

## INSURANCE – LIFE AND HEALTH

# Data in health insurance: An underutilised wealth

Access to granular data is essential to understand the health business and take appropriate decisions to improve its performance, say LINK's Messrs Jihad Ghanem, Jens Sonnenschein, Imad Hamoush.



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“Information is the oil of the 21st century, and analytics is the combustion engine,” said Gartner executive vice president Peter Sondergaard.

The saying resonates well for an insurance industry challenged by the fast pace of technology. In an era where cars will soon be driving themselves, where the big four tech companies are seeking to compete in the insurance industry and where capacities are still struggling to offer relevant cyber protection products, the insurance industry needs to stand up to the challenge and keep an eye on the real wealth behind its business: Data.

While data is available to insurance stakeholders for various insurance lines, health related databases remain among the richest, most complex and most prone to be leveraged for analytical purposes.

Insurers usually collect medical data from various sources. Among these, business production data is often sourced from their own systems, while claims and health data is usually

obtained either from third party administrators (TPA) or in-house claims management systems and nowadays to a much lesser extent from wearable devices.

From a data perspective, using an in-house claims management has the benefit of keeping data intimately guarded within the realm of its owner which represents a major advantage in terms of confidentiality, data security, data intelligence and compliance with data location regulations.

On the other hand, relying on TPA services brings the advantages of high reporting capability, rich data capture applications complementing often limited legacy systems, and easy integration of the different data formats from various providers of the health services ecosystem.

Once data is captured, the main issues remain:

- The reliability of data
- The interpretation of data
- Making optimal use of the data available

### Challenges from the onset

Leveraging data in its most granular form for the benefit of the various players is often met with a challenge. The data owner, often the insurer has legitimate concerns spanning data security, confidentiality and proprietary advantage which cause a great reluctance to share granular health data with close partners such as reinsurers or others.

Even when data is indeed shared, the challenge of data cleansing, streamlining and aggregation is often the next hurdle. From one source to another, field separators differ, age indicators can be stored as either date of birth, age or closest age band limit, coding standard varies between ICD, CPT and in-house standards, etc. A careful integration is necessary to leverage the data reliably.

After data cleansing, comes the challenge of addressing potentially misleading representations where assumptions about the data shared or data definitions are not accurate. It

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therefore becomes essential to ensure all field definitions and calculation methods are well clarified before any attempt is made to analyse the data.

The issue of data integrity then surfaces, especially when medical claims data is shared by incumbent owners with their clients for the purpose of tendering their health insurance scheme. A practice which is often witnessed is the intentional inflation of claims data by various stakeholders in the chain (starting with direct brokers) to defend their business at renewal when tendered or offered in the market and to force competitors to quote higher premiums. While this approach might work at the beginning, we have noticed that it ends up backfiring with damaging effects for all. Indeed, as market players become aware of the manipulation practice, they end up quoting for new schemes very aggressively and often well below burning cost without much reliance on the manipulated claims data to acquire the business, after which they gather a more reliable claims experience at the cost of a significant first year loss which they can sometimes hardly recuperate next year.

These damaging practices can only be addressed with adequate and dedicated regulatory policies and controls and all players including incumbents will in the end benefit from the resulting discipline.

## A generally underused asset

The formidable information wealth available is often not fully used. If we take insurance companies for example, this varies widely between players depending on the company's maturity, data systems and resources devoted to analytics.

In cases where little data analysis is performed, lead reinsurers typically come to the rescue offering their tools and analytical reviews. Otherwise, most companies use their data to extract the basic indicators required to run their medical business such as loss ratio calculation, top provider utilisation, profitability analysis, incidence rates, frequency and severity, inflation and medical trends, earned exposures or IBNRs.

But whether performed internally

or with the help of reinsurers, using the power of granular data together with the capture and integration of consumer insights remains limited even though essential for many purposes not the least of which would be the development of new health products. Reinsurers here also have a key role in leveraging the market data they possess to guide product development but they should also be expected to provide consumer insights and market knowledge through independent studies they can perform and share with their ceding partners.

Other shortfalls often noticed are the use of a limited set of variables such as age, gender and nationality individually without considering the benefits of a multivariate approach, or the fact that data from various departments across the organisation (such as claims, call centre and accounting data) are rarely combined to derive intelligent learnings and strategies.

Data is also often underused in terms of cost control where stakeholders can detect the onset of negative health developments and preventively guide patients through a risk mitigation program or channel them to reliable but cost-efficient providers.

## Overcoming the hurdles

The practice of deliberately inflating claims referred to earlier can only be addressed through a thorough regulatory involvement. While some regulators have attempted to crack down on such practices by implementing strict reporting policies, limited success has been achieved mainly due to the lack of clearly defined reporting variables which allowed reporting entities to subjectively tweak definitions for the requested data based on their interests.

While the simplest way of addressing other challenges would consist of increasing investment in analytical human resources and leveraging appropriate IT systems, relying on reinsurer capabilities might compensate for the shortcomings facing some insurers and strict NDAs can address the data protection related concerns. But where reinsurers are unwilling as might often happen


to bear the administrative and cost burdens of associated with such support, securing the involvement of a professional reinsurance broker specialised in the health line can be a game changer, often bridging the gap between an insurer's need for flexibility, protection and growth on one hand and a reinsurer's transparency and profitability concerns.

## Unlocking value

The first gain from using granular data comes in the form of augmented accuracy and reliability. This gain can have wide ranging effects including calculations of IBNR, forecasting and trend analysis, early performance deviation detection, recovery and optimisation, inflation assumption development, as if scenarios for treaty structuring, seasonality modelling and more which are essential for correct decision making.

The second benefit from leveraging granular data is product design such as when assessing the impact of modifying benefits to an existing product or guiding new product development through a pricing toolbox.

The third area which can witness significant improvement by leveraging granular data is control, which when adequately performed allows optimisation of profit margins and customer satisfaction.

Overall, access to granular data is essential to understand the health business at hand and take the appropriate decisions to improve its performance. Given the size of medical portfolios, a slight percentage improvement in revenue and bottom line can have a very significant financial impact for a company. Insurers and reinsurers should invest resources to be able to leverage this wealth. Whenever this capability is not available internally, it is strongly recommended to capitalise on the bandwidth, experience and tools of a specialist reinsurance broker who can unlock the value hidden behind the data and provide the fuel for optimal decision-making. 

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