



Collection and Processing of Personal Data in Insurance: New Practices & Challenges

Dr. Aysegul Bugra

Director, NASAMER

AIDA Presidential Council Member

Assistant Professor, Koç University

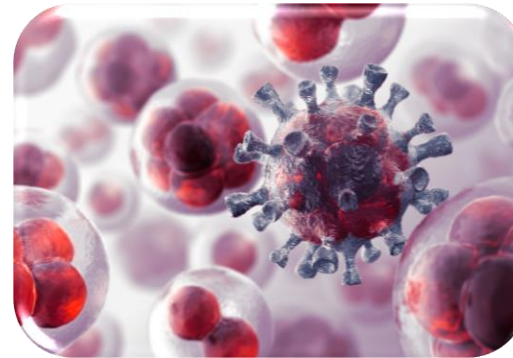
INTRODUCTION



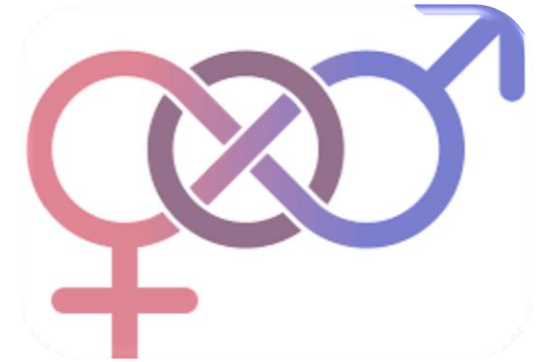
Data collected
through
wearables and
interactive life
insurance



Data collected
through online
media and
relevant
challenges



Use of genetic
data in health &
life insurance



Use of gender as
a risk factor in
motor vehicle
insurance

TRADITIONAL VS NEW DATA SOURCES

Traditional data sources	New data sources enabled by digitisation
Medical data (e.g. medical history, medical condition, condition of family members)	IoT data (e.g. driving behaviour (car telematics), physical activity and medical condition (wearables)).
Demographic data (e.g. age, gender, civil and family status, profession, address)	Online media data (e.g. web searches, online purchases, social media activities, job career information)
Behavioural data (except IoT data) (e.g. Smoking, drinking behaviour, distance driven in a year)	Geocoding data (i.e. latitude and longitude coordinates of a physical address)
Population data (e.g. mortality rates, morbidity rates, car accidents)	Genetics data (e.g. results of predictive analysis of a person's genes and chromosomes)

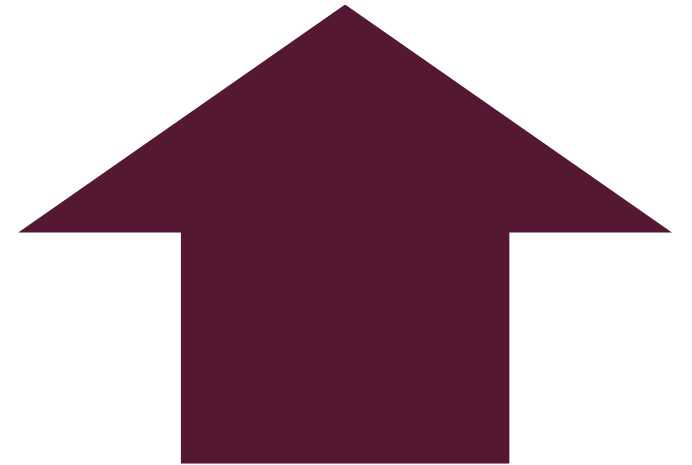
Source: The Geneva Association (the categorisation of types of data was slightly amended by EIOPA) – published in the EIOPA Report in May 2019

HOW TO STRIKE THE BALANCE?



Insurer's right of
access to
information for
accurately assessing
the risk

- Individual's right of
access to insurance
- Right not to know



INTERACTIVE LIFE INSURANCE

**A leading life insurer in NZ will begin to offer
'Interactive Life Insurance' as from
June 2019**



INTERACTIVE LIFE INSURANCE

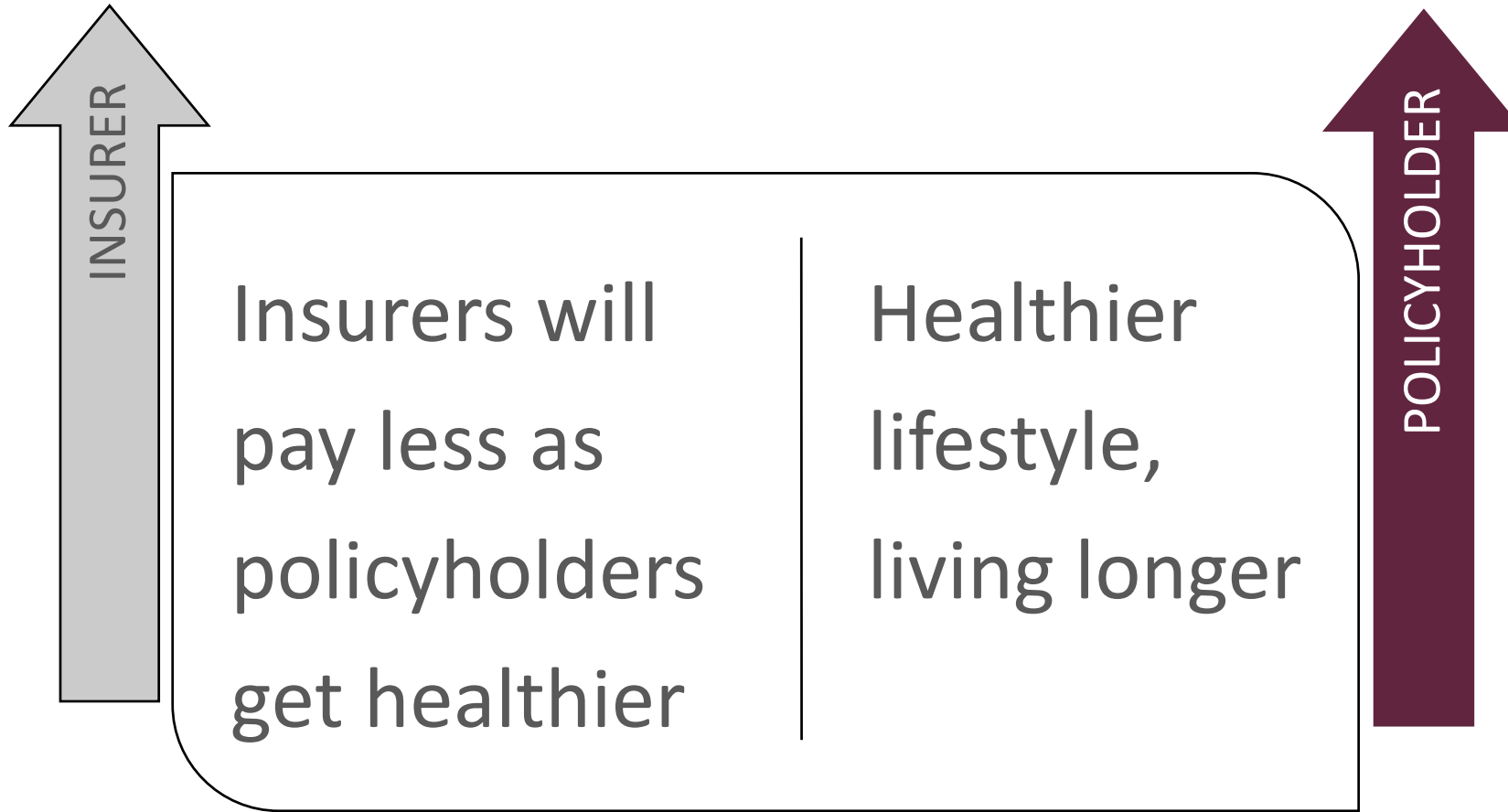
- ‘Health plan’ offered to policyholders with targets to be met for a **healthier life**

Apple Watch operating
as an electrocardiogram



- Amazon & wearable device & hotel **discounts**
AND
LOW PREMIUMS

INTERACTIVE LIFE INSURANCE



INTERACTIVE LIFE INSURANCE

Facts	Remarks
Access to the programme is voluntary	Those who are not in the programme may be unduly prejudiced because their premiums will be higher than those who are
Policyholders constantly hand over personal health-related data	<ul style="list-style-type: none">• Collection for a «lawful purpose»• Consent – informed and freely given
Premium discount where policyholders meet the targets	Reduction of risk
Non-compliance with the targets set?	<ul style="list-style-type: none">• Aggravation of risk? → Higher premiums• Creation of a pool of uninsurable people (those consistently not reaching the targets)

INTERACTIVE LIFE INSURANCE

Privacy Act 1993 - Privacy Bill	General Data Protection Regulation (in force as of May 2019)	CoE Recommendation on the Processing of Health-Related Data for Insurance Purposes
Collection directly from the data subject For a 'lawful purpose'	Rigorous concept of 'consent': freely given , specific, explicit, informed and unambiguous	Health-related personal data should not be processed for insurance purposes without the insured person's ' free , express and informed , written consent.'

INTERACTIVE LIFE INSURANCE

«Would you be willing to have your life insurance premiums fluctuate based on the results of your yearly physical activity?»

- Yes: 22.7%
- No: 77.3%

«Would you be willing to wear a fitness tracker and submit reports to insurance companies if it means potentially receiving a better premium?»

- Yes: 40.7%
- No: 59.3%

«If you had to choose one, what background information source would you be most comfortable sharing with insurance companies?»

- Financial history: 33.4%
- Medical history: 27.6%
- DNA/genetic testing: 7.3%
- Fitness/health testing: 31.8%

INTERACTIVE LIFE INSURANCE

- Millennials and Gen Z respondents seemed to be the most receptive to the idea of integrating technology and insurance to receive a more balanced assessment of their overall risk.
- They are also the market who are the least likely to purchase life insurance in general.

PROCESSING OF ONLINE MEDIA DATA



Chief Executive of the Insurance Council New Zealand:

«The gathering of data across a wide range of technologies - from phones to GPS, fitbits and Google searches meant there was a higher potential for insurance to be more personalised in the future.»

- https://www.nzherald.co.nz/personal-finance/news/article.cfm?c_id=12&objectid=11714793, 2 October 2016

PROCESSING OF ONLINE MEDIA DATA

- **Rough areas:** difficulty in reaching recommended 10,000 steps a day.

Data on where you live and geographical profiling



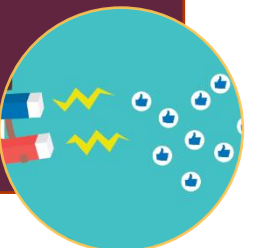
- **Information about lifestyle** (e.g. alcohol consumption)

Lifestyle profiling



- They may be **inaccurate** but will be considered as relevant information

Things you post to attract 'likes'



PROCESSING OF ONLINE MEDIA DATA

- Risk assessment
- Detecting fraud
- **Privacy Act 1993 & Health Information Privacy Code 1994**

If the insurers have reasonable grounds to believe that the information is publicly available, they will not need to collect the information directly from the insured
(s 6 Principle 2(2)(a); cl. 5 Rule 2(2)(f) respectively)



PROCESSING OF ONLINE MEDIA DATA

Unreliability of the information posted

- Disclosure on social media



- Disclosure prior to an insurance contract

Mere 'correlation' between...

- Risk factors, and
- Policyholder's behaviour

sufficient?

Indirect discrimination?

- Discrimination not on the basis of protected areas (race, ethnic origin etc.)
- But on the basis of proxies (ZIP code)

Challenges	Possible remedies
Unreliability of information posted on social media	CoE Recommendation on the Processing of Health-Related Data for Insurance Purposes, Principle 7: processing of information found in public domain or social media NOT permitted
Insufficiency of correlation-based risk assessment	Introduction of the requirement of causation? <i>Test Achats v Conseil des ministres (2011) C-236/09 CJEU</i>
Indirect discrimination?	Can indirect discrimination be justified where risk assessment is based not only on correlation, but also on causation?



PROCESSING OF GENETIC DATA

«New Zealand Financial Services Council chief executive said [...] his organisation had established a life insurance committee focused on specific issues in insurance. Genetic testing and the effects of that in New Zealand was an issue that would be discussed. "It's not a big issue right now, right here but that's not to say it's not going to be.»»

<https://www.goodreturns.co.nz/article/976514818/insurers-tackle-genetic-testing.html>, 9 May 2019



PROCESSING OF GENETIC DATA

Whether insurers can
request applicants to
take predictive genetic
tests

Whether applicants /
policyholders would need to
disclose predictive genetic
test results to insurers



GENETIC TESTS

Diagnostic Tests

- Taken to confirm a diagnosis based on existing symptoms
- Not available for all genes & genetic conditions

Predictive Tests

- Taken to detect faulty gene patterns
- Taken for neuromuscular, cardiac, neurological conditions

NON-EXHAUSTIVE LIST OF GENETIC DISEASES

Heart
disease

Diabetes

Huntington

Prostate
cancer

Breast
cancer

Mental
illness



Applicant

Has a family history of
coronary heart disease

Insurer

- Provides cover for life,
health etc.

- If the Applicant carries
the same risk as the
family member

→ **Affects Insurer's risk
assessment**

CONTROVERSIAL ISSUES

Before the insurance contract is concluded

Can the Insurer ask the Applicant to take a predictive genetic test?

If the Applicant has predictive genetic test results, would they need to be disclosed?

Can the Insurer refuse cover where the Applicant has a serious genetic disease?

After the insurance contract is concluded

Can the Insurer ask the Policyholder to take a predictive genetic test?

If the Policyholder takes a predictive genetic test and finds out a genetic disease,

- Would this constitute aggravation of the risk insured?
- Would the Policyholder have to disclose this information?

Will the Insurer pay, if the Policyholder's loss results from a genetic disease?

WHERE TO LOOK FOR ANSWERS

Rules on Insurance Contract Law

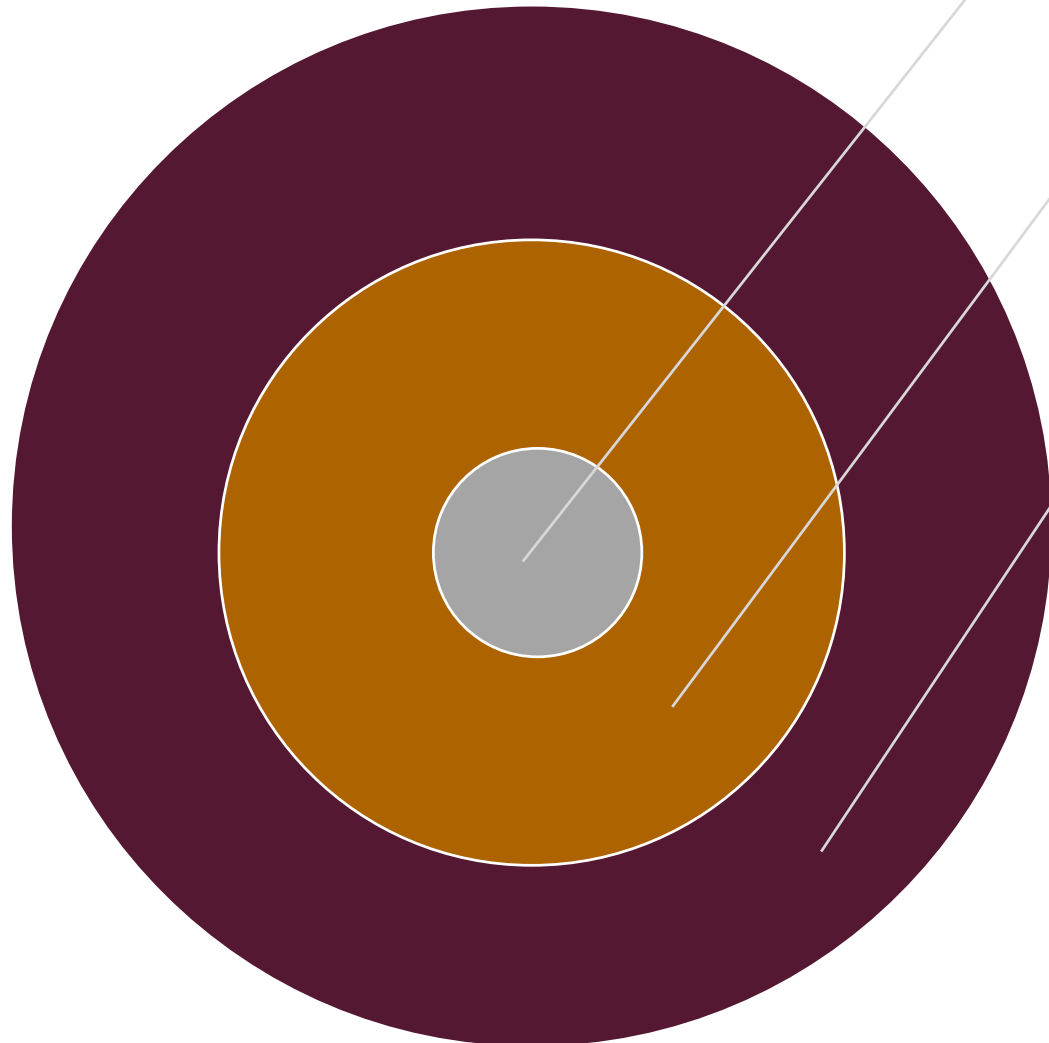
- Rules on pre-contractual disclosure / representation
- Rules on aggravation of risk – notification of aggravation

Rules on Data Protection & Privacy

- Whether/how genetic information can be collected & processed by insurers
- Requesting predictive tests: breach of the right to privacy?

Rules on Discrimination

- Refusing cover if the risk is too high: Discrimination? Freedom of contract?



Soft Law

- Standard-setting Recommendations
- Instruments Applicable through Incorporation into Insurance Contracts
- Codes of Practice

Domestic Legislative Instruments

Conventions / Treaties

EXAMPLES OF INSTRUMENTS DISALLOWING GENETIC TESTING FOR UNDERWRITING PURPOSES

New Zealand Human Rights Commission Guidelines on Insurance	Health Funds Association of New Zealand (HFANZ) Policy on Genetic Testing
They represent the Commission's views on how the Human Rights Act should be interpreted.	Applies to the members of HFANZ, and only in the context of health insurance
5.2. Insurance companies can request applicants to disclose the results of any genetic tests but cannot require them to undergo genetic testing	Rule 2 Health insurers will not ask applicants to undergo genetic tests.

Financial Services Council Code of Conduct, Rule 9: Members must treat customers fairly.

EXAMPLES OF INSTRUMENTS DISALLOWING GENETIC TESTING FOR UNDERWRITING PURPOSES

Council of Europe (CoE) Convention on Human Rights and Biomedicine No 164 (entry into force: 1999)	CoE Recommendation on the Processing of Health-Related Data for Insurance Purposes, Including Data Resulting from Genetic Tests (2016)
Legally binding on the CoE & other States having signed and ratified the Convention	Not binding
Article 12 – Predictive genetic tests Tests which are predictive of genetic diseases ... may be performed only for health purposes or for scientific research linked to health purposes , and subject to appropriate genetic counselling.	Principle 4 Insurers should not require genetic tests for insurance purposes.

EXAMPLES OF INSTRUMENTS DISALLOWING GENETIC TESTING FOR UNDERWRITING PURPOSES

Principles of European Insurance Contract Law (PEICL)

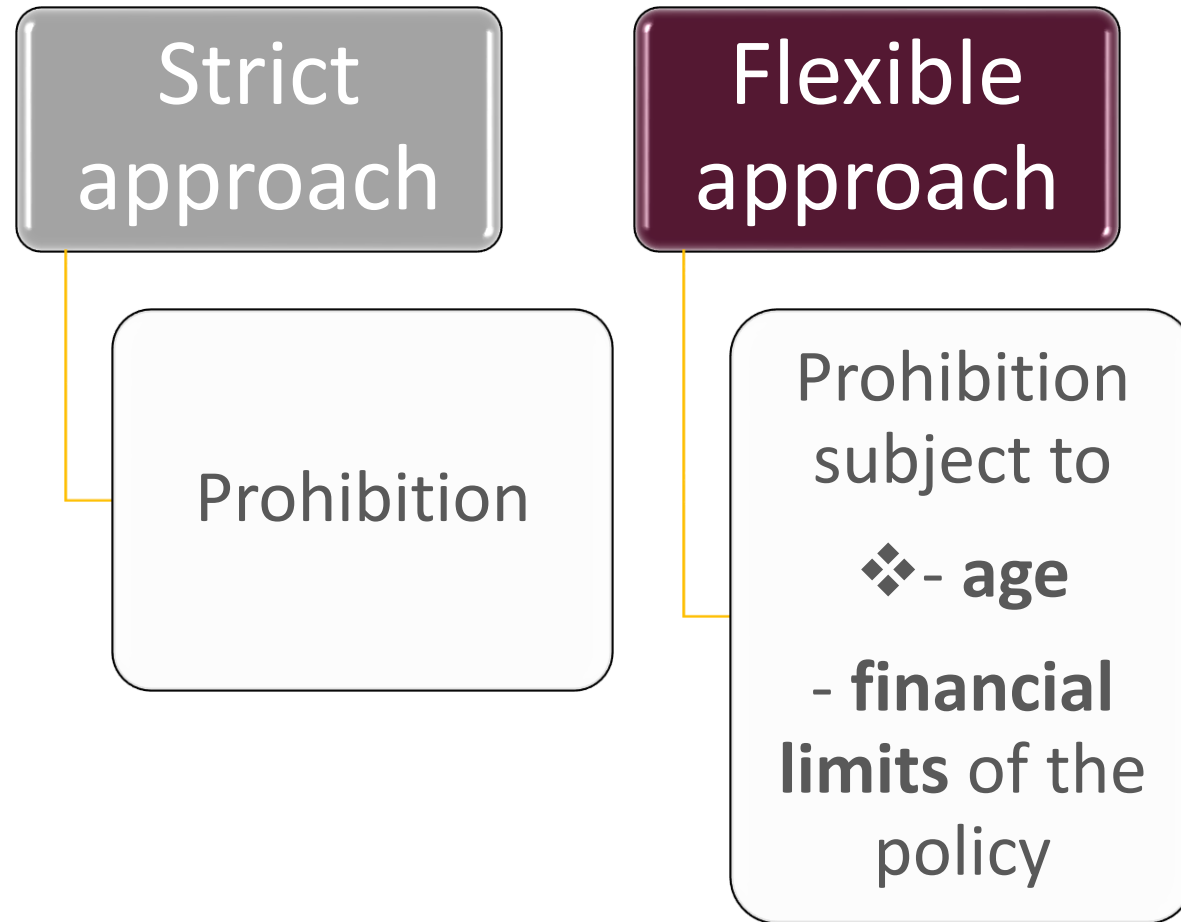
- **Soft law instrument**
- 2015
- Apply where duly incorporated into insurance contracts
- Insurer **may not ask** the applicant/policyholder/person at risk to undergo a predictive genetic test **unless**:

 The person **> 18 years old**, and
 The sum insured **> EUR 300,000**, or
 Money payable **> EUR 30,000** per year.

UK Government & Association of British Insurers Concordat and Moratorium on Genetics and Insurance

- In force until November 2019
- **Fair right of access to insurance for consumers / fair right of access to information by insurers**
- Adoption of the Concordat → Condition of the membership to ABI
- Only applies to predictive genetic tests
- Para 21(a): «customers **will not be asked**, nor will they be put under pressure, **to take a predictive genetic test** to obtain insurance cover»

POLICY APPROACHES DISALLOWING GENETIC TESTING FOR UNDERWRITING PURPOSES



INSTRUMENTS GOVERNING THE USE OF GENETIC DATA BY INSURERS

New Zealand Human Rights Commission Guidelines on Insurance	Health Funds Association of New Zealand (HFANZ) Policy on Genetic Testing
They represent the Commission's views on how the Human Rights Act should be interpreted.	Applies to the members of HFANZ, and only in the context of health insurance
<p>5.2.</p> <p>Insurance companies can request applicants to disclose the results of any genetic tests</p>	<p>3. Health insurers may request that the results of existing genetic tests are made available at the time of application.</p> <p>4. Health insurers will not use genetic tests as the basis of preferred risk underwriting, (ie offering individuals insurance at lower than standard premium rates.)</p>

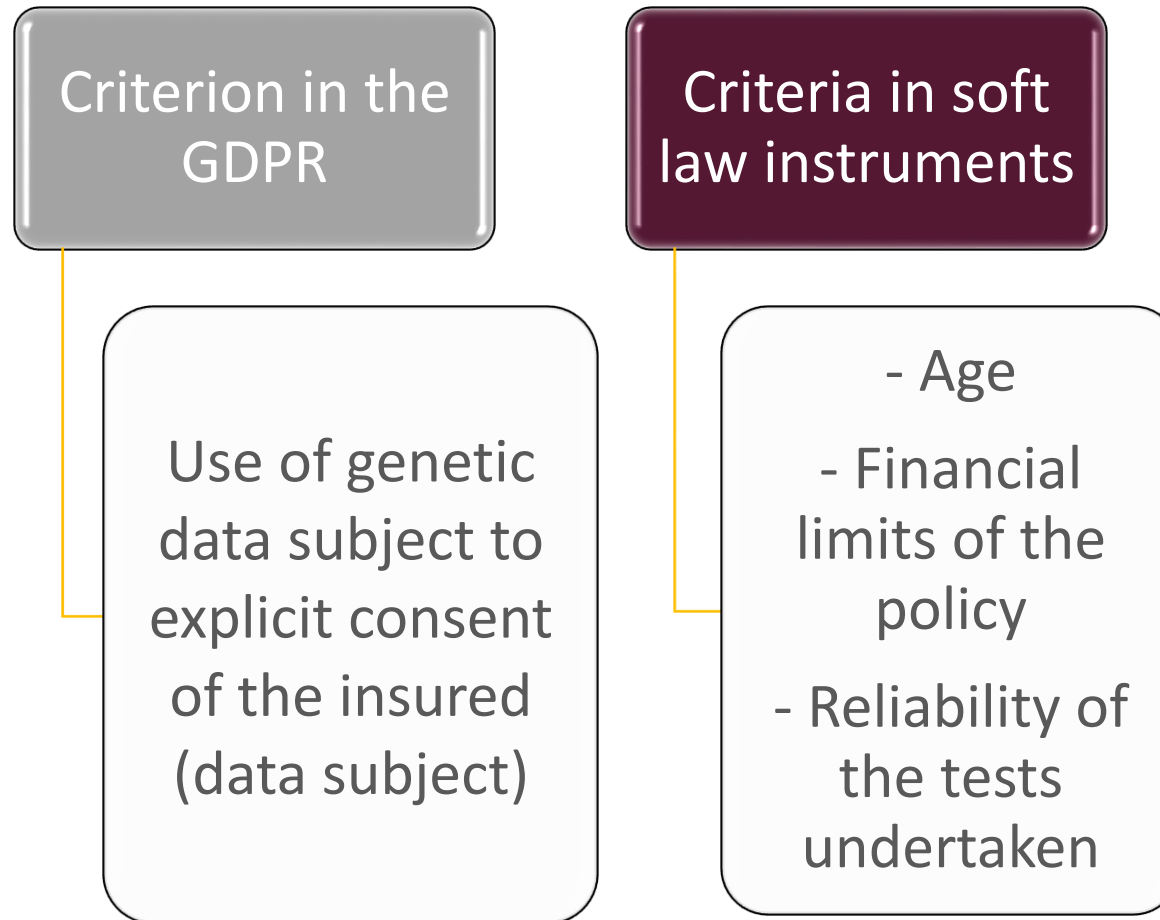
INSTRUMENTS GOVERNING THE USE OF GENETIC DATA BY INSURERS

General Data Protection Regulation (GDPR)	CoE Recommendation on the Processing of Health-Related Data for Insurance Purposes, Including Data Resulting from Genetic Tests (2016)
Binding - Governs data protection and processing in the EU	Not binding
<p>Art 9: Its collection and processing is subject to the data subject's explicit consent</p> <p>Explicit consent must also be:</p> <ul style="list-style-type: none">- Freely given- Informed <p>Art 9.4: 4. Member States may maintain or introduce further conditions, including limitations, with regard to the processing of genetic data</p>	<p>Para 16: Existing predictive data resulting from genetic tests should not be processed for insurance purposes unless specifically authorised by law.</p> <p>If authorised by law, insurers have to</p> <ul style="list-style-type: none">→ inform the insured about how the premium has been calculated→ justify any additional premium→ justify total or partial exclusion from insurance.

INSTRUMENTS GOVERNING THE USE OF GENETIC DATA BY INSURERS

Principles of European Insurance Contract Law (PEICL)	UK Government & Association of British Insurers Concordat and Moratorium on Genetics and Insurance
<ul style="list-style-type: none">• Soft law instrument• 2015• Apply where duly incorporated into insurance contracts	<ul style="list-style-type: none">• In force until November 2019• Fair right of access to insurance for consumers / fair right of access to information by insurers• Adoption of the Concordat → Condition of the membership to ABI
<p>Art 1:208: The insurer shall not ask the applicant, the policyholder or the person at risk to disclose genetic test results nor use the results of the test unless</p> <p>The person > 18 years old, and The sum insured > EUR 300,000, or Money payable > EUR 30,000 per yer.</p>	<p>Para 21(d): Persons will be required to disclose the results of predictive tests only if:</p> <p>The sum insured > £500,000 (life insurance) The sum insured > £300,000 (critical illness insurance) The sum insured > £30,000 (income protection insurance) + The tests have been assessed by a panel of experts and approved by the Government + Insurers ask the person to disclose the information</p>

POLICY APPROACHES ON THE USE OF GENETIC DATA FOR UNDERWRITING PURPOSES

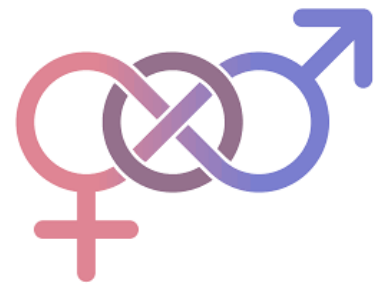


DIFFERENTIAL TREATMENT BASED ON GENDER

The New Zealand Herald:

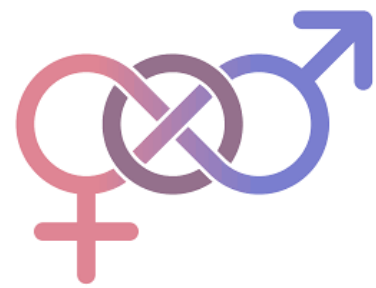
**«Man changes gender on ID to get cheaper
car insurance»**

- https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=12097734, 30 July 2018



DIFFERENTIAL TREATMENT BASED ON GENDER

- «David said that last April **he would have paid NZ\$5090 if he had insured his car as a man, but the premium dropped to just \$3857** after changing his gender to a woman.»
- "I'm a man, 100 per cent. Legally, I'm a woman," David said.
- He says he's saved about \$100 per month



DIFFERENTIAL TREATMENT BASED ON GENDER



Use of personal characteristics such as sex, race, age, sexual orientation, disability in risk assessment



Insurance industry's reliance on actuarial science and statistical data for risk rating



Classifying risk-bearers into (more or less) homogeneous groups and pricing their risk according to these classifications



Individuals' premiums calculated in reliance on statistical data that exists as to the groups in which the individual is placed

DIFFERENTIAL TREATMENT BASED ON GENDER

- Human Rights Act 1993 s 21: prohibited grounds for discrimination
 - Sex, race, disability, age, political opinion etc.
- Human Rights Act s 44(1): unlawful for those supplying 'facilities' to refuse to supply them to the persons by reason of any of the prohibited grounds of discrimination
- 'facilities by way of insurance' (s 44(2))
- **Insurer's refusal to provide cover on the ground of sex, disability, age, race, political opinion etc. → prohibited**

DIFFERENTIAL TREATMENT BASED ON GENDER

- Human Rights Act s 48 on **‘Exception in relation to insurance’**
 - Provided the different treatment is on **gender, disability or age**, and
 - Provided it relies on actuarial & statistical data relating to life expectancy, accidents or sickness, upon which it is reasonable to rely
- **Insurer’s different treatment (eg. charging different premiums) in offering life insurance policies, accident insurance policies, other policies of insurance allowed under the Human Rights Act**
- The Human Rights Commission Insurance Guidelines reiterate the above

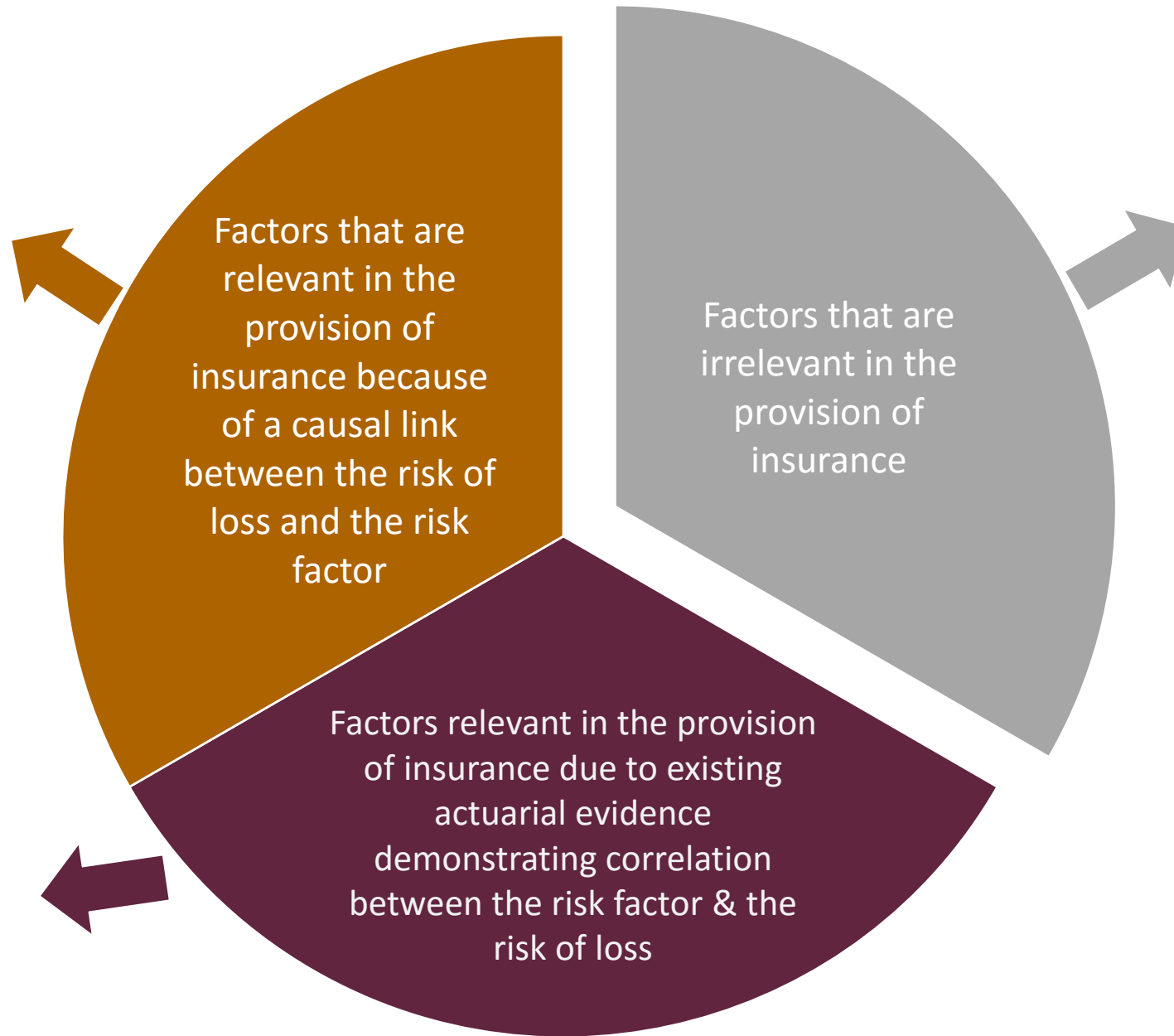
DIFFERENTIAL TREATMENT BASED ON GENDER

- **Differential treatment based on gender in motor vehicle insurance: allowed?**
 - «other policies of insurance»
 - «actuarial & statistical data relating to ... accidents and sickness»
- **Human Rights Review Tribunal, *Avis Rent a Car v The Proceedings Commissioner* (1998), Decision No. 16/98**
 - Drivers aged between 21 and 24 (protected ground of 'age') may be subject to different car insurance premiums based on s 48
 - Where road accident statistics justify so

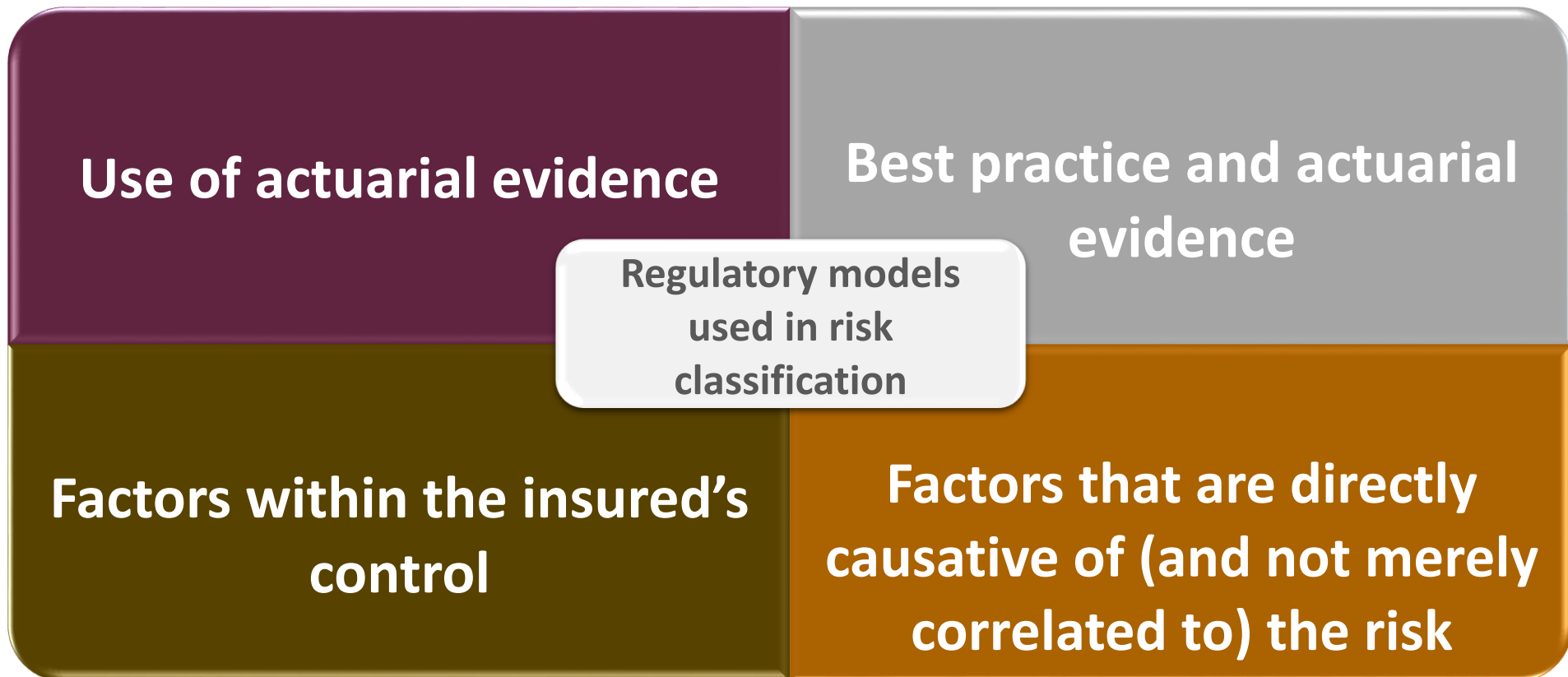
gender and
health
insurance

political belief
and motor
vehicle
insurance

gender and
motor vehicle
insurance



REGULATORY APPROACHES ON INSURERS' RELIANCE ON ACTUARIAL EVIDENCE



DIFFERENTIAL TREATMENT BASED ON GENDER

- Calculation of motor vehicle insurance premiums conventionally based on:
 - age
 - occupation
 - car driven
 - area where the insured lives
 - insured's claims history
 - number of drivers
 - gender

DIFFERENTIAL TREATMENT BASED ON GENDER

- *Case C-236/09 Association Belge des Consommateurs Test-Achats ASBL and Others v Conseil des ministres* [2011] ECR I-773

- Decision of the Court of Justice of the European Union (CJEU)
- Suit brought by a Belgian consumer rights group:

Whether insurers could classify drivers applying for motor vehicle insurance by gender

- The insurers operating in Belgium (and others, including those in the UK) had been permitted this behaviour in reliance on Art 5(2), Council Directive 2004/113 EC (the 'Gender Directive')

DIFFERENTIAL TREATMENT BASED ON GENDER

- Article 5 (1)

“Member States shall ensure that in all new contracts concluded after 21 December 2007 at the latest, the use of sex as a factor in the calculation of premiums and benefits for the purposes of insurance and related financial services shall not result in differences in individuals’ premiums and benefits.”

- Article 5(2)

“Notwithstanding paragraph 1, Member States may decide before 21 December 2007 to permit proportionate differences in individuals premiums and benefits where the use of sex is a determining factor in the assessment of risk based on relevant and accurate actuarial and statistical data. ...”

DIFFERENTIAL TREATMENT BASED ON GENDER

Article 21(1) of the Charter of Fundamental Rights of the European Union:

*Any discrimination based on any ground such as **sex**, race, colour, ethnic or social origin, genetic features, language, religion or belief, political or any other opinion, membership of a national minority, property, birth, disability, age or sexual orientation shall be prohibited.*



Clash between Art 5(2) of the Gender Directive and Art 21(1) of the Charter

DIFFERENTIAL TREATMENT BASED ON GENDER

- Decision of the CJEU in *Test Achats*:

- Art 5(2) of the Gender Directive was incompatible with the Treaty provisions requiring non-discrimination on which the Directive was based,

- Art 5(2) of the Gender Directive was a transitional provision →

Member States were given until the end of 2012 to ensure that

insurers complied with the general obligation in Art 5(1) of the

Directive and **move to a broadly gender-neutral model of insurance.**

DIFFERENTIAL TREATMENT BASED ON GENDER



DIFFERENTIAL TREATMENT BASED ON GENDER

Impact of *Test Achats* ruling

Insurance providers offering services within the EU (including UK insurers) may **no longer offer differential pricing based on gender even where the actuarial evidence is reasonable and reliable.**

DIFFERENTIAL TREATMENT BASED ON GENDER

- Principles of European Insurance Contract Law (PEICL)
 - Soft law instrument modelled through the harmonisation of the insurance law principles applicable in EU Member States
 - Final text: dated 2015
 - Applicable if duly incorporated into insurance contracts
 - Article 1:207 Non-Discrimination
- (1) **Gender**, pregnancy, maternity, nationality and racial or ethnic origin **shall not be factors resulting in differences in individuals' premiums and benefits**

CONCLUDING REMARKS

- Handing over personal data: condition for more affordable insurance
- Informed consent is key: the policyholder needs to have understood all the implications of sharing its personal data with the insurer
- Reliance on statistical data: mere correlation or also causation required between risk factors and risk of loss?
- Processing of genetic data by insurers: requires to be comprehensively dealt with