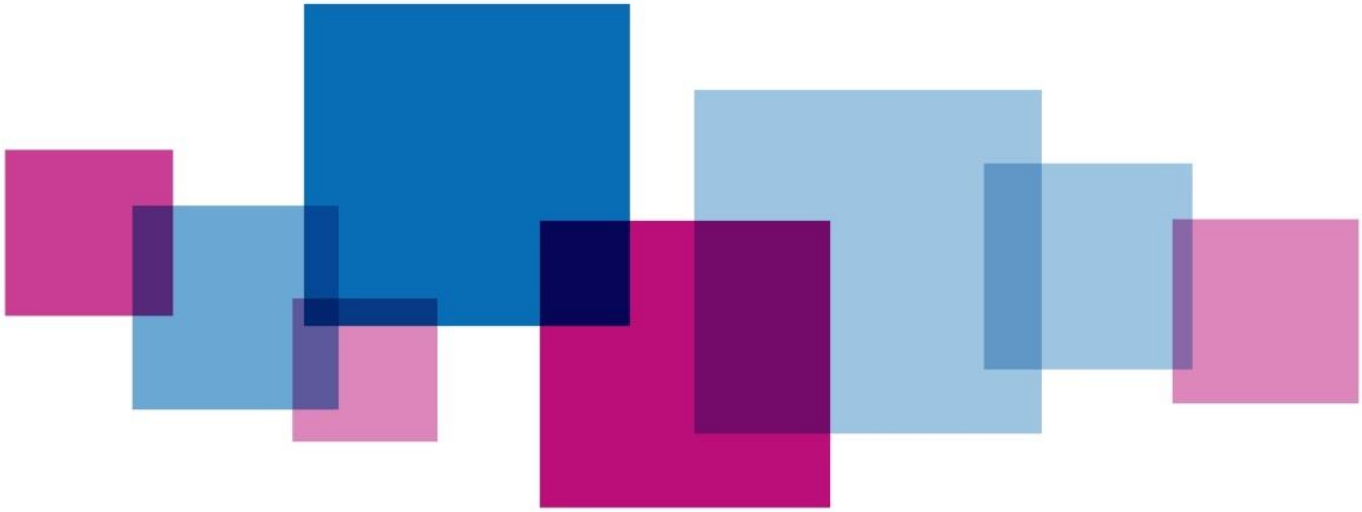
Clinical Pathway for the use of diabetes technologies in all patients with Type 2 Diabetes



Produced in collaboration with Adults, Children and Young People BNSSG Diabetes Teams
BNSSG Medicines Optimisation Team. Approved by BNSSG APMOC (November, 2023) July 24 update to sensor names and information
Review (November, 2026)

Shaping better health

INTRODUCTION

This pathway has been developed to accommodate the NICE recommendations for Continuous Glucose Monitoring (CGM) for patients with Type 2 diabetes in the following published clinical guidelines:

1. NICE guideline [NG28] **Type 2 diabetes in adults: management**
2. NICE guideline [NG3] **Diabetes in pregnancy: management from preconception to the postnatal period**
3. NICE guideline [NG18] Diabetes (type 1 and type 2) in children and young people: diagnosis and management

TYPES OF CGM

CGM is a device which measures glucose in the interstitial fluid (the fluid between cells), rather than capillary blood glucose levels from finger-prick testing, via a sensor which is inserted under the skin.
The information will allow trends in glucose levels to be seen and alarms can alert patients if glucose levels are too high or too low.
There are two types of CGM -

Intermittently scanned CGM (isCGM)
With isCGM or Flash Glucose monitoring the sensor is worn on the upper arm, updating the glucose result every minute and stores up to eight hours of glucose readings in 15-minute intervals. A reader device is scanned over the sensor to read the result. This technology is suitable for all patients over 2 years of age.

Real time CGM (rtCGM)
With Continuous Glucose the sensor is either connected to a transmitter that automatically sends continuous glucose results to a receiver device every 5 minutes. If using Flash glucose monitoring with an app and smartphone, this also acts as real time CGM and sends glucose readings directly to a smartphone every minute. These results are presented as continuous values and trends over time, enabling immediate therapeutic adjustments on the basis of 'real time' glucose results.

ELIGIBILITY

Patients with Type 2 diabetes must fulfil one of the following criteria to be considered for CGM.

Adults –

- **on multiple daily insulin injections (two or more daily insulin injections) and at least one of the following apply:**
  - **they have recurrent hypoglycaemia (Frequent events of hypoglycaemia that occur each week or month and have an impact on quality of life) or severe hypoglycaemia (Episodes of hypoglycaemia that require assistance from another person to treat)**
  - **they have impaired hypoglycaemia awareness**
  - **they have a condition or disability (including a learning disability or cognitive impairment) that means they cannot self-monitor their blood glucose by capillary blood glucose monitoring but could use an isCGM device (or have it scanned for them)**
  - **they would otherwise be advised to self-measure at least 8 times a day.**
- **on insulin and would otherwise need help from a care worker or healthcare professional to monitor their blood glucose.**
- **Patients with type 2 diabetes on haemodialysis and who are on insulin treatment AND as a result of a clinical need, have to self-monitor their blood glucose 8 times or more per day as demonstrated on a meter download/review over the past 3 months**

Pregnant women -

- **on insulin therapy and have:**
  - **problematic severe hypoglycaemia (with or without impaired awareness of hypoglycaemia) or**
  - **unstable blood glucose levels that are causing concern despite efforts to optimise glycaemic control.**

Children and Young People –

- **Offer real-time continuous glucose monitoring (rtCGM) to children and young people with type 2 diabetes if any of the following apply. They:**
  - **have a need, condition or disability (including a mental health need, learning disability or cognitive impairment) that means they cannot engage in monitoring their glucose levels by capillary blood glucose monitoring**
  - **would otherwise be advised to self-monitor at least 8 times a day**
  - **have recurrent or severe hypoglycaemia.**

Consider rtCGM for children and young people with type 2 diabetes who are on insulin therapy.

Consider intermittently scanned continuous glucose monitoring (isCGM, commonly referred to as 'flash') for children and young people with type 2 diabetes aged 2 years and over who are on insulin therapy if:

- **rtCGM is contraindicated for them or**
- **they express a clear preference for isCGM.**

In July 2024, use of isCGM for children aged under 2 years was off-licence.

INITIATION, EDUCATION & TRAINING

Initiation is restricted to clinicians who have completed self-directed training which is available via the following:

- Diabetes Technology Network
- Diabetes UK Diabetes Technology Module
- EDEN Diabetes - Implementing Glucose Sensing in Primary Care' education package
- Glooko Academy, the following modules are relevant
  1. Self-Monitoring Blood Glucose (SMBG)
  2. Flash Glucose Monitoring-essential for primary care

Registration is required-https://eu.my.glooko.com/patients

- TREND Diabetes - via the learning hub All Courses – Trend Diabetes Learning Platform - Sensor technology for community nurses: a practical toolkit and glucose sensor technology podcast

Initiation should not be limited to case setting and can occur via Primary Care, Secondary Care or Community Teams.

The initiating team will provide the patient with a device, if required (reader and/or transmitter) and at least 2 weeks supply of sensors on initiation.

It is expected that patients' complete education on their CGM either online where available or in person to ensure they are obtaining maximal benefit from the technology. Ongoing review of the CGM should be undertaken as part of the routine diabetes reviews and, where that review is not undertaken by the Primary

care team, clearly documented and communicated to **primary care for ongoing repeat prescribing of the sensors and transmitters, if required.**
Clinicians will need to set up access at their clinic setting to the relevant device platform to allow the review of patient CGM data (see table below). Information about how to set this up can be found via the training resources listed above or directly from the manufacturers. A Data Protection Impact Assessment (DPIA) has been completed by BNSSG ICB for use of the LibreView, Clarity and GlucoRx Voyager platforms. If you require a copy of this, please contact bnssg.medicines-optimisation@nhs.net The DPIA will be reviewed as required in line with any updates or amendments to the pathway.

The following table lists the current prescribe CGM devices.
When choosing a CGM device: use shared decision making to identify the person's needs and preferences, and offer them an appropriate device. If multiple devices meet their needs and preferences, offer device with lowest acquisition cost.

	Type of CGM	Licensed age of use	Wearable site	Sensor duration	Sensor Cost (Calculated for 30 day supply July 24 Drug Tariff)	Transmitter duration and cost	Reader available	App needed	Platform for sharing with HCP
GlucoRx Aidex	rtCGM	≥ 14 years	**Abdomen Upper arm**	14 days	£63.77	Up to 4 years £19.95	No	GlucoRx AIDEX	GlucoRx Voyager
Dexcom One+	rtCGM	≥ 2 years	**Upper buttocks (2-6 years) Abdomen Upper arm**	10 days	£74.91	No transmitter	Yes	Dexcom ONE+	Clarity
FreeStyle Libre 2+	isCGM/ rtCGM*	≥ 2 years	**Upper arm**	15 days	£75.00	No transmitter	Yes	LibreLink	LibreView

* The FreeStyle Libre 2+ functions as rtCGM when paired with the LibreLink app on a smartphone and as isCGM (requiring manual scanning) when used with the Libre Reader device.

BLOOD GLUCOSE TESTING STRIPS AND METER

The choice of meter and test strips should be based on BNSSG Type 2 Diabetes Blood Glucose Monitoring Guidance (Adults) Patients with type 2 diabetes who are using CGM will still need to take capillary blood glucose measurements although they can do this less often: to check accuracy of their CGM device and as a back-up e.g., when blood glucose levels are changing quickly or if the device stops working. Reduce to 1 box every 3 months or on request.

Please also note that the prescribing of adhesive remover wipes is not recommended, patients should be directed to use warm, soapy water to remove any remaining adhesive following removal of the sensor.

DRIVING AND DVLA REQUIREMENTS

The DVLA (Driver and Vehicle Licensing Agency) requires all patients who use insulin to monitor their blood glucose levels before driving and every two hours on long journeys. Group 2 drivers must continue to use finger prick testing for the purposes of driving. RT-CGM and flash glucose monitoring systems are not legally permitted for the purposes of Group 2 driving. For full self-monitoring requirements, please contact the DVLA directly or visit their website https://www.gov.uk/diabetes-driving

SELF-FUNDING PATIENTS WITH TYPE 2 DIABETES

Assessment for NHS funding of CGM will be undertaken at the next follow-up appointment. NICE criteria must be met, and device choices should be within the guidance of the technology pathway and as such may result in a change of device for the patient.

RECORDING CGM USAGE

To support System monitoring of the use of CGM the following codes should be added to the patient record to record discussion (including if declined), provision and cessation of isCGM or rtCGM respectively.

Code	Term
1464621000000103	Intermittently scanned continuous glucose monitoring stopped (situation) / Flash glucose monitoring stopped
1464531000000102	Intermittently scanned continuous glucose monitoring declined (situation) / Flash glucose monitoring declined
1464651000000108	Discussion about intermittently scanned continuous glucose monitoring (procedure) / Discussion about flash glucose monitoring
1464551000000109	Provision of intermittently scanned minimally-invasive interstitial fluid continuous glucose monitoring system (procedure) / Provision of flash glucose monitoring system
1464641000000105	Real-time continuous glucose monitoring stopped (situation) / Continuous glucose monitoring stopped
1464541000000106	Real-time continuous glucose monitoring declined (situation) / Continuous glucose monitoring declined
1464661000000106	Discussion about real-time continuous glucose monitoring (procedure) / Discussion about continuous glucose monitoring
1464561000000107	Provision of real-time minimally-invasive interstitial fluid glucose monitoring system (procedure) / Provision of continuous glucose monitoring system