PRICEWATERHOUSECOOPERS

Medicare Schedule Review Board

A resource-based model of private medical practice in Australia - final report

Volume 4 – The methodology

December 2000

Contents

1 The process

For the practice cost study, we developed a methodology which modelled private medical practice in Australia, incorporating activity levels, resource levels and costs that were substantiated by and benchmarked across the specialty groups.

This volume explains the methodology used to produce the model practice, and also discusses the concepts underlying the development of the methodology.

The aim of the practice cost study was to develop a resource-based model of private medical practice in order to identify a dollar amount of practice cost to include in the total schedule fee for an MBS item. That dollar amount had to take into account the diversity of medical practice within Australia. Therefore, any methodology used in the study had to incorporate the key practice variables of:

- hours of practice
- MBS activity profile (ie number and mix of items)
- resources required to deliver the activity
- costs of those resources
- size of practice.

The methodology also had to take into account the effect of a practice's location (ie which State, whether rural or metropolitan, etc), and then distil all these factors to produce one cost per item, consistent with a uniform national fee schedule. The starting point for developing such a methodology was the concept of the 'reasonably efficient practice'.

1.1 The concept of the 'reasonably efficient practice'

To ensure that reimbursement is adequate for doctors in all groups to maintain an appropriate level of service, we built the model practice around the concept of a reasonably efficient practice. We defined the reasonably efficient practice in terms of workload, activity profile, the resources required to deliver the activity, the cost of those resources and the size of the practice. These definitions are explained in more detail in Chapter 2.

The reasonably efficient practice must reflect what is reasonably achievable in terms of hours of work and the activity profile. The activity profile must reflect a typical balance of consulting items, diagnostic items and procedures within each specialty. The doctor's activity level directly impacts upon the level of resources required to practise. The key components of practice costs, being accommodation, staff, office expenses, professional

indemnity insurance, other costs and direct costs for certain items, must be reasonable to support the doctor's activity.

This concept was used to build the model practice, the results from which can be used to develop a single cost per item while removing the inherent variability associated with the range and scope of actual private medical practice in Australia. The practice cost study did not attribute costs to individual items, apart from direct costs. The attribution of costs will take place during a later phase of the RVS.

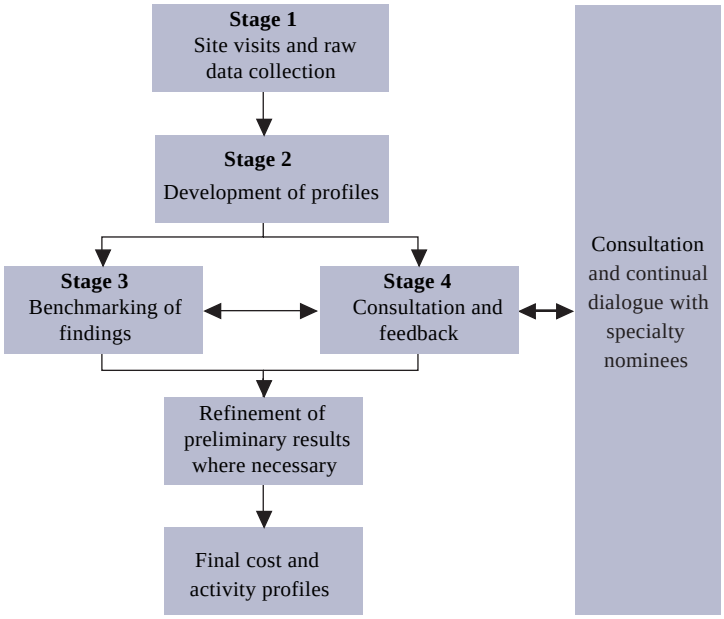
1.2 The process

The methodology process consisted of four key stages:

- Stage 1 – Site visits and raw data collection
  face-to-face interviews with doctors selected from all specialties and from a diverse range of locations
- Stage 2 – Development of profiles
  preliminary activity and resource requirements for each specialty using the study data, including the timetables of the doctors who participated in the study as well as observation and measurement of the physical resources employed. We also used the study doctors' HIC data, supplemented with additional HIC data to ensure that the profiles were representative of actual practice in Australia
- Stage 3 – Benchmarking of findings
  with the results of other, broad-based surveys and studies such as the ABS survey on private medical practice (ABS 1996 & 1997), the FMRC business benchmarks (FMRC 1997) and the KPMG study (KPMG 1996)
- Stage 4 – Consultation and feedback
  formal meetings with the APPC; informal discussion of preliminary findings with specialty nominees; and extensive formal feedback process following the release of our preliminary findings report in March 1999.

None of these activities stands alone. They are all interrelated components of the process of building up a comprehensive picture of the costs of medical practice in Australia. We elaborate on each of these stages later in this chapter. An overview of the methodology process is presented in Figure 1.1.

Figure 1.1 Overview of the methodology process



1.2.1 Formula for allocating practice costs

A process for allocating practice costs to each MBS item is illustrated by the formula presented in Figure 1.2. It should be noted that application of this formula will not be possible until other studies (the PRS and the Remuneration Rates Study [RRS]) being undertaken as part of the RVS are completed. Nevertheless, the formula is reproduced for completeness of this report.

Figure 1.2 Allocation of practice costs to each MBS item

Item cost = $\frac{(PC}{T}$ x I) + DC			
where:	PC	=	General overhead cost ($)
	I	=	Item time (minutes)
	T	=	Total annual time available for 100% MBS activity (minutes)
	DC	=	Direct costs ($ per item)
Total general overhead cost (PC) = W + O + G + S + P + MV + PII + WC			
where:	W	=	Support wages and staff costs
	O	=	Occupancy costs
	G	=	General office expenses
	S	=	Other practice costs
	P	=	Professional costs
	MV	=	Motor vehicle expenses
	PII	=	Professional indemnity insurance (overhead proportion)
	WC	=	Imputed interest on the cost of working capital
Direct costs per item (DC) = $\frac{(E + O)}{A} + \frac{(W \times T)}{60} + C + PII$			
where:	E	=	Dedicated equipment cost (interest and depreciation per year)
	O	=	Occupancy costs (dedicated space in square metres x annual rent per square metre)
	A	=	Typical activity level (number of items per year)
	W	=	Wages and staff ($ per hour)
	T	=	Time taken to deliver service item (minutes)
	C	=	Consumables and sundry costs per test or service ($)
	PII	=	Professional indemnity insurance (item specific)

Note 1. All costs are expressed in $.
Note 2. In many cases DC = $0.

Source: Practice cost study, 31 December 1999

1.2.2 The case study approach

The case study approach focuses on identifying the reason for the cost, or 'cost driver'. It is only through the detailed analysis of data from individual doctors that meaningful conclusions on resource utilisation and practice costs can be drawn, particularly given the range of practice variables. The study's approach was to ensure that the key parameter of 'reasonable efficiency' could be factored into the data relating to costs. For example there would be no benefit in knowing that X% of doctors spent $Y on staffing if there was no knowledge of the how those resources were applied or of the individual relationships/factors taken into account in determining the levels of wages (for example, employees who are spouses of the doctor or doctors who use serviced suites).

The terms of reference required not only that the study identify a value for each category of resource in private medical practice, but that these values reflect reasonably efficient practice. This key criterion necessitated a deeper understanding of costs and resource utilisation than would be achievable through other forms of data collection such as surveys. We recommended the use of the case study methodology as the only viable approach to capturing key operational information on practices. The Board accepted this approach because it was the best method of delivering the resource-based costing models required.

The information provided by the case study approach was refined by continual dialogue with and feedback from APPC representatives as well as through a series of meetings with specialty nominees. Final outcomes were validated against recognised benchmarks and the results of other studies to ensure overall consistency and reliability (ABS 1996 & 1997; FMRC 1997; KPMG 1996; AIHW 1997; Campbell Research & Consulting 1997).

The validity of the case study approach was confirmed by Professor Des Nicholls, Professor of Statistics and Econometrics at the Australian National University, as the only practical way to obtain comprehensive operational data on private medical practices in Australia. Appendix B contains a letter from Professor Nicholls to this effect.

1.3 Stage 1 – Site visits and raw data collection

By interviewing doctors from all specialty groups and across a range of locations, we obtained a detailed understanding of the financial, administrative and clinical operations of these practices. The doctors who participated in the study were selected at random by specialty and location from *The Medical Directory of Australia*[1]. Participants were selected from most mainland States, capital cities, regional cities and towns, and from rural and remote locations. The data collected represents a 30% response rate to the initial letter of invitation and personal telephone contact. This provided data from a wide cross-section of medical practices.

The same PwC consultants (the team), with extensive experience in health financing, and including a medical practitioner with an extensive clinical and administrative background, conducted the interviews. By maintaining the same interviewers, we were assured that the

[1] *The Medical Directory of Australia,* 21st edition, Australasian Medical Publishing Company Limited, 1996

information given and data collected were consistent across all interviews. This also avoided potential variations in interpretation of the data, which may have occurred had different teams of interviewers been used.

The site visits allowed the team to collect and analyse doctors' timetables, financial data, occupancy data, equipment lists and staffing profiles. In addition, we discussed the basis of the timetable and cost data with the doctors to obtain a deeper understanding of these issues. This extensive knowledge base of medical practice was then used to interpret both data from other surveys and medical utilisation statistics from the HIC. The timetable information gathered through the interviews was able to be cross-referenced with the HIC profile of the doctors, allowing a greater understanding of the link between actual hours worked and the MBS activity delivered.

1.3.1 The interview process

Each participant was initially contacted by letter and visited by the team. Prior to the visit, participants were asked to have their financial statements and/or tax returns available for perusal and discussion. Participants also gave authority for the team to access their annual MBS item activity through the HIC records. All PwC staff involved in the study signed confidentiality undertakings in relation to this data.

The doctors were interviewed in their rooms. This assisted the collection and verification of accommodation/occupancy and staffing details, with key data being recorded for later analysis. The team asked identical questions of all doctors, using a questionnaire developed for the purpose. The questionnaire is attached in Appendix C. The questions sought a significant amount of detail, ranging from specific financial information such as total costs incurred to operational activities such as staffing requirements, hours of practice, floor space in rooms, etc. The questions also covered areas such as patient booking patterns and the nature of the various activities of the doctor, ie MBS, VMO, medico-legal, etc.

Interviews addressed all cost components recorded in the financial statements, including unusual expenditure types or amounts. Current practice characteristics, plans for change and historical factors were discussed along with any expected influences on the practice and its management. The site visits also allowed the team to form a view about the total practice environment.

Timetables and the nature of the work undertaken in scheduled doctor time in the practice were recorded. Any allocations for out-of-hours work and use of locums as well as the use and cost of sessions other than at the principal practice location were noted. Any arrangements for subletting of the doctors' rooms for sessions by other doctors or for facility-sharing were discussed and details recorded. Staff resource allocations were recorded as 'full-time equivalent' (FTE) staff by classification. For example, a staff member working two full days per week would be counted as 0.4 of an FTE (based on a five-day week).

Breakdown of participants

The number of practices visited in the face-to-face interview process was 128. These practices provided data on 293 individual doctors across the specialties. The team also accessed additional de-identified (ie anonymous) profiles for all specialty groups from the HIC to give a broad view of the types and levels of item activity for each doctor.

Other information collected

During the interview process additional relevant data such as advice on current medical practices was obtained, through correspondence and by telephone, from nominees of colleges and associations. This external data was combined with the data obtained from individual interviews. The combined data allowed for the development of preliminary costs which could then be continually modified and refined.

Outcome

The result of the process was the development of a model practice for each specialty, detailed in Volumes 1 and 2. These model practices include physical resources such as staff, facilities and equipment which reflect what is available in the market place and being purchased in current practice. The values paid for these resources were compared to commercially available sources and checked by the nominees of the groups involved. Concerns of these nominees or groups were considered by the team and adjustments made where appropriate. Rather than representing an average or most common value, the values derived represent what a reasonably efficient doctor should expect to incur in providing the services that are reimbursed through the MBS. The process of deriving these values is explained in Section 1.4.

1.4 Stage 2 – Development of preliminary activity and resource profiles

After collecting the data from both site visits and the HIC, we began the process of developing activity and resource profiles as a basis for the model practice.

Definition of 'profile'

'Profiles' are representative descriptions of the type of MBS activity delivered by a doctor and the resources and costs necessary to deliver that level of activity.

1.4.1 Preliminary activity profiles

The purpose of the preliminary activity profiles was to provide assurance to the team that the doctors participating in the study were delivering a reasonable mix and level of items. These preliminary activity profiles will not be used as the basis for the attribution of costs to items (see Section 1.7), as final activity profiles are being developed as part of the PRS for this purpose. This will ensure that the activity levels used for the final attribution of

practice costs to items represents actual levels and not those specific to doctors included in the case study used for the practice costs study.

To build the preliminary activity profiles, we analysed the activity of each specialty group in terms of the following parameters:

- total annual activity
- the mix of consulting and procedural items
- items with a direct cost component (direct costs are explained in Section 1.4.6).

The typical activity of a doctor delivering 100% MBS services can be considered in two dimensions: the number of hours per year they deliver MBS services, and the number of items per hour they deliver. In addition, doctors engage in different categories of activity during their working week, not all of which relate to MBS items – some are related to maintaining their expertise or to providing service to patients other than MBS-reimbursed items. As this study was only concerned with identifying costs that are directly related to MBS items, only those hours that related to the 'business' being open for MBS activity were included. Time spent in activities such as CME, teaching, research, and VMO work was not included (although the costs of CME were included). In practice, some general and specialist practices may be open for longer hours than we have used in the model practice.

The study data gave an average total patient-related working time for general practitioners of 41.5 hours per week when only full-time doctors were considered. This was very close to the results of other studies (ABS 1996; AIHW 1997) which indicated that general practitioners work between 40 and 42 hours per week. These surveys also identified that specialists typically work longer hours than general practitioners, which was reinforced by our study data.

In an effort to overcome the entrenchment of unduly long hours of work and to standardise the hours of specialty groups, our first step in building the activity profiles was to identify a reasonable number of working hours per week per doctor. We decided on 40 hour per week, using the formula in Figure 1.3. The process used to arrive at this amount of hours is explained in Section 1.4.2.

Figure 1.3 Formula for calculating annual MBS hours

Full time	40 hours of MBS activity over a week (8 hours/day x 5 days/week)	
Year	GPs	52 weeks less 2 weeks public holidays Note 1
	Specialists	52 weeks less 2 weeks public holidays less 4 weeks annual leave Note 2

Note 1. We have not included a provision for annual leave as general practitioners generally retain the services of a locum during these periods. We have recognised the reduced activity of locums in those 4 weeks of annual leave by discounting the total MBS activity by 40% (based on study data) for the 4-week period.

Note 2. As specialists generally do not employ locums, but rather close the practice when they take leave, their activity has been calculated at 46 weeks.

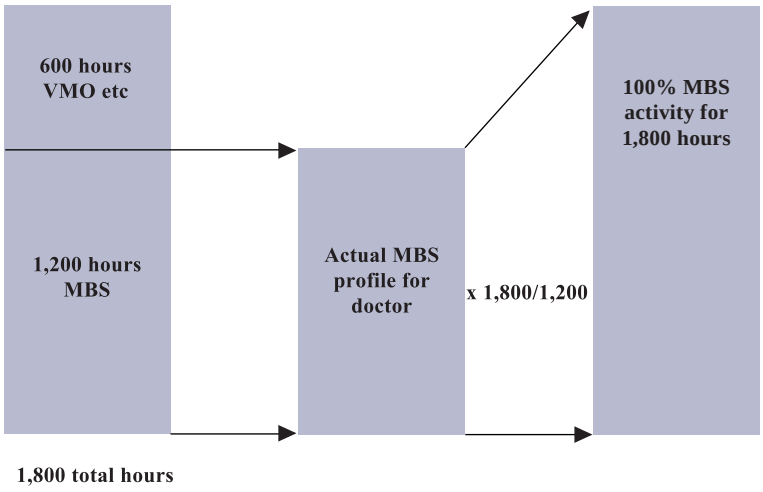
Building the preliminary activity profiles was a complex process, which is explained in Table 1.1.

Table 1.1 Process for determining preliminary activity profiles within each specialty group

What we did		Why
Step 1	Within each specialty group: ■ reviewed each of the study doctors' timetable information to determine the time spent on: (a) MBS activity; and (b) other activities such as VMO ■ analysed the study doctors' activity profiles as provided by the HIC and matched those profiles against the timetables for those doctors ■ extrapolated (or condensed) the activity profile of the doctor such that it represented 40 hours of MBS time per week (see Figure 1.4)	To determine a rate of MBS activity that was a typical profile of those study doctors and extrapolate this to an annual level for the model doctor
Step 2	Compared the resulting profile against the HIC profiles for all doctors within that specialty group, and adjusted it where necessary	To ensure that the model activity levels represented the items delivered by doctors in each specialty
Step 3	Added a total of 200 de-identified profiles across the specialties of doctors within the full-time activity range	To ensure that the profiles for individual doctors excluded any atypical items and provided a representative profile of full-time MBS activity for each specialty
Step 4	Circulated the resulting preliminary profiles at the APPC meetings and discussed them with the representatives	To ensure they reflected typical practice in Australia

Figure 1.4 sets out the extrapolation process.

Figure 1.4 Development of 100% MBS annual activity profiles



The process of extrapolating and condensing profiles assumed a linear relationship between the hours worked and the items delivered. In some cases the actual MBS time spent by doctors in the study was 40 hours per week, which meant that their activity profile did not require extrapolation. In other cases doctors worked more than 40 hours per week on MBS activity, which meant that their MBS activity profile was condensed. In all cases the extrapolation/condensation process retained the relative mix of items within the profile and only adjusted the annual item activity level.

1.4.2 Hours worked per week

For the model practice, it was essential to determine a rate of hours worked per week because of the need to:

- have standard operational hours corresponding to the MBS activity for all specialty groups
- reflect the hours of clinical work that most study doctors thought was reasonable and were engaged in
- ensure that the hours of work for the model practice were not overly onerous
- reflect the opening hours of the 'business' and therefore the hours generally worked by support staff
- ensure that the business or practice was operational for a sufficient time to justify capital expenditure on the practice.

Why 40 hours?

From the study data we concluded that the costs of practice were fixed for most of the major costs based on a full-time doctor whose rooms were open for 40 hours per week. Rent, salaries for support staff and personal expenses such as professional indemnity insurance were fixed on an annual basis. These costs showed no significant variation whether doctors delivered 30 or 50 hours of MBS activity per week. The variations in overhead costs were related more to the individual specialties and the items delivered.

We acknowledge that 40 hours per week is a conservative estimate, and that most doctors work longer hours. The concept of the 40-hour working week was developed to align with the practice's normal 'hours of business'. As practice costs are recovered on a per-item basis, increased hours resulting in increased MBS time and item activity will mean that a doctor will receive a higher reimbursement of practice cost than the model practice provides for. Similarly, less activity will result in less cost reimbursement than in the model practice.

Hours of clinical work of the doctor

The 40-hour week correlates to the weekly MBS activity or clinical work of the doctor. The 40-hour week of doctor activity was determined to match activity with the resources of the practice and allow a single level of MBS activity for each specialty group. The 40 hours encompasses only that activity which is directly reimbursable through the MBS, clinical face-to-face time and the pre and post-episode time directly related to that episode.

The 40 hours per week is reflected in the following:

- The ABS survey (ABS 1996) indicated that nearly all groups spent 40 hours per week in 'private patient activities'.
- Doctors generally construct their timetables into 10 half-day sessions of booked time. This equates generally to 40 hours per week.
- The timetable data and activity profiles from the study participants showed that the 40-hour or 10-session week equates to the activity level of the 75th percentile of HIC activity. This also approximates to the median level of activity of a full-time doctor in most specialty groups.

1.4.3 CME hours

No reduction in either the number of working hours per week or the number of weeks per year has been factored into the model practice to account for time spent undertaking CME activities. The reasons for this are:

- CME activities can be completed in a number of different ways:
  - by attending conferences during work hours
  - by attending conferences and undertaking self-study after hours
  - by combining conferences with annual leave etc
  - by integrating CME into clinical activities in such a way that it cannot be separately identified
- the study doctors' timetables revealed that doctors can maintain a 40-hour/week, 46-week/year workload and still complete CME requirements. They do this by either working longer hours than the standard 40 hours per week or by planning CME activities outside normal working hours.

1.4.4 Resource profiles

For resource profiles we:

- defined the resource and its function (eg staff, accommodation, etc)
- identified the nature of the delivery of that resource (eg purchase, hire, lease)
- costed the resource.

1.4.5 Costing

Each classification of cost was analysed by doctor and practice in conjunction with activity levels and hours of work (MBS and other), and then compared with others in the same specialty and across all specialties.

To ensure that the costs of practice were matched against the activity, we identified the variable costs of medical practice that would be affected by changes in the preliminary activity profile. Costs such as office supplies and telephone (not direct costs) were extrapolated (or condensed) in line with changes in activity.

Validation and identification of outliers

Significant cost variations within specialties were investigated. Non-arms-length and non-commercial payments made by doctors (eg payments of salary and wages to spouses) were identified and normalised (ie treated on a consistent basis).

Categorisation

We grouped costs into categories covering occupancy, office expenses, staffing, etc, to ensure that there would be a valid method of addressing common variations in account classification, particularly for smaller expenditure amounts. As an example, printing and stationery, computing consumables and postage were often unable to be separated either by us or by the doctors. We grouped these items under 'office expenses'. A number of external sources of benchmarking data grouped the costs into similar office expense categories, which meant that our grouping process allowed comparison and provided confidence in the values adopted at the aggregated levels.

Discretionary costs

Doctors have a great deal of discretion as to the extent of costs they incur in a typical medical practice, for example renting or owning premises or choice of motor vehicle. In order to adequately address this issue, we developed a framework of principles using external reference points which would be considered reasonable in terms of the service obtained and the related cost.

1.4.6 Costing principles

To determine a typical amount for each resource utilised by medical practice, we applied a set of costing principles which ensured consistency in our approach. This enabled us to compare resources and costs across specialties and will enable the future development of a single reimbursement amount for each item despite the diversity of resource usage and activity amongst doctors. These costing principles are explained in Volume 1.

Direct resources and costs

Items which require specific dedicated resources (eg special equipment or staff) that are not provided for in the general overhead allocation of the model practice are referred to as 'direct cost items'. The direct resource needs of these items were determined according to the specific requirements of the item. Costs were applied to the direct resources and then allocated to the direct cost items on an item-by-item basis. These direct costs are over and above the general overhead costs allocated to the model practice.

The resources required to deliver the direct cost items were identified, and include:

- dedicated equipment costs
- occupancy costs (space)
- wage and staff costs (technicians)
- consumables or disposables
- professional indemnity insurance.

The method used to determine the resource requirements and the costs of those resources, for direct cost items, is explained in Volume 3.

1.5 Stage 3 – Benchmarking of findings

A key aspect of the development of the model practice for each specialty was that the costs of resources and other information collected through the face-to-face interviews be validated using external references (ie benchmarked).

After developing detailed resource requirements and activity profiles we benchmarked the preliminary findings. The benchmarking process consisted of the following steps:

- identification of resources and establishment of preliminary costs
- comparison of preliminary costs to relevant benchmarks
- review of preliminary costs and adjustment if necessary to ensure consistency with benchmarks.

The collected data was benchmarked against:

- the results of the ABS survey (ABS 1996 & 1997)
- the benchmark study for general practitioners, anaesthetists and selected specialties from the FMRC benchmarks (FMRC 1997)
- the KPMG study (KPMG 1996) on the time involved in consultations for all specialties
- Australian Medical Workforce Advisory Committee (AMWAC) reports (1996-1998; for complete list, see bibliography)
- information and statistics received from real estate and property consultants
- Federal and State industrial awards
- information received from suppliers of products and equipment used in medical practice.

We used the benchmarking as a means of verifying and justifying the cost values included in the model practice.

1.6 Stage 4 – Consultation and feedback

To ensure the profession had an opportunity to contribute to the study, we sought their feedback through consultation.

1.6.1 The consultative process

The consultative process was used to develop and refine the findings from the field work. The team considered consultation essential for discussing the proposed methodology and to gain advice about aspects of each specialty. One of the key outcomes for the consultative process was agreement on the key resources and cost drivers for each specialty group.

Consultation occurred with the profession in three key ways:

- continual dialogue with the nominees of the specialty groups
- presentation to and consultation with the representatives at APPC meetings
- presentation of a preliminary report and feedback process.

Consultation with specialty nominees

As early as possible in the study, the team met with the specialty nominees of the colleges or associations. The nominees were given papers covering the methodology of the study. The nominees of the groups listed in Table 1.2 were visited personally by the team. At these meetings, the nominees were able to discuss the specific concerns of their group and indicate any areas of their specialty requiring special consideration.

Nominees provided advice in relation to resource needs such as equipment and staffing requirements, and in interpreting item descriptions in the schedule. In some instances, they were able to advise on items that were now outmoded, or items in which the equipment usage had altered since the original item description was introduced.

The role of the APPC meetings and review of findings with relevant groups

The APPC comprised a representative of each of the specialty groups. They provided the team with advice and clarification in relation to practice cost issues. Important aspects highlighted by this group included the variability between specialties and practice localities (eg State). The APPC was involved in successive iterations of the nominal MBS activity profile and resource profile for each specialty, and commented on the interim findings and recommendations. Most importantly, the APPC process enabled the team to refine the resources required for each specialty group, and indicative costs, with these groups directly.

The process of consultation with the APPC and the profession (through the specialty nominees) can be distilled to a number of stages:

- face-to-face interviews conducted and data collected
- resource and activity profiles developed
- activity profiles refined and preliminary benchmarking completed

- first APPC meeting held
- data sent to nominees throughout the process
- second APPC meeting held
- preliminary resource values further refined
- third APPC meeting held.

The APPC had three meetings with PwC to review the nominal profiles of activity and resources. In addition, a series of meetings and discussions took place both before and after these meetings with a number of the representatives. The bodies represented in the APPC have had, and continue to have, the opportunity to challenge the study's broad conclusions and offer suggestions and assistance to the process.

A number of specialty groups such as anaesthetics and general practice commissioned costing studies, and we took account of the results in our benchmarking process. Other groups such as dermatology and psychiatry commissioned studies specifically as a result of the APPC process. The results of these studies were also considered.

The input from these groups has been invaluable to the results presented in this report. As a result of the meetings, adjustments were made to preliminary values in several categories to ensure that the levels reflected real practices across the specialties.

Preliminary findings report – consultation process

A preliminary report detailing the findings of the practice cost study was released to the profession in March 1999 for comment. All the specialty groups were requested to respond in writing raising any issues of concern relating to the report.

We held formal meetings with a number of groups both before and after receiving the formal responses. These meetings were used as a forum for the groups to explain their concerns with the report and for us to explain how we developed our findings.

We received formal responses to the preliminary report from a number of specialty groups, and in some cases, more than one response from a specialty. We issued a formal response to all specialty groups and individuals who responded to the preliminary report.

Extent of consultation with the profession

We consulted extensively with the nominees of the specialties listed in Table 1.2.

Table 1.2 Specialty groups involved in the consultative process

Anaesthetics	General surgery	Psychiatry
Cardio-thoracic surgery	Neurology	Radiation oncology
Cardiology	Neurosurgery	Rehabilitation medicine
Dermatology	O&G	Renal medicine
ENT surgery	Ophthalmology	Rheumatology
Gastroenterology	Paediatric medicine	Thoracic medicine
General medicine	Paediatric surgery	Urology
General practice	Plastic surgery	Vascular surgery

An invitation to establish informal reference groups to consider issues relating to the study was given to all specialty groups. The specialties listed in Table 1.3 established such groups, which regularly contributed to the study through liaison between the nominee and the study team.

Table 1.3 Specialty groups with informal reference groups

Anaesthetics	General practice	Thoracic medicine
ENT surgery	O&G	Urology
Dermatology	Ophthalmology	
Gastroenterology	Rehabilitation medicine	

The orthopaedic surgery group did not provide a nominee to the study. As a result, we adopted the general surgery model practice for orthopaedic surgery.

1.7 Overview of attribution of costs to MBS items

In this section, we present a summary of a possible attribution process. The attribution process will not take place until the PRS and RRS have been completed.

'Attribution' refers to the allocation of practice costs to an individual MBS item. There can be only a single amount of practice cost for each item. This single cost, or attribution figure, must take into account the fact that doctors from different specialties with different cost structures deliver the same item. It therefore cannot reflect every doctor's costs, but should reflect a 'reasonable' cost of delivering an individual item of service.

Costs and activity levels that represent what a reasonably efficient doctor can achieve were used as the basis of the model practice. The study's aim was to ensure that doctors with that nominal activity profile are reimbursed through the MBS for their total model costs.

The attribution process covers a number of phases:

- quantifying a reasonable nominal activity profile for the model practice
- quantifying the resources and costs required to support that level of activity in the model practice
- determining the fairest way to attribute costs to each item knowing that doctors' costs and profiles vary greatly.

The attribution process also had to identify the most appropriate methodology to allocate practice costs to MBS items. This methodology had to:

- reimburse the reasonably efficient doctor's practice costs based on the model activity profile
- reimburse only those doctors who actually incur the costs identified
- be flexible enough to be applied to new items, such as those proposed under the new attendance item structure.

In this way we can encourage doctors to provide a high quality of service and adequately reimburse them for time spent in doing so.

1.7.1 Time-based attribution

Time-based attribution, as a cost recovery method, attributes practice costs to MBS items directly on the basis of the doctor time for that item. The Board accepted this as the most appropriate method of attribution. The time-based method establishes a relationship between doctor time and cost recovery such that a five-minute consultation would recover half the practice costs of a ten-minute consultation. The individual item times build up so that a doctor receives total reimbursement for a year's activity. The time for each item is being determined through consultation with the profession in the PRS. These times will be used as the basis of the attribution.

A new attendance item structure has been developed. When introduced, it will provide for greater differentiation in relation to content and time. Under this system doctors will bill on this basis with much greater accuracy.

As the new attendance item structure has approximate time references for different levels of activity, a practice cost attribution methodology also based on time appears to be a logical choice. Time-based attribution can be distilled to a practice cost per unit of time, and items reimbursed on that basis.

1.7.2 The 'dominant group' issue

Different specialties charge against the same item numbers in the MBS; for example, the general procedural items for the removal of skin lesions encompass items that are predominantly delivered by groups ranging from general practitioners to plastic surgeons. In the absence of generalist and specialist items, there can only be a single cost component

per item, even though each specialty has a different cost profile. Therefore it is essential to identify which specialty will be used as the cost base for each item. This specialty is known as the ‘dominant group’ for that item.

The dominant group is determined as being the specialty for which the reimbursement for that item makes up the highest percentage of total reimbursement. The PRS consultancy will identify which specialty group will be the dominant group for all the items in the MBS.

2 The concept of the reasonably efficient practice

The model practice was based on the concept of a 'reasonably efficient' practice, which first required a definition of what constitutes such a practice.

In this chapter we explain the concept of the reasonably efficient practice and the process we undertook to arrive at our decision on what constitutes such a practice.

From an operational viewpoint, a generic medical practice can be broken down into four elements:

- hours of work
- activity delivered
- resources consumed
- cost of resources.

The following definition was presented to and accepted by the Board in October 1997:

The reasonably efficient practice is one that utilises good management to ensure efficient resource usage while maintaining a level of quality that patients expect and that the profession can be reasonably expected to provide.

A 'reasonably efficient' practice is therefore one which, in a reasonable number of working hours per year, delivers a level and quality of activity that is achievable in that time. To do this, it must make effective use of time and resources.

The practice requires certain resources, such as accommodation, staff, etc, to deliver that activity. The costs of those resources should also be reasonable, that is, neither base level nor gold standard.

The study methodology was designed to construct a reasonably efficient practice based on the concept as defined.

2.1 Reasonable level of activity

It was not the intention of this study to impose efficiency measures in relation to MBS activity. The preliminary activity profile developed for each specialty group is a 'reasonable' level of activity that can be delivered in a 40-hour business week.

We validated the process of developing the nominal activity profile as follows.

For general practice

- We analysed study participants' timetable data and the HIC data for the study group, and calculated a total time of 13.5 minutes for the standard general practice consultation. This item of service represents over 75% of all general practitioner items billed in Australia. From the study data, we established that a value of 13.5 minutes was the 'best fit' value for doctors falling within the model activity range.
- It would be impossible to quantify a single amount of time for all standard consultation items billed in Australia. By its very nature, therefore, this calculation is not exact. It was intended to provide justification for the model profile and correlation between the timetables and HIC data.
- We validated this time value by comparing it with other studies:
  - the KPMG study (KPMG 1996), involving several thousand timed consultations, indicated a value of 11-12 minutes for face-to-face time
  - the FMRC benchmarks (FMRC 1997) indicated that the average length of all general practice items was 15 minutes.
- Our time for the standard consultation of 13.5 minutes falls between the other studies. However, it is consistent with their results, as the KPMG study only gave a face-to-face time and the FMRC study involved all general practice items, not just the standard consultation.
- The nominal annual item activity of 8,199 for the model general practitioner corresponds to a doctor who sees 4.1 patients per hour in a 40-hour week for 50 weeks a year (taking locums into account by discounting their activity by 40% in the four weeks they substitute for the doctor). The time value of 13.5 minutes for the consultation takes all other items in the profile into consideration.
- The standard consultation time value was derived for the purpose of attribution and to provide support for the activity profile developed for the model practice. It does not necessarily reflect the face-to-face time for doctors: rather, it equates to the total time per patient episode (ie pre, intra and post time per item). However, it does reflect the booking practice of most of the general practitioners in the study.
- We compared the nominal annual item activity of 8,199 to the annual activity of all individual general practitioners from the HIC data.
  - This level was the median level of activity for full-time general practice. It was also close to the 75th percentile of all general practitioners' activity levels.

For specialist practice

- We used the same methodology as for general practitioners to arrive at, and then validate, the activity of specialists.
- As specialists have such a large number of differing items in their profile and there are fewer studies to compare against, we were not able to cross-check the final activity level as readily as for general practitioners.

2.2 Efficient use of resources

Efficiency measures can be applied to both the physical resources (eg the size of rooms, number of staff, level of equipment) and the costs of those resources.

Throughout the study, the team used the site visits and the discussions with doctors and nominees to identify a range of efficiencies in the management of resources and costs. This data was compared, where possible, with data and standards from previous cost studies and surveys in Australia (ABS 1997; FMRC 1997; Campbell Research 1997; RACGP 1996[2]). In determining 'reasonably efficient' practice, only standards that were observed as actually being applied in current private medical practice were considered. The intention was to create a model practice that reflected a balanced, real practice rather than a notional, unrealistic practice of the lowest-cost components stitched together. For example, the model practice for general practice complies with all standards included in the RACGP entry standards document (RACGP 1996).

We considered the suggestion that if there were more resources available in certain specialty groups, patients could be offered more in terms of service. However, we did not set resource levels at what is 'ideal' in terms of service standards. The model practice reflects what is achievable now, not 'if there were more resources available'.

Listed in Table 2.1 are the major groups of resources/costs that can be found in a typical Australian medical practice split between fixed and variable costs. Fixed costs are those costs that remain relatively constant irrespective of variations in activity levels, ie they do not vary as activity increases or decreases. Variable costs are those which change directly with changes in the level of activity. Some costs may have both fixed and variable elements, for example staffing costs.

2 The Royal Australian College of General Practitioners, *1996 Entry Standards for General Practices*, RACGP, Sydney, 1996

Table 2.1 Resource/cost groups of a typical Australian medical practice

Resource/cost	Fixed	Variable	Comment
Wages	✔		On the basis that staff are full-time, wage costs will remain fixed over a level of activity. As activity increases beyond the typical level or the hours of practice increase, more staff will be needed.
		✔	If staff are employed on a part-time basis and only work when the doctor works, the wage costs can become variable.
Rent	✔		Space requirements will vary on a specialty-by-specialty basis due to functional requirements (eg plaster rooms for orthopaedic surgeons), and in some circumstances the higher activity specialties may require more space.
Office costs		✔	Generally vary with activity level
Other practice costs	✔		Depreciation – fixed
		✔	Medical supplies – variable
Professional costs	✔		Fixed cost per doctor
Motor vehicle costs	✔		Fixed cost per doctor
Professional indemnity insurance	✔		Fixed cost per doctor
Working capital	✔		Interest – fixed

Source: Practice cost study, 31 December 1999

We considered all these costs, and found that only small gains in resource usage and cost savings are possible in the last six categories. However, there are efficiencies to be gained from the management of rent and wages.

2.2.1 Rent and wages

Efficiencies can be gained in rent and wages through the sharing of resources. This sharing may be in the form of simple arrangements, whereby doctors practising from the same location have receptionists and other administrative staff cover duties when the doctors are absent, to the formation of formal partnerships in group practices.

Other efficiencies can be gained by sharing facilities. For example in some special-purpose medical precincts, which operate as a serviced office arrangement, services are shared and doctors purchase set consulting sessions only. These facilities demonstrate great efficiencies and low expenses, but they represent a very small proportion of actual medical practices.

Medical precincts have relatively small waiting areas for each tenant doctor, but larger secondary waiting areas that are shared. Many doctors in the medical precincts use

answering services or receptionists from other practices when they are away from their rooms. These efficiencies were seen during the study and can be adopted by virtually all doctors. As these strategies are commonly available and easily implemented, we incorporated them into the model practice.

2.2.2 Group practices

Efficiency gained through the establishment of formal group practices was difficult to assess. The field work provided enough data to indicate where efficiencies of size from practising in groups were achievable in general practices. The situation was not as clear with many of the other specialty groups. Our investigation into whether efficiencies could be achieved by forming groups was restricted by lack of information and data from the specialty groups themselves. Most of the information passed on from the nominees and groups was based on single-doctor practices.

Psychiatrists and anaesthetists provided their views on the benefits of group practice; however, their view was not the majority view in the other specialty groups.

Because the majority of specialists tend to be solo practitioners there was very little information available on the efficiencies of forming groups. Larger groups were uncommon, so that any hard data on efficiencies across increasing size was not obtainable within the study. Although we encountered some larger group practices which demonstrated economies with equipment, staffing and space, they were so infrequent as to be considered exceptional. Further discussion on efficiency as it relates to the size of practice is contained in Section 2.4.

2.3 Where reasonably efficient practice can differ from actual practice

We determined the reasonably efficient practice based on our study data, benchmarked data and the information obtained from other external sources[3]. The model practice incorporates, in the costs of some resources, the discretionary element identified in doctors' spending habits. By its very nature, this discretionary element will vary from practice to practice.

There are four major areas of discretion:

- wages and staff costs
- accommodation costs
- motor vehicle expenses
- working capital requirements and depreciation.

This section looks at each area and explains how we determined our values for those resources and costs and why these will often differ from actual practices.

[3] For a complete list of references, refer to the bibliography

2.3.1 Wages and staff costs

As the largest cost for the majority of medical practices in Australia, staffing for the model practice is an important issue. There are two elements of our interpretation of the reasonably efficient practice in relation to staff costs:

- the level of physical staff resources
- wages paid to staff.

Staff resources

There was considerable variation in staffing levels in the study data. The staffing resources for individual specialties were determined on a specialty-by-specialty basis. In all cases the allocation in the model practice is consistent with the average level of staff found in the study. Variations in the model practice resources, when compared with actual study data, are due to factors such as staff rostering (including management of leave coverage).

Wages

In relation to wages paid, we found a general level of consistency between the study data, the ABS survey (ABS 1997) and the FMRC benchmarks (FMRC 1997). The feedback from specialty nominees and APPC representatives indicated that wage rates vary considerably, and in many cases could be as high as 50% more than the standard rate in the model practice. There also appears to be variation between locations, with Sydney being generally accepted as the most expensive and to a lesser extent Melbourne.

The issue of wages and staff costs is dealt with in detail in Volume 1.

2.3.2 Accommodation costs

The model practice is based on the assumption that doctors rent their rooms from an arms-length landlord. Doctors who currently own their rooms or rent from a non-arms-length landlord could have a different cost structure to that of the model practice.

The model practice for each specialty presents space requirements based on the identified functional areas observed for that specialty. These requirements were derived from observations made during the site visits and also from consultation with the specialty nominees. The space requirements defined by this process are therefore representative of the requirements of each specialty, but could differ from actual practice due to the impact of market availability and sharing arrangements.

For example, in many instances doctors will take rooms in the geographic area they wish to practise in, and may be prepared to accept more accommodation than they actually require. In the reasonably efficient practice doctors would offset the cost of additional space by sharing with other doctors in the same or even a different specialty.

Our assessment of rental costs was based on discussions with the real estate industry.[4] As for wages, the most significant problem with this method arises from the use of the national weighted average (based on doctor numbers by State) to determine a single figure for rent. Doctors in Sydney, and to a lesser extent Melbourne, pay higher rents than the average and would therefore be under-reimbursed. This is a consequence of the averaging approach, which is itself a prerequisite of a single cost reimbursement for each item in a fee schedule based on uniform national fees. In light of these differences and complexities, the national weighted average approach was considered the most objective method for the treatment of rent costs.

The issues relating to accommodation are dealt with in detail in Volume 1.

2.3.3 Motor vehicle expenses

Our approach to this issue was based on determining a reasonable allowance for the operating needs of the model practice. The costing of motor vehicle resources was a highly sensitive issue throughout the project. It was acknowledged early in the study that a motor vehicle is an essential resource of a medical practice. However, allocating costs to this resource was not a straightforward matter.

In the observed data and benchmarks, motor vehicle expenses varied from $0 to over $20,000 per year. This variation was substantially due to each doctor's choice of car or to expenses not being recorded. To alleviate this problem, we sought to identify an arms-length source of data for the running costs of motor vehicles, and ultimately determined the NRMA guide *Vehicle Operating Costs, Passenger Cars & Light Commercials* (NRMA 1997) as a satisfactory reference point.

Selecting the type of motor vehicle to include in practice costs was a more difficult subject. We determined that each doctor in the reasonably efficient practice would need a motor vehicle to perform patient-related activities or administration functions, such as travelling to the bank. Having observed that private usage of motor vehicles varied, we determined that 70% business usage was a reasonable allocation and 30% private usage not unreasonable. In many instances doctors had little or no business usage of a motor vehicle. However, we have accepted that a motor vehicle is a necessary resource, and in order to ensure that doctors who did use their motor vehicle for business use were not disadvantaged, we have not discounted the business usage rate. We then applied this rate to a specific motor vehicle, a Holden Commodore.

For a variety of reasons, including discretion in the choice of car, many doctors will incur greater motor vehicle costs than allowed for in the model practice.

The issues relating to motor vehicles are dealt with in detail in Volume 1.

[4] Information supplied directly from real estate agencies and other property specialists in each State and Territory

2.3.4 Working capital requirements and depreciation

Working capital and depreciation are also costs that vary from practice to practice. The 'reasonable' allocation for the cost of working capital is based on an interest rate of 8.96% (the 31 December 1999 10-year bond rate of 6.96% plus 2.00% standard bank overdraft risk factor) being applied to the cash or bank overdraft, debtors (less creditors) and 50% of the written-down value of plant and equipment. This gave an indicative cost of working capital of around $5,000 for most specialties.

Interest costs in the study data ranged from $0 to $35,000, and were generally higher than the model practice value. This is because the study data often included activities not contemplated in the model practice. For example, doctors finance non-medical activities through their practice, such as purchase of rooms and other investment activities. Some doctors carry high levels of debt to finance these activities, whereas other doctors may prefer to keep debt levels to a minimum. The model practice does not include any costs associated with non-MBS activity.

The model practice's treatment of depreciation also results in differences when compared to actual practice. Depreciation rates observed in the study were generally at levels specified by the ATO. These are accelerated rates designed to encourage the acquisition of capital assets by all businesses, not just medical practices. The model practice's calculation of depreciation, which is in accordance with Australian Accounting Standards[5], is to depreciate assets over their estimated useful lives.

The issues relating to working capital and depreciation are dealt with in greater detail in Volume 1.

2.4 Efficiency and size of practice

The size of the reasonably efficient practice, as presented in the model practice, is still to be finalised for general practitioners. We have presented for comparative purposes the costings for a solo-doctor, two-doctor, three-doctor and four-doctor general practice. For specialist practice with the exception of anaesthetics, cardio-thoracic surgery, psychiatry and radiation oncology, the reasonably efficient model is a solo practitioner sharing some common resources.

The size of the model practice for all specialties is presented in Table 2.2.

The many variables and discretionary costs affecting the study data made it difficult to make a clear correlation between size of practice and costs. Other complexities making this correlation difficult, particularly in relation to general practice, were:

- solo and two-doctor practices often have more resources than required, in anticipation of future expansion
- as general practices increase in size they take on a more complex clinical mix, which is reflected in more extensive equipment assets and space requirement.

[5] Standards are developed jointly by the Australian Accounting Research Foundation, its Boards and the Australian Accounting Standards Board

Table 2.2 Model practice size (number of doctors) by specialty

Specialty	Size of model practice (number of doctors)
Anaesthetics	7
Cardio-thoracic surgery	3
Cardiology	1
Dermatology	1
ENT surgery	1
Gastroenterology	1
General medicine	1
General practice	1,2,3 or 4
General surgery	1
Intensive care	5
Neurology	1
Neurosurgery	1
Obstetrics and Gynaecology	1
Ophthalmology	1
Orthopaedic surgery	1
Paediatric medicine	1
Paediatric surgery	1
Plastic surgery	1
Psychiatry	2
Radiation oncology	4
Rehabilitation medicine	1
Renal medicine	1
Rheumatology	1
Thoracic medicine	1
Urology	1
Vascular surgery	1

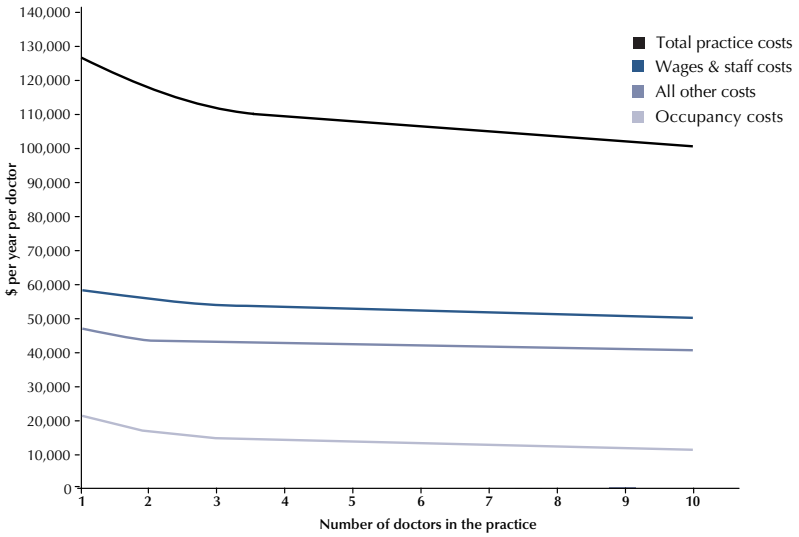
Source: Practice cost study, 31 December 1999

2.4.1 General practitioners

Identifying practices that remain similar in all respects as they increase in size is impossible without a very large sample and specific and confidential information about all costs. Financial modelling on the basis of notional efficiency criteria and factors applied to increasing size of practice is the only method of estimating where the greatest efficiencies can be gained.

Figure 2.1 illustrates, based on our observations, the effect of applying efficiency factors to the table of costs of a general practice. The two major cost categories of staff and accommodation reflect the largest reduction per doctor in costs. Staff can be rostered to cover reception over greater operating hours when there are two or more doctors in a practice. Thus staffing does not increase as quickly as patient activity with the introduction of another one or two doctors. The gains in staffing are greatest when a practice increases from one to two doctors; they remain considerable in the increase to three doctors, and taper off after that.

Figure 2.1 Notional annual overhead costs by practice size on a per-doctor basis



Source: Practice cost study, 31 December 1999

The ABS survey (ABS 1997) showed that 51% of general practitioners were in practice sizes of three or more doctors Figure 2.2. Table 2.3 summarises the 1996 KPMG study's breakdown of the size of general practice.

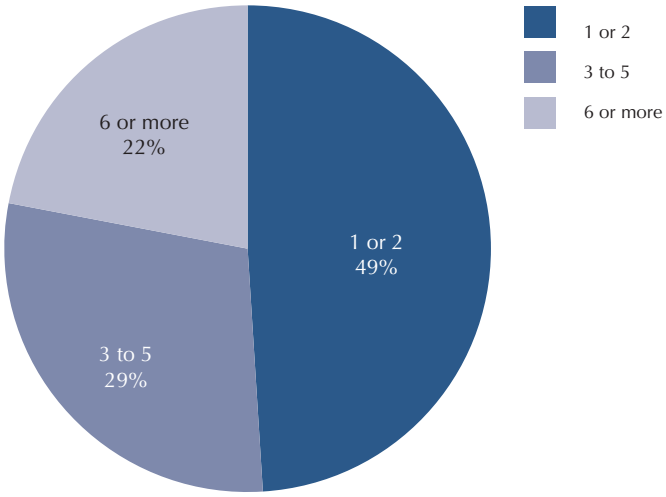
Table 2.3 Breakdown of general practice size - KPMG study (1996)

Resource/cost	Number of doctors in practice			
	Solo	2 – 4	>4	Total
Non-vocationally registered general practitioners	1,175	1,476	923	3,574
Vocationally registered general practitioners	3,968	9,188	3,337	16,493
Total	5,143	10,664	4,260	20,067
Total (%)	26%	53%	21%	100%

Source: KPMG study (1996)

The KPMG study did not use the same size classifications as the ABS survey; however, the study showed 26% of doctors were in solo practice and 74% were in group practice. Both the KPMG study and the ABS survey could be interpreted to suggest that the reasonably efficient size of general practice in Australia is three doctors.

Figure 2.2 Breakdown of general practitioners by size of practice



More recent data released by the AIHW[6] showed that the 49.9% of general practitioners were practising in group practices of 4 doctors or more and 64.2% were practising in group practices of 3 doctors or more.

The Board was unable to agree on the size of the reasonably efficient general practice. Consequently, we have provided costings for a one-doctor, two-doctor, three-doctor and four-doctor general practice.

The 1998 report of the *General Practice Strategy Review Group, General Practice: Changing the Future Through Partnerships*[7], discussed, on page 119, the advantages that arise from linked practices and other collaborative models:

> *Such cooperative arrangements would enable GPs to focus on the provision of clinical care. The cooperatives could be fully networked by information technology and provide such facilities as the capacity to:*

- make appointments and arrange house calls centrally through a single phone number
- process and collect accounts
- manage personnel
- bulk-purchase medical supplies
- provide IT support
- provide central sterilisation
- manage emergency calls and after-hours and locum services
- offer convenient access from multiple sites.

We studied the entry standards for general practice (RACGP 1996) and, where quality standards relate to the size of practice or arrangements between practices, included them in the model practice. However, the entry standards are not prescriptive.

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6 Australian Institute of Health & Welfare, *Medical Labour Force 1998,* AIHW cat. No HWL-15, AIHW, Canberra, 2000 (National Health Labour Force Series)

7 General Practice Strategy Review Group, *General Practice: Changing the Future Through Partnerships,* Department of Health and Family Services, 1998

The entry standards include certain key criteria for group practices, such as:

- 24-hour coverage of patient medical care
- arrangements for continuing education for staff
- the presence of a support staff member at all consultation times.

In the practice cost study, doctors reported that two or more doctor practices sharing staff and accommodation facilities achieved:

- improved profitability
- increased flexibility of working hours for doctors
- the capacity to keep the practice open longer to cater for patient needs
- the flexibility for some doctors to 'specialise' in aspects of family practice.

Practice quality factors mentioned included stability and continuity of staffing where staff could work on permanent part-time arrangements. Staff turnover was low and patient comment positive.

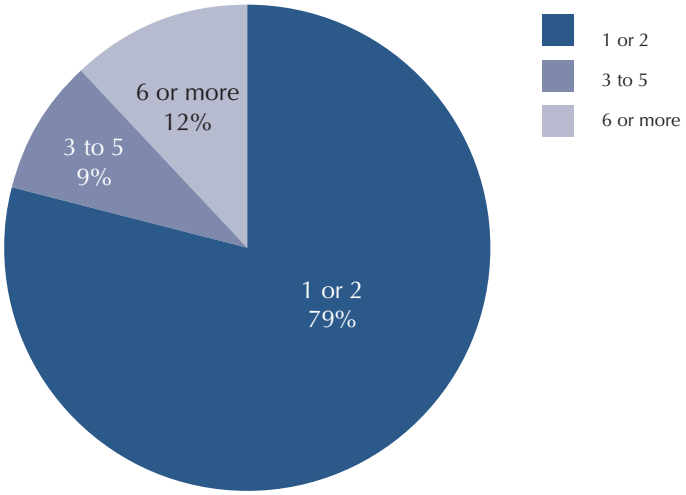
2.4.2 Specialists

The efficient size of specialist practice, as reflected in the model practice, is a single practitioner collaborating with another specialist in staff and accommodation. This arrangement was observed during the site visits to be an efficient model.

The ABS survey (ABS 1997) indicated that the great majority of specialists practise in one or two-doctor practices (about 89% when the large imaging and pathology practices are removed). The ABS survey data did not differentiate between solo practice and two-doctor practice, and gave no indication as to whether any elements of resource-sharing were practised. Figure 2.3 shows the breakdown of specialists by size of practice.

Where two or more specialists share staffing and accommodation services, there will be an advantage in cost savings and in improved practice quality. The cost savings reflect efficiencies in accommodation and in staffing.

Figure 2.3 Breakdown of specialists by size of practice



Source: ABS survey (1997)

Note: Larger practices generally comprise anaesthetics, pathology and imaging practices.

Collaboration between specialists

Having a group of staff serve a small group of specialists provides for continuity of office functions throughout the day, including coverage of meal breaks and for periods of leave. The improvements in flexibility of staffing hours and knowledge of billing and referral systems are all positive features of such collaborative arrangements.

The advantages of collaboration between specialists in the use of resources were observed in many of the specialist practices visited during the study. Specialists reported that sharing staff and accommodation facilities achieved:

- reduced costs
- coverage in time of absence of the principal
- increased flexibility of working hours for staff
- the capacity to keep the practice open longer to cater for patient needs.

Individual specialists included in the study had varying arrangements to cover their periods of absence from the practice. Mostly the practice closed down and calls were either diverted or covered by another practice's reception. Some practices employed normal staffing levels for reduced hours; others employed temporary/casual staff. Similar arrangements were adopted when support staff took leave at times when the specialist was not on leave.

The study also encountered a significant number of linked practices and collaborative arrangements across specialties. The effect of these practice styles is to lower practice costs per doctor and per MBS item without reducing the quality aspects of the practice. Through these informal arrangements there are many efficiencies to be gained without extending to formal partnerships.

The study data indicated that space requirements were reduced when doctors co-located. Areas such as waiting space and staff facilities could be reduced by avoiding duplication for each individual doctor.

We are aware that the majority of specialists do not practise in group arrangements. When the issue of specialists practising in groups of two was canvassed with the profession it was generally met with negativity. The change to groups within most of the specialties would involve a major shift in operation. We suggest that any move to group practice should be carefully considered. An analysis of the efficiencies flowing from sharing of resources needs to be considered together with the impact on patient care. This analysis is needed to ensure that any marginal return is not outweighed by a deterioration in patient acceptance or standard of care.

2.4.3 Specialty groups that typically operate under group practice arrangements

Three specialist groups indicated to us that their preferred practice is a group practice: anaesthetics, cardio-thoracic surgery and psychiatry.

Anaesthetics

The model practice size in anaesthetics is seven doctors. Group practices offer common resources such as meeting areas, teaching venues and libraries, as well as offering efficiencies in bookings and accounts.

Anaesthetists pointed out that advantages arising from group practice include:

- a single point of contact for surgeons wishing to book lists
- bookings can be made through a central area rather than by interrupting operative sessions
- central venues for library, CME, meetings and shared resources such as equipment
- central location for pre-anaesthetic consultation or pain management reviews
- shared accounts systems and staff.

The site visits included a number of large practices of over 10 doctors. Our model practice is based on these larger practices. This makes it easier to identify and include many of the costs relating to management, teaching and pre-anaesthetic checks that would not be present in smaller anaesthetic practices. The model practice for anaesthetics was built up by proportioning most of the major costs such as space, support staff and billing on a per-doctor basis. While the size of the model practice is seven anaesthetists, the relationship between the number of doctors and the costs is linear and altering the number of doctors in the practice will not appreciably affect the cost per doctor.

Cardio-thoracic surgery

The model practice size in cardio-thoracic surgery is three doctors. Like anaesthetists, cardio-thoracic surgeons spend a large proportion of their time in theatre and tend to share resources. A three-doctor model allows a sufficient ratio of activity (patients) to administrative support when compared to other specialties. If we adopted a solo practice for cardio-thoracic surgeons as the model, the existing full-time costs would need to be reduced to reflect the two to three sessions per week the rooms were open for consulting.

Psychiatry

The model practice size in psychiatry is two doctors. Psychiatrists benefit from group practices or sharing of resources. Their low appointment rate (generally one patient per hour) and high rate of repeat attendances means that a single receptionist for a single psychiatrist is not cost effective. Collaboration between doctors allows efficient use of receptionist time across several doctors.

2.5 General practice accreditation and quality standards

We used accreditation standards wherever they were available to ensure that the model general practice reflected reasonable practice in Australia. However, using accreditation guidelines to determine the resources to allocate to the model practice inherently results in subjective interpretation. Accreditation standards and the process that surveys practices purposely leaves much of the final decision-making up to the surveyors.

Guidelines for accreditation are not prescriptive; they allow each practice some flexibility to achieve standards in the most efficient and practical way for its particular circumstances. A large amount of discretion will be used in how the standards are achieved, both in terms of the actual practice and from the point of view of the surveyors.

The RACGP Standards for General Practice[8] state that in recognition of the wide variation within Australian general practice, any assessment process related to the standards should be based on common sense and should not seek to penalise or exclude practices on the basis of technicalities.

The model practice complies with the standards as written and in terms of the feedback from the surveyors as published. However, this does not mean that this is the only way of achieving the standards or that a doctor with a particular special interest may believe that a higher standard of resources is required.

[8] The Royal Australian College of General Practitioners, *Draft Standards for General Practices,* second edition, January 2000.

We analysed the accreditation guidelines in several ways, as follows:

- We scrutinised the draft standards to include or compare any resource that was quantified. We categorised them as essential, highly desirable, not essential or 'no costing impact'.
- We responded to the self-assessment questions in the Australian General Practice Accreditation Limited Self Assessment Kit.
- We referred to the accreditation survey advice provided by the accreditation body advising on the most common ways of attaining the standards.

2.5.1 Interpretation and application of the standards

The information supplied by the accreditation bodies has no further implications for the resourcing of the model practice above those already discussed in the preceding section.

The major areas covered by the discussion in the accreditation standards relates to sterilisation of equipment, practice information sheets, after-hours coverage of medical services, medical progress notes, storage of S8 drugs, confidentiality of records and occupational health and safety for staff. The model practice complies with all these standard interpretations. Table 2.4 provides a summary of RACGP standards.

Table 2.4 Summary of RACGP standards

Ref No	Description	Essential	Highly desirable	Not essential	No costing impact
1.1	Access and availability				
1.1.1	Triage system for urgent problems				✔
1.1.2	Consultation within two working days				✔
1.1.3	Flexible appointments system				✔
1.1.4	Advice by telephone				✔
1.1.5	Off site (eg home) visits				✔
1.1.6	Reasonable 24 hour medical care		✔		
1.2	Communication				
1.2.1	Practice information sheet				✔
1.2.2	Consultation length		✔		
1.2.3	Purpose, risks & benefits				✔
1.2.4	Costs of consultations				✔
1.2.5	Costs additional to consultation				✔
1.2.6	Potential costs when referred				✔
1.2.7	Patients proficient other language				✔
1.2.8	Health pamphlets and brochures		✔		
1.3	Diagnosis/management of problems				
1.3.1	Consistency with most GPs				✔
1.3.2	Consistency within the practice				✔
1.4	Content of medical records				
1.4.1	Comprehensive, organised, legible				✔
1.4.2	Incorporates health summaries				✔
1.4.3	Accurate, sufficient information				✔
1.4.4	No prejudicial/irrelevant statements				✔
1.5	Integration of care				
1.5.1	Knowledge & works with services				✔
1.5.2	Referrals contain sufficient information				✔
1.6	Health promotion				
1.6.1	Local health promotion & public health				✔
1.6.2	Education and information		See 1.2.8		
1.6.3	Opportunistic preventive care				✔
1.6.4	Reminder system				✔
1.7	Continuity of care				
1.7.1	Continuity of care provided				✔
1.7.2	Able to see doctor of choice				✔
2.1	Rights and needs of patients				
2.1.1	Respectful care at all times				✔
2.1.2	Right to privacy		✔		
2.1.3	Records confidential		✔		
2.1.4	Right to refuse any treatment				✔
2.1.5	Right to seek further opinion				✔
2.1.6	Right to transfer from practice				✔
2.1.7	Acknowledge complaints/ feedback				✔

Ref No	Description	Essential	Highly desirable	Not essential	No costing impact
2.1.8	Consent to third party obtained				✔
2.1.9	Consent for research obtained				✔
2.1.10	Privacy of accounts		See 2.1.3		
3.1	QA & continuing education				
3.1.1	All doctors appropriately qualified/training			✔	
3.1.2	Non-medical staff trained & qualified		✔		
3.1.3	On-going training of admin staff		✔		
3.1.4	Practice administration review				✔
3.1.5	Resources for immediate reference		✔		
4.1	Practice staff				
4.1.1	At least one person present + doctor		✔		
4.1.2	Appropriate inter-personal skills				✔
4.2	Medical records system				
4.2.1	Confidentiality, privacy, security		See 2.1.3		
4.2.2.	Stored securely, retrievable		See 2.1.3		
4.2.3	Transfer on request				✔
4.2.4	Review of tests etc received				✔
4.2.5	Follow up abnormal results				✔
4.2.6	Inactive records stored securely		See 2.1.3		
4.3	Control of practice				
4.3.1	Doctors exercise full autonomy				✔
5.1	Practice facilities				
5.1.1	One consultation room per doctor		See 2.1.2		
5.1.2	Consultation room facilities		See 2.1.2		
5.1.3	Sufficient waiting area		✔		
5.1.4	Toilets/hand washing facilities		✔		
5.1.5	Privacy for patients in distress		See 2.1.2		
5.1.6	Adequate telecommunications		✔		
5.1.7	Practice security is maintained		✔		
5.1.8	Disinfection and decontamination		✔		
5.1.9	Infection control procedures				✔
5.1.10	Precleaning procedures				✔
5.1.11	Sterile instruments		✔		
5.1.12	Contaminated waste		✔		
5.1.13	Safely disposes of sharps		See 5.1.12		
5.1.14	Safety of doctors & staff				✔
5.1.15	Smoking not permitted				✔
5.1.16	Well maintained & visibly clean		✔		
5.2	Practice equipment				
5.2.1	Medical equipment necessary		✔		
5.2.2	Equipment for procedures		✔		
5.2.3	Access to doctor's bag		✔		
5.2.4	Vaccine storage		✔		
5.2.5	Materials not beyond use by dates				✔
5.3	Physical access				
5.3.1	Appropriate physical access		✔		

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

In Tables 2.5 to 2.9 we list the standards that can be quantified and which we have categorised as 'highly desirable'.

Table 2.5 Section one: Practice services

Standard		Model practice response
1.1.6	The practice ensures reasonable arrangements for 24 hour medical care for patients of the practice	The standards allow the practice to cover their own patients on a 24-hour basis, share cover with other practices in the area or use a deputising service. The only option with a resource implication is the use of deputising services. We have included an allowance for the use of a deputising service in the model practice
1.2.2	Consultation times are long enough to allow quality care. This means that average times are not less than 10 minutes. Actual appointments will vary according to the clinical need	The basis of patient activity through the model practice is within the guidelines set in the accreditation document
1.2.8	Patients of the practice have access to a range of written information	This information is included in the allowance for 'other' costs

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

Table 2.6 Section two: Rights and needs of patients

Standard		Model practice response
2.1.2	Patients are interviewed and examined in surroundings designed to ensure privacy. Discussion or consultation involving patients is conducted discreetly	Each doctor has a 20 square metre consulting room and piped music will be included through the circulation area for privacy. There is also a screened area of the consultation room for examinations
2.1.3	The practice ensures the confidentiality of all patients' personal health information according to the RACGP Code of Practice for the Management of Health Information in General Practice	Files are secured in a compactus and a shredding machine has been included in the model practice fit-out equipment

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

Table 2.7 Section three: Quality assurance and education

Standard		Model practice response
3.1.1	All doctors in the practice are appropriately qualified and trained	CME allowance is provided for each doctor in the model practice
3.1.2	All non-medical staff involved in clinical care are appropriately trained	A training allowance for each employee is provided in the model practice
3.1.3	All administrative staff participate in ongoing training	There is an allowance for staff training in the model practice that is adequate for the training described in the standard
3.1.5	The practice has access to a range of resources and materials for clinical reference	Allowance provided for medical journals

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

Table 2.8 Section four: Practice administration

Standard		Model practice response
4.1.1	At least one person in addition to the doctor is present in the practice during normal practice hours who can provide practical help in an emergency. (Normal practice hours are those advertised by the practice as being their regular hours of operation for routine consultations. This need not apply to the small branches of those rural practices that have surgeries in a number of locations or to surgery consultations conducted outside normal hours)	Staffing levels within the model practice allow for at least one staff member to be available for the opening hours of the practice not including doctors in the multi-doctor practices

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

Table 2.9 Section five: Physical factors

Standard		Model practice response
5.1.3	The practice has a patient waiting area sufficient to accommodate the usual number of patients and others who would be waiting at any one time	The space allocation for the waiting area is 35.5 square metres which is 9 square metres per patient if there is a half-hour delay. This space allows for an accompanying person with each waiting patient. Within that space there is an allocation for a child's playing area with equipment
5.1.4	The practice has toilets and hand washing facilities readily available for the use by patients and others	The rent for the space reflects commercial rent that includes access to toilet facilities
5.1.6	The practice has a telecommunications system adequate to its needs	The practice is provided with a 'Commander' telephone system
5.1.7	Practice security is maintained at all times to prevent unauthorised access to Schedule 8 drugs and other sensitive practice resources stored in the practice. (Generally requires that Schedule 8 drugs are stored in a locked cabinet which is fixed to an immovable structure.)	A drug safe is included in the model practice equipment. There is also a security service with a back-to-base alarm system
5.1.8	The practice uses appropriate equipment and procedures for cleaning	The practice is provided with a commercial cleaning contractor
5.1.11	The practice ensures that sterile instruments are available	Bench-top steriliser included as part of practice equipment
5.1.12	The practice safely disposes of contaminated waste. (The practice has safely located leak proof containers, preferably displaying a bio-hazard symbol, for the disposal of infectious/hazardous waste	The model practice has a contaminated waste disposal service which includes containers that comply with the appropriate standard
5.2.1	Medical equipment and resources are appropriate and adequate to ensure comprehensive primary care and resuscitation	The equipment listed in the standard is either specified in the model practice equipment list or obtainable within the equipment allowance on an annual basis
5.2.3	The practice ensures that each doctor has access to a doctor's bag	Each doctor receives an allowance of $3,000 for minor equipment
5.2.4	The practice has appropriate vaccine storage which maintains vaccines at temperatures between +2 and +8 degrees centigrade. The temperature is continuously monitored and is checked and recorded daily. Monitoring is done using a max/min thermometer	The model practice has a separate fridge for vaccines and this is monitored by a max/min thermometer

Source: RACGP Draft Standards for General Practices, 2nd Edition, January 2000

2.5.2 The self-assessment workbook

The self-assessment workbook is a pre-survey checklist for practices. It contains questions relating to the standards which will be asked by the surveyors. In Table 2.10 we have listed the questions relating to the physical resources in the model practice and responded in the manner of a real practice.

Table 2.10 Model practice self-assessment

Question		Model practice response
2.1.2E	Auditory privacy	The practice will have background music throughout the waiting room and circulation areas
5.1.2F	Heating and/or air conditioning	Air conditioning is included in the cost of rent for the facility
5.1.3A	Sufficient area to accommodate the usual number of persons who will be waiting at one time. Separate space and toys for children	There is 35.5 square metres of waiting space for two doctors seeing four patients per hour. This is approx 9.0 square metres per person for each patient with one accompanying person if the waiting time is half an hour. A play area with toys is included in the fit-out and equipment list
5.1.5B	Separate area to provide privacy for patients and others in distress	The practice has an examination room that could be used for occasional accommodation of distressed clients
1.1.6C	Is there an after-hours message on an answering machine?	An answering machine is included in the equipment
5.1.6A	Does the practice's telephone system have sufficient inward and outward call capacity?	The model practice has a 'Commander' system with the capacity for two lines. This capacity is satisfactory for practices of up to five doctors according to the suppliers
5.1.6C	Does the practice have a fax machine?	A fax machine is included in the equipment list
5.1.13E	Is office equipment properly designed for its purpose?	All furniture is commercial standard with adjustment available in the receptionist's and doctors' chairs
5.1.1A	Is there a dedicated consulting/examination room for each doctor working in the practice at any one time?	Each doctor has a 20 square metre consulting room with a curtained area for examination
Do the consulting rooms have:		
2.1.2B/ 5.1.2A	Visual and auditory privacy	Each room is separate with music in the circulation areas
2.1.2C	A private area	Each consulting room has a screened examination area
5.1.2B	Adequate lighting	Each examination area has a wall mounted examination light as well as adequate ceiling lighting
5.1.2E	Examination couch	Provided in the equipment list
5.1.9A	Hand washing facilities	Included in the fit-out cost
I5.1.7A	Are drugs of dependency safely secured?	A standard drug safe is included in the equipment list
5.2.4B	Is there an accurate monitoring of the temperature within the vaccine refrigerator?	A minimum/maximum thermometer is included in the equipment list
5.1.4A	Are toilets and hand washing facilities readily available for use of patients and others	The rent level has been determined to cover the cost of reasonable commercial accommodation that would include toilets or refurbished residential accommodation including toilets for patients
5.3.1B	Is there adequate parking within reasonable distance from the practice	Parking should be available on the principles of adequate commercial or refurbished residential accommodation
5.2.2A	Does the practice have the necessary equipment to enable the procedures performed in the practice to be undertaken safely and competently?	Routine examinations performed within the practice have adequate support with regard to equipment and space. Procedures equipment will not be listed in the equipment for general overheads, but rather in the direct cost items that they relate to
1.4.1A/B	Does every patient have an individual file containing all the patient's clinical information?	The annual costs cover the maintenance of medical records and a compactus is included to store the records

Source: Australian General Practice Accreditation Limited, Self Assessment Kit, Edition vii, February 2000

3 Review, evaluation and adjustment

To ensure that the values of the model practice reflect changes in costs over time, it will be necessary to review, evaluate and adjust the model practice on an ongoing basis. This chapter outlines our recommended approach for doing this.

Our methodology for such a review involves three stages:

- establish a consistent cost base for the resources in the model practice
- determine the types of cost movement
- establish the method and timing of adjustment.

3.1 Establish a cost base as at 31 December 1999

To ensure that the cost base of the resources in the model practice and the direct cost items were standardised in relation to time, we selected 31 December 1999 as the base date for all resource costs.

Updating the values to 31 December 1999 levels involved identifying the individual costs that make up the model practice and the years in which those costs were collected. Many of the practice costs were collected from 30 June 1997 financial statements, however other costs such as subsequent professional indemnity premiums and some direct cost resources were collected from 30 June 1998 and later sources.

The appropriate cost or wage index was applied to all other costs to bring those up to 31 December 1999 values.

3.2 Determine the types of cost movement

There are three types of cost movement:

- cost movements over time (ie inflationary effect)
- cost movements independent of general inflationary effects (eg professional indemnity insurance premiums)
- cost movements as a result of changes in the key resources (eg technological improvements).

3.2.1 Cost movements over time (inflation)

The costs of resources in the model practice should be linked to an appropriate measure of cost movement, and adjusted accordingly.

The key issue in determining an appropriate measure of cost movement over time is identifying an appropriate index to link to each relevant resource of the model practice. There are three types of index to be considered: price, labour and composite.

Price indexes

In order for the non-salary and wage costs of the model practice to keep pace with inflation, the costs will need to be adjusted by an appropriate index. There are three measures of inflation that we have considered as alternative indexes: Consumer price index (CPI), underlying inflation, and 'new' CPI.

Consumer price index (CPI)

The CPI is a general measure of changes in prices of a basket of consumer goods and services purchased by Australian households. The total basket is divided into eight major groups, each representing a specific set of commodities:

- food
- clothing
- housing
- household equipment and operation
- transportation
- alcohol and tobacco
- health and personal care
- recreation and education.

These broad groups are further broken down to 33 subgroups and the subgroups into 101 expenditure classes.

The valuation basis for direct price indexes such as CPI can be described as either purchasers' prices or basic prices, where:

- the purchasers' price is the amount paid by the purchaser inclusive of indirect taxes (less subsidies), trade margins (wholesale and retail) and transport costs; that is, the price for commodities supplied to the purchaser
- the basic price is the amount received by the producer exclusive of indirect taxes (less subsidies) and transport and trade margins; that is, the ex-plant price.

It is important to note that price indexes at basic prices are output measures and relate to a different pricing point, and hence different transactions, to indexes at purchasers' point. Indexes at purchasers' point are input measures, that is, they are on a 'delivered to user' basis.

The CPI is an input index, that is, it relates to the prices of goods and services bought by householders; the valuation basis is the purchaser's price and the prices are obtained by direct collection from retail outlets and other businesses from which the CPI population group buys (ABS Cat no. 6241.0)[9].

[9] ABS, *An analytical framework for price indexes in Australia,* Catalogue no 6421.0, September 1999

The adjustment of the costs of the model practice should be made on an input basis because:

- the costs collected in order to develop the model practice were based on input prices
- this will reflect the reality of a doctor establishing and running a medical practice.

Underlying inflation (underlying CPI)

Underlying inflation is a subset of CPI, as embodied in the Treasury Measure of Underlying Inflation (TMUI). It excludes three types of price changes, namely:

- changes which reflect the impact of monetary and fiscal policy decisions
- changes which reflect a regular seasonal pattern
- changes which reflect inherent volatility rather than underlying price pressures.

To determine underlying inflation, modifications must be made to the CPI using one of three methods: the exclusion method, the specific adjustment method and outlier-based methods. Most attempts to measure underlying inflation in Australia have been based on the exclusion method[10].

We considered the use of TMUI in order to avoid distortions associated with the CPI. However, it has been noted by the Reserve Bank of Australia (RBA) that over a reasonably long period, the average rates of change of the various underlying measures of inflation have usually been quite similar to the CPI. The usefulness of the underlying series is simply that they give a more reliable signal, over periods of up to a year or two, of the overall inflationary trend than does the CPI.

We note that the TMUI was discontinued effective with the September quarter 1999. It was announced in the June quarter 1999 of the publication *Consumer Price Index*[12] that "As from the September quarter 1999, the Treasury Measure of Underlying Inflation will no longer be published by the ABS".

Following the introduction of the 13th series CPI in the September quarter 1998, the target for monetary policy has been restated as 'maintaining an average rate of inflation, as measured by the CPI, of 2-3% over the medium term' (RBA, Oct 1998)[11].

The main argument in favour of using CPI as a measure, as opposed to underlying CPI, is its simplicity. An argument against would be the CPI's volatility and inclusion of administered prices (RBA, Oct 1998). Changes to the calculation of CPI, specifically changes to the treatment of interest charges, will reduce the problems associated with its volatility from quarter to quarter.

[10] ABS, ibid.
[11] Reserve Bank of Australia, *Bulletin,* October 1998
[12] ABS, *Consumer Price Index,* Catalogue no 6401.0, September Quarter 1999

'New' CPI

In November 1997, the ABS announced changes to the composition of the CPI.[13] A major change was the exclusion of interest rates from the index. In an attempt to assess whether the new CPI was any more reliable in the determination of inflation than the TMUI, the RBA measured the following indexes over the periods since 1990 and 1993:

- CPI
- underlying CPI
- 'acquisitions' CPI.

As there are no statistics for the CPI calculated on the new basis, acquisitions CPI was derived to best approximate the new CPI for comparative purposes.

In Table 3.1 we have reproduced the average rate of increase, in percentage terms, of the three indexes over the periods since 1990 and 1993.

Table 3.1 Consumer prices

	Average rate of increase (% per year)	
	Since 1990	Since 1993
CPI	2.1	2.1
Acquisitions CPI	2.6	2.4
Treasury underlying CPI	2.4	2.2

Source: Abstract of table from RBA, Oct 1998

The RBA bulletin states that the average rate of increase in the CPI since 1990 has been slightly below that of the other two series, because there has been a net decline in interest rates over the period. If anything, therefore, the published CPI has probably slightly understated the rate of inflation on average over the past seven or eight years (RBA, Oct 1998).

The RBA's judgement is that while the new CPI is still likely to be more volatile than the measure of underlying inflation over short periods, over the medium term it will be "quite satisfactory as the focus of the medium-term inflation target" (RBA, Oct 1998).

Given that the ABS will no longer publish the underlying rate of inflation, the RBA has no concerns with using the new CPI and because of its simplicity and general public acceptance, we believe that the new CPI measure is the appropriate index to use for updating the non-wage costs of the model practice costs.

[13] ABS, News release 150/97: *Changes coming for the Consumer Price Index,* November 12 1997

Labour indexes

We examined four indexes to determine the most appropriate one to adjust the costs of wages and staff costs in the model practice.

Average weekly earnings (AWE)

AWE statistics represent average before-tax earnings of employees. Estimates of AWE are derived by dividing estimates of weekly total earnings by estimates of number of employees. The AWE statistics are affected by compositional changes in the employee workforce, by changes in average hours paid per employee and by the sample used by the ABS.[14]

Average Weekly Ordinary Times Earnings (AWOTE)

AWOTE refers to one week's earnings attributable to standard or agreed hours of work. AWOTE excludes overtime payments, retrospective pay, pay in advance, leave loadings and other payments not related to the reference period. This makes the index less volatile than AWE in the short-term.

The AWE survey can give a distorted picture of movements in AWOTE when, for example, overtime penalty payments or benefits such as leave loading are rolled into ordinary wages as a result of an enterprise or workplace agreements (ABS Cat no 6346.0).

Safety net adjustment (SNA)

The SNA is determined from time to time by the Industrial Relations Commission. The SNA represents a balance between maintaining an award system that provides relevant wages and conditions, and promoting enterprise bargaining. The SNA can be used as an index when it is taken as a percentage of AWE. In this way, the derived percentage measures just the increase in wage cost. Any further increases in wage would need to be offset through productivity gains.

Wage cost index (WCI)

The WCI is an integrated set of quarterly indexes measuring changes in wage and salary costs for employee jobs, unaffected by changes in the quality and quantity of work performed (ABS Cat no 6346.0). The WCI is a new index developed by the ABS that intends to measure the changes in the underlying price of labour.

The AWE was seen by the ABS as an unreliable indicator of the trends in the price of labour, and the WCI is intended to fill that gap. The component indexes of the WCI are 'pure' price indexes, that is, they aim to measure changes in wages and salary costs, unaffected by changes in quality or quantity of work performed.

The ABS anticipates that the WCI will be used for 'rise and fall' clauses in contracts to adjust the wage component of contract costs in line with movements in the cost of labour (ABS Cat no 6346.0).

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[14] ABS, *Wage Cost Index, Australia,* Catalogue no 6346.0, 1998

For these reasons, we recommended the use of the WCI as the appropriate index for the update of the wage and salary component of the model practice.

Composite indexes

Wage and Cost indexes

From 1 July 1997 the adjustment of all running costs of government agencies was based on a standard Wages and Cost Index (WCI). The WCI provides for a single index to replace the separate price adjustments previously applied to the salary, administration and property components of running costs.

Wages and cost indexes are made up of two components:

- SNA –as a percentage of AWOTE to measure wage costs
- TMUI –as a measure of non-wage costs.

A limited number of WCIs reflect differing proportions of wage and non-wage costs. The WCI which best matches the proportion of salary to non-salary components of an agency's running costs is selected by that agency to adjust those running costs over time.

The four WCIs available to agencies consist of the following mixes of SNA and TMUI:

- 75% SNA / 25% TMUI
- 90% SNA / 10% TMUI
- 60% SNA / 40% TMUI
- 40% SNA / 60% TMUI.

Source: Department of Finance, Running costs arrangements handbook, July 1997

The benefits of applying a single index rather than separate indexes to individual cost components are its simplicity and ease of calculation. However, given that not all costs will be updated by the application of an index (for example, professional indemnity), we do not believe there are any efficiency or accuracy gains to be achieved through the application of the WCI series.

Should the WCI series be a requirement given its use within the Department of Health and Aged Care, we believe the 40% SNA / 60% TMUI is the most appropriate as it most closely approximates the ratio of salary and wages to other costs in the model practice.

Other factors to consider

Efficiency

An efficiency dividend can be applied to the model practice costs in one of two ways:

- as a rate of reduction in practice costs before adjustment for inflation
- through an increase in the size of the reasonably efficient practice.

Efficiency dividend as a percentage reduction in costs

In Commonwealth Government budgeting an efficiency dividend is applied to annual running costs. The efficiency dividend was introduced in 1987-88 as an integral component in budgeting. All agencies are required to pay the efficiency dividend, which aims to:

- provide managers with the incentive to continually seek new or more efficient means of undertaking ongoing government business
- allow government to redirect a portion of efficiency gains to higher priority activities
- clearly demonstrate public service efficiencies resulting from improvements in management and administrative practices.

The current efficiency dividend rate applying to running costs of government agencies is 1% of total net running costs per year. The efficiency dividend is applied before the running cost base is indexed to budget year prices and before any one-off or ongoing adjustments are made.

Efficiency dividend as an increase in the size of the model practice

The model practice is premised on the definition of what is a reasonably efficient practice. One of the decisive factors in this definition is the size of practice. As part of any consideration of an efficiency dividend that may apply to practice costs, a review of what constitutes a reasonably efficient practice should also be undertaken.

During the course of this study we observed that many specialty practices operate in resource-sharing arrangements and in partnerships. To the extent that this type of practice becomes more prevalent, the definition of what is reasonably efficient should be adjusted.

In our view, an efficiency dividend achieved through an increase in the size of the model practice is more in line with the study terms of reference. We believe that setting a goal of larger, more efficient practices will be both acceptable to the profession, as it will be measurable and demonstrable through analysis of practice statistics, and also achievable in the longer term.

Application of indexes

As a result of our analysis we determined that the following indexes were the most appropriate for the update of the model practice:

- 'new' CPI
- wage cost index.

The model practice is divided into the following cost categories:

- wages and staff costs
- occupancy costs
- office expenses
- other practice costs

- professional costs
- motor vehicle expenses
- professional indemnity insurance
- working capital (interest)
- direct costs.

These cost categories can be broken down into the following groups for indexation purposes:

- wages and staff costs
- professional indemnity insurance
- direct costs
- all other costs.

We have outlined the process for updating each of these groups below.

Wages and staff costs

We updated the costs associated with this category as shown in Table 3.2.

Table 3.2 Wages and staff costs update process

Cost component	Index
Salary and wages (base amount)	Wage cost index
Superannuation	Statutory percentage of base amount (6% at 30 June 1997)
Long service leave	0.5% of base amount
Workers compensation	2.0% of base amount
Training	Consumer price index

Source: Practice cost study, 31 December 1999

Salary and wages costs include the costs associated with staff used to deliver direct cost items.

Professional indemnity insurance

The cost of PII for doctors does not vary in line with any specific index. This cost category is an example of the second type of cost movement (cost movements independent of general inflationary effects). This is discussed later in this chapter (Section 3.2.2).

Direct costs

Due to the specific nature of the direct costs we have treated them as a separate category for review. While the resource costs of the direct cost items such as wages and occupancy will move in line with either of the two proposed indexes, there needs to be a mechanism for the inclusion or removal of items or changes in activity or delivery of direct cost items. We discuss this matter in Section 3.2.3.

All other costs

We updated all other costs as shown in Table 3.3.

Table 3.3 'Other costs' update process

Cost component	Index	Frequency of update
Occupancy costs	Consumer price index	Annual update
Office expenses	Consumer price index	Annual update
Other practice costs	Consumer price index	Annual update
Professional costs	Consumer price index	Annual update
Motor vehicle expenses	NRMA running costs for Commodore	Annual review of rates
Working capital – interest	Based on interest rate formula of government bond rate plus risk allowance	Annual review of rates

Source: Practice cost study, 31 December 1999

Annual updates

Annual updates are necessary to ensure that practice costs keep pace with general price movements. All costs should be updated on an annual basis against the index proposed for that cost.

3.2.2 Cost movements independent of inflation

When costs move independently of inflation (that is, at a much faster or slower rate), the process for review, evaluation and adjustment for the model practice must be able to recognise and accommodate such costs. The best example of such a cost is PII. The premiums paid by doctors over the last five years have not varied in line with any specific price index, but many premiums have moved by over 20% in a single year.

The current basis for the determination of premiums charged by PII providers is that the premiums should cover the risk of a particular group as a whole. The 'gross premium' is then divided by the number of doctors in that group who will be paying the premium, to establish a premium per doctor.

The premiums reflect:

- past liabilities or profits from previous years' payments
- current liabilities in terms of payments for current litigation
- future liability for doctors who are currently paying premiums and will continue to pay premiums until claims are settled
- liability for doctors who cease paying premiums but who may have continuing liability for actions performed during the time they were paying premiums.

The recent trend is for the premiums to be determined on a doctor-by-doctor basis determined by the individual doctor's claims history. Doctors with higher or more frequent claims will attract higher premiums, although this method should not affect either the group risk or the average premium. It is not possible to reflect individual doctor premiums in the fee structure, so the premium adopted must be based on group-determined rates.

The method of updating such costs in the study must be able to adjust the cost by a factor greater than could be provided by simply indexing to the CPI or another price index.

Such costs will be reviewed at the same time as other costs are indexed (typically annually) and adjusted according to the most appropriate method of calculating that cost category. For example, in the case of PII it will be a national weighted average of actual premiums paid in the year of review.

An appropriate method for updating PII

We have considered whether, for the purposes of ongoing review, the costs of PII should be updated by reference to the actual premiums or to some other benchmark.

Should the costs of PII be updated by reference to actual premiums, the Commonwealth could be seen as indirectly underwriting the costs of the insurance. The alternative to matching the cost increases each year is to update the cost of the premiums by CPI alone.

If the use of CPI results in costs becoming out of date, there are mechanisms where the profession can apply for a specific review, which is discussed in more detail in Section 3.3.3.

3.2.3 Cost movements as a result of changes to key resources

Many cost movements result from changes in the key resources of the model practice. These changes do not necessarily reflect movements in prices, they reflect changes to the way doctors deliver services. Examples of such changes are technological changes, which often result in improved efficiency, and lower capital costs or changes in equipment standard, which could require a different quality or safety standard to be adopted.

Many components of direct cost items will fall into this category. Should technology or practices associated with the delivery of certain items change in a period, the process will need to be capable of recognising the change and costing the items appropriately.

3.3 Establish the method and timing of adjustment

A number of alternative review opportunities may be used either in isolation or in combination. They focus on the timing of the review and on the circumstances that create the need for a review. The different review opportunities are:

- annual review: routine adjustments of costs applying to all items are addressed annually according to appropriate indexes
- rolling review: a program of review of all schedule items over time is instituted
- specific review: review of certain items due to efficiency gains or changes to technology or clinical management
- complete review: review and adjustment of all resource elements in the model practice.

Each of these is discussed below.

3.3.1 Annual review

The current method for updating costs of MBS items is, as a general rule, annual review. The MBS does not specifically state how the 'adjustments' will be applied.

Annual reviews are necessary for the items in the MBS to keep pace with inflation. In keeping with the requirement of the study terms of reference that the process of updating be simple, all cost components will be increased uniformly.

Items that have been subject to a specific review throughout a year will be identified and will be assessed as to whether the annual review is appropriate or not. The annual review will not be appropriate where the review has brought all costs up to current values; it may be appropriate where the specific review had not brought costs up to date at year end.

3.3.2 Rolling review

A review, on a 'rolling' basis, of the various groups and subgroups within the MBS will entail a detailed investigation of that specific part of the Schedule. A program of rolling reviews is necessary to ensure that all MBS items have been examined in a complete review cycle. The rolling review represents more than updating costs for price movements; it will involve a systematic review of the resources required to deliver the item of service as well as the cost of the resources.

The review will cover all the items in the MBS. Table 3.4 shows the classifications and suggested review timeframes.

Table 3.4 Item classification and rolling review timeframe

Review grouping	Timeframe	Objectives
Attendance items	Three-year cycle	Ensure that the model practice resource levels are still appropriate (current)
Diagnostic items	Two-year cycle	Ensure that: ■ the item is still an in-rooms direct cost item ■ required direct resources are appropriate ■ the model activity level for the item is still appropriate
Procedural items	Two-year cycle	Ensure that: ■ the item is still an in-rooms direct cost item ■ required direct resources are appropriate for banded minor procedures ■ all infection control standards have been met ■ the model activity level for the item is still appropriate

Source: Practice cost study, 31 December 1999

3.3.3 Specific review

Changes to the key resources of the model practice will also need to be considered. The onus should be placed on the specialty groups to (1) nominate those items that require a review of costs, based on certain criteria, and (2) have that request reviewed by the Department of Health and Aged Care prior to initiating a review.

The following circumstances would trigger a specific review:

- request by specialty group
- change in technology
- change in standards of equipment
- activity changes due to efficiency and technological change.

Request by specialty group

The process for a review requested by a specialty group will remain largely the same as the existing process.

Change in technology

It will be necessary to determine what a change in technology encompasses and at what stage a change in technology should be incorporated into the MBS. In addition, it must be considered whether it is appropriate to incorporate the change in technology into the model practice, given that incorporating the change will affect all doctors billing that item. In other words, would the 'reasonably efficient' doctor billing that item use the new technology?

Change in standards of equipment

'Change in standards of equipment' relates to changes in technology, but also incorporates changes in safety standards and any changes that may be required due to legislative changes.

Changes in standards of equipment would be triggered by either legislative change or a pronouncement from the group peak body, and both would be incorporated into standards of practice.

Equipment and activity levels will change from time to time. A decision is required to determine what extent of change will justify a review of a direct cost item.

The alternatives for assessing changes are as follows:

- all changes are significant and will be incorporated
- all legislative changes are incorporated and other changes will be incorporated only where certain benchmarks are met in terms of equipment cost or delivery
- changes are made specifically
- changes are made regularly, in line with other reviews.

We suggest that the review of this type of cost change will be a combination of all these points depending upon the circumstances.

Activity changes due to technological change

Adjustments reflecting general cost movements will not address cost variations associated with specific technological change or clinical indications. For example, a new item of technology may be developed for a specific diagnosis or procedure that may reduce the cost of delivering the test. These changes may not be brought to the attention of the Medicare Benefits Consultative Committee through the normal processes of consultation with the profession.

We recommended that a process be established that monitors item activity on an annual basis, with examinations of those items that vary from parameters which have been previously set in the review process.

All items in the MBS that are not strictly time based will be cost sensitive to changes in activity. For example, a diagnostic test may become automated. A small number of tests may historically have been delivered by a large number of doctors. After automation the same number tests may be provided by fewer doctors specialising in this field. This may be accompanied by a significant drop in the unit price of the test due to automation and the economies of scale achieved.

Therefore, we recommended that an index of individual provider activity be used to flag items for review on the basis of changed activity. The index should reflect the change in activity of the higher-activity doctors delivering the items.

3.3.4 Complete review

The model practice is based on resources required to deliver a certain level of activity. This applies to both the general overheads and the direct cost items. A complete review assumes that there are changes to costs of resources or to the make-up of the model practice that the annual, periodic or rolling review processes will not deal with adequately.

The complete review will test the underlying structure of the model practice, in contrast to a rolling review which assesses the adequacy of the cost and resource components of individual categories of items. A complete review will take place on a longer timeframe (recommended to be five years) to ensure that all changes made as a result of other review processes are valid in the context of the model practice and have been consistently applied across all specialties.

A complete review is necessary to ensure that:

- the size of the model practice is appropriate
- the activity of the model practice is appropriate
- the resources required to operate the practice are appropriate
- the costs of the resources are appropriate.

3.4 Other general points

The effect of the GST legislation on practice costs needs to be considered. While GST should not be a cost to medical practice, as input tax credits will be refunded, there may be circumstances where specific costs may either increase or decrease which will need to be taken into account. Additional costs of compliance should also be considered.

The specific areas where we believe costs will rise are accounting and compliance costs.

Accounting and compliance costs will more than likely increase with the imposition of the GST as the doctors seek an external adviser to prepare and lodge their GST returns on a monthly basis.

3.5 Summary

The indexes that are appropriate for the review of the costs of resources are:

- non-wage costs including PII – 'new' CPI
- wages and staff costs – WCI.

An efficiency dividend will be achieved through either an increase in the size of the model general practice or an increase in resource-sharing arrangements in specialty practice.

The timing of evaluation and adjustment will depend on the circumstances; however we recommended the following review timeframe:

- annual review – indexation of all cost components
- rolling review – progressive review of all items over a two to three-year timeframe
- specific review – review of a specific item on an 'as-requested' basis
- complete review – review of all resources and structural components of the model practice every five years.

Appendix A
Terms of reference

A.1 Terms of reference – practice cost study

Under the direction of the Medicare Schedule Review Task Force and within a process of consultation with representative medical groups the consultant will:

1. (a) develop the criteria to apply in the determination of resources required to operate a reasonably efficient private medical practice across a range of major specialty groups;

   (b) construct representative resource based models based on reasonably efficient private medical practices to assist in establishing fair and reasonable non professional medical components in private medical fees across the range of major specialty groups;

   The models must:

   - identify the physical resources incorporated into each practice type;
   - apply reasonable efficient cost and utilisation rates to those resources;
   - provide an orderly classification and allocation of costs into the following cost groups: direct costs; indirect costs; professional indemnity insurance; and working capital;
   - provide sufficient flexibility to allow for inclusion of new items of service and changes of mix of services with consequent adjustments to resources allocated to other items within the model;
   - provide the capacity for differential cost analysis in relation to the following practice variables:
     - location of service;
     - practice type;
     - size of practice; and
     - geographical location of practice; and
   - allow for the ongoing review, evaluation and adjustment of practice costs.

2. Identify options and recommend a set of costing principles to apply to the allocation of resources and costs within the model.

3. (a) undertake differential cost analyses in relation to costs affected by the location where services are provided, the practice type, size of practice and geographical location of practice, and report on the policy issues arising; and

   (b) analyse and report on the variances between groups of costs of services across a range of specialty groups and within groups.

4. Through application of the models describe and quantify the financial impact of options for determining cost recovery rates which could represent the practice cost component for fees for items of service listed in the Medicare Benefits Schedule.

5. The consultancy shall commence by Tuesday 1 July 1997 and be completed as soon as practicable, but no later than Thursday 30 April 1998.

A.1.1 Elaboration of terms of reference

Background

The joint Commonwealth/AMA Medicare Schedule Review Board has been established to undertake a major review (referred to as a Relative Value Study or RVS) of the General Medical Services Table of the Medicare Benefits Schedule (MBS). The Board has concluded that the only feasible approach to the exercise is via a cost or resource-based methodology; ie a process in which the resources used in providing a service are identified and costed in an appropriate manner.

The resource-based costing methodology

The 'formula' at section A.1.2 has been accepted by the Board as providing a general outline of the general methodology to be adopted in costing medical fees and is a key reference for the exercise.

Although the proposed consultancy concentrates largely on practice costs it is nevertheless important to recognise that recovery of practice costs is part of a process which must take place ultimately in the context of a 'rolled up' fee for a professional service provided by the doctor – as specified in an MBS Item.

There are two basic elements to consider in relation to practice costs:

1. determination of a fair and reasonable allowance for the quantum of practice costs; and
2. how best to effect their recovery and assignment to individual items of service given that many costs do not reflect a linear relationship with the effort of the doctor.

Feasibility stage completed

A preliminary study has already been undertaken which the Board accepts has demonstrated:

- the feasibility of building models which are capable of closely predicting the resource needs of practices
- the potential use of sophisticated modelling techniques to assist in the allocation of practice costs to individual services.

The consultants for the feasibility stage have also developed a resource-based costing model to assist further work in this area. The Board now wishes to extend and refine the process beyond the feasibility stage as expressed in the Terms of Reference provided to prospective consultants.

Progress beyond the feasibility stage

It is important that consultants have a clear appreciation of the expected outcomes of the consultancy and the operational constraints that apply to the process.

The basic purpose of the practice cost modelling process is to provide a visible, tangible and defensible process ultimately for determining and allocating practice costs to individual services and, with the capacity to test outcomes under various costing scenarios.

Cost separation and classification

The 'formula' envisages transparency in the modelling process with the separate identification and treatment of the following components of practice costs in individual items of service:

- direct costs such as for technicians or specialised staff, dedicated facilities, equipment, consumables etc which can be readily identified to specific diagnostic tests and procedures provided within the practice setting and/or at the practitioner's expense and which are separately billed by the provider.
- professional indemnity insurance (which raises significant service allocation issues for some practitioners).
- residual indirect costs of a general overhead nature which must be recovered across services in a fair and equitable manner but which are not readily identified to individual services (which might be considered in the context of possible general cost recovery approaches identified in 1, 2 or 3 below).
- fair allowance for working capital.

The preferred approach is that the modelling for each of the above components is undertaken separately; with the capacity to 'roll up' the components and link with the professional component of the service.

Some general costing approaches in relation to the recovery of general overheads in fees

1. A simple approach might be to add up all the practice overhead costs of a selected model practice and divide by the expected number of services to derive an average per service. That is, each service is presumed to carry an equal allocation of practice overheads.
2. Another simple approach might be to allocate practice overhead costs on the basis of the time spent by the doctor on the service. Under this approach the practice overhead costs of a selected model practice are divided by the total expected productive hours of the doctor to derive an average recovery rate per unit of doctor time. Each service is then allocated a share of practice overhead costs so that a twenty minute service is allocated twice the practice overhead costs of a ten minute one etc.
3. A more complex mixture of 1 and 2 above which separates those overhead costs which are seen to be more episodic in nature (and better recovered on a per service basis as in 1 above) from those which are seen to follow more closely the effort of the doctor (and better recovered on a doctor-time basis as in 2). An example of 1 might be in respect of the costs of patient recording and billing and 2 rental of consulting and waiting room space.

The above examples are deliberately simple and do not address those services which have a high direct cost or technical components (eg diagnostic tests) and fail to have regard to possible differential costs of services provided inside and outside the practice setting (eg in hospitals) they nevertheless demonstrate the flexibility of approach that is expected of consultants which appropriate costing experience. The flexibility in the modelling process is emphasised here because many the products themselves (items of service in the MBS) are poorly differentiated and subject to review within the RVS. This is particularly the case for consultation and attendance items which make up the bulk of items under review.

See the chart at section A.1.3, which outlines the general approach to modelling as perceived by the Board.

It is important for potential consultants to appreciate that a major emphasis of the modelling process is to provide the capacity to consider options and approaches for the recovery of practice costs across services. Further, it must be kept in mind that there must be a capacity to link the derived practice cost components with the activity of the doctor. This highlights the emphasis on recovery rates in the terms of reference rather than single-dollar amounts. The simple model at section A.1.4 is provided to facilitate consideration of this issue.

Selection of models, activity levels and work mix

To achieve fair and reasonable practice cost recovery rates in fees cost and activity models must be selected which the profession accepts as being representative of the general class of practice in a particular field. There seems little point in selecting say a solo urology practice on which to model and determine practice cost overhead recovery rates if a clear majority of urologists work in multiple units. An important by-product of the modelling process might allow for analysis of variations from the selected 'standard' but this is largely a secondary issue which may be dealt with a later time.

A.1.2 Proposed (simplified) formula for costing medical fees

[< Professional Component >|< Practice Cost Component >]

$F = [\{(T_1 + T_2) \times E_p\} \times C_s \times S_s] + DC_s + OR_{p/s} + PII_{p/s} + WC$

F = Fee

T_1 = Average efficient direct service time by doctor (based on surveys)

T_2 = Average efficient indirect service time by doctor (based on surveys)

E_p = Standard or base earning rate per time unit for that specialty taking into account the personal capital investment, including training, duration of professional working life etc that are relevant to that specialty.

C_s = Relative complexity factor for that service also determined by a panel of expert doctors.

S_s = Relative risk or 'sweat' factor for that service also determined by expert medical panels.

DC_s = Direct costs such as direct staff (technicians etc), consumables, dedicated facilities etc attributable to that service.

$OR_{p/s}$ = General overhead recovery attributable to that specialty/service or episode based on the financial modelling of efficient practice (includes allowance for professional overhead time such as for practice management – based on Ep).

$PII_{p/s}$ = Professional indemnity recovery attributable to that specialty/service or episode.

WC = Allowance for working capital based on representative cost/billing/payment cycle.

Note

(1) The above formula does not address 'qualitative' (and largely subjective) factors such as the most cost effective process, or measurements of the relative worth of services, their social benefits etc.

(2) Allowances for "profit", return on capital investment etc. are assumed to be built into each cost component. Profit is assumed to be the cost of staying in business.

(3) The formula assumes that proper differentiation of services occurs so that globalisation is kept to a minimum.

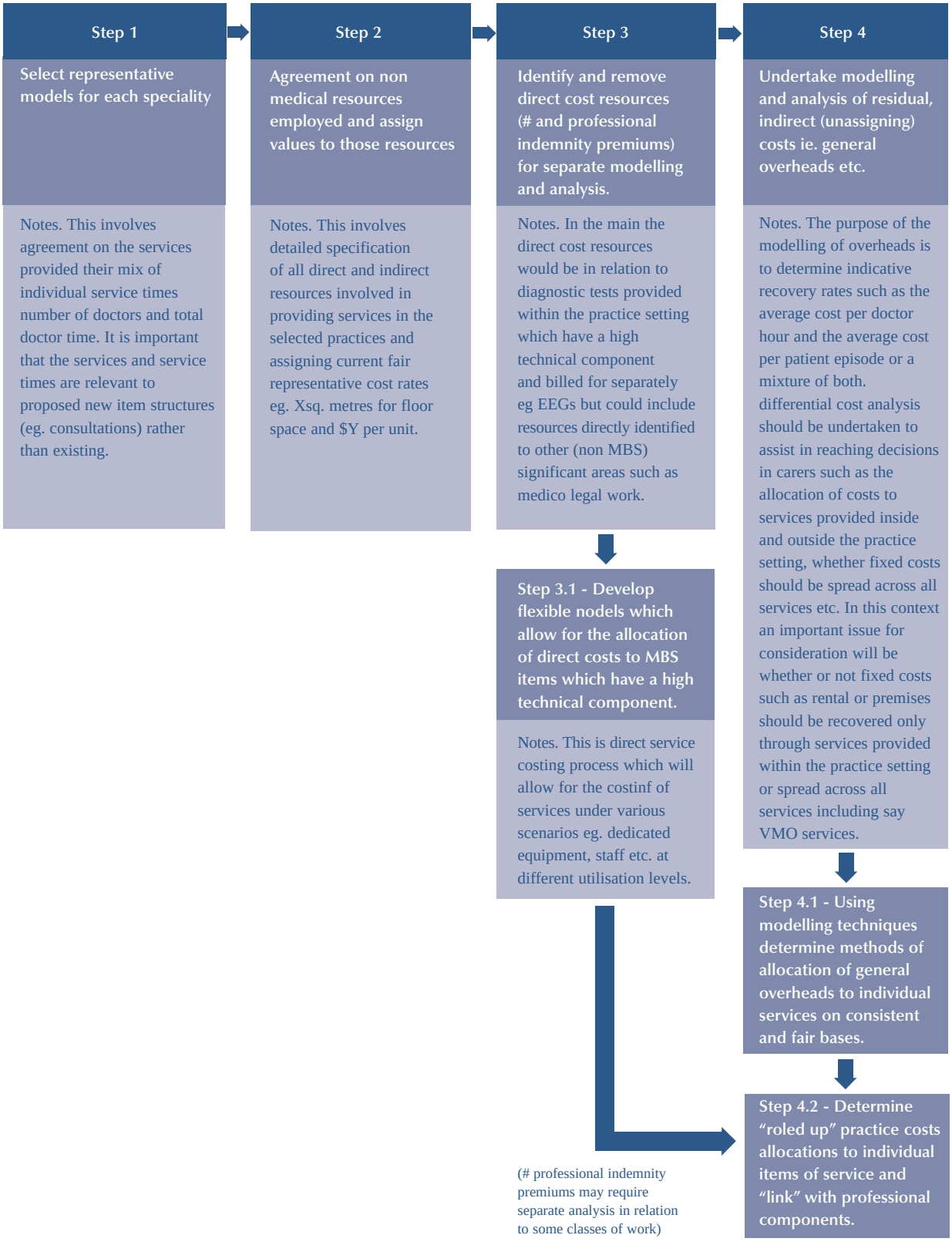
(4) 'Cost neutrality' and changes in the growth or mix of services are not considered to be relevant to the individual fee setting process and are therefore not part of the formula.

(5) In developing the professional component, complexity and risk loadings would not necessarily be applied linearly to total time (T1 + T2) but weighted say more to direct time (T1) depending on the nature of the service.

(6) The recovery of general practice overheads (OR) and professional indemnity costs (PII) in fees should not be dismissed lightly as being simple percentage mark-ups on the professional component. There are complex costing issues that must be addressed otherwise distortions in fee relativities will result. That is, all the good work in developing professional relativities could be undone by inappropriate treatment of practice cost recoveries. It should be noted that the American RBRVS did not address practice cost recoveries in any real way, but relied on traditional broad-based costs to income ratios. This is probably the biggest fault in the American system and the cause for the greatest concern.

(7) It is critical that all variables are accurately identified in order that any future changes or indexation are properly applied to ensure that the relativities between fees remain reliable.

A.1.3 Outline of general approach to modelling perceived by the Board



A.1.4 Demonstration model of a solo surgeon practice (based on notional data)

Working hours	In rooms 900 56.25%		Out of rooms 700 43.75%		Total 1600 100.00%	
Service mix	**No.**	**Time Hours**	**No.**	**Time Hours**	**No.**	**Time Hours**
Av time Item Consultations						
5 A (5mins)	80	7	0	0	80	7
9 B (10mins)	450	68	0	0	450	68
16 C (15mins)	680	181	0	0	680	181
21 D (20mins)	820	287	0	0	820	287
32 E (30mins)	190	101	0	0	190	101
42 F (45 mins)	80	56	0	0	80	56
	2300	700	0	0	2300	700
Procedures						
15 G	350	88		0	350	88
30 H	0	0	90	45	90	45
60 I	0	0	120	120	120	120
90 J	0	0	220	330	220	330
120 K	0	0	55	110	55	110
	350	88	485	605	835	693
Tests						
15L	65	16	0	0	65	16
Totals	2715	804	485	605	3200	1409
Indirect Time		96		95		191
		11%		14%		12%

 # Direct nurse/tech:
Proced $3,795
Test $705.00

Analysis of practice costs Practice costs			Rooms			Outside proced	Total		
			Cons	Proced	Test				
Type	**Cost $**	**Cost allocation variables**	**$**	**$**	**$**	**$**	**$**	**%**	
Prof. Indem. Ins	15000	80% procedure. 20% rest	2932	1516	68	10484	1500	10	#
Test facilities	1500	100% test rooms			1500		1500	1	#
Test consumables	250	100% test rooms			250		250	0	#
Proc facilities	2500	100% proced rooms		2500			2500	2	#
Proc consumables	320	100% proced rooms		320			320	0	#
Nurse/tech	45000	90% gen rooms, 10% dir proc/test	35271	8205	1524		45000	29	# Part
Sec/recp/typing	50000	60% sec/typing, 40% recp rooms	32323	4041	751	12885	50000	32	only
General premises	25000	100% rooms service	21772	2722	506		25000	16	
Motor vehicle	10000	70% out of rooms service	2613	327	61	7000	7000	6	
Gen. Med. supplies	300	100% in rooms service	261	33	6		10000	0	
Gen. Expenses	5000	100% all services	2484	311	58	2148	5000	3	
Total	154870		97656	19975	4722	32517	154870	100	
Av. per service	$48.40		42.46	57.07	72.65	67.04	48.40		
Av. per doc hour	$109.95		139.54	228.28	290.61	53.75	109.95		
Practice costs after removal of direct costs and prof.ind. ins #			94724	11843	2199	22033	130800		
Av. per service			41.18	33.84	33.84	26.39	40.88		
Av. per doc hour			135.35	135.35	135.35	36.42	92.86		

Notes:

1. *The service mixes dollar values and allocation of practice costs are for illustrative purposes only.*
2. *In the above model allocations of practice costs within classes of services have been made in proportion to doctor time.*
3. *An important policy consideration is whether or not basic infrastructure costs such as for a secretary, a minimum allowance for consulting room etc. should be spread across services provided both inside and outside the practice. For example if it was determined that a minimum cost recovery of 25% should be achieved via a flat recovery rate of $10.22 per service. The resultant average cost recovery cost of $69.64 per doctor per hour would apply. It would then be necessary to decide how the residual costs would be spread across services. A separate cost allocation model using different cost allocation variables but along the same lines would be required.*
4. *The above figures are an attempt to demonstrate the extent of potential variability of unit costs between classes of service depending on the costing assumptions made.*
5. *Variations to the above would be required to take account of factors such as VMO, medico legal work, multiple service episodes etc.*

Appendix B
Letter from Professor Nicholls

The Australian National University

The Australian National University
Department of Statistics and Econometrics
Canberra A.C.T. 0200 Australia
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10 September 1998
Mr Mike Empson
PricewaterhouseCoopers
GPO Box 386
Canberra City ACT 2601

Dear Mike

Re: Methodology for the Costing Study.

I am responding to a number of issues you have raised relating to the costing study and associated methodology.

PwC was engaged by the Medical Benefits Schedule Review Board to "develop the criteria to apply in the determination of resources required to operate a reasonably efficient private medical practice across a range of specialty groups" and "to construct representative models based on reasonably efficient private medical practices to assist in establishing fair and reasonable non-professional medical components in private medical fees across the range of major specialty groups."

Furthermore the following definition of the reasonably efficient practice has been accepted: "The reasonably efficient practice is one that utilises good management to ensure efficient resource usage whilst maintaining a level of quality that patients expect and the profession can be reasonably expected to provide." - MSRB 1997.

To satisfy these requirements, PwC adopted a case study methodology Similar studies have been used to define costs in healthcare settings previously. It should be noted that the original costing of Diagnostic Related Groupings in the USA by Fetter (Diagnosis Related Groups: Product Line Management within Hospitals. Academy of Management Review,

1986, Vol. 11, No l, 41- 45 in the early eighties utilised the case study approach Fetter's methodology had to content with the large variation of costs resulting from "physician determined variables." Identification of the reasonable cost of each component of the costing relied on identifying a reasonable level for each component rather than averaging large numbers of discretion driven costs.

Fetter described the difficulties of using activity based costings in a system with great variability and thousands of product lines. His group (from Yale) had to create groupings out of clinical categories which were never designed to reflect costs. PwC had a similar problem in matching the specialty groupings to costs and then attributing these costs to the many items within the MBS.

Fetter's group commenced by analyzing the costs of the "product lines" in hospitals they then normalized the costs for identifiable components to arrive at a "cost for the patient care episode". The changes to the cost attribution in the Casemix use of DRG's evolved from a process of adaptation and the allocation of appropriate weightings. This is reflected by the way in which PwC has undertaken the quantification of the costs. Indeed a process incorporating APPC meetings end expert discussion through the period of the study has been utilized by PwC in the determination of the RVS costings.

The case study approach involved a number of face to face interviews with doctors chosen from all specialty groups and a number of locations. The information gathered through these visits was compared to all available comparable studies including the ABS "Private Medical Industry" survey that collected information from 9,000 private practitioners. The results of both the site visits and the comparisons with the ABS survey were then presented to the specialty groups nominees individually and to focus groups. Nominees of Colleges and Associations gave valuable advice in the targeting of appropriate specialists for information While financial and other useful data were gathered during the face to face interviews, the primary task was to obtain information to validate the cost drivers to be used in the model.

The visits to individual work environments enabled the interview team to relate individual physical environments with work practices, and to cross reference the data obtained with data from other sources including the HIC, real estate agents accountants and workplace relations specialists. The data obtained from all sources was, on an ongoing basis, considered by focus groups (cg APPC). These values were adjusted where appropriate. The strength of the approach taken was that focus groups and other relevant experts were able to have significant ongoing input into the process. Moreover, data were able to be benchmarked against other databases (cg KPMG, FRMS and ABS surveys).

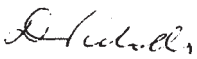
There would not be the time nor would it be cost effective to have undertaken a survey of a representative group of doctors in every specialty to determine appropriate costs associated with a reasonably efficient practice. The diverse nature of the data required to determine the cost components, combined with the detail required to understand the complexity of information would not have allowed the detailed knowledge of the cost drivers to he obtained through a survey. The results of the ABS survey were utilised to check the values that resulted from the study visits and the discussion with the profession. Many of the costs

have been benchmarked against comparative current market values (eg rent, wages, etc). The determination of averages, upper and lower limits for individual cost items as determined from a statistically representative sample, etc is not an appropriate approach in many items of interest. In many items the variations will be very large and result in the upper and lower limits being so far apart that the information obtained will not be of any real value. For example in the case of rent paid for premises there are often good financial reasons for the payment of an apparently high rent for the size end quality of the premises occupied but this should not be included in a database to determine the rent paid in the case of a reasonably efficient practice.

When there is a large degree of variability in the data, obtaining statistical information with an acceptable degree of accuracy would require such a large sample that the costs involved, and the time required, make such an approach inappropriate. This is particularly so when it is recognized that the ABS survey results were available and able to be utilized as benchmarks in the confirmatory analysis of much of the data. PwC believed that to be the case here and chose the case study approach.

The PwC approach included focus groups of experts other expert advice as required and independent benchmarks against which to check results. This approach adopted is the most appropriate one for the determination of costs associated with a reasonably efficient practice. The methodology is dynamic in nature and will allow refinement of any of the values. Thus any areas that require further study or new items that need to be included into the schedule can be accommodated. I agree that the methodology will lead to values for the major cost categories in each specialty which are a reflection of “reasonably efficient practice” in Australia.

Yours sincerely



Des Nicholls
Professor of Statistics

Appendix C
Questionnaire for study participants

Demographic Information

1. Doctor's code:

2. Locality

   (regional, metropolitan, remote)

3. Practice situation

   (hospital, med precinct, commercial/retail, stand-alone, co-residential)

4. Specialty

Practice Structure

5. How is the practice structured?

a) Sole practitioner ☐

b) Partnership ☐

c) Medical practice company ☐
(please specify shareholders and directors)

	Yes	No
Do you have a service trust?	☐	☐
Does the medical company pay fees to the trust?	☐	☐

If yes, how are these determined?

	Yes	No
Do you have your own superannuation fund?	☐	☐
Does any related entity to you (ie superfund, family trust, company, spouse) lease or rent to the trust or the company?	☐	☐

If so, what is the nature of the arrangement?

	Yes	No
Are you paid a salary from the medical company?	☐	☐

If so, how much and how is this determined ie profit?

Does the company or the trust pay your service company?	☐	☐

If so, how much and how is this determined ie profit?

Does the company pay your (or spouse's) superannuation?	☐	☐

If so, how much and how is this determined ie profit?

Do you or a family-owned entity own the rooms that you practise from?	☐	☐

Which entity owns the property?

Do you practise from more than one location?	☐	☐

Please provide details of the locations and who owns the property

Property location	Ownership

	Yes	No
Do you practise out of premises owned by a related entity?	☐	☐
If so, what rent is charged?	☐	
And how is this determined?		
Do you practise out of premises owned by a related entity?	☐	☐

6. Do you practise with other doctors or specialists?

If so, how many, including employed doctors, locums etc?

Occupation description	Total
	☐
	☐
	☐

7. Do you share costs between yourselves?

	☐	☐

If so, how is this determined?

8. Are you equal partners or shareholders?

Partners	☐	☐
Shareholders	☐	☐

(diagram may be useful)

Financial Information

Please detail the following expenses from your profit and loss statements by each of your practice entities, ie personally, medical practice company, service company or trust, and relating to your medical practice costs only.

We are trying to determine what is your usual level of arms-length expenditure for each of the expense categories we are reviewing. It is important that if your costs are unusually high or low this year, you explain this and give us an indication of what is a more indicative level.

Practice Administration Costs $

9. Accounting and audit fees

10. Advertising and promotion

11. Computer consumable items (eg software costs)

12. Fees and permits (include AMA subscriptions)

(details, if applicable)

13. Laundry

14. Legal fees (relating to practice matters; exclude capital acquisitions etc)

15. Magazines

16. Medical supplies

17. Postage, printing and stationery

18. Security

19. Telephone and communications

20. Waste disposal

21. Plant hire

22. Sundry (use sparingly)

(details, if applicable)

Financial Costs

23. Bank charges, FID, merchant charges

24. Interest

Insurance

25. Contents

26. Professional indemnity

27. Public liability

28. Disability (Income Protection Insurance)

Occupancy

29. Can you split the floor space for your rooms between consultation areas per doctor and common areas for all, ie waiting room and amenities?

Yes ☐ No ☐

	Area (m2)	No of doctors	m2/Doctor
_____	☐	☐	☐
_____	☐	☐	☐
_____	☐	☐	☐

	$
30. Rent	☐
31. Rates and taxes	☐
32. Cleaning	☐
33. Electricity	☐
34. Gas	☐

Fixed Assets

35. Depreciation:	☐
Medical equipment (dedicated and general equipment)	☐
Office equipment	☐
Motor vehicles	☐
36. Repairs and maintenance of equipment (exclude capital expenditure)	☐

37. Purchase of minor equipment (items below $300)

38. Lease payments

Purchase prices to be included

Item	Cost

Finance leases

- What are the monthly payments?
- What assets are leased?

Operating leases

- What are the monthly payments?
- What assets are leased?

39. Motor vehicle expenses

Fuel and oil

Repairs and maintenance

Registration and insurance

What is the purchase price of the motor vehicle?

How was it financed?

What are the annual kilometres?

What is the business percentage of usage?
(Info from vehicle log book if available)

Staffing

40. How many staff do you employ in each of the following categories (FTEs)?

Doctors (not including principals) ☐

Nurses ☐

Administrative staff ☐

Technical staff ☐

41. Are they related to you or your principals in any way?

Yes ☐ No ☐

Details _____

_____

_____

42. Salary and wages:

$

Doctors:

- Principals ☐
- Other ☐

(Split between remuneration and expense reimbursement)

Nurses ☐

Administrative staff ☐

Technical staff ☐

43. Superannuation

Doctors:

- Principals ☐
- Other ☐

	$
Nurses	
Administrative staff	
Technical staff	

44. Training

Doctors:

■ Principals	
■ Course/conference fees	
■ Accommodation	
■ Travel	
■ Proportion applicable to spouse or other family	
■ Other	
Nurses	
Administrative staff	
Technical staff	

45. Payroll tax

46. FBT

47. Worker's compensation insurance

Working Capital

The following information can be collected from your practice entity (or entities') balance sheets. We are asking for average balances which will mean adding the opening and closing balances and dividing them by two.

If the balances are unusually high or low or are not normal for any reason you will need to explain why. It may be due to a recent asset purchase that has drained your cash or increased your overdraft or it may also be an increase in cash or a reduction in your overdraft through an asset sale.

Please detail the following balance sheet information for all practice entities:

$

48. What is your average for the year cash on hand, on deposit and at bank? ☐

Yes No

49. Do you have any debtors? ☐ ☐

$

What are your average trade debtors? ☐

Are the debtors - trade? ☐ or

- from related entities? ☐

Yes No

50. Do you have any creditors? ☐ ☐

$

What are your average trade creditors? ☐

Are the creditors - trade? ☐ or

- from related entities? ☐

51. Can you provide a list of all assets owned by you and their costs (depreciation schedules will have this information), such as:

$

- Furniture, fittings and things for your waiting rooms ☐
- Office equipment such as telephones, photocopiers ☐
- Computers ☐
- Medical equipment (dedicated and general equipment) ☐
- Land and buildings relating to your practice ☐

52. Do you have any long-term borrowing?

- Bank loans and average bank overdrafts ☐
- Leases ☐
- Bills ☐

53. Related entity borrowing

- Are these borrowing for

  - specific assets? or ☐

  - to provide working capital? ☐

Timetable information (summarised version)

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
AM							
PM							
Evening							

Activities to be identified: all medical activity and whether it is in the doctor's facility or a facility that charges a fee to the doctor. Note all VMO, operating, consulting and related medical activities in terms of whole sessions. Note the length of the session as well (3 or 4 hours). Make a note of time available for call-outs and estimate of call-outs.

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List of abbreviations

AAS	Australian Accounting Standard
ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health & Welfare
AMA	Australian Medical Association
AMWAC	Australian Medical Workforce Advisory Committee
APPC	Advisory Panel on Practice Costs
ATO	Australian Taxation Office
AWE	Average Weekly Earnings
AWOTE	Average Weekly Ordinary Times Earnings
CME	Continuing Medical Education
CPI	Consumer Price Index
DH&FS	Department of Health and Family Services
DMS	Deputising Medical Services
ECG	Electrocardiography
ENT	Ear, Nose and Throat
FMRC	Financial Management Resource Centre, University of New England
FTE	Full-time equivalent
GMST	General Medical Services Table
GST	Goods and Services Tax
HIC	Health Insurance Commission
IVF	In-vitro Fertilisation
KPMG	KPMG Management Consultants
MBS	Medicare Benefits Schedule
MOPS	Maintenance of Professional Standards
NAMDS	National Association of Medical Deputising Services
O&G	Obstetrics and Gynaecology
PAYE	Pay-As-You-Earn
PII	Professional Indemnity Insurance
PIP	Practice Incentive Program
PRS	Professional Relativities Study
PwC	PricewaterhouseCoopers
RACGP	Royal Australian College of General Practitioners
RACP	Royal Australasian College of Physicians
RBA	Reserve Bank of Australia
RRMA	Rural, Remote and Metropolitan Areas
RRS	Remuneration Rates Study
RVS	Relative Value Study
SNA	Safety Net Adjustment
TMUI	Treasury Measure of Underlying Inflation
VMO	Visiting Medical Officer
WCI	Wage Cost Index (ABS); Wages and Cost Index (Government)

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