



H e a l t h M a r k e t I n q u i r y

Promoting Healthy Competition

REPORT ON ANALYSIS OF MEDICAL SCHEMES CLAIMS DATA-
A FOCUS ON PRESCRIBED MINIMUM BENEFITS

8 DECEMBER 2017

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This report relies upon the information supplied to the HMI by various stakeholders and this report takes no account of subsequent developments after the date of the submission of that data. The HMI Panel with the assistance of WTW has exercised reasonable professional skill and care in evaluating the information and data provided by the stakeholders accurately, nevertheless WTW and its directors, officers, employees, sub-contractors and affiliates accept no responsibility and will not be held liable for any errors, omissions or misrepresentations made by stakeholders and/or any other third party, or for any resulting errors or misrepresentations in the work undertaken. The HMI has ultimate responsibility for any findings it makes regarding the subject matter of this report.

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ABBREVIATIONS

BHF	Board of Health Care Funders
CDL	Chronic Disease List
CMS	Council for Medical Schemes
Discovery Health	Discovery Health Pty Ltd
GEMS	Government Employees Medical Scheme
HMI	Health Market Inquiry
ICD10	International Classification of Diseases version 10
Medscheme	Medscheme Holdings (Pty) Ltd
Metropolitan Health	Metropolitan Health (Pty) Ltd
NAPPI	National Pharmaceutical Product Interface – a unique identifier owned by MediKredit, for all pharmaceutical, surgical and healthcare consumable products in RSA to enable electronic transfer of information throughout the healthcare delivery chain. https://www.medikredit.co.za/index.php?option=com_content&view=article&id=21&Itemid=31)
PMB	Prescribed Minimum Benefit
PMBD	Prescribed Minimum Benefit Diagnosis
WTW	Willis Towers Watson

Introduction

1. This report, which is the third in a series of results reports from the WTW analysis process, is intended to provide drill down analyses into the cost impact of Prescribed Minimum Benefits (PMBs).
2. This report is also intended to provide some insight into the question of whether or not PMBs are a cost driver in the medical schemes industry, to the extent that this is possible, and to replicate some of the analyses received via submissions by various medical schemes and administrators around PMBs. It is specifically noted that price increases above inflation, although mentioned in this report, will be dealt with more specifically in future reports. This report should be read in conjunction with the previous analysis reports submitted, which dealt in detail with the dataset being used for the analysis conducted for the HMI, the methodology used to build the analysis datasets and the overall industry cost trends over the analysis period.

Data and Methodologies

Data Used

3. The Prescribed Minimum Benefit (PMB) analyses uses the analysis datasets which WTW built for the HMI and which were described in the **Expenditure Analysis Report No. 1**. The **Expenditure Analysis Report No. 1** also outlines in detail the process of building these datasets. The datasets were built using the detailed claims and membership data which was requested by the HMI from the medical schemes and their administrators.

Prescribed Minimum Benefit Diagnosis (PMBD) Attribution Analyses

4. For the attribution analyses outlined in this report, we use individual medical scheme beneficiaries as the base unit of the statistical analyses. These analyses therefore use the **beneficiary file** built by WTW for the HMI analysis as a base. This file is structured at an individual beneficiary level and contains demographic information about each beneficiary in each year analysed, summary details of their claims for that year and some other usage indicators which have been built off the claims and membership databases. Of specific interest for the attribution analyses are:
 - 4.1. The demographic information about each beneficiary, specifically age and gender;
 - 4.2. The clinical profile and reporting status indicators, which are built using claims and utilisation data with the associated medicines and diagnoses and aim to build two different pictures of the disease burden within the industry;
 - 4.3. The member movement indicator (joiner, stayer, leaver, switcher) which was built to assess how benefit option selections by members impact healthcare costs; and
 - 4.4. The medical scheme and medical scheme plan selected, which have been grouped using the methodology described in **Expenditure Analysis Report No. 2** and used as analysis variables.

Other Analyses

5. The remainder of the PMB analyses are descriptive, as opposed to statistical analyses, and use the various indicators built into the analysis data files created by WTW for the HMI analyses. For the analysis by medical scheme type and benefit option type, the grouping methodologies used in the attribution analysis and outlined in **Expenditure Analysis Report No. 2** were used. These groupings aggregate benefit option

characteristics into groups which are as homogenous as possible in order to allow the characteristics to be used as analysis variables.

Methodologies

6. For this PMB report, no new methodologies have been defined, and the methodologies used in the first two analysis reports produced are applied to claims which have been defined as PMB by one of two methodologies:

Prescribed Minimum Benefits (PMB) flagged claims are claims where the medical schemes and/or their administrators who provided the data flagged specific claims as PMB claims (a PMB indicator was requested as part of the detailed data submission from the medical schemes); and

Prescribed Minimum Benefit Diagnosis (PMBD) claims are claims where the ICD10 code submitted by the treating provider is on the list of PMB diagnoses published by the Council for Medical Schemes (CMS).

7. We note that the PMBD approach is likely to cause an overstatement of true PMB claims, because, the Medical Schemes Act and the accompanying regulations define PMBs as combinations of diagnoses and treatments, either directly as Diagnosis and Treatment Pairs (DTPs) or indirectly through the publication of treatment algorithms for those conditions on the Chronic Disease List (CDL). In addition the PMB flag approach is dependent on consistent identification of PMB claims across schemes and administrators, and could contain some data inconsistencies. This is further tested by scheme in Section 3 of this report.

Some Methodological Considerations

8. When calculating the figures contained in this report, the following further definitions have been applied:
 - 8.1. When the report refers to members or beneficiaries, it counts total covered lives¹ on any scheme in a given year, as opposed to the average exposed membership used in financial reporting.
 - 8.2. Claim or 'cost' figures are calculated using fees charged as opposed to benefits paid. Thus claim estimates will include claims rejected and paid out of pocket by beneficiaries as well as those paid from medical savings accounts. We note that true out of pocket expenditure will still be understated in our estimates since claims not submitted to medical schemes and paid out of pocket will be excluded.
 - 8.3. 'Open' and 'Restricted' schemes are defined as in the CMS annual reports.
 - 8.4. All calculated inflation figures are annualised, i.e. when an inflation figure from 2010 to 2014 is quoted as x%, it should be read as x% per year. This will be consistent throughout all of the reports produced as part of the expenditure analysis, and any exceptions will be noted accordingly.
 - 8.5. Where claims figures are summarised by an analysis variable, the definition will correspond to those used in ***Expenditure Analysis Report No. 1***.

¹ In this case 'covered lives' could refer either to members or beneficiaries depending on the context, and is used here to distinguish the counts from those of exposed lives as used in most financial reporting.

PMB Definitions and Trends

PMB Data Provided by Schemes and Administrators

9. The table in Appendix A shows the proportion of in-hospital claims which were labelled as PMB by the two definitions outlined in 0 by scheme (out-of-hospital claims are less commonly PMBs and are more heavily impacted by benefit design, and have thus been excluded here). The tables show that:
 - 9.1. Across all of the submitting schemes, 47.63% of in-hospital claims were flagged as PMBs by the administrators while 55.18% of in-hospital claims came in with PMB diagnoses as per the CMS published list of ICD10 codes;
 - 9.2. Five schemes (Afrisam SA Medical Scheme, De Beers Benefit Society, Food Workers Medical Benefit Fund, Government Employees' Medical Scheme (GEMS) and Umvuzo Health) appear to have submitted all of their claims as non-PMBs, while a number of others show very low rates of PMB labelling;
 - 9.3. A number of schemes have very low rates of PMB diagnoses in their data, suggesting either incompleteness or formatting issues with the ICD10 codes submitted.
10. We note that:
 - 10.1. Of the five schemes where all claims were labelled as non-PMB, only GEMS (19.36% of the total dataset) has a material impact on the overall results (the other schemes are small, and in the case of the Food Workers' Medical Benefit Fund, exempt from the PMB regulations);
 - 10.2. The schemes with low rates of PMBDs are generally smaller and less likely to have a material impact on the overall dataset (we note these mostly part of the group of schemes which are self-administered or administered by the smaller administrators, and this should be noted if and when the results are broken down by administrator group).
11. The next sub-section analyses and compares the two approaches to defining PMBs and demonstrates the effect of the data challenges outlined above on any potential analysis results.

Comparison of PMB Definitions

12. In this sub-section, analyses are performed across various dimensions to show the prevalence of PMBs using both definitions, as well as how schemes are funding PMBs. The intention is to demonstrate broad trends, as well as to show the impact of the data issues outlined above on the analysis results.

Overall Trends by PMB and PMBD, All Schemes

13. This sub-section analyses, across various dimensions, the trends in payment patterns of PMB and PMBD claims. For the purposes of this sub-section, claim payment sources are defined as follows:
 - 13.1. A payment from 'Risk' is any amount paid from the schemes' funds, including from hospital benefits or major medical benefits, any insured benefit limits in traditional type options and above threshold benefits;
 - 13.2. A payment from 'Savings' is any amount paid from the personal medical savings account of a member; and
 - 13.3. An 'Unpaid'¹ claim amount is an amount which claimed by a service provider, but was not paid by the scheme.
14. Table 1 shows, for all schemes, the proportion of out-of-hospital claims which were incurred in respect of PMB diagnoses and non PMB diagnoses, as well as the proportion of those paid from risk and savings respectively.

¹ We note that 'Unpaid' claims could result either in a co-payment being made by a medical scheme member to the service provider or a write-off of the outstanding balance by the provider (the data provides no information which would allow us to determine which of these is the case).

Table 1: Out-of-hospital Payment Sources by PMBD, All Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.00%	83.48%	10.80%	5.72%	67.07%	25.41%	7.52%
2011	21.86%	84.94%	10.06%	5.00%	66.92%	25.57%	7.51%
2012	22.93%	85.27%	9.43%	5.29%	66.87%	25.60%	7.54%
2013	24.08%	85.54%	9.34%	5.12%	66.25%	26.31%	7.44%
2014	25.28%	85.82%	9.12%	5.06%	65.64%	27.24%	7.12%

15. Table 1 shows that around a quarter of out-of-hospital claims are for a PMB diagnosis, with the proportion increasing over time. It also shows that, in 2014, over 85% of these claims were paid from risk, around 9% from savings, and 5% remained unpaid. Although Regulation 8 to the Medical Schemes Act states that PMB claims should be paid in full, there could be various legitimate reasons for PMBD claims to be short-paid, and as such we would not expect 100% payment from risk for PMBD claims. It does however appear that payment rates from risk are increasing over time and payment rates from savings as well and rates of claims unpaid are decreasing.

16. The next table shows the PMBD and non PMBD figures for in-hospital claims. The table shows that a higher proportion of in-hospital claims are for PMB diagnoses can be observed. As is the case with the out-of-hospital claims an increasing trend in the proportions of claims with PMB diagnoses can be observed. It is also noticeable that, although the same reasons for incomplete payments from risk would apply, the percentages of claims paid from risk are much higher than for the out-of-hospital claims. The proportion of unpaid claims is also lower at around 3%.

Table 2: In- hospital Payment Sources by PMBD, All Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	54.51%	95.95%	0.44%	3.61%	93.77%	1.81%	4.42%
2011	53.92%	96.39%	0.41%	3.21%	94.07%	1.60%	4.33%
2012	54.17%	96.41%	0.40%	3.19%	94.13%	1.53%	4.34%
2013	55.86%	96.40%	0.39%	3.20%	93.88%	1.59%	4.53%
2014	57.59%	96.34%	0.37%	3.29%	93.76%	1.67%	4.56%

17. The table shows no material trends in where claims are being paid from. A potential reason for this is that most benefit options offer full, unlimited risk cover for at least the hospital component of in-hospital claims.

18. The tables are reproduced below for PMB flagged claims. We note that PMB flagged claims could also be affected by the same legitimate reasons for incomplete payments and hence could still legitimately be paid at less than 100% of cost.

Table 3: Out-of-hospital Payment Sources by PMB Flags, All Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	22.26%	83.96%	8.72%	7.32%	66.67%	26.24%	7.09%
2011	22.81%	84.78%	8.13%	7.10%	66.74%	26.34%	6.92%
2012	22.51%	84.21%	8.23%	7.56%	67.28%	25.86%	6.87%
2013	24.01%	84.81%	7.83%	7.36%	66.50%	26.77%	6.73%
2014	24.28%	84.76%	7.94%	7.30%	66.24%	27.39%	6.37%

Table 4: In-hospital Payment Sources by PMB Flags, All Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	45.77%	95.64%	0.46%	3.90%	94.38%	1.58%	4.04%
2011	47.62%	95.88%	0.43%	3.69%	94.81%	1.43%	3.76%
2012	46.53%	96.07%	0.44%	3.49%	94.75%	1.34%	3.92%
2013	47.89%	96.12%	0.44%	3.45%	94.53%	1.37%	4.11%
2014	49.19%	96.02%	0.42%	3.56%	94.49%	1.41%	4.09%

Medical Scheme Types

19. This sub-section analyses claim payment patterns with respect to PMBD and PMB flagged claims by scheme type. In this case, the restricted scheme group has been divided into GEMS and the other restricted schemes, to isolate the potential data problem outlined previously with respect to GEMS.

20. The first set of tables, starting with Table 5 below, shows the proportion of claims by scheme type which are PMB diagnoses, as well as the proportion of claims paid from risk and savings for PMB and non-PMB diagnoses separately for out-of-hospital claims.

Table 5: Out-of-hospital Payment Sources by PMBD, Open Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.95%	77.24%	16.19%	6.57%	52.44%	39.63%	7.94%
2011	22.79%	78.53%	15.87%	5.60%	51.14%	40.72%	8.14%
2012	24.10%	78.89%	14.90%	6.21%	50.67%	41.04%	8.29%
2013	25.72%	80.01%	14.10%	5.89%	50.09%	41.83%	8.08%
2014	26.74%	80.36%	13.88%	5.75%	49.16%	42.95%	7.90%

Table 6: Out-of-hospital Payment Sources by PMBD, GEMS

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	18.13%	94.68%	2.03%	3.29%	91.42%	2.93%	5.65%
2011	19.97%	94.99%	1.67%	3.33%	90.96%	2.91%	6.13%
2012	21.35%	95.64%	0.92%	3.44%	90.92%	2.89%	6.19%
2013	23.17%	95.23%	1.53%	3.23%	90.89%	3.33%	5.77%
2014	23.92%	94.84%	1.67%	3.49%	91.19%	3.80%	5.01%

Table 7: Out-of-hospital Payment Sources by PMBD, Other Restricted Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.22%	89.31%	5.20%	5.49%	77.32%	14.56%	8.12%
2011	21.56%	90.81%	4.17%	5.02%	77.77%	14.81%	7.43%
2012	21.94%	90.69%	4.45%	4.86%	77.59%	15.17%	7.24%
2013	21.32%	90.75%	4.35%	4.90%	78.18%	14.25%	7.56%
2014	23.24%	91.38%	3.89%	4.74%	77.59%	15.02%	7.39%

21. The tables show that:

21.1. Open schemes show higher proportions of PMBD claims out-of-hospital than either restricted scheme group.

21.2. In open schemes, increasing proportions of PMBD claims are being paid from risk, while decreasing proportions of non-PMBD claims are being paid from risk, and greater proportions from savings. The first trend is also evident in restricted schemes, although the second is markedly less prevalent.

22. The next set of tables shows the same trends for in-hospital claims, again broken down by scheme type.

Table 8: In-hospital Payment Sources by PMBD, Open Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	53.56%	96.23%	0.62%	3.15%	93.21%	2.55%	4.24%
2011	52.93%	96.59%	0.63%	2.78%	93.56%	2.25%	4.19%
2012	52.30%	96.20%	0.62%	3.17%	93.52%	2.09%	4.38%
2013	54.37%	96.20%	0.61%	3.19%	93.22%	2.19%	4.58%
2014	55.42%	96.35%	0.58%	3.07%	93.19%	2.25%	4.56%

Table 9: In-hospital Payment Sources by PMBD, GEMS

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	40.88%	94.02%	0.64%	5.34%	94.13%	1.07%	4.80%
2011	41.24%	95.80%	0.26%	3.94%	94.37%	1.03%	4.60%
2012	43.03%	96.49%	0.26%	3.24%	94.25%	1.04%	4.71%
2013	40.32%	96.20%	0.23%	3.57%	94.10%	0.95%	4.94%
2014	46.74%	96.45%	0.17%	3.39%	93.89%	1.25%	4.86%

Table 10: In-hospital Payment Sources by PMBD, Other Restricted Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	60.13%	95.87%	0.12%	4.01%	94.77%	0.60%	4.63%
2011	58.91%	96.18%	0.10%	3.72%	94.94%	0.56%	4.50%
2012	60.00%	96.70%	0.08%	3.22%	95.30%	0.58%	4.11%
2013	62.26%	96.75%	0.09%	3.16%	95.17%	0.56%	4.27%
2014	63.83%	96.31%	0.09%	3.61%	94.95%	0.57%	4.48%

23. The tables show that there is significantly more uniformity in the patterns for in-hospital claims, both across scheme types and between PMB and non-PMB diagnoses. The major notable difference is the lower rate of PMBDs for GEMS compared to the other two groups. Unlike the out-of-hospital claims, there appear not to be any material shifts in the way claims are paid.

24. The tables are now repeated for PMB flagged claims, starting with Table 11 below.

Table 11: Out-of-hospital Payment Sources by PMB Flags, Open Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	28.80%	80.85%	11.04%	8.11%	48.59%	43.97%	7.44%
2011	30.59%	81.67%	10.41%	7.92%	46.67%	45.92%	7.40%
2012	30.43%	80.95%	10.42%	8.62%	47.20%	45.37%	7.43%
2013	31.51%	81.76%	10.05%	8.19%	46.75%	46.04%	7.21%
2014	32.28%	82.00%	10.03%	7.97%	45.82%	47.16%	7.02%

Table 12: Out-of-hospital Payment Sources by PMB Flags, GEMS

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	0.00%	0.00%	0.00%	0.00%	92.01%	2.77%	5.22%
2011	0.00%	0.00%	0.00%	0.00%	91.76%	2.67%	5.57%
2012	0.00%	0.00%	0.00%	0.00%	91.93%	2.47%	5.60%
2013	0.00%	0.00%	0.00%	0.00%	91.90%	2.92%	5.18%
2014	0.00%	0.00%	0.00%	0.00%	92.06%	3.29%	4.64%

Table 13: Out-of-hospital Payment Sources by PMB Flags, Other Restricted Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	25.54%	90.91%	3.56%	5.54%	76.08%	15.67%	8.25%
2011	26.05%	92.07%	2.78%	5.15%	76.53%	15.94%	7.52%
2012	26.80%	92.07%	2.94%	4.99%	76.22%	16.43%	7.35%
2013	28.90%	92.04%	2.57%	5.39%	76.32%	16.03%	7.65%
2014	28.80%	91.72%	2.66%	5.62%	76.37%	16.39%	7.24%

25. The tables show very similar trends to the tables for PMBD claims, aside from the absence of PMB flagged claims for GEMS. The next set of tables shows the same trends for in-hospital claims, again broken down by scheme type.

Table 14: In-hospital Payment Sources by PMB Flags, Open Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	55.58%	96.32%	0.54%	3.13%	92.96%	2.73%	4.31%
2011	58.73%	96.33%	0.55%	3.11%	93.50%	2.59%	3.91%
2012	57.96%	96.19%	0.55%	3.26%	93.18%	2.39%	4.42%
2013	60.22%	96.07%	0.55%	3.38%	92.98%	2.52%	4.50%
2014	62.25%	96.17%	0.52%	3.31%	92.92%	2.66%	4.42%

Table 15: In-hospital Payment Sources by PMB Flags, GEMS

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	0.00%	0.00%	0.00%	0.00%	97.80%	0.10%	2.10%
2011	0.00%	0.00%	0.00%	0.00%	97.45%	0.09%	2.46%
2012	0.00%	0.00%	0.00%	0.00%	97.31%	0.07%	2.62%
2013	0.00%	0.00%	0.00%	0.00%	97.09%	0.10%	2.80%
2014	0.00%	0.00%	0.00%	0.00%	96.86%	0.11%	3.03%

Table 16: In-hospital Payment Sources by PMB Flags, Other Restricted Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	54.48%	93.99%	0.26%	5.75%	92.43%	1.17%	6.39%
2011	59.23%	94.80%	0.14%	5.06%	92.77%	1.30%	5.94%
2012	60.21%	95.80%	0.14%	4.06%	93.04%	1.39%	5.57%
2013	60.45%	96.26%	0.12%	3.62%	92.49%	1.29%	6.22%
2014	62.56%	95.61%	0.14%	4.25%	92.50%	1.38%	6.12%

26. Again, the results in the tables do not differ markedly from those run using PMBDs, aside from the GEMS issue.

Administrators

27. This sub-section analyses claim payment patterns with respect to PMB flagged and PMBD claims by administrator. Since administrators use the same administration system, and often similar rules, to assess claims for all of the schemes under administration, this represents an alternate way of aggregating similar schemes. In this case, the administrators have been divided into the three largest administrators (Discovery Health (Pty) Ltd (Discovery Health), Metropolitan Health (Pty) Ltd (Metropolitan Health) and Medscheme Holdings Pty Ltd (Medscheme)), the other third-party administrators and the group of self-administered schemes.

28. The first set of tables, starting with Table 17 below, shows the proportion of claims by administrator or administrator group which are PMB diagnoses, as well as the proportion of claims paid from risk and savings for PMB and non-PMB diagnoses separately for out-of-hospital claims.

Table 17: Out-of-hospital Payment Sources by PMBD, Discovery Health Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.87%	72.09%	21.83%	6.08%	40.44%	51.16%	8.40%
2011	23.45%	73.60%	20.61%	5.79%	39.27%	52.61%	8.12%
2012	24.09%	72.84%	20.77%	6.39%	37.68%	54.13%	8.19%
2013	25.02%	74.08%	20.18%	5.74%	36.81%	55.48%	7.71%
2014	26.10%	74.98%	19.19%	5.83%	36.63%	55.72%	7.65%

Table 18: Out-of-hospital Payment Sources by PMBD, Metropolitan Health Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	20.46%	93.36%	2.71%	3.93%	86.48%	6.88%	6.65%
2011	21.77%	94.75%	1.67%	3.57%	86.92%	6.57%	6.51%
2012	22.67%	94.95%	1.37%	3.68%	87.50%	6.00%	6.50%
2013	24.18%	94.72%	1.62%	3.66%	87.85%	5.92%	6.23%
2014	25.01%	94.78%	1.46%	3.76%	88.33%	6.09%	5.57%

Table 19: Out-of-hospital Payment Sources by PMBD, Medscheme Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	26.69%	88.71%	3.50%	7.79%	82.83%	9.48%	7.69%
2011	24.38%	91.58%	3.38%	5.04%	81.88%	9.40%	8.72%
2012	25.70%	91.69%	3.41%	4.90%	82.34%	9.95%	7.71%
2013	26.96%	91.66%	3.60%	4.74%	81.82%	10.34%	7.83%
2014	29.40%	92.03%	3.49%	4.48%	81.98%	10.93%	7.10%

Table 20: Out-of-hospital Payment Sources by PMBD, Other Third-Party Administered Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	4.93%	84.01%	6.71%	9.28%	76.90%	15.96%	7.14%
2011	7.55%	83.49%	4.56%	11.95%	77.29%	15.29%	7.43%
2012	9.45%	88.04%	4.00%	7.96%	73.55%	18.63%	7.83%
2013	12.92%	87.84%	2.46%	9.70%	75.64%	15.10%	9.26%
2014	13.34%	87.73%	2.55%	9.73%	73.79%	16.26%	9.96%

Table 21: Out-of-hospital Payment Sources by PMBD, Self-Administered Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	23.56%	87.76%	7.46%	4.78%	72.59%	20.60%	6.81%
2011	23.49%	87.07%	7.86%	5.07%	70.98%	22.48%	6.54%
2012	26.80%	87.83%	5.27%	6.90%	71.77%	19.36%	8.87%
2013	26.94%	87.05%	6.51%	6.44%	68.78%	22.68%	8.54%
2014	27.40%	86.95%	7.52%	5.53%	66.91%	24.86%	8.23%

29. The tables show very similar patterns for all of the administrator groups, with the exception of a lower rate of PMB diagnoses for the schemes administered by other third-party administrators. This is a result of the low rates of PMBDs for the schemes administered by Momentum Health which make up a significant proportion of this group. The trend towards increased payment of PMBD claims from risk is evident in all groups except for the self-administered scheme group.

30. The next set of tables shows the same trends for in-hospital claims, again broken down by administrator group.

Table 22: In-hospital Payment Sources by PMBD, Discovery Health Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	58.07%	96.51%	0.84%	2.65%	91.58%	4.14%	4.29%
2011	57.65%	96.51%	0.87%	2.63%	92.51%	3.64%	3.85%
2012	56.36%	96.14%	0.90%	2.96%	92.89%	3.45%	3.66%
2013	57.72%	96.14%	0.91%	2.95%	92.70%	3.65%	3.65%
2014	58.30%	96.03%	0.87%	3.10%	92.69%	3.64%	3.66%

Table 23: In-hospital Payment Sources by PMBD, Metropolitan Health Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	61.73%	95.60%	0.15%	4.25%	94.37%	0.59%	5.04%
2011	60.76%	96.12%	0.07%	3.81%	94.56%	0.52%	4.91%
2012	61.95%	96.73%	0.05%	3.22%	95.16%	0.49%	4.35%
2013	63.99%	96.90%	0.05%	3.04%	95.03%	0.49%	4.48%
2014	65.77%	96.32%	0.04%	3.64%	94.72%	0.55%	4.74%

Table 24: In-hospital Payment Sources by PMBD, Medscheme Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	62.12%	95.42%	0.19%	4.39%	95.18%	0.61%	4.21%
2011	59.11%	96.49%	0.12%	3.39%	94.99%	0.50%	4.51%
2012	60.71%	96.48%	0.14%	3.38%	94.32%	0.62%	5.07%
2013	63.34%	96.32%	0.13%	3.55%	94.16%	0.68%	5.16%
2014	65.36%	96.67%	0.13%	3.20%	94.29%	0.73%	4.98%

Table 25: In-hospital Payment Sources by PMBD, Other Third-Party Administered Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	5.60%	92.91%	0.40%	6.69%	95.25%	0.52%	4.23%
2011	8.59%	96.45%	0.25%	3.30%	95.09%	0.47%	4.44%
2012	8.78%	94.40%	0.24%	5.37%	94.69%	0.49%	4.82%
2013	14.96%	94.83%	0.12%	5.05%	94.18%	0.39%	5.43%
2014	16.25%	95.43%	0.11%	4.46%	94.02%	0.43%	5.55%

Table 26: In-hospital Payment Sources by PMBD, Self-Administered Schemes

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	57.25%	96.93%	0.21%	2.85%	95.73%	0.80%	3.47%
2011	57.24%	96.91%	0.22%	2.87%	95.83%	0.89%	3.28%
2012	59.51%	96.47%	0.21%	3.32%	94.37%	0.82%	4.82%
2013	61.86%	96.25%	0.21%	3.54%	93.97%	1.01%	5.01%
2014	63.07%	97.41%	0.21%	2.38%	94.08%	1.13%	4.79%

31. The trends are again similar for each group, barring the other schemes as outlined above. Again the payment rates between PMB and non-PMB diagnoses do not differ markedly across any of the administrator groups.
32. The tables are now repeated for PMB flagged claims, starting with Table 27 below.

Table 27: Out-of-hospital Payment Sources by PMB Flags, Discovery Health Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	29.51%	76.89%	15.08%	8.03%	34.99%	57.17%	7.84%
2011	31.57%	77.47%	14.63%	7.90%	33.42%	59.16%	7.42%
2012	32.05%	76.23%	14.88%	8.89%	31.96%	60.82%	7.22%
2013	32.72%	77.01%	14.84%	8.15%	31.12%	62.11%	6.77%
2014	33.25%	77.36%	14.70%	7.94%	31.34%	61.87%	6.80%

Table 28: Out-of-hospital Payment Sources by PMB Flags, Metropolitan Health Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	11.98%	91.83%	2.36%	5.81%	87.35%	6.52%	6.13%
2011	11.22%	93.96%	0.91%	5.12%	87.95%	6.09%	5.96%
2012	10.50%	93.57%	1.28%	5.15%	88.68%	5.38%	5.94%
2013	11.72%	93.51%	1.14%	5.35%	88.98%	5.37%	5.64%
2014	11.41%	93.71%	0.94%	5.36%	89.46%	5.45%	5.09%

Table 29: Out-of-hospital Payment Sources by PMB Flags, Medscheme Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	24.99%	90.57%	2.01%	7.43%	82.35%	9.84%	7.82%
2011	25.26%	93.29%	0.04%	6.67%	81.19%	10.60%	8.21%
2012	25.62%	93.99%	0.04%	5.98%	81.56%	11.10%	7.34%
2013	26.10%	93.99%	0.03%	5.98%	81.11%	11.53%	7.36%
2014	27.51%	94.17%	0.03%	5.80%	81.43%	12.04%	6.53%

Table 30: Out-of-hospital Payment Sources by PMB Flags, Other Third-Party Administered Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	33.23%	91.99%	2.28%	5.73%	69.91%	22.09%	8.00%
2011	35.52%	91.37%	2.14%	6.49%	70.25%	21.28%	8.47%
2012	35.02%	90.19%	3.28%	6.53%	66.69%	24.77%	8.55%
2013	37.99%	89.90%	2.12%	7.98%	69.45%	20.43%	10.13%
2014	37.50%	88.92%	2.22%	8.86%	67.68%	21.76%	10.57%

Table 31: Out-of-hospital Payment Sources by PMB Flags, Self-Administered Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	8.98%	88.10%	0.35%	11.55%	74.99%	19.20%	5.81%
2011	10.52%	89.49%	0.42%	10.09%	73.03%	21.24%	5.73%
2012	16.17%	90.74%	0.26%	9.00%	73.25%	18.54%	8.21%
2013	17.07%	90.94%	0.42%	8.64%	70.15%	22.00%	7.84%
2014	18.63%	91.74%	0.47%	7.79%	67.98%	24.60%	7.42%

33. The trends in terms of payments are similar for each of the groups, except for lower rates of payment of PMB flagged claims from risk for Discovery Health and a declining trend for PMB claims paid from risk in the other schemes group. The proportion of PMB flagged claims is lower for the Metropolitan Health schemes, because of the GEMS issue, and for the self-administered scheme group.

Table 32: In-hospital Payment Sources by PMB Flags, Discovery Health Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	57.06%	96.34%	0.85%	2.82%	91.92%	4.06%	4.02%
2011	57.81%	96.24%	0.90%	2.87%	92.87%	3.61%	3.52%
2012	58.17%	95.97%	0.93%	3.10%	93.00%	3.51%	3.49%
2013	60.15%	96.04%	0.95%	3.02%	92.64%	3.76%	3.59%
2014	61.53%	95.97%	0.90%	3.12%	92.50%	3.82%	3.67%

Table 33: In-hospital Payment Sources by PMB Flags, Metropolitan Health Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	23.38%	91.86%	0.27%	7.86%	96.12%	0.34%	3.54%
2011	23.21%	93.35%	0.04%	6.61%	96.16%	0.31%	3.53%
2012	21.59%	95.01%	0.05%	4.94%	96.44%	0.27%	3.29%
2013	20.41%	95.89%	0.03%	4.08%	96.32%	0.26%	3.42%
2014	20.78%	94.50%	0.03%	5.47%	96.11%	0.26%	3.63%

Table 34: In-hospital Payment Sources by PMB Flags, Medscheme Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	59.62%	96.62%	0.02%	3.36%	93.43%	0.83%	5.74%
2011	67.80%	96.95%	0.01%	3.04%	93.62%	0.84%	5.54%
2012	69.91%	97.17%	0.00%	2.83%	92.06%	1.07%	6.86%
2013	70.71%	96.94%	0.00%	3.06%	92.13%	1.12%	6.75%
2014	73.60%	97.30%	0.00%	2.70%	91.80%	1.28%	6.92%

Table 35: In-hospital Payment Sources by PMB Flags, Other Third-Party Administered Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	56.74%	95.46%	0.15%	4.39%	94.67%	1.00%	4.33%
2011	64.12%	95.35%	0.09%	4.56%	94.94%	1.10%	3.96%
2012	61.27%	94.75%	0.10%	5.14%	94.51%	1.05%	4.44%
2013	63.82%	94.73%	0.07%	5.20%	93.47%	0.85%	5.68%
2014	64.85%	94.68%	0.07%	5.25%	93.46%	0.94%	5.60%

Table 36: Out-of-hospital Payment Sources by PMB Flags, Self-Administered Schemes

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	5.38%	98.54%	0.02%	1.45%	96.30%	0.49%	3.21%
2011	7.99%	99.22%	0.00%	0.78%	96.21%	0.55%	3.25%
2012	26.65%	98.90%	0.01%	1.09%	94.43%	0.62%	4.96%
2013	28.55%	98.16%	0.07%	1.77%	94.27%	0.70%	5.04%
2014	32.80%	98.24%	0.03%	1.74%	95.17%	0.81%	4.02%

34. The same issues in terms of proportions of PMB flags are evident as for the out-of-hospital claims. In this case, payment rate trends are again broadly similar for PMB flagged claims and non-PMB flagged claims across the administrator groups, with payments from risk remaining high and relatively static for both PMB and non-PMB flagged claims.

Option Types

35. As outlined above, benefit design factors can impact materially on the results of the analyses that we performed with respect to this report. The next set of tables groups the benefit options using the methodology outlined in the second analysis report and used for the attribution analyses, noting that the benefit options have been grouped separately with respect to in- and out-of-hospital benefits. The ‘PMB Exempt’ and ‘Unknown’ option groups have been excluded as the number of members in those groups is too small to produce consistent trends.

36. The first set of tables, starting with Table 37 below, show the payment patterns by option type (Savings, Hospital, Traditional and Comprehensive) for out-of-hospital claims.

Table 37: Out-of-hospital Payment Sources by PMBD, Hospital Plans

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	41.02%	89.58%	1.12%	9.30%	80.72%	6.49%	12.79%
2011	41.85%	91.17%	0.86%	7.97%	81.31%	5.28%	13.41%
2012	42.59%	90.86%	0.88%	8.26%	80.45%	5.66%	13.90%
2013	38.51%	91.49%	0.95%	7.56%	80.89%	5.67%	13.44%
2014	39.33%	91.67%	1.01%	7.32%	80.86%	6.31%	12.82%

Table 38: Out-of-hospital Payment Sources by PMBD, Savings Plans

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	19.63%	63.16%	29.79%	7.06%	31.58%	61.82%	6.60%
2011	19.89%	65.55%	28.49%	5.96%	31.92%	61.78%	6.29%
2012	20.02%	67.08%	26.96%	5.96%	31.48%	62.28%	6.24%
2013	20.93%	68.06%	26.60%	5.34%	31.08%	63.03%	5.89%
2014	22.44%	69.67%	24.88%	5.45%	30.44%	63.75%	5.81%

Table 39: Out-of-hospital PMBD Payment Patterns, Traditional Plans

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	19.13%	94.54%	0.83%	4.63%	90.95%	2.03%	7.01%
2011	20.05%	95.05%	0.84%	4.11%	90.42%	2.26%	7.32%
2012	21.71%	94.84%	0.67%	4.49%	89.90%	2.56%	7.54%
2013	22.79%	94.77%	0.87%	4.36%	89.55%	2.98%	7.47%
2014	24.13%	94.66%	0.90%	4.45%	90.01%	3.11%	6.87%

Table 40: Out-of-hospital PMBD Payment Patterns, Comprehensive Plans

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.72%	82.20%	12.03%	5.77%	61.64%	30.26%	8.10%
2011	22.70%	83.33%	11.60%	5.07%	60.73%	31.26%	8.01%
2012	23.90%	83.11%	11.45%	5.43%	60.24%	31.75%	8.01%
2013	25.35%	83.89%	10.70%	5.40%	60.48%	31.52%	8.00%
2014	26.21%	84.39%	10.32%	5.29%	60.46%	31.72%	7.82%

37. The tables show that:

- 37.1. Hospital plans have significantly higher proportions of PMB diagnoses in their out-of-hospital claims. We would expect this since Hospital plans typically only offer out-of-hospital benefits for PMB claims, and hence non-PMB claims are not covered by design.
- 37.2. Across all plan types, payments from risk are higher for PMB diagnoses than non-PMB diagnoses. Across all plan types the proportion of PMB diagnosis claims paid from risk is increasing, while the corresponding proportion for non-

PMB claims is virtually flat. The next set of tables, starting with Table 41 below, repeats the figures for PMB flagged claims.

Table 41: Out-of-hospital Payment Sources by PMB Flags, Hospital Plans

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	64.79%	87.23%	0.67%	12.10%	79.06%	10.94%	10.00%
2011	72.14%	87.88%	0.48%	11.64%	79.12%	11.06%	9.82%
2012	70.61%	87.32%	0.55%	12.13%	79.03%	11.00%	9.97%
2013	70.71%	87.76%	0.49%	11.75%	78.23%	11.98%	9.79%
2014	70.38%	88.32%	0.56%	11.12%	77.50%	12.94%	9.56%

Table 42: Out-of-hospital Payment Sources by PMB Flags, Savings Plans

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	28.84%	73.77%	17.70%	8.53%	23.20%	70.86%	5.95%
2011	29.57%	75.65%	16.12%	8.22%	23.06%	71.55%	5.39%
2012	29.24%	75.45%	16.20%	8.35%	23.38%	71.33%	5.29%
2013	29.51%	76.13%	16.00%	7.86%	23.21%	71.89%	4.90%
2014	29.73%	76.34%	15.93%	7.73%	23.54%	71.57%	4.88%

Table 43: Out-of-hospital Payment Sources by PMB Flags, Traditional Plans

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	9.86%	94.04%	0.20%	5.76%	91.38%	1.98%	6.64%
2011	9.58%	94.69%	0.18%	5.13%	90.99%	2.17%	6.84%
2012	10.30%	93.84%	0.16%	5.99%	90.64%	2.38%	6.98%
2013	11.22%	93.64%	0.16%	6.20%	90.37%	2.79%	6.84%
2014	10.73%	93.25%	0.14%	6.61%	90.88%	2.87%	6.25%

Table 44: Out-of-hospital Payment Sources by PMB Flags, Comprehensive Plans

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	26.00%	84.11%	8.87%	7.03%	59.78%	32.43%	7.80%
2011	27.16%	84.50%	8.62%	6.89%	58.91%	33.57%	7.51%
2012	26.86%	83.52%	8.92%	7.56%	59.16%	33.50%	7.34%
2013	28.52%	84.43%	8.25%	7.32%	59.23%	33.42%	7.35%
2014	28.98%	84.69%	8.13%	7.18%	59.40%	33.45%	7.15%

38. Comparing these tables to the PMBD tables shows that:

- 38.1. All option groups except Traditional plans show higher proportions of PMBD claims than PMB flagged claims (this is likely the GEMS effect, since GEMS’ largest option would have been classified as Traditional);
- 38.2. The proportions paid from risk do not differ markedly between PMB flagged and PMBD claims for Traditional and Comprehensive plans, while Savings plans show higher payments from risk for PMBD claims as compared to PMB flagged claims whereas Hospital plans show a marginally opposite trend (i.e. higher payment rates for PMB flagged claims).

Service Provider Types

39. This section outlines the payment patterns by service provider group across both definitions of PMBs. Although the PMB regulations apply to and affect all service providers’ claims, a significant focus of the submissions to the HMI in respect of PMBs have been on medical practitioners, and most notably, medical specialists. Table 45 shows the proportion of out-of-hospital claims for specialists which were for PMB diagnoses, as well as the percentage of claims which were paid from risk and from savings for both PMB and non-PMB diagnoses.

Table 45: Out-of-hospital Payment Sources by PMBD, Specialists (excl. Anaesthetists)

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	56.18%	78.89%	15.54%	5.57%	60.75%	28.56%	10.69%
2011	57.12%	80.33%	14.34%	5.33%	60.60%	28.34%	11.06%
2012	58.38%	80.72%	13.43%	5.85%	60.46%	28.00%	11.54%
2013	58.55%	80.79%	13.59%	5.62%	61.17%	27.26%	11.57%
2014	59.24%	80.83%	13.47%	5.70%	60.66%	27.75%	11.5

40. Table 45 shows that between 50% and 60% of out-of-hospital specialist claims are in respect of PMB diagnoses, and that this proportion is increasing over time. This is consistent with the overall increase in PMB diagnoses out-of-hospital shown in previous sections of the report. In addition and also consistent with overall trends, the proportion of PMBD claims paid from risk is increasing over time. However the proportion of unpaid claims (i.e. not from risk or savings) for non-PMB diagnoses appears substantially higher for specialists than the overall figure, while the proportion paid from savings for PMB diagnoses is also higher than the overall figure.

41. The corresponding tables for the other provider groups in respect of out-of-hospital claims are shown in the table below.

Table 46: Out-of-hospital Payment Sources by PMBD, General Practitioners

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.48%	77.33%	18.53%	4.14%	71.86%	24.49%	3.65%
2011	21.10%	78.19%	17.61%	4.20%	71.85%	24.17%	3.97%
2012	21.24%	79.18%	16.86%	3.96%	72.10%	24.31%	3.60%
2013	20.87%	78.32%	17.75%	3.93%	71.31%	24.70%	3.99%
2014	20.98%	78.39%	18.11%	3.50%	70.74%	25.75%	3.51%

Table 47: Out-of-hospital Payment Sources by PMBD, Pathologists

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	22.50%	97.73%	1.47%	0.80%	73.87%	23.03%	3.09%
2011	24.42%	97.49%	1.49%	1.02%	74.35%	23.00%	2.65%
2012	26.54%	97.75%	1.37%	0.88%	74.90%	22.84%	2.25%
2013	29.40%	97.86%	1.30%	0.84%	74.11%	23.29%	2.60%
2014	31.87%	97.79%	1.23%	0.98%	74.51%	23.11%	2.37%

Table 48: Out-of-hospital Payment Sources by PMBD, Radiologists

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	19.99%	88.28%	8.36%	3.36%	79.10%	17.20%	3.69%
2011	21.66%	90.09%	7.40%	2.51%	79.48%	16.91%	3.61%
2012	23.27%	90.39%	6.81%	2.80%	79.42%	16.77%	3.82%
2013	24.37%	89.71%	7.21%	3.08%	79.23%	16.79%	3.98%
2014	25.52%	89.94%	7.00%	3.06%	78.52%	17.52%	3.96%

Table 49: Out-of-hospital PMBD Payment Patterns, Auxiliary Services

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	21.13%	77.39%	17.77%	4.84%	66.26%	28.65%	5.10%
2011	21.48%	78.65%	16.64%	4.71%	64.65%	28.59%	6.76%
2012	23.07%	79.67%	15.76%	4.57%	65.20%	29.76%	5.04%
2013	24.50%	80.03%	15.36%	4.60%	65.28%	30.10%	4.62%
2014	26.78%	81.32%	13.28%	5.40%	64.72%	30.42%	4.86%

42. The tables show that the proportion of claims made up of PMB diagnoses is markedly smaller for the other provider groups than for specialists, and is actually declining for general practitioners in contrast to the increases seen for other groups. Pathology and radiology do not reflect the trend toward increasing proportions of payments from risk for PMB diagnoses, but general practitioners and auxiliary services show the same trend as specialists.
43. The next set of tables shows the same trends for in-hospital claims, starting with Table 50 for hospital claims.

Table 50: In-hospital Payment Sources by PMBD, Hospitals

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	61.56%	97.60%	0.22%	2.18%	96.99%	0.77%	2.24%
2011	60.54%	97.84%	0.21%	1.95%	97.21%	0.64%	2.14%
2012	60.31%	98.10%	0.21%	1.69%	97.28%	0.65%	2.07%
2013	62.15%	98.11%	0.21%	1.68%	97.13%	0.70%	2.17%
2014	64.03%	98.13%	0.19%	1.68%	97.13%	0.74%	2.12%

44. Consistent with the overall in-hospital trends outlined above, hospital claims show very similar payment patterns for PMB and non-PMB diagnoses, and are almost always paid in full.

45. The next two tables are for specialists and anaesthetists (we note that anaesthetists are separated out in-hospital because anaesthetics becomes a supporting specialist discipline as opposed a primary treating discipline in an out-of-hospital setting).

Table 51: In-hospital Payment Sources by PMBD, Specialists (excl. Anaesthetists)

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	56.74%	90.80%	0.63%	8.56%	87.36%	0.90%	11.74%
2011	57.80%	91.98%	0.46%	7.56%	87.06%	0.78%	12.15%
2012	59.31%	91.41%	0.44%	8.15%	86.28%	0.80%	12.91%
2013	60.91%	91.45%	0.43%	8.12%	86.00%	0.76%	13.25%
2014	62.73%	91.06%	0.42%	8.52%	85.57%	0.80%	13.62%

Table 52: In-hospital Payment Sources by PMBD, Anaesthetists

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	44.64%	86.93%	0.67%	12.40%	84.19%	2.02%	13.80%
2011	45.26%	88.43%	0.37%	11.19%	85.24%	0.99%	13.77%
2012	47.68%	88.24%	0.36%	11.40%	84.26%	0.97%	14.77%
2013	49.48%	88.32%	0.33%	11.34%	83.85%	0.90%	15.25%
2014	51.76%	88.70%	0.29%	11.02%	82.98%	0.95%	16.07%

46. The tables show that, consistent with the hospital experience, around 60% of specialist claims are in respect of PMB diagnoses and this proportion is increasing over time.

However, specialist and anaesthetist claims show substantial unpaid components for most claims, over 15% in some cases for non PMBDs.

47. It is also noticeable that this unpaid component is increasing for non-PMB diagnoses over time. The payment ratio remains broadly constant at around 91% for PMB diagnoses and the unpaid component, expressed as a proportion of the amounts claimed, has remained more or less constant over time.

48. The corresponding tables for the other provider groups are shown below. The substantial savings payments in respect of general practitioner services are potentially a result of emergency room treatments, which are often paid from routine benefits, as opposed to hospital benefit pools.

Table 53: In-hospital Payment Sources by PMBD, General Practitioners

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	44.06%	88.21%	6.47%	5.31%	82.19%	12.34%	5.47%
2011	44.18%	88.38%	6.26%	5.36%	82.87%	11.53%	5.61%
2012	45.35%	88.86%	5.83%	5.31%	82.92%	11.58%	5.50%
2013	46.06%	88.86%	5.39%	5.74%	82.99%	11.21%	5.80%
2014	47.31%	88.70%	5.19%	6.12%	81.74%	11.59%	6.67%

Table 54: In-hospital Payment Sources by PMBD, Pathologists

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	10.44%	97.19%	0.63%	2.19%	94.84%	1.51%	3.65%
2011	11.40%	97.54%	0.59%	1.88%	95.98%	1.50%	2.52%
2012	11.91%	97.61%	0.54%	1.85%	96.60%	1.38%	2.03%
2013	13.15%	97.65%	0.55%	1.80%	96.12%	1.56%	2.32%
2014	13.55%	97.42%	0.54%	2.04%	96.41%	1.71%	1.88%

Table 55: In-hospital Payment Sources by PMBD, Radiologists

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	29.19%	93.88%	1.37%	4.75%	96.19%	3.11%	0.71%
2011	29.67%	97.56%	1.34%	1.10%	94.91%	3.12%	1.96%
2012	31.33%	97.26%	1.30%	1.45%	94.84%	3.10%	2.06%
2013	33.05%	96.84%	1.43%	1.73%	94.34%	3.35%	2.31%
2014	34.58%	96.89%	1.42%	1.69%	94.12%	3.52%	2.35%

Table 56: In-hospital Payment Sources by PMBD, Auxiliary Services

Year	% PMBD	% PMBD from Risk	% PMBD from Savings	% PMBD Unpaid	% Non-PMBD from Risk	% Non-PMBD from Savings	% Non-PMBD Unpaid
2010	47.22%	96.94%	1.07%	1.99%	95.75%	0.93%	3.32%
2011	49.62%	97.12%	0.85%	2.02%	96.29%	0.87%	2.84%
2012	52.38%	97.62%	0.63%	1.74%	96.75%	0.81%	2.45%
2013	54.79%	97.27%	0.95%	1.78%	96.97%	0.83%	2.20%
2014	59.31%	97.37%	0.86%	1.76%	97.12%	0.93%	1.95%

49. The tables are repeated below for PMB flagged claims. Table 57 shows the proportion of out-of-hospital claims for specialists which were for PMB flagged claims, as well as the percentage of claims which were paid from risk and from savings for both PMB and non-PMB flagged claims.

Table 57: Out-of-hospital Payment Sources by PMB Flags, Specialists (excl. Anaesthetists)

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	39.72%	76.18%	18.14%	5.68%	67.49%	23.30%	9.22%
2011	40.92%	77.89%	16.74%	5.38%	67.70%	22.84%	9.46%
2012	40.51%	77.81%	16.47%	5.72%	68.53%	21.55%	9.92%
2013	41.75%	78.63%	15.87%	5.50%	68.38%	21.69%	9.93%
2014	43.20%	78.98%	15.47%	5.55%	67.76%	22.19%	10.05%

50. The corresponding tables for the other provider groups in respect of out-of-hospital claims are shown next.

Table 58: Out-of-hospital Payment Sources by PMB Flags, General Practitioners

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	11.93%	69.23%	26.26%	4.51%	73.55%	22.80%	3.65%
2011	11.47%	70.13%	25.10%	4.77%	73.59%	22.49%	3.93%
2012	11.04%	69.35%	26.03%	4.62%	74.13%	22.31%	3.56%
2013	11.00%	69.86%	25.60%	4.53%	73.13%	22.96%	3.91%
2014	11.53%	70.85%	24.79%	4.36%	72.54%	24.06%	3.40%

Table 59: Out-of-hospital Payment Sources by PMB Flags, Pathologists

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	19.66%	95.40%	3.69%	0.92%	75.29%	21.73%	2.98%
2011	21.22%	95.00%	3.78%	1.22%	75.96%	21.51%	2.53%
2012	21.72%	95.17%	3.71%	1.12%	77.02%	20.87%	2.10%
2013	24.15%	95.43%	3.47%	1.10%	76.52%	21.08%	2.40%
2014	25.86%	95.26%	3.55%	1.19%	77.28%	20.53%	2.19%

Table 60: Out-of-hospital Payment Sources by PMB Flags, Radiologists

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	17.97%	87.85%	8.42%	3.73%	79.42%	16.97%	3.60%
2011	20.39%	89.62%	7.32%	3.06%	79.78%	16.78%	3.45%
2012	19.61%	88.84%	7.71%	3.45%	80.29%	16.09%	3.61%
2013	20.56%	88.06%	8.07%	3.87%	80.16%	16.11%	3.74%
2014	21.31%	88.25%	7.82%	3.93%	79.59%	16.73%	3.68%

Table 61: Out-of-hospital Payment Sources by PMB Flags, Auxiliary Services

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	14.10%	73.13%	22.13%	4.74%	67.87%	27.04%	5.09%
2011	14.56%	74.94%	20.66%	4.40%	66.42%	26.94%	6.65%
2012	14.75%	74.58%	21.14%	4.28%	67.49%	27.46%	5.04%
2013	16.93%	76.08%	19.01%	4.90%	67.43%	28.02%	4.55%
2014	17.67%	78.43%	17.32%	4.25%	67.18%	27.65%	5.17%

51. The next set of tables shows the same trends for in-hospital claims, starting with Table 62 or hospital claims.

Table 62: In-hospital Payment Sources by PMB Flags, Hospitals

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	49.60%	97.45%	0.25%	2.30%	97.27%	0.62%	2.11%
2011	51.59%	97.58%	0.24%	2.19%	97.61%	0.54%	1.85%
2012	50.44%	97.94%	0.25%	1.82%	97.60%	0.53%	1.87%
2013	51.71%	98.06%	0.25%	1.69%	97.40%	0.55%	2.05%
2014	53.05%	97.99%	0.24%	1.78%	97.52%	0.57%	1.91%

52. The next two tables are for specialists and anaesthetists (we again note that anaesthetists are separated out in-hospital because anaesthetics mostly becomes a supporting specialist discipline as opposed a primary treating discipline in an out-of-hospital setting).

Table 63: In-hospital Payment Sources by PMB Flags, Specialists (excl. Anaesthetists)

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	49.38%	89.76%	0.61%	9.63%	88.88%	0.88%	10.24%
2011	51.60%	90.56%	0.48%	8.96%	89.20%	0.72%	10.08%
2012	50.64%	90.29%	0.48%	9.23%	88.33%	0.70%	10.97%
2013	51.63%	90.19%	0.48%	9.33%	88.39%	0.64%	10.97%
2014	53.19%	89.97%	0.48%	9.55%	87.93%	0.66%	11.41%

Table 64: In-hospital Payment Sources by PMB Flags, Anaesthetists

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	41.58%	86.08%	0.57%	13.36%	84.94%	2.02%	13.05%
2011	43.56%	87.53%	0.31%	12.16%	86.03%	1.02%	12.95%
2012	43.42%	88.40%	0.28%	11.32%	84.43%	0.98%	14.59%
2013	44.97%	88.06%	0.28%	11.66%	84.43%	0.89%	14.68%
2014	47.11%	88.45%	0.27%	11.28%	83.70%	0.90%	15.40%

53. The corresponding tables for the other provider groups are shown below. Again, the substantial savings payments in respect of general practitioner services are potentially a result of emergency room treatments, which are often paid from routine benefits, as opposed to hospital benefit pools.

Table 65: In-hospital Payment Sources by PMB Flags, General Practitioners

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	33.18%	85.53%	7.63%	6.84%	84.51%	10.81%	4.69%
2011	33.82%	86.05%	7.25%	6.70%	84.92%	10.19%	4.88%
2012	33.01%	86.76%	7.14%	6.10%	85.05%	9.87%	5.07%
2013	34.08%	87.53%	6.16%	6.31%	84.74%	9.76%	5.50%
2014	36.95%	87.74%	5.69%	6.57%	83.45%	10.24%	6.31%

Table 66: In-hospital Payment Sources by PMB Flags, Pathologists

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	21.77%	98.49%	0.33%	1.18%	94.14%	1.72%	4.15%
2011	23.73%	98.39%	0.36%	1.25%	95.46%	1.71%	2.82%
2012	23.53%	98.40%	0.36%	1.24%	96.20%	1.56%	2.24%
2013	26.53%	98.49%	0.38%	1.13%	95.54%	1.81%	2.65%
2014	27.28%	98.51%	0.40%	1.09%	95.81%	1.98%	2.20%

Table 67: In-hospital Payment Sources by PMB Flags, Radiologists

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	27.46%	97.05%	1.28%	1.66%	94.93%	3.10%	1.97%
2011	29.36%	97.01%	1.35%	1.64%	95.15%	3.11%	1.74%
2012	28.87%	96.61%	1.43%	1.97%	95.18%	2.99%	1.83%
2013	31.02%	96.27%	1.56%	2.16%	94.67%	3.23%	2.10%
2014	32.31%	96.38%	1.56%	2.05%	94.46%	3.39%	2.16%

Table 68: In-hospital Payment Sources by PMB Flags, Auxiliary Services

Year	% PMB Flags	% PMB from Risk	% PMB from Savings	% PMB Unpaid	% Non-PMB from Risk	% Non-PMB from Savings	% Non-PMB Unpaid
2010	37.60%	97.11%	0.99%	1.90%	95.83%	1.00%	3.17%
2011	41.65%	96.91%	0.80%	2.28%	96.56%	0.90%	2.54%
2012	40.41%	97.09%	0.73%	2.18%	97.29%	0.70%	2.01%
2013	42.83%	96.88%	1.02%	2.10%	97.33%	0.80%	1.87%
2014	44.42%	97.17%	0.90%	1.92%	97.35%	0.88%	1.77%

54. Aside from the lower prevalence of PMB flags (which is caused by the missing GEMS flags) the results and trends look similar for PMBDs and PMB flags.
55. Since the two definitions produce similar results once a correction is made for the GEMS data in particular, and since the PMBD trends seem less affected than the PMB flagged trends, the detail analysis in the next section will focus only on trends and analyses in respect of PMBD claims. As outlined previously, the PMBDs should reflect a slight overestimate of the rates of actual PMB claims. However it appears from the analyses in this section that the extent of this overestimate is not large once the missing GEMS flags are corrected for.

PMBD Detail Analyses

Descriptive Statistics and Overall PMBD Trends

56. This sub-section is intended to display some broad trends in PMB diagnosis (PMBD) claims relative to those without a PMB diagnosis. The intention is to assess whether different cost drivers potentially exist for PMBD claims relative to non-PMBD claims. As discussed previously, given the fundamental difference between how schemes manage and pay the claims, in-hospital and out-of-hospital claims are considered separately.

Out-of-hospital Cost Trends

57. Table 69 shows the out-of-hospital cost per beneficiary per year for both PMB and non-PMB diagnoses respectively. It shows that, in an out-of-hospital setting, the cost per beneficiary per annum for claims with a PMB diagnosis have increased at a substantially higher rate than those with non-PMB diagnoses (12.05% compared to 5.79% per annum). This necessarily implies that PMBD claims will represent an increasing proportion of out-of-hospital expenditure over time.

Table 69: Out-of-hospital PMBD Cost Trends 2010-14, All Schemes

All Schemes, OH Claims				
Year	PMBD Claim Cost pbpa ¹	PMBD Trend	Non-PMBD Claim Cost pbpa	Non-PMBD Trend
2010	998		3 530	
2011	1 106	10.79%	3 766	6.69%
2012	1 213	9.75%	3 913	3.91%
2013	1 381	13.84%	4 102	4.83%
2014	1 573	13.88%	4 422	7.80%
Overall Trend ²		12.05%		5.79%

58. We note that the Council for Medical Schemes published a revised list of PMB diagnoses during the course of 2012. Although the sample is small, it is noticeable that inflation rates for PMBD claims post 2013 are higher than before.

¹ Per average beneficiary per annum

² Where an 'Overall Trend' row is included in a table, this is a geometric average calculated across the full period from 2010 to 2014.

59. The next two tables show the same figures for open and restricted schemes. Although the figures for the two medical scheme types differ by year, the overall trends are broadly similar.

Table 70: Out-of-hospital PMBD Cost Trends 2010-14, Open Schemes

Open Schemes, OH Claims				
Year	PMBD Claim Cost pbpa	PMBD Trend	Non-PMBD Claim Cost pbpa	Non-PMBD Trend
2010	1 050		3 553	
2011	1 167	11.15%	3 838	8.02%
2012	1 248	6.89%	3 855	0.44%
2013	1 451	16.25%	4 142	7.45%
2014	1 635	12.71%	4 429	6.94%
Overall Trend		11.70%		5.67%

Table 71: Out-of-hospital PMBD Cost Trends 2010-14, Restricted Schemes

Restricted Schemes, OH Claims				
Year	PMBD Claim Cost pbpa	PMBD Trend	Non-PMBD Claims pbpa	Non-PMBD Trend
2010	933		3 501	
2011	1 034	10.89%	3 683	5.19%
2012	1 171	13.20%	3 985	8.21%
2013	1 296	10.68%	4 053	1.69%
2014	1 495	15.34%	4 413	8.88%
Overall Trend		12.51%		5.95%

60. The potential impact of the 2013 change to the ICD10 code listings on the per average beneficiary per annum cost of claims with a PMB diagnosis is more noticeable for open schemes, but again the number of sample years is relatively small. To assist understanding of the trends outlined above, the figures in Table 69 are broken down into the number of claiming beneficiaries and the cost per claiming beneficiary in respect of PMBD claims.

Table 72: Out-of-hospital PMBD Claimers and Cost Trends, 2010-14 All Schemes

All Schemes, OH Claims				
Year	% Lives claiming PMBD	Change	Cost per PMBD Claimer	Increase
2010	39.47%		2 528	
2011	39.97%	0.50%	2 766	9.41%
2012	40.40%	0.43%	3 003	8.58%
2013	40.86%	0.46%	3 381	12.56%
2014	42.08%	1.22%	3 738	10.58%
Overall Trend		2.61%		10.27%

61. Table 72 shows that the proportion of beneficiaries claiming for PMBD conditions is increasing gradually over time (2.61% over the five year period analysed with the largest increase happening for 2013 to 2014), while the average cost per claimer has increased by 10.27% per year over the period. Both factors are therefore contributing to the increase in overall PMBD claims cost.

In-hospital Cost Trend

62. Table 73 shows the in-hospital cost per beneficiary per year for claims pertaining to PMB and non-PMB diagnoses respectively. The table shows that, in an in-hospital setting, claims with PMB diagnoses have increased by 12.39% a year, much higher than the 8.91% a year for those with non-PMB diagnoses. In fact, it appears the PMBD cost trend has been accelerating over time whereas the non-PMBD trend has been decelerating.

63. This suggests that, similar to the out-of-hospital claims above, PMBD claims will represent an increasing proportion of the total in-hospital expenditure over time.

Table 73: In-hospital PMBD Cost Trends 2010-14, All Schemes

All Schemes, IH Claims				
Year	PMBD Claim Cost pbpa	PMBD Trend	Non-PMBD Claim Cost pbpa	Non-PMBD Trend
2010	2 894		2 434	
2011	3 196	10.46%	2 756	13.26%
2012	3 529	10.42%	3 031	9.95%
2013	4 037	14.40%	3 234	6.71%
2014	4 616	14.34%	3 425	5.89%
Overall Trend		12.39%		8.91%

64. We again note the revised list of PMB diagnoses which was published by the Council for Medical Schemes during the course of 2012. Although the sample is small, it is again noticeable that inflation rates for PMBD claims post 2013 are higher than before.

65. The next two tables show the same figures for open and restricted schemes. Again although the figures differ by year, the only significant trend is a much larger inflation 'gap' between restricted schemes and open schemes.

Table 74: In-hospital PMBD Cost Trends 2010-14, Open Schemes

Open Schemes, IH Claims				
Year	PMBD Claim Cost pbpa	PMBD Trend	Non-PMBD Claim Cost pbpa	Non-PMBD Trend
2010	3 005		2 634	
2011	3 353	11.55%	3 033	15.15%
2012	3 547	5.81%	3 309	9.13%
2013	4 147	16.90%	3 564	7.68%
2014	4 696	13.24%	3 838	7.70%
Overall Trend		13.15%		7.34%

Table 75: In-hospital PMBD Cost Trends 2010-14, Restricted Schemes

Restricted Schemes, IH Claims				
Year	PMBD Claim Cost pbpa	PMBD Trend	Non-PMBD Claim Cost pbpa	Non-PMBD Trend
2010	2 754		2 185	
2011	3 016	9.49%	2 438	11.58%
2012	3 507	16.28%	2 687	10.22%
2013	3 902	11.26%	2 828	5.24%
2014	4 515	15.70%	2 901	2.59%
Overall Trend		11.80%		9.87%

66. To assist understanding of the trends outlined above, the figures in Table 73 are broken down into the number of admissions with PMB diagnoses and the cost per PMBD admission.

Table 76: In-hospital PMBD Admissions and Cost per Admission Trends, 2010-14 All Schemes

All Schemes, IH Claims				
Year	% Admissions PMBD	Change	PMBD Cost per Admission	Increase
2010	32.57%		22 517	
2011	33.10%	0.53%	24 460	8.63%
2012	32.99%	-0.11%	26 690	9.12%
2013	32.98%	0.00%	29 475	10.43%
2014	33.77%	0.78%	32 512	10.30%
Overall Trend		1.19%		9.62%

67. Table 76 shows that the proportion of admissions which are labelled as PMBD has increased marginally over the five year period (1.19% with the biggest change again from 2013 to 2014), while the unadjusted PMBD cost per admission has increased by 9.62% a year on average. This again suggests that both factors are contributing to the increases, but in this case cost per admission is a more significant contributor. In-hospital claims are broken down in more detail in the next sub-section.

PMBD Attribution of Cost Increases Analyses

Out-of-hospital PMBD Claims

68. Table 77 and Table 78 shows the annual increases in out-of-hospital cost per beneficiary in respect of PMBD claims across all schemes included in the dataset, including the contributions of the same key cost drivers outlined in ***Expenditure Analysis Report No. 2***.

Table 77: Out-of-hospital PMBD Claims Cost Trends: All Schemes (Narrow Disease Burden)

All Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	10.72%	9.55%	13.87%	13.59%	11.93%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>2.95%</u>	<u>1.00%</u>	<u>2.86%</u>	<u>1.75%</u>	<u>2.14%</u>
Age	0.73%	3.60%	1.60%	1.17%	1.77%
Gender	-0.03%	-0.08%	0.07%	0.02%	-0.01%
Disease Profile	1.70%	-0.36%	1.46%	0.79%	0.90%
Member Profile	1.88%	-0.06%	0.09%	0.27%	0.55%
Plan Mix	-1.33%	-2.10%	-0.36%	-0.50%	-1.07%
<u>Unexplained Factors</u>	<u>2.76%</u>	<u>2.95%</u>	<u>5.30%</u>	<u>5.74%</u>	<u>4.19%</u>

Table 78: Out-of-hospital PMBD Claims Cost Trends: All Schemes (Broad Disease Burden)

All Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	10.72%	9.55%	13.87%	13.59%	11.93%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>4.35%</u>	<u>2.30%</u>	<u>2.68%</u>	<u>2.27%</u>	<u>2.90%</u>
Age	0.73%	3.60%	1.60%	1.17%	1.77%
Gender	-0.03%	-0.08%	0.07%	0.02%	-0.01%
Disease Profile	2.25%	0.31%	1.20%	1.17%	1.23%
Member Profile	2.20%	-0.08%	0.02%	0.31%	0.61%
Plan Mix	-0.81%	-1.44%	-0.22%	-0.40%	-0.71%
<u>Unexplained Factors</u>	<u>1.37%</u>	<u>1.65%</u>	<u>5.49%</u>	<u>5.22%</u>	<u>3.43%</u>

69. Table 77 shows that, over the five year period from 2010 to 2014 the average out-of-hospital PMBD claims cost per medical scheme beneficiary has increased by 11.93% per year, compared to an average CPI of 5.60%. **Expenditure Analysis Report No. 2** showed that all out-of-hospital claims increased on average by 7.28% per year. This is consistent with the conclusion in earlier sections of this report that PMB diagnoses constitute an increasing proportion of total expenditure out-of-hospital.

70. Increasing average ages have contributed 1.77% to the increase, while changes in prevalence of in the clinical profile indicator conditions have contributed 0.90%. Members joining and leaving the industry, as well as moving between schemes and options, has contributed another 0.55%. Changes in plan mix have contributed negatively, i.e. the industry appears to have experienced a net buy-down¹ effect, to the extent of 1.07%. Table 88 shows similar trends using the Broad Disease Burden definition for allocating beneficiaries to a disease profile group, albeit with a larger impact for the disease profile explanatory factor.

71. This leaves an average unexplained increase of 4.19% per year using the narrow disease burden approach and 3.43% using the broad approach. This is likely attributable to either price increases above CPI for PMBD claims or increasing utilisation of services for PMB

¹ This 'buy-down effect' is likely more closely related to the option choices made by new beneficiaries rather than option changes by existing beneficiaries, since these are relatively uncommon.

diagnoses. The increasing utilisation could result from changes in the frequency of coding PMB diagnoses relative to non-PMB diagnoses, or increased volumes/intensity of services used in existing PMBD cases.

72. The next four tables show the same analysis separately for open and restricted schemes, and shows that the trends have been broadly the same, although restricted schemes show a smaller ageing effect as well as a smaller unexplained increase. It is again noted that the buy-down effect is much larger in open schemes than restricted schemes.

Table 79: Out-of-hospital PMBD Cost Trends: Open Schemes (Narrow Disease Burden)

Open Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	11.21%	6.72%	16.28%	12.68%	11.72%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>3.53%</u>	<u>-0.73%</u>	<u>3.49%</u>	<u>1.30%</u>	<u>1.90%</u>
Age	1.60%	4.10%	1.62%	1.04%	2.09%
Gender	-0.09%	-0.08%	0.08%	0.02%	-0.02%
Disease Profile	1.60%	-0.98%	2.67%	0.43%	0.93%
Member Profile	1.89%	-0.14%	-0.37%	0.69%	0.52%
Plan Mix	-1.48%	-3.63%	-0.51%	-0.88%	-1.62%
<u>Unexplained Factors</u>	<u>2.68%</u>	<u>1.84%</u>	<u>7.08%</u>	<u>5.29%</u>	<u>4.22%</u>

Table 80: Out-of-hospital PMBD Cost Trends: Open Schemes (Broad Disease Burden)

Open Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	11.21%	6.72%	16.28%	12.68%	11.72%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>4.41%</u>	<u>0.47%</u>	<u>3.24%</u>	<u>2.24%</u>	<u>2.59%</u>
Age	1.60%	4.10%	1.62%	1.04%	2.09%
Gender	-0.09%	-0.08%	0.08%	0.02%	-0.02%
Disease Profile	1.88%	-0.89%	2.07%	1.29%	1.09%
Member Profile	2.12%	-0.14%	-0.49%	0.76%	0.56%
Plan Mix	-1.09%	-2.52%	-0.05%	-0.88%	-1.13%
<u>Unexplained Factors</u>	<u>1.80%</u>	<u>0.64%</u>	<u>7.34%</u>	<u>4.35%</u>	<u>3.53%</u>

Table 81: Out-of-hospital PMBD Cost Trends: Restricted Schemes (Narrow Disease Burden)

Restricted Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	10.61%	12.97%	10.71%	14.67%	12.24%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>2.84%</u>	<u>2.87%</u>	<u>1.99%</u>	<u>2.20%</u>	<u>2.47%</u>
Age	0.10%	2.38%	1.57%	1.12%	1.29%
Gender	0.04%	-0.08%	0.06%	0.02%	0.01%
Disease Profile	1.62%	0.75%	-0.13%	1.37%	0.90%
Member Profile	1.90%	0.03%	0.69%	-0.29%	0.58%
Plan Mix	-0.82%	-0.21%	-0.19%	-0.03%	-0.31%
<u>Unexplained Factors</u>	<u>2.77%</u>	<u>4.50%</u>	<u>3.02%</u>	<u>6.37%</u>	<u>4.17%</u>

Table 82: Out-of-hospital PMBD Cost Trends: Restricted Schemes (Broad Disease Burden)

Restricted Schemes, OH PMBD Claims	2011	2012	2013	2014	Average
Total Increase	10.61%	12.97%	10.71%	14.67%	12.24%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>4.84%</u>	<u>4.34%</u>	<u>1.91%</u>	<u>2.15%</u>	<u>3.31%</u>
Age	0.10%	2.38%	1.57%	1.12%	1.29%
Gender	0.04%	-0.08%	0.06%	0.02%	0.01%
Disease Profile	2.57%	2.14%	0.06%	1.09%	1.47%
Member Profile	2.31%	-0.01%	0.68%	-0.29%	0.67%
Plan Mix	-0.17%	-0.10%	-0.46%	0.21%	-0.13%
<u>Unexplained Factors</u>	<u>0.77%</u>	<u>3.03%</u>	<u>3.10%</u>	<u>6.42%</u>	<u>3.33%</u>

73. The next set of tables repeats the out-of-hospital attribution analyses for non-PMBD claims. The overall attribution for all schemes is shown in Table 83 and Table 84.

Table 83: Out-of-hospital Non-PMBD Cost Trends, All Schemes (Narrow Disease Burden)

All Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	6.76%	4.88%	5.17%	9.32%	6.53%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>3.04%</u>	<u>-1.70%</u>	<u>1.42%</u>	<u>1.15%</u>	<u>0.98%</u>
Age	0.53%	2.52%	1.15%	0.84%	1.26%
Gender	-0.01%	0.02%	0.02%	0.04%	0.02%
Disease Profile	1.69%	-1.59%	0.83%	0.64%	0.40%
Member Profile	2.47%	-0.01%	0.07%	0.29%	0.70%
Plan Mix	-1.64%	-2.65%	-0.65%	-0.67%	-1.40%
<u>Unexplained Factors</u>	<u>-1.29%</u>	<u>0.99%</u>	<u>-1.95%</u>	<u>2.07%</u>	<u>-0.04%</u>

Table 84: Out-of-hospital Non-PMBD Cost Trends, All Schemes (Broad Disease Burden)

All Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	6.76%	4.88%	5.17%	9.32%	6.53%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>4.56%</u>	<u>0.23%</u>	<u>1.95%</u>	<u>1.76%</u>	<u>2.13%</u>
Age	0.53%	2.52%	1.15%	0.84%	1.26%
Gender	-0.01%	0.02%	0.02%	0.04%	0.02%
Disease Profile	2.86%	0.24%	1.47%	1.51%	1.52%
Member Profile	2.60%	-0.17%	0.06%	0.27%	0.69%
Plan Mix	-1.43%	-2.37%	-0.76%	-0.90%	-1.37%
<u>Unexplained Factors</u>	<u>-2.80%</u>	<u>-0.95%</u>	<u>-2.48%</u>	<u>1.45%</u>	<u>-1.19%</u>

74. Table 83 shows that out-of-hospital non-PMBD claims have increased by 6.53% per year, compared to the increase of 12.07% per year in the PMBD out-of-hospital claims and an average CPI inflation of 5.60%. Of the increase above CPI, 0.98% was attributable to the explanatory factors, with age profile (1.26%) and member profile (0.70%) the largest contributors, offset again by a negative plan mix effect. The unexplained component is very small (-0.04%). Table 84 shows similar trends with a larger impact for the disease profile explanatory factor resulting in a negative unexplained component.

75. The results for open and restricted schemes are shown below.

Table 85: Out-of-hospital Non-PMBD Cost Trends, Open Schemes (Narrow Disease Burden)

Open Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	8.43%	1.28%	8.09%	8.20%	6.50%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>2.92%</u>	<u>-4.01%</u>	<u>1.62%</u>	<u>0.65%</u>	<u>0.29%</u>
Age	1.14%	2.85%	1.16%	0.72%	1.47%
Gender	-0.14%	0.00%	-0.01%	0.02%	-0.03%
Disease Profile	1.08%	-2.13%	2.01%	0.36%	0.33%
Member Profile	2.46%	-0.21%	-0.39%	0.82%	0.67%
Plan Mix	-1.62%	-4.53%	-1.15%	-1.28%	-2.14%
<u>Unexplained Factors</u>	<u>0.51%</u>	<u>-0.30%</u>	<u>0.78%</u>	<u>1.45%</u>	<u>0.61%</u>

Table 86: Out-of-hospital Non-PMBD Cost Trends, Open Schemes (Broad Disease Burden)

Open Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	8.43%	1.28%	8.09%	8.20%	6.50%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>4.35%</u>	<u>-2.45%</u>	<u>2.29%</u>	<u>1.43%</u>	<u>1.40%</u>
Age	1.14%	2.85%	1.16%	0.72%	1.47%
Gender	-0.14%	0.00%	-0.01%	0.02%	-0.03%
Disease Profile	2.33%	-1.33%	2.84%	1.27%	1.28%
Member Profile	2.43%	-0.31%	-0.53%	0.89%	0.62%
Plan Mix	-1.41%	-3.66%	-1.18%	-1.47%	-1.93%
<u>Unexplained Factors</u>	<u>-0.92%</u>	<u>-1.87%</u>	<u>0.11%</u>	<u>0.67%</u>	<u>-0.50%</u>

Table 87: Out-of-hospital Non-PMBD Cost Trends, Restricted Schemes (Narrow Disease Burden)

Restricted Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	4.82%	9.34%	1.74%	10.73%	6.65%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>3.40%</u>	<u>1.11%</u>	<u>1.19%</u>	<u>1.78%</u>	<u>1.87%</u>
Age	0.12%	1.69%	1.14%	0.84%	0.95%
Gender	0.13%	0.08%	0.07%	0.09%	0.09%
Disease Profile	1.92%	-0.37%	-0.56%	1.16%	0.54%
Member Profile	2.47%	0.23%	0.61%	-0.35%	0.74%
Plan Mix	-1.25%	-0.52%	-0.08%	0.04%	-0.45%
<u>Unexplained Factors</u>	<u>-3.59%</u>	<u>2.63%</u>	<u>-5.15%</u>	<u>2.85%</u>	<u>-0.81%</u>

Table 88: Out-of-hospital Non-PMBD Cost Trends, Restricted Schemes (Broad Disease Burden)

Restricted Schemes, OH Non-PMBD Claims	2011	2012	2013	2014	Average
Total Increase	4.82%	9.34%	1.74%	10.73%	6.65%
<u>CPI</u>	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>5.08%</u>	<u>3.52%</u>	<u>1.54%</u>	<u>2.19%</u>	<u>3.08%</u>
Age	0.12%	1.69%	1.14%	0.84%	0.95%
Gender	0.13%	0.08%	0.07%	0.09%	0.09%
Disease Profile	3.10%	2.61%	-0.15%	1.98%	1.89%
Member Profile	2.81%	0.00%	0.75%	-0.47%	0.78%
Plan Mix	-1.09%	-0.86%	-0.28%	-0.26%	-0.62%
<u>Unexplained Factors</u>	<u>-5.26%</u>	<u>0.22%</u>	<u>-5.50%</u>	<u>2.44%</u>	<u>-2.03%</u>

In-hospital PMBD Claims

76. With respect to in-hospital claims, two key variables could be impacted by the PMB regulations and the knock on effects of said regulations, namely admission rates (admissions per 1 000 lives) and cost per admission. These are analysed separately as they potentially are subject to different sets of cost drivers. It has been alleged in various

submissions to the HMI that the mandatory cover aspect of PMBs is causing increased utilisation of PMB diagnoses and that schemes are exposed in this regard. It has also been contended that the interpretation and application of Regulation 8 has caused inflated prices in many respects. The contentions are analysed further in this section.

77. Table 89 shows the admission rate per 1 000 covered lives for PMB and non-PMB diagnoses respectively across the complete analysis dataset.

Table 89: Admissions per 1 000 lives Trends by PMBD, All Schemes

	PMBD		Non-PMBD	
	Admissions per 1 000	Trend	Admissions per 1 000	Trend
2010	115		134	
2011	117	1.94%	139	3.78%
2012	118	0.92%	142	1.64%
2013	122	3.34%	142	0.36%
2014	126	3.41%	142	0.15%
Overall Trend		2.40%		1.47%

78. Table 89 shows that, from 2010 to 2012, non-PMBD admissions increased at a faster rate than PMBD admissions, and that this trend was seemingly reversed when the new list of PMB ICD10 codes was introduced in 2013. As outlined above, this is unlikely to be a result of increased payment of claims which were already incurred, because most benefit options provide full hospital cover regardless of PMB status.

79. Table 90 shows the trends in the unadjusted cost per admission for PMB and non-PMB diagnoses respectively. We note that by design it would be reasonable to expect PMBD admissions to be more costly than non-PMBD admissions. This is because the express intention of the PMBs is to protect medical scheme members from the catastrophic types of expenditure which could potentially lead to financial ruin.

Table 90: Cost per Admission Trends by PMBD, All Schemes

	PMBD		Non-PMBD	
	Cost per Admission	Trend	Cost per Admission	Trend
2010	27 139		15 202	
2011	29 363	8.19%	16 500	8.53%
2012	31 935	8.76%	18 006	9.13%
2013	35 583	11.42%	18 852	4.70%
2014	39 008	9.63%	19 619	4.07%
Overall Trend		9.49%		6.58%

80. Overall, unadjusted cost per admission for PMBD cases has increased by 9.49% a year, while the corresponding figure for non-PMBD cases is 6.58%. However, it is noticeable that from 2010 to 2012, the trends in unadjusted cost per admission increases were similar for PMB and non-PMB diagnoses, and in fact the cost increase for non-PMB diagnoses was marginally higher, whereas from 2013, a change in the trends is noted and PMBD admissions have increased at markedly higher rates than non-PMBD admissions.

81. The next set of tables are reproduced from the *Expenditure Analysis Report No. 2*, and outline the impact of various explanatory factors, including PMB diagnosis rates, on the cost per admission trends outlined above.

82. Table 91 and 92 show the attribution analysis across the complete dataset.

Table 91: Overall Cost per Admission Trends: All Schemes, All Admissions (Narrow Disease Burden)

All Schemes, CPA Trends	2011	2012	2013	2014	Average
Total Increase	8.28%	9.04%	9.10%	8.72%	8.79%
CPI	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>-0.25%</u>	<u>0.95%</u>	<u>2.61%</u>	<u>1.48%</u>	<u>1.20%</u>
Age	0.57%	1.57%	1.40%	1.04%	1.15%
Gender	-0.01%	-0.03%	-0.02%	-0.02%	-0.02%
Disease Profile	-0.18%	0.19%	-0.12%	-0.15%	-0.06%
Case Mix	-0.31%	-0.48%	0.73%	0.18%	0.03%
PMB Diagnoses	-0.31%	-0.31%	0.61%	0.44%	0.11%
<u>Unexplained Factors</u>	<u>3.54%</u>	<u>2.49%</u>	<u>0.79%</u>	<u>1.14%</u>	<u>1.99%</u>

Table 92: Overall Cost per Admission Trends: All Schemes, All Admissions (Broad Disease Burden)

All Schemes, CPA Trends	2011	2012	2013	2014	Average
Total Increase	8.28%	9.04%	9.10%	8.72%	8.79%
CPI	<u>5.00%</u>	<u>5.60%</u>	<u>5.70%</u>	<u>6.10%</u>	<u>5.60%</u>
<u>Explanatory Factors</u>	<u>-0.12%</u>	<u>0.84%</u>	<u>2.60%</u>	<u>1.49%</u>	<u>1.20%</u>
Age	0.57%	1.57%	1.40%	1.04%	1.15%
Gender	-0.01%	-0.03%	-0.02%	-0.02%	-0.02%
Disease Profile	0.26%	-0.08%	-0.16%	-0.11%	-0.02%
Case Mix	-0.59%	-0.34%	0.77%	0.15%	0.00%
PMB Diagnoses	-0.34%	-0.29%	0.61%	0.44%	0.10%
<u>Unexplained Factors</u>	<u>3.40%</u>	<u>2.60%</u>	<u>0.80%</u>	<u>1.13%</u>	<u>1.98%</u>

83. The table shows that the unadjusted average cost per admission has increased by 8.79% per year on average, compared to average CPI of 5.60%. Of the increase above CPI, only 0.11% is attributable to changes in the rate of PMB diagnoses.

84. It is however noticeable that both of the explanatory factors which rely on the clinical coding submitted by the service providers (case mix and PMB diagnoses) show negative

contributions in the first two years up to 2012 and positive contributions in the two years after the new coded list was published in 2013.

PMBD Hospital Admission Trends and Case Studies

All Admissions

85. The overall trends in numbers of admissions and cost per admission are shown in the previous section. This sub-section is intended to provide further details and breakdowns of the overall trends shown earlier. Table 93 shows the average cost per admission in 2014, as well as the unadjusted average annual increase since 2010, for a variety of components of the total cost per admission.

Table 93: Cost per Admission Trends by Claim Type

	% of Total Cost per Admission 2014		Average Annual Increase since 2010	
	Non-PMBD	PMBD	Non-PMBD	PMBD
Ward Fees	22.30%	31.91%	3.73%	7.26%
Theatre	13.61%	8.52%	4.03%	7.57%
Medicines and Consumable Items	9.46%	10.90%	0.48%	2.32%
ARM	2.17%	1.72%	9.27%	9.92%
Other Hospital	17.08%	14.11%	9.10%	10.25%
Specialist	16.79%	16.20%	6.32%	8.22%
Anaesthetist	4.75%	3.41%	5.93%	9.16%
GP	2.44%	1.45%	5.03%	5.78%
Pathology	5.19%	5.73%	6.69%	8.98%
Radiology	4.50%	3.56%	6.33%	9.07%
Auxiliary	1.71%	2.50%	7.78%	10.83%

86. The table shows that:

- 86.1. The largest components of the cost of a hospital admission are the hospital costs (notably ward fees, theatre fees and the 'other' component which includes other hospital services as well as those surgical items which are billed by tariff, as opposed to NAPPI, code) and specialist costs;
- 86.2. The increases across all of the components are higher for PMBD admissions than non-PMBD admissions.

87. Table 94 and 95 show the admission types (as per the grouping process outlined in **Expenditure Analysis Report No. 2**) which are most commonly and least commonly labelled as PMBD admissions.

Table 94: Admission Types with Highest Proportion of PMB Diagnoses, 2014

Admission Type	Admissions 2014	PMBD % 2014	PMBD % 2010	Change
Cardiologist - PTCA	3 918	94.59%	97.85%	-3.26%
Cardiologist - ICU Care	2 409	92.82%	80.88%	11.94%
Paediatrician - Perinatal Conditions	16 604	92.59%	93.92%	-1.33%
Cardiologist - Angiogram	4 653	92.09%	96.24%	-4.15%
Radiation Oncologist - Radiotherapy	7 039	90.98%	86.89%	4.09%
Cardiologist - CRM Devices	1 092	89.84%	82.13%	7.70%
Gynaecologist - Normal Delivery	27 139	89.47%	92.94%	-3.46%
Orthopaedic Surgeon - Radius/Ulna Fracture or Dislocation	3 875	88.80%	88.69%	0.11%
Oncologist - Chemotherapy	953	88.67%	83.99%	4.68%
Psychiatrist - Psychiatric	54 960	88.62%	90.95%	-2.34%

Table 95: Admission Types with Lowest Proportion of PMB Diagnoses, 2014

Admission Type	Admissions 2014	PMBD % 2014	PMBD % 2010	Change
GP - Dental Procedures	17 277	0.76%	0.65%	0.11%
Urologist - Circumcision	12 669	0.96%	1.29%	-0.39%
Otorhinolaryngologist - Tonsillectomy	30 382	2.56%	4.39%	-2.05%
Orthopaedic Surgeon - Knee Replacement	9 946	4.46%	7.96%	-4.19%
Dermatologist - Infections	389	4.88%	5.03%	-0.41%
Orthopaedic Surgeon - Other Joint Replacements	32 871	4.96%	5.97%	-1.18%
Dermatologist - Non-Malignant Neoplasms	159	6.29%	6.62%	-0.95%
Surgeon - Breast Biopsy and Diagnostic Breast Procedures	5 069	6.55%	6.49%	0.01%
Ophthalmologist - Other Eyelid, Conjunctiva, Cornea Procedures	11 455	6.56%	7.60%	-1.27%
Gastroenterologist - Non-Malignant Neoplasms	787	7.37%	10.90%	-3.47%

88. The results in the tables appear to confirm that the more severe conditions are generally those which are included in the PMBs, which is in line with the original design of the PMB

list of conditions. The bottom 10 admission types appear to be more diagnostic in nature, aside from the joint replacements

89. Table 96 and 97 show the admission types which have shown the greatest shifts towards and away from PMB diagnoses over the period analysed.

Table 96: Admission Types with Largest Movements towards PMB Diagnoses

Admission Type	Admissions 2014	PMBD % 2014	PMBD % 2010	Change
Surgeon - Appendectomy	9 345	87.73%	12.89%	74.84%
Surgeon - Haemorrhoid Procedures	7 669	83.94%	15.76%	68.17%
Orthopaedic Surgeon - Spinal Fusion	4 666	50.36%	33.49%	16.87%
Cardiologist - ICU Care	2 409	92.82%	80.88%	11.94%
Surgeon - Other Upper GI	6 929	69.00%	58.47%	10.53%
Surgeon - Other	47 569	51.75%	41.76%	9.99%
Surgeon - Other Lower GI	7 632	82.34%	72.52%	9.82%
Neurosurgeon - Partial Bone Excision	921	40.93%	31.18%	9.75%
Neurosurgeon - Spinal Fusion	7 060	35.35%	26.15%	9.21%
Neurosurgeon - Other Musculo-skeletal	5 001	33.21%	24.19%	9.03%

Table 97: Admissions Types with Largest Movements Away from PMB Diagnoses

Admission Type	Admissions 2014	PMBD % 2014	PMBD % 2010	Change
Pulmonologist - Cerebrovascular Disease	74	58.11%	81.61%	-23.50%
Rheumatologist - Other	346	18.21%	39.26%	-21.05%
Pulmonologist - Other	2 285	28.01%	43.60%	-15.59%
Pulmonologist - Bronchitis	204	31.37%	44.25%	-12.88%
Pulmonologist - Anaemia	34	50.00%	62.50%	-12.50%
Paediatrician - Normal Birth	4 073	80.85%	90.11%	-9.26%
Pulmonologist - Hypertension	146	69.86%	79.07%	-9.21%
Pulmonologist - Heart Conditions	368	73.10%	81.61%	-8.51%
Pulmonologist - Pneumonia	822	76.28%	84.17%	-7.89%
Pulmonologist - Non-Specific	493	57.81%	65.69%	-7.88%

90. The tables show some relatively large movements, although it must be noted that the number of admissions in some of the groups, especially in the second table, are relatively small. We note that the two largest movements (appendectomies and haemorrhoid procedures) could be as a result of revisions to the ICD10 coding structure and the corresponding revisions to the coded list which occurred over the period.

91. Based on these and some of the submissions received, three specific admission types were identified as case studies, namely spinal fusions, cholecystectomies and hernia repair procedures. The case study analyses are outlined in the following sections.

Spinal Fusions

92. Table 98 shows the admission rates for spinal fusions as well as the trend over time. The table shows that admission rates for non-PMB diagnoses have fallen marginally, while those for PMB diagnoses have increased sharply over time.

Table 98: Spinal Fusion Admission Rates, 2010-14

Spinal Fusions	Admissions per 1 000 lives		Trend	
	Non-PMBD	PMBD	Non-PMBD	PMBD
2010	0.77	0.32		
2011	0.74	0.35	-4.50%	9.56%
2012	0.71	0.42	-3.13%	22.91%
2013	0.76	0.48	6.37%	13.71%
2014	0.75	0.53	-1.46%	8.97%
Overall Trend			-0.77%	13.65%

93. Table 99 shows the trends in the unadjusted cost per admission for spinal fusions over time. It shows that spinal fusions with PMB diagnoses are markedly more costly than those with non-PMB diagnoses, but that the unadjusted cost increases have not been markedly different over time. This suggests that to the extent there has been an increase in PMB-related costs for spinal fusions, it has been driven by increasing rates of PMB diagnoses as opposed to increasing cost per admission for PMB diagnoses.

Table 99: Spinal Fusion Unadjusted Cost per Admission Trends, 2010-14

Spinal Fusions	Unadjusted Cost per Admission		Trend	
	Non-PMBD	PMBD	Non-PMBD	PMBD
2010	111 757	135 380		
2011	120 317	142 175	7.66%	5.02%
2012	129 155	154 513	7.35%	8.68%
2013	134 035	159 723	3.78%	3.37%
2014	142 994	167 683	6.68%	4.98%
Overall Trend			6.36%	5.50%

Cholecystectomies

94. Table 100 shows the admission rates for cholecystectomies as well as the trend over time. Again, it shows that admission rates for non-PMB diagnoses have fallen marginally, while those for PMB diagnoses have increased sharply over time.

Table 100: Cholecystectomy Admission Rates, 2010-14

Cholecystectomies	Admissions per 1 000 lives		Trend	
	Non-PMBD	PMBD	Non-PMBD	PMBD
2010	0.47	1.02		
2011	0.46	1.05	-1.87%	2.90%
2012	0.47	1.08	1.20%	2.61%
2013	0.46	1.12	-0.43%	4.30%
2014	0.44	1.18	-5.03%	5.04%
Overall Trend			4.12%	4.60%

95. Table 101 shows the trends in the unadjusted cost per admission for cholecystectomies over time. It shows that cholecystectomies with PMB diagnoses are not markedly more costly than those with non-PMB diagnoses, and that the unadjusted cost increases have been marginally higher for the PMB diagnosis cases over time. This suggests that to the extent there has been an increase in PMB-related costs, in this case it has been driven by increasing cost per PMBD admission as opposed to increasing relative admission rates for PMB diagnoses.

Table 101: Cholecystectomy Unadjusted Cost per Admission Trends, 2010-14

	Unadjusted Cost per Admission		Trend	
	Non-PMBD	PMBD	Non-PMBD	PMBD
2010	39 360	40 158		
2011	42 014	43 018	6.74%	7.12%
2012	45 248	45 462	7.70%	5.68%
2013	46 899	48 443	3.65%	6.56%
2014	50 422	51 222	7.51%	5.74%
Overall Trend			4.84%	7.68%

Conclusion

96. This report, which is the third in a series of results reports from the WTW analysis process, is intended to outline some trends and details relating to Prescribed Minimum Benefits (PMBs). The report shows that:
 - 96.1. PMB diagnoses are an increasing component of medical scheme expenditure over the period analysed;
 - 96.2. There is some evidence of shift in diagnosis patterns from non-PMB to PMB diagnoses, across all medical service providers but particularly medical specialists; and
 - 96.3. There is also evidence of increasing payments from so-called risk benefits in respect of PMB diagnoses, which potentially suggests either increased compliance with Regulation 8 by medical schemes or increased awareness by members of their PMB entitlements over time.

Appendix A: PMB Summaries by Scheme

Table 102: Proportion of PMB Flags and PMBDs by Scheme

Scheme Name	% of Dataset	% PMB Flags	% PMBD
AECI Medical Aid Society	0.27%	70.65%	62.83%
Afrisam SA Medical Scheme	0.00%	0.00%	60.99%
Altron Medical Aid Scheme	0.12%	58.35%	57.06%
Anglo Medical Scheme (DH)	0.10%	63.78%	53.80%
Anglo Medical Scheme (Momentum)	0.86%	74.08%	0.81%
Anglovaal Group Medical Scheme	0.16%	60.50%	58.42%
Bankmed	2.71%	60.62%	61.94%
Barloworld Medical Scheme	0.24%	68.25%	61.13%
Bestmed Medical Scheme	2.60%	2.59%	62.35%
BMW Employees Medical Aid Society	0.02%	62.80%	57.45%
Bonitas Medical Fund	7.55%	72.21%	63.65%
BP Medical Aid Society	0.09%	62.59%	63.18%
Chartered Accountants (SA) Medical Aid Fund (CAMAF)	0.84%	3.38%	60.07%
Cape Medical Plan	0.17%	3.39%	61.82%
De Beers Benefit Society	0.22%	0.00%	61.67%
Discovery Health Medical Scheme	33.48%	59.01%	56.80%
Edcon Medical Aid Scheme	0.04%	58.21%	60.72%
Engen Medical Benefit Fund	0.14%	60.01%	60.49%
Fedhealth Medical Scheme	2.65%	67.60%	61.07%
Fishing Industry Medical Scheme (Fishmed)	0.00%	61.92%	61.61%
Food Workers Medical Benefit Fund	0.00%	0.00%	1.05%
Government Employees Medical Scheme (GEMS)	19.36%	0.00%	62.79%
Glencore Medical Scheme	0.20%	69.41%	60.87%
Golden Arrow Employees' Medical Benefit Fund	0.03%	61.48%	62.41%
Horizon Medical Scheme	0.02%	70.81%	67.65%
IBM (SA) Medical Scheme	0.04%	57.98%	56.50%
Impala Medical Plan	0.03%	76.94%	0.00%
Imperial Group Medical Scheme	0.24%	58.08%	59.02%
Keyhealth	0.80%	68.44%	63.83%
LA-Health Medical Scheme	1.39%	62.98%	60.46%
Libcare Medical Scheme	0.17%	61.13%	62.69%
Liberty Medical Scheme	1.96%	65.00%	0.00%
Lonmin Medical Scheme	0.08%	66.85%	64.64%
Malcor Medical Scheme	0.00%	34.13%	34.13%
MBMed Medical Aid Fund	0.08%	70.14%	62.63%

Medihelp	2.25%	58.37%	66.09%
Medipos Medical Scheme	0.36%	62.79%	63.54%
Medshield Medical Scheme	2.82%	62.40%	61.71%
Metropolitan Medical Scheme	0.14%	59.67%	60.08%
Momentum Health	2.50%	74.26%	0.84%
Motohealth Care	0.80%	75.08%	0.59%
Naspers Medical Fund	0.17%	60.35%	56.88%
Nedgroup Medical Aid Scheme	0.65%	62.54%	62.49%
Netcare Medical Scheme	0.71%	58.27%	0.00%
Old Mutual Staff Medical Aid Fund	0.40%	62.10%	61.23%
PG Group Medical Scheme	0.02%	68.97%	0.00%
Pick n Pay Medical Scheme	0.20%	56.08%	58.39%
South African Police Service Medical Scheme (POLMED)	5.10%	62.36%	63.48%
Profmed	0.38%	69.11%	0.00%
Quantum Medical Aid Society	0.18%	61.93%	59.23%
Rand Water Medical Scheme	0.17%	6.29%	65.40%
Remedi Medical Aid Scheme	0.62%	57.31%	56.22%
Resolution Health Medical Scheme	0.74%	75.73%	24.91%
Retail Medical Scheme	0.18%	61.01%	58.39%
South African Breweries Medical Aid Scheme (SABMAS)	0.27%	71.50%	0.38%
SABC Medical Aid Scheme	0.18%	68.70%	61.40%
SAMWUMed	0.42%	12.87%	63.76%
Sasolmed	1.09%	64.73%	57.99%
Sedmed	0.02%	1.88%	52.28%
Selfmed Medical Scheme	0.14%	28.07%	68.69%
Spectramed	0.62%	12.76%	0.00%
Suremed Health	0.04%	77.21%	0.00%
TFG Medical Aid Scheme	0.05%	60.70%	57.12%
Thebemed	0.09%	26.81%	0.00%
Transmed Medical Fund	1.11%	72.57%	71.26%
Tsogo Sun Group Medical Scheme	0.10%	62.63%	58.44%
Umed	0.04%	54.47%	55.62%
Umvuzo Health Medical Scheme	0.26%	0.00%	33.69%
University of Kwa-Zulu Natal Medical Scheme	0.10%	60.16%	57.63%
Witbank Coalfields Medical Aid Scheme	0.10%	55.73%	57.53%
University of the Witwatersrand Staff Medical Aid Fund	0.10%	68.80%	62.60%
Wooltru Healthcare Fund	0.21%	62.42%	63.57%
All Schemes	100.00%	47.63%	55.18%