



Actuaries Summit

Time to Act

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**Actuaries
Institute**

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Navigating Life Underwriting

LIWMPC Data and Underwriting Working Group

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Overview

- 1 Current landscape & requirements (**Colin Yellowlees**)
- 2 Industry individual life insurance product terms and exclusions (**Adrian Mak**)
- 3 Useful sources of relevant data (**Kajal Pandya**)
- 4 How do insurers currently classify, manage and utilise data? (**Elizabeth Baker**)
- 5 Next steps for actuaries (**Elizabeth Baker**)

1. Current landscape and requirements relating to discrimination in insurance

Regulatory and community scrutiny of the industry

The practices of the insurance industry have been in the spotlight

Ombudsman slams 'discriminatory' mental health exclusions

12 September 2016

Source: insurancenews.com.au

Royal Commission

into Misconduct in the Banking, Superannuation
and Financial Services Industry

Banking royal commission: Insurers might be breaking anti- discrimination laws

Source: www.afr.com.au



Our work to stop discrimination by insurance providers

Evidence suggests that people with a history of a **mental health** condition can experience difficulties obtaining insurance. Discriminatory practices include either refusal of insurance or denial of claims on the grounds of non-disclosure of a previous mental health condition.



Parliamentary Joint Committee
on Corporations and Financial Services

Life Insurance Industry

Disability Discrimination Act - 2 Limbs

The 'data limb' must be considered before the 'no data limb'. If relevant data is available or reasonably obtainable, an insurer cannot ignore it.

Generally it is illegal to discriminate on the basis of disability when providing any form of insurance, whether by refusing cover or by the terms and conditions applied,

UNLESS:

1

The Data Limb

The discrimination is based upon actuarial or statistical **data on which it is reasonable to rely**, and the discrimination is reasonable having regard to the matter of the data and **other relevant factors** (S46(1)(f) and 2(f))

2

The No Data Limb

Where no such actuarial or statistical data is available and cannot reasonably be obtained, the discrimination is reasonable having regard to any **other relevant factors** (S46(1)(g) and (2)(g))

Detail from the AHRC 2016 guidelines (1/2)

What data is considered reasonable to be relied upon? What are the “other relevant factors”?

What data is considered to be **reasonable** to be relied upon?



(1. The Data limb)

- **Complete** and **up to date underwriting manuals**
- **Local data** such as relevant domestic population or insurance studies
- Relevant **international** population or medical studies
- The **claims experience** of the insurer or other insurance companies which is **up to date, directly applicable to the particular situation and of a sufficient sample size.**

What are the “**other relevant factors**”?



(2. The No data limb)

- **Medical opinions**
- **Relevant information** about the particular individual seeking insurance such as **type of disability**, the **functional impact of the disability**, **treatment plans**; and **Employment records**
- Opinions from other professional groups
- Actuarial advice or opinion
- **Practice** of others in the **insurance industry**; and
- **Commercial judgement**

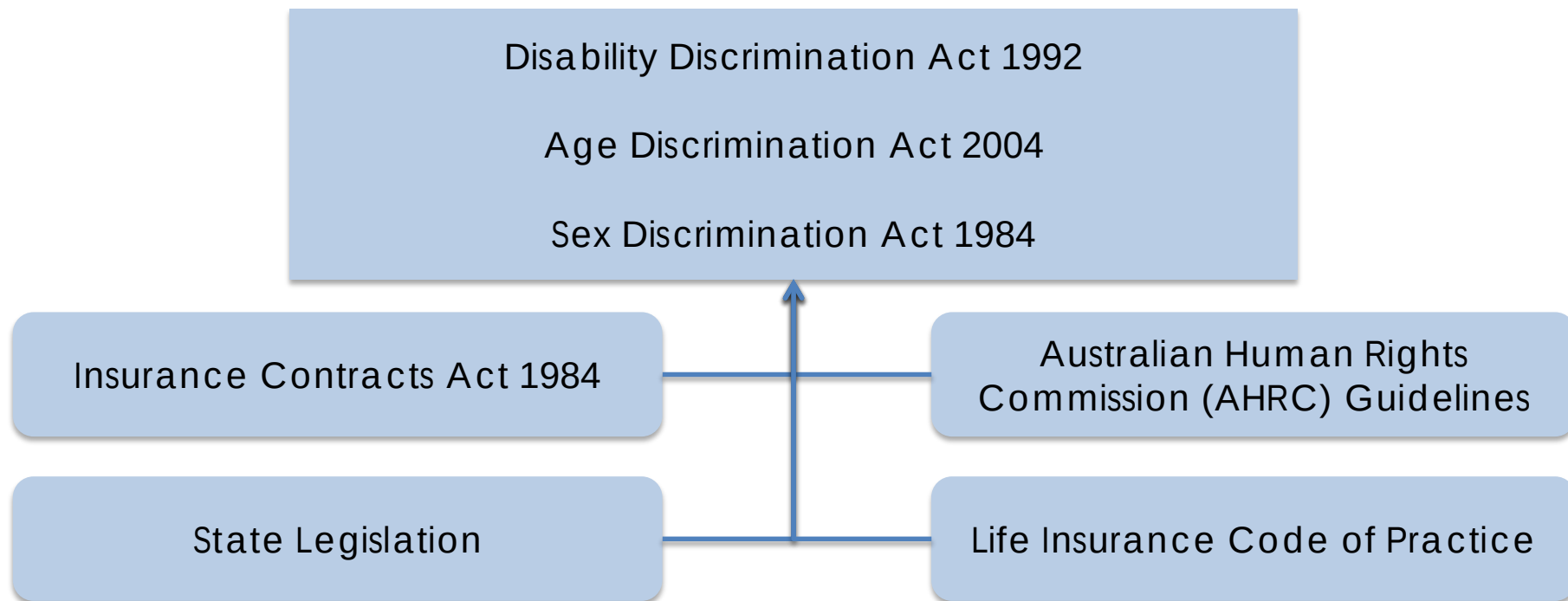
Detail from the AHRC 2016 guidelines (2/2)

What matters can be taken into account in determining whether discrimination is “reasonable”?

- **Practical and business considerations**
- Whether **less discriminatory options** were available?
- The **individual’s particular circumstances**;
- All other relevant factors of the **particular case**; and
- **The objectives of the DDA, especially the object of eliminating disability discrimination as far as possible**

Regulatory requirements and laws

Regulatory requirements and laws relating to discrimination in insurance have been in place for a significant period of time



Life Insurance Code of Practice

The Life Insurance Code of Practice contains requirements for life insurers to comply with the requirements of anti-discrimination law.

- **Section 5:17** “ *Our decision on applications for insurance will comply with the requirements of anti-discrimination law. Our decisions will be evidence-based, involving relevant sources of information where this is available, and having regard to any other relevant factors where no data is available and cannot reasonably be obtained. We will regularly review our underwriting decision-making processes to ensure we are not relying on out-of-date or irrelevant sources of information.*”
- **Section 8:19** Reasons for denied claims will be explained in writing
- **Sections 5 (When you buy insurance) and 8 (When you make a claim)** of the Code specify timeframes for insurers to respond to requests for information on underwriting and claims.

One of the recommendations of the Final Services Royal Commission was that Codes of Practice should have enforceable provisions. It is likely that these enforceable provisions would cover the underwriting and claims for the Life Code.

The 'Ingram' travel insurance case – 2015

The (Ella) Ingram vs QBE decision in 2015, was a key landmark case which attracted scrutiny to insurance industry practices around discrimination. The claim related to a first presentation (i.e. first time incidence) mental illness claim for cancelled travel under a 'blanket' mental health exclusion.

Some of the key points in the decision were that:

- 'QBE clearly failed to meet its obligations under discrimination laws. There was **no evidence that it considered any statistics, actuarial data or expert medical information** about the risks presented by different types of mental illnesses when it created this travel insurance policy and decided to exclude all claims made because of a mental illness.'
- 'Ella's win confirms that compliance with discrimination laws is not optional and that **insurers need to base their decisions on evidence, not stereotypes and assumptions, when they reject a claim or cover** because of a mental illness.'
- The tribunal found that QBE's **exclusion of all claims made because of a mental illness, regardless of the type, severity or circumstances of the illness, was not reasonable**. It also rejected QBE's claim that it would suffer an unjustifiable hardship if it removed the general exclusion clause from the travel insurance policy.
- The tribunal found **documentation** must be **available at time that the policy was provided to the customer**.

This case and its findings are equally relevant for life insurance as for travel insurance

What practices do the AHRC guidelines suggest may be unlawful?

The AHRC released guidelines in 2016 to aid the interpretation of the DDA 1992 (Cth). These guidelines include examples of what is considered to be unlawful.

It is considered **unlawful** under the DDA 1992 (Cth) to:

- a) Refuse to insure a person with a disability simply **because the provider does not have any data** if it would otherwise be reasonable to provide insurance having regard to other relevant factors;
- b) Refuse to insure a person with a disability merely **because of historical practice**;
- c) Base decisions about insurance or superannuation on **inaccurate assumptions or stereotypes** of people with disability;
- d) **Impute a disability merely from the fact that a person has consulted with a medical practitioner**;
- e) Impute a disability merely from the fact that a person has **failed to disclose** to an insurer that **they consulted** with a **medical practitioner**; and
- f) Impute a disability from information disclosed by a person if the person has not disclosed that they have a disability and the imputation is not supported by medical opinion.

5 key take-outs for actuaries

Actuaries need to be aware of what is required, maintain their knowledge and keep up to date.

- 1** Insurers **need to**
 - Maintain product terms and conditions, loadings and exclusions; **and**
 - Base any underwriting and claims decisions **on****Relevant evidence and data specific to the product term/exclusion/reason for underwriting loading or decline**
- 2** There should be **evidence** that it was relied upon **at the time of the product issue as well as the time of underwriting decision**
- 3** The data used should be **up to date** and **trends in and sources of new available data** should be considered
- 4** **Documentation** of the data relied upon and the **reasoning for its relevance** are important
- 5** Recommendations from industry reviews may mean that **evidence** and **data** may need to be **produced upon request** from the individual customer

2. Life insurance individual products in the market

Life insurance individual products in the market

In looking at this topic, our working group conducted a market scan of available products of

- **Individual Retail life insurance**
- **Direct life insurance**

We looked at **on-sale**

- **Lump sum products** (Death & Terminal Illness, TPD and Trauma); **and**
- **Income protection products**

Market Scan



- Our market scan of available on sale life insurance products finds that there is a lot of similarity in product terms and conditions and exclusions.
- There are a large number of conditions covered, in particular for Trauma cover
- There are a range of exclusions including for **self harm, pre-existing conditions, conditions linked to alcohol and drug use** and **some mental health conditions**.

The need for relevant data to support product terms and conditions and exclusions is an industry wide theme.

Common conditions covered in trauma products

We observed from our market scan that trauma conditions covered are similar across the industry. It is estimated that 4 conditions represent 70 to 90% of the trauma claims.

Conditions covered	% Claims	Conditions covered	% Claims
Alzheimer's disease	<0.5%	Head trauma	<0.1%
Angioplasty	2%	Heart attack	15%
Aortic surgery	<0.1%	Open heart surgery	2%
Aplastic anaemia	<0.1%	Heart valve surgery	0.50%
Meningitis	<0.1%	Hepatitis	<0.1%
Benign brain tumour	2%	HIV medically acquired	<0.1%
Benign spinal tumour	<0.1%	HIV occupationally acquired	<0.1%
Blindness	<0.1%	Intensive care	<0.1%
Severe burns	<0.1%	Loss of independent existence	<0.1%
Cancer	45-65%	Loss of limbs	<0.1%
Carcinoma in Situ	0.50%	Loss of speech	<0.1%
Cardiac arrest (out of hospital)	2%	Organ transplant	<0.5%
Cardiomyopathy	<0.1%	Motor neurone disease	0.50%
Kidney failure	0.50%	Multiple sclerosis	5%
Liver failure	<0.5%	Muscular dystrophy	<0.1%
Lung failure	<0.5%	Osteoporosis	<0.1%
Cognitive impairment	<0.1%	Parkinson's disease	<0.5%
Coma	0.50%	Pneumectomy	<0.1%
Coronary artery bypass surgery	2%	Primary pulmonary hypertension	<0.1%
Creutzfeldt-Jakob disease	<0.1%	Rheumatoid arthritis (severe)	<0.1%
Deafness	<0.1%	Coronary Artery Disease	0.50%
Dementia	<0.1%	Stroke	5%
Severe diabetes	<0.1%	Systemic sclerosis	<0.1%
Paralysis	<0.1%	Terminal illness	<0.1%
Encephalitis	<0.1%		

Key observations

1. Based on our market scan of trauma products, we observed that a similar range of trauma conditions are covered under individual products.
2. 70-90% of all trauma claims are covered by four conditions (Cancer, Heart Attack, Multiple Sclerosis and Stroke)
3. However, data is needed to support **all** the conditions covered, including the estimated impact on the pricing if some conditions were excluded.

Common medical conditions excluded in individual life insurance

We observed from our market scan that there are a number of examples of similar types of conditions excluded in individual life insurance products across the industry

Examples of excluded conditions based on the market scan

Self Harm (TPD)

Pre-Existing Symptoms

Pre-Existing Diagnosed Condition

Self Harm (Trauma)

HIV (Occupationally Acquired) (If Cure available at time of infection)

HIV (Medically Acquired) (If Cure available at time of infection)

Hepatitis B or C (If Cure available at time of infection)

Fibromyalgia

Stress

Anxiety, Depression, Fatigue, Psychosis

Mental Health (due to alcohol or drug use)

Cancers (those classified as **low malignancy**)

Major Organ Transplant (other than the kidney, heart, lung, liver, pancreas or small bowel)

Parkinson's Disease (other than the degenerative idiopathic Parkinson's disease)

Intensive Care (Due to alcohol or drug use)

Pulmonary Hypertension (due to chronic lung disease)

Coma (due to alcohol or drug use)

Key observations

1. Our market scan showed a similar range of exclusions apply in the industry. These include exclusions for Self-Harm, due to alcohol and drug use, pre existing conditions and in some cases mental health conditions.
2. Discrimination law requires that we have the actuarial or statistical data or other relevant evidence to support the application of these exclusions.
3. Commercial financial viability has not generally been accepted as a reason for an exclusion in the absence of data.

Source: Working group analysis of individual Retail and Direct Life products

3. Some useful sources of relevant data

Useful sources of relevant data (1/2)

A key challenge is in understanding which internal and external sources of data may be relevant for an organization.



Useful sources of relevant data (2/2)

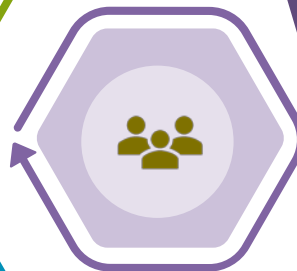
A key challenge is in understanding which internal and external sources of data may be relevant for an organization.

LOCAL PUBLIC DATA

1. Data from **Australian Bureau of Statistics** and other Government Studies (adapted for the insured population)
 - Cause of Death & workplace injury data
 - Key risk factors data such as Obesity, Smoking, Diabetes, alcohol etc.
2. Australian Institute of Health and Welfare

INTERNATIONAL DATA

1. Data from relevant international population or medical studies if Australian data is unavailable



SPECIALIST ORGANIZATION STUDIES

1. Studies published by non-government specialist organizations for specific conditions and prevention of these e.g. Heart Foundation, Cancer Council, Beyond Blue etc.

4. How life insurers currently classify, manage and utilise data for individual business

Life insurance industry survey results

- An insurers' own data can be a key relevant source of data under the data limb.
- In looking at this topic, our working group conducted a survey of a number of life insurance companies on their underwriting, administration and claims data approaches. We looked at

Individual Retail life insurance

Direct life insurance

- We have included a selection of the question responses and comments in the following slides.

Survey results showed



- Consistency of responses and themes identified across the life insurers
- Legacy systems and data and paper based files represent challenges.
- Consistency of customer mapping across multiple systems will enable easier data analysis and insights for the portfolio from a single data repository.

All the insurers that responded would like to enhance their data capture processes.

Sample questions & responses from the industry survey

There was consistency of responses from the insurers that answered our survey

Example Question	Response				
	Insurer 1	Insurer 2	Insurer 3	Insurer 4	Insurer 5
Medical conditions in underwriting are recorded using ICD10 references (or similar)	✗	✗	✗	✓	✗
Medical conditions in claims recorded using ICD10 references (or similar)	✓	✓	✓	✓	✗
Medical conditions disclosed in underwriting recorded in the admin system	✗	✓	✗	✓	✓
Cause of claims are recorded in the admin system	No response	✗	✓	✗	✗
Electronic underwriting is used in the organisation	✓	✓	✓	✓	✓

Source: Analysis of Working Group survey responses (May 2019)

Sample questions & responses from the industry survey

There was also consistency of themes identified in the responses by our survey respondents

Survey Question

What is the one thing that you would like to improve about your **underwriting**?

Consistency of underwriting, policy admin and claims data. Real time linkage.



Responses

- **Linkage** between underwriting and claims to allow feedback to product and pricing
- Access to **real time, digital and structured data** to enable more accurate pricing and more consistent underwriting assessments
- **Consistency** of categorisation across underwriting and claims
- **Improved linkage** with other data such as claims and lapses

What is the one thing that you would like to improve about your **claims management**?

Limitations of legacy data, data repository, secondary cause data



- Improved **automation and integration between the policy system and claims system**
- Limitations of **legacy** and **in-force data**
- More accurate and granular view of **claims cause (secondary claim cause, comorbidity)**
- **Storage** - all information stored in one place, one system
- **Accessibility** - easy to retrieve and quick response times

What is the one thing that you would like to improve about your **experience investigations**?

Data quality, single data repository, removal of paper applications



- Continued improvement to **data quality** and **granularity** of analysis and assumption setting
- **Data quality** - ability to **join in external data** where relevant
- **Removal of paper applications** would allow for full linkage between policy data and the Underwriting Rules Engine
- **Single repository of medical data** with same categorisation linking multiple data sources through a single life identifier

Key themes from our life company industry survey

Life insurers agreed that accessibility and consistency of data at a portfolio level are the key areas where they would like improvement.

- **Relevant data** is available through **multiple systems and sources** (underwriting, claims, admin etc.) but there **may be no central “source of consistent truth”** that allows systematic analysis .
 - In some instances, there are no unique keys to join customer information from the different sources together
- **Inconsistency** in medical classifications **between the underwriting and claims functions**
 - **ICD classifications** are often used for claims but not necessarily in underwriting
- **Electronic underwriting** and **new claims systems** have improved consistent classifications (e.g. through drop-down boxes) but there are still limitations in accessing data from paper files and legacy systems.
- There are areas where useful information may not have been fully captured in a readily accessible format at a portfolio level
 - **Underwriting:** Capturing and using medical conditions which result in loadings, exclusions and declinature of cover
 - **Claims:** Capturing and using information on secondary cause of claim (comorbidity)

NZ Society of Actuaries Professional Standard No. 92

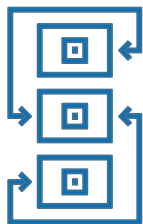
NZ have introduced an actuarial professional standard in a similar area (Provision of Advice under the Human Rights Act 1993). It applies from 1 April 2019 . Some of the considerations may be useful for Australian actuaries.

Section 6 of Professional Standard No 92. sets out ‘ Overview of Exceptions based on data’.

- 6.4 “Justification must comprise both **quantitative and qualitative aspects**.
- 6.5 “ ... The use of generic data will be reasonable but an effort should be made to **tailor decisions** to individual cases and circumstances....
- 6.6. “The Member must be aware, **particularly in the case of disability**, that **not only is experience in certain areas rapidly changing** but that **local data collection and analysis is increasing both in quality and quantity**. In any particular case the Member can be expected to justify why available local statistics were or were not taken into account.
- 6.7 “The Member must have regard to the **credibility of the data being used** both in a **statistical and qualitative** sense. In particular, the Member must be able to **quote the source of the data or table** and have appropriate regard to:
 - The **composition of the group** giving rise to the data
 - The **period** to which the data relates
 - Any **qualifications** on the collection or analysis of the data
 - The **size of the data sample**
 - The **construction methods** employed **in deriving smoothed rates** from data
 - Any **projections** used in the table construction

Opportunities and challenges for actuaries in this area

There is relevant data available to insurers from various sources. Capturing and organizing the data in a usable and relevant format for the portfolio may present a challenge that needs to be overcome.



There is **opportunity** for insurers to tap into an abundance of data to support their product terms and conditions, pricing, underwriting and claims decisions.

A **challenge** is in accessibility and level of effort required to clean and analyse the data for it to be relevant and consistent.



There is an **opportunity** to obtain an end-to-end view of life insurance risks by introducing consistent classifications for claims and underwriting and in the policy administration systems.

A **challenge** is to “stitch” together information from the various sources of together. This may be an intensive exercise requiring buy-in from areas across the organisation. Efforts to implement a **single customer classification** across systems will be worthwhile.



Understanding **claims** by **secondary cause** as well having information on **declined lives** is an **opportunity** to see the full picture of insurance risks and allow for more granular actuarial experience investigations.

A **challenge** is to have in place policies and processes in place to record, store, access and use this information in a systematic and meaningful way.

5. Next steps for actuaries

Time to Act

There is opportunity for actuaries and insurers to access large quantities of relevant data. A challenge is to collate the information and use it in a meaningful and relevant way to meet the requirements.



Understand and be aware of

- What is required and expected of insurers – e.g. DDA and AHRC guidelines etc.
- Your company's practices and procedures in respect of relevant insurance risk data and the products and customers that your company has.
- What relevant data you have available to access and how to access and maintain it



Invest time and resources

- **Resources** into improving data quality and accessibility of data and its organisation. Data needs to be available at time of decision making.
- **Time** into ensuring that data, policies and processes are **maintained** and **documented**.



Monitor and keep up to date with

- Regulatory environment – Royal Commission recommendations, PJC, Life Code of Practice
- Industry practice here and overseas – industry better practices, Institute working groups, Insights sessions, NZ Professional Standard etc.
- Trends in certain conditions and new data sources available

Some product terms and conditions may need to be reviewed and refined

Question and Answer session

Want to know more?

Useful references

- <https://www.legalaid.vic.gov.au/about-us/news/ella-ingram-wins-discrimination-case-against-insurance-giant>
- <https://www.legislation.gov.au/Details/C2018C00125>
- https://www.humanrights.gov.au/sites/default/files/AHRC_DDA_Guidelines_Insurance_Superannuation2016.pdf
- <https://fsc.org.au/policy/life-insurance/code-of-practice/>
- <https://www.piac.asn.au/projects/discrimination/>
- **Mental Health – a case study with lessons for travel insurance (Bill Konstantinidis, Michael Storozhov) – Actuaries Institute General Insurance Seminar (12-13 November 2018)**
- https://actuaries.org.nz/wp-content/uploads/2019/02/PS92-Human-Rights-Act_Feb-2019-FINAL-1.pdf
- <https://www.apra.gov.au/media-centre/media-releases/apra-and-asic-release-new-life-claims-data>
- <https://www.abs.gov.au/Health-Conditions-and-Risk-Factors>
- <https://www.beyondblue.org.au/?&scp=true>
- <https://www.heartfoundation.org.au/>
- <https://www.cancer.org.au/about-cancer/what-is-cancer/facts-and-figures.html>

Participate in our working group – Contact us

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