



QUANTIFYING RISK, ENABLING OPPORTUNITY

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Utilisation and inflation in medical schemes

Overview

- I. Inflation & medical inflation as measure by Statistics South Africa (Stats SA)
- II. Contribution inflation in medical schemes
- III. Drivers of contribution inflation
- IV. Utilisation in 2014 & 2013
- V. Contribution inflation measurement (prospective)
- VI. Questions

Inflation - Stats SA

- CPI – general increases in prices of goods and services
- Rebased after carrying out Income and Expenditure surveys (IES) every five years (may be reduced to 3 years)

Medical Inflation from Stats SA

- Also includes medical inflation basket targeting healthcare goods and services
- Stats SA measures how the general prices of medical services increase from year to year
- Medical inflation has been shown to increase at rates higher than CPI
- This is regardless of how much if these services are consumed from year to year

Medical inflation - Stats SA

- Medical inflation measures how prices change over time
- The price measured is not affected by how much health services are used



Just calculate the increase in the price of one egg. This does not measure how many eggs are consumed over time



- For medical schemes, its important how much health services are consumed

Medical inflation or contribution inflation

- Contributions are used to finance both Medical services & goods and non health-care expenditure
- It is important to measure how much cost of services change over time and how much of the services are consumed over time for Medical Schemes



Even when
the price of
eggs do not
change you
would need
more Cash



Contribution inflation

- Contribution increases of medical schemes respond to a number of factors such as:
 - I. General increase in price levels of medical services
 - II. Increase in use of the medical services (utilisation)
 - III. General increase in non-healthcare expenditure (NHE)
 - IV. Reserving requirements
- Industry technical advisory panel (ITAP) formula & work

$$\text{Medical inflation} = \text{tariff increase} + \text{utilisation increase}$$

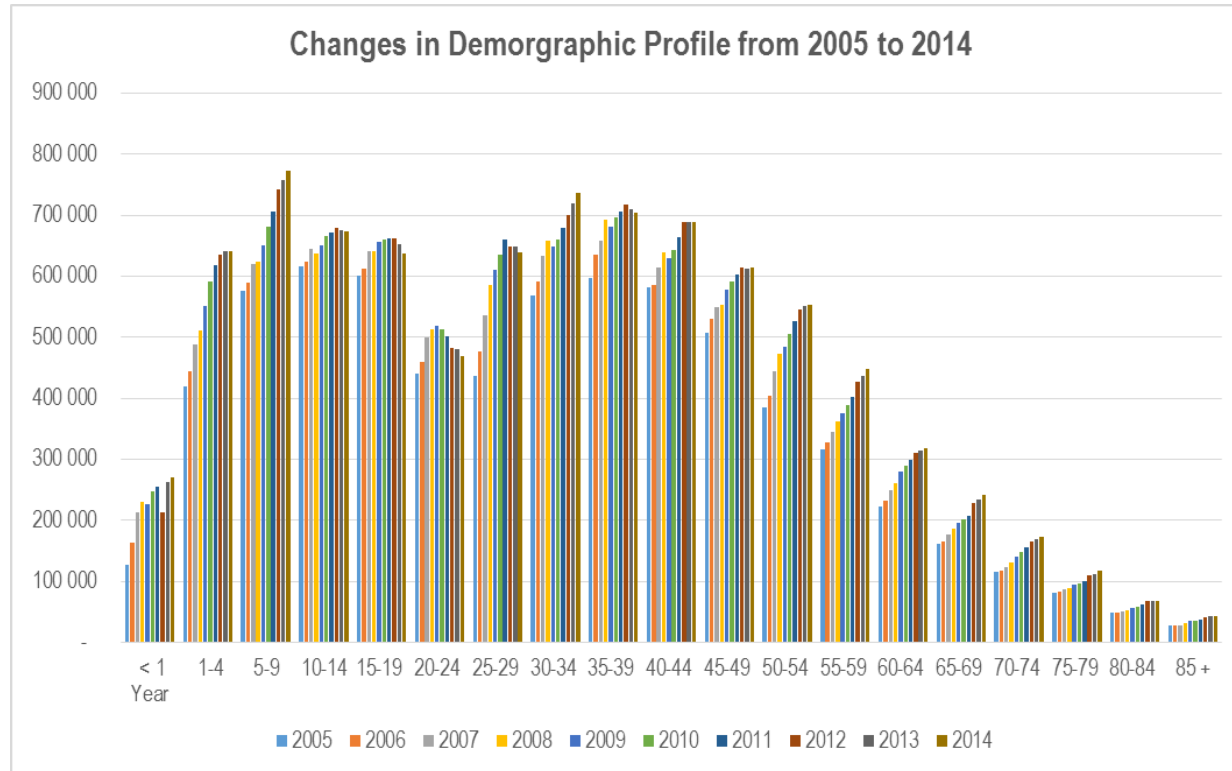
$$\text{Medical inflation} = \text{tariff increase} + (\text{demand side component} + \text{residual supply side effect})$$

$$\text{Medical inflation} = \text{tariff increase} + (\text{plan-mix effect} + \text{residual demographic effect}) + \text{residual supply side effect}$$

- ITAP led to the review of data collected by CMS so as to measure medical inflation more accurately

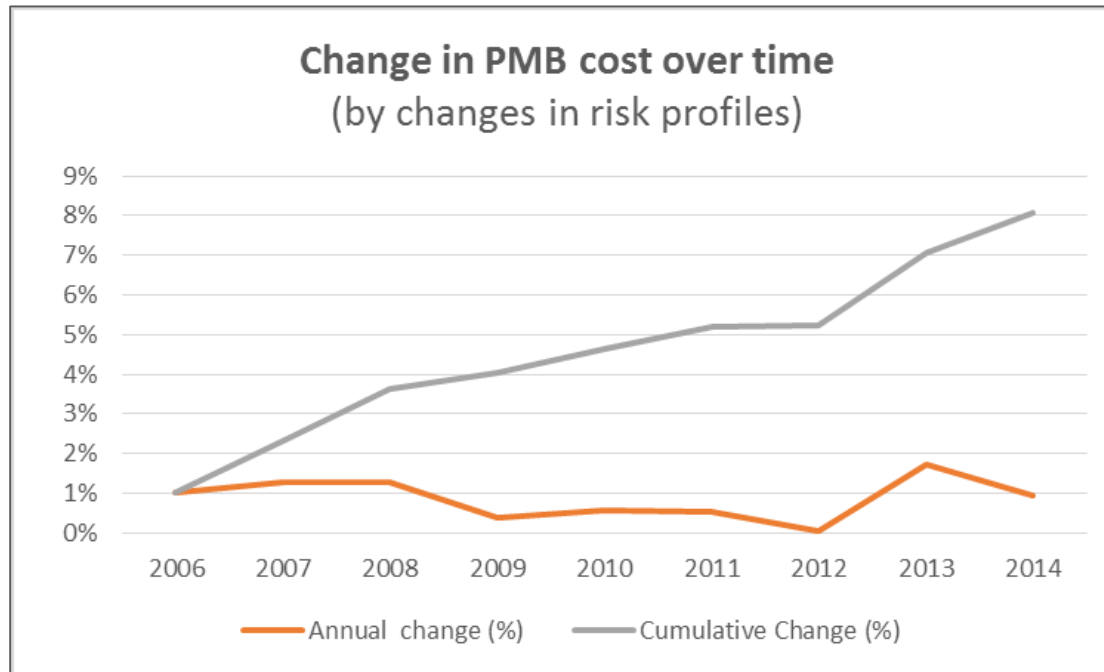
Contribution inflation

Effect Of Demographic Profile On Cost Of PMBs



Contribution inflation

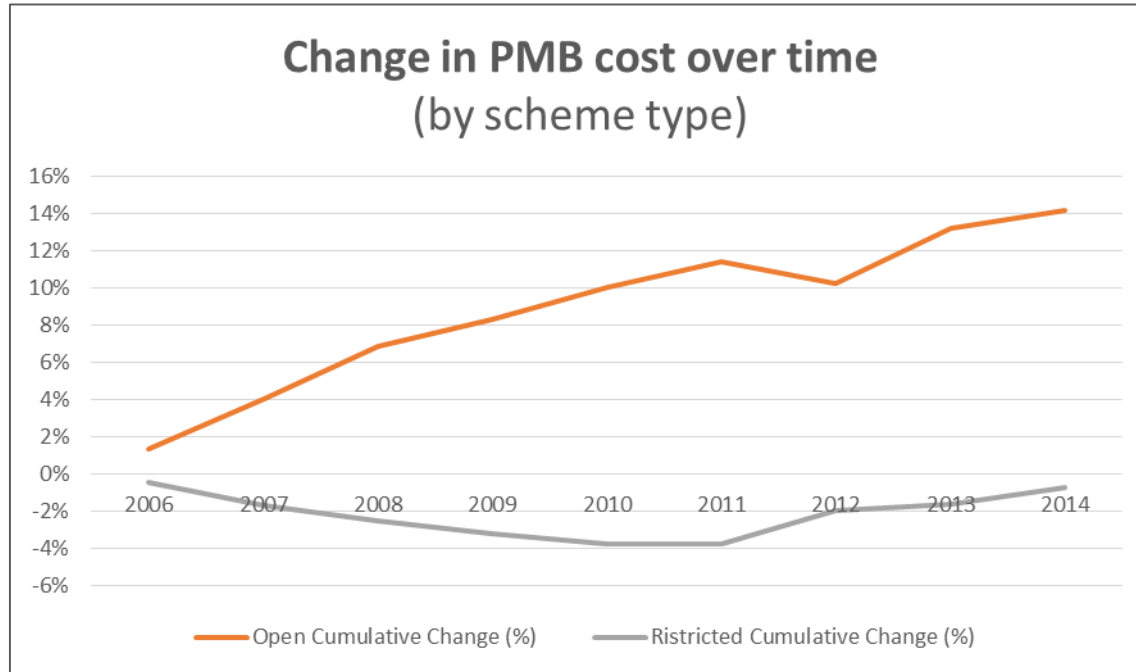
Effect of demographic profile on cost of PMBs



- Cost of PMBs pbpm for 2014 was used to calculate the cost of PMBs using the beneficiary profiles of the previous years
- If the profile had not changed from 2006, the cost of PMBs would be 8% lower

Contribution inflation

Effect of demographic profile on cost of PMBs



- The impact of change in membership profile was mostly on open schemes
- If the profile had not changed from 2006, the cost of PMBs would be 14% lower on open schemes

Utilisation

Data Collected

Data Table	Fields collected Option level for financial years 2013 & 2013	Adjustments / Quality of data
A2	No of beneficiaries at the end of each month in the financial years 2013 and 2014.	None / good quality
B1	No of visits to the various providers and the total cost of such visits	None / good quality
B2	Total amount spend on medicines and consumables outside hospital and the no of items dispensed	None / good quality
B3	Hospital admission data for beneficiaries: no of admissions, admission type and no of days spent in hospital	Adjustments to length of Stay for some options / reasonable quality
B6	Hospital admission data for beneficiaries: no of admissions, admission type & category and no of days spent in hospital	None / reasonable quality

Utilisation

- Mostly consisted of 3 categories: Medicines, Providers and Hospitalisation

Category	Average Cost “Tariff” per event	Utilisation pabpm	Sub-category
Medicines (16,6% of total benefits paid)	Each item dispensed and paid for by the schemes	No of items dispensed	Consumables & Medicines
Providers (43,7% of total benefits paid)	Each visit paid for by the schemes	No of visits	In-Hospital & Out-of-Hospital
Hospitalisation (37,6% of total benefits paid)	Each hospital admission paid for by the schemes Each day spent in-hospital paid for by the schemes	No of admissions No of in-patient days per admission <i>and is not calculated pabpm</i>	In patient days <24hrs “Short stay” & In patient days >24hrs “Long stay”

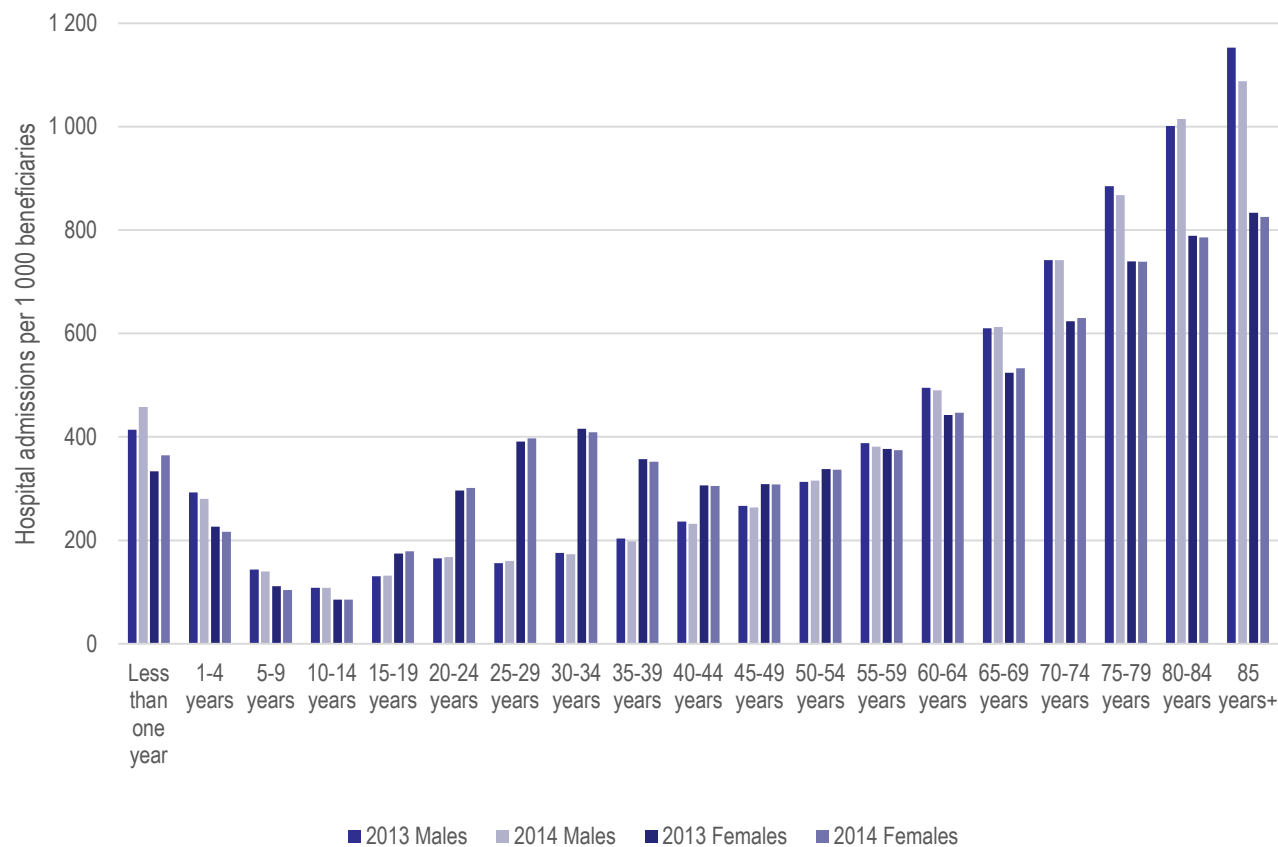
Utilisation

Hospitalisation

	2013	2014	% change per 1 000 beneficiaries
Hospitalisation			
Number of admissions	2 506 398	2 540 535	0.3%
Day case	756 185	769 764	0.7%
Long stay	1 750 213	1 770 771	0.1%
Average cost per admission (R)	16 606.88	18 331.34	10.4%
Day case (R)	6 545.34	7 213.98	10.2%
Long stay (R)	20 953.99	23 164.12	10.5%
Number of inpatient days	7 494 131	7 904 851	4.1%
Day case	756 185	769 764	0.0%
Long stay	6 737 946	7 135 087	4.7%
Average cost per day (R)	5 554.14	5 891.50	6.1%
Day case (R)	6 545.34	7 213.98	10.2%
Long stay (R)	5 442.90	5 748.82	5.6%

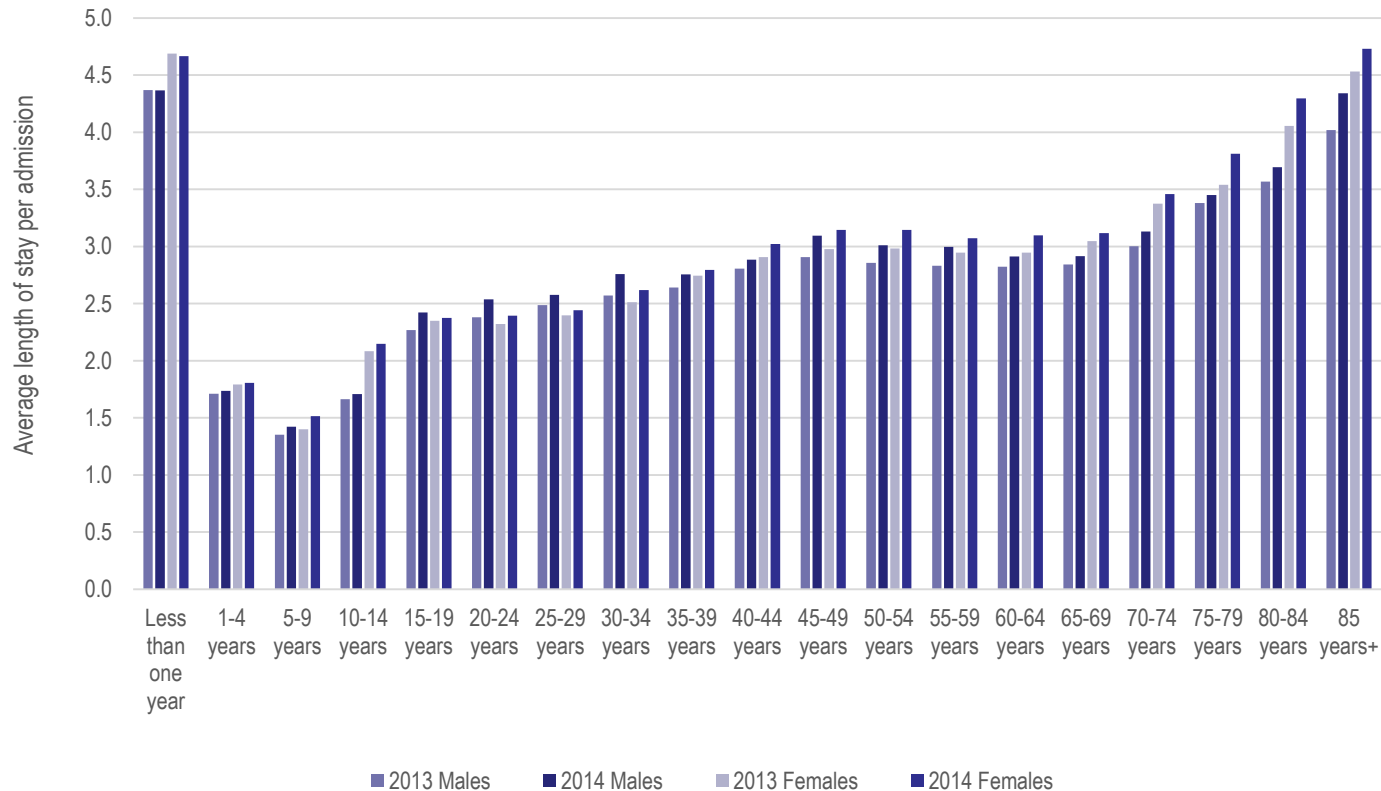
Utilisation

Hospitalisation - No of admissions per 1000 beneficiaries



Utilisation

Hospitalisation – Average Length of Stay per admission (Long Stay)



Utilisation

Medicines

	2013	2014	% change per 1 000 beneficiaries
Medicines			
Number of items dispensed	212 366 520	223 161 203	4.2%
Consumables	14 752 285	15 063 860	1.0%
Medicine	197 614 235	208 097 343	4.2%
Average cost per item dispensed (R)	88.69	92.18	3.9%
Consumables (R)	66.38	72.25	8.8%
Medicine (R)	90.36	93.62	3.6%

- Average cost per item dispensed for medicines was lower compared to consumables

Utilisation

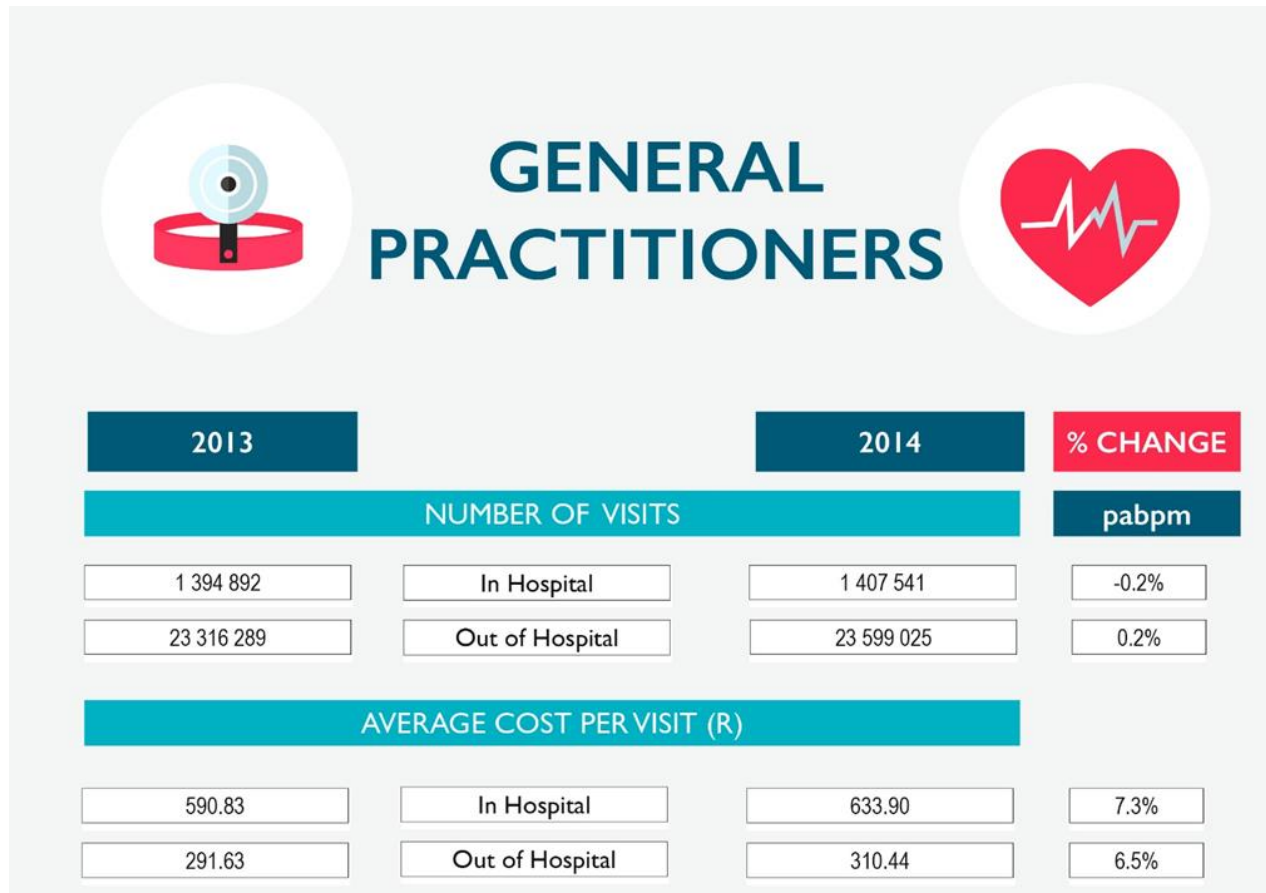
Providers

	2013	2014	% change per 1 000 beneficiaries
Providers			
Number of visits	68 824 388	71 435 900	2.7%
In-hospital	17 340 663	18 428 527	5.2%
Out-of-hospital	51 483 725	53 007 373	1.9%
Average cost per visit (R)	689.13	744.05	8.0%
In-hospital (R)	1 103.59	1 184.16	7.3%
Out-of-hospital (R)	549.53	591.04	7.6%

- Utilisation of providers increased more for in-hospital visits

Utilisation

GPs



- A hospital GP visit costs more than double an out-of-hospital visit.

Utilisation

Medical Technology



MEDICAL TECHNOLOGY



2013		2014	% CHANGE
NUMBER OF VISITS			pabpm
9 862	In Hospital	13 181	32.6%
44 886	Out of Hospital	52 406	15.5%
AVERAGE COST PER VISIT			
641.24	In Hospital	947.41	47.7%
528.13	Out of Hospital	577.02	9.3%

•There is a very significant increase in utilisation of medical technology especially in-hospital.

•The average cost per event is also much higher in-hospital

Utilisation

major take-away

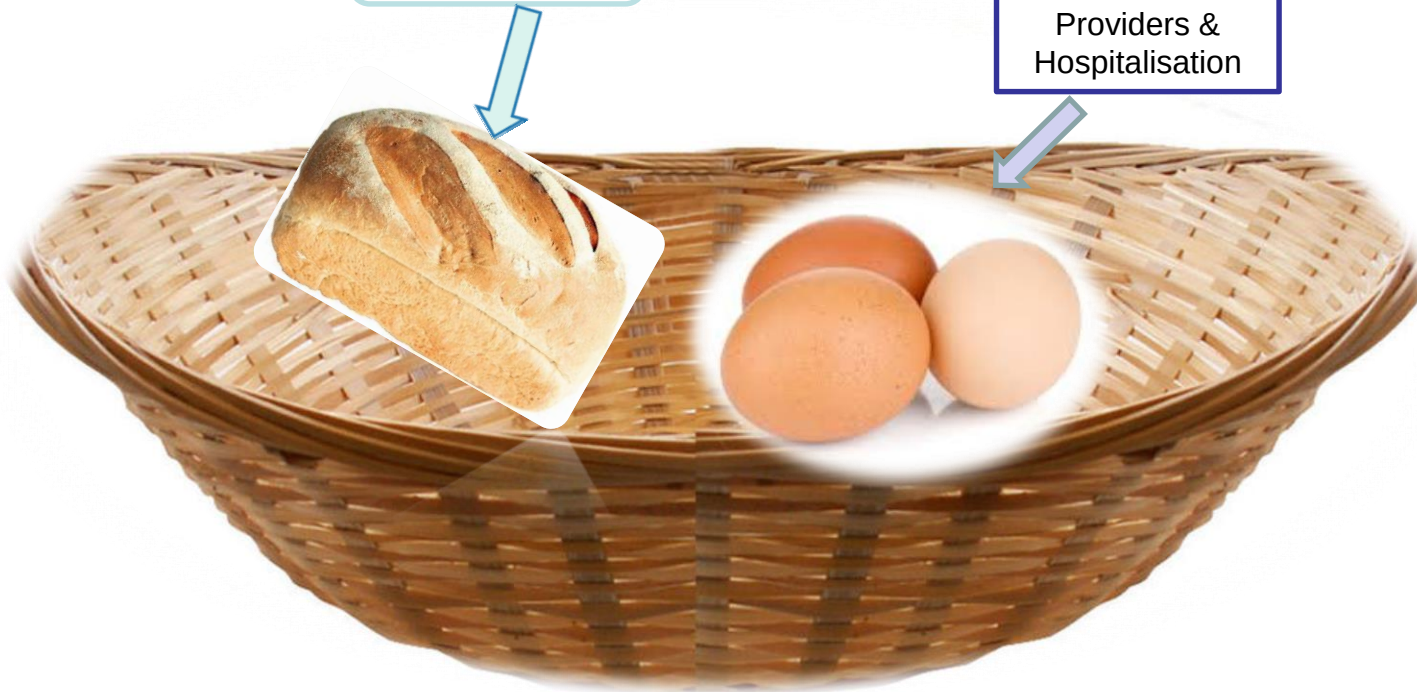
- I. no of admissions increased marginally while length of stay increased at 4%
(it would be more helpful to unpack utilisation in hospital more)
- I. utilisation of providers increased most in-hospital 5,2% compared to 1,9% out-of-hospital
- II. average cost per event is higher in hospital for a number of disciplines
- III. the increase in average cost of medicines was 3,6% - probably due to single exit price and use of generics

Contribution increase measurement

Contribution allocation in Medical schemes

Non Healthcare
Expenditure

Medicines
Providers &
Hospitalisation



Need to determine:

- What proportion of contributions goes towards NHE & HC costs?
- How does NHE & HC increase over time?
- How does the utilisation of HC change over time?

Contribution inflation measurement

- Assumptions / objectives
 1. By analysing the industry wide revenue account of medical schemes – one has in actual fact considered all drivers of contribution increases (tariff + utilisation)
 2. Understanding and measuring utilisation does not require us to determine how much each individual component of utilisation contributes – over time with more data this maybe possible
- The following method is a mirror of contribution assumptions methodology; it does not specify how each individual component of utilisation contributes to total contribution inflation

Actual increase in contributions

All Schemes									
		Weight in Index	Tariff (cost per event)			Utilisation (no of events pabpm)			Overall Increase
		2013	2 013	2 014	% Change	2013	2014	% Change	
Non Health-Care Expenditure	Administration Expenditure	7,84%	12 932,55	13 810,05	6,79%	-	-	-	6,79%
	Managed Care	2,68%	4 412,06	4 711,41	6,78%	-	-	-	6,78%
	Brokerage	1,33%	2 186,76	2 347,33	7,34%	-	-	-	7,34%
	Other Expenditure	-2,78%	-4 588,60	-4 757,50	3,68%	-	-	-	3,68%
Sub-Total		9,06%			7,82%	-	-	-	7,82%
Health-Care Expenditure	Day Admission	4,17%	6 545,54	7 214,21	10,22%	1,051	1,057	0,60%	10,87%
	Long Stay Admission	30,92%	5 437,57	5 741,91	5,60%	9,373	9,811	4,67%	10,53%
	Medicines	15,05%	90,44	93,63	3,53%	274,422	285,736	4,12%	7,80%
	Consumables / Medicines	0,82%	66,40	72,26	8,82%	20,481	20,684	0,99%	9,90%
	Providers In-Hospital	16,13%	1 103,91	1 184,19	7,27%	24,089	25,306	5,05%	12,69%
	Providers Out-of-Hospital	23,84%	549,34	590,93	7,57%	71,545	72,803	1,76%	9,46%
Sub-Total		90,94%			6,31%			3,66%	10,19%
Grand Total		100,00%			6,45%			3,33%	9,98%

NHE was assumed to increase at 6,1% in 2014

Assumed Utilisation increase was 2,3% & overall increase was 9,2%

SEP was 5,8% for 2014

Actual increase in contributions

Open Schemes

Open Schemes									
		Weight in Index	Tariff (cost per event)			Utilisation (no of events pabpm)			Overall Increase
		2013	2 013	2 014	% Change	2013	2014	% Change	
Non Health-Care Expenditure	Administration Expenditure	9,25%	16 262,19	17 135,61	5,37%	-	-	-	5,37%
	Managed Care	2,74%	4 812,26	5 075,67	5,47%	-	-	-	5,47%
	Brokerage	2,17%	3 809,99	4 066,59	6,73%	-	-	-	6,73%
	Other Expenditure	-2,28%	-4 001,83	-4 676,49	16,86%	-	-	-	16,86%
Sub-Total		11,87%			3,44%			-	3,44%
Health-Care Expenditure	Day Admission	4,41%	6 443,88	7 281,14	12,99%	1,204	1,214	0,82%	13,92%
	Long Stay Admission	30,71%	5 967,22	6 177,69	3,53%	9,052	9,567	5,69%	9,42%
	Medicines	13,75%	115,59	111,55	-3,50%	209,183	232,647	11,22%	7,33%
	Consumables / Medicines	0,76%	81,89	81,71	-0,21%	16,227	17,054	5,09%	4,87%
	Providers In-Hospital	16,33%	1 181,96	1 268,39	7,31%	24,301	25,583	5,28%	12,98%
	Providers Out-of-Hospital	22,17%	569,68	609,98	7,07%	68,426	69,533	1,62%	8,81%
Sub-Total		88,13%			4,47%			5,20%	9,78%
Grand Total		100,00%			4,34%			4,58%	9,03%

Actual Increase in Contributions

Restricted Schemes

Restricted Schemes									
		Weight in Index	Tariff (cost per event)			Utilisation (no of events pabpm)			Overall Increase
		2013	2 013	2 014	% Change	2013	2014	% Change	
Non Health-Care Expenditure	Administration Expenditure	5,84%	8 831,59	9 667,33	9,46%	-	-	-	9,46%
	Managed Care	2,59%	3 919,15	4 257,63	8,64%	-	-	-	8,64%
	Brokerage	0,12%	187,50	205,60	9,65%	-	-	-	9,65%
	Other Expenditure	-3,51%	-5 311,30	-4 858,42	-8,53%	-	-	-	-8,53%
Sub-Total		5,04%			21,57%			-	21,57%
Health-Care Expenditure	Day Admission	3,83%	6 720,30	7 096,86	5,60%	0,862	0,862	-0,03%	5,57%
	Long Stay Admission	31,20%	4 833,09	5 228,47	8,18%	9,769	10,115	3,55%	12,02%
	Medicines	16,92%	72,18	78,88	9,28%	354,774	351,871	-0,82%	8,39%
	Consumables / Medicines	0,92%	54,37	64,29	18,26%	25,721	25,206	-2,00%	15,89%
	Providers In-Hospital	15,84%	1 005,88	1 076,68	7,04%	23,829	24,960	4,75%	12,12%
	Providers Out-of-Hospital	26,24%	526,60	569,46	8,14%	75,387	76,877	1,98%	10,28%
Sub-Total		94,96%			8,17%			2,34%	10,68%
Grand Total		100,00%			8,84%			2,22%	11,23%

Conclusion

- The objective is to have a way of understanding and measuring proponents of contribution increases
- Its important that this is measured for all schemes and is based on data that is readily available
- The proposed method may be improved to in cooperate other details and we would be keen to work with stakeholders on this
- Contribution inflation and what drives it has been very topical and there are many version of what is driving it – let's work towards telling one story based on global evidence and what is measurable

Questions



Questions

(Its my Turn Now)

- Do you believe this method accurately measures utilisation and tariffs:
 - I. At providers?
 - II. For hospital admissions?
 - III. Of medicines outside hospital?
- If we are to expand hospital admissions, what would be better to include?
 - a) Place – general ward; ICU; etc..
 - b) Type of admission – emergency room; ambulatory maternity; etc.
- Do you believe we should include more items in measurement of utilisation and if what should we include?
- Overall, do you think there is value in continuing with this approach?

Thank You