



Society of Actuaries in Ireland

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## **Reinsurance Forum: The Future of Underwriting: Session 2**

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Mandy Luo, ReMark and John Turner, Swiss Re

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## Disclaimer

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**The views expressed in this presentation are those of the presenter(s) and not necessarily those of the Society of Actuaries in Ireland or their employers.**

# **Q&A with Mandy Luo, ReMark Health Incentives through Wearables**

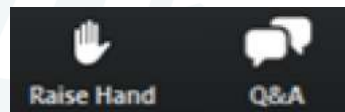
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# Underwriting: The simmering revolution

Society of Actuaries in Ireland – June 2020

John Turner,  
Head of L&H Underwriting Propositions



**Insurance is  
changing**

## “Future of Underwriting”



Individualised insurance journey to meet the unmet customer needs.

# But when will that future finally start?

# Pressures on the existing model....
















To quote a famous  
philosopher:  
*'The times they are a-changin'*  
- Bob Dylan (1964)



# What have we been saying since 2015?



Examples of a comprehensive UW ecosystem to drive excellent customer experience:

-  Smart UW
-  Predictive Modelling
-  Up-sell Cross-sell
-  Machine Learning
-  Mobile
-  Claims data
-  Extensive and multiple data sources
-  Data hub
-  Automation technology
-  Analytics
-  Cloud





Building the  
Future of  
Underwriting  
**NOW**

## Today



## Tomorrow

Disclosure Based UW



Static view of health



Insurer-led underwriting



Selecting risk via underwriting



**Data Driven  
Invisible UW**



**Personalised  
Health Trajectory  
linked to lifestyle**

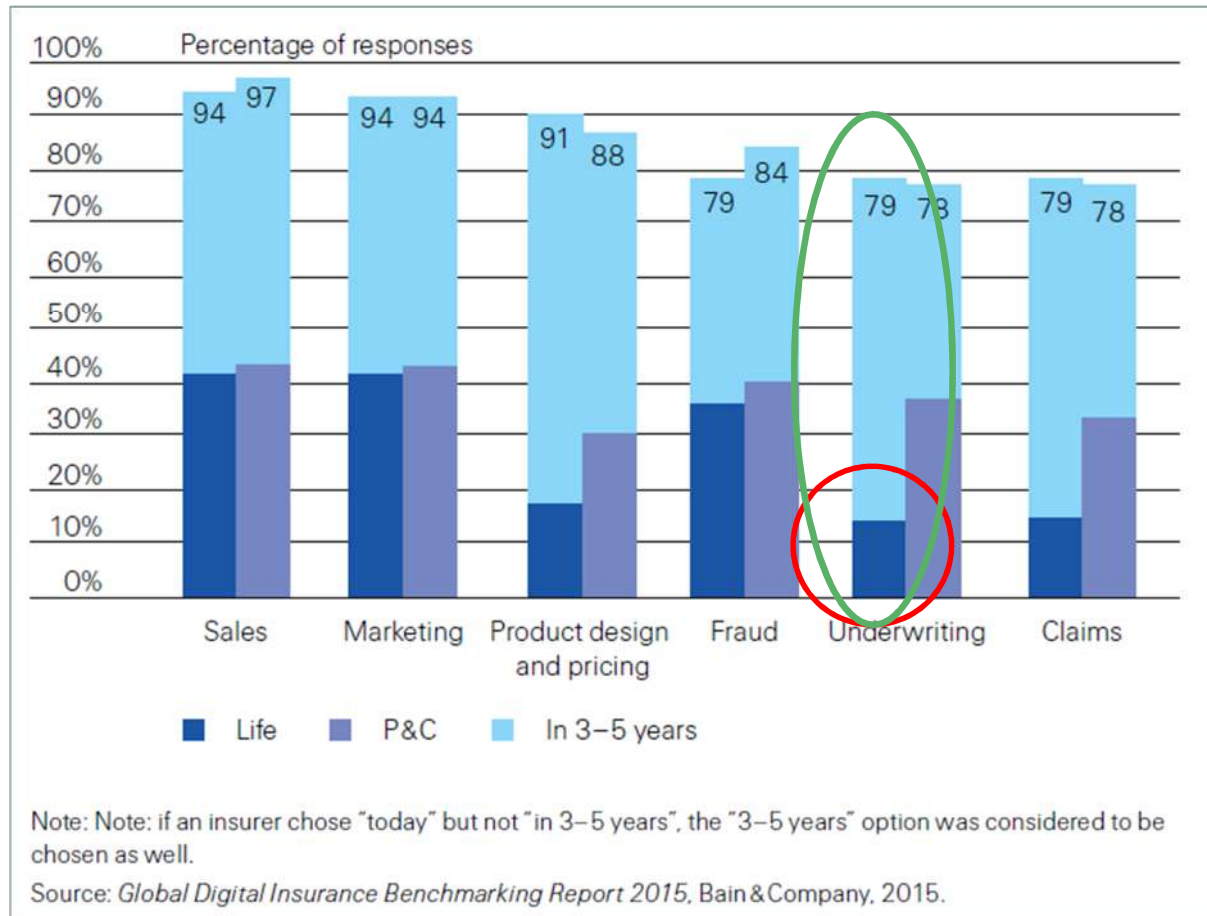


**Customer-led  
agile underwriting  
landscape**



**Transforming  
business with  
underwriting**

# So where did we think we would be by now as an industry and function?



Functions in which insurers apply data analytics  
*Survey question: To which functions do you apply Big Data analytics?*

**Pressures on the existing model – but maybe some of these actually prevent innovation.....**



# But insurtech investments are piling up, with high ambitions..

from the possible...



extract risk factors from paper submissions...

...to the plausible...



use banking data for risk stratification...

...to the harder to achieve



quantify mortality risk based on face pictures...

Often disappointing results, but with positive unexpected outcomes



# So what next for Underwriters? How do we boil instead of simmer?

Currently unused lifestyle factors will become big

Influence rather than segment risk

Much more holistic rather than binary risk management

Ever more automation (not just decision making)

More data based

Less medical than currently

Less invasive than currently

More personalised and welcomed by our customers

Better solutions for lives with impairments

?



**Technology  
Savvy**



**Innovative &  
Change Ready**



**Data Capable**



**Sales Expert**



**Behavioural expert**



**Legal Expert**

**Is traditional  
underwriting  
dead?**

**No.... but  
certainly  
new skills  
required!**



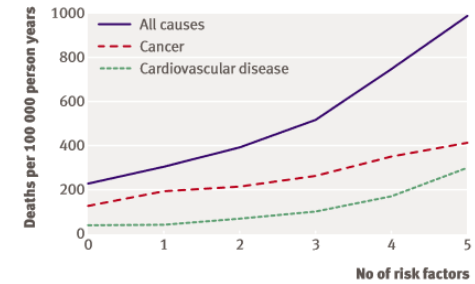


Any  
Questions?

# And if we have time, some evidence to justify the More Lifestyle, Less Medical

**Table 1** | Multivariate relative risk of death from any cause, cardiovascular disease, and cancer during 24 years of follow-up according to body mass index, cigarette smoking, alcohol consumption, physical activity, and diet\*

	Person years	Deaths from any cause		Cardiovascular deaths		Cancer deaths	
		Cases	Relative risk (95% CI)	Cases	Relative risk (95% CI)	Cases	Relative risk (95% CI)
<b>Body mass index (kg/m<sup>2</sup>)</b>							
18.5-24.9	1 174 514	5095	1.00 (1.00 to 1.00)	855	1.00 (1.00 to 1.00)	2747	1.00 (1.00 to 1.00)
25-29.9	404 856	2359	1.18 (1.12 to 1.24)	511	1.46 (1.31 to 1.63)	1195	1.14 (1.06 to 1.22)
≥30.0	180 039	1428	1.67 (1.57 to 1.78)	424	2.81 (2.49 to 3.17)	585	1.32 (1.21 to 1.45)
<b>Cigarette smoking</b>							
Never	787 104	2998	1.00 (1.00 to 1.00)	595	1.00 (1.00 to 1.00)	1519	1.00 (1.00 to 1.00)
Past	667 250	4076	1.52 (1.44 to 1.59)	743	1.49 (1.33 to 1.66)	2079	1.47 (1.37 to 1.57)
Current 1-14/day	104 428	609	1.94 (1.77 to 2.12)	145	2.61 (2.17 to 3.14)	318	1.82 (1.61 to 2.06)
Current ≥15/day	200 626	1199	2.32 (2.16 to 2.49)	307	3.34 (2.88 to 3.87)	611	2.10 (1.90 to 2.32)
<b>Alcohol consumption† (g/day)</b>							
0	386 395	2044	1.00 (1.00 to 1.00)	502	1.00 (1.00 to 1.00)	887	1.00 (1.00 to 1.00)
1-4	745 039	3589	0.81 (0.76 to 0.85)	712	0.69 (0.61 to 0.77)	1878	0.97 (0.90 to 1.06)
5-14	405 344	1861	0.80 (0.75 to 0.86)	324	0.63 (0.54 to 0.73)	1023	0.99 (0.90 to 1.09)
15-29	155 024	900	0.90 (0.83 to 0.98)	168	0.75 (0.62 to 0.90)	492	1.11 (0.99 to 1.24)
≥30	67 369	485	1.11 (1.00 to 1.23)	82	0.75 (0.59 to 0.96)	246	1.26 (1.09 to 1.46)
<b>Physical activity‡ (hours/week)</b>							
0-0.4	116 915	1143	1.00 (1.00 to 1.00)	231	1.00 (1.00 to 1.00)	513	1.00 (1.00 to 1.00)
0.5-1.9	596 872	3366	0.84 (0.78 to 0.90)	715	0.94 (0.81 to 1.09)	1644	0.88 (0.79 to 0.97)
2.0-3.4	370 631	1690	0.77 (0.71 to 0.83)	345	0.87 (0.73 to 1.03)	896	0.83 (0.75 to 0.93)
3.5-5.4	201 459	768	0.72 (0.65 to 0.79)	126	0.70 (0.56 to 0.87)	446	0.82 (0.72 to 0.94)
≥5.5	248 639	636	0.63 (0.57 to 0.69)	96	0.57 (0.45 to 0.73)	379	0.73 (0.64 to 0.84)
<b>Healthy diet score§</b>							
Fifth 1	337 747	2122	1.00 (1.00 to 1.00)	443	1.00 (1.00 to 1.00)	1038	1.00 (1.00 to 1.00)
Fifth 2	348 559	1848	0.85 (0.79 to 0.90)	427	0.96 (0.84 to 1.10)	891	0.83 (0.76 to 0.91)
Fifth 3	355 705	1766	0.80 (0.75 to 0.85)	344	0.78 (0.67 to 0.90)	895	0.81 (0.74 to 0.89)
Fifth 4	359 442	1701	0.76 (0.71 to 0.81)	326	0.75 (0.65 to 0.87)	894	0.80 (0.73 to 0.87)
Fifth 5	357 955	1445	0.65 (0.61 to 0.70)	250	0.59 (0.51 to 0.70)	809	0.72 (0.65 to 0.79)



Age standardised all cause, cancer, and cardiovascular mortality during 24 years of follow-up by number of lifestyle risk factors. Lifestyle risk factors included cigarette smoking (ever), lack of physical activity (<30 min/day moderate to vigorous intensity activity), low diet quality (lowest three fifths of healthy diet score), alcohol intake of 0 or ≥15 g/day, and overweight (body mass index ≥25)

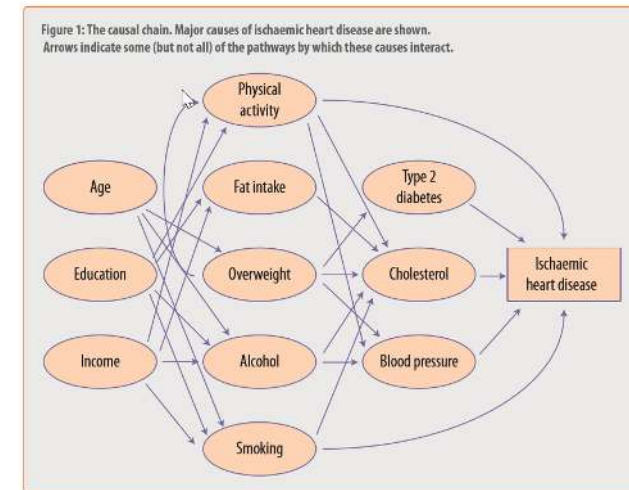


Figure 1: The causal chain. Major causes of ischaemic heart disease are shown. Arrows indicate some (but not all) of the pathways by which these causes interact.

# We're smarter together

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# Questions

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