



# Diabetes and Mental Illness

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# Co-morbidity

- Greatest challenge facing medicine is co-morbidity
- Two thirds of all people over 55 years of age with a chronic disorder such as diabetes and Depression, have more than one illness at the same time (WHO 2011)
- Co-morbidity of mental and physical illness is much less appreciated despite co-occurring commonly with grave consequences (Lawrence & Coghlan, 2002)
- Prevalence of diabetes is increasing in both the general and psychiatric populations (Katon et al 2009)
- Health and Economic burden of diabetes falls disproportionately on persons with mental illness particularly depression and anxiety (Atlantis et al 2012)

# Diabetes and Schizophrenia

- People with schizophrenia
  - have multiple risk factors for type 2 diabetes
  - may represent an independent high-risk group for diabetes
- Interaction between Schizophrenia, antipsychotic medication and diabetes is complex
  - Schizophrenia itself may be an additional risk factor for diabetes as may antipsychotic treatment (metabolic disorders)

de Hert, M ., 2012

# Co-morbidity in Children & Young People

- Diabetes has a negative impact on virtually all aspects of child development increasing the risk for psychiatric disorder, anxiety and depression being the most common.
- Females with type 1 diabetes are twice as much at risk of developing anorexia or bulimia.
- 40% of 15-30 year olds regularly omit insulin intake with possible devastating consequences
- Emerging dual diagnosis of type 1 diabetes and eating disorder.
  - Syndrome termed “ED-DMT1”; affecting teenage girls
  - Describes the intentional misuse of insulin for weight control
  - Devastating effects leading to mortality
- There is still a large unmet need to quantify and qualify the co-morbidity of these disorders in children and young people.

# Diabetes and Depression: Facts

- Type 2 diabetes and depression
  - are common chronic illnesses (Katon, 1992; American Diabetes Association, 2012)
  - individually can be among the most disabling chronic disorders and when they occur comorbidly, they are even more detrimental
- 31-33% of persons with diabetes suffer from depression (Anderson & Freedland, 2000; Van Der Feltz C M, 2011)
- In the presence of diabetes, the prevalence of depression increases to 15% to 30% depending on depression definition, population sample and study type (Stone et al . 2006; Anderson et al 2001)
- Persons with depressive disorders are twice as likely as the rest of the population to also suffer from diabetes (Bjorntorp, 2001)

# Bi-directional relationship

- Diabetes and Depression exhibit a bi-directional relationship, with each disease an independent risk factor for development of the other
- Prognosis of both diabetes and depression is worse for either disease when they are co-morbid than it is when they occur separately (Lustman et al., 2000; Egede,2006)
- Bi-directional relationship is not limited to its effects on prevalence. When these diseases are co-morbid, they significantly amplify the cost, morbidity and mortality expected from either one alone
- In the case of depression, changes in blood sugar levels have been linked directly to moods such as anger, anxiety, sadness, frustration and general wellbeing (Gonder-Frederick et al., 1989)

# Bi-directional relationship

- More than 70% of patients with diabetes have depressive episodes lasting longer than 2 years (Katon, et. al 2004)
- Dysthymia and double depression is more common in patients with diabetes (Katon, et al 2004)
- MDD is highly recurrent in diabetic patients – 80% of depressed persons with diabetes experience a relapse of symptoms with an average relapse rate of nearly 1 episode every year (Lustman et al, 1997)
- Depression is one of the most disabling chronic conditions. The functional impairment it causes is substantially worse when it occurs in the context of diabetes
- Depression in diabetes has been associated with decreased self-care, including decreased adherence to treatment, exercise, smoking cessation and eating a healthy diet (Ciechanowski et al, 2000)

## Bi-directional relationship & other risk factors

- Depression

- contributes to the pathophysiology of diabetes (Katon et al 2004)
- is associated to many other adverse outcomes (de Groot et al, 2001)
- in diabetic patients is a risk factor for dementia, hospitalisation and even death
- In the case of dementia, diabetes and depression are independent risk factors for vascular and Alzheimer-type dementias, and co-morbidly they impart substantially more risk than either one alone

# Increased costs of diabetes care

- Depression contributes to decreased quality of life and increased costs of diabetes care
- Costs of the care for depressed versus non-depressed patients with diabetes was 4.5 – fold higher
- Costs for severely depressed patients were 86% higher than those for patients with less severe depressive symptoms (Ciechanowski et al, 2000; Egede et al, 2002)
- The economic impact is particular high in the area of employment because of absenteeism, presenteeism and withdrawal from the labour market , as well as in the area of social welfare due to benefits (McDaid, D. 2012)

# Conclusions

- Prevalence of diabetes and mental illness is increasing
- Association between type 2 diabetes and mental illness is bi-directional
- The prevalence of diabetes has been found to be consistently higher for people with mental illness
- There is limited awareness and knowledge of the
  - frequency and consequences of co-morbidity of diabetes and mental illness
  - developmental and psychological impact of diabetes on children and young people
- Resources directed towards improving care and quality of life for persons with co-morbid diabetes and depression are insufficient

# Recommendations

- Multi-condition Collaborative Care Programme
- Routine screening of patients with diabetes for psychopathology and vice versa, as well as lifestyle risk factors, to inform practice for more effective management and prevention planning. (e.g PHQ-9)
- Public Health Interventions
- Effective Treatment – pharmacological and psychological
- Training of Health Care Professionals (GPs, Nurses and Specialists (Endocrinologists and Psychiatrists))
- Research
  - Co-morbidity (diabetes and its effects on development and mental health) in children and young people
  - Epidemiological studies on co-morbidity of diabetes and depression
  - Treatment effectiveness

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Thank You