

 Institute and Faculty of Actuaries

## C2 Insurance Implication of the Major UK Health Issues: A perfect storm?

John Graham

16 May 2016




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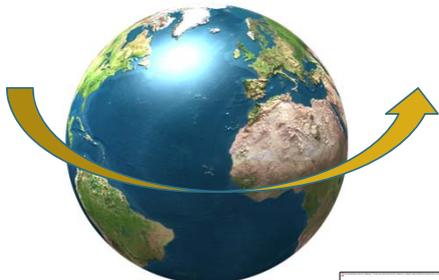
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### The World is a rapidly changing place



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### A perfect storm?

Introduction



Diabetes   Obesity   Mental Illness



Implications  
Opportunities

Social implications



Financial implications



Insurance Opportunities

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## Diabetes and Mental Illness

**Diabetes** is a condition where the amount of glucose in your blood is too high because the body cannot use it properly. This is because your pancreas doesn't produce any insulin, or not enough insulin, to help glucose enter your body's cells – or the insulin that is produced does not work properly (known as insulin resistance).

- Insulin is the hormone produced by the pancreas that allows glucose to enter the body's cells, where it is used as fuel for energy so we can work, play and generally live our lives. It is vital for life.
- Glucose comes from digesting carbohydrate and is also produced by the liver.
- If you have diabetes, your body cannot make proper use of this glucose so it builds up in the blood and can't be used as fuel.
- There are two main types of diabetes: Type 1 and Type 2.

Source: Diabetes UK

A **mental disorder**, also called a **mental illness** or **psychiatric disorder**, is a diagnosis of a behavioural or mental pattern that can cause suffering or a poor ability to function in ordinary life. Such features may be persistent, relapsing and remitting, or occur as a single episode. Many disorders have been described, with signs and symptoms that vary widely between specific disorders.

Source: Wikipedia, WHO

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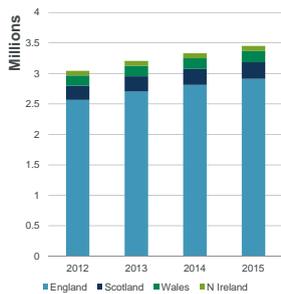
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## Diabetes prevalence in the UK



### Prevalence increasing:

- Nearly 3.5m people diagnosed with diabetes<sup>1</sup>
- 0.55m undiagnosed cases<sup>1</sup>
- Doubled since 1996<sup>2</sup>
- Estimated to grow to 5m by 2025<sup>3</sup>
- Global challenge

<sup>1</sup> Diabetes UK  
<sup>2</sup> Quality and Outcomes Framework (QOF) 2014/15  
<sup>3</sup> AHPO diabetes prevalence model

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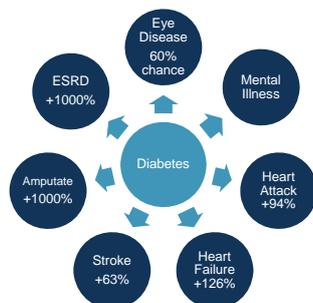
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## Diabetes sufferers are more prone to other serious illnesses



### This creates a significant financial burden

- NHS spend £10bn pa<sup>1</sup>
- Total cost £23.7bn<sup>1</sup>
- Increase to £39.8 by 2035/6<sup>1</sup>
- One in seven beds<sup>2</sup>
- 45.1m prescriptions<sup>3</sup>
- 135 amputation per week<sup>4</sup>

<sup>1</sup> Hex, N., et al (2012)  
<sup>2</sup> HSCIC (2013) National Diabetes In patient Audit 2012  
<sup>3</sup> HSCIC (2015) Prescribing for Diabetes: England 2005-06 to 2013-14  
<sup>4</sup> Public Health England (2015)

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## Obesity gives rise to a multitude of medical conditions and increased mortality<sup>1</sup>

Increased health risk (based on BMI and waist circumference)<sup>1</sup>

Risk category	Male	Female
Very high risk	22%	25%
High risk	13%	18%
No increase	47%	43%

### Significant strain on NHS<sup>2</sup>

- 9,130 admissions in England
  - 22% less than 2011/12 peak but four times figures from 2004/5
  - 69% aged between 35 and 64
- 6,032 bariatric surgeries (31% below 2011/12 peak)
  - 60% aged between 35 and 54
- 519k prescriptions in England (563k in 2013 – 8% reduction)
- UK Obesity levels 6 percentage points higher than OECD average

<sup>1</sup> National Institute for Health and Clinical Excellence (NICE)  
<sup>2</sup> HSCIC (2014)

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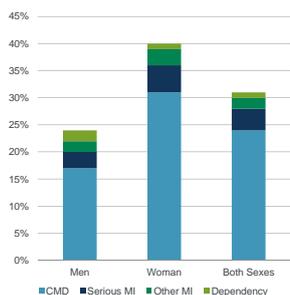
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## Mental Illness prevalence in the UK (2014)



### A few MI facts

- 26% diagnosed with at least one MI (18% undiagnosed)<sup>1</sup>
- 24% men/18% women with Serious MI attempt suicide<sup>1</sup>
- Peaks at working ages<sup>1</sup>
- Main cause of work related illness in 2014/15<sup>2</sup>
- Reduces life by 10-25 years<sup>3</sup>

<sup>1</sup> Health & Social Care Information Centre (HSCIC)  
<sup>2</sup> Health & Safety Executive  
<sup>3</sup> World Health Organisation

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## Is the situation likely to improve?

### Are current treatments effective?

- 1 in 10 waiting over one year, 50% over 3 month for talking therapy, 13% awaiting first assessment<sup>1</sup>
- 58% not offered choice of therapy, 25% no choice of location, 11% pay as unavailable on NHS<sup>1</sup>
- Negative impact of delays in treatment is well documented<sup>1</sup>
- MIND Infoline received 50% more calls in 2012/13 than previous year<sup>1</sup>
- 40% of MH Trusts reduced income in 2013/14 and 2014/15<sup>2</sup>
- Only 14% of patient felt care appropriate in a crisis<sup>3</sup>

### Significant financial impact

- Mental Health problems cost the economy £105bn pa<sup>4</sup>
- Causes 23% of ill-health in the UK<sup>5</sup>
- Cost of treatment could double over next 20 years<sup>6</sup>
- In 2014/15 over 1.8m people contacted Mental Health services<sup>3</sup>

Sources:

<sup>1</sup> We still need to talk report  
<sup>2</sup> Kings Fund: MH Under Pressure  
<sup>3</sup> Care Quality Commission 2015  
<sup>4</sup> Centre for Mental Health (2010)  
<sup>5</sup> Department of Health (2011)  
<sup>6</sup> The Kings Fund: McCrone, P et al (2008)

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## Is the prevalence of Mental Illness increasing?

### The stats

- In 2014 57.1m prescriptions were issued relating to Mental Health conditions<sup>1</sup>
- This is nearly double the number in 2004<sup>1</sup>
- Increasing cause of absence from work and associated costs
- Increasing rates of Alzheimer's, and other Dementias, as people live longer

### But is it that simple?

- Reducing stigma and increasing awareness (and sympathy)
- "Celebrity effect"
- Past support systems eroded (Church, Family, Community etc.)
- Doctors quick to prescribe (10 minute appointment)?
- Increasing recreational drug use, including legal highs
- More stressful society??

### Conclusion (tentative)

- Difficult to come up with a definitive statement on underlying prevalence

<sup>1</sup> HSCIC

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## Mental Illness can lead to other problems

### Mental Illness co-morbidities

- 42% of unplanned admission to an acute hospital of people over 79 have dementia<sup>1</sup>
- 80% common comorbidities dementia sufferers admitted to hospital with preventable conditions<sup>2</sup>
- In-patients with dementia three times more likely to die during first admission for acute condition<sup>1</sup>
- Type 2 diabetes diagnosis amongst dementia sufferers than those without dementia<sup>3</sup>

### Why do Mental Illness sufferers (arguably) receive less than optimal treatment<sup>4</sup>

- Symptoms of co-morbidities misdiagnosed as worsening of mental illness
- Communication challenges
- Failure to treat individual as a whole (i.e. treat in silos)
- Lack of skills and knowledge

<sup>1</sup> Sampson E et al (2009); British Journal of Psychiatry 195

<sup>2</sup> Alzheimer's Society (2009)

<sup>3</sup> Heun R, et al. Eur Psychiatry 2013, 28:40-48

<sup>4</sup> J Scrutton & C U Brancati: Dementia and co-morbidities, Ensuring parity of care

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## Is there a relationship between Mental Illness and Obesity/Diabetes



### A downward spiral?

- A link between diabetes and mental illness has been recognised since the 1960's
- Dementia and diabetes both long-term progressive co-morbidities

- Cause and effect not always clear

- Trends unfavourable

### Are we coping?

- NHS under strain across the board
- Mental Illness seeing reduced budgets
- Treating Diabetes complications rather than underlying diabetes

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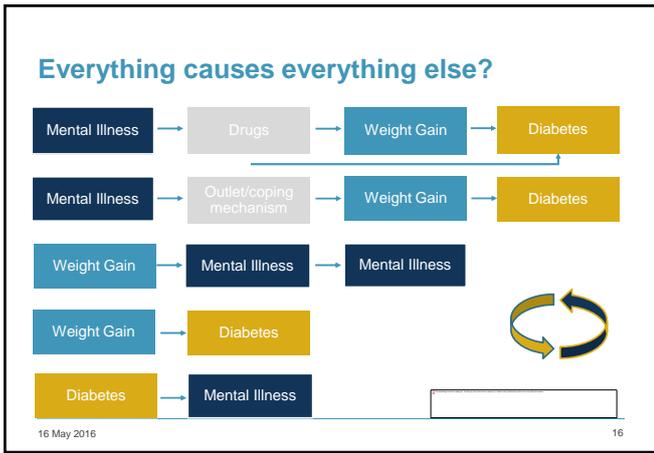
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- ### Is there any good news?
- Psychiatrists now required to monitor overall health of patient and not treat mental health issues in isolation
  - Increasing awareness of issues, lots of data and analysis
  - Part of increase is due to positive developments
    - Increasing life spans
    - Stopping smoking leading to weight gain
  - Not unique to UK
  - Developing technology and treatments
  - Wearable technology
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- ### Thinking aloud... How can we help?
- Data analysis**
- Lots of data, soon be even more
  - Behavioural economics of health (understand propensity of patients to follow a cause of action relative to expected outcomes)
  - Analysing impact of Government initiatives
  - Bespoke incentive programmes
  - Business case for early intervention
  - Modelling
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### More thinking aloud...

#### What insurance products are needed?

##### Diabetics

- Insure against potential complications
- Provide suite of potential services at fixed cost (bespoke cash plan)
- Early intervention treatments
- Programmes for "pre-diabetics"

##### Mental Illness

- Financial support for carers
- Quicker access to talking therapies
- Remove any delays to treatment e.g. waiting periods

##### Generic

- Products aimed at adult children of (potential) sufferers

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Questions

Comments

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