SAJS
General Surgery

General surgery in crisis – comparatively low levels of remuneration

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Summary

Introduction. Several factors, including comparatively low remuneration, may be responsible for the decline in applicants to general surgery. In this study, the levels of remuneration of general surgeons in the state sector were compared with other professionals in the state sector and general surgeons overseas.

Methods. The study involved a combination of desk research and structured interviews. The Paterson system of job evaluation was used to compare general surgeons with other professionals. The levels of remuneration of general surgeons in the state sector were compared with those of other professionals.

Results. There was a significant difference in the levels of remuneration between state-employed medical practitioners and other professional positions such as legal professionals, municipal managers and airline pilots. At senior levels (senior specialist) the remuneration was only ±55% of that paid to the selected comparator group. There was also a significant differential between the remuneration of state-employed general surgeons and their overseas counterparts.

Conclusion. Levels of remuneration of state-employed medical practitioners continue to lag behind other professionals.

There is a serious concern about the diminishing interest in general surgery as a specialty.[1,2] The last 5 - 10 years has seen a significant reduction in the number of applicants for surgical trainee positions at all local academic institutions. Furthermore, there are an increasing number of vacant posts in surgery in the state sector. As a result, the Association of Surgeons of South Africa (ASSA) undertook a study to determine the extent of the problem. ASSA has a membership of about 500 and is the official body representing general surgeons in both the state and the private sectors in South Africa.

The decline in applicants to general surgery has been noticed throughout the world.[1-3] Several reasons may be responsible for this serious threat to the future of surgery, and include factors such as graduates placing a greater emphasis on a favourable lifestyle, the lure of private practice, the lure of overseas, and the comparatively low remuneration.[4-7] In this study we compared the levels of remuneration of general surgeons employed in the state sector with both other professionals employed in the state sector, and general surgeons employed in selected English-speaking First-World countries, with the objective of assessing the degree of remuneration parity general surgeons currently enjoy.

Methods

P-E Corporate Services (P-ECS) were contracted by ASSA to undertake this comparative study into the remuneration and working conditions of general surgeons in South Africa. The study involved a combination of desk research, structured interviews, and a brief visit to an international destination that typically attracts South African doctors.

The desk research involved in-depth reviews of relevant data in professional medical publications, other studies, the internet, and P-ECS's own extensive database of remuneration levels and employment policies across most sectors of the South African economy.

Structured interviews were undertaken with general surgeons, including heads of departments, recently qualified specialists, and registrars, other medical specialists, and professionals in other fields, such as law, accounting, engineering, etc. The interviews were spread through Gauteng, the Free State, KwaZulu-Natal, and the Western Cape. A structured questionnaire was developed to research the surgeons' perceptions of their choice of general surgery as a career option, and of the current state of the profession in general.

The international field research was limited to two interviews in the UK plus fairly comprehensive desk research.

The levels of remuneration of general surgeons within the state sector were compared with other professionals in the state sector and general surgeons employed in selected English-speaking First-World countries with the objective of

assessing the degree of remuneration parity general surgeons currently enjoy.

Remuneration comparisons between medical professionals and other professionals were necessarily 'best approximations'. Job descriptions and content obviously varied from profession to profession and factors such as the nature of work carried out, working conditions, decision-making structures, consequences of error etc. also varied correspondingly. In the case of the international comparisons, job alignment was somewhat easier. However, factors such as differences in tax and social security structures, living standards and cost of living had to be taken into account. Nevertheless, methodologies to provide reasonably meaningful comparisons were employed.

Comparison of general surgeons with other professionals employed in the state sector

Comparisons of jobs across different functional areas were made by analysing job content, and grading or ranking this using a job evaluation system. Job evaluation may be defined as the process of determining, without regard for personalities or personal competencies, the worth of one job relative to others. Job evaluation systems therefore measure the intrinsic worth of jobs. Various such systems are used in South Africa, and all employ a conceptually similar approach.

For the purpose of this study the Paterson system of job evaluation was used. This is the most widely used system in South Africa and categorised jobs in terms of decision bands. Each band represents an increasingly complex decision level and thus a more senior management level. For the purpose of evaluating and grading (or ranking) jobs, the bands are divided into grades and sub-grades. Six bands are recognised in the Paterson system, from the lowest to highest organisational decision levels.

Only the three highest bands were required for comparative purposes in this exercise and these bands, grades and sub-grades, and typical management and decision responsibility levels are shown in Table I.

Pay scales applicable to general surgeons working in the state sector were analysed and compared with selected professions employed within the same sector. The selection of comparator professions was necessarily constrained by availability of comparative data. For example, single-state pay scales were not readily available for professions such as accounting and engineering where such skills may be located in various job functions across various departments. In such cases overall public sector data were used.

Comparisons were made by grading jobs at different professional levels and computing total cost of employment figures.

The professions and benchmark jobs which were used for comparative purposes are shown in Table II.

General surgeons compared with their counterparts in English-speaking countries

The level of remuneration and net disposable income earned by medical practitioners in state employ in South Africa was compared with that in selected English-speaking countries. In order to provide meaningful comparisons of earnings in different international locations, it was necessary to take factors such as taxation, social security costs, costs of living and essential living expenditure into consideration, in addition to gross remuneration earned.

P-ECS had developed a robust methodology for this purpose, which involved computing the 'net disposable income' (NDI) associated with levels of remuneration earned for comparable jobs in different international locations. Application of the methodology in this particular situation involved the following steps:

1. The gross remuneration data (total cost of employment) for medical practitioners at different levels in different international locations was researched. The three countries selected for comparison with South Africa were the UK, Australia and New Zealand.

2. The deduction of taxation and social security (retirement funding, medical health insurance costs, etc.), based on normal market practice in the country concerned, from the gross remuneration yielded a net income figure.

3. The essential living costs applicable at the remuneration level and in the country concerned were determined. Essential living costs were defined as costs required to purchase non-luxury needs such as food, housing, transport, etc. in the country concerned.

4. Deduction of the essential living costs from the net income yielded the NDI. The NDI represented that portion of the gross remuneration available for discretionary spending or saving.

5. By dividing the NDI by the essential living costs we were able to develop a convenient index of the purchasing power of the net disposable income.

TABLE I. COMPARISONS OF JOBS ACROSS DIFFERENT FUNCTIONAL AREAS

Paterson band	Management level	Broadband grades	Sub-grades	Decision type
F	**Top management/executives in large companies**	**F upper F lower**	**F2 F1**	**Policy making or strategic decisions usually made at top management/board level**
E	**Senior executives reporting to the CEO. Holding or subsidiary/single unit company**	**E upper E lower**	**E3/E4 E1/E2**	**Programming decision usually made by senior managers or head of major functions/business units**
D	**Middle managers and professionally qualified, experienced specialists, e.g. in finance, IT, etc.**	**D upper D lower**	**D4/D5 D1/D2/D3**	**Interpretive or probabilistic decisions usually made by middle management and professional staff based on overall corporate strategy**

TABLE II. PROFESSIONS AND BENCHMARK JOBS USED FOR COMPARATIVE PURPOSES

Profession	Job title/benchmark job	Paterson grade/broadband	
Medical practitioner in state sector employ	**Intern**	**D2**	**D lower**
	Registrar (Leg 1)	**D3**	**D lower**
	Community service doctor	**D3**	**D lower**
	Medical officer	**D3**	**D lower**
	Junior specialist (working under supervision)	**D5**	**D upper**
	Senior medical officer	**D5**	**D upper**
	Specialist	**E2**	**E lower**
	Principal medical officer	**E2**	**E lower**
	Chief medical officer	**E3**	**E upper**
	Senior specialist	**E3**	**E upper**
Judge/magistrate in state sector employ	**Magistrate**	**D3**	**D lower**
	Senior magistrate	**D4**	**D upper**
	Regional/chief magistrate	**D5**	**D upper**
	Regional court president/special grade Chief magistrate	**E2**	**E lower**
	Judge, e.g. High Court, Labour Court	**E3**	**E upper**
Engineer employed in the public sector (state, local authority or parastatal)	**Qualified professional engineer (5 - 10 years' experience)**	**D3**	**D lower**
	Qualified professional engineer (over 10 years' experience)	**D5**	**D upper**
	Engineering manager in intermediate-sized organisation	**E2/E3**	**E lower/E upper**
Municipal manager: Local authority	**Small local authority**	**D3**	**D lower**
	Medium local authority	**D4**	**D upper**
	Intermediate-sized local authority, e.g. Kimberley, East London	**E1**	**E lower**
	Large local authority (Metro), e.g. Johannesburg, Cape Town	**E3**	**E upper**
Airline pilot in state-owned airline, i.e. SAA, SA Express, SA Airlink	**First Officer: Narrow-bodied aircraft**	**D1**	**D lower**
	Senior First Officer: Wide-bodied aircraft	**D3**	**D lower**
	Captain: Narrow-bodied aircraft	**E1**	**E lower**
	Captain: Wide-bodied aircraft	**E2/E3**	**E lower/E upper**

Salary increases

The salary increases awarded to state-employed medical practitioners over the past 5 years was analysed. The increases in basic salary and in total cost of employment were analysed separately. The increases were compared with the average increases awarded to all staff categories across all sectors of the South African economy, and with inflation.

All sector increases were extracted from P-ECS's annual National Surveys of General Staff Remuneration in South Africa. The surveys report on a database of over 900 organisations across all sectors, employing between 1.5 and 2 million staff. They are regarded as highly authoritative and are used as benchmarks by numerous South African companies. Inflation data was based on Statistics S.S. data, and the CPIX indicator had been employed for this purpose.

Results

General surgeons compared with other medical professionals in state employ

Consultant general surgeons and registrars in state employ were paid on a comparable basis with other medical professionals in state employ. The remuneration package included base pay for a 40-hour working week, 16 hours of overtime, a scarce skills allowance, and a rural allowance where applicable. A 'standard' bonus (thirteenth cheque) was paid in the birthday month. State benefits also included the pension fund, medical aid contributions, a housing allowance and education subsidy.

No provision was made for the provision or cost reimbursement of essential productivity tools such as cell phones or laptops, which have to be provided at the cost of the employee.

General surgeons compared with other professionals employed within the state sector

Comparative remuneration data for various professionals employed in the state sector are shown in Table III. Comparisons were made on the basis of total employment cost, i.e. basic salary plus cash allowance (e.g. car allowances, annual non-performance-related bonus, etc.) plus value of company (state) contributions paid on behalf of employee (e.g. retirement funding, insurances, medical aid, etc.). Where employees in selected benchmark positions were eligible for

TABLE III. COMPARATIVE REMUNERATION FOR DIFFERENT PROFESSIONS

Paterson grade	Annual total cost of remuneration (rands) – average salary/grade mid-point (range reflected in brackets where applicable)					Comparative ratio
	Medical practitioners	Judges/magistrates in state sector	Engineers in public sector	Municipal managers: Local authorities	Airline pilots: state-owned airlines	
D1					**420 000 (315 000 - 525 000)**	
D2	**179 000**					
D3	**278 000**	**362 000**	**315 000 (262 000 - 384 000)**	**415 000 (328 000 - 525 000)**	**560 000 (440 000 - 700 000)**	**0.67**
D4		**398 000**				
D5	**343 000**	**440 000**	**467 000 (393 000 - 569 000)**	**532 000 (429 000 - 660 000)**		**0.72**
E1				**705 000 (596 000 - 841 000)**		
E2	**397 000**	**545 000**	**607 000 (511 000 - 753 000)**		**990 000 (740 000 - 1 250 000)**	**0.56**
E3	**475 000**	**861 000**		**1 108 000 (988 000 - 1 276 000)**		**0.55**

short-term incentive pay (i.e. a payment, typically annual, for achieving pre-agreed performance criteria), the amount for achieving budget or expected performance has been included. The data are shown as either the average remuneration or the calculated mid-point of the pay range at the grade concerned. When available, the pay ranges are also reflected. The most current available pay data have been used.

It is evident that significant differentials exist between the remuneration of state-employed medical practitioners and other professional positions. The registrar remuneration trailed that of state-employed legal professionals by 23%, municipal managers by 33%, and airline pilots in state-owned airlines by 50%. The remuneration of senior medical specialists in the state sector trailed that of their legal counterparts by 45%, and was less than half the remuneration for municipal managers and airline pilots.

The comparative ratios in Table III indicate the relationship between the remuneration of medical practitioners and the average remuneration paid to the 'basket' of selected benchmark, comparator positions. This highlighted the fact that registrars and medical officers receive only ± 70% of the remuneration paid to their peers. At more senior levels (senior specialists and principal medical officers) the remuneration was only ±55% of that paid to the selected comparator group.

It should also be noted that about 25% of the remuneration of medical specialists comprised non-pensionable allowances, which further disadvantaged them in relation to other state employees.

The differences in remuneration for the different professionals in state employ are illustrated graphically in Fig. 1.

General surgeons compared with their counterparts employed in selected English-speaking First-World countries

The gross remuneration by job level for each of the four countries is shown in Table IV. The remuneration data were reflected in a common currency (South African rands) converted at the following exchange rates: GB£1: R11.6, AU$1: R4.8, NZ$1: R4.5.

At each job level gross remuneration for South African medical practitioners was less than for their international counterparts. At specialist and senior specialist level the gross remuneration was only marginally less than in Australia, but approximately 30% less than in New Zealand and less than half of that in the UK. However, it should be borne in mind that medical practitioners in Australia work in private practice as well and this income is not reflected in their gross remuneration.

The net disposable income (NDI) calculations for specialists and senior specialists are shown in Tables V and VI. According to the calculations the NDI for South African specialists and senior specialists was greater than for their Australian counterparts, equivalent to those in New Zealand, but less than half of that in the UK. The NDI for senior specialists in South Africa was R113 000 compared with R260 000 for those in the UK, and R80 000 and R110 000 for those in Australia and New Zealand respectively.

The purchasing power ratios relative to South Africa (as base 100) averaged for specialists and senior specialists is shown in Fig. 2. Compared with the base of 100 for South African specialists and senior specialists, those in the UK, Australia and New Zealand had purchasing power ratios of

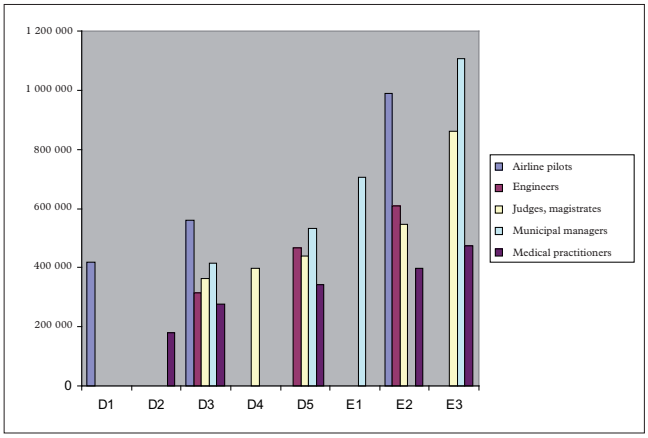

Fig. 1. Comparative remuneration for different professions.

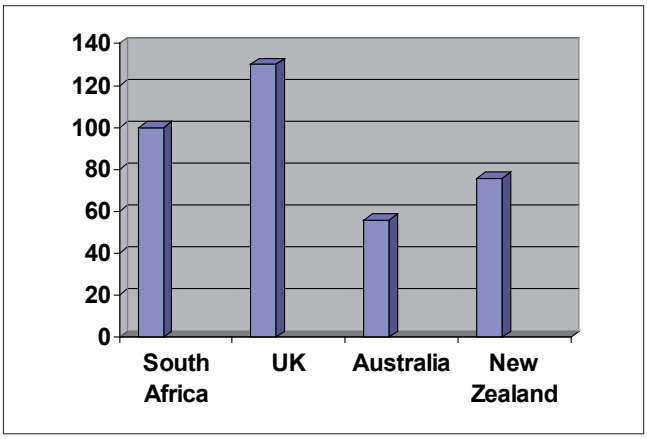

Fig. 2. Purchasing power ratios relative to South Africa (as base 100).

130, 56 and 76 respectively. In other words the standard of living of general surgeons employed in comparable positions in the UK was some 30% higher than in South Africa, whereas South Africans enjoyed higher living standards than their colleagues in Australia and New Zealand.

In order to make meaningful deductions from these statistics, however, it is important to reconcile this analysis with comparable statistics for business executives working in the commercial sector. Summary purchasing power ratios for South African executives compared with their counterparts in selected developed countries are shown in Fig. 3.

The most striking feature of the most recent commercial sector comparisons was that South African executives enjoyed purchasing power parity with American executives and exceeded those of counterparts in the UK and Australia.

Salary increases

The salary increases awarded to state-employed medical practitioners over the past 5 years are shown in Table IV.

The data in Table VII indicate that the basic salary increases awarded to state-employed medical practitioners

TABLE IV. GROSS REMUNERATION BY JOB LEVEL FOR EACH COUNTRY

	Total employment cost (rands per annum)			
Benchmark job title	South Africa	UK	Australia	New Zealand
Intern	**178 693**	**243 275**	**240 206**	**360 000**
Medical officer				
Registrar (1st leg)	**278 191**	**367 233**	**264 197**	**455 587**
Senior medical officer				
Registrar (2nd leg)	**342 996**	**509 298**	**331 200**	**562 500**
Principal medical officer				
Specialist	**397 331**	**852 925**	**421 978**	**607 500**
Chief medical officer				
Senior specialist	**474 753**	**1 053 720**	**513 931**	**684 000**

TABLE V. PRINCIPAL MEDICAL OFFICER/SPECIALIST

	South Africa	UK	Australia	New Zealand
Total employment cost	**397 000**	**850 000**	**430 000**	**610 000**
Tax and social security	**94 000**	**290 000**	**140 000**	**200 000**
Net income after tax/social security	**303 000**	**560 000**	**290 000**	**410 000**
Essential living costs	**240 000**	**430 000**	**260 000**	**340 000**
Net disposable income	**63 000**	**140 000**	**30 000**	**70 000**
NDI/ELC (purchasing power of NDI) ratio	**0.26**	**0.33**	**0.12**	**0.21**
Purchasing power ratio relative to SA as base 100	**100**	**127**	**46**	**81**

TABLE VI. CHIEF MEDICAL OFFICER/SENIOR SPECIALIST

	South Africa	UK	Australia	New Zealand
Total employment cost	**475 000**	**1 050 000**	**510 000**	**680 000**
Tax and social security	**122 000**	**370 000**	**170 000**	**230 000**
Net income after tax/social security	**353 000**	**680 000**	**340 000**	**450 000**
Essential living costs	**240 000**	**420 000**	**260 000**	**340 000**
Net disposable income	**113 000**	**260 000**	**80 000**	**110 000**
NDI/ELC (purchasing power of NDI) ratio	**0.47**	**0.62**	**0.31**	**0.33**
Purchasing power ratio relative to SA as base 100	**100**	**132**	**66**	**70**

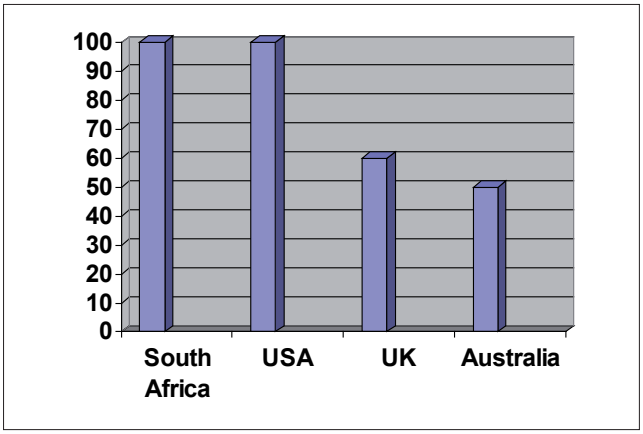

Fig. 3. Purchasing power ratios for executives in South Africa relative to counterparts in selected developed countries.

have trailed both all sector averages and rates of inflation by ±36% and ±24% respectively. The position improved if increases in the total package were considered, with medical practitioners trailing all sector increases by 13%.

Remunerated work outside of the public sector (RWOPS)

The low level of remuneration paid to state-employed surgeons over many years has led to the entrenchment of the practice of RWOPS. It has become accepted practice that general surgeons need to supplement their public sector-based pay packages by carrying out private practice work. It is estimated that over 90% of medical professionals in the state sector now engage in this practice at least to some degree. Additional earnings potential can be attractive.

Discussion

In this part of the study, the levels of remuneration of general surgeons within the state sector were compared with other non-medical professionals in the state sector, and general surgeons employed in selected English-speaking First-World countries. The data showed that recently qualified general surgeons in state sector employ were remunerated at rates some 25 - 30% below the public sector positions used in the comparisons, including state-employed legal professionals, municipal managers, and airline pilots in state-owned airlines. These differentials increased up to 100% at higher levels of seniority. In addition, the level of gross remuneration for South African medical practitioners was also less than their international counterparts.

In the broadest sense, remuneration may be interpreted as the cost of labour. In developing remuneration policies, therefore, it is conventional within the private sector that higher levels of pay are required to attract and retain higher level skills and skills that are in short supply. The national remuneration survey statistics confirm that some 54% of South African organisations (across all sectors) currently pay premiums, over and above their established or 'normal' pay scales, to attract and retain scarce skills.

TABLE VII. SALARY INCREASES AWARDED TO STATE-EMPLOYED MEDICAL PRACTITIONERS AND OTHER STAFF EMPLOYED ACROSS ALL SECTORS OF THE ECONOMY COMPARED WITH THE INFLATION RATE

Period	State-employed medical practitioners		General staff employed across all sectors of the economy (%)	Inflation (CPIX) (%)
	Basic salary (%)	Total package (%)		
1999 - 2000	**6.0**	**n/a**	**8.2**	**7.9**
2000 - 2001	**6.5**	**n/a**	**8.0**	**6.4**
2001 - 2002	**9.0**	**n/a**	**8.0**	**9.2**
2002 - 2003	**9.0**	**n/a**	**8.9**	**6.4**
2003 - 2004	**6.2**	**n/a**	**7.8**	**5.0**
Cumulative increase	**30.7**	**41.8**	**48.2**	**40.1**

n/a = no data available

In recent years the public sector has in many areas begun to adopt pay policies that are more closely aligned with current best practice in remuneration. For example, municipal managers are now remunerated with reference to overall market rates and packages include incentive pay structured around performance criteria such as service delivery. In contrast, levels of pay of state-employed medical practitioners lag behind private sector rates by very substantial margins. In addition remuneration paid to medical practitioners is also low in relation to that paid to state and public sector employees in other professional and managerial categories, and in relation to job-related skill levels.

Many factors play a role in the choice of a career in medicine. Financial compensation is usually regarded as an important consideration in choosing a career option as a young medical graduate.[7] The decline in physician income, and in particular, the declining reimbursement for surgical services, is universal and we would argue that this may one of the major reasons for the significant decline in the number of applicants for surgical registrar posts, both locally and overseas.

The performance of RWOPS has been critical in retaining general surgeons in the state sector. However, RWOPS practice has obvious implications that cause ongoing debate. The ethics and morality of carrying out what is in effect a second job while under an existing contract of employment are questionable. This is justified on the basis that the state system would collapse as a result of mass resignations if surgeons were not allowed to supplement their income in this way. In addition, this practice is not unique to South Africa and there are many similar examples throughout the world.

One of the problems with RWOPS is the lack of control on the amount of work carried out. The onus is placed on the individual to act responsibly. Conflicts inevitably do arise, particularly when cost of living pressures force surgeons to prioritise a certain number of RWOPS hours to the detriment of the state jobs.

Others argue that it would be unreasonable to condemn the practice of RWOPS as unethical and immoral given that it has become entrenched and accepted practice, and that it has become essential at this time to avoid further losses of already scarce medical skills from the state sector.

South African executives in most sectors of the economy were currently enjoying a period of unprecedented relative prosperity in relation to their international counterparts. This was largely due to the recent good performance of the South African economy and in the case of the business/commercial sector, significant increases in executive pay flowing partly from globalisation of pay scales. Other factors included the low inflation and a stable rand, relatively low living costs in South Africa, and a weak US dollar.

The position of general surgeons in the state employ is in stark contrast to that of executives in other sectors. While South African business executives enjoyed living standards over 60% higher than their UK counterparts, general surgeons lagged behind comparable UK living standards by 30%. Differentials of this type obviously provide a strong inducement to doctors to emigrate. Comparative data for Australia indicated that relative living standards of both commercial sector executives and general surgeons were lower than in South Africa. This may, however, be attributed largely to flatter commercial sector wage structures. Also remember that greater use is made of regional incentive allowances, for example, in Australia.

The basic salary increases awarded to doctors employed in the state sector trailed both all sector averages and the rates of inflation. The increases in the total package were an improvement. However, the total package comparison is somewhat misleading in that it includes the benefit of adjustments in allowances such as overtime, which are only made occasionally, and the adjustments do not form part of the pensionable portion of the remuneration.

In summary, therefore, remuneration of general surgeons in state employ lagged behind their non-medical professionals in state employ, colleagues in the private sector, and general surgeons overseas.

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