

# **Implementing glucose monitoring technologies in hospitals and care homes for people living with diabetes**

Diabetes UK welcomes applications for research which seeks to **improve the implementation of glucose monitoring technologies for the care of people living with diabetes**. We are interested in applications which look at implementation within the setting of (1) hospitals and (2) care homes.

## **Background**

### **Theme 1: Implementation in hospitals**

The Diabetes Research Steering Group on Acute Care has identified that there is a need to understand how current and novel glucose monitoring technologies can be better utilised in hospitals to improve inpatient care for people living with diabetes.

Currently, [GIRFT](#) guidance recommends that all hospitals use web-linked blood glucose and ketone meters that allow inpatient diabetes teams to remotely monitor blood glucose and ketone data, and alert ward nursing staff of out-of-range results.<sup>1</sup> Doing so has been found to reduce severe hypoglycaemic events by over 45%.<sup>2</sup> However, only 70% of trusts have such systems, and only 50% are using alerts and remote access.<sup>1</sup>

Additionally, there is an increase in the use of glucose monitoring technology (Continuous Glucose Monitoring (CGM) / Flash monitoring) within the population of people with type 1 diabetes that will be carried through to inpatient stays, and which provide additional sources of information.

We have identified a need for implementation research, investigating how diabetes connected meters or other sensing technology is used within the hospital environment (intensive care and general ward environments). This could include but is not limited to:

- Feasibility, acceptability, and cost-effectiveness of the implementation of connected glucose monitoring technology within hospitals.
- Impact of active use of out-of-range glucose alarms in the inpatient context and the impact of altering thresholds of these alarms for both hyper- and hypoglycaemia.
- Implementing the use of data from Continuous Glucose Monitoring (CGM) / flash monitoring devices in the inpatient setting.

Outcomes of interest could include:

- Person-specific clinical and surrogate outcomes e.g. impact on glucometric outcomes: hypoglycaemia / severe hypoglycaemia / hyperglycaemia / glycaemic variability / time in range (TIR); incidence of ketoacidosis; and/or
- System-level outcomes e.g. impact of the implementation of various technologies on longer-term clinical outcomes e.g. in-hospital infections, readmission rates, in-hospital and early post-discharge mortality etc

## **Theme 2: Implementation in care homes**

By 2050 the number of people aged 85 years and over will be greater than eight million in the UK. The number of older people living with diabetes is set to rise, with a growing population requiring care in their older age. At present, one in four people in care homes has diabetes. People with diabetes living in care homes have high levels of frailty and multimorbidity and face unique daily challenges managing their diabetes. Moreover, there are evident difficulties in communication between care homes and diabetes healthcare providers, which inevitably leads to shortfalls in the quality of care available. These factors exacerbated the impact of COVID-19 in care homes and increased the vulnerability of those residents with diabetes. There is an urgent need to re-examine how diabetes care is delivered to residents with diabetes and the use of glucose monitoring technology to aid this process. The overarching aim is to ensure that residents of care homes should expect the same level of support/care as if they were living in their own homes.

Objectives:

This funding opportunity seeks to develop innovative approaches using glucose monitoring technology that can be translated to the most pressing health problems faced by residents with diabetes in care homes and change how diabetes care is delivered.

We aim to support projects that:

1. Will generate real-world impact
2. Are co-created with stakeholders i.e. care home staff, councils and older people living with diabetes
3. Give more support to people who look after family members, partners or friends living with diabetes

Innovation in glucose monitoring technologies can tackle a range of health and technical issues. This may include addressing (but is not restricted to):

- The significant lack of data sharing between all stakeholders involved in the care of residents with diabetes.

- The skills gap in the knowledge of care home staff in using glucose monitoring technology as part of their care processes.
- Whether the use of glucose monitoring technology by care homes in close liaison with community-based teams, primary care or community pharmacists is likely to improve quality, efficiency and patient experience of care.
- Whether glucose monitoring technology can be used to support older people in care homes with health issues before they need hospital treatment and help those leaving the hospital to return and recover in the community.

## Funding

Diabetes UK invites applications to kick-start research in these areas. The highlight notices form part of the project grant funding scheme which provides funding of up to £500,000 over five years. Please note they do not have ringfenced funding and these applications are in open competition with all the other applications that we receive.

## Deadline

The deadline for applications is 3 June 2024 17:00 hrs (funding decisions will be made in October 2024)

## How to apply

Apply for a Diabetes UK grant through our online portal and select “*glucose monitoring technologies in hospitals and care homes*”.

For further details please contact the Diabetes UK Research team at [research@diabetes.org.uk](mailto:research@diabetes.org.uk)

## Application assessment process

Applications will be assessed by the scientific panel on the following criteria:

- Potential difference the research will make to the lives of people with diabetes.
- Scientific excellence and potential impact.
- Track record of the applicants.
- Value for money.

Applications will be assessed by the Grants Advisory Panel on the following criteria:

- Relevance to people with diabetes and its potential impact.
- The timescale on which the project could make a difference to people living with diabetes.

- The extent of involvement of people with diabetes in the development and management of the study.

## References

1. Rayman, G., & Kar, P. (2020). *Diabetes: GIRFT Programme National Specialty Report*. <https://www.gettingitrightfirsttime.co.uk/wp-content/uploads/2020/11/GIRFT-diabetes-report.pdf>
2. Akiboye F, Adderley NJ, Martin J, Gokhale K, Rudge GM, Marshall TP, Rajendran R, Nirantharakumar K, Rayman G; DICE team. Impact of the Diabetes Inpatient Care and Education (DICE) project on length of stay and mortality. *Diabet Med*. 2020 Feb;37(2):277-285. doi: 10.1111/dme.14062. Epub 2019 Aug 2. PMID: 31265148.