

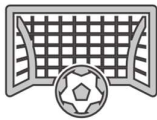
Diabetes Data Science Catalyst Project summaries

Project Title 2: Diabetes, Obesity and Heart failure - Insights from Big Data across the UK and Denmark



Challenges addressed by the proposed project

There is increasing prevalence of diabetes, obesity, cardiovascular disease and heart failure across most populations globally. The increase in diabetes includes both type 1 and type 2 diabetes. It is recognised by doctors that cardiovascular disease is commonly identified in patients with type 1 and type 2 diabetes, however recent research has revealed that heart failure is an under-recognised complication of diabetes.



Project Goal - how will the project be the solution to address/ understand the challenge or problem?

The key aims for this project are in development, some examples might include:

- 1) To identify how common heart failure is in patients with Type 1 and Type 2 Diabetes across the UK and Denmark and how many new cases are identified within each year of the study period.
- 2) To evaluate the outcomes (identifying what has happened to patients) in patients with both Heart Failure and Type 1 or Type 2 Diabetes. We will also look at how these patients may have been affected by the Covid-19 pandemic.
- 3) What is the relationship between obesity, Heart Failure, Type 1 diabetes and patient outcomes?
- 4) Identify any sub-groups within the populations who may be more affected in any of the above questions, this could include ethnicity and social and economic status.

How will we do this?

We will work with the Steno Diabetes Centre in Denmark who can securely access data from Danish National Registries. In the UK we will be able to securely access data including data from NHFA (National Heart Failure Audit). No data would be transferred between the two countries, but the same questions would be asked of both sets of data.



How could this project provide impact e.g. how will it benefit patients/NHS, inform policy etc?

By working across different countries, we will be able to securely access data from a much larger population. This may help to identify smaller groups (such as minority ethnic groups) within both countries who may have different outcomes or responses to treatments. This type of project would aim to provide some insights within a short timeframe to then develop and fund further critical research in this area.