

The analysis of REF returns for Quarter 4 of 2005 and Quarters 1 and 2 of 2006

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COUNCIL FOR MEDICAL SCHEMES

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Executive summary

The Council for Medical Schemes has received REF returns from medical schemes for the months starting January 2005 up to September 2006. The previous full report on REF submissions included analysis of returns up to September 2005.

This report presents an analysis of REF returns for quarter 4 of 2005, quarter 1 of 2006 and quarter 2 of 2006.

The quality of data submissions has improved dramatically. Whereas in quarter 4 of 2005 25% of submissions were categorised as “Poor data”, this proportion has decreased to 7% in Quarter 2 2006. Similarly, the percentage of data categorised as “Fair” has increased from 42% in December 2005 to 73% in June 2006.

Automated DIN¹ scores were developed to measure each submission’s deviation from industry norms (DIN scores). Even though the development and fine-tuning of DIN scores will require years of work, results are presented to assist schemes in evaluating their submissions. The median industry DIN score was 4,3 in December 2005; this has improved to 3,4 in June 2006. The clinical credibility of the submissions has also improved notably; most of the serious errors reported on previously have been resolved. The report provides details of the typical errors still encountered and lists schemes or administrators whose data submissions show large variation from the expected.

With the large improvement in the quality of the data, it is now possible to make a better assessment of the probable financial impact that the REF will have on medical schemes. The large variation that clinical data previously had on the community rate has improved

¹ DIN scores refer to scores assigned to REF submissions based on the particular dataset’s Deviation from the Industry Norm. These scores were previously called data quality scores but since poor scores may not always reflect poor data but could represent a true high or low risk in schemes, a more descriptive name as “DIN scores” has been used in this report.

greatly and this variation is now similar to that found when age only is used as a risk factor.

If the Age only contribution table was used, 3 133 beneficiaries would pay in between R75 and R100 per month to the REF while 410,845 beneficiaries would receive more than R150 per month.

1 Introduction

1.1 The REF Shadow period

As part of the Risk Equalisation Fund (REF) shadow period, which started in January 2005, schemes have submitted consolidated monthly REF returns to the Council for Medical Schemes (CMS) on a quarterly basis. The main purpose of the shadow period is to give schemes and the CMS an opportunity to prepare for a system of risk equalisation. This entails the development of specific skills and development of systems to administer REF.

The Department of Health has also published for comment a draft Medical Schemes Amendment Bill, which seeks to introduce the REF.

1.2 Purpose and outline of this report

Individual feedback to schemes is published on the CMS website for the fourth quarter of 2005 up to the second quarter of 2006. The purpose of this document is to assist individual schemes to interpret the results given on the website and to use this document to benchmark their own results against others in the industry.

Limitations of the data and methods are listed in section 2.1. In spite of these limitations, it is critical that this feedback is considered by medical schemes to assist them in the process of adjusting their processes and systems to adequately cater for REF requirements.

Section 2 describes the data that was analysed, explains how data submissions were categorised, how deviations from industry norms have been measured and evaluates the clinical credibility of the data. This section also evaluates administrators using categorisation and deviations from the industry norm.

The financial impact of REF on schemes is dealt with in Section 3.

2 REF Data and methods

Detailed descriptions of the data and methods are presented in Annexure B.

2.1 Limitations of data and methods

2.1.1 Entry and verification criteria

With the introduction of Version 1 of the Entry and Verification criteria in November 2005, followed by Version 2 in May 2006, schemes did not consistently apply these criteria during 2006. This clearly has an impact on the community rates presented in this report. All schemes have been requested to comply with Version 2 of the criteria from 1 January 2007.

2.1.2 REF weighting tables

The pricing, expected count value and the hierarchy of costs of chronic diseases used in the published weighting tables (previously called contribution tables) have been based on 2002 data before Entry and Verification criteria were developed. It is therefore likely that the existing table for 2006 does not provide an accurate estimate of the expected counts for chronic diseases. In addition, the weights assigned for the respective risk factors may also be inaccurate. The REF weighting table for 2007, based on 2005 data, is currently under development.

2.1.3 Estimation of expected values

In the evaluation of scheme submissions, the reported values are compared against expected values, which are in some instances not correct. The expected count values used in the REF weighting tables are based on 2002 data while Entry and Verification criteria have been applied only from November 2005. In addition, these benchmarks do not cater for seasonal changes. Comparison with statutory returns data is also not always suitable since these are submitted to the CMS on a quarterly and annual basis while REF data is submitted on a monthly basis.

2.2 REF Data submitted for analysis

Data representing REF returns for the months October 2005 to June 2006, representing quarter 4 of 2005 up to quarter 2 2006 were analysed. Table 1 below indicates that 7,5% of schemes did not submit data on time; however, examination of Table 4 on page 4 indicates that some schemes that did not submit data came into existence after the respective quarter while others were discontinued. Note that the late submission of data causes considerable delays in the analysis of REF returns. All submissions must be complete before the industry community rate can be calculated accurately.

Table 1: Percentage of schemes that submitted REF returns

<i>Percentage of schemes that submitted data²</i>			
	Quarter 4 2005	Quarter 1 2006	Quarter 2 2006
Submitted	91,0%	91,7%	92,5%
Not submitted	9,0%	8,3%	7,5%
Total	100,0%	100,0%	100,0%

From the information presented in Table 2 below it is apparent that the schemes not submitting data had relatively few beneficiaries and that 99.4% of all beneficiaries are represented in quarter 2 2006, as opposed to only 91,3% represented in quarter 4 2005 (See Table 3 below).

Table 2: Number of lives represented in REF submissions

<i>Number of lives for whom REF returns were submitted¹</i>			
	Quarter 4 2005	Quarter 1 2006	Quarter 2 2006
Not submitted	594 485	72 439	43 218
Submitted	6 211 684	6 824 843	6 885 477
Grand Total	6 806 169	6 897 282	6 928 695

Table 3: Percentage of lives represented by REF submissions

<i>Percentage of lives for whom REF submissions were received</i>			
	Quarter 4 2005	Quarter 1 2006	Quarter 2 2006
Not submitted	8,7%	1,1%	0,6%
Submitted	91,3%	98,9%	99,4%
Grand Total	100,0%	100,0%	100,0%

² Statutory Returns data used as denominator

Table 4: Schemes that did not submit REF returns

<i>Scheme Name</i>	<i>Quarter 4 2005</i>	<i>Quarter 1 2006</i>	<i>Quarter 2 2006</i>
<i>BAYMED</i>	Did not submit	Did not submit	Did not submit
<i>FOOD WORKERS MEDICAL BENEFIT FUND</i>	Never submitted	Never submitted	Never submitted
<i>GOVERNMENT EMPLOYEES MEDICAL SCHEME (GEMS)</i>	Non existent		
<i>FREE STATE MEDICAL AID SCHEME</i>		Discontinued	Discontinued
<i>G5MED</i>		Discontinued	Discontinued
<i>GENHEALTH MEDICAL SCHEME</i>		Did not submit	Did not submit
<i>KLERKSDORP MEDICAL BENEFIT SCHEME (KDM)</i>			Discontinued
<i>LONMIN MEDICAL SCHEME</i>		New Scheme	
<i>MEDICAL EXPENSES DISTRIBUTION SOCIETY (MEDS)</i>		Discontinued	Discontinued
<i>OMNIHEALTH</i>		Discontinued	Discontinued
<i>PROTECTOR HEALTH</i>		Discontinued	Discontinued
<i>RAND WATER MEDICAL SCHEME</i>		No statutory returns	No statutory returns
<i>SIZWE MEDICAL SCHEME</i>	Late submission		
<i>THEBEMED</i>	Did not submit		
<i>VENDA POLICE & PRISONS MEDICAL SCHEME (POLPRISMED)</i>	Discontinued		

2.3 Categorisation and the assessment of submitted data

The deviation from the expected values, deviations from statutory returns and evaluation of clinical credibility were considered in the categorisation of data. After manual evaluation of each of the submissions, schemes were categorised in one of nine categories and automated methods were developed to assign DIN scores³ (Deviation from the Industry norm) to the schemes.

2.3.1 Categorisation

REF submissions were categorised by REF analysts in accordance with the categories listed in Table 5 below. Note that the definitions of these categories are not exactly the

³ DIN scores refer to scores assigned to REF submissions based on the particular dataset's Deviation from the Industry Norm. These scores were previously called data quality scores but since poor scores may not always reflect poor data but could represent a true high or low risk in schemes, a more descriptive name as "DIN scores" has been used in this report.

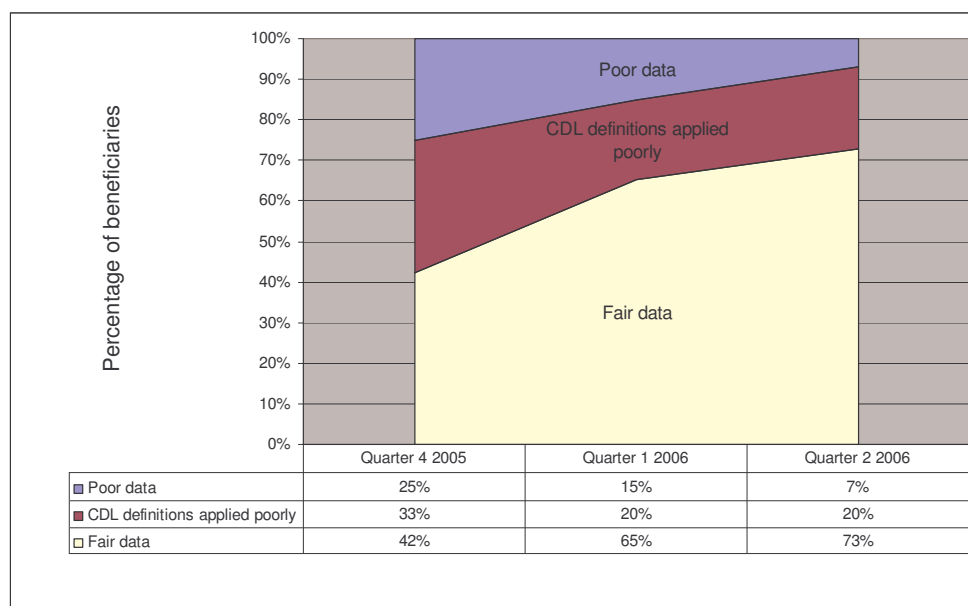
same as used in previous reports. Similarly, the grouping of categories as being representative of “fair data”, “CDL definitions applied poorly” and “poor data” was performed in accordance with the current definitions and therefore does not correlate with previous assessments. More detailed definitions of the respective categories appear in Annexure C on page 45.

Table 5: Categories and groups used in the analysis of REF returns

<i>Category</i>	<i>Short description</i>	<i>Group</i>
1	No concerns	Fair data
2	Minor concerns	
3	Some concerns	
4	Many more beneficiaries in REF returns than in statutory returns	Poor data
5	No data or substantially less than in statutory returns	
6	Much lower than expected CDLs	CDL definitions applied poorly
7	Much higher than expected CDLs	
8	Problems with maternity data	Poor data
9	Data is clearly inadequate, incomplete or inappropriate	

Figure 1 below indicates that the proportion of beneficiaries for whom fair data has been submitted has increased from 42% to 72%. The proportion of beneficiaries for whom poor data was submitted has decreased from 25% to 7%.

Figure 1: Improvement in the proportion of beneficiaries for whom fair data has been submitted (Based on current definitions for categories and groups)



2.3.2 DIN Scores

Deviation from the Industry Norm Scores (DIN scores) were calculated for each scheme to estimate the quality of data submitted. The DIN scores were based on the deviations from the expected industry profile and the statutory returns data for the same period. The expected prevalence and count of chronic diseases, maternity and HIV cases per thousand beneficiaries in each age band are published with the REF contribution table. To make provision for the limitations of the data specified in section 2.1 on page 2, deviations forming “tolerance bands” around the expected values were used to assign DIN scores. The DIN scores therefore make provision for variations of expected values among schemes. These “tolerance bands” were used as a benchmark against which DIN scores for total chronic diseases, multiple chronic diseases, maternity, HIV and NON-cases were calculated.

Statutory returns data was used to measure the reasonableness of the number of beneficiaries in the below one age band, number of beneficiaries in the 85 plus age band and the total data submitted in the REF grids.

DIN scores range from zero to ten, with zero reflecting data with no deviation from the upper or lower limits of the expected values, and ten an indication of data with large deviations from the expected or no data submitted at all. The weights used are described in Annexure D on page 47.

Figure 2 below shows that there has been a major improvement in the DIN scores over time. Few schemes have managed to achieve an overall DIN score of less than two in the period October 2005 to June 2006. Schemes with good DIN scores between two and four have increased from 33% in October 2005 to 61% in June 2006. Schemes with poor DIN scores between four and six have dropped from 58% to 22% in the same period. Less than 10% of schemes have scored six or more. Detailed definitions and methods appear in Annexure D on page 47 while results can be found in Annexure B on page 26.

Figure 2: Percentage of schemes by overall DIN score bands and month

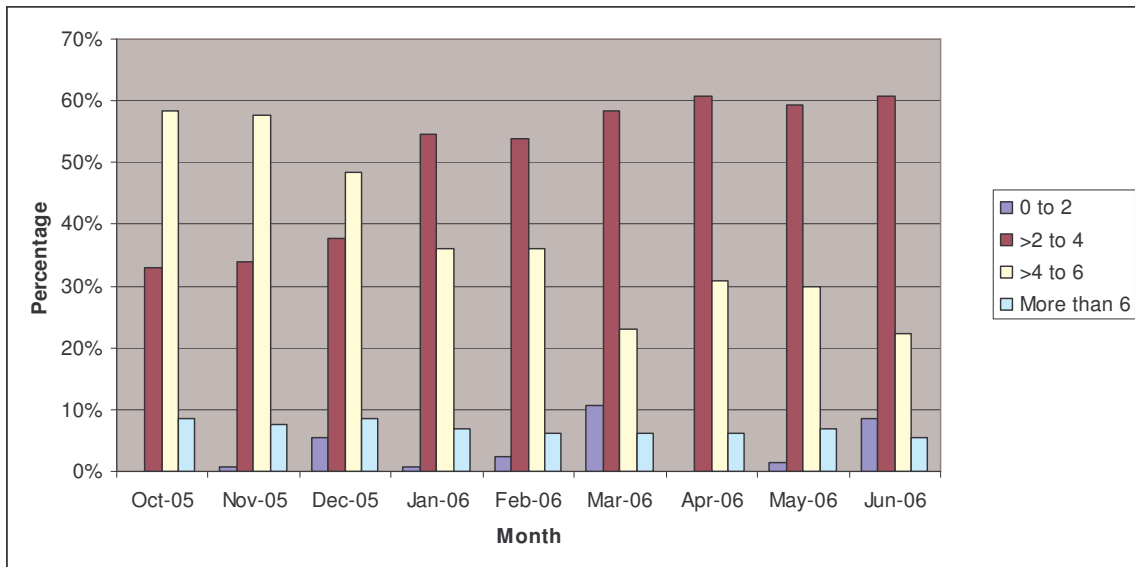


Table 6 below displays the standard deviation and the median values for the Overall DIN score and for the individual components of the DIN scores for December 2005, March 2006 and June 2006. Schemes can use this as a benchmark to evaluate their own scores against that of the industry.

Table 6: Standard deviation⁴ and Median values for DIN scores by month

<i>Score</i>	<i>December 2005</i>		<i>March 2006</i>		<i>June 2006</i>	
	<i>Std</i>	<i>Median⁵</i>	<i>Std</i>	<i>Median</i>	<i>Std</i>	<i>Median</i>
<i>Data submitted</i>	3,26	5,44	2,83	2,59	2,66	3,09
<i>Age 85 Plus</i>	3,05	3,04	2,78	1,16	2,82	1,34
<i>Under 1</i>	3,44	1,92	3,04	1,21	2,85	1,67
<i>Maternity</i>	2,14	1,81	2,25	1,88	2,07	1,74
<i>Non</i>	1,89	6,18	2,32	5,08	2,35	5,04
<i>HIV</i>	2,17	5,06	2,03	5,09	1,96	5,03
<i>Total CDL</i>	1,09	6,52	1,30	6,26	1,14	6,33
<i>Multiple CDL</i>	1,79	6,51	1,81	4,88	1,77	4,73
<i>Overall</i>	1,67	4,27	1,56	3,48	1,46	3,40

Over time, there has been an improvement in most of the scores. The Overall score decreased from 4,27 in December 2005 to 3,40 in June 2006. However, the scores for NON, HIV, total CDL and multiple CDL could still improve. The high total CDL and multiple CDL values result from over and under reporting of chronic conditions by the schemes. This also results in the NON-scores being distorted. For HIV the majority of the actual counts are lower than the expected counts due to the under reporting of HIV.

2.3.3 Evaluation of clinical credibility of submissions

Annexure F on page 75 contains detailed information on the trends observed in the clinical data over the months under review.

There has been a consistent improvement in the data submitted during the period under review. A key finding is represented in Figure 3 below, demonstrating that the total CDL count has reduced dramatically since January 2006 when the entry and verification criteria were introduced.

⁴ The standard deviation (Std) is the most frequently calculated measure of variability. The Std value represents the average distance of a set of scores from the mean.

⁵ Since the data is skewed, the median instead of the mean is reported because the median is a better measure of central tendency in this instance.

Figure 3: Total CDL count reported by all schemes over time

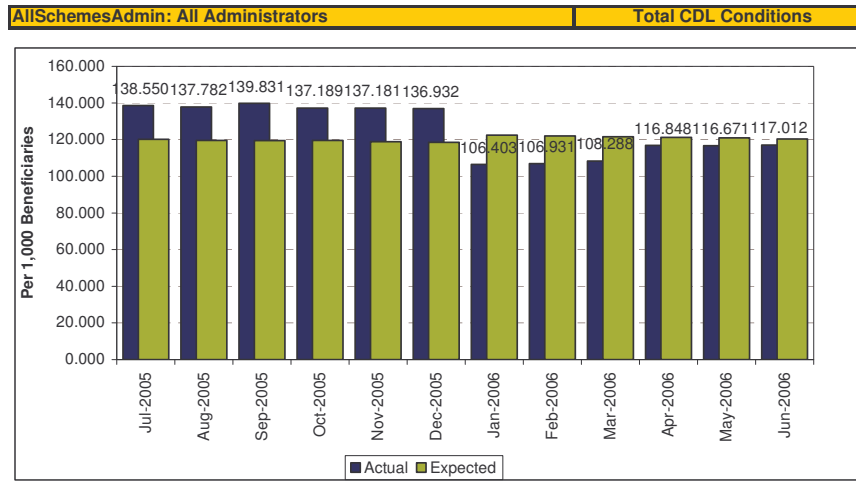


Figure 4 below graphically shows the large burden of cardiac and associated conditions, while Table 7 on page 10 displays the results for the ten most common chronic conditions.

Figure 4: Distribution of chronic disease

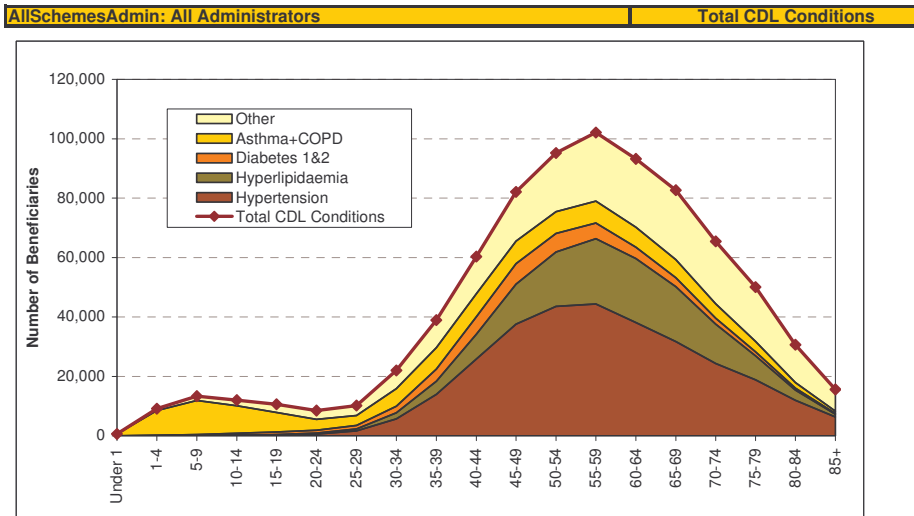


Table 7: Most frequently occurring chronic diseases

<i>Top ten chronic disease conditions ranked in order</i>			
Order	Name	Number of beneficiaries	% of CDL
1	Hypertension	305 005	36,5%
2	Hyperlipidaemia	135 603	16,2%
3	Asthma	97 635	11,7%
4	Ischaemic heart disease	53 866	6,4%
5	Cardiomyopathy and cardiac failure	43 301	5,2%
6	HIV	32 373	3,9%
7	Hypothyroidism	31 607	3,8%
8	Diabetes mellitus 2	28 303	3,4%
9	Epilepsy	24 416	2,9%
10	Diabetes mellitus 1	17 341	2,1%
	Other	65 777	7,9%
Total		835 227	100,0%

Most of the problems experienced previously with regard to the clinical credibility of the REF submissions have been resolved. However, maternity numbers still seem to be higher than expected (Annexure F, Figure 36, page 76). There has been a great improvement in the submission of MAT data; 22 schemes did not report any maternity cases in Q1 2005, while only one scheme that should have had maternity cases, did not report any. (Annexure F, Table 26 page 77).

The lower than expected trend in HIV continues (Annexure F, Figure 37, 78), while the previously experienced massive over reporting of chronic renal disease has been addressed. (Annexure F, Figure 38, page 79). The unexplained high level of haemophilia has also reduced. (Annexure F, Figure 41, page 83). There has been an unexpected increase in cardiomyopathy and cardiac failure, while some schemes still report cardiac failure separately from cardiomyopathy. (Annexure F, section 4, page 80).

The application of the entry and verification criteria by schemes has led to more realistic reporting of multiple chronic diseases. (Annexure F, Figure 44, page 86).

2.3.4 Evaluation of REF submissions by administrator

2.3.4.1 Categorisation, DIN Scores by administrator

Table 8 below shows the number of schemes by administrator and category. Twelve schemes (9,75%) were classified as Category 9 schemes, of which five were self-

administrated. Medscheme administered five of the eleven Category 2 schemes. None of the schemes was classified as a Category 1 scheme. Five of the 17 self-administrated schemes were classified as Category 9 schemes.

Table 8: Scheme Categories by administrator (June 2006)

Administrator <i>Frequency(number of schemes)</i> <i>Row Pct (Percentage of schemes)</i>	Category							Total
	2	3	4	5	6	7	9	
Allcare Administrators (Pty) Ltd	0 0,00	4 57,14	0 0,00	1 14,29	2 28,57	0 0,00	0 0,00	7
Amanzi Health Administrators (Pty) Ltd	0 0,00	1 50,00	0 0,00	0 0,00	1 50,00	0 0,00	0 0,00	2
Benmed Medical Scheme Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	1
Definiti Medical Fund Managers (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1
Discovery Health (Pty) Ltd	2 20,00	6 60,00	0 0,00	0 0,00	1 10,00	0 0,00	1 10,00	10
Eternity Private Health Fund Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	1
Exclusive Health (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1
Ingwe Med (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1
Integrated Healthcare (Pty) Ltd	0 0,00	1 33,33	0 0,00	0 0,00	1 33,33	1 33,33	0 0,00	3
Medscheme Holdings (Pty) Ltd	5 26,32	10 52,63	0 0,00	0 0,00	3 15,79	1 5,26	0 0,00	19
Metropolitan Health Group (Pty) Ltd	2 11,76	11 64,71	0 0,00	0 0,00	3 17,65	1 5,88	0 0,00	17
Mpumalanga Managed Health Care (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	1
Multimed	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	1
Mx Health (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	2 100,00	2
Old Mutual Healthcare (Pty) Ltd	0 0,00	3 33,33	0 0,00	1 11,11	1 11,11	4 44,44	0 0,00	9
PPS Insurance Co, Ltd	0 0,00	1 100,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1
Private Health Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1
Prosperity Health Managers (Pty) Ltd	0 0,00	1 50,00	0 0,00	0 0,00	0 0,00	0 0,00	1 50,00	2
Providence Healthcare Risk Managers (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	1
Resolution Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	1
Rowan Angel (Pty) Ltd	0 0,00	1 100,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1
Self-Administered	0 0,00	6 35,29	0 0,00	1 5,88	3 17,65	2 11,76	5 29,41	17
Sigma Health Fund Managers (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	1
Sizwe Medical Services (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	1
Sovereign Health (Pty) Ltd	2 20,00	8 80,00	0 0,00	0 0,00	0 0,00	0 0,00	0 0,00	10
Status Medical Aid Administrators (Pty) Ltd	0 0,00	2 22,22	1 11,11	0 0,00	3 33,33	3 33,33	0 0,00	9
Thebe ya Bophelo Healthcare Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1

Administrator	Category							
V Medical Aid Administrators (Pty) Ltd	0 0,00	0 0,00	0 0,00	0 0,00	1 100,00	0 0,00	0 0,00	1
Total	11	55	1	3	24	17	12	123

Table 9 below displays the number of schemes by administrator who have an overall DIN score, grouped in the following ranges: 0,00 to 2,00; 2,01 to 4,00; 4,01 to 6,00 and above 6,00. (Within limits, low DIN scores are indicative of good quality data)

No schemes had an overall DIN score below two for June 2006. However, there were 17 schemes with DIN scores above six. Four of them were administered by Allcare Administrators and three were self-administered. Both schemes administered by Prosperity Health Manager (Pty) Ltd have an Overall DIN score above 6,00, and the following administrators each had a scheme with a DIN score above 6: Integrated Healthcare (Pty) Ltd, Multimed, Mx Health (Pty) Ltd, Providence Healthcare Risk Managers (Pty) Ltd, Resolution Administrators (Pty) Ltd, Sigma Health Fund Managers (Pty) Ltd and Thebe ya Bophelo Healthcare Administrators (Pty) Ltd.

Table 9: Overall DIN score by administrator for June 2006 (Within limits, low scores indicate good data)

Overall DIN score (Industry Median = 3,4)					
Administrator	June 2006				Total
	Frequency	2,01-4,00	4,01-6,00	>6,00	
<i>Allcare Administrators (Pty) Ltd</i>	0	3	4	0	7
<i>Amanzi Health Administrators (Pty) Ltd</i>	1	1	0	0	2
<i>Benmed Medical Scheme Administrators (Pty) Ltd</i>	1	0	0	0	1
<i>Definiti Medical Fund Managers (Pty) Ltd</i>	0	1	0	0	1
<i>Discovery Health (Pty) Ltd</i>	1	8	0	1	10
<i>Eternity Private Health Fund Administrators (Pty) Ltd</i>	1	0	0	0	1
<i>Exclusive Health (Pty) Ltd</i>	0	1	0	0	1
<i>Ingwe Med (Pty) Ltd</i>	1	0	0	0	1
<i>Integrated Healthcare (Pty) Ltd</i>	0	2	1	0	3
<i>Medscheme Holdings (Pty) Ltd</i>	4	15	0	0	19
<i>Metropolitan Health Group (Pty) Ltd</i>	2	14	0	1	17
<i>Mpumalanga Managed Health Care (Pty) Ltd</i>	0	1	0	0	1
<i>Multimed</i>	0	0	1	0	1
<i>Mx Health (Pty) Ltd</i>	0	1	1	0	2
<i>Old Mutual Healthcare (Pty) Ltd</i>	2	7	0	0	9
<i>PPS Insurance Co. Ltd</i>	1	0	0	0	1
<i>Private Health Administrators (Pty) Ltd</i>	1	0	0	0	1
<i>Prosperity Health Managers (Pty) Ltd</i>	0	0	2	0	2
<i>Providence Healthcare Risk Managers (Pty) Ltd</i>	0	0	1	0	1
<i>Resolution Administrators (Pty) Ltd</i>	0	0	1	0	1
<i>Rowan Angel (Pty) Ltd</i>	1	0	0	0	1
<i>Self-Administered</i>	2	12	3	0	17
<i>Sigma Health Fund Managers (Pty) Ltd</i>	0	0	1	0	1
<i>Sizwe Medical Services (Pty) Ltd</i>	0	1	0	0	1
<i>Sovereign Health (Pty) Ltd</i>	4	6	0	0	10
<i>Status Medical Aid Administrators (Pty) Ltd</i>	4	4	1	0	9
<i>Thebe ya Bophelo Healthcare Administrators (Pty) Ltd</i>	0	0	1	0	1
<i>V Medical Aid Administrators (Pty) Ltd</i>	0	1	0	0	1
Total	26	78	17	2	123

2.3.4.2 Administrator trends in health status data

The differences between administrators appear to be due to variation in the interpretation and application of REF entry and verification criteria. As stated in the previous reports, there are some differences in these criteria at scheme level, but it is more common for the administrator to propose and implement a particular “house” set of criteria.

Other reasons for these differences could be:

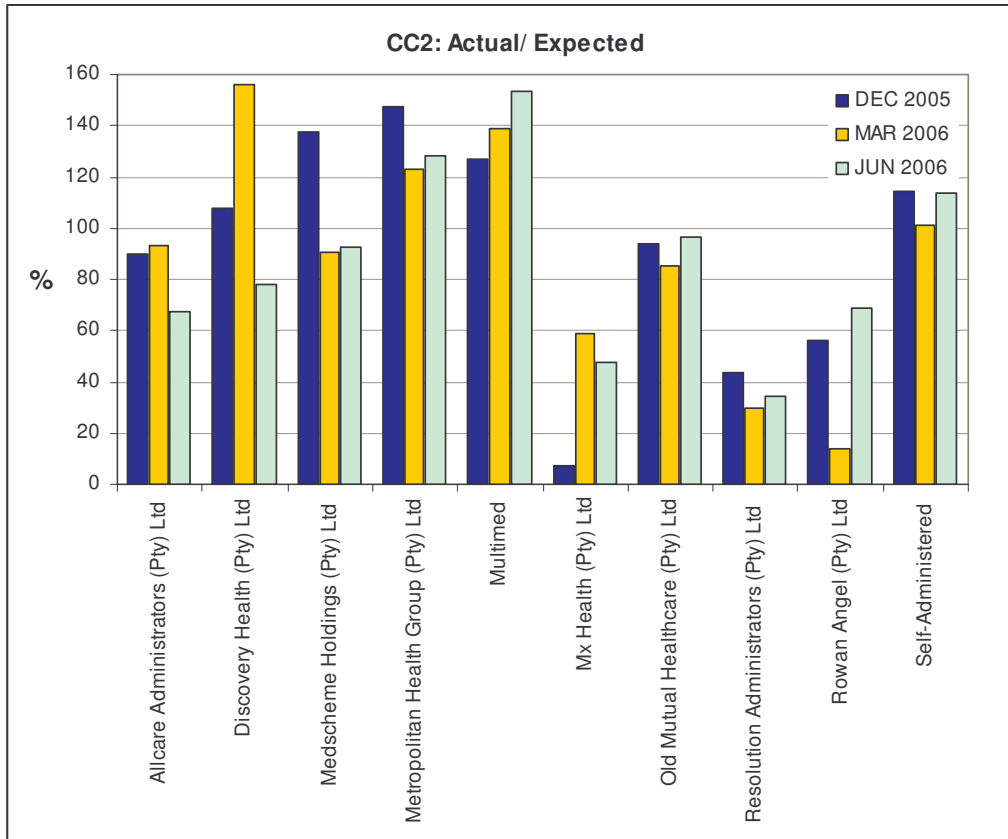
- designated service providers (e.g. Capitation service providers) that cannot submit comprehensive data on CDLs.
- clearing houses that use medicine (NAPPI) codes only to apply the REF entry and verification criteria. This results in ambiguous and over-reporting of beneficiaries. REF clearly states the use of diagnostic and treatment information when identifying REF beneficiaries.
- no quality assurance on the data passed between clearing houses and administrators.
- trustees and Principal Officers who have not checked their own scheme data adequately before signing it off.

Figure 5 below demonstrates that reporting of two or more chronic conditions closer to the expected values, was done by, Medscheme Holdings (Pty) Ltd and Old Mutual Healthcare (Pty) Ltd.

Administrators reporting consistently lower values than the expected are Mx Health (Pty) Ltd; Resolution Administrators (Pty) Ltd and Rowan Angel (Pty) Ltd. While administrators frequently reporting more than the expected values include Metropolitan Health Group (Pty) Ltd, Multimed and Self-Administered schemes.

Large variation in the CC2 values reported has been noted with Allcare Administrators (Pty) Ltd and Discovery Health (Pty) Ltd. Some of the variations reported on above may be ascribed to the proper application of Entry and verification rules and is therefore not necessarily a reflection of poor data submissions in all instances.

Figure 5: Comparison of Actual over Expected for Two Simultaneous conditions (CC2)



In general, the reporting of CC3 has been inconsistent with fluctuations in high and low values during December 2005 to March and June 2006. Three administrators were consistently reporting more than the expected values, these are Metropolitan Health Group (Pty) Ltd, Multimed, and Self-Administered schemes.

Mx Health (Pty) Ltd; Resolution Administrators (Pty) Ltd and Rowan Angel (Pty) Ltd continue to report less than expected values (See Figure 6 below).

Figure 6: Comparison of Actual over Expected for Three Simultaneous conditions (CC3)

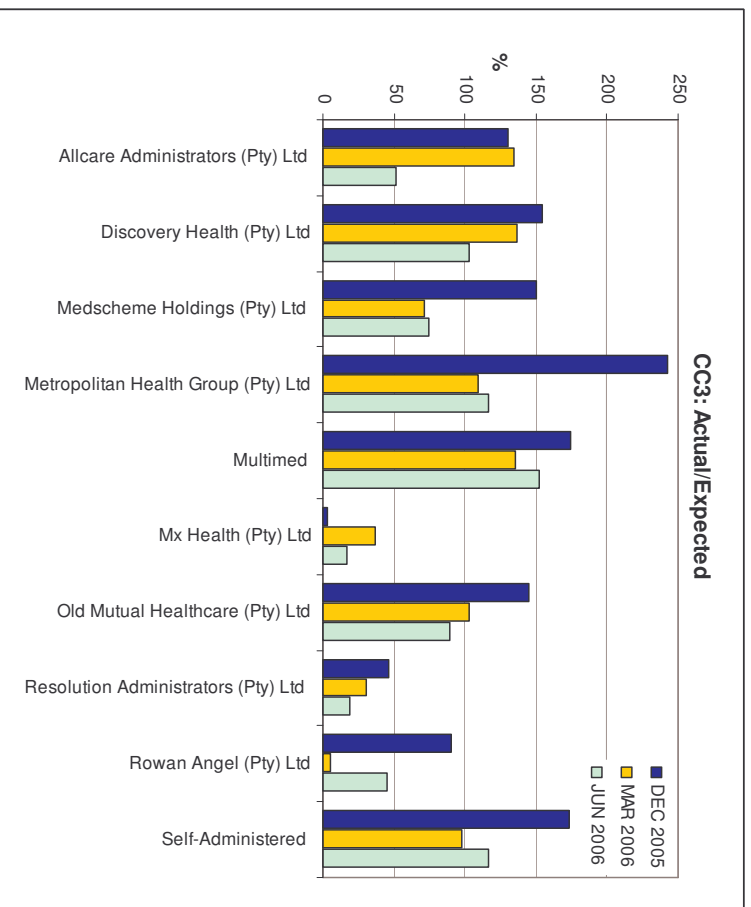


Figure 7: Comparison of Actual over Expected for Four or More Simultaneous conditions (CC4)

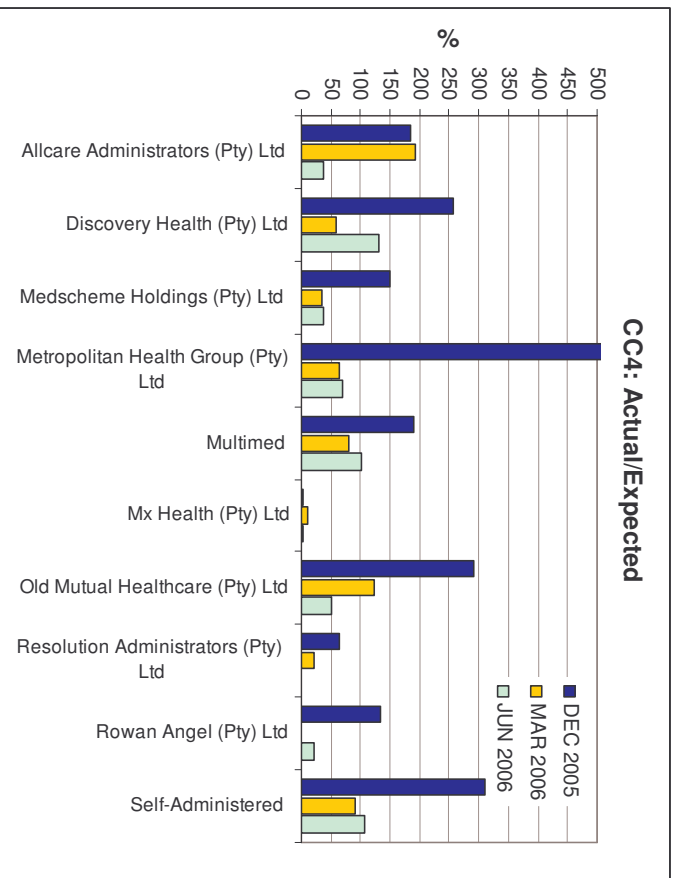
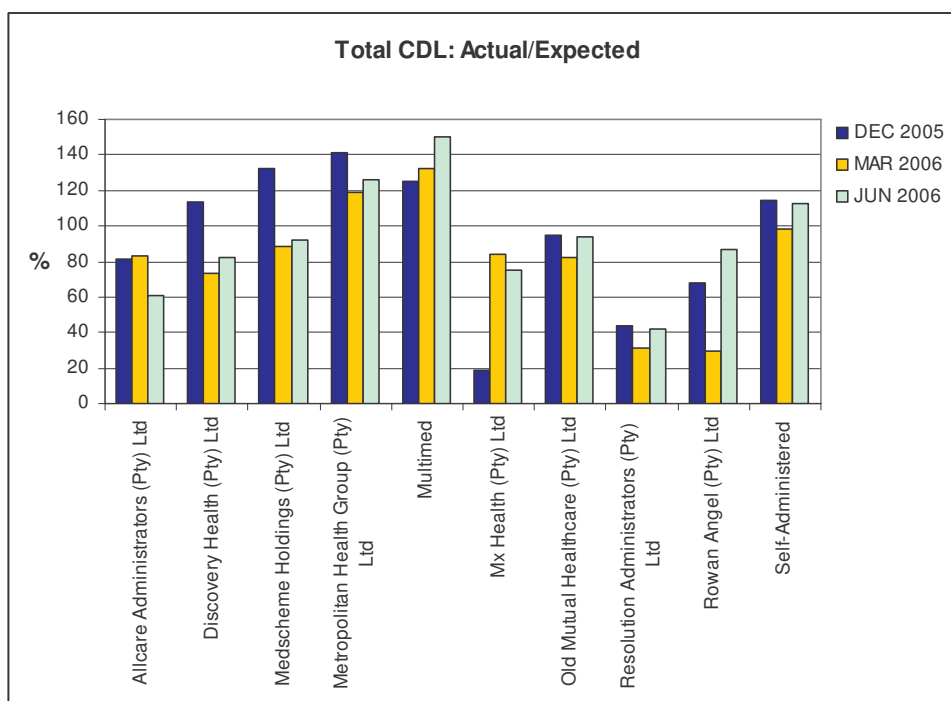


Figure 7 above suggests that much improvement is required in the reporting of CC4, as the data submitted is erratic, and perhaps unrealistic, amongst all the administrators.

Figure 8: Comparison of Total CDL Actual over Expected values



The higher than expected levels reported by Multimed and Metropolitan Health Group (Pty) Ltd remains noticeable, while good improvement is noted in Rowan Angel (Pty) Ltd. (See Figure 8 above).

Stabilised reporting for March 2006 and June 2006 is eminent in Discovery Health (Pty) Ltd, Medscheme Holdings (Pty) Ltd, and Old Mutual Healthcare (Pty) Ltd.

Resolution Administrators (Pty) Ltd has yet to reach the 50% mark while Self Administered schemes hover just over the 100% mark.

2.4 Exclusion of bias in categorisation and DIN scores

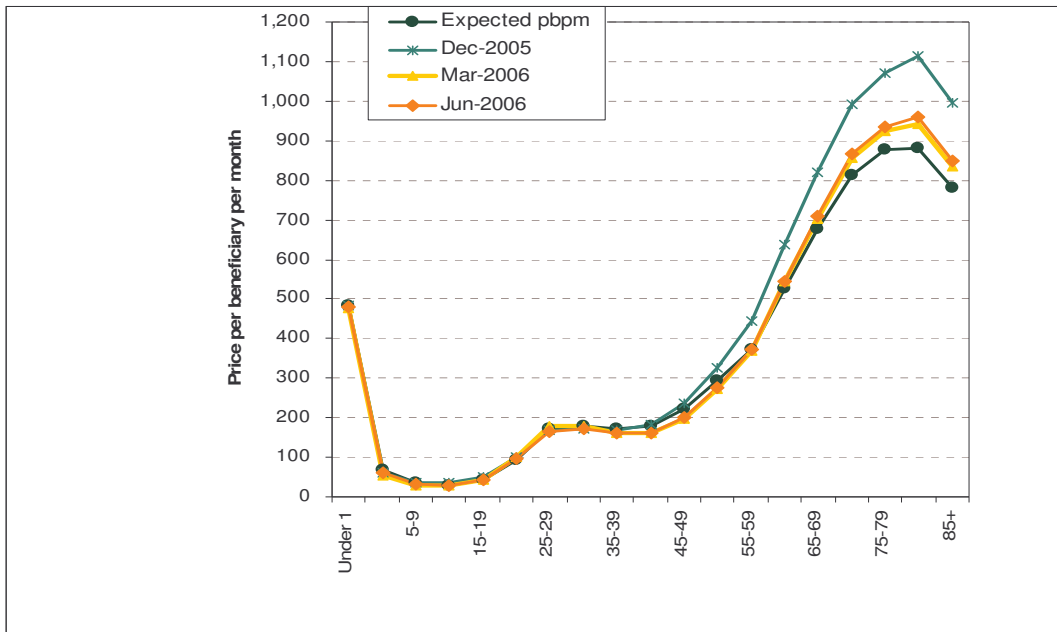
Correlation coefficients were calculated and tested for statistical significance to determine whether there are significant relationships between the number of beneficiaries, the overall deviational scores and the scheme risk (the difference between the scheme rate and the industry rate). No relationships could be demonstrated,

indicating that bias (possibly giving low risk schemes a bad DIN score, or otherwise) could not be demonstrated. Section 2.3 on page 39 contains more details.

2.5 Impact on administrator of REF price by Age

Figure 9 below indicates the impact that the improvement of REF submissions has had on the REF price by age for the industry. The large deviation from the expected price in the older age bands observed in December 2005 has diminished substantially in the March 2006 submissions, with a slight increase observed in the June 2006 submissions.

Figure 9: REF Price by age for all schemes



It is apparent from the graph above that the somewhat heavier tail due to chronic conditions is becoming less prominent; a large portion of this change is ascribed to the correct application of the entry and verification criteria by many schemes. However, there still is room for improvement of the clinical data, as is elaborated on in section 2.3.3 on page 8 of this report.

Price by age graphs are presented for the major administrators in Annexure E on page 66.

3 Evaluation of the financial impact on schemes

The full impact of the REF on medical schemes will only be known when data quality has improved further. The impact of REF on schemes depends on which of the respective REF weighting tables⁶ are applied. In this analysis the impact of each of the published tables are investigated (Age Only, Age & Mat, Full table). In addition, a combination of the age & maternity and full table is examined, assigning a 90% and 10% weight to the respective tables.

The financial impact of REF on a particular scheme is dependent on the difference between the scheme's community rate and the industry community rate. This implies that even if a scheme did submit good data, but the rest of the industry submitted poor data, that the industry community rate will be estimated incorrectly. The limitations listed in section 2.1 on page 2 must be considered when the financial impact is evaluated.

An important consideration lies therein that the current contribution table has been developed before the entry and verification criteria has been developed. Some of the schemes applied Version 1 of the REF entry and verification criteria; other schemes applied Version 2 while some schemes did not apply any. Health status data, as well as the REF weighting table for 2006 is therefore flawed.

Given these limitations, detailed analysis of the financial impact on schemes is nevertheless attached as Annexure G on page 89.

⁶ REF Weighting tables are published as REF contribution tables at www.medicalschemes.com. Tables applied in this report are:

- REFContributionTable2005v7Feb2005, including the full risk table, the age table and the age & maternity table
- REFCT2006 with phased tables REVISED July 2006, including the full risk table, the REF Contribution Table 2006 Ver: AGE ONLY and the REF Contribution Table 2006 Ver: AGE and MAT ONLY

Figure 10 below up to Figure 13 on page 23 demonstrates the financial impact by payment band on beneficiaries if any of the respective weighting tables mentioned above were applied.

Figure 10: Number of beneficiaries by payment band (Age table only) – June 2006

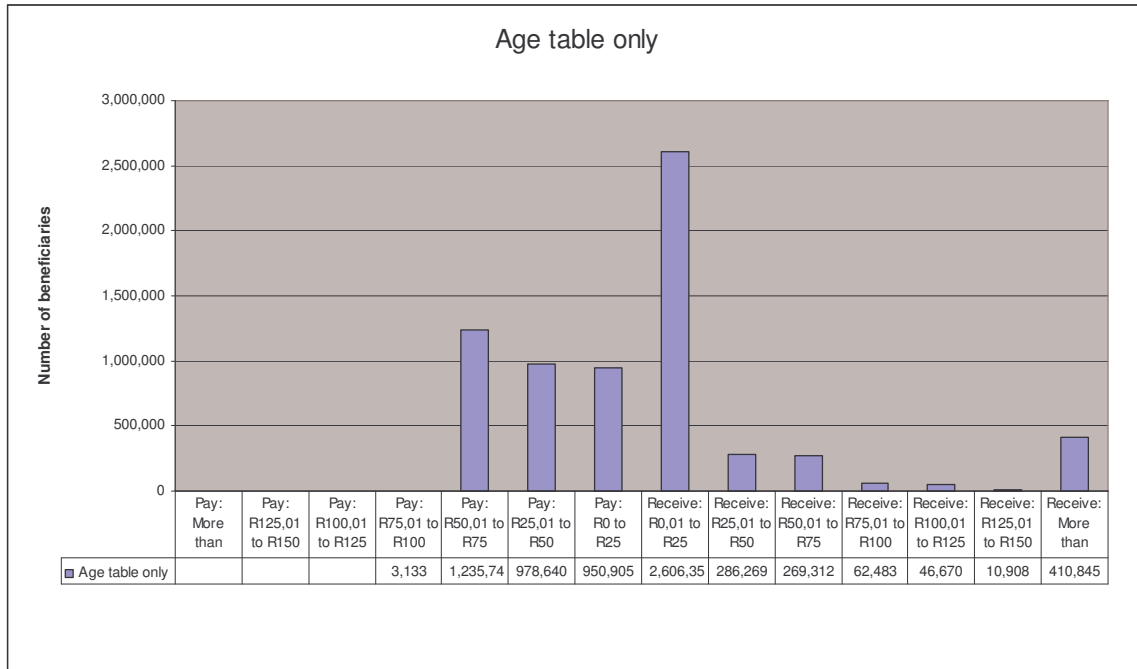


Figure 10 above indicates that if the Age only table was used, that 3 133 beneficiaries would pay in between R75 and R100 per month, while 410 845 beneficiaries would receive more than R150 per month. Similarly, Figure 11 below demonstrates that if the age and maternity table was used, that 17 332 beneficiaries would pay in between R75 and R100 per month, while the number of beneficiaries receiving more than R150 per month decreases to 244 355.

The largest impact would be felt if the full risk table was implemented; Figure 12 on page 22 indicates that approximately 40 000 beneficiaries would have to pay in more than R100 per month.

Figure 11: Number of beneficiaries by payment band (Age and Maternity) – June 2006

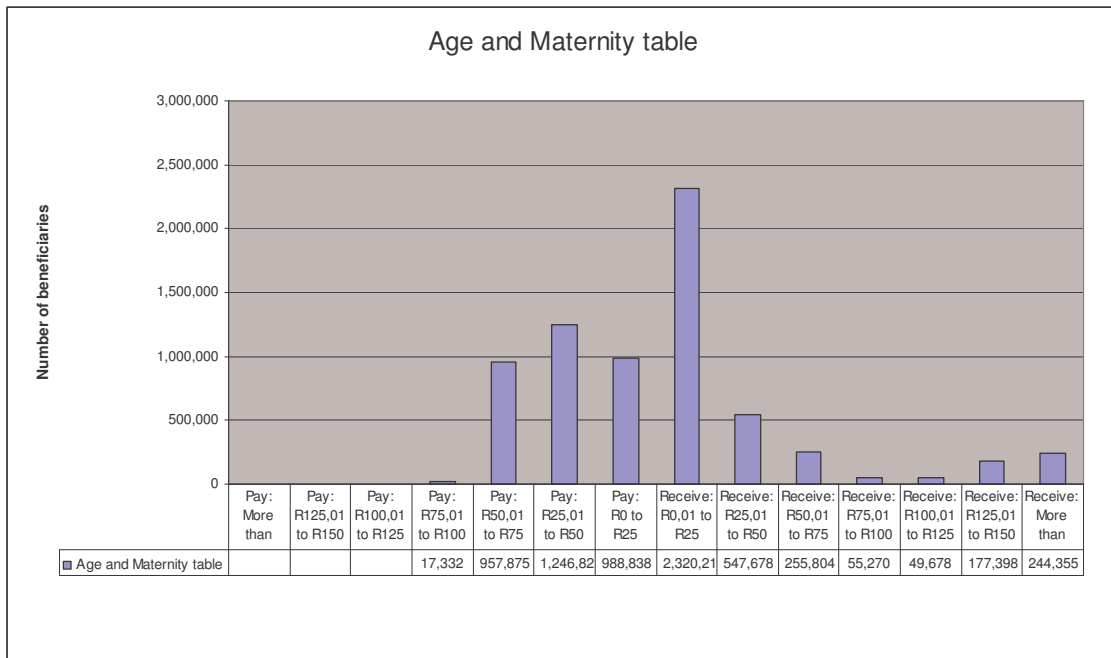


Figure 12: Number of beneficiaries by payment band (Full risk table) – June 2006

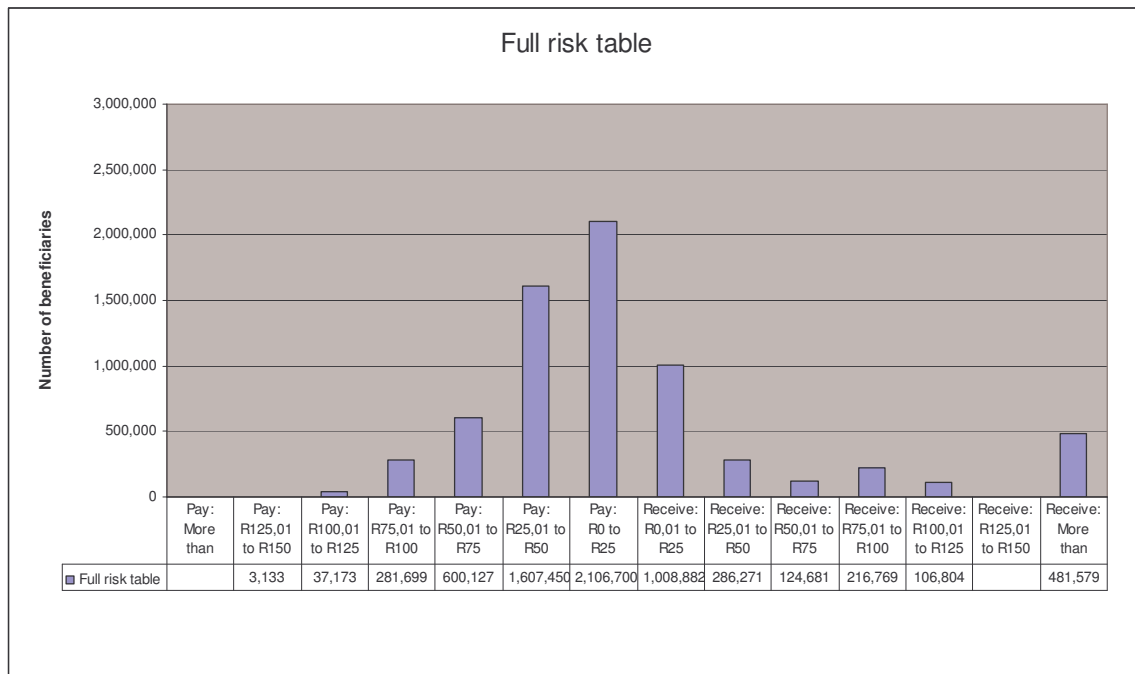
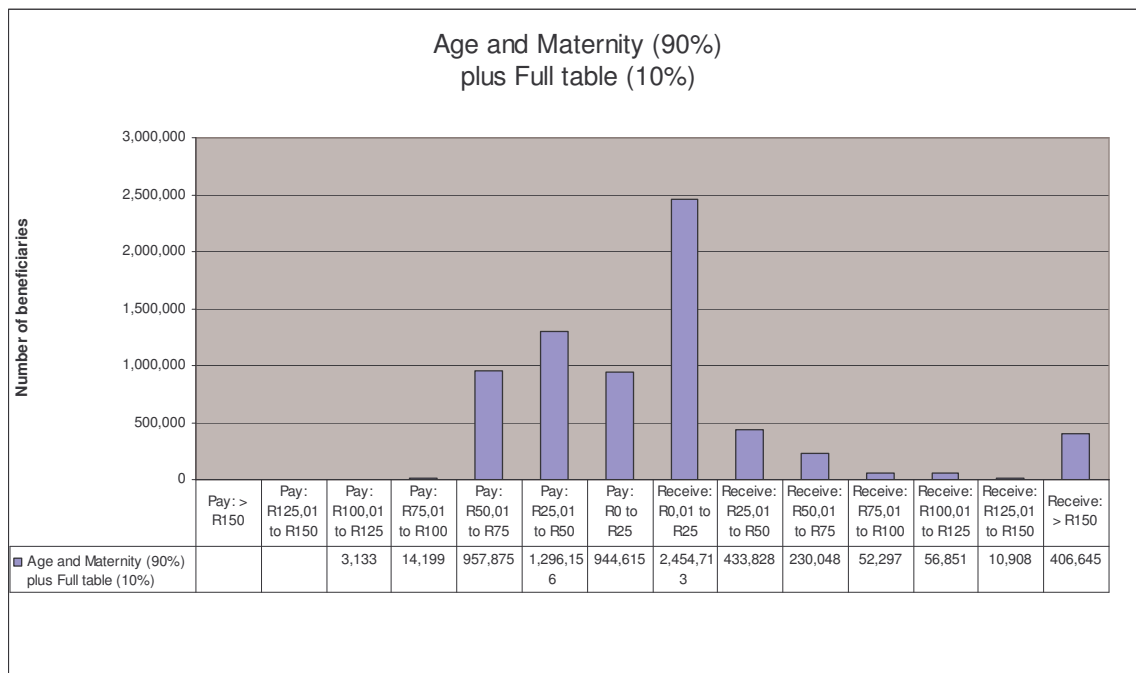


Figure 13: Number of beneficiaries by payment band (Age and Maternity 90% plus Full table 10%) – June 2006



Clearly, this first published industry wide estimate of the impact of REF on beneficiaries must be interpreted cautiously until better quality data is available. Annexure G on page 89 provides a wealth of information on the financial impact of the REF on the industry.

4 Conclusions

It is apparent from the results that the implementation of the entry and verification rules has led to a significant improvement of the quality of the submitted grids from 2005 to 2006. These improvements are reflected in a number of statistics described in sections 4.1 to 4.5 below.

4.1 Many more beneficiaries in schemes categorised as having “fair data”

The proportion of schemes whose data was categorised as being “fair” has increased from 42% in December 2005 to 72% in June 2006 (Section 2.3.1 on page 4). If Categories 6 and 7 are included, the percentage improves from 77,87% in December 2005 to 86,99% in June 2006. Note that the categorisation and evaluation of data as

being “fair data” or otherwise, is based on new definitions (See section 2.3 on page 4, and Annexure C on page 45 for definitions) of the respective categories and does therefore not relate to previously reported figures.

4.2 The deviational scores have shown a remarkable improvement.

There has been a remarkable and consistent improvement in the DIN scores, from an overall score of 4,27 in December 2005 down to 3,40 in June 2006 (Section 2.3.2 on page 6).

4.3 Improvement in the clinical credibility of submissions

Many of the serious problems with clinical data have been resolved (Section 2.3.3 on page 8).

4.4 REF price by age

There has been a major improvement in the observed values when compared to the expected (Section 2.5 on page 19). In addition, all administrators and schemes are converging toward the expected values.

4.5 Financial impact on schemes

The financial impact that REF may have on schemes are highlighted in Section 3 on page 20. Clearly, the estimation of the impact relies heavily on good quality data. The improvement in the standard deviation on the scheme risks is discussed on page 117 in Section 5 of Annexure G.

5 Invitation to request additional feedback

The CMS Office will arrange feedback sessions with some administrators, schemes and other stakeholders.

Stakeholders are invited to contact the office if more specific information is required; Annexure A on page 25 provides contact details of the REF project team.

Annexure A: REF project team

<i>Name</i>	<i>Job title</i>	<i>Provides assistance with</i>	<i>E-mail address</i>	<i>Extension number (012 431 XXXX)</i>
Carrie- Anne Cairncross	Personal assistant	General administrative duties Application for extension of deadlines for submissions. Provides REF grids for completion. Follows up on the submission of REF grids.	c.cairncross@medicalschemes.com	0534
Mondi Govuzela	REF Analyst	Evaluation of data quality and systems to evaluate REF returns, including the development and maintenance of DIN scores (Deviation from Industry Norms)	m.govuzela@medicalschemes.com	0408
Roschelle Singh	REF Clinical Audit analyst	Evaluation of clinical data content and the execution of data quality audits, including the REF identification and verification criteria	r.singh@medicalschemes.com	0417
Anton de Villiers	Senior data manager	Statistical and financial analysis of data	a.devilliers@medicalschemes.com	0579
Boshoff Steenekamp	REF Project specialist	Preparation for a system of risk equalisation	b.steenekamp@mediclaschemes.com	0418
Azita Safaie	Senior Analyst Financial Flows	Preparation of financial systems to effect financial transfers	a.safaie@medicalschemes.com	0419