The Impact of Prescribed Minimum Benefits on the Affordability of Contributions

By Professor Heather McLeod, Deus Bazira Mubangizi, Professor Alan Rothberg and Dr Therese Fish

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A Research Report Prepared under Contract for the Council for Medical Schemes
Executive Summary

The Council for Medical Schemes invited tenders for three projects in March 2002. This report is presented in fulfilment of the contract in respect of the third of the three projects and deals with assessing the impact of the Prescribed Minimum Benefit (PMB) package on the affordability of contributions.

The first two projects, *The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001* and *The Costing of the Proposed Chronic Disease List Benefits in South African Medical Schemes in 2001*, developed a price for the Complete PMB package which is used here to assess affordability.

Approach to Affordability

Previous South African studies that commented on affordability were reviewed. In this report affordability will firstly be approached from the point of whether current medical scheme contributions are adequate to meet a mandatory PMB package. Secondly, affordability of the PMB package will be considered in the context of income and subsidy levels.

Data and Methodology

The components of the PMB package were compared to data on medical scheme benefits and contributions submitted as part of the Statutory Returns to the Registrar of Medical Schemes in respect of 2001.

For purposes of assessing impact of the package on household income, data from a study of low-cost options by Ranchod et al (2001) was used. From that study, a benchmark family of four (two adults plus two children) with an average household income of R4 000 per month was used.

The October Household Survey 1999 (OHS99) was used to extract information on the income levels of current members of medical schemes and those not in medical schemes who could potentially become members under Social Health Insurance.

Research shows that the different clusters experience different benefit utilisation, costs and disease profiles. Provider behaviour has been shown to differ by cluster, even within the same hospital facility. This report makes use of two of the four clusters from the first two studies:

- **High** contains options with older, 'whiter' members with high utilisation;
- **Low** contains options with younger, 'blacker' members with low utilisation.

The Consortium recommended using a weighted total to better represent the industry. This **Weighted industry** price uses 50% of the costs of the Low cluster and 100% of the other clusters and is the one predominantly used in the Affordability studies. The results for the Low cluster are more relevant to the emerging low-cost option environment. The High cluster is used to give an upper limit to the PMB price.
Price of the Complete PMB Package

Using the Weighted industry total, the price of the Complete PMB package is R2 156.78 pbpa or R 179.73 pbpm. This is made up of an Inpatient package of R1 246.95 pbpa, an Outpatient package of R 232.10 pbpa and the CDL package of R 677.74 pbpa in 2001 prices.

The Complete PMB package for the Low cluster delivered in the private sector is R1 551.47 pbpa or R 129.29 pbpm. The price for the High cluster is R3 797.50 pbpa or R 316.46 pbpm. The price of the Low cluster is 40.9% of that of the High cluster, or in other words, the High cluster price is 2.45 times that of the Low cluster. The PMB price was developed using private sector data and thus these prices are for the delivery of the PMB package in a private sector fee-for-service environment.

The proportion of non-healthcare expenditure for the Complete PMB package is 5.3%. The proportion is highest for the Low cluster at 5.8%, falling to 4.5% for the High cluster. All of these results are well below the 10% benchmark commonly used by the Registrar of Medical Schemes.

A great deal of work needs to be done to definitively determine the relationship between the costs in the public sector and the costs in the private sector. The Complete PMB package for the Low cluster could reduce from R1 551.47 pbpa or R 129.29 pbpm delivered in the private sector, to R1 015.61 pbpa or R 84.63 pbpm when delivered in the public sector.

The estimate for the delivery of the Complete PMB package in the public sector effectively provides the Complete PMB package for roughly the same price as the private sector Inpatient and Outpatient packages. It could be said that roughly speaking, by using the public sector for delivery rather than the private sector, members would obtain the CDL package of benefits at no additional cost.

The price of the PMB package has a strong relationship to age. Note that the price of the Complete PMB package exceeds the community-rated price for all age bands over age 40. This illustrates why there is still such a strong incentive for open medical schemes to attract and retain younger members. This incentive will remain until risk equalisation using at least the age factor is implemented.

The Weighted industry price for the Complete PMB package is R 640.33 per month for a family of four, when delivered in the private sector. It is estimated that this would reduce to R 416.76 pm when delivered in the public sector. The Low cluster price for a family of four would be R 489.31 pm in the private sector and R 321.15 pm in the public sector.

Comparison to Benefits

It was found that there were problems with the categorisation of hospital and medicine expenditure in the Statutory Returns of some schemes. The misclassification of expenditure typically greatly inflates expenditure on medicine or appliances for these schemes, and reduces the apparent hospital expenditure. Results comparing the PMB package to the hospital, hospital and related; and medicine components thus need to be treated with care.
The industry total benefit expenditure per beneficiary per annum is more than the price of the Complete PMB package for all three levels, namely Low cluster, Weighted industry and High cluster. This means that technically at an industry level, the complete PMB package can be provided within current industry benefit expenditure and should thus not put upward pressure on contributions.

The price of the PMB package of benefits used in this comparison already includes a substantial loading for the current uncertainty in the definition of PMBs. Thus it is possible to say with certainty that at a scheme level, 90.4% of the schemes are already paying for benefits at a level in excess of the industry cost of the PMB package. The same can be said for 91.8% of restricted schemes and 87.8% of open schemes. Although there are some schemes and options that appear not to afford the PMB package, more work is needed to standardise the package to their beneficiary profile and utilisation patterns before an authoritative conclusion can be made about them.

The question of the content of packages in excess of those required under PMB legislation is likely to be of great interest to the industry in the months following the release of these results. The question we need to ask is what benefits are being included that are not part of PMBs. The addition of GP services, optical, dental, allied health disciplines and acute medication in current scheme designs can be of the order of 25-30% of benefit spend. This questioning of benefits may lead to a redefinition of the PMB package, or to a redefinition of the packages on offer to the industry in 2004 and beyond. Suffice to say that there seems to be substantial scope in benefit packages to reduce the package to closer to the legislated levels and thus provide affordable healthcare to many more people.

**Comparison to Non-healthcare Costs**

The non-healthcare costs allowed for in the PMB package price are substantially lower than non-healthcare expenditure in registered schemes. Non-healthcare expenditure for open schemes is R 921 per beneficiary per annum, while that included in the PMB package for the Low cluster is less than 10% of that level. Open schemes spend 1.8 times the amount that restricted schemes spend on non-healthcare items.

It is noteworthy that on average the industry spent R 785.23 per beneficiary per annum on non-healthcare expenditure in 2001. The cost of the Weighted industry Complete PMB package is R2 156.78 pbpa. Thus current non-healthcare expenditure is 36.4% of the amount needed for the delivery of healthcare and administration of the PMB package.

**Comparison to Total Contributions**

Overall, pooled contributions more than cover the Complete PMB package price. The Weighted industry PMB price constitutes 43.4% of pooled contributions for all registered schemes, 44.2% for open schemes and 41.5% for restricted schemes. In all cases the proportion is less than 50.0%. Thus after meeting costs associated with the Complete PMB package, schemes still have more than half of their pooled contributions to meet other benefits and non-healthcare costs in excess of those already in the PMB price.
When total contributions are considered, the Weighted industry PMB price constitutes 39.1% of total contributions for all registered schemes, 39.4% for open schemes and 38.3% for restricted schemes. Total contributions thus cover the PMB package by a substantial margin at an industry level.

The conclusion at scheme and option level is that there are only relatively few schemes and options where existing levels of contribution do not meet the industry level PMB price. It cannot be concluded without further work that these schemes and options could not or are not covering the Complete PMB package. Particular options may have much younger profiles than the industry and thus contributions may be artificially low.

It is clear that if public sector contracts to deliver the PMB package are pursued, then the affordability of the package is even greater. Apart from five schemes, all of them restricted, all registered scheme contributions at a beneficiary per annum level adequately cover the Low cluster Complete PMB price in the public sector. The total of all those not meeting the Weighted industry PMB price in the public sector is only six schemes or 4.1% of registered schemes. Therefore, the findings are suggestive that almost all options in registered schemes can adequately meet the Weighted PMB price when the package is delivered in the public sector, without the need to increase contribution levels.

Schemes with savings accounts whose benefit structures currently do not cover the Complete PMB package are likely to re-design their benefits so that funds currently channelled to savings accounts will instead be used for pooled benefits.

**Affordability for Bargaining Council Schemes**

The benefit design of these schemes is of increasing interest as the prospect of Social Health Insurance becomes a reality. These schemes have been able to offer basic services to their members within a very constrained budget and they could offer a better reference for designing primary care for new low-cost options within registered schemes.

At an industry level Bargaining Council schemes are in no position to meet the demands of the PMB package, even when delivered in the public sector. The public sector Low cluster price is 2.2 times the contributions per beneficiary per annum in this sector.

However, before reaching conclusions on the difficulty that Bargaining Council schemes might have with including the PMB package in their benefit structures, the recommendations by the Taylor Committee with regard to healthcare need to be explored.

If the existing tax structure for the medical schemes industry is replaced with a per capita subsidy, this would have most impact at lower income levels. The price of the PMB package for the Low cluster, when delivered in the public sector, is only R1 015.51 per beneficiary per annum. A per capita subsidy of this order would dramatically affect any conclusions on the affordability for Bargaining Council schemes.
Affordability of Low Cost Options

It is recommended that in this area, where option size is changing rapidly, that little weight be attached to the reported results on a per beneficiary basis. A more useful comparison is to compare the PMB package to the published contribution tables of options. From the Ranchod et al (2001) study of low-cost options, information on a total of 174 option prices in open schemes was available.

The conclusion is inescapable that the industry is offering packages costing way in excess of the PMB package. It was found that 12 options (6.9%) cover the PMB package by a factor of four times or more. There were 94 options (54.0%) that cost more than double the PMB package price, even though this is the private sector price being used. The issue that the industry must now answer is what do the packages contain that makes them cost so much more than this private sector PMB package. The challenge is now to redesign packages to make them more affordable, in line with the cost of the PMB package.

Some schemes may argue that they face a demographic profile or a prevalence of disease different from that inherent in the industry price. If that is the cause of the seemingly excessively high prices for existing options, then the arguments for a risk equalisation system between schemes covering the PMB package are strengthened.

The Ranchod study identified 17 lowest-cost options that made use of network primary care, typically on a capitated basis. However, only two options, both from the same scheme, have been priced close to the price of the Low cluster PMB package. The private sector PMB package price for a family if four is R 489.31 pm and the public sector equivalent is R 321.15 per family per month. Most of the lowest-cost options are still priced between R 600 and R 800 per family per month.

The conclusions from the analytical work are clear: the industry has still not been able to bring down prices to levels that would provide for the PMB package in full, with some additional small amount for routine primary care. The PMB package is clearly affordable in the context of prices currently being charged in the industry. The challenge is for trustees to look at the packages they currently offer and find ways to bring offerings to the market that are much closer to the PMB package prices.

The argument that the legalisation on Prescribed Minimum Benefits is responsible for the upward pressure on contributions is found to be baseless.

Affordability Relative to Income

Using the October Household Survey 1999, the income levels of existing medical scheme members were investigated and these were compared to the price of the PMB package.

The degree of employer subsidy falling outside of quoted income levels will naturally affect the results. A further important, but as yet unknown factor is the extent to which the per capita subsidy for healthcare, recommended in the Taylor Report, impacts on the proportion of income required to be spent. The Consortium has not formed an opinion on what is acceptable income proportion affordable to lower income workers. This is an issue on which the opinions of organised labour, the Department of Trade and Industry and forums such as NEDLAC should be obtained.
Affordability for Potential Members

The report demonstrates that the bulk of potential recruits earn under R5 000 per month and a large group earn below R2 500 per month. Below R1 800 per month there is a very large group of people who could not afford the PMB package without assistance. There needs to be a radical shift not only in benefit design, but also in the subsidy available for this group.

The change in taxation to provide a per capita subsidy, as recommended in the Taylor Committee report, could dramatically alter the potential affordability. With a per capita subsidy of R1 000 per annum (R 83.33 per month), the cost for a family of four is completely covered if the Low cluster PMB package is delivered in the public sector. Even with an R 800 subsidy (R 66.67 per month), affordability for those earning between R 800 and R1 800 per month improves from 22.1% of income to 3.7% of income.

The shape of the subsidy will need to be carefully considered. The use of this subsidy as part of the flow of a risk equalisation system also needs further careful consideration, now that the price of the PMB package has been determined.

Affordability for Present and Future Pensioners

The OHS99 records pensioners as being 6.3% of total beneficiaries in medical schemes. Returns to the Registrar for 2001 show that pensioners made up 6.5% of beneficiaries in the industry equivalent to 452 586 individuals. It was found that 5.3% of beneficiaries in open schemes and 8.6% in restricted schemes are pensioners. The pressure due to the particular problems of affordability for pensioners will be felt mostly in restricted schemes in the absence of a risk equalisation system between medical schemes.

Pensioners represent a special group because they are vulnerable to the highest healthcare costs at the time in their lives when income is reduced. While community-rating goes a long way to ensuring access for these beneficiaries at a more affordable level, the impact of levies and co-payments on benefits will be more serious for this group.

A further issue affecting affordability for pensioners is the rate of escalation of pensions. If the price of the PMB package continues to accelerate at the same sort of rate as medical scheme contributions have done in the recent past, then the package will rapidly begin to become less affordable to pensioners.

New accounting principles have led employers to restructure employee benefits in order to reduce their liabilities for promises that continue into retirement. The subsidy for medical scheme contributions to existing pensioners will not be greatly affected, but that for future pensioners has undergone a radical change. In the space of two years, the proportion of new employees who are not given a subsidy to assist with affordability of medical schemes in retirement has increased from 43% to 60% of employers surveyed by Old Mutual.

This issue is a potential affordability time bomb that will impact the industry when those joining companies from around the year 2000 onwards reach retirement age. This could be some 15 years to 35 years into the future, but if this practice does not receive serious policy attention now, the impact on affordability of medical schemes for those future pensioners can only be described as devastating.
Conclusions on the Affordability of Prescribed Minimum Benefits

The studies comparing actual benefit expenditure and contributions to the price of the PMB package all showed that at an industry level, the PMB package was well covered. There should thus be no upward pressure on contributions from Prescribed Minimum Benefits.

The most useful analysis at options level proved to be the comparison of published options prices to the price of the PMB package. This work showed conclusively that the current packages on offer by open schemes were way in excess of the price of the PMB package for the industry. In some cases the prices were four or five times the price of the PMB package.

The conclusion must be that there is substantial room to reduce the current benefit offerings in the industry to something closer to the price of the PMB package plus an additional amount for routine primary care. The industry needs to critically examine benefit offerings for 2004 and begin the designs with a focus on the PMB package.

Policy Issues Raised

It has become apparent during this research that the introduction of Prescribed Minimum Benefits with effect from 1 January 2000 has barely impacted the industry. Very few schemes are able to isolate PMB expenditure from other benefits. Of even greater concern is how few medical practitioners seem to have heard of PMBs. Thus at the critical interface with patients there is little knowledge of the rights of medical scheme beneficiaries to treatment for the PMB conditions. It is certainly not in the interests of schemes to educate practitioners and this critical role must be taken on centrally by the Department of Health or the Council for Medical Schemes.

The comparison of options prices in open schemes for the benchmark family shows a wide divergence of prices. Members should be facing a common community-rated price for the PMB package and not a price determined by each scheme according to its own demographic profile and illness burden. Now that a price has been conclusively determined for the PMB package for the industry, this can facilitate work on a risk equalisation mechanism between schemes that covers the benefits in the PMB package.

From the study findings, it is evident that pensioners are already vulnerable and that they will increasingly find contributions to medical schemes difficult to afford, given that medical contribution increases have exceed pension increases. Added to this is the changing structure of employee benefits in such a way that future pensioners will be unlikely to have a subsidy for medical benefits in retirement. The study describes the subsidy issue as a future time bomb and this issue needs to be placed on the agenda now.

The study also attempts to put into context the per capita subsidy mooted in the Taylor Committee report. It was demonstrated that this subsidy could have enormous impact on the affordability of healthcare for low-income families. This impact is subject to the final amount of the subsidy and the exact form it will take. There is no doubt that a subsidy of this nature has a far-reaching impact on affordability of the PMB package for low-income groups and clarity on proposals is now needed.
The price of the PMB package in the public sector, which lies at the heart of affordability for the low-cost options and the Bargaining Council schemes, now needs further work by the public sector itself. Medical schemes need to know at what price they can contract for the delivery of benefits in the public sector and these contracts need to be facilitated at a national level. The impact of this additional substantial network to the current hospital networks offered by the private sector should have a galvanising effect on hospital benefit negotiations for 2004.

To put the size of the business in context, total expenditure on the PMB package using the Weighted industry price would have been R 14.573 billion in 2001. The estimated price for delivery of the package in the public sector would have been R 9.460 billion. This covers only registered schemes and a further amount of R 0.268 billion would be added to the public sector total for those Bargaining Council schemes reporting in 2001.

**Further Work on Affordability**

A more comprehensive study using scheme contributions and expenditures adjusted for beneficiary profiles; household expenditure patterns as well as healthcare seeking behaviours is needed in order to provide a more exhaustive answer to the affordability question. This Affordability report should therefore only be considered as a first step in attempting to provide an answer on the affordability of the PMB package for those not currently in medical schemes.
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1. Introduction and Background

1.1 Purpose and Objectives

The Council for Medical Schemes (the Council) invited tenders for three projects in notices in national newspapers on 15 March 2002. The Council set out the scope of the projects and the expected outcomes.

A consortium of researchers, led by the Centre for Actuarial Research at the University of Cape Town (CARE PMB Consortium), was awarded the tender for these projects in a letter dated 20 May 2002. The Consortium consists of:

- Professor Heather McLeod of the Centre for Actuarial Research at UCT
- Professor Alan Rothberg of the Faculty of Medicine of the University of the Witwatersrand and Executive Director of Medscheme
- Dr Therese Fish of the University of Stellenbosch Graduate School of Business
- Deus Bazira Mubangizi of the Health Economics Unit, School of Public Health and Primary Health Care at UCT.

Medscheme Integrated Care Division, which is responsible for managed care initiatives for Medscheme clients, supplied data for these projects.

One of the objectives of the Centre for Actuarial Research is to build capacity in actuarial research through the contracting and mentoring of young researchers. To this end, a number of UCT Honours and Masters students assisted with aspects of this project. Their contributions are acknowledged in Section 1.4.

The Consortium proposed a number of changes to the methodology of the projects and the revised expected outcomes formed part of the agreed contract signed in June 2002. The proposed methodology for the third project, the Affordability Project, is set out in Appendix A.

This report is presented to the Council for Medical Schemes in fulfilment of the contract in respect of the last of the three projects. The first two reports are entitled:

- The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001; and

This report deals with the impact of those packages on the affordability of contributions.

While the first two projects established that the Prescribed Minimum Benefit (PMB) package appears to be generally affordable at an industry level, this project goes further to determine what the impact is at the industry level, the individual scheme level and the individual option level.

The scope of this part of the project has been broadened beyond the original brief in order to address the issue of the affordability of the PMB package in a number of different ways.
1.2 Approach to Affordability

There is surprisingly little literature on the topic of affordability and the issue seems to have barely been addressed in the South African context. While the concept of affordability is often discussed in the industry, the Consortium found different approaches to affordability in the few studies available.

A mandatory PMB package paid from a common risk pool in which contributions are made on the basis of size of family and income, independent of health risk profile, is in line with the general principles of equity. These include the equal treatment of equals and the unequal treatment of unequals. This means that people with equivalent healthcare needs are treated the same way and that people with unequal income should make different contributions to health care financing. There should be a clear relationship between ability to pay and payments made towards healthcare financing and the magnitude of benefit received should not be tied to the amount of payment made (Donaldson and Gerald, 1993). In a way therefore, the advocates of a mandatory PMB package for all with medical cover regardless of income and health risk profile, have as the main objective, ensuring equity in the provision and financing of private healthcare in South Africa. This understanding of equity though does not resolve the measurement of affordability.

Affordability as approached in this report does not follow the approach for assessing equity in healthcare financing. The latter is assessed using data from national health accounts combined with data from a nationally representative household survey of healthcare utilisation and expenditures to compile a description of the distribution of all health expenditures across a national population (Rannan-Eliya et al, 1999). Such an exercise has not been done in this study.

What is however relevant from an equity point of view is that certain forms of health care benefits go beyond the individual consumer. Such health care products fall within the public goods domain and cannot be left to individuals to provide at their own whim as failure or delay in provision could lead to negative effects for many. Beyond this is the fact that there are some in society (the poor and indigent), who cannot afford to provide for themselves. As McGuire et al (1987) argue, such groups need a social security system that gives them protection or else they would be faced with a reduction in their standard of living. It is along these lines that a PMB package can be considered to go beyond the limits of individuals to provide on their own and that is why such a package should be funded from a common risk pool. It is also for this reason that arguments are put forward for a subsidy towards those individuals who cannot afford to meet the cost of the PMB package on their own. The private sector is encouraged to expand to allow in new members, thus freeing government resources to be targeted at those who cannot meet the costs of healthcare on their own.

Affordability in this report is firstly determined relative to reported income and expenditure of the industry. While the first two studies showed that the PMB price appeared generally affordable for the whole industry, affordability needs to be judged at individual scheme level. In the absence of risk equalisation there will be variations between schemes as a result of differences in demographic characteristics which in turn lead to differences in utilisation and claim patterns in each scheme. The analysis is thus performed in the aggregate at industry level and then individually for schemes and finally for options.
The study looks at contributions and benefit expenditure in the medical scheme industry relative to the PMB package to assess affordability at industry and scheme level. The different components of the PMB package are disaggregated and compared to corresponding benefits offered by schemes in order to establish which part of the PMB package is affordable or not by schemes. This analysis is performed at an option level for total benefits and contributions, as more detailed benefit expenditure breakdowns are not available. The report provides an assessment as to whether the PMB package is affordable given current benefit payments and contributions actually received.

The reported outcome for a particular option or scheme during the year is affected by the demographic profile and health status of those who chose to join those options. This is particularly true of open scheme options. The PMB package is compared to published contribution tables in order to remove the selection effects. Published tables are an *a priori* expectation of prices, utilisation and selection. The analysis in this part focuses particularly on the published tables for low-cost options, as defined in Section 2.3.

Another way to understand affordability is to consider the price of the PMB package relative to the incomes of members. The affordability of the PMB package is considered for current members, potential members, those not yet in schemes but in employment and other groups such as pensioners and the disabled who are particularly affected by rising medical coverage costs.

The question of affordability is considered in the present environment and also in the context of changes in subsidy levels, both employer subsidies and the industry per capita subsidy. The affordability relative to income is affected by the extent to which the low-cost option market develops and contribution increases are kept under control. Thus there is also a time dimension to the question of affordability.

Affordability should also be looked at in the context of disposable income at a household level, after the deduction of basic living expenses. This aspect of affordability is not pursued in this report, but would be an important study to undertake in future.

Affordability has also been considered at an industry level in the Khosa, Söderlund & Peprah (1997) and Söderlund & Peprah (1998) studies. Both considered affordability in terms of the impact on the national payroll. These findings are summarised in Section 2.2. This aspect is not pursued in this report.

Thus in this report, affordability will firstly be approached from the point of whether current medical scheme contributions are adequate to meet a mandatory PMB package. Secondly, affordability of the PMB package will be considered in the context of income and subsidy levels.

### 1.3 Data and Methodology

This project uses the price of the PMB package developed in the first two projects: *The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001* and *The Costing of the Proposed Chronic Disease List Benefits in South African Medical Schemes in 2001*. 
The PMB package price estimated from the first two projects gives the Complete PMB package price. This was disaggregated into a hospital only component, hospital plus related costs, medicine only, major medical benefits and a non-healthcare component. Three PMB prices were considered, namely the Low cluster price, Weighted industry price and the High cluster price. The Complete PMB package price was determined by age and for a benchmark family, again by cluster.

Data at option level and scheme level was provided by the Council for Medical Schemes from the Statutory Returns to the Registrar for 2001. This data consists of the number of beneficiaries, contribution and total benefit information for each option in each scheme. At a scheme level, the benefits are split into categories of which hospital benefits, specialist benefits and medicine benefits were of interest.

The contribution, benefit expenditure and non-health care expenditure at a per beneficiary per annum level were determined for all options and for all schemes. These data were then compared with the PMB package relative to the corresponding component of the package in order to assess affordability. The data were also aggregated to provide industry level information for open schemes, restricted membership schemes and Bargaining Council schemes, as defined by the Registrar.

A forthcoming CARE monograph on exempt schemes provided data on contribution and benefit expenditure for these schemes in 2000, which was also used to assess affordability relative to the PMB package. The 2000 data on exempt schemes was useful as more schemes made returns to the Registrar in 2000 compared to 2001.

The study of low-cost options by Ranchod, McLeod & Adams (2001) provided information on the published contribution tables for all options, including low-cost options in 2001. The full data used in their study was made available to the Consortium. This enabled the PMB package price for a family to be compared to published contribution tables.

Data from the October Household Survey 1999 was used to extract income information households, pensioner income information, disabled income information and employment profile of the population. This information was used to assess affordability of the PMB package relative to different income levels for different groups.

1.4 Acknowledgements

The Consortium wishes to acknowledge the staff of the Council for Medical Schemes who collated the data set that made it possible for the option and scheme level analysis to be done. We also acknowledge all those whose prior work has been referred to in this study, for their work greatly informed the framework for this report.

Specific mention is made of Shivani Ranchod, who in her last year at UCT in 2001 acted as a research assistant to Professor McLeod. Her work on collating information on medical scheme benefit design and particularly on low-cost option design was an important starting point for this project.
Simon Dreyer, in his last year at UCT, collated and interpreted the data on exempt schemes that will be the subject of a forthcoming monograph.

Other students whose Honours projects provided valuable material were Shamim Aghdasi, Samora Adams, Zaïd Hoosain, Hamish Fraser and Preeta Rama. We are proud of the increasing number of actuarial students who now have experience of healthcare research.

The authors wish to express their gratitude to Kirsty Davies for her role in the efficient running of the central CARE office and in helping us to work seamlessly as a team across borders and from different offices.
2. Previous Research in South Africa on Affordability

2.1 Towards a National Health Insurance System

The Committee of Enquiry into National Health Insurance (NHI) recommended in 1995 that formally employed individuals and their employers be required to fund at least a minimum package of hospital cover for employees and their dependants. This cover could be provided under current medical schemes or under social health insurance in future, if such a system was to be introduced.

The Committee made a proposal for mandatory health insurance coverage for a defined hospital benefit package. The package proposed would not include primary care services as these would be provided and funded via the publicly funded Primary Health Care. The minimum for the package specified would be that all employed individuals and their families obtain coverage for at least the costs of their use of the public hospital system. The Committee further held that all those under current medical schemes would already have the minimum coverage level required. Those in formal employment without medical scheme cover would be obliged to obtain such cover and would be free to negotiate with employers for packages that exceeded the minimum requirements.

The mandatory core benefit package would not explicitly require that those covered be treated in a public hospital, only that the costs of that treatment must be covered, should they in fact use a public hospital. While employers and schemes were free to negotiate favourable rates with private hospital to offer that package for their members and families, the Committee emphasized the need to ensure that coverage in private hospitals should not exhaust the benefit cover leading to dumping of contributors on public hospital system as this would in turn raise public health costs, in violation of the major goal for wanting to reform the private health system.

The proposed package was deemed to be affordable to those targeted. Primary estimates in 1995 put the approximate cost of this package at R 400 per person per year on average. With adequate risk sharing arrangements in place, total costs for a family of three might amount to approximately R 56 per month. To ensure that payments related to this package were generally affordable especially to low income earners, contributions were to be made on the basis of income so that low income levels would pay substantially less than probably the average cost of the package while high income earners would pay more.

The proposed package and the accompanying regulatory reform was expected to stabilise the private health insurance system through a reversal of trends towards fragmentation of risk pools and the exclusion of the aged and sick from affordable coverage. This would be possible through preventing low risk and high-income members from leaving the system, at least with respect to the core package, and this would help to stabilise the market. The Committee postulated that the entry into medical schemes of a large number of relatively low income contributors would also generate incentives for medical schemes to design low-cost, affordable benefit packages in excess of the statutorily defined minimum, and that this would encourage trends towards managed care arrangements and other cost containment measures.
There were arguments against this package including an argument that the costs of the package had been underestimated and therefore its affordability was questioned.

Despite numerous arguments against the proposal and the number of unanswered questions posed, the Committee concluded that the advantages of the proposal significantly outweighed the disadvantages and that many problems raised in relation to the proposal could be dealt with through fine-tuning of the mechanisms involved.

2.2 Affordability of the Initial PMB Package

Khosa et al. (1997) discussed three main aspects of the proposed essential hospital package. Firstly, the report suggests possible motives for the National Health Insurance Committee’s proposed package. Secondly it highlights the importance of specific objectives when defining a minimum benefit package and lastly, it reviews international experience of defining minimum hospital benefit packages and relates the experience to the South African context. A common theme throughout the paper is the need for further technical and political work concerning the introduction of a minimum package.

Some of the assumptions made in this paper are that the government would not be able to provide free hospital care and that a minimum package would be affordable and would be an acceptable substitute for public hospital care. Affordability in this paper was considered in the context of what the likely impact of a mandatory package on the aggregate national payroll would be.

The authors conclude the paper by recommending that, in order to take the process of developing a minimum benefit package forward, the National Health Department needs to clearly define the main objectives of the minimum benefit package, set the priorities for defining the benefits provided by the package, and proceed to define a minimum benefit package. Consideration has to be given to the cost of providing the package to low-income formal sector employees, taking into account demographic, socio-economic and health care usage patterns. Finally, the burden of the contributions on employers and employees, as well as the proportion of the total workforce covered from the package’s inception has to be carefully considered.

The paper by Söderlund & Peprah (1998) discusses issues encountered in reforming the financing system of health care in South Africa. They suggest the major objective for proposing a minimum benefit package was a minimum public insurance objective. They then develop key criteria that could be used to define such a package. A minimum benefit package is defined and priced on the basis of these criteria:

- Exclusion of services for which there are other parties responsible. In particular, it was suggested that primary care, hospital care for mental illness & chronic infectious diseases and occupational illness and injuries be excluded from the package.
- The degree of urgency of the condition. In other words, discretionary treatments were excluded (where the degree of urgency for provision of the treatment is low).
- The cost effectiveness of the treatment. In other words, when two treatment options (with equal effectiveness) exist for a single condition, the lower cost treatment is included in the package.
Söderlund & Peprah (1998) estimate that a feasible low-cost package of essential inpatient and outpatient hospital care would cost around R 690 per person per year given the average age and gender structure of the employed but uninsured population and their dependants. This cost consists of approximately R 510 for hospital care, and R 180 for ambulatory care.

To put this cost into the affordability context, the authors estimated the impact of this mandatory package on the aggregate national payroll. Data on income, numbers of dependants were taken from the 1995 October Household Survey and income was inflated to 1998 using the Consumer Price Index. The table below (from their paper) summarises the impact of including different income groups in mandatory cover.

Table 1: Estimated Impact of Minimum Benefits on National Payroll (Söderlund & Peprah (1998))

<table>
<thead>
<tr>
<th>Income category (R per bread-winner per year)</th>
<th>Average number of dependants per worker</th>
<th>Cumulative number of persons covered-000s (workers plus dependants)</th>
<th>Cumulative percentage of total payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;200,000</td>
<td>0.74</td>
<td>21</td>
<td>0.4</td>
</tr>
<tr>
<td>100,001-200,000</td>
<td>1.55</td>
<td>200</td>
<td>1.2</td>
</tr>
<tr>
<td>75,001-100,000</td>
<td>2.02</td>
<td>423</td>
<td>1.7</td>
</tr>
<tr>
<td>50,001-75,000</td>
<td>2.22</td>
<td>1,297</td>
<td>2.6</td>
</tr>
<tr>
<td>30,001-50,000</td>
<td>2.29</td>
<td>3,731</td>
<td>4.1</td>
</tr>
<tr>
<td>20,001-30,000</td>
<td>2.31</td>
<td>7,503</td>
<td>5.8</td>
</tr>
<tr>
<td>10,001-20,000</td>
<td>2.47</td>
<td>13,470</td>
<td>8.1</td>
</tr>
<tr>
<td>5,001-10,000</td>
<td>2.51</td>
<td>17,536</td>
<td>9.8</td>
</tr>
<tr>
<td>2,001-5,000</td>
<td>2.19</td>
<td>19,817</td>
<td>10.5</td>
</tr>
<tr>
<td>1,001-2,000</td>
<td>2.38</td>
<td>19,344</td>
<td>10.6</td>
</tr>
<tr>
<td>0-1,000</td>
<td>2.13</td>
<td>19,384</td>
<td>10.6</td>
</tr>
</tbody>
</table>

The significance of the above table is that if the package was to be mandatory for everyone earning more than R20 000 per year, an additional cost of 5.8% would be added to the national payroll and an additional 7.503 million people would be provided with healthcare cover.

The impact considered by Söderlund & Peprah is on the cost of employment rather than on household expenditure. The authors further observe that including lower income groups into the core package cover would probably impose an inordinate economic burden on low-to middle-income workers and their employers. They advised that the core package should not be applied to those earning less than R20 000 per year.
2.3 Initial Research on Low Cost Options

Ranchod, McLeod & Adams (2001) identified and analysed trends in the provision of low-cost options in medical schemes in 2001. Data on income of scheme members was based on a survey carried out by the Council for Medical Schemes among open schemes in 2000. Data on benefit structures was based on information collected from the marketing material of medical schemes in early 2001.

The study identified two groups that could benefit from low-cost options in medical schemes, namely those currently not covered by medical schemes (a potential target for Social Health Insurance) and current members of medical schemes who can no longer afford options they are using and need a lower-cost solution.

Ranchod et al (2001) quoting from Rama & McLeod (2001), show that the major force driving members to seek lower cost alternatives in the medical scheme environment is the increase in real contribution rates. It is shown that from 1974 to 1999, contributions in real terms increased from approximately R 300 to R 900 per member per month in 2000 Rand amounts. This not only has put pressure on members given their income levels but also has consequences for affordability of contributions generally and impacts on the ability of the industry to attract new members.

In the 1970’s when contributions in real terms were lower, the employer subsidy was in the range of 50% to about 66%. This employer subsidy has also changed with employers seeking to limit the subsidy or limit it to a specific less expensive option, leaving the member to meet full costs if a more expensive option was chosen. Other employers have opted to make their subsidy in fixed Rand amounts regardless of contribution increases. All these changes have far reaching implications for affordability especially given that the Prescribed Minimum Package has to be offered without limitation to all members and their dependants under medical schemes. The authors point out that the change in employer subsidy policy has its greatest impact in retirement.

The relevance of this study on low-cost options is that not only do schemes have to consider the price of PMB package and whether they can afford to offer it, but they also need to consider the impact of future increases and changes in subsidy on contributions and the tremendous pressure this creates on affordability.

The Ranchod study restricted detailed analysis to 41 out 166 options that met the criteria for low-cost options. Using a benchmark family of four (two adults plus two children) with a monthly income of R4 000, they found that majority of the 166 options had contributions per family per month of more than R1 000. Only those costing less than R1 000 for the benchmark family were considered to be low-cost options. However, the authors express reservations as to whether a family with an income of R4 000 per month can afford to pay so large a proportion of income in medical scheme contributions, even if there is a 50% employer subsidy.

From an affordability perspective, it is important to consider the total cost to members for there is a possibility that an option can look deceptively cheap when most of the day-to-day expenses are paid for out of savings accounts or are expected to be paid out-of-pocket. The need to fund benefits out-of-pocket would impact substantially on the affordability of healthcare for low-income families.
It is apparent from the study that the lowest-cost options have rejected savings accounts and instead use networks for the delivery of primary care to members. In many cases, the primary care is capitated in these networks.

The study shows that contributions for the lowest-cost options are still generally between R 600 and R 800 per month for a family of four. This is considered unaffordable, as there are many families whose income is below R3 000 per month. The authors therefore argue that in order to address the issue of affordability for low-cost options, the industry needs to come up with new products that are offered at a cost of below R 500 per month for the benchmark family. It is only products below this price that can attract a substantial market of those not yet covered by medical schemes.

The authors recommend that the way of ensuring more affordable packages is to use contracted networks for hospital benefits as well as for primary care. In particular, they recommend engaging with the public sector to offer hospital benefits and chronic medicine under contract to scheme beneficiaries, an option that has not been fully utilised to date.

2.4 Affordability of Working Class Healthcare

A relevant study for affordability is by Cornell J.E titled, “Trade Unions and the Restructuring of Working Class Health Care in South Africa: Case Studies in the Clothing, Leather and Transport Sectors 1992-1996” which looks at healthcare for members working in the mentioned industries and belong to what have come to be known as Bargaining Council Schemes. This study was undertaken for a doctoral thesis.

Cornell J. (Doctoral Thesis 1997) observes that in the 1980s, South African government policy was explicitly directed towards the increasing privatisation of health services and the deregulation of the private sector, in line with broader policy aimed at making the South African economy more competitive. The doctrine of individual responsibility and its correlate of freedom of choice was an essential part of the ideological thrust of ‘modernising’. In terms of health care this translated to a view that, on the one hand, workers were responsible for the health care of their families and, on the other, that they should be free to choose the level and style of care to which they had access - in the private sector. The only constraint on choice was affordability. This formulation is based on two assumptions: that health care is an individual responsibility and that ability to pay should determine the nature of the care to which an individual has access.

Unions taking up health care as an issue are, in effect, challenging both these assumptions. They are asserting that the responsibility for health care is not individual but collective and that need, rather than ability to pay, should determine the nature of the care to which an individual has access. In this way, the issue of health care connects directly with the central trade union principles of collectivism and solidarity. Consequently, it has a rightful place on the agenda of any trade union, other than those with a very narrowly economistic definition of their role. By taking up health care in a collective way, trade unions take a quantum leap, extending their support to their members in time of illness and giving them the backing of a collective organisation which will assert their rights and challenge the attitudes and practices of health professionals.
Cornell (1997) goes on to argue that if unions want to ensure access to good and affordable health care for their members, they have to address a number of issues which emerged in the course of the studies.

The first of these issues is the widespread distrust of the public health sector amongst workers and its corollary of exaggerated respect for the private sector. The distrust of the public sector is based partly on direct experience in the apartheid era. Services were under-resourced, resulting in overcrowding, long queues and shortages of staff, equipment and supplies. Therefore, as we think in terms of getting some beneficiaries to use public health sector services for PMB package delivery, this issue should be brought to bear.

The impetus to move out of the public sector was strengthened in situations where there was a racial gradient in access to health care within a company or sector. She adds that exposure to differential benefits focuses aspirations on achieving the most expensive benefits, short-circuiting a more fundamental process of examination and comparative ranking of health and other needs. She stresses that this is independent of the question of how the costs are met: a decision to aim for a lower cost benefit is not a union failure, provided negotiating energy is directed to ensure that the putative increase is not lost but redirected to improvement of the cash wage or other elements of the social wage.

However, it is unrealistic to imagine that members will change their attitude towards the public sector on order. This will not happen unless and until there are visible changes in public sector services, which need to achieve a dramatic shift in image. The use of public sector services by high profile personalities, especially (but not only) from the political sphere, would assist in raising the credibility of these services, as would the involvement and backing of union leaders. There is a curious anomaly in the fact that the staff of public sector health services, some of whom are unionised, belong to medical schemes and use primarily private sector health care. If those who provide the health care in the public sector are seen to go elsewhere for their own health care, it is not surprising that workers would prefer to follow their example. Equally, it is strange that unions, which are strongly opposed to privatisation, on political as well as economic grounds, have failed to make the link with health policy.

One of the clearest points to emerge from the studies is the difficulty of containing costs in systems which are located in the open private sector. Direct delivery of services through primary care clinics, staffed and financed by the schemes themselves (as in the industrial council schemes), facilitates monitoring of both cost and quality, though it does not automatically assure them. Care delivered via contracted panel doctors is less satisfactory, particularly in terms of quality of care, but does enable some degree of monitoring of cost. The free choice system operating in most commercial medical schemes is the most problematic of all. The assumption is that the quality of care is higher than from panel doctors but there is no necessary causal link between high fees and high quality.

Cornell found that the relationship between benefit design and utilisation levels on the one hand, and contribution tables and increases on the other, is generally obscure not only to union members but also to their representatives on management structures.
3. Price of the Prescribed Minimum Benefit Package

The first PMB project, *The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001*, developed a price for the existing PMB package, excluding the Chronic Disease List (CDL). This price has two components, the Inpatient package and the Outpatient package. The second project, *The Costing of the Proposed Chronic Disease List Benefits in South African Medical Schemes in 2001*, developed a price for the CDL package and then combined the three components to comment on the price of the Complete PMB package. All values are given in 2001 Rand terms.

The projects reported on the price of PMBs by cluster. The approach developed by Medscheme involves using statistical techniques to cluster the benefit options into distinct groups based on option characteristics and demographic characteristics, primarily age of members, family size and percentage of African-Black membership. In the absence of details in medical schemes on socio-economic status, the reality is that ethnicity still plays a part in differentiating claiming behaviour.

Research shows that the different clusters experience different benefit utilisation, costs and disease profiles. Provider behaviour has been shown to differ by cluster, even within the same hospital facility. The reports showed prices of the components and the Complete package for the following clusters:

- **High** contains options with older, 'whiter' members with high utilisation;
- **Medium-older** contains options with medium utilisation and older members;
- **Medium-younger** contains options with medium utilisation and younger members; and
- **Low** contains options with younger, 'blacker' members with low utilisation.

As the Low cluster is more dominant in Medscheme data than in the rest of the industry, the Consortium recommended using a weighted total price to better represent the industry. This weighted price uses 50% of the costs of the Low clusters and 100% of the other clusters. This *Weighted industry* price is the one predominantly used in the Affordability studies. The results for the Low cluster are more relevant to the emerging low-cost option environment. The High cluster is used in this Affordability report to give an upper limit to the PMB price in comparison to specific scheme data.

Note that the prices in this Section should not be used blindly in pricing work. They cover only the actual claims in the study period, for the demographic group in this study, as adjusted by the margins and factors discussed in the first two reports.

In order to use this data for contracting or pricing, further adjustments will need to be made. These include standardisation to the expected demographic profile of the scheme, an inflation adjustment to the period when the price is to apply, incorporation of contracted administration and managed care costs and an allowance for solvency margins, depending on the current solvency position of the scheme. The uncertainty of pricing in an open scheme as compared to a restricted scheme environment, together with marketing costs and brokerage would also need to be accounted for. An actuary, or other skilled pricing professional, should be consulted on adapting these prices for the actual pricing of other medical schemes or for pricing provider capitation contracts for future years.
3.1 Price of the Inpatient and Outpatient Packages

The price of the PMB package (excluding CDL) is divided into four components as shown in the graph below. Firstly the Inpatient PMB package price based on the full data in the study, for which there is a high degree of certainty about the result; secondly, that portion of price for which uncertainty exists in the PMB definition (the proportion to include of the Non-classifiable (NC) and excluded from PMB (OUT) categories); thirdly, the margin added for ambulatory costs and finally the non-healthcare costs.

Non-healthcare costs include the hospital management programme, administration, member management and claims payment for hospitalisation and related events. An estimate for the non-healthcare component of the ambulatory package is also included.

As indicated in the graph above and detailed in Table 3 (electronically as Appendix B), the price of the PMB package (excluding CDL) is R1 479.04 pbpa or R 123.25 pbpm for the Weighted industry total. This is made up of an Inpatient package of R1 246.95 pbpa and an Outpatient package of R 232.10 pbpa in 2001 prices.

Note that the electronic version of the price spreadsheet supplied as Appendix B on CD-ROM can be adjusted to explore the price using different assumptions to those used by the Consortium.

Of note is the price of the Low cluster, which is 45.2% of the price for the High cluster. The price of the PMB package (excluding CDL) for the Low cluster is R1 100.08 pbpa, while that of the High cluster is R2 432.41 pbpa.
3.2 Price of the Chronic Disease List Package

The price of the CDL package is also divided into four components, as shown in the graph below. Firstly the medicine component of the package, based on the full data in the study, for which there is a high degree of certainty about the result; secondly, that portion of price for which uncertainty exists until the package is fully defined and an allowance for the impact of the package being mandatory; thirdly, the amount added for medical management costs and finally the non-healthcare costs.

Non-healthcare costs include the chronic medicine management programme, administration, member management and claims payment for chronic medication.

![Figure 2: Price of Private Sector CDL Package by Cluster](image)

As indicated in the graph above and detailed in Table 4 (electronically as Appendix B), the Weighted industry price of the CDL package is R 677.74 pbpa or R 56.48 pbpm. The price of the CDL package for the Low cluster is 33.1% of the price for the High cluster. The price for the Low cluster is R 451.39 pbpa while that of the High cluster is R1 365.09 pbpa.

Note that differences between Low and High cluster prices are the result of a complex interaction of factors, including differences in disease profile. PMB content is different for the two clusters, with the High cluster tending towards diseases of lifestyle and degeneration while the Low cluster tends towards socio-environmental diseases. The reader is referred to the first two reports in this series for a greater understanding of the issue.
3.3 Price of Complete PMB Package

The Complete PMB package consists of the Inpatient package, the Outpatient package and the CDL package.

Using the Weighted industry total the price of the Complete PMB package is R2 156.78 pbpa or R 179.73 pbpm. This is made up of an Inpatient package of R1 246.95 pbpa, an Outpatient package of R 232.10 pbpa and the CDL package of R 677.74 pbpa in 2001 prices. The detail is presented in Table 4 (electronically as Appendix B).

The CDL package thus adds 45.8% to the price of the PMB package, as it exists in 2001, before CDL. The CDL package represents 31.4% of the Complete PMB package.

The Complete PMB package for the Low cluster delivered in the private sector is R1 551.47 pbpa or R 129.29 pbpm. The price for the High cluster is R3 797.50 pbpa or R 316.46 pbpm. The price of the Low cluster is 40.9% of that of the High cluster, or in other words, the High cluster price is 2.45 times that of the Low cluster.

The CDL package contains the chronic medicine component together with an estimate for medical management which covers the diagnosis and management of the CDL conditions. In the graph and table below, the medicine component is separated from the medical management component and the latter is added to the Outpatient package to give the cost of the Ambulatory component of the PMB package. This is shown graphically and in the table below.

![Figure 3: Price of Private Sector Complete PMB Package by Cluster](image-url)
The PMB price was developed using private sector data and thus these prices are for the delivery of the PMB package in a private sector fee-for-service environment.

The prices above are thus based on the protocols (whether explicit or implicit) in use in the private sector in 2001. To the extent that contracts with providers are entered into on a risk-sharing basis, the protocols for treatment may alter. The greater the degree of risk-sharing, the more careful providers are expected to be in ensuring that an appropriate standard of care is delivered and that wastage in the system is reduced. It is not possible to put an estimate on that effect, but the impact would be to reduce the price in the private sector from the levels quoted.
Table 3: Full Price of PMB Package\(^1\) (excluding CDL) per Beneficiary per Annum

<table>
<thead>
<tr>
<th>Price per beneficiary per annum (in 2001 Rand terms)</th>
<th>Estimate</th>
<th>High</th>
<th>Medium-older</th>
<th>Medium-Younger</th>
<th>High and Medium</th>
<th>Low</th>
<th>Total Study</th>
<th>Weighted Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Sector Package:</strong></td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>50%</td>
<td>weights on left</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-patient PMB package</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portion of NC</td>
<td>20% (^2)</td>
<td>R 84.46</td>
<td>R 67.29</td>
<td>R 43.64</td>
<td>R 64.20</td>
<td>R 32.35</td>
<td>R 41.40</td>
<td>R 46.45</td>
</tr>
<tr>
<td>Portion of Out</td>
<td>27% (^3)</td>
<td>R 281.46</td>
<td>R 222.36</td>
<td>R 167.89</td>
<td>R 221.27</td>
<td>R 108.20</td>
<td>R 140.35</td>
<td>R 158.26</td>
</tr>
<tr>
<td>Hospital management costs</td>
<td></td>
<td>R 38.56</td>
<td>R 32.31</td>
<td>R 29.57</td>
<td>R 33.26</td>
<td>R 23.29</td>
<td>R 26.13</td>
<td>R 27.71</td>
</tr>
<tr>
<td>Claims payment costs and queries</td>
<td></td>
<td>R 43.46</td>
<td>R 36.41</td>
<td>R 33.32</td>
<td>R 37.49</td>
<td>R 26.25</td>
<td>R 29.44</td>
<td>R 31.23</td>
</tr>
<tr>
<td><strong>Total Inpatient package</strong></td>
<td></td>
<td>R 2,076.97</td>
<td>R 1,709.86</td>
<td>R 1,256.20</td>
<td>R 1,662.21</td>
<td>R 917.01</td>
<td>R 1,128.88</td>
<td>R 1,246.95</td>
</tr>
<tr>
<td>Dialysis</td>
<td>R 12.00 (^4)</td>
<td>R 12.00</td>
<td>R 12.00</td>
<td>R 12.00</td>
<td>R 12.00</td>
<td>R 12.00</td>
<td>R 12.00</td>
<td>R 12.00</td>
</tr>
<tr>
<td>Chemotherapy</td>
<td>R 36.00 (^5)</td>
<td>R 36.00</td>
<td>R 36.00</td>
<td>R 36.00</td>
<td>R 36.00</td>
<td>R 36.00</td>
<td>R 36.00</td>
<td>R 36.00</td>
</tr>
<tr>
<td>Other Ambulatory care</td>
<td>15% (^6)</td>
<td>R 299.24</td>
<td>R 246.17</td>
<td>R 179.00</td>
<td>R 238.72</td>
<td>R 130.12</td>
<td>R 161.00</td>
<td>R 178.20</td>
</tr>
<tr>
<td>Ambulatory administration</td>
<td>10% (^7)</td>
<td>R 8.20</td>
<td>R 6.87</td>
<td>R 6.29</td>
<td>R 7.08</td>
<td>R 4.95</td>
<td>R 5.56</td>
<td>R 5.89</td>
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<tr>
<td><strong>Total Outpatient package</strong></td>
<td></td>
<td>R 355.44</td>
<td>R 301.04</td>
<td>R 233.29</td>
<td>R 293.79</td>
<td>R 183.07</td>
<td>R 214.55</td>
<td>R 232.10</td>
</tr>
<tr>
<td><strong>Total PMB Package excl. CDL</strong></td>
<td></td>
<td>R 2,432.41</td>
<td>R 2,010.90</td>
<td>R 1,489.49</td>
<td>R 1,956.01</td>
<td>R 1,100.08</td>
<td>R 1,343.43</td>
<td>R 1,479.04</td>
</tr>
</tbody>
</table>

**Public Sector Adjustment:**

| Total Inpatient package                              | 70% \(^8\) | R 1,465.44 | R 1,206.59 | R 888.21 | R 1,173.53 | R 648.89 | R 798.05 | R 881.17 |
| Total Outpatient package                             | 70% \(^8\) | R 251.27 | R 212.79 | R 165.19 | R 207.78 | R 129.64 | R 151.85 | R 164.23 |
| **Total PMB package(excl.CDL) delivered in Public sector** | R 1,716.72 | R 1,419.39 | R 1,053.40 | R 1,381.31 | R 778.53 | R 949.91 | R 1,045.41 |

\(^1\) The following adjustments have been used in determining the full price of the PMB package (references to original PMB report):

\(^2\) For uncertainty in definition of the package, 20% of the NC is included (see section 8.1.2)

\(^3\) For uncertainty in definition of the package, 27% of the OUT is included (see section 8.1.1)

\(^4\) The preliminary margin for Dialysis is R 12.00 pbpa (see section 8.3)

\(^5\) The preliminary margin for Chemotherapy is R 36.00 pbpa (see section 8.3)

\(^6\) Other ambulatory care is 15% of the Inpatient PMB, NC and OUT amounts (see section 8.5)

\(^7\) Ambulatory administration is 10% of Inpatient non-healthcare expenditure (see section 8.6)

\(^8\) Public sector delivery is 70% of the cost in the private sector (see section 9)
Table 4: Full Price of CDL Package and Effect on PMB Package\(^2\) per Beneficiary per Annum

<table>
<thead>
<tr>
<th>Price per beneficiary per annum (in 2001 Rand terms)</th>
<th>Estimate used</th>
<th>High</th>
<th>Medium-older</th>
<th>Medium-Younger</th>
<th>High and Medium</th>
<th>Low</th>
<th>Additional</th>
<th>Total Study</th>
<th>Weighted Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private Sector Package:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chronic Disease List package</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
<td></td>
<td>50%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R 913.58</td>
<td>R 569.64</td>
<td>R 421.64</td>
<td>R 637.24</td>
<td>R 226.31</td>
<td>R 590.69</td>
<td>R 333.40</td>
<td>R 394.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td>R 0.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical management estimate</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td>R 130.00</td>
<td></td>
</tr>
<tr>
<td>Compliance adjustment</td>
<td>20.0(^{\circ})</td>
<td>R 182.72</td>
<td>R 113.93</td>
<td>R 84.33</td>
<td>R 127.45</td>
<td>R 45.26</td>
<td>R 118.14</td>
<td>R 66.68</td>
<td>R 78.95</td>
</tr>
<tr>
<td>5.0(^{\circ})</td>
<td>R 45.68</td>
<td>R 28.48</td>
<td>R 21.08</td>
<td>R 31.86</td>
<td>R 11.32</td>
<td>R 29.53</td>
<td>R 16.67</td>
<td>R 19.74</td>
<td></td>
</tr>
<tr>
<td>Co-pay adjustment</td>
<td>5.0(^{\circ})</td>
<td>R 52.43</td>
<td>R 40.18</td>
<td>R 31.64</td>
<td>R 41.65</td>
<td>R 22.77</td>
<td>R 46.72</td>
<td>R 28.38</td>
<td>R 31.59</td>
</tr>
<tr>
<td>6(^{\circ})</td>
<td>R 28.31</td>
<td>R 21.69</td>
<td>R 17.08</td>
<td>R 22.49</td>
<td>R 12.29</td>
<td>R 25.22</td>
<td>R 15.32</td>
<td></td>
<td>R 17.06</td>
</tr>
<tr>
<td>Total CDL package</td>
<td>R 1,365.09</td>
<td>R 911.83</td>
<td>R 711.75</td>
<td>R 999.48</td>
<td>R 451.39</td>
<td>R 948.48</td>
<td>R 595.28</td>
<td>R 677.74</td>
<td></td>
</tr>
<tr>
<td>Total PMB Package excluding CDL</td>
<td>R 2,432.41</td>
<td>R 2,010.90</td>
<td>R 1,489.49</td>
<td>R 1,956.01</td>
<td>R 1,100.08</td>
<td>R 1,343.43</td>
<td>R 1,479.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total PMB Package including CDL</td>
<td>R 3,797.50</td>
<td>R 2,922.73</td>
<td>R 2,201.25</td>
<td>R 2,955.48</td>
<td>R 1,551.47</td>
<td>R 1,938.71</td>
<td>R 2,156.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDL proportion of PMB Package (excl. CDL)</td>
<td>56.1%</td>
<td>45.3%</td>
<td>47.8%</td>
<td>51.1%</td>
<td>41.0%</td>
<td>44.3%</td>
<td>45.8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CDL proportion of PMB Package (incl. CDL)</td>
<td>35.9%</td>
<td>31.2%</td>
<td>32.3%</td>
<td>33.8%</td>
<td>29.1%</td>
<td>30.7%</td>
<td>31.4%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Public Sector Adjustment:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PMB package (excl. CDL) in Public sector</td>
<td>R 1,716.72</td>
<td>R 1,419.39</td>
<td>R 1,053.40</td>
<td>R 1,381.31</td>
<td>R 778.53</td>
<td>R 949.91</td>
<td>R 1,045.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total CDL package</td>
<td>R 708.76</td>
<td>R 476.00</td>
<td>R 371.69</td>
<td>R 520.56</td>
<td>R 237.08</td>
<td>R 497.60</td>
<td>R 311.83</td>
<td>R 354.66</td>
<td></td>
</tr>
<tr>
<td>Total PMB package (incl.CDL) delivered in Public sector</td>
<td>R 2,425.48</td>
<td>R 1,895.39</td>
<td>R 1,425.10</td>
<td>R 1,901.87</td>
<td>R 1,015.61</td>
<td>R 1,261.73</td>
<td>R 1,400.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^2\)The following adjustments have been used in determining the full price of the CDL package (references to original CDL report):

1. Cost of haemophilia is R0.50 pbpa (see section 9.1)
2. For removal of three conditions in final Regulations, 3.7% of the CDL medicine package cost is removed (see section 9.2)
3. For estimate of medical management in definition of the package, R130.00 is added pbpa (see section 9.3)
4. Margin for effect of lack of compliance is 20% of the CDL medicine package (see section 9.4)
5. Margin for effect of limits and co-payment removal is 5% of the CDL medicine package (see section 9.5)
6. Public sector delivery is 50% of the cost in the private sector (see section 10.3)
3.4 Non-healthcare Expenditure on the PMB Package

The table below shows the proportion of non-healthcare expenditure estimated to be necessary to deliver the Complete PMB package. The full cost of the hospital management and chronic medicine management for PMBs has been included. The administration component covers the following services:

- claims assessment
- claims payment
- a portion of contribution collection
- a portion of scheme finance (accounting, reporting and pricing)
- a portion of membership management and customer services costs.

The table below shows the proportion of non-healthcare expenditure included in each component of the Complete PMB package.

**Table 5: Proportion of Non-healthcare Expenditure in the Complete PMB Package**

<table>
<thead>
<tr>
<th>Non-healthcare Expenditure as a Proportion of ...</th>
<th>High</th>
<th>Medium-older</th>
<th>Medium-Younger</th>
<th>High and Medium</th>
<th>Low</th>
<th>Total Study</th>
<th>Weighted Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inpatient package</td>
<td>3.9%</td>
<td>4.0%</td>
<td>5.0%</td>
<td>4.3%</td>
<td>5.4%</td>
<td>4.9%</td>
<td>4.7%</td>
</tr>
<tr>
<td>Total Outpatient package</td>
<td>2.3%</td>
<td>2.3%</td>
<td>2.7%</td>
<td>2.4%</td>
<td>2.7%</td>
<td>2.6%</td>
<td>2.5%</td>
</tr>
<tr>
<td>Total CDL package</td>
<td>5.9%</td>
<td>6.8%</td>
<td>6.8%</td>
<td>6.4%</td>
<td>7.8%</td>
<td>7.3%</td>
<td>7.2%</td>
</tr>
<tr>
<td>Complete PMB package</td>
<td>4.5%</td>
<td>4.7%</td>
<td>5.4%</td>
<td>4.8%</td>
<td>5.8%</td>
<td>5.4%</td>
<td>5.3%</td>
</tr>
</tbody>
</table>

The proportion of non-healthcare expenditure for the CDL package at 7.2% is higher than for the Inpatient and Outpatient components of the package. This is due to the greater intensity of chronic medicine benefit management relative to hospital benefit management. Hospitalisation is a single event for most admissions whereas medicines management requires ongoing management with or without a formal disease management component.

The proportion of non-healthcare expenditure for the Complete PMB package is 5.3%. The proportion is highest for the Low cluster at 5.8%, falling to 4.5% for the High cluster. All of these results are well below the 10% benchmark commonly used by the Registrar of Medical Schemes.

In an open scheme environment there will be an additional component for member acquisition and maintenance, including marketing costs and brokerage fees. The full cost of member enquiry help-lines has also not been included. In a scheme with a complex benefit structure, or experiencing administration delays, this aspect of administration cost can escalate substantially from what has been included. The costs of data warehousing and IT development in a complex benefit environment may also be higher than included here. Reinsurance for small schemes has not been included but is unlikely to be warranted on the PMB package when risk equalisation is in place.

Given that non-healthcare expenditure for the Complete PMB package is only 5.3% of the total price, there is enough scope to add these additional costs and remain within the Registrar’s benchmark of 10% of total expenditure.
3.5 Price of PMB Package Delivered in the Public Sector

The delivery of the package in the public sector is of interest particularly for low-cost options that would be targeted at those not yet covered under the present medical scheme environment and the Bargaining Council schemes.

Definitive studies of the relationship between public sector and private sector costs for the PMB package of events are not available. An attempt to compare the costs in the Medscheme environment between public and private sector hospital admissions uncovered the unexpected finding that not all provinces were billing using the UPFS system in 2001. This further complicates any estimate of public sector prices. A more comprehensive project to look at these cases is scheduled for 2003 at CARE.

A great deal of work needs to be done to definitively determine the relationship between the UPFS costs in the public sector and the costs in the private sector. Work is underway at the National Department of Health on a study that may assist in this regard in future.

In the absence of solid evidence, the Consortium recommends the use of 70% of the full PMB price for delivery of both the PMB Inpatient package and the PMB Outpatient package in the public sector environment. This may be adjusted in negotiations with the relevant provincial authorities.

The estimate suggests that the price of the PMB package (excluding CDL) for the Low cluster could reduce from R1 100.08 pbpa to R 778.53 pbpa, or R 64.88 pbpm when delivered in the public sector.

The 1995 Report of the Committee of Inquiry into a National Health Insurance System considered the impact of a switch in private sector prescribing to the Essential Drugs List (EDL) medicines. They favoured a scenario in which prescription costs would be halved, rather than the best-case scenario in which an 80% reduction could be achieved if all drug prescriptions were switched to EDL medicines at State tender prices.

A study by Rothberg & Walters (1996) compared private sector prescribing patterns to the EDL protocols. They showed that if the EDL medicines prescribed by GPs in the study were purchased through the State, an 18.3% saving would be achieved on the total medicines expenditure. An additional 15.7% would be saved if GPs switched ‘other forms of EDL’ items to EDL items, and another 38.0% if supplementary formulary items and some out-of-formulary items could be switched to EDL medicines. Switching of all items, other than an acceptable 10% of out-of-formulary items, would achieve a saving of some 72% on total GP medicine expenditure.

The ability to achieve this saving depends on the ability and willingness of prescribers to switch patients from non-EDL to EDL products, and the base from which the savings are calculated.

The issue of private sector access to the Essential Drugs List medicines at State tender prices was again raised in the recent report of the Social Security Committee of Inquiry. Consideration needs to be given to making certain drugs available nationally, either free, or on a cost-recovery basis. This intervention can dramatically bring down the cost of treating certain conditions and will eliminate the incentive for medical schemes to discriminate.
against chronic sufferers. Such an intervention will be both market sensitive and have significant implications for the achievement of public health objectives.

The Consortium recommends using an estimate of a 50% saving in the cost of the CDL package when delivered in the public sector. As policy unfolds in this area, so this estimate can be further refined. The price of the CDL package for the Low cluster could reduce from R 451.39 pbpa to R 237.08 pbpa, or R 19.76 pbpm when delivered in the public sector.

The Complete PMB package for the Low cluster could thus reduce from R1 551.47 pbpa or R 129.29 pbpm delivered in the private sector, to R1 015.61 pbpa or R 84.63 pbpm when delivered in the public sector.

The detail is presented in Tables 3 and 4 (electronically as Appendix B), and the relationship between the public sector and private sector costs is illustrated below. Note that administration and managed care costs are included in each part of the public sector package.

![Figure 4: Price of Public Sector Complete PMB Package by Cluster](image)

The reason for considering the public sector even in the absence of full costing data is to provide a benchmark against which the public sector can work to develop services for delivery of a Complete PMB package that is attractive to scheme beneficiaries, especially those in the Low cluster and the potential additional Social Health Insurance members.
### 3.6 Price of Complete PMB Package by Age

Extensive work was done in the first two reports on aspects of the PMB package by age. The key results of incidence (prevalence for the Chronic Disease List conditions), average cost and raw price were all shown by age. Five-year age bands were used throughout, with the addition of the category 0-1. Although the PMB study did not go beyond the category 75+, the CDL study used age bands up to 85+ in order to capture the distinct tailing off of chronic medicine costs at the highest ages.

The raw price of the PMB package needs a number of adjustments and margins added in order to obtain the full price. These are given in the table below, with the recommendation of the Consortium as to how these items should be spread by age. The references are to the original reports where the decisions for the level of each adjustment are argued.

<table>
<thead>
<tr>
<th>Section in PMB Report</th>
<th>Inpatient and Outpatient Packages</th>
<th>Decision on shape of adjustment by age</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1</td>
<td>Uncertainty in Definition of the PMB Package</td>
<td>Actual OUT and NC by age tables extracted. Used 20% of NC and 27% of OUT at all ages.</td>
</tr>
<tr>
<td></td>
<td>Recoding the OUT Group</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recoding the NC Group</td>
<td></td>
</tr>
<tr>
<td>8.2</td>
<td>Hospital Management and Administration Costs</td>
<td>Spread total costs according to PMB incidence by age.</td>
</tr>
<tr>
<td>8.3</td>
<td>Costs of Chemotherapy and Dialysis</td>
<td>Small flat amount applied to all ages. Correct shape with respect to age unknown.</td>
</tr>
<tr>
<td>8.4</td>
<td>Costs related to HIV/AIDS</td>
<td>Already included in raw price.</td>
</tr>
<tr>
<td>8.5</td>
<td>Estimate of the Cost of Ambulatory Care</td>
<td>Flat 15% of IN, NC and OUT used, applied at all ages.</td>
</tr>
<tr>
<td>8.6</td>
<td>Ambulatory Administration</td>
<td>Flat 10% applied at all ages to expenses by age.</td>
</tr>
<tr>
<td>9.3</td>
<td>Estimate for Delivery of PMBs in the Public Sector</td>
<td>Flat 70% of private sector package, with 100% of managed care costs, applied to all ages.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Section in CDL Report</th>
<th>Chronic Disease List Package</th>
<th>Decision on shape of adjustment by age</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.1</td>
<td>Cost of Treating Haemophilia</td>
<td>Very small flat amount applied to all ages. Correct shape with respect to age unknown.</td>
</tr>
<tr>
<td>9.2</td>
<td>Removal of Diseases from CDL List in Final Regulations</td>
<td>Flat 3.7% reduction applied at all ages to raw price by age.</td>
</tr>
<tr>
<td>9.3</td>
<td>Estimate of Cost of Diagnosis and Medical Management</td>
<td>Spread total costs according to CDL prevalence by age.</td>
</tr>
<tr>
<td>9.4</td>
<td>Adjustment for Compliance</td>
<td>Flat 20% added at all ages to raw price by age.</td>
</tr>
<tr>
<td>9.5</td>
<td>Adjustments for Co-payments and Limits</td>
<td>Flat 5% added at all ages, for each of co-payments and limits, to raw price by age.</td>
</tr>
<tr>
<td>9.6</td>
<td>Medicine Management and Administration Costs</td>
<td>Spread total costs according to CDL prevalence by age.</td>
</tr>
<tr>
<td>10.3</td>
<td>Estimate for CDL Package Delivered in the Public Sector</td>
<td>Flat 50% of private sector package, with 100% of managed care costs, applied to all ages.</td>
</tr>
</tbody>
</table>
The graph below illustrates the PMB package components and the Complete PMB package price by age. The price of the Complete PMB package delivered in the public sector is super-imposed on the graph. The price of each component of the PMB package by age is given in Appendix C and supplied on CD-ROM.

Note the very strong shape of the PMB package by age. The CDL package is barely in evidence before age 35 and becomes progressively more expensive with age until age 80, where after it reduces somewhat. The Inpatient package has the strongest effect on the overall shape, with a high price for the 0-1 age band, very low prices in the childhood years, the classic South African early adult hump and the increase with age from age 45 onwards.

Note also for all age bands over age 40, that the price of the Complete PMB package exceeds the community-rated price. This illustrates why there is still such a strong incentive for open medical schemes to attract and retain younger members. This incentive will remain until risk equalisation using at least the age factor is implemented.

The estimate for the delivery of the Complete PMB package in the public sector effectively provides the Complete PMB package for roughly the same price as the private sector Inpatient and Outpatient packages. It could be said that roughly speaking, by using the public sector for delivery rather than the private sector, members would obtain the CDL package of benefits at no additional cost.
3.7 Price of Complete PMB Package for a Family

The unit of analysis until this point has been the price per beneficiary per annum. In order to compare these prices to the results of the research on low-cost options in the industry, the price needs to be expressed separately for adults and children. This will enable the price for a typical family to be explored.

There were 6,757,083 beneficiaries and 2,603,861 members in registered schemes in 2001. This gives a dependency ratio of 2.6:1. Information from the October Household Survey 1999 indicates that the greatest concentration of scheme membership is around age 35 with family composition of between two adults plus two children and two adults plus 3 children (Ranchod et al, 2001). Analysis of contribution tables shows that the typical increase in contribution for adding a third child is marginal. The study by Ranchod et al therefore recommends that a family of four be used as the reference family.

Once the price of the Complete PMB package by age had been determined, using the adjustments and margins detailed in the Section above, it was possible to isolate the price for children and adults. The price for children was taken to be the community-rated price for all beneficiaries under age 20. The price for adults was taken to be the community-rated price for all beneficiaries age 20 and over.

The table below gives the price of the Complete PMB package for a typical family of two adults plus two children, on a per family per month basis. The spreadsheet for determining these prices is supplied as Appendix B on CD-ROM.

<table>
<thead>
<tr>
<th>Price per family per month (2001 Rands)</th>
<th>High</th>
<th>High and Medium</th>
<th>Low</th>
<th>Total Study</th>
<th>Weighted Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inpatient package</td>
<td>R 556.37</td>
<td>R 466.84</td>
<td>R 291.98</td>
<td>R 345.27</td>
<td>R 373.29</td>
</tr>
<tr>
<td>Total Outpatient package</td>
<td>R 98.28</td>
<td>R 84.98</td>
<td>R 59.00</td>
<td>R 66.93</td>
<td>R 71.09</td>
</tr>
<tr>
<td>Total CDL package</td>
<td>R 338.95</td>
<td>R 259.47</td>
<td>R 138.33</td>
<td>R 176.00</td>
<td>R 195.94</td>
</tr>
<tr>
<td>Complete PMB package Private Sector</td>
<td>R 993.59</td>
<td>R 811.28</td>
<td>R 489.31</td>
<td>R 588.19</td>
<td>R 640.33</td>
</tr>
<tr>
<td>Complete PMB package Public Sector</td>
<td>R 638.26</td>
<td>R 525.01</td>
<td>R 321.15</td>
<td>R 383.75</td>
<td>R 416.76</td>
</tr>
</tbody>
</table>

The Weighted industry price for the Complete PMB package is R 640.33 per month for a family of four, when delivered in the private sector. It is estimated that this would reduce to R 416.76 pm when delivered in the public sector. The Low cluster price for a family of four would be R 489.31 pm in the private sector and R 321.15 pm in the public sector.

The table below shows the monthly price for a single adult, as an additional reference point.
Table 8: Price of the Complete PMB Package per month for a Single Adult

<table>
<thead>
<tr>
<th>Price per single adult per month (2001 Rands)</th>
<th>High</th>
<th>High and Medium</th>
<th>Low</th>
<th>Total Study</th>
<th>Weighted Industry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Inpatient package</td>
<td>R 219.42</td>
<td>R 177.58</td>
<td>R 110.50</td>
<td>R 132.69</td>
<td>R 143.84</td>
</tr>
<tr>
<td>Total Outpatient package</td>
<td>R 36.51</td>
<td>R 30.28</td>
<td>R 20.29</td>
<td>R 23.59</td>
<td>R 25.26</td>
</tr>
<tr>
<td>Total CDL package</td>
<td>R 155.83</td>
<td>R 117.65</td>
<td>R 60.47</td>
<td>R 78.51</td>
<td>R 87.97</td>
</tr>
<tr>
<td>Complete PMB package Private Sector</td>
<td>R 411.76</td>
<td>R 325.51</td>
<td>R 191.25</td>
<td>R 234.79</td>
<td>R 257.07</td>
</tr>
<tr>
<td>Complete PMB package Public Sector</td>
<td>R 261.37</td>
<td>R 207.92</td>
<td>R 124.26</td>
<td>R 151.52</td>
<td>R 165.43</td>
</tr>
</tbody>
</table>

The price of the Complete PMB package on a monthly basis for a family of four is used to compare to low-cost options in Section 7. The prices for a single adult and a family of four are used to compare to income levels in Section 8 and the price for a single adult and two adults is used to compare to pensioner income levels in Section 9.
4. Affordability Relative to Industry Benefits

Analysis in this section has been based on the Registrar’s Returns for the year 2001. The unit of analysis is the amount per beneficiary per annum. The relevant components of the Complete PMB package are compared to categories of benefit expenditure in the Statutory Returns.

The study takes into consideration all benefit payments, whether paid from the risk pool or from savings accounts, because all benefits represent a direct cost to members. The amounts that members pay out-of-pocket as a result of co-payments or limits is not explored here.

The affordability relative to benefits is initially explored at industry level by considering open vs. restricted schemes and all registered schemes. There can be significant differences in affordability for particular schemes and the same comparisons are then performed for each scheme. Finally, the comparisons are performed at option level on total benefits. Data is not available on all the components of expenditure at option level.

The graph below shows the distribution of beneficiaries between open, restricted and Bargaining Council schemes. Out of the consolidated total of 7 020 806 beneficiaries as at 31 December 2001, 67.9% (or 4 768 076) were in open schemes, 28.3% (or 1 989 007) were in restricted schemes and the remaining 3.8% (or 263 723) were in Bargaining Council schemes. The question of affordability for registered schemes is dealt with in this section and affordability for the Bargaining Council schemes is dealt with separately in Section 6.

![Figure 6: Beneficiaries in Medical Schemes as at 31 December 2001](image-url)
4.1 Comparison to Total Hospital Expenditure

The hospital component of the PMB package is compared to hospital benefits in the Statutory Returns.

The graph below shows the hospital component of the PMB package for the Low cluster, Weighted industry and the High cluster compared with hospital benefits for open, restricted and all registered schemes. The horizontal lines crossing the whole graph are set at the price of the Low cluster and the Weighted industry price.

Note that on the open, restricted and registered scheme bars, the expenditure is shown split between a large pooled component at the bottom and the benefits paid from savings at the top of the respective bars. In the case of hospital expenditure, there is almost no expenditure from savings so the division is barely visible.

The surprising finding in the first study and seen again here is that the expenditure by restricted schemes on hospitals is much lower than for open schemes. On investigation this has been demonstrated to be a problem in the way certain schemes classified benefit expenditure. Some of the largest problems identified and reported to the Council for Medical Schemes were in respect of large restricted schemes. The misclassification of expenditure typically greatly understates the hospital expenditure and greatly inflates expenditure on medicine and appliances for particular schemes.

Figure 7: PMB Hospital Component Relative to Industry Hospital Benefits

Note that on the open, restricted and registered scheme bars, the expenditure is shown split between a large pooled component at the bottom and the benefits paid from savings at the top of the respective bars. In the case of hospital expenditure, there is almost no expenditure from savings so the division is barely visible.

The surprising finding in the first study and seen again here is that the expenditure by restricted schemes on hospitals is much lower than for open schemes. On investigation this has been demonstrated to be a problem in the way certain schemes classified benefit expenditure. Some of the largest problems identified and reported to the Council for Medical Schemes were in respect of large restricted schemes. The misclassification of expenditure typically greatly understates the hospital expenditure and greatly inflates expenditure on medicine and appliances for particular schemes.
The PMB Low cluster and Weighted industry amounts in the graph above are well covered by all schemes. On average, the Weighted industry price accounts for 63.8% of hospital benefits per beneficiary in 2001 for all registered schemes, 68.2% for restricted schemes and 62.1% for open schemes. The Low cluster price accounts for 46.6% of hospital benefits for all registered schemes, 49.8% for restricted schemes and 45.4% for open schemes.

The High cluster price is greater than the existing expenditure on hospitals for open, restricted and all registered schemes. However it is very unlikely that any scheme will have a demographic profile of only High cluster-like beneficiaries. Even if several options have this profile the scheme as a whole is likely to have a profile between the High cluster and that of the Weighted industry.

Overall at industry level the findings are suggestive that the current level of hospital benefits should adequately cover the hospital component of PMBs.

When individual schemes are considered, there is a wider range of results. The table below shows the number of schemes that meet particular expenditure levels. The full detail at scheme level is given electronically in Appendix D and supplied on CD-ROM.

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>6</td>
<td>13</td>
<td>19</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>7</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>13</td>
<td>22</td>
<td>35</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>23</td>
<td>60</td>
<td>83</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>

There are 19 registered schemes, (13.0% of schemes) that appear not to match even the Low cluster price of the PMB hospital component. These schemes present the greatest concern from an affordability perspective.

The data from Statutory Returns had some obvious errors especially when it came to hospital and medicine expenditure figures. It was found that some schemes had reported almost nil expenditure on hospital benefits while their expenditure on medicines was almost half of total expenditure on pooled benefits. The Consortium is of the opinion that for some of those schemes, expenditure on hospitals was incorrectly reported as expenditure on medicines or other items. It is therefore possible that as many as 12 of the 19 schemes above that do not meet the Low cluster expenditure level will be found to have errors in their hospital expenditure information in their Statutory Returns to the Registrar.

Even with data corrections, it appears that there could be some schemes that cannot afford even the Low cluster PMB hospital component within current benefit expenditure on hospitals. One possible reason is a scheme growing fast where average benefit expenditure appears low because of the delay in new beneficiaries submitting claims.
The 2001 data may also have had beneficiaries still within waiting periods for certain conditions that means that real expenditure patterns are delayed, although this is more likely to affect chronic medicine expenditure than hospitalisation, where PMB conditions would still have to be covered.

A further possible reason is that schemes could have used risk-sharing arrangements for the hospital component, for example a per diem contract, and not reflected this portion correctly as hospital expenditure. This is likely to be one reason for some of the data inaccuracies outlined above.

The most likely reason for schemes not meeting the Low cluster price is that these schemes have a very young age profile and thus their current hospital expenditure is unusually low. These schemes require individual attention to understand which options are affected, the demographics of those options and the benefit design of those options.

It was found that 56.8% of registered schemes currently spend more on hospital benefits than the High cluster hospital component. More restricted schemes are at this level of expenditure (61.9%) compared to open schemes (46.9%).

### 4.2 Comparison to Hospital and Specialist Expenditure

The price of the Inpatient and Outpatient components of the PMB package, excluding managed care and administration costs, is compared to reported expenditure on hospitals and a proportion of specialist’s costs. The Consortium elected to use hospital expenditure plus 60% of expenditure for specialists as a proxy figure for the PMB study’s hospital and related costs.

![Figure 8: PMB Hospital and Related Component Relative to Industry Proxy](chart)

**Figure 8: PMB Hospital and Related Component Relative to Industry Proxy**
At an industry level, expenditure on hospitals plus 60% of specialist expenditure seems adequate to afford the estimated PMB price for hospital and related charges at both the Low cluster price and the Weighted industry price. Note how there is now slightly more scheme expenditure from savings than there was for the hospital only comparison.

On average, the Weighted industry price accounts for an estimated 75.3% of registered scheme expenditure on these elements. This is higher than for hospital only, which stood at 63.8%. The measure stands at 68.2% for restricted schemes and 62.1% for open schemes. However the problems described above with restricted scheme hospital data will influence this result. The Low cluster price for hospital and related expenditure accounts for 55.7% of hospital plus 60% of specialist benefits for all registered schemes.

The table below shows how schemes perform for different levels of that component of the package which includes hospital and related benefits.

### Table 10: PMB Hospital Plus Related Component Relative to Scheme Proxy Benefits

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>11</td>
<td>14</td>
<td>25</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>7</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>17</td>
<td>33</td>
<td>50</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>14</td>
<td>42</td>
<td>56</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>

As anticipated from the industry level analysis, the results at scheme level are generally poorer than for the hospital component alone.

### 4.3 Comparison to Total Medicine Expenditure

The medicine component of the PMB package is compared to medicine benefits from the Statutory Returns. The Registrar’s report does not distinguish between acute and chronic medicine benefits, thus it is expected that the PMB medicine component price will be much lower than the reported spend on all medicines per beneficiary. This is illustrated in the graph below.

Note that the total medicine expenditure by schemes is separated into pooled expenditure and savings account expenditure in the graph below. In the three bars showing open, restricted and all registered schemes, the bottom part of the bar is pooled expenditure and the top part is savings account expenditure.

In Section 4.1 the problems with categorisation of hospital and medicine expenditure in the Statutory Returns were raised. The misclassification of expenditure greatly inflates expenditure on medicine and appliances for a scheme. As some of the largest problems were for restricted schemes, this would also explain the seemingly higher spend on medicine for restricted schemes in the graph below.
The PMB Low cluster and Weighted industry amounts in the graph above are clearly well covered both by total medicine expenditure and by pooled medicine expenditure by all schemes. On average, the Weighted industry price accounts for 42.2% of medicine benefits per beneficiary in 2001 for all registered schemes, 44.9% for open schemes and 37.2% for restricted schemes. The Low cluster price accounts for 24.2% of medicine benefits for all registered schemes.

It appears that even the High cluster price is just covered for all registered schemes and more easily covered for restricted schemes. However, given the misclassification of data this finding is unlikely to be correct.

The table below gives a summary of how schemes perform relative to the medicine component of the PMB package, using their total spend per beneficiary on medicines in 2001.

Table 11: PMB Medicine Component Relative to Scheme Medicine Benefits

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>6</td>
<td>9</td>
<td>15</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>6</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>19</td>
<td>32</td>
<td>51</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>18</td>
<td>52</td>
<td>70</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>
There are 15 registered schemes, (10.3%) that appear not to match the Low cluster price of the PMB medicine component. Based on the uncorrected data made available to the Consortium, 82.9% of registered schemes have expenditure on medicines which exceeds the Weighted industry level and 47.9% of schemes have expenditure which already exceeds the High cluster level.

It seems likely that even after data corrections that the majority of schemes will be able to afford the Chronic Disease List package without any changes to contributions. The issue cannot be explored at option level, given the format in which data is submitted to the Registrar.

### 4.4 Comparison to Total Benefit Expenditure

The price of the Complete PMB package, excluding managed care and administration costs, is compared to total benefit expenditure in the Statutory Returns.

![Figure 10: PMB Package of Benefits Relative to Industry Total Benefit Expenditure](image)

The industry total benefit expenditure per beneficiary per annum is more than the price of the Complete PMB package (excluding non-healthcare costs) at all three levels, namely Low cluster, Weighted industry and High cluster price. This means that technically at an industry level, the complete PMB package can be provided within current industry benefit expenditure and should thus not put upward pressure on contributions.
The High cluster price accounts for up 79.0% of registered scheme total benefit expenditure, the Weighted industry PMB price accounts for 44.5% and the Low cluster price accounts for 31.8% of the industry total benefit expenditure pbpa.

The Weighted industry PMB price appears to be generally affordable as it takes up less than half the total expenditure on all benefits, leaving substantial space for primary care benefits and extended benefits with no effect on contribution levels.

The demographic profile of a particular scheme may result in experience different from that of the Weighted industry experience. The table below shows the impact at scheme level of meeting the various PMB prices.

Table 12: PMB Package of Benefits Relative to Scheme Total Benefits

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>0</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>33</td>
<td>79</td>
<td>112</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>

There are seven restricted schemes, (4.8% of all registered schemes) that would not meet the Low cluster price of the PMB package of benefits. Note that all open schemes are already offering benefits at a level exceeding the Low cluster PMB package. The 14 schemes that do not meet the Weighted total PMB package, should be investigated further. Their beneficiary profiles needs to be analysed in order to further determine why their total benefit expenditure is so far below the industry average.

It can be inferred that given the low number of schemes failing to meet the PMB package of benefits compared to those failing to meet hospital only, medicine only and hospital plus related PMB packages, that what is needed is the restructuring of benefits so that more money goes into funding the mandatory PMB package in all cases.

Looking at the results another way, 95.2% of schemes already have benefit expenditure that exceeds the Low cluster cost of the PMB package of benefits on a per beneficiary per annum basis. The expenditure of 90.4% of schemes exceeds the Weighted industry PMB package of benefits and 76.7% exceed the High cluster package of benefits.

The price of the PMB package of benefits used in this comparison already includes a substantial loading for the current uncertainty in the definition of PMBs. Thus it is possible to say with certainty that at a scheme level, 90.4% of the schemes are already paying for benefits at a level in excess of the industry cost of the PMB package. The same can be said for 91.8% of restricted schemes and 87.8% of open schemes.
The same analysis has been performed at option level, to the extent that data was made available. Data at options level was received for 137 of the 146 registered schemes. Out of these, 44 were open and 93 were restricted schemes. In total 553 options were considered, 291 of which were part of open schemes and 262 were part of restricted schemes.

Table 13: PMB Package of Benefits Relative to Option Total Benefits

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>49</td>
<td>28</td>
<td>77</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>19</td>
<td>5</td>
<td>24</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>59</td>
<td>41</td>
<td>100</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>164</td>
<td>188</td>
<td>352</td>
</tr>
<tr>
<td>Total</td>
<td>291</td>
<td>262</td>
<td>553</td>
</tr>
</tbody>
</table>

At an option level, there are 77 options (13.9%) that have expenditure on benefits that does not cover the Low cluster PMB package of benefits. More open schemes (16.8%) are in this position, compared to restricted schemes (10.7%). Further analysis of these options is needed to look at their benefit structure and beneficiary profile in order to conclusively establish the reason why they are not offering benefits at a level expected to meet at least the Low cluster PMB package.

Although more open scheme options do not meet the Low cluster PMB package price, we saw earlier at scheme level that all open schemes are already offering benefits at a level exceeding the Low cluster PMB package. This suggests that some options, possibly due to the risk and demographic profile of beneficiaries are spending less on benefits while others are spending more. What is needed is to ensure that each option is able to meet the matching PMB package given the profile of beneficiaries in that option.

It was found that 81.7% of all options offer benefits in excess of the Weighted industry PMB package. This can be said for 87.4% of restricted scheme options and only 76.6% of open scheme options.

The substantial difference in coverage of restricted vs. open scheme options bears further investigation. One possible explanation is the degree of company subsidy provided in a restricted scheme environment may make it feasible to provide packages with greater benefits. In a restricted scheme environment it is also possible to engineer long-term cross-subsidies between options in order to assist lower income workers. Finally, as will be seen in Section 5.2, non-healthcare expenditure is typically much greater in an open scheme environment, thus for the same contribution level, less is available for benefit expenditure.

It is recommended that a more detailed study of the benefits available in open vs. restricted schemes be performed. Included in the analysis would be an assessment of the non-healthcare costs in each environment.
4.5 Implications of the Results

Schemes and options that are paying benefits in excess of the industry package could either have an age profile substantially older than the industry age profile, or are providing benefits in excess of those required by Prescribed Minimum Benefits legislation.

The question of age can be investigated more thoroughly once better data is available on age profiles at option level. The methodology would be to determine an age- and socio-economic-standardised price of the PMB package for each option, using the unique demographic characteristics for that option. This would then be compared to the actual expenditure.

It is anticipated that there are substantial differences in age profile between options. Legislation requires that each option be priced to be financially self-supporting. As the price of the PMB package is strongly related to age, those options with a lower than industry average age profile would have a price advantage over other options. In a restricted scheme environment this has little consequence and in fact may be a deliberate strategy by employer and unions to cross-subsidise the lower income employees.

In open schemes this price advantage is of great importance for competitive reasons. Open schemes thus have a strong incentive to encourage and maintain a lower than average age profile. It is strongly recommended that age should be the first variable to be used in the process of risk equalisation between schemes. Age certainly does not explain all differences in option level pricing, but as was shown in Section 3.6, age is a major determinant in the shape of the price curve.

The question of the content of packages in excess of those required under PMB legislation is likely to be of great interest to the industry in the months following the release of these results. The question we need to ask is what benefits are being included that are not part of PMBs. The addition of GP services, optical, dental, allied health disciplines and acute medication in current scheme designs can be of the order of 25-30% of benefit spend.

This questioning of benefits may lead to a redefinition of the PMB package, or to a redefinition of the packages on offer to the industry in 2004 and beyond. Suffice to say that there seems to be substantial scope in benefit packages to reduce the package to closer to the legislated levels and thus provide affordable healthcare to many more people.
5. Affordability Relative to Industry Contributions

Analysis in this section has been based on the Registrar’s Returns for the year 2001. The unit of analysis is the amount per beneficiary per annum. The relevant components of the Complete PMB package are compared to components of the contributions reported in the Statutory Returns.

5.1 Composition of Contributions

The contribution charged to members is typically made up of the following components:

- The expected cost of the benefit package (the largest component and should be of the order of 90% of the contribution, but is often less in South Africa);
- Loadings for uncertainty with regard to demographic changes and the future cost of benefits and utilisation of benefits;
- A loading for building the required or greater than required level of statutory reserves;
- An allowance (usually reduction) for expected investment income on the assets of the scheme;
- An adjustment for the expected net cost of any reinsurance arrangement (typically only necessary in smaller schemes);
- Administration fees charged by the administrator or the cost of in-house administration;
- Managed care fees for services rendered by managed care companies;
- The costs of designing and printing marketing material, and postage in respect of this material, to the extent that this does not form part of the standard administration charge;
- The costs of meetings of the Board of Trustees and the Annual General Meeting;
- The costs of employing a Principle Officer and his/her staff;
- Auditors fees;
- Consulting fees, typically for an actuarial opinion on the pricing and reserving;
- Legal fees (if anticipated);
- Brokerage expected to be paid for new members (only in open schemes);
- Membership of industry bodies, such as the Board of Healthcare Funders; and
- Annual levies by the Council for Medical Schemes.

The overall contribution needed for all these items is the total or gross contribution. Some schemes make use of personal savings account structures to incentivise members to manage their own healthcare expenditure, usually limited to day-to-day benefits like GP visits and acute medicines. The amount that is allocated to savings accounts may not exceed 25% of the gross contribution. The balance of the contribution is known as the risk pool contribution.

The table below shows the risk pool and savings contributions per beneficiary for all registered schemes in 2001.
On aggregate, savings contributions account for 9.9% of all scheme contributions. The proportion may appear low but this is an average amount and some schemes do not operate savings accounts. Particularly in open schemes, there are typically some options with savings account structures and others without. In other words 91.1% of contributions are paid into the risk pool. In comparison, 89.3% of benefits are paid from the risk pool. The lower proportion of benefits relative to contributions is probably because the risk pool contribution is used to cover more of the non-healthcare expenditure and to build statutory reserves.

### 5.2 Comparison to Non-healthcare Expenditure

The graph below illustrates the composition of non-healthcare expenditure for all registered schemes in 2001. Non-healthcare expenditure is defined as (administration + managed care fees + net loss on reinsurance + broker fees (in open schemes) + bad debts component).

#### Table 14: Contributions per beneficiary per annum in 2001

<table>
<thead>
<tr>
<th></th>
<th>Risk Pool Contribution</th>
<th>Savings Contribution</th>
<th>Gross Contribution</th>
<th>Savings Proportion of Gross Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Schemes</td>
<td>R 4,876.66</td>
<td>R 598.69</td>
<td>R 5,475.35</td>
<td>10.9%</td>
</tr>
<tr>
<td>Restricted Schemes</td>
<td>R 5,192.41</td>
<td>R 433.00</td>
<td>R 5,625.41</td>
<td>7.7%</td>
</tr>
<tr>
<td>All Registered Schemes</td>
<td>R 4,970.98</td>
<td>R 549.19</td>
<td>R 5,520.17</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

#### Figure 11: Industry Non-healthcare Expenditure in 2001
The bad debts component is defined as (bad debts written off – bad debts recovered + increase in bad debt provision during the year). Own facility cost is not part of the current definition of non-healthcare expenditure, but has been included in the long historic series to aid in the understanding of managed care costs in the past.

The graph below shows historic non-healthcare expenditure per beneficiary per annum in real terms, i.e. after removing the effects of inflation. All figures in the graph are taken from the historic Registrar’s Reports and restated to the equivalent of 2001 Rands. The sharp increase in non-healthcare expenditure in recent years is cause for great concern as to the impact on value-for-money to members.

![Graph showing historic non-healthcare expenditure per beneficiary per annum in real terms. The graph compares the administration plus managed care component of the Complete package to the same items in the industry, taken from the Statutory Returns. The PMB package does not contain margins for broker fees, bad debts or losses on reinsurance. The administration plus managed care component of the PMB package is also shown relative to total non-healthcare expenditure by the industry.]

**Figure 12: Historic Industry Non-healthcare Expenditure in Real 2001 Rands.**

The graph below compares the administration plus managed care component of the Complete package to the same items in the industry, taken from the Statutory Returns. The PMB package does not contain margins for broker fees, bad debts or losses on reinsurance. The administration plus managed care component of the PMB package is also shown relative to total non-healthcare expenditure by the industry.

Note that although the PMB package contains what is believed to be an appropriate portion of membership management and customer services costs, this cost can be substantially higher in schemes with complex benefit structures or those experiencing administration delays, as discussed in Section 3.4. The costs in open schemes of member management are also greater than in restricted schemes.
The non-healthcare costs allowed for in the PMB package price are substantially lower than non-healthcare expenditure in registered schemes. Non-healthcare expenditure for open schemes is R 921 per beneficiary per annum, while that included in the PMB package for the Low cluster is less than 10% of that level. Open schemes spend 1.8 times the amount that restricted schemes spend on non-healthcare items, when measured on a per beneficiary per annum basis.

Table 15: Administration plus Managed Care of PMB Package Relative to Schemes

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>47</td>
<td>90</td>
<td>137</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>

Only one open scheme has administration plus managed care expenditure less than the Low cluster value, whereas this is the case for six restricted schemes. This further serves to show that open schemes spend more on administration costs than restricted schemes.

It is noteworthy that on average the industry spent R 785.23 per beneficiary per annum on non-healthcare expenditure in 2001. The cost of the Weighted industry Complete PMB package is R2 156.78 pbpa. Thus current non-healthcare expenditure is 36.4% of the amount needed for the delivery of healthcare and administration of the PMB package.
5.3 Comparison to Total Contributions

The price of the Complete PMB package, including administration and managed care costs, is compared to gross contributions (i.e. pooled contributions plus savings account contributions) from the Statutory Returns. This is shown in the graph below, with pooled contributions shown separately from savings account contributions.

![Graph showing comparison of PMB package price to industry contributions](image)

**Figure 14: Complete PMB Package Price Relative to Industry Contributions**

Overall, pooled contributions more than cover the Complete PMB package price. The Weighted industry PMB price constitutes 43.4% of pooled contributions for all registered schemes, 44.2% for open schemes and 41.5% for restricted schemes. In all cases the proportion is less than 50.0%. Thus after meeting costs associated with the Complete PMB package, schemes still have more than half of their pooled contributions to meet other benefits and non-healthcare costs in excess of those already in the PMB price.

When total contributions are considered, the Weighted industry PMB price constitutes 39.1% of total contributions for all registered schemes, 39.4% for open schemes and 38.3% for restricted schemes. Total contributions thus cover the PMB package by a substantial margin at an industry level.

The High cluster PMB price takes up 76.4% of pooled contributions for all registered schemes and 68.8% of total contributions. It would seem that at scheme level, the expenditure in the industry is more than adequate to cover the PMB package with a substantial margin for additional benefits.
The table below shows the analysis to total contributions at a scheme level.

**Table 16: Complete PMB Package Price Relative to Scheme Total Contributions**

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Between Low Cluster and W.I.</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Between Industry and High C.</td>
<td>8</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Exceeding High C.</td>
<td>40</td>
<td>81</td>
<td>121</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>49</strong></td>
<td><strong>97</strong></td>
<td><strong>146</strong></td>
</tr>
</tbody>
</table>

From the table above, six schemes, all of them restricted schemes, cannot meet the estimated Complete PMB package Low cluster price given their current total contributions. An additional three schemes do not meet the Weighted industry price. These schemes need to be looked at more closely to establish their demographic profiles and the nature of their benefit structures.

Looking at the results another way, 93.8% of all registered schemes have existing contribution levels which more than cover the complete PMB package Weighted industry price. 82.9% of all schemes have contributions which are greater than even the High cluster price.

The table below shows the same analysis at option level.

**Table 17: Complete PMB Package Price Relative to Option Total Contributions**

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>20</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>Between Low Cluster and W.I.</td>
<td>14</td>
<td>15</td>
<td>29</td>
</tr>
<tr>
<td>Between Industry and High C.</td>
<td>62</td>
<td>27</td>
<td>89</td>
</tr>
<tr>
<td>Exceeding High C.</td>
<td>195</td>
<td>206</td>
<td>401</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>291</strong></td>
<td><strong>262</strong></td>
<td><strong>553</strong></td>
</tr>
</tbody>
</table>

Only 34 options (6.1%) of options fail to meet the Low cluster PMB package price when considering total contributions. This compares to 77 options (13.9%) that did not cover the Low cluster package benefits, when considering total benefit expenditure, as shown in Section 4.4.

It was found that 88.6% of all options have contributions in excess of the Weighted industry PMB price. This can be said for 88.9% of restricted scheme options and 88.3% of open scheme options. These figures are substantially higher than the coverage of benefits in Section 4.4.
The conclusion at an option level is that there are only relatively few options where existing levels of contribution do not meet the industry level PMB price. It cannot be concluded without further work that these options could not or are not covering the Complete PMB package. These options may have much younger profiles than the industry and thus contributions may be artificially low. Some options could already be using public sector contracts and thus have lower contributions than the private sector PMB price.

In order to determine the full impact of affordability, it would be necessary to produce age- and socio-economic–standardised prices of the Complete PMB package for each option. The collection of age data in respect of options at the Registrar’s office is beginning to improve, but in 2001 the data was not considered by the Consortium to be reliable enough to perform this task without substantial estimation.

Note that contributions also need to include a margin to build solvency reserves. This element has not been included in the PMB package price, as the amount to be included will vary from scheme to scheme. It will always be true that contributions seemingly cover the PMB package more completely than does a comparison of benefits.

Overall, it can be concluded that the existing level of contributions in the industry is more than adequate to meet the cost of the PMB package. There are some instances of options where this is not the case, but these need to be dealt with on a case-by-case basis to determine whether this is really an affordability problem or whether the lower level of contributions is a result of the demographic profile. The latter is believed to be the more likely explanation.

5.4 Impact of PMBs on Savings Account Structures

Schemes with savings accounts whose benefit structures currently do not cover the Complete PMB package are likely to re-design their benefits so that funds currently channelled to savings accounts will instead be used for pooled benefits.

The whole PMB package has been clarified in the Regulations of 4 November 2002 to cover the standard of treatment in a public hospital, not only treatment in those facilities. The Minister added the following explanatory note to the Regulations on Prescribed Minimum Benefits:

(2A) In respect of treatments denoted as “medical management” or “surgical management”, note (2) above describes the standard of treatment required, namely “prevailing hospital-based medical or surgical diagnostic and treatment practice for the specified condition”. Note (2) does not restrict the setting in which the relevant care should be provided, and should not be construed as preventing the delivery of any prescribed minimum benefit on an outpatient basis or in a setting other than a hospital, where this is clinically most appropriate.

The Chronic Disease List package to be implemented from 1 January 2004 requires for the 25 specified conditions:

Diagnosis, medical management and medication, to the extent that this is provided for by way of a therapeutic algorithm for the specified condition, published by the Minister by notice in the Gazette.
Medical schemes thus need to reconsider many of the items currently paid only from savings and instead incorporate these as PMBs to be paid from pooled funds. The Minister has clarified in Regulation that schemes may not use savings accounts to pay for PMBs in any way. This is likely to see further impetus to reducing the amounts going to savings structures.

### 5.5 Comparison to PMB Package in the Public Sector

Until this point, the PMB package prices that have been used have been the private sector fee-for-service prices. The graph below shows the comparison of the PMB package to total contributions from the Statutory Returns, but distinguishing between the public sector cost of the PMB package and the additional cost if delivered in the private sector.

![Figure 15: Complete PMB Package Public Sector Relative to Industry Contributions](image)

**Figure 15:** Complete PMB Package Public Sector Relative to Industry Contributions

The coverage of the PMB package at private sector levels was discussed in Section 5.3 above. It is clear that if public sector contracts to deliver the PMB package are pursued, then the affordability of the package is even greater. The table below compares the Complete PMB package price when delivered in the public sector with total contributions in schemes.
Table 18: Complete PMB Package Public Sector Relative to Scheme Contributions

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>47</td>
<td>88</td>
<td>135</td>
</tr>
<tr>
<td>Total</td>
<td>49</td>
<td>97</td>
<td>146</td>
</tr>
</tbody>
</table>

Apart from five schemes, all of them restricted, all registered scheme contributions at a beneficiary per annum level adequately cover the Low cluster Complete PMB price in the public sector. The total of all those not meeting the Weighted industry PMB price in the public sector is only six schemes or 4.1% of registered schemes.

The table below shows the same analysis at option level.

Table 19: Complete PMB Package Public Sector Relative to Options Contributions

<table>
<thead>
<tr>
<th></th>
<th>Open Schemes</th>
<th>Restricted Schemes</th>
<th>All Registered Schemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>9</td>
<td>11</td>
<td>20</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>7</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>31</td>
<td>21</td>
<td>52</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>244</td>
<td>227</td>
<td>471</td>
</tr>
<tr>
<td>Total</td>
<td>291</td>
<td>262</td>
<td>553</td>
</tr>
</tbody>
</table>

It was found that only 20 options had contributions that did not cover the Low cluster PMB package in the public sector. A further 10, making 30 in all, lie below the Weighted industry price. This accounts for 5.4% of options.

Therefore, the findings are suggestive that almost all options in registered schemes can adequately meet the Weighted PMB price when the package is delivered in the public sector, without the need to increase contribution levels. An in-depth look is needed at those six schemes that fail to meet this price in order to establish their demographic profile and utilization patterns.
6. Affordability Issues for Bargaining Council Schemes

Bargaining Council schemes (previously called “exempt schemes”) are those schemes that are not able to comply fully with the Act and are thus granted exemptions from certain of its provisions, particularly with respect to the provisions of PMBs. Historically the exempt schemes included those covering the police service, correctional services and the defence force, as well as schemes that were created before the first Medical Schemes Act of 1967. Over time many exempt schemes have acquired the status of registered schemes. Those that remain tend to offer very limited benefits, often only primary health care delivered by salaried or panel doctors. In 2001 the name of these schemes was changed to Bargaining Council schemes.

In 2001 only eight of the 19 Bargaining Council schemes reported to the Registrar and they accounted for 3.8% of total beneficiaries. However, there are estimated to be some 42 Bargaining Council schemes in total if all were brought within the regulatory framework of the Medical Schemes Act (personal communication Stephen Harrison, Council for Medical Schemes).

In 2001 Bargaining Council schemes catered for 3.8% of total beneficiaries in the medical scheme industry and spent a total of R113 424 310 on benefits, which is equivalent to only 0.4% of the total spend on benefits in the industry. As only eight of the bargaining council schemes made returns to the Registrar in 2001, the 2001 figures may not be representative of this sector of the industry. However, the 2000 figures are more complete with data received on 19 schemes and thus a study by McLeod & Dreyer (forthcoming) using the 2000 data has been used in parts of this analysis.

The benefit design of these schemes is of increasing interest as the prospect of Social Health Insurance becomes a reality. These schemes have been able to offer basic services to their members within a very constrained budget and they could offer a better reference for designing primary care for new low cost options within registered schemes.

Most of the expenditure in Bargaining Council schemes goes to general practitioners as these schemes often rely solely on GP’s to provide a comprehensive range of services. In many cases the schemes offer only primary care benefits. Members and their families make use of the public sector for chronic medicine as well as all specialist needs and hospitalisation. At least one scheme has engaged in discussions with the public sector to begin to integrate these benefits with the rest of the scheme and to work towards being able to reimburse the public sector for usage by their members.


Bargaining Council schemes spent on average R 411.57 per beneficiary per annum in 2001 on benefits, which is equivalent to 10.0% of what registered schemes spent on benefits. The Low cluster PMB package price is more relevant to this group of schemes. A comparison of the Low cluster PMB price in the private and public sectors with total benefits and contributions of Bargaining Council schemes in 2001 is shown below.
Note that the public sector price includes some administration and managed care costs that would be implemented by the public sector and not the scheme. Effectively, the public sector PMB price would be capitated to the scheme.

**Figure 16: Low Cluster Complete PMB Package Compared to Total Benefits and Contributions of Bargaining Council Schemes**

At an industry level, the graph shows clearly that Bargaining Council schemes are in no position to meet the demands of the PMB package, even when delivered in the public sector. The public sector Low cluster price is 2.2 times the contributions per beneficiary per annum in this sector.

The industry level figures mask great variability in this sector. Of the eight Bargaining Council schemes that made returns to the Registrar in 2001, four of them spent between R 922 and R 2,634 per beneficiary on medical benefits. The scheme spending R 2,364 pbpa can almost certainly accommodate the Low cluster PMB package with a few adjustments.

What is needed however, is engagement with each scheme in this group to explore how their current benefit structures can be changed to accommodate an acceptable, if initially limited, version of PMBs delivered in the Bargaining Council scheme environment and the public sector. The readiness of the public sector to engage with these schemes also requires some attention at a national level as different provinces are proceeding at different paces.

The graph below shows benefit spend per beneficiary per month for exempt schemes in 2000. The schemes have been categorised into industries.
The Overall Exempt bar has an overlay showing the low expenditure reported in 2001 compared to 2000. This illustrates how sensitive the industry numbers are to which schemes are included in the reporting. Note the unusually high expenditure of MEDCOR in 2001, at levels much greater than even registered schemes. At the other end of the scale, the average benefit expenditure pbpm in the clothing industry was only R 22.70.

It was considered not reasonable to attempt to estimate what the benefits in the PMB package in the public sector might have cost in 2000. So although the comparison is very rough, the public sector PMB package price for the Low cluster of R 84.63 pbpm has been overlaid on the graph above. Only the motor industry, MEDCOR and possibly the hairdressing industry appear able to cover the PMBs within existing benefit expenditure. Whether this is actually feasible or whether the switch from primary care to tertiary care would be acceptable, would need to be considered carefully in each case.

Even within industries, there is a wide range of benefit structures in these schemes. The graph below uses the 2000 data to explore this issue at scheme level. Again the price of the public sector PMB package for the Low cluster in 2001 has been overlaid on the graph.

Out of 19 schemes, only 6 or possibly 7 have benefit expenditure at a level that could conceivably cover the PMB package in the public sector. Again, whether trading off primary care for tertiary care is even feasible, is something that will need to be considered by the Bargaining Councils themselves.
From an affordability perspective, understanding the design of benefits under Exempt schemes is crucial for benchmarking low-cost options and provides what could be considered the lowest cost reference point for the PMB package price. While the basket of benefits offered under Bargaining Council schemes differs from what is offered under the registered schemes environment, these schemes are still relevant for comparison purposes to show that with carefully designed benefit structures, it is possible to lower the price of healthcare to within the income levels of their members.

Before reaching conclusions on the difficulty that Bargaining Council schemes might have with including the PMB package in their benefit structures, the recommendations by the Taylor Committee with regard to healthcare need to be explored. If the existing tax structure for the medical schemes industry is replaced with a per capita subsidy, this would have most impact at lower income levels. The price of the PMB package for the Low cluster, when delivered in the public sector, is only R1 015.51 per beneficiary per annum. A per capita subsidy of this order would dramatically affect any conclusions on the affordability for Bargaining Council schemes.
7. Affordability of Low-Cost Options

7.1 Comparison to Low-Cost Options

Ranchod et al (2001) developed a definition of low-cost options which is discussed in Section 2.3. That study found 41 options meeting the low-cost criteria in 2001, out of a total of 166 options surveyed in open schemes. One of those options was found not to have reported results to the Registrar at the end of 2001 and the remaining 40 were isolated from the analysis in Sections 4 and 5.

The two tables below compare reported benefits and contributions per beneficiary per annum for these 40 options, to the corresponding elements of the PMB package. As these are low-cost options, the demographic profile they attract is likely to be more similar to the Low cluster. The benefits and price of the Low cluster PMB package are compared using the private sector price in the first table and the public sector price in the second table. The full detail is provided on CD-ROM as Appendix G.

**Table 20: Low Cluster PMB Package Private Sector Relative to Low-Cost Options**

<table>
<thead>
<tr>
<th></th>
<th>Contributions</th>
<th>Total Benefits</th>
<th>Administration + Managed Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>7</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>3</td>
<td>11</td>
<td>1</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>22</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>8</td>
<td>8</td>
<td>36</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>40</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

**Table 21: Low Cluster PMB Package Public Sector Relative to Low-Cost Options**

<table>
<thead>
<tr>
<th></th>
<th>Contributions</th>
<th>Total Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not meeting Low Cluster</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>Between Low Cluster and Weighted Industry</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Between Industry and High Cluster</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Exceeding High Cluster</td>
<td>26</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>40</strong></td>
<td><strong>40</strong></td>
</tr>
</tbody>
</table>

In both tables the comparison of contributions produces results where more options cover the PMB package than when benefits are considered. This means that the non-healthcare component and any margins for solvency are improving the apparent affordability. It seems that a number of schemes do not meet the Weighted industry benefit level in the private sector. This contrasts with evidence in Sections 7.2 and 7.3 below.
Many low cost options were only developed for the 2001 benefit year. They were registered to be available from the beginning of 2001. The number of beneficiaries in these options thus would have been changing over the 2001 year, more so than for established options. The data on beneficiary numbers at option level was only provided as at 31 December 2001. The per beneficiary numbers used in this analysis are thus higher than they would be if the exposure of beneficiaries for the year had been available. This makes the per beneficiary per annum numbers lower than they should be and thus the options appear less able to cover the PMB package price.

It is recommended that in this area, where option size is changing rapidly, that little weight be attached to the reported results on a per beneficiary basis. It is also recommended that, if possible, beneficiary numbers need to be reported monthly at option level as they currently are at scheme level.

### 7.2 Published Contributions for the Benchmark Family

The study by Ranchod et al (2001) considered the contributions that would be required for each of the 166 options in the study from the benchmark family. The benchmark family, as discussed in Section 2.3, consists of two adults and two children, with a household income of R4 000 per month in 2001.

A more useful way to look at the affordability of options is to compare the Weighted industry PMB package price to the published contribution tables of these open scheme options, as shown in the graph below.

![Figure 19: Weighted Industry PMB Package Relative to Published Contributions for Benchmark Family](image-url)
The 166 options, with variations for managed care networks, gave 174 separate option prices. While the detail of each of the options is not clearly visible at this scale, it is clear that for a family earning R4 000 a month there are large numbers of options that are simply unaffordable. The Ranchod et al study found that some packages for a family of four cost over R3 500 per month.

Using the Ranchod et al study data in the graph above, superimposed with the private sector Weighted industry PMB price of R640.33 per family per month, the visual conclusion is inescapable that the industry is offering packages costing way in excess of the PMB package. It was found that 12 options (6.9%) cover the PMB package by a factor of four times or more. The detail is provided as Appendix H on CD-ROM. There were 94 options (54.0%) that cost more than double the PMB package price, even though this is the private sector price being used.

The point has been made by several people in the industry that the PMB package cannot be sold completely in isolation. While the diagnosis and treatment costs of all PMB conditions need to be covered, there still needs to be an amount for primary care to enable a beneficiary to seek medical advice, confident that if it is not a PMB condition they will not be entirely responsible for the account. This issue is of little consequence at higher income levels but is of critical importance for lower income groups.

Only 9 options (5.2%) cost less than the PMB package. The package used in the comparison now includes the cost of treating 25 chronic conditions without limits or co-payments, whereas some low-cost options had previously been careful to exclude or severely restrict chronic medicine costs.

The issue that the industry must now answer is what do the packages contain that makes them cost so much more than this private sector PMB package. The challenge is now to redesign packages to make them more affordable, in line with the cost of the PMB package.

Some schemes may argue that they face a demographic profile or a prevalence of disease different from that inherent in the industry price. If that is the cause of the seemingly excessively high prices shown in the graph above, then the arguments for a risk equalisation system between schemes covering the PMB package are strengthened. The PMB price shown graphically above is effectively the community-rated price of the PMB package.

Members should have access to packages that are close in price to the community-rated price of the PMB package, otherwise the scepticism about the value-for-money on offer by the medical scheme industry will not be laid to rest.

### 7.3 Published Contributions for Lowest-Cost Options

The Ranchod study isolated those 41 options costing less than R1 000 in order to focus on the low-cost options. That study then identified and named the 17 lowest-cost options in the study that made use of network primary care. The analysis is in Appendix I on CD-ROM.

The graph below compares the 17 lowest-cost options to the Low cluster PMB package price. The private sector and public sector prices are both used in the comparison.
Only two options, both from the same scheme, have been priced close to the price of the Low cluster PMB package. The private sector PMB package price for a family of four is R 489.31 pm and the public sector equivalent is R 321.15 per family per month.

The message of the graph above is clear: the industry has still not been able to bring down prices to levels that would provide for the PMB package in full, with some additional small amount for routine primary care. The PMB package is clearly affordable in the context of prices currently being charged in the industry. The challenge is for trustees to look at the packages they currently offer and find ways to bring offerings to the market that are much closer to the PMB package prices.

Since the publication of the low-cost options study, the Centre for Actuarial Research has argued that the industry needs to design packages at R 500 and less for a family of four. Now that the PMB package price for the Low cluster has been demonstrated to fall below this level, there seems to be no argument that can be raised against reaching that target.

The argument that the legalisation on Prescribed Minimum Benefits is responsible for the upward pressure on contributions is found to be baseless, given the results in Figures 19 and 20 above. Note for clarity that the PMB package used above already includes the cost of the Chronic Disease List package which only becomes effective from 1 January 2004.
8. Affordability Relative to Income Levels

Thus far, affordability has been considered in the context of the relationship of the price of the PMB package to the existing offerings by medical schemes. A further aspect of affordability is the comparison of the price of the PMB package to income levels. The incomes of existing members of medical schemes and of workers will be examined in this section. The particular issues related to the disabled and pensioners are discussed in Section 9.

8.1 Income of Open Scheme Members in 2000

The quality of data collected on income in open schemes is usually poor. In restricted schemes the information is directly available from the employer, but in open schemes there are many members in self-employment or in small companies. Income is difficult, if not impossible to verify for voluntary members and many open schemes have accordingly removed income as a means of differentiating contributions.

An Interim Membership Survey was conducted by the Council for Medical Schemes amongst open scheme members for the first nine months of 2000, i.e. up to September 2000. The Membership Survey produced an income profile for open schemes which is given in the table below and illustrated in the graph which follows.

Table 22: Income Levels of Open Medical Scheme Members in 2000

<table>
<thead>
<tr>
<th>Member Income per month</th>
<th>Percentage</th>
<th>Cumulative Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than R 2 000</td>
<td>12.4</td>
<td>12.4</td>
</tr>
<tr>
<td>R 2 001 to R 3 000</td>
<td>28.9</td>
<td>41.3</td>
</tr>
<tr>
<td>R 3 001 to R 4 000</td>
<td>12.3</td>
<td>53.7</td>
</tr>
<tr>
<td>R 4 001 to R 5 000</td>
<td>14.7</td>
<td>68.3</td>
</tr>
<tr>
<td>Over R 5 000</td>
<td>31.7</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The survey showed that more than half (53.7 %) of open medical scheme members earn less than R4 000 per month and 41.3% of members earn less than R3 000 per month. This would include many of the pensioners.

The pie chart below illustrates the data from the Membership Survey. The colours used reflect the degree of vulnerability of members from an income perspective. While the income bands in the Membership Survey do not exactly match the October Household Surveys, an attempt has been made to colour-code these in a similar fashion. The only group considered to be readily able to afford the packages currently on offer in the industry, is those earning over R5 000 per month. All other groups are vulnerable to a greater or lesser degree.
The Complete PMB package price for a family of four (Section 3.7) is R 640.33 per family (i.e. member) per month (or R7 683.96 pmpa). The price for a single adult is R 257.07 pmpm (or R3 084.83 pmpa). This monthly expenditure represents 16.0% of monthly income of R4 000 for a family with one breadwinner and 8.6% of income for a single person. Recall that more than half of open medical scheme members earn less than this amount.

If the largest grouping of open scheme members is used, namely those earning between R2 001 and R3 000, we can choose to examine the mid-point of this range which is an income of R2 500 per month. The monthly expenditure on the Weighted industry PMB package would then represent 25.6% of income for a family of four and 10.2% of income for a single person. If the Low cluster prices of R 489.31 pmpm for a family and R 191.25 for a single person are used, then the proportion of income falls to 19.6% for the family and 7.7% for the single person.

The family earning R2 500 per month could not reasonably spend one-fifth of its income on healthcare alone. Given the evidence for the average packages in the industry exceeding the requirements of the PMB package, it is hard to understand how members with these levels of income are able to afford current private sector offerings in open schemes. Information on the extent to which members are paying the full contribution directly or whether there is an additional employer subsidy was not obtained in the survey. Whereas in the 1970s and 1980s the employer subsidy was usually added on top of cash income, in the 1990s it became more usual for the total cost of employment to be used. The subsidy to members then became part of the total income quoted. Thus there would be no relief of an employer shouldering the burden of a part of the cost of the package.
If the price of the PMB package in the public sector is used, instead of the private sector prices above, then the cost becomes R 321.15 pmpm for the Low cluster family and R 124.26 for a single adult. These prices represent 12.8% of a monthly income of R2 500 for the family and 5.0% for the single person.

8.2 Income Levels from October Household Survey 1999

One source of income data that separates those in medical schemes from those not in medical schemes is the October Household Survey. The 1999 version of the Survey (OHS99) has been extensively analysed by various students at UCT for use on healthcare issues. However the use of the OHS is not without difficulty. Johnson & Dorrington (2002), describe the difficulties of using the October Household Survey data as follows:

A problem that arises in using the 1999 October Household Survey data is that it is based on weightings derived from the 1996 Census. The 1996 Census is thought to understate the number of children at young ages. It is also known that the 1996 Census understates the number of men at working ages (particularly in the 20 to 30 age band) and the number of whites.

Adjustments are usually made to demographic data to correct for these sources of bias. However it was found in the first project in this series that the unadjusted OHS99 age profile was a better fit to other known industry data than were the adjusted figures.

The data from the Council for Medical Schemes Membership Survey in 2001 was compared to the unadjusted income data in the OHS 1999 for those with medical cover. Although the income brackets used for the two studies differ, an attempt was made to calibrate the two studies. The proportion of members of medical schemes with income over R5 000 was approximately 30% in both studies. The analysis of income levels in the sections that follow thus uses the unadjusted OHS99 data.

The OHS99 study relates to October of 1999, whereas the price of the PMB package was determined for the calendar year 2001. Although it is probably more correct to adjust income levels from 1999 to 2000 using wage inflation, this would need to be done separately for different income levels. A simpler solution is to re-state the 1999 age bands in 2001 Rand terms, as shown in the table below. This adjustment using mid-year Consumer Price Inflation figures is also in line with much other work on the historic Registrar’s data set.

Table 23: October Household Survey 1999 Income Bands in 2001 Rand Terms

<table>
<thead>
<tr>
<th>Monthly Income Bands</th>
<th>OHS 1999</th>
<th>2001 estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than R10 000</td>
<td>More than R11 179</td>
<td></td>
</tr>
<tr>
<td>R5 000 to R9 999</td>
<td>R5 589 to R11 178</td>
<td></td>
</tr>
<tr>
<td>R2 500 to R4 999</td>
<td>R2 795 to R5 588</td>
<td></td>
</tr>
<tr>
<td>R1 800 to R2 499</td>
<td>R2 012 to R2 794</td>
<td></td>
</tr>
<tr>
<td>R 800 to R1 800</td>
<td>R 894 to R2 012</td>
<td></td>
</tr>
<tr>
<td>R 1 to R 799</td>
<td>R 1 to R 893</td>
<td></td>
</tr>
</tbody>
</table>
8.3 Income of Existing Members of Medical Schemes

The graph below shows the employment profile of medical scheme beneficiaries by age, extracted from the October Household Survey 1999.

Figure 22: Employment Profile of Medical Scheme Beneficiaries by Age (OHS99)

Questions on employment are deemed not applicable to those under the age of 15 years. The majority of those aged 15 to 19 and a substantial proportion aged 20 to 24 are still not economically active. In the adult years the not economically active are often housewives. After age 55, an increasing number of pensioners are counted into the not economically active group. Pensioner issues are dealt with separately in Section 9.

Of the total beneficiaries, 44.0% were estimated to be employed, 2.3% were unemployed and 24.7% were not economically active. The balance of 29.0% are children under the age of 15. Those describing themselves as pensioners accounted for 6.3% of total beneficiaries and 25.6% of those not economically active.

Work in progress at UCT by Professor McLeod with Shamim Aghdasi suggests that the data could be reclassified to show dependent children being 38.9% of all beneficiaries, spouses not working being a further 10.5% and members plus working spouses accounting for 50.7% of all beneficiaries. The Registrar’s Report records members as being 39.0% of all beneficiaries. This implies that of the 50.7% members plus working spouses, there are 11.7% who are earning an income and are not the principle member. This would seem to be a first estimate of the proportion of dual-income households in medical schemes.
The impact on affordability of dual-income households (or even multi-income households) is not possible to measure directly from the October Household Survey, but needs to be borne in mind in the analysis that follows and for future studies.

The graph below shows the income profile of medical scheme beneficiaries by age from the October Household Survey 1999. The colour coding used is a measure of the perceived vulnerability of various income levels in terms of being able to afford the packages in the market at present. Only the two groups earning over R5 000 per month are perceived to be readily able to afford existing packages. Note that in the graph below the income levels are as stated in the OHS99 and not re-stated in 2001 Rand terms as discussed in Section 8.2.

Using the colour coding for vulnerability, 16.5% of beneficiaries were found to earn over R5 000 per month and could reasonably afford existing packages. A further 13.5% earned between R2 500 and R4 999 per month and are vulnerable to the level of cost escalation in the industry, particularly at the lower end of this range. Given the price of even low-cost options, as reported in Section 2.3, the 5% of beneficiaries earning below R2 500 per month must be said to be extremely vulnerable. Those earning below R1 800 per month are very unlikely to be able to afford a medical scheme without a substantial subsidy from an employer. There are likely to be many pensioners in this group. Note that over half (52.4%) of beneficiaries did not earn an income, did not know their income or the field was missing in the data.

The graph below shows the income profile of medical scheme beneficiaries by age from the October Household Survey 1999. Note how the groups identified as vulnerable, extremely vulnerable and unable to afford, increase with age.
Appendix J contains a table using the OHS99 income categories, re-stated in 2001 Rand terms. The mid-point for each re-stated band is used and compared to the price of the Complete PMB package. The prices for a single adult and a family of four are relevant here and three comparisons are made using:

- The Weighted Industry price in the private sector;
- The Low cluster price in the private sector; and
- The Low cluster price in the public sector.

The proportion of income represented by the PMB package is determined in each case.

The table in Appendix J also sets out a series of income levels and determines the proportion of income represented by the PMB package in each case.

The degree of employer subsidy falling outside of quoted income levels will naturally affect the results. A further important, but as yet unknown factor is the extent to which the per capita subsidy for healthcare, recommended in the Taylor Report, impacts on the proportion of income required to be spent.

The Consortium has not formed an opinion on what proportion of income would be an acceptable amount for lower income workers to be able to afford. This issue is simply presented and the opinions of organised labour, the Department of Trade and Industry and forums such as NEDLAC should be sought in this regard.
8.4 Income of Potential Members of Medical Schemes

It is not a simple matter to isolate potential members of medical schemes from the October Household Survey information. The graph below shows the proportion of people at each income level that are already members of medical schemes. The balance are in all probability using the public sector for most of their healthcare needs, although those who can afford may use private sector primary care rather than wait at public sector clinics. Some will also have access to primary care at workplace occupational health sites that may have expanded beyond their original role. Employees of the mining sector typically receive all their healthcare from clinics and hospitals set up by the major employers.

![Figure 25: Proportion of Medical Scheme Beneficiaries by Income Level](image-url)

The graph above clearly demonstrates that at higher income levels, a large proportion of the population are already in medical schemes. The question of affordable packages needs to address the needs of those earning at the middle-income levels.

The OHS99 shows that 80.0% of the population belong to the income bracket below R 800 per month. If those who were unable to give an income are included, this rises to 83.1%. The category of those with income greater than R2 500 per month is of interest to existing schemes as this represents the pool of potential members. The OHS99 has 7.5% of the population earning above R2 500 per month. However, 4.9% of the population with this income are already members of medical schemes, leaving 2.7% or 1 159 340 individuals who could potentially join schemes in their own capacity.
If the income band is broadened to include all those earning above R1 800, then this covers 9.8% of the total population of which 5.7% are already medical scheme members. This leaves 4.1% of the population or 1 783 785 individuals who could potentially join if packages were sufficiently affordable.

Note that these numbers are in respect of individuals with incomes and this does not directly match either beneficiaries or members. Attempts are still underway at UCT to isolate the immediate and eligible families of those with incomes in these brackets in order to more fully understand the demographics of the target group. Some of these individuals identified will be part of dual-income or multiple-income households, so the numbers overstate the potential family membership.

The graph below shows the group of those reporting incomes that have been identified in a preliminary study as potential medical scheme recruits if the pricing and design of benefit options is affordable. Note that the families of these individuals are not yet isolated in the analysis, hence the zero income column in the graph shows only a defined fraction of the large numbers of people who do not have incomes.

![Figure 26: Potential Medical Scheme Beneficiaries by Income Level, excluding Non-earning Dependents](image)

The graph above is of interest in that it demonstrates that the bulk of potential recruits earn under R5 000 per month and a large group earn below R2 500 per month. Below R1 800 per month are a very large group of people who could not afford the PMB package without assistance.
8.5 The Impact of a Per Capita Subsidy on Affordability

In order to incorporate the very large group earning between R 800 and R1 800 per month, there needs to be a radical shift not only in benefit design, but also in the subsidy available for this group. It is here where the change in taxation to provide a per capita subsidy, as recommended in the Taylor Committee report, could dramatically alter the potential affordability.

The table below shows the impact of an annual subsidy of R 800 per beneficiary and one of R1 000 per beneficiary on the proportion of income that would need to be spent on the PMB package. The effect on the affordability of the Low cluster PMB package delivered in the public sector is examined here. The full table is given in Appendix K and is summarised below for a single adult and a family of four.

Table 24: Impact of Per Capita Subsidy on Affordability of Low Cluster Public Sector PMB Package

<table>
<thead>
<tr>
<th>Monthly Income Bands OHS99</th>
<th>Proportion of Income</th>
<th>Single Adult</th>
<th>Family of Four</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No subsidy</td>
<td>R 800 pa subsidy</td>
</tr>
<tr>
<td>Complete PMB Package Price pmpm in 2001</td>
<td></td>
<td>R 124.26</td>
<td>R 57.59</td>
</tr>
<tr>
<td>Effective price to the member</td>
<td></td>
<td>R 124.26</td>
<td>R 57.59</td>
</tr>
<tr>
<td>More than R10 000</td>
<td></td>
<td>1.1%</td>
<td>0.5%</td>
</tr>
<tr>
<td>R5 000 to R9 999</td>
<td></td>
<td>1.5%</td>
<td>0.7%</td>
</tr>
<tr>
<td>R2 500 to R4 999</td>
<td></td>
<td>3.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>R1 800 to R2 499</td>
<td></td>
<td>5.2%</td>
<td>2.4%</td>
</tr>
<tr>
<td>R 800 to R1 800</td>
<td></td>
<td>8.6%</td>
<td>4.0%</td>
</tr>
<tr>
<td>R 1 to R 799</td>
<td></td>
<td>27.8%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

At a per capita subsidy of R1 000 per annum (R 83.33 per month), the cost for a family of four is completely covered and the member does not have to sacrifice income to receive the package. Even at a subsidy of R 800 per annum (R 66.67 per month), affordability improves for those earning between R 800 and R1 800 from 22.1% of income to 3.7% of income.

The shape of the subsidy will need to be carefully considered. A flat subsidy per beneficiary has been used here. A flat subsidy produces the effect that for larger families the addition of an extra child gives an increase in subsidy much greater than the increase in the price of the PMB package. The “negative cost” of the package for a family when the subsidy is R1 000 pa, implies that the subsidy can be more efficiently spread and will thus impact the single adult members more than shown here.

The use of the subsidy as part of the flow of a risk equalisation system also needs further careful consideration now that the price of the PMB package has been determined.
9. Affordability Issues for Pensioners

The October Household Survey of 1999 records pensioners as being 6.3% of total beneficiaries in medical schemes. In the Registrar’s Report of 2001, pensioners made up 6.5% of beneficiaries in the industry, equivalent to 452 586 individuals. Of these, 92.0% (or 416 390) were in registered schemes and the rest in Bargaining Council schemes. Of those in registered schemes, 40.1% (or 169 852) were in restricted schemes, while 59.9% (or 246 538) were in open schemes.

Pensioners made up 5.3% of open scheme beneficiaries, 8.6% of restricted scheme beneficiaries and 9.2% of Bargaining Council schemes. This is indicative of the degree of selectivity by the industry when it comes to recruitment of pensioners into schemes. This demographic profile further suggests the pressure due to the particular problems of affordability for pensioners will be felt mostly in restricted schemes in the absence of a risk equalisation system between medical schemes.

Pensioners represent a special group because they are vulnerable to the highest healthcare costs at the time in their lives when income is reduced. While community-rating goes a long way to ensuring access for these beneficiaries at a more affordable level, the impact of levies and co-payments on benefits will be more serious for this group.

9.1 The Vulnerability of Existing Pensioners

The graph below shows the income profile of pensioners in medical schemes, relative to age, as extracted from the October Household Survey 1999. See Section 8.2 for adjustment of income bands to 2001 Rands.

![Figure 27: Income Profile of Medical Scheme Pensioners by Age (OHS99)](image-url)
In contrast to Figure 24, Figure 27 shows that more pensioners are in the more vulnerable income bands. It was found that 78.4% of pensioners receive less than R5 000 per month and 51.7% receive less than R1 800 per month. While some of these may be spouses not receiving a pension, the household income levels are much lower than for working people.

Appendix J shows the affordability of the PMB package for one adult and two adults. While younger pensioners may still have families, there will typically be fewer families in this group. It seems highly unlikely that pensioners can afford medical scheme cover without some additional subsidy. As many are in restricted schemes, there may be substantial employer subsidies not visible in the data used.

A further issue affecting affordability for pensioners is the rate of escalation of pensions. The graph below shows historic levels of the average medical scheme contribution per member per month, taken from the annual Registrar’s Reports and re-stated in 2001 Rand terms.

![Figure 28: Real Contributions Per Member Per Month](image)

The graph above removes the effect of inflation to show contribution levels in real terms. The graph shows the impact on affordability over time of the escalation in cost of medical schemes. The average member that used to pay some R 300 per month (in today’s value) in 1974, now pays nearly R1 200 per month for medical scheme cover.
While this report has concentrated on the affordability of the PMB package in 2001, true affordability must also have a time dimension. If the price of the PMB package continues to accelerate at the same sort of rate as medical scheme contributions have done in the recent past, then the package will quickly begin to become less affordable to all groups. The pensioners are even more vulnerable than workers in this regard because pensions have tended to escalate more slowly than wages. Recent changes to retirement fund legislation may go some way to improve the rate of escalation of pensions already in payment.

### 9.2 Pensioners Not in Medical Schemes

At the time open enrolment and community-rating was implemented in terms of the Medical Schemes Act, 1998, some industry stakeholders warned of a potential influx of elderly members to open schemes and the effect this would have on the community-rated price. The graph below shows the income levels of all pensioners in South Africa not in medical schemes from the October Household Survey 1999.

![Figure 29: Income Profile of Pensioners Not in Medical Schemes by Age (OHS99)](image)

The contrast of Figure 27 with Figure 29 is dramatic. It was found that 94.7% of all pensioners not in medical schemes in 1999 received less than R1 800 per month. It was simply not conceivable for this group to gain access to private sector medical scheme packages without substantial subsidies. It is expected that those who did have access to subsidies from previous employers were already part of the medical scheme system.
9.3 The Vulnerability of the Disabled

The graph below shows the income profile of those medical scheme members recorded as disabled in the October Household Survey 1999.

![Figure 30: Income Profile of the Disabled in Medical Schemes by Age (OHS99)](chart)

While these individuals may not all be the sole breadwinners in the household, a proportion of them probably were sole breadwinners. Income levels are very low and their membership of current medical schemes could only be possible through the income of a spouse or by way of substantial employer subsidy.

9.4 The Vulnerability of Future Pensioners

While the problems for existing pensioners are substantial, there is an even greater crisis in the making some years into the future.

For much of the 1990s, consultants to employers have been arguing for a change in the subsidy formula for medical schemes to be used in retirement. In the 1970s and 1980s it was common to find a subsidy in the member's working life of 50% of the contribution and this would often increase to two-thirds or even a 100% subsidy in retirement. In the public sector, a subsidy in the working years of two-thirds was more common and this was often 100% in retirement.
In the early 1990s, the accounting profession in South Africa began to bring the country in line with developments throughout the rest of the world with regard to the accounting for promises that continue into retirement. The initial accounting opinion in South Africa was AC305, published in July 1995. By 2000, this had been replaced by the accounting standard AC116 which is virtually identical to the international standard IAS19.

AC116 prescribes how companies must treat all post-retirement promises, not just those of medical scheme coverage. It became mandatory for financial statements covering periods commencing on or after 1 January 2001.

In essence, AC116 requires companies to recognise a liability on their balance sheet while an employee is working, for the extension of the medical scheme subsidy into the retirement period when the person is no longer employed. This accrual accounting requires that the full cost of employment be recognised while that person is in employment. Further, companies must show an expense on the income statement related to changes in the value of this promise over the year.

The impact of AC116 was expected to be particularly large for some companies. In the years leading up to its becoming mandatory, companies have carefully determined the impact of this liability on their balance sheets, the annual cost to their income statements and the potential for these changes to affect the share price.

The most common response of companies, once seeing the magnitude of the liability created by the promise to continue subsidies in retirement, has been to find ways to reduce the subsidy.

It has seldom been possible for companies to alter in any meaningful way the subsidy promised to those who are already in retirement. The subsidy may have formed part of a contract of employment written some 40 years ago or may from a legal perspective have developed into an implicit contract through a number of years of granting such subsidies.

Many employees in the 1990s found themselves agreeing to new contracts of employment as companies attempted to tidy up the legal tangle of different employment contracts at different periods in time. Many workers were unaware of the implications of the new contracts signed.

The greatest effect has been on new contracts of employment. The graph below, taken from an Old Mutual Healthcare Survey in 2001, shows the dramatic change to the terms of new contracts of employment with respect to the subsidy of medical scheme contributions.
In the space of two years, the proportion of new employees who are not given a subsidy to assist with affordability of medical schemes in retirement has increased from 43% to 60% of employers surveyed.

This issue is a potential affordability time bomb that will impact the industry when those joining companies from around the year 2000 onwards reach retirement age. This could be some 15 years to 35 years into the future, but if this practice does not receive serious policy attention now, the impact on affordability of medical schemes for those future pensioners can only be described as devastating.

Figure 31: Company Philosophy on Medical Schemes for Future Pensioners (OMHC Survey 2001)
10. Conclusions, Policy Issues and Future Research

In this report, we have touched on several aspects of affordability. We have also considered different stakeholders in the affordability equation. These have included affordability of the PMB package for the industry as a whole, for individual schemes and for individual options within schemes. The special issue surrounding Bargaining Council schemes and low-cost options were considered. Affordability has also been considered for members already with medical coverage, for potential members of medical schemes who are currently outside the medical scheme environment and special groups which include pensioners and the disabled.

Conceptually, we elected to consider affordability from an expenditure and income framework. We did not assess affordability from an income adequacy framework whereby expenditure on healthcare would be considered relative to other household expenditures, especially expenditure on essential goods. In the study we mostly considered cross-sectional data based on 2001 information and therefore an assessment of the trend in affordability over time was not done. The increase in real contributions and real non-healthcare expenditure over time have been noted.

10.1 Conclusions on the Affordability of Prescribed Minimum Benefits

The studies comparing actual benefit expenditure and contributions to the price of the PMB package all showed that at an industry level, the PMB package was well covered. There should thus be no upward pressure on contributions from Prescribed Minimum Benefits. Note that all the comparisons already included the price of the Chronic Disease List package only due for implementation on 1 January 2004.

At an individual scheme level, there appeared to be some instances where the PMB package was not covered. This was also true when reported benefits and contributions for options was considered.

At a scheme level, it was possible to calculate the correct exposure of beneficiaries over the year, as monthly data on beneficiary numbers was available. Although the per beneficiary per annum figures are thus correct, at scheme level this can mask options that can easily afford the PMB package from others with a very different level of expenditure. There may also be remaining cross-subsidies between options that are masked at scheme level.

Unfortunately the data on beneficiaries at an option level was not satisfactory, as only the number as at 31 December 2001 was provided. In the case of the low-cost options which were newly designed for 2001, members would have been recruited to these options during the year and the end of year beneficiary numbers are not the true exposure of beneficiaries for the year. As a result, per beneficiary per annum numbers for reported benefits and contributions are lower than they should be.
The most useful analysis at options level proved to be the comparison of published options prices to the price of the PMB package. This work showed conclusively that the current packages on offer by open schemes were way in excess of the price of the PMB package for the industry. In some cases the prices were four or five times the price of the PMB package.

It is acknowledged that in focus groups members often appear to value the primary care content of packages more than they value the cover for major events. However, once a member has needed to use cover for a major event, the preference usually shifts. The trade-off between primary care and PMBs in package design will be an important issue for consultants and trustees in the development of packages for 2004.

When the lowest-cost options were compared to the Low cluster price of the PMB package, it was again found that even these network primary care options had packages substantially in excess of the price of the PMB package in the private sector, let alone the price when delivered in the public sector.

The conclusion must be that there is substantial room to reduce the current benefit offerings in the industry to something closer to the price of the PMB package plus an additional amount for routine primary care. The industry needs to critically examine benefit offerings for 2004 and begin the designs with a focus on the PMB package.

10.2 Policy Issues Raised

It has become apparent during this research that the introduction of Prescribed Minimum Benefits with effect from 1 January 2000 has barely impacted the industry. Very few schemes are able to isolate PMB expenditure from other benefits. Of even greater concern is how few medical practitioners seem to have heard of PMBs. Thus at the critical interface with patients there is little knowledge of the rights of medical scheme beneficiaries to treatment for the PMB conditions. It is certainly not in the interests of schemes to educate practitioners and this critical role must be taken on centrally by the Department of Health or the Council for Medical Schemes. The lack of consumer complaints about the denial of PMBs is perhaps indicative of the lack of understanding of this policy instrument.

The comparison of options prices in open schemes for the benchmark family shows a wide divergence of prices. Members should be facing a common community-rated price for the PMB package and not a price determined by each scheme according to its own demographic profile and illness burden. Now that a price has been conclusively determined for the PMB package for the industry, this can facilitate work on a risk equalisation mechanism between schemes that covers the benefits in the PMB package.

From the study findings, it is evident that pensioners are already vulnerable and that they will increasingly find contributions to medical schemes difficult to afford, given that medical contribution increases have exceed pension increases. Added to this is the changing structure of employee benefits in such a way that future pensioners will be unlikely to have a subsidy for medical benefits in retirement. The study describes the subsidy issue as a future time bomb and this issue needs to be placed on the agenda now.
The study also attempts to put into context the per capita subsidy mooted in the Taylor Committee report. It was demonstrated that this subsidy could have enormous impact on the affordability of healthcare for low-income families. This impact is subject to the final amount of the subsidy and the exact form it will take. There is no doubt that a subsidy of this nature has a far-reaching impact on affordability of the PMB package for low-income groups and clarity on proposals is now needed.

The question of the pace of incorporation of all Bargaining Council schemes under the Medical Schemes framework will also be clarified if the per capita subsidy can be resolved.

The price of the PMB package in the public sector, which lies at the heart of affordability for the low-cost options and the Bargaining Council schemes, now needs further work by the public sector itself. Medical schemes need to know at what price they can contract for the delivery of benefits in the public sector and these contracts need to be facilitated at a national level. The impact of this additional substantial network to the current hospital networks offered by the private sector should have a galvanising effect on hospital benefit negotiations for 2004.

To put the size of the business in context, total expenditure on the PMB package using the Weighted industry price would have been R 14.573 billion in 2001. The estimated price for delivery of the package in the public sector would have been R 9.460 billion. This covers only registered schemes and a further amount of R 0.268 billion would be added to the public sector total for those Bargaining Council schemes reporting in 2001.

10.3 Further Work on Affordability

The authors found themselves in the position that as each section was written, so they realised that further work could be done to look at the fascinating issues raised. Ultimately the need to have this document distributed to the industry put an end to the analytical work but we feel we have only begun to scratch the surface of the question of affordability.

A study by Glazner (2000) on Prices and Affordability of Health Insurance for Colorado’s Uninsured Population is relevant as issues faced by uninsured populations worldwide are not very different. The study findings indicate that designing ways to assure that all the population has access to health insurance is a complex undertaking. It requires substantial information about the needs and characteristics of the uninsured population, as well as the price of health insurance and its effects on demand.

In order to determine the impact of the health insurance price (in our case the price of the PMB package), it must be established how much disposable income people have in different income strata. While this Affordability report has attempted to estimate impact of PMB price on total income, it should be borne in mind that the data available can only give a rough estimate and that proper estimation is needed based on other data including consumer expenditure information collected over a specified duration of time.
One important finding of the Colorado study is that very few uninsured families can afford to pay any amount for health insurance after spending on essentials. This could as well apply to the medically uninsured population of South Africa. A more comprehensive study using scheme contributions and expenditures adjusted for beneficiary profiles; household expenditure patterns as well as healthcare seeking behaviours is needed in order to provide a more exhaustive answer to the affordability question. This Affordability report should therefore only be considered as a first step in attempting to provide an answer on the affordability of the PMB package for those not currently in medical schemes.

There are several surveys on income and household expenditure produced by StatsSA that look promising for the study of affordability. In particular, the *Survey on Income and Expenditure of Households*, conducted in October 2000, looks relevant. It is suggested that future researchers can reach a more complete understanding of affordability by considering the price of the PMB package, together with any subsidy, relative to the disposable income of households.

The question of employer subsidies and how these differ between open, restricted and Bargaining Council schemes is an important piece of information not readily available. The proportion of income that can reasonably be devoted to healthcare at various income levels also needs further clarification. It is recommend that the opinions of organised labour, the Department of Trade and Industry, forums such as NEDLAC as well as consumer bodies and pensioner organisations should be sought in this regard.
11. Bibliography


• Söderlund N., Peprah E. (1998), *An Essential Hospital Package for South Africa: Selection Criteria, Costs and Affordability,* Centre for Health Policy Monograph Number 52. To be found on Centre for Health Policy part of Health Systems Trust site at [http://www.hst.org.za](http://www.hst.org.za)


• Statistics South Africa. South Africa in transition: selected findings form the October household survey of 1999 and changes that have occurred between 1995 and 1999. Statistics South Africa.
Appendix A: Proposed Methodology for the Affordability Project

This Proposed Methodology was agreed in the contract between the Council for Medical Schemes and the Centre for Actuarial Research, in June 2002.

Items from the PMB and CDL Project Methodologies:

1. Proportion of expenditure allocated to PMBs

Data in respect of all medical costs of beneficiaries covered by the PMB investigation will be extracted. It is suggested that costs be broken down into the same categories as to be used for the Annual Returns to the Registrar for 2001, in order to facilitate later comparison to other schemes.

The report will include:
- The proportion of hospital expenditure related to PMBs
- The proportion of major medical expenditure related to PMBs
- The proportion of total benefit expenditure related to PMBs.
- If possible, the proportion of total costs related to PMBs. This last aspect can only be done at a scheme level, whereas the previous elements can be done at an option level and thus analysed in the clusters.

2. Proportion of expenditure allocated to CDL

Proposed Methodology for the Affordability Project

The understanding of the Consortium is that the additional project is to give Council an insight into the pricing of options on a per member per month basis. The “accessibility” referred to in the Council document is taken to mean affordability, relative to income levels. Of relevance are the low and middle-income groups.

The data gathered for Section 6.3 is considered necessary for this exercise. In particular, the analysis by Low, Medium and High clusters will assist this work.

The results from Sections 5.6, 6.3 and 6.6 will be used to indicate possible costs for options at different ends of the market. The work done by CARE on low-cost options will be of relevance in determining affordability. New material on the income levels of those currently using and those not in medical schemes will also be used in this work.

In addition, attention will be given to explaining the methodology of pricing in medical schemes. Attention at scheme level (rather than option level) is also to investment returns and building statutory reserves. Relevant readings in this regard will be supplied as part of the project.
Appendix B: Spreadsheet for Price of Complete PMB Package by Cluster

Provided on CD-ROM.
Contains PMB price per beneficiary per annum which produces results as set out in Tables 3 and 4 of Section 3.
Also contains child and adult rates and the monthly price for a family of four (two adults and two children).
The user can change assumptions in the price.
Details and justification of assumptions used by the Consortium are in the reports:
•  The Costing of Existing Prescribed Minimum Benefits in South African Medical Schemes in 2001; and
Appendix C: Price of Complete PMB Package by Age

Also provided on CD-ROM.
Low Cluster prices overleaf.

<table>
<thead>
<tr>
<th>Age Category</th>
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<th>Total Outpatient package</th>
<th>Total CDL package</th>
<th>Complete PMB package Public sector</th>
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### Price of PMB Package for Low Cluster (2001 prices)

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Appendix D: Scheme Level Analysis of Benefits and Contributions

Provided on CD-ROM.

Appendix E: Option Level Analysis of Benefits and Contributions

Provided on CD-ROM.

Appendix F: Exempt Scheme Analysis of Benefits in 2000

Provided on CD-ROM.
Appendix G: Low-Cost Option Analysis of Benefits and Contributions

Provided on CD-ROM.

Appendix H: Option Analysis using Published Contributions

Provided on CD-ROM.

Appendix I: Low-Cost Network Option Analysis using Published Contributions

Provided on CD-ROM.
Appendix J: Affordability of Complete PMB Package by Income Levels

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<th>Low cluster Public Sector</th>
<th>Weighted industry Private Sector</th>
<th>Low cluster Private Sector</th>
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<td>R 257.07</td>
<td>R 191.25</td>
<td>R 124.26</td>
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<td>R 514.14</td>
<td>R 382.50</td>
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<th>Proportion of Income</th>
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## Appendix K: Affordability of Low Cluster Public Sector Package with Subsidy

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