

## **Expenditure analysis overview of approach and general observations**

The Competition Commission Market Inquiry into the Private Healthcare Sector is progressing. It has been focusing on those issues that are important to improving competition in the health market.

We are pleased to release a series of eight reports, starting with four today and the rest to follow over the next week. These reports put into the public domain analyses undertaken using medical schemes claims data for the period 2010-2014. Further work using these data is still underway and will be released in due course; in particular geographic analyses and drivers of demand in the private health care market.

The documents released today describe our work with regard to expenditure analysis. In short, in any market, the costs of healthcare are a product of prices and volumes. In these reports we use empirical evidence to understand the drivers of the costs of private healthcare in South Africa.

Two of the reports have been published before *“Report on analysis of medical schemes claims data – descriptive statistics”* and *“Report on analysis of claims data – Initial cost attribution analysis”*. Based on responses to these two documents plus interaction with stakeholder through the HMI data room process, we have amended these reports and are re-issuing them.

We are also issuing a *“Response to data room submissions”* report in which we address the comments, critique and input received from stakeholders. They are addressed collectively as, in many instances, stakeholders had similar comments. We have not and will not reply individually to each stakeholder on each issue. Further, stakeholders may be interested to see what others had to say on the reports. This report is accompanied by a *Technical Annexure* prepared by Willis Towers Watson which covers the more technical issues involved in the analyses. It is aimed at a technical audience.

In addition, we publish today a *“Report on analysis of medical schemes claims data – a focus on prescribed minimum benefits (PMB)”* and will, over the next week, publish *“Report on analysis of medical schemes claims data – a focus on funders”*, *“Report on analysis of medical schemes claims data – a focus on facilities”* and *“Report on analysis of medical schemes claims data – a focus on practitioners”*.

The industry claims data from 2010-2014 provides the HMI an opportunity to quantitatively describe and understand expenditure trends. This is a different exercise to what schemes must analyse to set contribution levels. They must raise sufficient income to cover

prospectively the likely costs irrespective of the reason for changes in expenditure, as determined by scheme rules. Administrators and schemes use their experience of the previous year(s), assess the demographic structure of the scheme and estimate what is required for the following year. In general this is the job actuaries are asked to do.

The HMI, however, is not involved in such an exercise – the aim of the HMI is to understand retrospectively what drives cost changes and, using the data available to it, provide insights into which of these are:

1. patient related (e.g. older age, more chronic disease, patient behaviour and choices)
2. medical input market related (e.g. a nurse wage increase)
3. technology related (e.g. due to a new drug or surgical technique), or
4. provider behaviour driven (e.g. a greater propensity to make a diagnosis because this guarantees reimbursement by a payer, opening a new hospital)

We are more interested in the drivers we can change through improved competition than the ones that are unavoidable.

Some **patient related** factors like age or how sick a person is are largely unavoidable. Some might be addressed by long term initiatives such as public health campaigns to reduce the risk of chronic disease; smoking regulations are a good example. Patient choices however can be influenced, for example by having better information about what they are purchasing. But this latter factor is not something that the claims analysis can give much insight into.

**Medical input cost inflation** is due to supply factors e.g. a nurse shortage driving up wages, or patents preventing competitor entry and shifts in technology. These are not completely uncontrollable, but probably largely beyond the remit of individual South African payers and providers. Governments may be able to change these over the longer (5-10 year) term, for example through things like altered intellectual property (IP) protections, changes in procurement rules or increased training of professionals, but the relevant policy domain is typically broader than just health.

**New health technologies** often drive up costs. Where these cost increases are accompanied by better outcomes this may be justified. Some interventions are just too expensive and may not be justified even if beneficial. Where the evidence for improved outcomes is absent or ambiguous, there is a real role for an institution to either generate or acquire the relevant evidence, and ensure that both providers and patients are aware of costs and benefits. Policy review to ensure that policy does not unintentionally encourage the use of ineffective technologies may be useful. Technologies that generate negative outcomes for all patients, regardless of cost, should not be utilised.

**Provider behaviours** (independent of the above two factors) can be influenced however, through medical training, regulation, and incentives inherent in reimbursement. These are thus of particular interest to the work of the HMI. Our aim is thus to identify what proportion of cost increases can be attributed to provider behaviours, and whether training, regulatory or payment levers can be pulled to ameliorate these effects.

Our approach to the analyses has been the following:

We take into account those factors that would logically make a difference to health care costs – explained factors. In particular: age, gender, the disease profile of the covered population (if someone has co-morbidities), and the actual problem for which they are seeking health care in each encounter (case-mix). A person with a complicated/more serious problem will logically cost more than a simpler disease/treatment. If the population gets older and/or sicker, logically healthcare costs go up. So, these are factors that explain health care needs and costs: the 'explained factors'. Our analyses also take into account increases in the prices of individual healthcare services or 'tariffs', set at CPI.

The unexplained portion is that proportion of cost changes that are due to other factors not related to the easily describable health/ill health of the population served. This unexplained increase is therefore over and above what could be understood to be caused by inflation, the age/sex of the population served, the state of ill-health and the severity of the person/condition being treated.

It is important to find a meaningful way to estimate the health of a population: to attempt to neither over nor undercount it. The degree of sickness that is in the covered population from the data we have from schemes is obviously affected by the diagnoses (and related coding) entered into the data set by health care providers. Some have said that all that is required is to include age, sex and HIV as most needs for health care is related to age and sex (pregnant woman) but that HIV also needs to be taken into account as it is not age related in the same way as most other diseases. Others have said that the HMI is undercounting the degree of illness in the covered population by not including each and every diagnosis and taking it as required care. To the extent that there is a propensity to over-diagnose and over-treat particular conditions, such as marginal hypertension for example, or a propensity to code a disease as a PMB or a disease on the chronic disease list (CDL), then a very broad definition of disease profile will include these over-diagnoses or up-coding behaviours (incorrectly) as explicable and the unexplained portion of expenditure will go down. We have thus included a narrow and broad definition of disease status and provided this range in our reports.

Lastly, the HMI has access to data from multiple sources, many schemes and many administrators. In South Africa there is no regulation with regard to how to report data. It therefore varies between schemes and administrators and it also varies over time. Thus the HMI had to take an approach that allowed us to use all the data combined. In some cases this means that the way the HMI dealt with the data differs to how a particular individual stakeholder will have assessed their own data. How we have done this is described and is logical and rational.

These reports are presented for the public to read and assess. The interpretation of the findings can only be made in conjunction with other information on and evidence about the functioning of the market. The HMI interpretation will be provided for comment in the provisional report which is still forthcoming.

The HMI welcomes responses to these reports.