Applying diabetes technologies during the hospital pathway to improve care for people living with diabetes

Endorsed By: Association of British Clinical Diabetes Diabetologists, UK Clinical Pharmacy Association (Diabetes and Endocrinology), Diabetes Inpatient Specialist Nurse UK Group, Getting It Right First Time and the Joint British Diabetes Societies for Inpatient Care.

Background

There is rising use of diabetes technologies, including glucose sensors, connected insulin pens, insulins pumps and automated insulin delivery systems in people living with diabetes. The benefits of these technologies are not being exploited in the acute care setting, including peri-operatively and in acute maternity settings, where there continues to be an unacceptably high risk of harms for people with diabetes.[1]

Several randomised clinical trials have shown limited, if any, improvements in glucose outcomes with glucose sensor use in hospitals compared to point of care glucose measurements.[2-7] This may be because existing systems and workflows for diabetes management during acute care have not yet been adapted to harness this technology. We have identified a need for research investigating how diabetes technologies can be safely and effectively integrated into the hospital environment to improve outcomes.

We have also identified a need to enhance insulin administration, where it is the preferred method for glucose management. This applies throughout the hospital journey - from prior to admission, during the hospital stay and immediately following discharge. Where safe and appropriate, this includes facilitating self-administration of insulin, and spans a range of approaches, including the use of insulin injections, insulin pumps, automated insulin delivery systems and decision support systems to improve outcomes.

Particular outcomes of interest include:

- clinical outcomes including, but not limited to, length of stay user experience and/or reducing inequalities in acute diabetes care
- evaluation of implementation processes including, but not limited to, appropriateness, workflow integration, healthcare provider experience and/or efficiency

Specific research priorities we have highlighted include:

1. Research investigating how glucose sensor data and safety alerts/alarms can be made accessible to healthcare providers and integrated into ways of working in the acute care setting, both for people with diabetes already using glucose sensors and/or where glucose sensors are used exclusively in hospital.
2. Research investigating how people with diabetes and healthcare providers can benefit from using glucose sensors throughout the hospital journey (in preparation for, during admission and immediately following discharge) with regards to improved clinical outcomes.
3. Research focussed on empowerment and greater preparedness for hospital admission, including safe self-administration of insulin for people with diabetes during their inpatient stay.
4. Research investigating the role of decision support tools using glucose and insulin data from within the electronic healthcare records.
5. Research investigating how to apply diabetes related technologies to improve outcomes in preparation for, during and after surgery and within acute maternity care. This includes approaches that would be suitable for people with significant mental health issues, frailty, cognitive impairment or special educational needs.

Funding

Diabetes UK invites research proposals that address these knowledge gaps in line with our project grant scheme which provides funding of up to £500,000 over five years.

Applicants are encouraged to show evidence of substantial patient and public involvement in all stages of the development and delivery of their project.

Deadline

The deadline for applications is **1 June 2026 17:00 hrs** (funding decisions will be made in September/October 2026)

How to apply

Apply for a Diabetes UK grant through our online portal and select ***"Using diabetes technology in hospitals to enhance diabetes care"***

For further details please contact the Diabetes UK Research team at research@diabetes.org.uk

Application assessment process

All applications received under this highlight notice will be assessed through the Diabetes UK standard assessment procedure for Project grants and will be considered in competition with all applications submitted.

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

- Potential difference the research will make to the lives of people living with and at risk of 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 and at risk of diabetes.
- The extent of involvement of people with diabetes in the development and the management of the study.

References

1. NHS England. National Diabetes Inpatient Safety Audit 2022-23. June 2024. Available at https://digital.nhs.uk/data-and-information/publications/statistical/national-diabetes-inpatient-safety-audit-ndisa

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