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Excessive Utilisation and Supplier Induced Demand

Presentation to the Health Market Inquiry

Prof. Nicola Theron, 12 April 2019

What does the HMI find in their study?

- Unexplained portion of utilisation (chapter 8) and expenditure and admissions (chapter 6);
- If finding “association” between admissions and beds/practitioners, does not explain SID;
- Recognition that causality not proven, supply could respond to demand;
- No investigation of all factors that drive utilisation (models include age, gender, disease indicator, scheme plan);
- Models indicate omitted variable bias (e.g. member income, fraud, waste and abuse, technology, workload of doctors, etc);
- If excess utilisation exists but not caused by beds or number of doctors – what findings have the HMI made on these factors?
- Recommendations has to be based on evidence;
- There is no hospital based SID theory (from HMI own models);
- If model is correct and practitioners drive SID, the absurd result must be a moratorium on doctors, in the context of a country with a significant shortage of doctors.

Common points of stakeholders accessing the data room

On the local concentration study, common concern over:

- Narrowed datasets and samples
- Double categorization of data

On the SID study, common concern over:

- Incomparable international comparisons (OECD);
- Poor analysis design and models;
- No causation;
- No control for any initial supply-demand imbalance;
- Reliance on an incorrect disease indicator;
- Reliance on bed datasets that are inaccurate;
- Reliance on municipalities as opposed to competition markets;
- Model results show extremely small effects;
- Disjoints between analyses, findings and conclusions.

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HMI Chapter 8 Study

Does the HMI find evidence of SID?

- One of the main findings from this study is that ***"the supply of hospital beds was not that significant an explanatory factor in the specialty models"***
- These specialty models are those which indicated a reasonable model fit; the other model run was one that pooled all admissions across specialties, and which indicated a poor fit (R squared of 7.96%)
- This aligns with the HMI's Initial Research Note on the topic of SID, where the HMI states: ***"In our search, the literature defined supplier induced demand strictly as it relates to physicians and the servicing of patients. Thus, using our search terms and approach we identified nothing as applied to facilities and suppliers."***
- **"Given that the beds data for the speciality models was inaccurate (that I beds by speciality rather than for the total number of beds was poorly described in the data) it is more reasonable to conclude that no inference ca be drawn from this model."**

HMI responses (4 April 2019)

- **Does not in any way control for any initial supply-demand imbalance**
- **Relies on an incorrect disease indicator**
- **Does not measure whether supply was necessary or unnecessary**
- **Relies on bed datasets that are inaccurate, and the measure of practitioners is also flawed**
- **Relies on municipalities as opposed to competition markets: '…relies on somewhat arbitrarily designed geographic boundaries'.**
- **Does not in any way prove causality (only 'positively associated')**

- "Very difficult, if not impossible, to determine whether care was necessary or not" – no such data in SA – used international comparators;
- The HMI acknowledges that in some local areas evidence of historic undersupply being met is likely, but not for market on average;
- Narrow disease indicator – endogeneity;
- Doctor dataset – HMI could not account for listed deficiencies in data;
- Bed dataset – had to work with incomplete dataset;
- Municipalities – aim was to focus on SID and not on competition. Acknowledge high % of admission occur outside municipality;
- Correct that model does not establish causality.

International non-price comparisons?

Comparability check	South African sample	OECD sample	Comparable?
Is treatment at public or private facilities in question?	Private hospitals	Public/private hospitals	**No**
Which type of private coverage is considered?	Supplementary, duplicative	Supplementary, duplicative, complementary; with varying combinations (in addition to, as mentioned above, public healthcare)	**No**
How representative are the samples of the respective private healthcare populations?	Beneficiaries covered by medical schemes (private coverage)	Participating countries conduct their own surveys, each with a different sample size; Eurostat and the OECD verify the methodologies used; unclear whether this focuses on private or public healthcare coverage	**No**
What is the service delivery model of the respective healthcare systems?	Catastrophic based hospital care combined with step-down facilities	HMI does not consider	**No**
What do the demographics of each respective population look like?	Burden of disease (consider regulatory landscape and resultant anti-selection)	HMI does not consider	**No**

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HMI Chapter 6 Study

Can unexplained factors be driven by concentration?

Actual minus expected admissions

HMI (Broad disease indicator) – based on sample (12% of regions) Provisional Report only narrow indicator

Actual minus Expected	2010	2011	2012	2013	2014
Concentrated	-8.12%	-9.62%	-10.18%	-8.20%	-8.79%
Moderately Concentrated	10.20%	9.71%	10.43%	10.20%	9.45%
Non-Concentrated	3.94%	3.14%	3.74%	4.68%	5.78%

Econex recalculated (based on all regions) – the local concentration results (admissions) do not hold once all regions are included

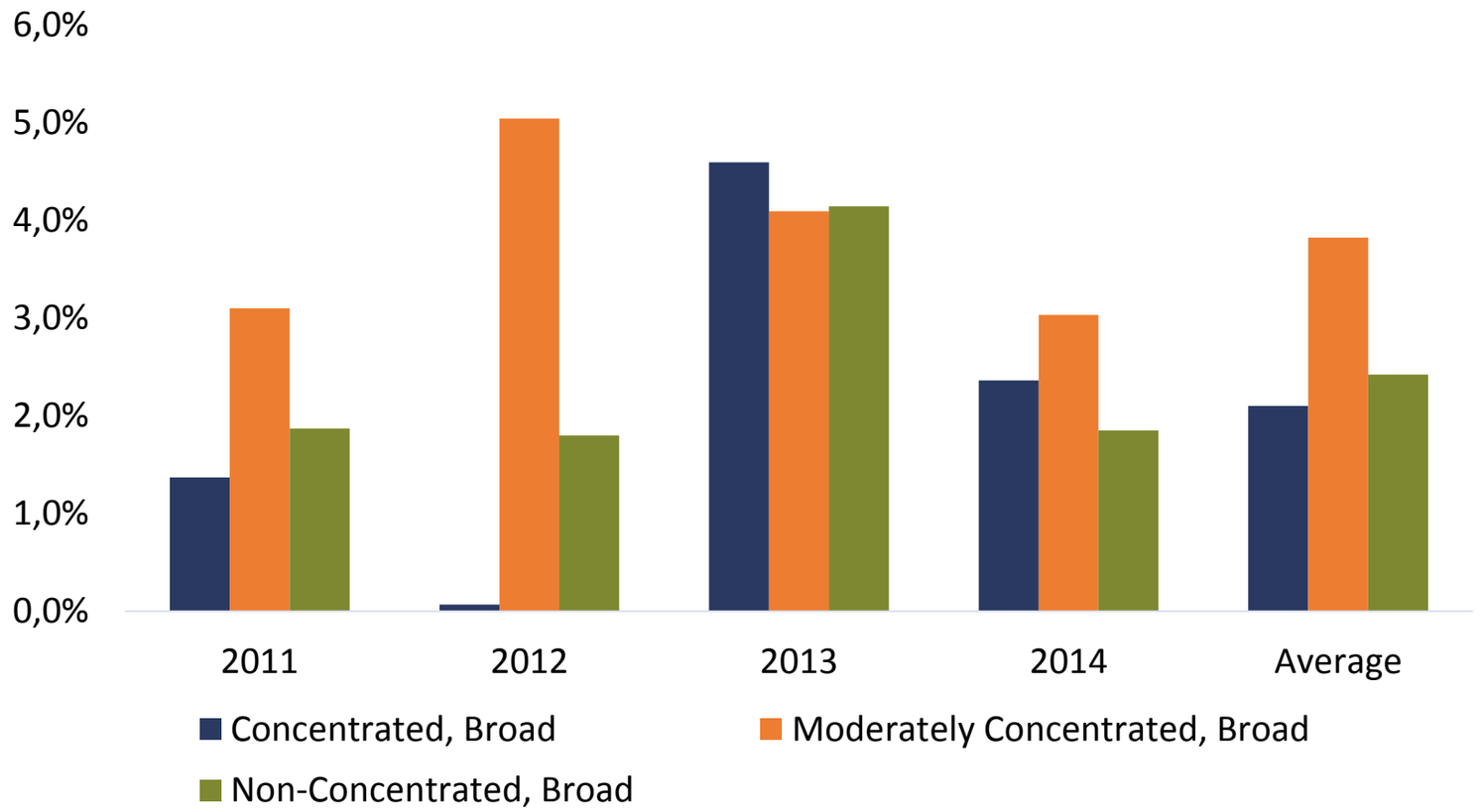
Actual minus Expected	2010	2011	2012	2013	2014
Concentrated	-0.17%	-1.17%	-0.63%	-0.12%	0.37%
Moderately Concentrated	-0.11%	-1.34%	-0.85%	-0.56%	-0.35%
Non-Concentrated	0.02%	-1.03%	-0.47%	0.09%	0.59%

Unclear theory, flawed analysis, inconsistent results

Results and fundamental flaws

No consistently higher trend in unexplained increases to support the hypothesis that more competitive markets yield inefficiencies and higher than necessary costs

In-hospital claims, unexplained increases, broad disease indicator, 2011-2014



Unexplained increases in utilization - local markets

Main finding by the HMI: more concentration leads to more competition

Data set problems (Appendix to HMI Report (Facilities))

- Study sample is 12% of regions (24/ 195) – 6 Mediclinic hospitals in final sample
- Conclusions of concentration and 'unexplained expenditure' are based on 'doubled' categories
  - Only 15% of Enumerator Areas (EA's) are linked to only one category of concentration, and almost half of EA's are linked to two categories of concentration; regions are concentrated and unconcentrated at the same time
  - When analysis run on all regions, results are no longer valid – the sample is therefore not representative

Further analytical flaws

- Focus on the narrow disease indicator; HMI has recognized problems
- Reliance on EA's, HMI has recognized problems

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Comments on Recommendations

Mediclinic's Recommendations

In order to ensure a sustainable and more efficient private healthcare market, Mediclinic's recommendations, taking in account the HMI recommendations, are as follows:

1. Removing barriers to develop integrated delivery models such as HMOs, ACOs and IPAs
    a. The amendment of the HPCSA ethical rules:

    This will enable more cost and value centric care and innovative delivery models;

    Will address fragmentation and unnecessary waste and aspects of fraud and abuse.
2. Effective and accessible training facilities for nurses and doctors with scope for private sector training
3. Regulatory reform aimed at ensuring the stability and viability of the medical scheme risk pool, including
    a. A risk-equalisation mechanism
    b. Introduction of a standard basic medical scheme benefit package
    c. Mandatory participation of formally employed
    d. The introduction of a risk based solvency approach for medical scheme;
    e. Introduction of low income/ scheme product;

Mediclinic's Recommendations

4. The industry wide development and introduction of a national grouper;
5. The establishment of an independent, neutral body to collect and publish reliable benchmark data on utilisation and quality indicators based on standardised definitions for the industry;
6. Health technology assessments or economic value assessments undertaken by an independent body using scientific and transparent methods which take into account value and patient outcomes.

HMI recommends controlling prices via SSRH, this does not flow from SID analysis, which is a non-price theory of harm.

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Thank you

Econex has merged with FTI Consulting as of 1 March 2019

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