

R063: Prescribing trends for Depression, Anxiety and Alzheimer's Disease in the Northern Ireland Type 2 Diabetes Population- are GLP-1 agonists protective? – UU

Diabetes is a metabolic disease associated with elevated blood glucose with an estimated global prevalence of ~500 million, and 3.8 million diagnosed individuals in the UK. Type 2 diabetes (T2D) accounts for ~90% of diabetes cases and is caused by insulin resistance and deficiency. T2D costs the NHS £10billion per year, with majority of costs associated with secondary complications. Common secondary complications of T2D include cardiovascular disease, which is the leading cause of mortality in T2D, kidney disease and retinopathy (the leading cause of blindness). Cognitive decline and mood dysfunction are lesser well-known complications of T2D, that significantly impact disease management.

Glucagon-like peptide-1 (GLP-1) agonists are a class of T2D drugs that have demonstrated numerous off-target benefits (i.e. benefits beyond improvement in blood glucose management), with respect to weight-loss, cardiovascular disease and all-cause mortality. There is also evidence to suggest that GLP-1 agonists can improve cognitive function and mood. The present study will identify all individuals prescribed type 2 diabetes medication, together with drugs used in the treatment of depression, anxiety and dementia.

Analysis of T2D prescription data at a population level will permit identification of prescribing patterns of T2D drugs and allow us to compare co-prescription of drugs to treat depression, anxiety and dementia in those receiving different T2D drugs. To do this, we will request data from the Honest Broker Service (HBS) for all individuals prescribed T2D drugs in Northern Ireland and will also request data for drugs to treat depression, anxiety and dementia in the same individuals.

Primary Research Objective: To identify co-prescription of anti-depressants, anxiolytics and dementia drugs with T2D drugs and compare proportions of mental health prescriptions between different T2D drug classes.

Secondary Research Objectives: To assess regional patterns of type 2 diabetes and comorbid mental health conditions, and correlate same with levels of deprivation (per super output area).

The HSC data will be used to identify the core cohort of patients prescribed diabetic drugs as well as prescribing in relation to anti-depressants, anxiolytics and dementia drugs.