INFORMATION NOTE 013 - MEDICAL SCHEME BENEFITS COMPARISONS

Classification

An Information Note (IN) is an educational document that provides information on current or emerging practices in relation to a practice area. It is not intended to prescribe requirements or provide formal actuarial guidance. It serves to familiarise members with approaches that might be taken and to demonstrate how the actuarial profession might approach the topic. An Information Note does not impose any obligation on any member to promote or apply the practices described. It is not a definitive statement as to what constitutes generally accepted practice in the area under discussion and the language used is not directive. While this IN is not intended to prescribe or guide, members are reminded to also consider the requirements of APN901, which provides general guidance to ensure all actuarial services are performed with professionalism, relevance, and transparency.

Abstract

This information note provides information on principles of the actuarial code with respect to conducting exercises to compare benefits offered between different options of medical schemes.

Purpose

The purpose of this information note is to provide information on current or emerging practices in relation to benefit comparisons are performed by members of the Actuarial Society of South Africa.

Legislation or Authority

Actuarial Society of South Africa, Healthcare Committee
Financial Advisory and Intermediary Services Act 37 of 2002

Application

Members providing benefit comparisons to either medical scheme or corporate clients. A technical guide has been included as an Annexure.

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Status

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1. DEFINITIONS

1.1 The purpose of a medical scheme benefit comparison may be to advise a medical scheme on potential benefit changes or to advise a corporate client on the appropriateness of a particular medical scheme or benefit option for their employee group.

1.2 The South African health care environment is a dynamic one, subject to ongoing changes in legislation. Actuaries providing comparisons of medical scheme plans may consider latest information on the developments affecting these plans.

1.3 For the purposes of this information note, the term "member" includes student, technical, associate and fellow members of the Actuarial Society of South Africa.

2. SCOPE

2.1 This information note concentrates on benefit comparisons for the purpose of advising medical schemes or corporate clients. This information note is not intended to provide guidance on providing individual advice to medical scheme members, and the relevant sections of the Financial Advisory and Intermediary Services (FAIS) Act but rather to provide an approach on how the comparisons on benefit may be undertaken.

3. BENEFIT COMPARISON METHODOLOGIES

3.1 Benefit comparisons may be performed by comparing benefit limits, by calculating the proportion of claims paid or by some other measure of comparing benefit richness. The intention of this information note is not to prescribe the method by which benefit options can be compared, although it would be useful to describe the methodology used to the client when the comparison is performed.

3.2 In particular, the following items are examples of what may be disclosed:

3.2.1 The sources and level of information taken into account to perform the benefit comparisons, e.g. If benefit comparisons are based on actual member or claims data, then the member should be comfortable that the amount and credibility of data used is sufficient for the purposes of the comparison.

3.2.2 If benefit comparisons are based on actual member or claims data, then appropriate adjustment of the risk profile must be performed or such differences in risk profiles clearly outlined.

3.2.3 How efficiency discount options and their non-efficiency discount counterparts have been treated in the comparisons.

3.2.4 How provider networks more generally have been treated in the comparisons.

3.2.5 How medication lists and formularies are treated in the comparisons.

3.2.6 How treatment and managed care protocols are treated in the comparisons.

3.2.7 How information contained in benefit brochures, information from scheme rules, or actual claims data are treated.

3.3 Where the benefit comparison makes use of an analytical model to measure relative benefit richness, for example, then the model may be based on the reasonable representation of medical scheme benefit structures, as required by APN901. The model may consider including some of following aspects of the benefit structure:

3.3.1 Different benefit categories, e.g., in-hospital, out-of-hospital, day-to-day, and chronic benefits;

3.3.2 Claim limits for each benefit category as well as sub-limits within each category;

3.3.3 Differences in limits and thresholds e.g., a cancer limit of R 300 000 vs threshold of R 300 000 (above which 80% of claims still covered);

3.3.4 Deductibles and co-payments applicable to certain claims;

3.3.5 Reimbursement rates for in-hospital claims;

3.3.6 Provider network restrictions; and

3.3.7 Payment of Prescribed Minimum Benefit (PMB) claims.

The decision on whether all benefit structures should be applied in the richness calculation or only the significant ones would take into account the intention of the comparison. This may also be guided by the proportion of claims in the experience data that belong to each benefit category to which such limits apply.

3.4 The size and spread of a provider network put in place for members to gain full cover, and how this meets the needs of the corporate client's location(s).

3.5 The member may consider using empirical data in any the model and may consider the source, accuracy, and credibility thereof. Where the data has material inadequacies, these may be considered by the member and disclosed to the client if considered appropriate, else not presented.

3.6 The member may review results of the model for reasonability, through a comparison of the outputs with actual medical scheme benefit structures. If the model is stochastic in nature, the consistency of results may be verified through the production of enough simulations to demonstrate stability in the statistical distribution of outputs.

3.7 The member may consider the reasonability of the model in circumstances where:

3.7.1 A significant period of time has elapsed since the model was first developed;
3.7.2 The model was originally developed for purposes other than benefit comparison; or
3.7.3 Sufficient credible data from comprehensive benefit plans are not available; or
3.7.4 A significant change in medical scheme benefits has occurred since the model was last used.

4. ASSUMPTIONS

4.1 As required by APN901, any significant assumptions made in performing the benefit comparison, when disclosed will aid in the demonstration of a model. Such assumptions may include member demographics, member claiming patterns, or other member or medical scheme behaviour.

4.2 The member may need to apply reasonable judgement in setting assumptions, which may include:

4.2.1 The inflation of claim amounts, if data is used from a prior period, for the purpose of ensuring that claims data is consistent with limits on scheme options in Rand terms. The healthcare cost inflation used to adjust the data may reflect actual experience since the data was collected.

4.2.2 Allowance for the different age and risk profiles within a scheme as this impacts the nature and extent of benefits utilised by members of that scheme.

4.2.3 Consideration of benefit richness calculations under different benefit structures, including:

- Traditional options
- New generation type options
- Hybrid options
- Efficiency discounted options
- Options using provider networks
- Optional add on benefits.

4.2.4 The treatment of scheme protocols and procedures, including:

- Medication formularies
- Network arrangements (in and out of hospital)
- Referral and managed care protocols
- Co-payments and deductibles
- Prescribed minimum benefits.

5. VALUE COMPARISONS

5.1 Medical scheme value comparisons may be performed by comparing benefit richness model results to contribution levels. However, the methodology used should be disclosed to the client for which the comparison is performed.

5.2 The following additional aspects may be considered:

5.2.1 The contribution structures, such as income-based vs family size;

5.2.2 Consistency in the data used for benefit modelling and contribution calculations; and

5.2.3 The impact of short-term medical scheme under- or over-pricing, distorting the results.

6. REPORTING

6.1 Where benefit and/or value comparisons are included in reports, it would be considered reasonable to include an explanation of the assumptions and methodology used to compile the comparisons, as well as any limitations of the method of comparison used.

7. ADVICE

7.1 Members performing benefit and/or value comparisons should be cognisant of the requirements of the FAIS Act and perform their duties in line with the requirements of this Act if required. If the benefit comparisons performed are used for the purpose of advice, then the individual presenting the comparisons should be FAIS accredited and accredited by the Council for Medical Schemes.

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Technical Guide – Medical Scheme Benefits Comparisons

1. Introduction

The purpose of this document is to provide technical reference to members performing medical scheme benefit comparisons that involve the use of models to measure benefit richness using claims data. Benefit richness is generically described as the proportion of claims invoiced that is paid[1]. It outlines the various modelling considerations a member should bear in mind before using the results of a benefit richness model. Benefit richness is not the only way in which benefit comparisons can be made, and at best represents a comparison for an average population and not necessarily applicable to individual members.

This technical guide annexed to the information note is not prescriptive or mandatory in nature. Members may use alternative means of modelling benefit richness provided such an approach is fully disclosed and justified.

2. Description of the Model

Typically, a benefit richness model models the impact of different plans' benefit limits on a set of claims data. The claims data used reflects the invoiced amount before limits are applied. The modelled claims after benefit limits are typically expressed as a percentage of the invoiced claims, e.g., an 80% benefit rich plan reflects a plan with limits that result in 80% of all invoiced claims being paid. In some instances, claims may not be submitted at all, either due to benefit exclusions or when benefit limits have been exhausted, so caution should be exercised in interpreting claims data to assess claims not covered.

3. Data

Acceptable types of data

The benefit richness model is created to model the impact of the specific benefit and contribution structure of the medical scheme in question, then the following sources of information may be consulted:

i. Scheme marketing material
ii. Scheme contribution tables
iii. Registered Scheme Rules.

The following data may be considered and, where possible, should be representative of the audience of the investigation or the purpose of the model:

[1] The exact description should be disclosed, particularly whether savings claims are included.

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i. Claims invoiced data (before limits are applied) split by benefit category, such as:
    - In-hospital, out-of-hospital, chronic, threshold, ex-gratia, etc.
    - Discipline (GPs, specialists, radiology, pathology, medication, etc.)
    - Benefit type (risk, savings)
ii. Beneficiary exposure corresponding to the claims experience used, including details of:
    - Beneficiary age, type, gender, and chronic status
    - Family structure
    - Period of exposure
    - Level of medical cover

For the purpose of interpreting the results of the model in the context of a scheme's financial performance, the following financial metrics may also be considered:

i. Credit ratings
ii. Accumulated reserves
iii. Surplus or deficits arising in prior years
iv. Solvency levels

Claims data from comprehensive plans could be used. This is to ensure claims data is available for all possible benefit limits. Claims data in respect of plans that only cover low day to day benefits may be incomplete and biased since members may not have submitted invoices once benefits have run out.

Credibility: Acceptable volume of data

Any scheme claims data used may ideally be collected over at least one complete benefit year to reflect the impact of benefit limits and seasonal variation inherent in the claims pattern of medical schemes. Experience over multiple years may be used where suitable adjustments have been made for:

i. Healthcare cost inflation
ii. Changes in scheme benefit structure
iii. Changes in scheme membership size and demographic profile
iv. Outliers or anomalies in certain years

Consideration may also be given as to whether the volume of claims data is sufficient enough to permit credibility for each sub-grouping within the data (e.g., benefit category, discipline, etc.). Where data collected from a single scheme option is not credible, this may be supplemented with data from other options or schemes with careful adjustment.

Ideally, a large set of data from a number of comprehensive plans is used for the modelling.

Acceptable quality of data

The member may consider the quality of data used and make appropriate adjustments for:

i. The accuracy of the data including corrections for duplication, missing or anomalous values, and incorrect classification within the data.

ii. The time period over which claims data was collected and whether this gives a fair reflection of a scheme's claims profile.
iii. Consistency in the format of the data if this was collected over multiple periods, through different sources, or from different schemes.
iv. Relevance of data from one country to measuring benefit richness in another country.

Data Limitations

Where necessary, the member may recognise and disclose any limitations in the data whether related to accuracy, credibility, quality, relevance, or the data being outdated.

4. Assumptions

Due to the complex and diverse nature of benefit structures in the medical schemes industry, it may be necessary to make simplifying assumptions in the calculation of benefit richness. The member may apply reasonable judgement in setting such assumptions, which may include:

i. The inflation of claim amounts, if data is used from a prior period, for the purpose of ensuring that claims data is consistent with limits on scheme options in Rand terms. The healthcare cost inflation used to adjust the data should reflect actual experience since the data was collected.
ii. Allowance for the age and risk profile of a scheme as this impacts the nature and extent of benefits utilised by members of that scheme.
iii. Consideration of richness calculations under different benefit structures, including:
    - Traditional options
    - New generation type options
    - Hybrid options
    - Efficiency discounted options
    - Options using provider networks
    - Optional add on benefits
iv. The treatment of scheme protocols and procedures, including:
    - Medication formularies

- Network arrangements (in and out of hospital)
- Referral protocols
- Co-payments and deductibles and application of managed care protocols

Often benefit richness models assume compliance with formularies, networks and protocols. This approach, or any other, should be disclosed.

5. Modelling

Appropriate consideration may be given to selecting the method of calculating benefit richness. The chosen methodology may be guided by the following principles:

i. The modelling approach may be chosen with the available data in mind and whether this enables the member to build the desired model.
ii. A consistent measure of richness may be applied across different schemes and benefit options to enable a like-for-like comparison.
iii. Similarly, a consistent calculation method may be applied across schemes and benefit options.
iv. If richness is calculated analytically, sensitivity tests should be conducted to demonstrate the reasonability of response in outputs to a change in the model parameters.
v. Where richness is calculated stochastically, a sufficient number of simulations may be conducted to demonstrate stability in the statistical distribution of the results.
vi. Appropriate allowance may be made for the fact that PMBs are covered in full and at cost regardless of the scheme option or benefit limits.
vii. An appropriate allowance may be made for scheme options that provide treatment through Designated Service Providers (DSPs) including consideration for the extent of such networks.

The following are possible methodologies that may be adopted in the comparison of benefit richness:

i. A generalised linear model employing key benefit design features as predictor variables, with richness as the response variable.
ii. A stochastic simulation of claims combined with the application of benefit limits to determine the richness under a given benefit structure.
iii. A detailed line-by-line comparison of benefit structures across scheme options to identify gaps in benefit offerings.
iv. Develop a distribution of claims amounts by benefit limit.
v. Modelling the impact of each benefit limit on claimed invoice amounts.

The preferred method, given today's computing power, is to apply method (v) above.

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6. Limitations

In calculating richness, appropriate allowance may be made for benefit limitations on different scheme options, whether defined as monetary amounts or in terms of claim frequency. Where such limits vary by benefit category, discipline, family size, or annual cycles such limits should be allowed for appropriately. The application of such limits should not apply to PMBs as these are payable in full.

The following are examples of benefits limitations that a model should take into account:

- Hospital reimbursement rates
- Overall benefit limits
- Category specific sub-limits
- Co-payments
- Deductibles

The member may apply reasonable judgement in deciding whether all benefit limits should be applied in the richness calculation or only the significant ones. This may also be guided by the proportion of claims in the experience data that belong to each benefit category to which such limits apply.

7. Interpretation of Results

The member may take reasonable steps to ensure that the model provides a realistic measure of richness and assess the reasonability of results by considering:

i. The richness measure relative to contributions charged on a scheme option
ii. The richness measure relative to the extent of benefit limits on a scheme option
iii. Reasonability of changes in the richness measure over time
iv. Reasonability across scheme options
v. The level of checking and audit performed on the calculations.

Any interpretation of the results may take into account that the richness is applied in aggregate and does not necessarily apply to individuals. For individuals, their experience of benefits will depend on factors such as whether they are hospitalised, are being treated for a chronic condition, require glasses or auxiliary services, etc.

8. Providing Advice

The benefit comparison assessment should be presented with due consideration to the audience (experience and knowledge of the industry). The member should highlight the limitations of the review as well as any assumptions made and the impact thereof. Members should be cognisant of the requirements of the FAIS Act and perform their duties in line with the requirements of this Act.