

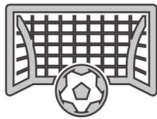
Diabetes Data Science Catalyst Project summaries

Project Title 3: Smart Health - Glucose Monitoring Data



Challenges addressed by the proposed project

There has been a huge increase in use of Continual Glucose Monitors (CGM) in the UK in the last few years with currently over 250,000 people actively using CGM in the UK. CGM provides minute-by-minute information on how glucose varies within an individual – this information is used to support Type 1 diabetes self-management. We aim to enable research access to this data which can then be linked to the individuals routinely collected health data. We will develop a number of proof-of-concept studies to establish that the use of CGM and other diabetes self-reported data can provide valuable insights into diabetes health outcomes that will improve the care for people with 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) How does CGM data help to predict possible complications of Type 1 diabetes complications e.g. Eye problems or kidney problems?
- 2) Does a Hypo (Hypoglycaemia, when a patient's blood sugar drops too low) identified on a CGM predict a serious Hypo that would result in a patient being admitted to hospital?

How will we do this?

Patients using CGM's can give their permission to share their data with their clinicians so it can form part of their clinical record. By applying for the correct ethical and regulatory approvals we hope to securely access this data and link this to other UK datasets such as hospital admission data.



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

By securely linking CGM data to hospital admission and other health data we will be able to, for the first time, access large scale detailed glucose monitoring information. This data could provide valuable insights into the management of Type 1 diabetes and directly affect the advice and information provided to both the patients and the clinicians treating them.