NHS
North Tees and Hartlepool
NHS Foundation Trust

Care Home Pilot Reduces Diabetes-Related Hospital Admissions by 97% with FreeStyle Libre 2 Continuous Glucose Monitoring System

The North Tees and Hartlepool NHS Foundation Trust serves around 400,000 residents across Hartlepool, Stockton-on-Tees and parts of Durham, offering comprehensive hospital and community services.[1] In early 2023, the Trust partnered with the McKenzie Group practice, which operates multiple primary care sites in Hartlepool,[2] to implement a care home pilot to address the high rates of hospitalisations among care home residents due to diabetes-related complications.

By combining the use of Abbott's FreeStyle Libre 2 continuous glucose monitoring (CGM) system with structured training for care home staff, the initiative enabled earlier detection of complications such as hypoglycaemia, more confident on-site management and fewer emergency hospitalisations – dropping from 35 admissions in 2023 to just 1 in 2024.[3]

According to the National Diabetes Inpatient Audit in 2019, 96%[4] of admissions for people with diabetes were emergency admissions, often linked to preventable issues such as treatment errors or delayed intervention. This programme was designed to close that gap by equipping frontline staff with the knowledge and tools to deliver proactive diabetes care within the care home setting. The results have been transformative – not only reducing admissions and lengths of hospital stay, but also boosting staff confidence, improving resident well-being and generating significant cost savings for the health system.[3,5]

Images are for illustrative purposes only. Not actual patient or data.

IMPROVED PATIENT OUTCOMES AND HEALTH-SYSTEM SAVINGS

The initiative that was implemented across several care homes reduced diabetes-related hospital admissions from 35 cases over a 6 month period to just 1 case. Additionally, hospital stays that previously totalled 235 days were drastically reduced to just 4 days.[3]

These improvements translated into substantial cost savings. Over 6 months, Hartlepool Health Primary Care Network (PCN) saved an estimated £161,700[3] in hospital-related expenses. The average cost of a district nurse visit to a care home is typically around £22 to £47 per hour.[5] By reducing the demand for district nursing services, this initiative generated annual savings of £12,012.[3,5]

EMBEDDING DIABETES TECHNOLOGY FOR REAL-TIME INSIGHTS

According to NICE Guideline NG28,[6] adults with insulin-treated type 2 diabetes who would otherwise need help from a care worker or healthcare professional to monitor their blood glucose should be offered continuous glucose monitoring.[6]

At the heart of the programme was the introduction of FreeStyle Libre 2 CGM sensors,* which allowed for continuous monitoring of care home residents' glucose levels. Traditional finger-prick testing methods often missed dangerous fluctuations – especially those occurring overnight – which often contribute to emergency hospital visits and extended admissions. The FreeStyle Libre 2 system was able to provide real-time insights, empowering care home staff and healthcare professionals to act before complications occurred.

Abbott's provision of accessible materials, including Easy Read guides, ensured that community teams, care home staff and residents received the support needed to use CGM effectively.

Emma Golby (*left*), Diabetes Specialist Nurse, and Julie Sinclair (*right*), Lead Adult Diabetes Nurse, North Tees and Hartlepool NHS Foundation Trust.

The project demonstrated the value of CGM in community settings, with teams increasingly identifying suitable patients and initiating CGM as part of routine diabetes care. To further embed this practice, Abbott delivered an online training session across Tees Valley, attended by district nursing staff from the North Tees and Hartlepool NHS Foundation Trust. This session not only strengthened confidence in applying CGM in day-to-day care but also generated valuable learning that was cascaded across community teams.

Julie Sinclair, Lead Adult Diabetes Nurse, North Tees and Hartlepool NHS Foundation Trust, said:

"By adopting a multi-layered approach of training, regular reviews by a specialist diabetes nurse and the introduction of new technology, the team has reduced diabetes-related admissions to hospital by an extraordinary amount.

We raised awareness of diabetes-related complications such as hypoglycaemia with care home staff by training them in continuous glucose monitoring, how to recognise various signs and symptoms and to provide simple, initial treatment to keep people safe."

IMPROVING PATIENT SAFETY WHILST CREATING EFFICIENCIES IN NURSING VISITS

Regular reviews conducted by a specialist nurse served to assess each resident's condition and optimise care plans, which further reduced the likelihood of emergencies. Care home staff also underwent focused training to develop their confidence in recognising and responding to diabetes-related complications such as hypoglycaemia. They were also trained to provide simple, initial treatments to prevent minor issues from escalating into critical situations.

"Having the diabetes nurses regularly reviewing the residents within the home has been useful to the staff, as it has raised awareness of diabetes as a whole." explained **Rachael Smith, Manager of Queens Meadow Care Home,** which was part of the pilot.

"Training the staff on hypoglycaemic events has grown their confidence in looking after patients with diabetes. Residents were having quite a few hypoglycaemic events overnight, and having the glucose monitors has meant these have been reduced and our residents are safer."

Rachael further explained:
"Having the nurses regularly review the residents has meant that we have been able to ask questions when we were unsure of something. This has reduced the amount of times our residents have been admitted to hospital with diabetes-related incidents to zero."

With the direct nurses also benefitting from time savings, there were fewer callouts required to manage residents living with diabetes. District nurses saved approximately 10.5 hours per week, freeing valuable time to focus on other patients in need.

A BLUEPRINT FOR FUTURE CARE MODELS

The success of this initiative highlights the potential of combining diabetes technology with ongoing staff training to optimise outcomes for care home residents using the FreeStyle Libre 2 system, all while reducing healthcare costs. With the average cost of a hospital stay estimated to range between £400 and £700 per day for general care and up to £1,500 to £2,000 per day for specialised care such as intensive care,[5] the financial implications of reducing admissions are significant.

By empowering care home staff to manage diabetes more effectively, the initiative has provided a replicable model for similar care settings, demonstrating the value of continuous glucose monitoring in improving care quality and patient safety.

*FreeStyle Libre 2 sensors refer to Libre 2 or Libre 2 Plus sensors

1. North East and North Cumbria Provider Collaborative – North Tees and Hartlepool NHS Foundation Trust. Available at: https://nenc-providers.nhs.uk/provider-collaborative-members/tees-valley/north-tees-and-hartlepool-nhs-foundation-trust. Accessed January 2026. **2.** McKenzie Group Practice – About the Surgery. Available at: https://www.mckenziegroupppractice.co.uk/about-the-surgery. Accessed January 2026. **3.** Data on File, (2023–2024) NHS North Tees & Hartlepool NHSFT Care Home Project. **4.** NaDIA 2019 – Hospital Level Analysis 2010–19 v1.0. **5.** National Cost Collection for the NHS – National Cost Collection Index. Available at: https://www.england.nhs.uk/costing-in-the-nhs/national-cost-collection/. Accessed January 2026. **6.** NICE guideline NG28 (2015) Last updated: 29 June 2022; available at https://www.nice.org.uk/guidance/ng28. Accessed January 2026.