

Regional N.Ireland Pathway for the Managed Access of Glucose Sensor Monitoring devices for People age ≥ 16 years Living with TYPE 2 DIABETES

This pathway is for use by secondary care diabetes health care professionals to assess if people aged ≥ 16 years living with type 2 diabetes are suitable for glucose sensor monitoring devices.

This pathway provides criteria to support clinical decision making processes. Criteria are in line with [NICE Guideline 'Type 2 diabetes in adults: management \(NG28\)'](#).

Criteria for glucose sensor monitoring devices

Offer glucose sensor monitoring devices to adults with:

- (1) Type 2 Diabetes attending secondary care clinic **AND**
- (2) Taking ≥ 2 insulin injections daily **AND** have one of the following:
 - recurrent hypoglycaemia or severe hypoglycaemia
 - impaired hypoglycaemia awareness
 - 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 a CGM device
 - would otherwise be advised to self-measure at least 8 times a day.
- 3) Insulin treated Type 2 diabetes who would otherwise need help from a care worker or healthcare professional to monitor their blood glucose

***Selection of device**

When choosing a glucose sensor monitoring 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 the device with the lowest cost.

Factors to consider when choosing a glucose sensor monitoring device

- Accuracy of the device
- Whether the device provides predictive alerts or alarms and if these need to be shared with anyone else (for example, a carer)
- Whether using the device requires access to particular technologies (such as a smartphone and up-to-date phone software)

- How easy the device is to use and take readings from, including for people with limited dexterity
- Fear, frequency, awareness and severity of hypoglycaemia
- Psychosocial factors
- Whether, how often, and how the device needs to be calibrated, and how easy it is for the person to do this themselves
- How data can be collected, compatibility of the device with other technology, and whether data can be shared with the person's healthcare provider to help inform treatment
- Whether the device will affect the person's ability to do their job
- How unpredictable the person's activity and blood glucose levels are and whether erratic blood glucose is affecting their quality of life
- Whether the person has situations when symptoms of hypoglycaemia cannot be communicated or can be confused (for example, during exercise)
- Clinical factors that may make devices easier or harder to use
- Frequency of sensor replacement
- Sensitivities to the device, for example local skin reactions
- Body image concerns

*****If a person cannot use or does not want to use a glucose sensor monitoring device, offer capillary blood glucose monitoring*****

***Refer to Appendix 3:** Glucose monitoring systems comparison chart, issued by Diabetes Specialist Nurse Forum UK for the specifications of devices (updated June 2024)

NOTE: Other devices may come onto the market or be added to this pathway following publication of this guidance

Consent and Training

- Patient consent obtained to ensure that they wish to use the system
- Patient referred for training
- Training should include device management **and** glucose data interpretation and optimisation
- At training, patient to be provided with details to join remote platform linked to local clinic (LibreView/Clarity/Diasend)
- Patient provided with relevant patient information leaflet, including details on relevant contacting manufacturer in event of faulty sensor (see appendix 2 for sample patient leaflets)
- Patient supplied with reader/transmitter (if applicable) and starter pack of sensors
- If the patient is switching from one sensor device to another, if appropriate ask patient to use up supplies of the old sensor prior to using the new sensor device.

Supply of sensors and transmitters/readers

At present the following sensors are available on this pathway:

- Dexcom ONE[®], Dexcom ONE Plus[®]
- Freestyle Libre 2[®], Freestyle Libre 2 Plus[®], *Freestyle Libre 3[®]

These sensors are listed on the N.Ireland Drug Tariff (June 2024) and do NOT require capillary glucose checks for either treatment decisions or calibration.

Sensor Name	Length of time sensor lasts	Pack Sizes available	Maximum quantity to prescribe	Transmitter required Y/N	Reader Available Y/N (for patients who are unable to access or use the smartphone application)
Dexcom One [®]	10 days	Pack size 1 AND Pack size 3	**Prescribe 3 sensors every 30 days	Yes; Maximum 1 transmitter to be prescribed every 3 months <i>(Note the first transmitter is supplied by the Trust)</i>	Yes, but not prescribable, It is available free of charge from Dexcom. This will be based on an assessment of specific patient needs.
Dexcom ONE Plus [®]	10 days	Pack size 1	Prescribe 3 sensors every 30 days	No	
Freestyle Libre 2 [®]	14 days	Pack size 1	Prescribe 2 sensors every 28 days	No	Yes, but not prescribable. It is available free of charge from Abbott.
Freestyle Libre 2 Plus [®]	15 days	Pack size 1	Prescribe 2 sensors every 30 days	No	This will be based on an assessment of specific patient needs.

****Please take extra care when prescribing Dexcom One[®] sensors to ensure that only 3 sensors are prescribed per month, as there are 2 different pack sizes available**

***Freestyle Libre 3[®]**

Freestyle Libre 3[®] sensor; **This sensor must ONLY be prescribed as part of a Hybrid closed loop system with CamAPS FX control algorithm & YpsoPump insulin pump.**

See Appendix 1 for sample GP letter.

Capillary blood glucose monitoring strips

Patient's current method of testing blood glucose and/or blood ketones to be reviewed.

Advise GP of appropriate monthly quantity of test strips to prescribe (this will be a reduction if patient previously not using a sensor)

Patients should be given separate meter(s) which use cost effective blood glucose strips; <£10 for 50 and cost effective ketone test strips <£10 for 10, to use alongside sensors

(Refer to the relevant meter guidelines on the N.Ireland formulary website at the following link: [6.1.6 Diagnostic and monitoring agents for diabetes mellitus | NI Formulary \(hscni.net\)](#))

Note: The FreeStyle Libre® reader has a built in port to enable blood glucose and ketone testing. This requires use of FreeStyle Optium® blood glucose test strips and FreeStyle Optium β Ketone® strips, which are NOT cost effective choices of blood glucose and ketone strips. **Prescribe an alternative cost effective choice of blood and ketone strip.**

GP Communication:

Letter to be issued from secondary care clinic to patient's GP. Letter to outline the following (see Appendix 1):

- Patient has met the criteria for sensor technology and is now eligible to receive sensors on prescription
- Patient has received training on the device
- First time users have been supplied with a starter pack of sensors and reader/transmitter (if necessary – see tables above)
- Request GP to issue prescriptions for chosen sensors (see table above for maximum quantity to prescribe- depending on brand of sensor)
- Note: For Dexcom One request GP to prescribe a Dexcom Transmitter every 3 months
- **If the patient is switching from one drug tariff sensor type to another, advise GP to remove the original sensors from the patient's repeat prescription list.**
- Inform GP of the patient's continued review at secondary care clinic
- Inform GP of the requirement to use recommended blood glucose test strips and ketone strips, if appropriate.
- Inform GP the quantity of blood glucose test strips to prescribe will be a reduced amount, if the patient has not previously been using a sensor.
- Inform GP that they should contact secondary care at any time if they are concerned as to the appropriateness of the continued use of the sensor technology system for a particular patient.

Follow up

Reassessment after 6-12 months of sensor usage should take place through secondary care. Ongoing prescription of sensors should only be recommended provided the following criteria are met:

1. Enrolled in remote platform linked to local trust (if possible)
2. Sensor usage demonstrated to be $\geq 70\%$
3. Improvement in either glycaemic control, hypoglycaemia, quality of life

Appendix 1: Sample letter to send to GP for prescription of sensors

Dear Dr {insert name},
 Your patient, {insert name}, who has Type 2 Diabetes requires a prescription for glucose monitoring sensors as detailed in the table below.
 I confirm that the patient has been provided with training on their use.

Patient is living with **type 2 diabetes** and is administering **more than 2 insulin injections per day**

AND has (please tick all that apply):

Recurrent hypoglycaemia

Impaired hypoglycaemia awareness

A condition or disability which mean they cannot finger prick to monitor glucose

Would otherwise be advised to self-measure at least 8 times a day

OR

Insulin treated Type 2 diabetes who would otherwise need help from a care worker or healthcare professional to monitor their blood glucose

Previous sensor prescribed	Please Tick	Enter details	Additional notes
YES			Please ensure these sensors are removed from the patient's repeat prescription list and are not prescribed again.
NO		N/A	N/A

Sensor Name	Length of time sensor lasts	Pack Size	Maximum quantity to prescribe	Tick which sensor to be prescribed
Dexcom ONE Plus®	10 days	Pack size 1	Prescribe 3 sensors every 30 days	
Freestyle Libre 2 Plus®	15 days	Pack size 1	Prescribe 2 sensors every 30 days	

Patients have been advised that should they receive a 'faulty' sensor, they should NOT request additional supplies via prescription but contact the company to obtain a replacement.

Your patient will continue to be reviewed in secondary care.

Patients will still, on occasions (e.g. during periods of sickness) be required to perform capillary blood glucose and/or capillary blood ketone testing. Please ensure the patient is prescribed an appropriate quantity of blood glucose strips and that these are prescribed in line with [guidance](#).

Please do not hesitate to contact our team if you have any concerns regarding the ongoing use of sensors in this patient.

Yours sincerely,

{Insert prescriber's name}

Appendix 2 : Sample Patient Information Leaflets

(a) Sample Patient Information Leaflet: FreeStyle Libre® 2 PLUS

Following assessment by your specialist diabetes team, you have been assessed as being eligible for a FreeStyle Libre® 2 plus system.

You will have received the appropriate training on the system and have been provided with a starter pack of sensors.

Each sensor lasts 15 days.

We have written to your GP to request that they prescribe a maximum of two FreeStyle Libre®2 Plus sensors per 30 days for you.

Please note that should you receive a 'faulty sensor', DO NOT contact your GP for another prescription.

Please contact the manufacturer (Abbott) directly for a replacement:

Abbott Customer Service Telephone number: 0800 1701177 (Mon – Fri 8am -8pm) excluding bank holidays).

You will have been made aware at your FreeStyle Libre® plus training session that a finger-prick test using a glucometer is still required e.g. during times of rapidly changing glucose levels (i.e. acute illness), if hypoglycaemia (low blood sugars) or impending hypoglycaemia is reported or the symptoms do not match the system readings.

Your diabetes specialist will discuss with you the most suitable glucometer for you to use alongside your FreeStyle Libre® plus system.

If you have any queries, please feel free to contact your diabetes team for further information.

(b) Sample Patient Information Leaflet: Dexcom ONE® PLUS

Following assessment by your specialist diabetes team, you have been assessed as being eligible for a Dexcom ONE® Plus Sensor system.

You will have received the appropriate training on the system and your HCP will have provided you with an initial Dexcom ONE® Plus Sensor box.

Each sensor lasts 10 days.

Please note: You do not require a separate transmitter for the Dexcom One® Plus sensor

We have written to your GP to request that they prescribe a maximum of 3 sensors per 30 days.

Please note that should you receive a 'faulty sensor', DO NOT contact your GP for another prescription:

Please contact the manufacturer Dexcom directly for a replacement.

Dexcom Tech Support: 0800 031 57 63 (Office opening times: Monday - Friday 07:00 - 18:00 & Saturday & Sunday 08:00 - 16:30) or via online product support request https://dexcom-intl.custhelp.com/app/support_request/

Additionally, there is further resources in [Help Centre](#) and [Training resource](#) pages.

You will have been made aware at your training session that a finger-prick test using a glucometer is still required when:

- Your sensor readings don't match your low or high symptoms.
- When your Dexcom ONE® Plus doesn't show both a number and trend arrow.
- During the 30 minute sensor warm-up period.

Your diabetes specialist will discuss with you the most suitable glucometer for you to use.

If you have any queries, please feel free to contact your diabetes team for further information.

Appendix 3

Real-time Continuous Glucose Monitoring Systems Comparison Chart

Diabetes Specialist Nurse Forum UK	FreeStyle Libre 2	FreeStyle Libre 2 Plus	FreeStyle Libre 3	Dexcom ONE	Dexcom ONE+	GlucoRx AiDEX
Real-time CGM	Yes*	Yes*	Yes	Yes	Yes	Yes
MARD (%)	9.2	8.2	7.8	9.0	8.2	9.1
Published accuracy data	Yes (T1 n=133)	No (T1=128)	Yes (T1 n=83)	Yes (T1 n=260)	Yes (T1 n=257)	Yes (T1 n=14)
RCT data	Yes	Yes (FSL/FSL2)	Yes (FSL/FSL2)	Yes (G4/5/6)	No	No
Stand-alone use	Yes	Yes	Yes	Yes	Yes	Yes
Pump/hybrid closed loop (HCL) compatibility	No	Omnipod 5	Ypsopump	No	No	No
Sensor life	14 days	15 days	14 days	10 days	10 days +12 hr grace period	14 days
Sensor warm up time	60 mins	60 mins	60 mins	120 mins	Up to 30 mins	60 mins
Separate transmitter	No	No	No	Yes	No	Yes
Transmitter Life	N/A	N/A	N/A	3 months	N/A	4 years
Smartphone app	LibreLink	LibreLink	Libre 3	Dexcom One	Dexcom One +	GlucoRx AiDEX
Reader available	Yes	Yes	Yes	Yes	Yes	No
Capillary glucose calibration	No	No	No	No	No	No
High & low alarms	Yes	Yes	Yes	Yes	Yes	Yes
Predictive alarms	No	No – stand-alone use	No - stand-alone use Yes - HCL use	No	No	No
Smart pen data connection	NovoPen 6 & Echo Plus	NovoPen 6 & Echo Plus	No	NovoPen 6 & Echo Plus [▲] SoloSmart pen cap [▲]	NovoPen 6 & Echo Plus [▲] SoloSmart pen cap [▲]	No
Data share HCP	LibreView	LibreView	LibreView	Clarity	Clarity	CGM Viewer
Data share friends/family app	LibreLinkUp	LibreLinkUp	LibreLinkUp	N/A	Dexcom Follow	GlucoRx AiDEX
UK approved wearable site	Back upper arm	Back upper arm	Back upper arm	Abdomen Back upper arm Buttocks ⁺	Abdomen Back upper arm Buttocks ⁺⁺	Abdomen Back upper arm

= available on prescription (FP10)
 = available via NHS supply chain

* When using LibreLink app on smartphone. ‘Scanning’ still required with reader device
 ** Different version of Guardian 4 sensor required
 ▲ via Glooko

⁺ 2-17 years old as per manufacturers' guidelines.
⁺⁺ 2-6 years old as per manufacturers' guidelines
⁺⁺⁺ 7-17 years old as per manufacturers' guidelines.