

Drivers of Medical Inflation

Summary

- Medical inflation in a year is the sum of the utilisation increases and tariff increases.
- The sum of the plan-mix effect, the demographic effect and the supply side effect captures the total increase in utilisation.
- The demand side component of medical inflation is the sum of the plan-mix effect and the demographic effect – this reflects members’ increasing needs for medical care.
- In addition, the supply-side effect reflects new technologies, changes in medical practices, including changes in the extent of referred costs (such as radiology and pathology), as well as changes in billing behaviour.
- The inclusion of the plan-mix effect over time will unmask the true underlying demographic changes in a scheme.
- Thus, contribution increases which are determined on the basis of plan-mix adjusted increases in the per life per month (PLPM) claims, will immunise a scheme against changes in the membership mix between different options.

The Impact of Plan Mix

Different options have different underlying demographic risk profiles and benefit structures. As membership changes from year to year, the proportion of members on each option also changes.

Hence, at an overall scheme level, the increase in the weighted average claims PLPM is a combination of:

- i. Changes in the “weights”, or the number of people per option, or the plan mix; and
- ii. Changes in the cost per option – which is a function of demographic changes, changes in benefits, changes in tariffs, and changes in member or provider behaviour in respect of utilisation of the benefits provided by each option.

The principle to be followed is to price for the plan-mix adjusted increase in claims costs PLPM. A scheme would be vulnerable to changes in the proportion of members on each option from year to year, if it were to price for the weighted average PLPM increase in costs. To immunize against the impact of membership movements, premiums have to be sufficient to cover claims on a plan-mix adjusted basis.

The plan-mix adjusted cost PLPM in a specific year reflects what the weighted average PLPM costs in that year would have been if the distribution of beneficiaries across options were the same in both years being compared.

An example to illustrate:

Year	PLPM Increase	Plan-mix adjusted PLPM increase	Plan-mix impact
2011	8.52%	9.76%	1.24%

From the above example, the increase from the plan-mix adjusted PLPM in 2011 to the weighted average PLPM in 2012, gives the plan-mix adjusted PLPM increase of 9.76%. Or, put differently, if the plan mix in 2011 were exactly the same as the plan mix in 2012, the PLPM cost would have increased by 9.76%, and not by the overall 8.52% observed on an overall basis. The movements between plans, therefore, mask the average PLPM increase.

The plan-mix adjusted PLPM increase can be unpacked into its factors, namely: tariff increases; the impact of plan reweighting; the impact of demographics; and residual utilisation.

It must be cautioned that where there are significant benefit changes from one year to the next, the plan-mix effect will also capture the demand side response to benefit changes. In addition, the supply side also responds to benefit changes, and hence the impact of benefit changes can be quantified separately, but will have both demand and supply side elements.

The Supply Side Effect

In order to understand the residual utilisation, after taking into account demographic and plan movements, the supply side effects need to be unpacked.

The factors below are examples of drivers of the supply side:

- Increase in admission rate above demographic factors (hospital cost impact) for example due to more hospital beds becoming available
- Increase in case mix above demographic factors (hospital cost impact) for example due to new expensive procedures being performed
- Increases in referral rates, for example of radiology and pathology
- New drugs becoming available to treat certain diseases e.g. biological.

It might not be possible to explain the full residual, thus, other balancing items could have also contributed to the claims experience.

The Demand Side Effect

Unpacking the reasons for the demand side change, or demographic changes, is harder, as medical schemes have much less information about why particular members join or leave the scheme, and why some people do not join.

Possible considerations:

- changes in underlying age, gender and chronic status distributions;
- an analysis of new versus continuation members ;
- how new lives claim relative to existing lives on every option, and how this has changed over time;
- change in underlying demographic risk by looking at the disease burden, and analysing experience in the context of disease burden drivers and compounding factors; and
- changes in demographic profiles of options in the rest of the market.

Conclusion

In conclusion, when considering medical inflation, it is important to do so on a plan-mix adjusted basis, to ensure that the scheme is not vulnerable to changes in the membership mix between different options.

Medical inflation can be broken down into utilisation increases and tariff increases. This utilisation is the sum of the plan-mix effect, the residual demographic effect and the residual supply side effect.