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The rise of Wearable Technology

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The rise of Wearable Technology

What does it mean for the insurance market?

Agenda

1	What is Wearable Tech? – a timeline
2	Implications for improved health and insurance
3	Are Wearables the future of underwriting?
4	What do potential customers think? – A short survey
5	Conclusions
6	A final word

What is Wearable Tech? – a timeline

1970s	1980s	1990s	The 'noughties'	2010 onward
Pulsar Calculator Watch 1975	*Casio DatabankCD-40 1984*	*Apple Newton PDA 1993*	*Bluetooth headset 2000*	*Nike Fuelband*
Sony Walkman 1979	*Digital hearing aid 1987*	*Blackberry 1999*	*Apple iPod 2001*	*Pebble Watch 2012*
			Motorola RAZR 2004	*Nissan Nismo Smartwatch*
			GoPro Camera 2004	*Misfit Shine*
			Apple iPhone 2007	*Google Glass 2013*
			FitBit 2008	*Apple Watch 2014*

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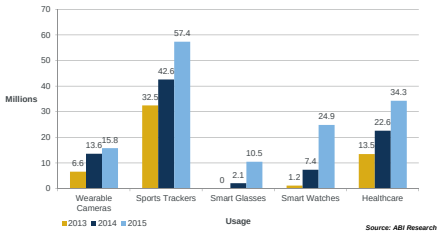
Wearables by volume - worldwide



Source: ABI Research

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Presidential Fitbit

The First Fitbit: President spotted with device to monitor heart rate, location, sleeping patterns and calorie intake (are you watching, Michelle?)

- President wore $250 body-monitoring device around Washington, D.C.
- Was spotted with the item speaking to Enda Kelly, Ireland's Prime Minister
- In February gave interview saying he was toying with buying on of them

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Paving the way for Apple Watch

- The Seiko TV Watch!
- The TV-Watch by HATTORI SEIKO CO., LTD (founded way back in 1881)
- Presented to the public in Tokyo in the summer of 1982
- Some hundred million yen were invested into its development
- Roger Moore wore one of these in the Bond film Octopussy in 1987

The Apple Watch – things have moved on!

- Went on sale Monday 9th March 2015 in US. Due to arrive in UK 24th April
- Available in three options:

  - **Apple Watch** £479 to £949
  - **Apple Watch Sport** £299 to £339
  - **Apple Watch Edition** £8,000+
- All three feature a custom heart rate sensor on the rear, using infrared and visible-light LEDs and photodiodes to detect heart rate alongside an accelerometer
- Provides a "comprehensive picture of your daily activity, suggest customised goals, and reward you for reaching personal fitness milestones."
- Expected that Apple will sell between 10 and 30 million devices within weeks of its release

Source: InsuranceNetworking News

Implications for improved health and insurance

From Fitbit to Quitbit

Can technology really change things?

Recent events would suggest yes!

But certain behaviours are harder to change!

There are **7.1 Billion** people on the planet
4 Billion of them use a mobile phone
Only **3.8 Billion** of them use a toothbrush

Are wearables the future of underwriting?

Life insurance discounts

- 64 per cent of people in the UK think they should pay less for life insurance if they can show they don't smoke.
- 47 per cent feel their life insurance premiums should be lowered for not drinking.
- 44 per cent feel they should get cheaper life insurance if they show they are exercising regularly.
- 43 per cent want think they should be rewarded with life insurance discounts for eating healthily.
- 34 per cent - think good drivers should also pay less for their life insurance as well as their car insurance.
- 21 per cent of those surveyed said life insurance premiums should be lowered for successfully managing their stress levels.

Source: Confused.com May 2013

Impact on rates

- Its clearly early days with wearable tech so it's impossible to know what will / won't be measurable in the future
- But even if we just assess activity, we can see tangible benefits immediately
- e.g. using NHanes (US) longitudinal data, we can see that Relative Risk of
  - someone who admits to regularly walking for 1 mile without stopping **69%** RR
  - someone who admits to not regularly walking for 1 mile without stopping **105%** RR
- Of course the 105% would include people who would clearly fail underwriting / have very high BMI etc. so the impact on an insured block is less
- We would want to analyse in far more detail before using - but for now if we assume half the impact on insured experience then we could see a **15% impact from those with better activity**

What do potential customers think?

- We surveyed a group of people across different disciplines/skills within the reinsurance and direct office market
- Nine short survey questions covering:

  - Sex
  - Age
  - Ownership/intention to buy
  - Advantages
  - Disadvantages
- We also asked for general comments re attitudes to wearables
- **85** responses from a survey group of **160**, so a completion rate of **53**%
- Better than any general election turnout!

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Survey and summary of results

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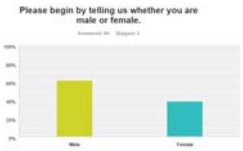
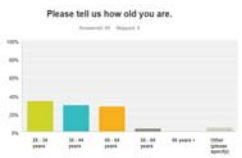
Sex and age distribution

Sex



Age distribution



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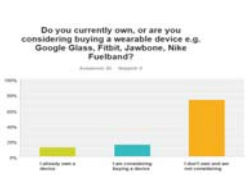
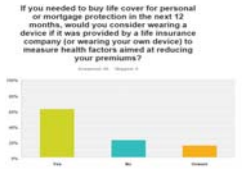
Ownership of devices and buying life cover

Ownership



Buying life cover



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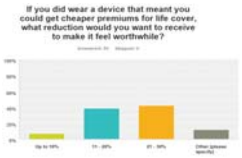
Premium reductions and company sponsored devices

Reduction in premiums



Company sponsored devices

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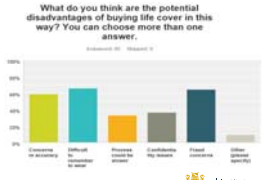
Potential advantages and disadvantages

Potential advantages

Potential disadvantages



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Survey results - general comments

- *"If I was given a device I would wear it in the short term to determine if I liked it. If I didn't like it then I would not wear beyond the short term. My decisions around wearable tech would never be driven by insurance costs unless it was completely unobtrusive and generated significant savings."*
- *"It may temporarily kick start people into a healthy living regime. Keeping them at that level or keeping them using the device may be more challenging therefore it would be important to consider how long you would monitor the data for."*
- *"I believe the technology companies will compete aggressively in the life assurance market in the near future. It would be economically unwise not to be prepared for this"*

Survey results – general comments

- *"So long as the insurance company couldn't contact me via the device (i.e. email) I would wear it. I do have the feeling of being 'technologically locked' and less of a human by wearing it though."*
- *"Main concern would be device being linked to smartphone and what data that could provide insurers with."*
- *"Wearables have a long way to go before becoming suitable for buying insurance. The people who could benefit most are unlikely to wear them, i.e. older age groups."*
- *"I consider these to be intrusive and there is no protection sufficient to cover sensitive personal data of this nature."*
- ***"Would worry if it recorded alcohol consumption."***

Key messages

Four key messages from this survey

- The majority of people do not own or are not considering buying a device
- Those who own or are prepared to buy are the predominantly younger lives, who are arguably striving for greater fitness
- A large proportion (60%) would wear one if a company was prepared to pay, in order to buy life cover
- The expected/preferred premium reductions are fairly broad from 10 – 50%

What can we infer from these outcomes?

- People remain sceptical about the technology and aesthetics around these devices
- The younger lives may well be inclined to own or buy anyway and insurance is not a primary driver in purchasing decisions
- Individuals seem prepared to 'give the technology a go' if someone else is going to pay
- Reflects different price attitudes at different ages, i.e. the older lives want cheaper cover

Conclusions

- Drawing any firm conclusion is difficult!
- But the growth in Wearable Tech means that it is here to stay and it will have implications for the way we do business
- The reasons for buying or wearing devices have little to do with planning around buying cheaper life insurance, and more to do with a drive for greater health awareness and wellbeing
- If a relatively well informed group of individuals (working in the life industry) have some concerns, how can we expect the general insurance buying public to view this?
- There are often negative perceptions of the industry by the insurance buying public, so it will take time for trust to build, especially when there are concerns over accuracy, data privacy and pricing
- But it will most certainly have to be considered as a way of accessing 'real time' health information and consumers will ultimately drive the market

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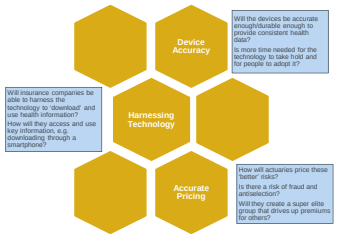
Three central issues



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Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.

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A window to the future?

- "Is Google working on a cure for cancer?" ***Source Daily Telegraph 17th March 2015***
- Google have filed a patent application with the World Intellectual Property Organization (WIPO)
- Nanoparticle Phoresis describes a wearable device that can automatically modify or destroy one or more targets in the blood that have an adverse effect on health
- Could target cancer cells by selectively targeting and modifying/destroying them so that spread is diminished
- October 2014 – Google X said to be developing a pill that could detect cancer

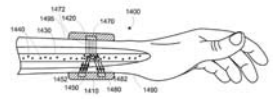

Image from Google's patent application

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A final word

- The industry has tended to focus on increasing protection sales, speeding up the customer journey, and innovative ways of assessing risk through automated underwriting or predictive underwriting
- Claims has historically not always been considered when it comes to discussions about innovation and technology
- To succeed in the new technology age, Claims must be considered by offices who want to compete and improve the customer journey; this includes looking at Wearable Tech
- Given the advances in Wearables in the medical sector, in the future will health information from devices be capable of being uploaded from wearables to benefit claims management?
- Diagnostic tests such as tumour markers and bloods could be made available for companies to admit CI claims or manage long term chronic conditions for IP

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