

**Keywords:** *patient-encounter load, consultation period, remuneration, Resource-based Relative-value Scale (RB-RVS).*

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## INTRODUCTION

The General Practitioner (GP) consultation fee in Singapore, unlike that of his specialist colleague, has been left very much undefined over the years. The time-hallowed practice of consultation and dispensing in the same practice has resulted in the usual practice of lumping the consultation fee with charges for medicines prescribed. The professional worth of the GP consultation is not emphasised and differentiated.

In 1982, the Association of Private Medical Practitioners of Singapore conducted a survey on consultation fees (without medicines) that GPs would like to charge<sup>(1)</sup>. The response rate was 51.1% (285 out of 555 members). For a short consultation, the mode was \$8 – \$10 (29.8% of the 286 respondents). About half (48.4% of the respondents) would like to charge a consultation fee between \$8 – \$12. Fifty-four (18.9%) recommended a consultation fee of \$5 – \$8. For a long consultation, 44.6% (127 out of 285) preferred a consultation of \$12 – \$18. Based on these figures, the Association recommended a short consultation of \$8 – \$12 with an average of \$10 and a long consultation of \$12 – \$18 in 1982. In 1984, an attempt was made by the Singapore Medical Association to recommend a separation of the consultation and medicine fee and based on the findings of a survey conducted by

the Association of Private Medical Practitioners of Singapore, it recommended a consultation fee of \$10 in 1984. The recommendations of a ten dollar consultation was however, not taken up by many GPs as there was no universal agreement.

To maintain a low consultation fee and earn an income of \$4,000 – \$6,000 for example, doctors would need a high volume of patients with short consultation periods. Such a high volume of consultations meant that it would be difficult to address complex problems at the primary care level without going beyond the usual consultation time and consequent long queues if there were several patients whose consultation periods exceed the usual time.

The recommendations of the Singapore Medical Association for a GP consultation has been revised in 1993 to \$12 – \$20 for a short consultation and \$20 – \$40 for a long consultation<sup>(2)</sup>.

With an increasing emphasis on the family doctor concept and the expectation that the frontline doctor will provide a higher level of service, there is a need to derive a more objective way of arriving at the GP consultation fee, simply because the consultation time may take longer than the 4-6 minutes to complete the tasks required of a more complex problem. The rising costs of premises and clinic assistants' salaries too will make it necessary to factor these into the GP consultation fee. Similarly, the possibility of capitation payment systems being introduced would also necessitate an objective way of calculating GP fees.

This paper attempts therefore to derive the GP consultation fee based on the model of estimating the total cost of producing the service including the doctor's remuneration. Known prevailing costs were used in the computation in this model. Capital costs have been estimated as such figures are not easily available. Further surveys to update the prevailing costs in the model will be needed from time to time if this method of calculating fees is to be used.

The idea of using the total cost of producing the service to compute the doctor's fee is not new. The Resource-based Relative-Value Scale (RB-RVS) developed by Hsiao WC et al<sup>(3-8)</sup>, which attempts to design a rational fee scheme for the American Medicare system, is also based on the resource cost of producing the service or "practice costs", separate from the valuation of total work by the physician and the opportunity costs of training.

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## MATERIALS & METHODS

### The components of the consultation fee

The consultation fee is usually expressed in dollars per patient encounter, with consultation time as the variable determinant. The cost of producing a consultation is made up of two components, namely, the practice cost and the doctor's remuneration. Figures for these two components are normally available as dollars per month. To arrive at a common denominator for calculations, the consultation periods (in minutes) were converted to patient encounter load (PEL) per month.

### Computing the PEL

In deriving the PEL per month for the average consultation periods, the working hours for the doctor were taken to be 44 hours per week or approximately 176 hours per month (using a four-week month to take into account public holidays). This is the figure used in the Employment Act on the usual working hours per week. Further, the actual time spent with patients was taken as 90% of the 176 hours or approximately 150 hours (allowing for 10% of time as total time spent on administrative tasks, telephone time with patients, on reviewing laboratory tests and other tasks which are not charged). The PEL per month for the various average consultation periods was worked out by multiplying the number of patients served during the different consultation periods in one hour with the total monthly hours of 150. (See Table I).

### Practice costs

The *practice cost* in private medical clinics are made up largely of the rental (fixed overheads) and the clinic assistants' salaries (variable costs).

*Rental and other fixed overheads* have been derived from a small survey of about 80 GPs conducted by the Singapore Medical Association in 1993<sup>(10)</sup>. The mean figure is around \$7000 (Rent \$3,795 and others \$2,319).

The capital cost of setting up a practice includes furniture and fixtures, renovation and medical equipment and this figure can vary from one practice to another. As an estimate, a figure of S\$120,000 is used. For depreciation, a simplified 10% depreciation per year over 10 years of the capital cost of S\$120,000 was used. This will work out to \$1,000 per month.

The figures of clinic assistants' salaries were obtained from a survey of clinic assistants' salaries. In this survey, the mean monthly salary for clinic assistants, working in private clinics for 7 years, is \$915 with one-third of the respondents receiving a mean overtime pay of \$138<sup>(9)</sup>. It would not be unreasonable therefore to use a monthly salary of \$1,000 for the purpose of calculation. To arrive at the marketable value of this category of staff, we have to multiply the monthly salary by 1.5 taking into consideration their mean year-end bonus of 2.2 months and other benefits as shown in Table II.

More clinic assistants are needed as the PEL of a practice increases. Actual statistics of the number of patients seen per month for medical practices is not available to derive a patient encounter per clinic assistant ratio. However, a rule-of-thumb of one clinic assistant per 600 PEL per month plus one more clinic assistant to process the PEL, has been used by several doctors managing established practices, as the *minimum number* necessary to provide the service. This figure does not include salaries of other staff and spouses who contribute to the administration of the practice.

Other variable costs like utilities have been excluded as these are not major expenditures.

**Table I – Patient encounter load (PEL) for a 150 hour consultation month**

Consultation period per patient	Patients served per hour	Patient encounter load per month (PEL)
30 min	2	300
20 min	3	450
15 min	4	600
10 min	6	900
6 min	10	1 500
4 min	15	2 250

**Table II – Market value of clinic assistants**

Salary per year (\$1000 x 12)	\$12 000
Bonus (2.2 months)	\$2 200
CPF* on above approx.	<u>\$2 800</u>
Sub-total	\$17 000
Add other benefits**	\$1 000
Gross total per year	<u>\$18 000</u>
Market value per month (\$18 000/12)	<u>\$1 500</u>
<b>Market value ratio</b>	<b>1.5 (18000 / 12000)</b>

Notes:

\*CPF = Central Provident Fund (Social Security Contribution)

\*\*Uniform, sick and maternity leave, medical bills etc. cost per year.

**Table III – Practice costs per patient, excluding doctor's remuneration (Singapore dollars)**

Consultation period	30 min	20 min	15 min	10 min	6 min	4 min
Fixed overheads	7 000	7 000	7 000	7 000	7 000	7 000
Clinic	3 000	3 000	3 000	4 500	4 500	6 000
Assistants	(2x1 500)	(2x1 500)	(2x1 500)	(3x1 500)	(3x1 500)	(4x1 500)
Depreciation	1 000	1 000	1 000	1 000	1 000	1 000
Total practice cost	11 000	11 000	11 000	12 500	12 500	14 000
Patient encounter load	300	450	600	900	1 500	2 250
Costs per patient	36.66	24.44	18.33	13.88	8.33	6.22

### The doctor's remuneration

Various levels of the doctor's remuneration are computed to reflect the range of salaries of doctors. The \$6,000–\$8,000 range corresponds to the prevailing gross remuneration rates of locums and \$10,000 corresponds to the gross remuneration of established GPs and GPs who possess higher qualifications. To obtain the doctor's remuneration cost to the patient in each consultation, the doctor's gross remuneration is divided by the PEL.

### The consultation fee

The consultation fee is the total costs of producing the service. Since it consists of two main components, namely the practice costs which is dependent on consultation period (Table III) and the doctor's expected remuneration (Table IV). Table V shows the computed consultation derived from Table III and Table IV. For example, for a 30-minute consultation, from Table III, the practice cost will be \$36.66. Table IV shows the doctor's remuneration for such a consultation period will be \$13.33 if his remuneration is \$4,000. The addition of these two figures gives the consultation fee of \$49.99 for a 30-minute consultation, not including inflation at 1993 prices in Table V.

**Table IV – Doctor's remuneration cost to the patient (Singapore dollars)**

Consultation period	30 min	20 min	15 min	10 min	6 min	4 min
Patient encounter load	300	450	600	900	1 500	2 250
Doctor's remuneration (pm)						
\$ 4 000	13.33	8.88	6.66	4.44	2.66	1.77
\$ 6 000	20.00	13.33	10.00	6.66	4.00	2.66
\$ 7 000	23.33	15.55	11.66	7.77	4.66	3.11
\$ 8 000	26.66	17.77	13.33	8.88	5.33	3.55
\$ 10 000	33.33	22.22	16.66	11.11	6.66	4.44

**Table V – Consultation cost (practice costs plus doctor's remuneration) (Singapore dollars)**

Consultation period	30 min	20 min	15 min	10 min	6 min	4 min
Patient encounter load	300	450	600	900	1 500	2 250
Doctor's remuneration (pm)						
\$ 4 000	49.99	33.32	24.99	18.32	10.99	7.99
\$ 6 000	56.66	37.77	28.33	20.54	12.33	8.88
\$ 7 000	59.99	39.99	29.99	21.65	12.99	9.33
\$ 8 000	62.32	42.21	31.66	22.76	13.66	9.77
\$ 10 000	69.99	46.66	34.99	24.99	14.99	10.66

## RESULTS

Table I shows the patient-encounter load for a 150-hour consultation month. The number of patients seen for an average 6-minute practice will be approximately 1,500 a month. This figure rises to 2,250 if the average consultation time is reduced to 4 minutes. Table III shows the practice cost per patient encounter. The cost of practice for a patient-load of 1,500 and 2,250 will be \$8.33 and \$6.22 respectively. Table IV shows the doctor's remuneration cost to the patient. For a 6-minute consultation it will cost the patient \$4.66 and for a 4-minute consultation it will cost him \$3.11, assuming the doctor expects to earn \$7,000 a month. The corresponding values for different remuneration levels of doctors are also shown in this table.

Table V shows the composite effect of consultation time and the doctor's expected remuneration on the consultation fee, assuming that the doctor expects to take home \$7,000 per month as was suggested earlier. If the consultation is 6 minutes to a patient, the consultation fee to be charged will be \$13.00. If the patient encounter is 4 minutes, the consultation fee drops to \$9.00. If the consultation time increases to 10 minutes, the consultation fee rises to \$21.65. For a 20-minute consultation, it would be \$39.99.

## DISCUSSION

There is concern over the increasing costs of healthcare in Singapore. This is attributed in part to the type of financing and payment systems available, which could influence the utilisation as well as the prices of healthcare. How doctors are remunerated is therefore a matter of public concern, discussed not only in the lay press<sup>(12)</sup> but also in a recent editorial of the Singapore Medical Journal<sup>(13)</sup>. There is also concern over the issues of limiting the doctor/population ratio and the specialists/general practitioners ratio in Singapore and its effects on doctors' fees.

The cost of consultation for various consultation times (to the nearest dollar) that have been derived is shown in Table V. The figures can be compared with the recommended consultation fees in the Singapore Medical Association's Guideline on Fees for Doctors in the private practice. The Singapore Medical Association's guidelines recommend \$12 – \$20 for a short consultation and \$20 – \$40 for a long consultation. Applying the GP consultation scale shown on Table V, the consultation period

for \$12 – \$20 will be 6-10 minutes and \$20 – \$40 will be 10-20 minutes and these are figures for a doctor earning a remuneration of \$4,000 per month. The SMA schedule therefore allows little room for adding other costs such as complexities of the task and the enhanced value of the general practitioner with further training and experience.

A doctor with further training in Family Medicine will be able to undertake more complex clinical consultations. It is likely that his consultation time may be lengthened. The method for computing consultation fee in this paper may be used or computing his consultation fees. He could also build in his premium for being trained by raising his expected remuneration to a higher bracket comparable to his colleagues in the specialties in hospital service as for example, \$8,000 or \$10,000 instead of \$6,000 or \$8,000. The current prevailing consultation fees for GPs with higher qualifications appear to be \$15 – \$25 for a short consultation and \$25 – \$35 for a long consultation and these figures will correspond to an expected remuneration of about \$10,000.

There are perceptions that the SMA's recommended fees for GPs are high when compared to the actual fees charged. Two factors may explain these perceptions namely, cross-subsidies from the sales of medicines in the GP's existing fee structures and secondly, the fierce competition for patients in the primary care market. This may lead doctors to charge low for fear of losing their customers and to attempt to earn the expected remuneration by seeing a high volume with short consultation times or to work beyond the stated consultation times to clear the high volume of patients at low charges. Such practices may lead to work dissatisfaction among practitioners because a lot of what is ideal cannot be put into practice because of the time constraints.

The pressure of an increasing number of new GPs serving a limited pool of patients, the unwillingness of older GPs to increase their charges and the subsidised rates charged by government out-patient dispensaries have pushed the GP consultation fees down to very low levels. The usual lump-sum charge of a consultation with medicines in many clinics in public housing estates is between \$12 to \$18. Taking the cost price of medicines as between 15% to 25% of the lump sum cost, the actual consultation fees charged are between \$9 to \$14 to provide for between 4 to 6 minutes of consultation time at cost. This will yield a maximum remuneration of \$7,000 if one assumes that the 150 hours of consultation per month is fully utilised. With an increasing number of GPs entering the market, the amount of idle time will increase. Some 300 names are added to the list of doctors in Singapore every year.

Assuming that in a cohort of doctors, 50% become GPs, the number of new GPs per year entering the workforce will be 150 for a population of 3 million. There may be increasing difficulties for a doctor to charge \$12 – \$18 in view of the declining work load that will take place as more doctors enter the workforce.

For new GPs, the slight saving due to the lower costs of hiring new (and less experienced) clinic assistants is more than offset by the higher rent that they are likely to pay and the higher cost of leasing capital equipment. Yet new GPs are expected by patients to charge less than their more experienced counterparts despite their higher practice costs (due to higher overheads and lower patient load). Due to the smaller doctor/population ratio, the new GP is unlikely to see over 1,800 patients a month at a steady state even after a number of years of practice. More new private GP clinics are being set up, pushing downwards the prevailing assistant doctors' pay towards that received by government medical officers who have 5-6 years post-housemanship experience, which is a monthly remuneration of about \$4,000 including benefits.

Since the limited pool of existing patients is now shared by

more doctors, established GPs are reluctant to increase their consultation fees to reflect their ability to handle more complex tasks commensurate with their experience. Low consultation fee benchmarks are therefore set for newer doctors to compete with. Family physicians are expected to be the vanguard of healthcare cost containment by enhancing their skills and capabilities so that patients require less specialist and in-patient care. Though family physicians have the advantage of giving 'quality' consultation time because of the accumulated knowledge of the patient through continuing care, extra consultation time and added financing for better equipment are needed to achieve that role. The low prevailing consultation fees provide no margin for such an enhanced role.

The consultation is the focus of the patient-encounter. Careful attention to history, physical examination and discussion with patients is not only good medicine but may save healthcare costs from the inappropriate use of diagnostic and treatment procedures. Doctors should therefore be remunerated for time spent in the consultation.

There should be more research into the components that contribute to overall healthcare costs. Comparison of the professional component of the fees with that of other professions in Singapore and with doctors in other countries with comparable healthcare service standards would set benchmarks to determine the remunerations of Singapore doctors and its contribution to the overall healthcare costs. Like the annual wage increases recommended by the National Wages Council (NWC), periodic adjustments to account for inflation and to reflect other changes in productivity and factors like competition, would be necessary.

## CONCLUSIONS

A GP consultation fee based on the total practice costs and the

doctor's expected remuneration allows an objective approach to its calculation. Such a method allows for the flexibility of factoring the time spent in the consultation as well as rising practice costs. Its applicability was tested against the Singapore Medical Association's recommended fee guidelines and found to match reasonably well for the basic monthly remuneration of \$4,000. The model could provide the benchmark upon which the consultation fees for other medical services could be constructed prior to the development of a more refined relative value scale in Singapore.

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