North East London
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North East London implementation document for continuous glucose sensors for adults with type 1 diabetes

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Scope and rationale

The National Institute for Health and Care Excellence (NICE) Guidance for adults with type 1 diabetes (NG17) changed in 2022 to include access to continuous glucose monitoring (CGM) technologies for all adults living with type 1 diabetes. This is an implementation document which aims to support NG17, empowering informed choice of device for adults with type 1 diabetes, ensuring equitable access for all groups and considering clinical characteristics that may be important for the safety and effectiveness of CGM technologies.

The scope of this document is for adults with type 1 diabetes only. A companion implementation document will be undertaken for CGM access for Children and Young People living with type 1 diabetes.

This document is based upon the pan-London implementation document for continuous glucose sensors for adults with type 1 diabetes (link) and is intended to aid local implementation in North-East London (NEL) for people with type 1 diabetes.

Suggested implementation and underlying principles

- It is recognized that people with type 1 diabetes will be accessing secondary care and primary care services regularly or periodically or accessing primary care services alone. Some individuals will rarely engage with any healthcare services and may be frequent attenders to emergency services and/or have significant mental health burden.
- It is recognized that there is significant inequality in outcomes for people from non-white ethnic minorities and more deprivation.
- This suggested protocol attempts to reduce inequalities to access to technology including due to lack of digital literacy.
- It is recognized that applying stringent clinical criteria to access to technology can exacerbate inequality, and this document attempts to keep pathways simple for healthcare users and clinicians alike.

Education and risk stratification

People with type 1 diabetes should be classified according to clinician judgement into the following categories:
RED: people with type 1 diabetes who are likely to struggle with either the device or the education resources available. This includes people with type 1 diabetes that are young adults, have a learning disability or neurodiverse, have a mental health history (particularly eating disorders), from deprived backgrounds or with difficult social circumstances or issues with literacy, numeracy and/or digital literacy. These individuals ideally need a specialist multidisciplinary (MDT)* discussion and risk assessment.
AMBER: people with type 1 diabetes who would not be suitable for online resources and may need either a face to face group consultation or an individual consultation to aid safe initiation of technology. This may include people with type 1 diabetes where English is not their first language. They may need closer clinical review after initiation.
GREEN: people with type 1 diabetes who are already familiar with glucose sensing devices and would be suitable to be directed towards online resources including webinars, video and industry literature. They do not need a routine clinical review but should have a contact number/email to access if they have any issues, particularly with skin irritation etc.

[* MDT – defined as containing diabetologist, diabetes specialist nurse, dietician and ideally psychology or psychiatry]

Suggested implementation for people with type 1 diabetes regularly or periodically accessing secondary care:

1. Identify people with type 1 diabetes during routine outpatient consultation for proposed use of glucose sensing device from the list of devices (appendix 1) according to patient choice and clinical criteria. Complete the Initiation and Transfer document (appendix 2), ideally with the patient and obtain patient implied consent.
2. In addition to above, consider identifying people with type 1 diabetes within the service that are clinical priorities including those with problematic hypoglycaemia, and inviting them for review. Pregnant women should be automatically prioritised and should be offered a glucose sensing device as soon as possible after pregnancy is confirmed.
3. The clinician should risk stratify the person with type 1 diabetes according to the red/amber/green classification above to ascertain the appropriate route for initiation.
4. For those identified as Red, they should be referred to a type 1 MDT to develop a risk assessment and bespoke clinical care plan/review schedule. For those identified as Amber, they may need face to face onboarding, some with an interpreter or other family members present. For those identified as Green, they are suitable for directing to online resources only and given contact details for any issues.
5. For those accessing devices from List 1 where a Blueteq form is required, order the device through the established process for the trust via NEL ICB Blueteq template.
6. For those accessing devices from List 1 or List 2 where available on FP10, prescribe 2 months of sensors using either trust pharmacy outpatient prescription or FP10
7. The review schedule after initiation should be determined by the initiating clinician and would generally follow the above red/amber/green risk classification.

8. It is suggested that for people accessing devices from lists 1, 2 or 3 where the glucose sensor is being used as a stand-alone device, that this does not necessarily need to be a clinical review but can be an administrative review to ensure that device is being used (using uploaded data), and then (electronically in most cases) the Initiation and Transfer document is sent to the patient's GP to continue with the prescription.
9. For people with type 1 diabetes where the glucose sensor will interact with existing insulin pump use, they will need individualised and close clinical review over the next 2-3 months. This will overlap with future documents on hybrid closed loop therapy.
10. For those people with type 1 diabetes accessing devices from List 1 where a Blueteq form is required, the Initiation and Transfer document can be kept as a record in the clinical records. The device will continue to be ordered through the secondary care service and will not be transferred to primary care.

Suggested implementation for people with type 1 diabetes that are accessing primary care alone:

1. As above, the person with type 1 diabetes should be classified according to the Red/Amber/Green classification as above. This may be during an annual review or opportunistic consultation.

2. For those identified as Red, these individuals would need to be either referred to or discussed with a type 1 diabetes specialist MDT for risk assessment and to develop a bespoke plan for glucose sensor initiation if deemed appropriate. If type 1 MDT is not available then these individuals could be discussed with the local specialist diabetes team through cluster meetings or advice and guidance.

3. For those identified as Amber, these individuals would need face to face support in initiating glucose sensor therapy safely. This can be through the community diabetes network with industry support if appropriate.

4. For those identified as Green, these individuals could be directed to online resources alone, with contacts for community diabetes services if problems arise.

5. For devices in List 1 where they are specified as being available on FP10 and devices in List 2 can be prescribed in primary care using FP10. Individuals

wishing to access all other devices from List 1 will need to be seen in a secondary care service before proceeding.

6. All people with type 1 diabetes should be strongly encouraged to attend their local type 1 diabetes secondary care service.

Education and Training

Training on Continuous Glucose Monitoring for Healthcare Professionals and People Living with Diabetes can be found in Appendix 3.

References

1. Pan-London implementation document for continuous glucose sensors for adults with type 1 diabetes. London-type-1-diabetes-CGM-access-written-pathway-LCEG-updated-August-2023.pdf (england.nhs.uk)
2. NHS England — London » Diabetes
3. Type 1 diabetes in adults: diagnosis and management; NICE guideline [NG17]Published: 26 August 2015 Last updated: 17 August 2022 Recommendations | Type 1 diabetes in adults: diagnosis and management | Guidance | NICE
4. A pan-London implementation document for continuous glucose sensors for adults with type 1 diabetes: device list. London-type-1-diabetes-CGM-access-Device-list-updated-August-2023.pdf (england.nhs.uk)
5. Flow chart: https://www.england.nhs.uk/london/wp-content/uploads/sites/8/2023/08/London-type-1-diabetes-CGM-access-flowchart-LCEG-updated-August-2023.pdf

Appendix 1

LIST 1:

- **Hybrid Closed Loop (HCL) compatible CGM devices (*can also be used as stand-alone CGM)**
- **Where part of a HCL – the combinations that are classed as cost-effective by the national framework of HCL technologies hosted by the NHS Supply Chain are in Green those that are not cost-effective are shown in Red**
- **No costings supplied for this list as supply chain costs will vary locally**
- **Please note prescribing should be in line with the NEL Blood Glucose Test Strips Guideline**

Device Name	Key features of device	CSII/Closed loop compatibility and HCL cost-effective combinations	CBG testing required?	Blueteq form required?	Available on FP10?
Abbott Freestyle Libre 3* **Note: not currently prescribed in primary care**	14-day sensor Optional low and high glucose alerts. Data sharing with healthcare team, friends/relatives/carers via LibreLinkUp Smartphone access only – no alternative data reader.	**Yes, compatible with:** Insulin Pump: Algorithm mylife YpsoPump: mylife CamAPS	Minimum 200 strips and lancets **per annum** - £52 p.a.[1]	Yes	Yes
Abbott FreeStyle Libre 2 Plus *	15-day sensor, no transmitter required Optional reader device if no smartphone access Optional low and high glucose alerts Data sharing with healthcare team, friends/relatives/carers via LibreLink App	**Yes, compatible with:** Insulin Pump: Algorithm Omnipod 5	£912.50 (sensors)[4] CBG testing: - Minimum 200 strips and lancets **per annum** - £52 p.a. [1]	No	Yes
Dexcom G6*	10-day sensor and 3-month transmitter. Fixed urgent low glucose alert (cannot be silenced). Predictive low glucose alert (optional). Data sharing with HCP's and relatives/carers. Optional reader	**Yes, compatible with:** Insulin Pump: Algorithm mylife YpsoPump: mylife CamAPS Tandem: Omnipod 5: Dana I: CamAPS	Minimum 200 strips and lancets **per annum** - £52 p.a. [1]	Yes	No

	device if no smartphone access.				
Dexcom G7*	10-day sensor, integrated transmitter – no expiry. Urgent low glucose alert and predictive low glucose alert (both optional/can be silenced). Data sharing with HCP's and relatives/carers. Optional reader device if no smartphone access.	No current CSII compatibility **Yes, compatible with:** Insulin Pump: Tandem T:Slim Algorithm:	Minimum 200 strips and lancets **per annum** - £52 p.a. [1]	Yes	No
Medtronic Guardian 3 **NOTE: not for new patients**	7-day sensor, 12-month rechargeable transmitter. Fixed urgent low glucose alert and optional predictive low glucose alert. Data sharing with HCP's only.	**Yes, compatible with:** Insulin Pump: **Medtronic 640G**, **Medtronic 670G** Algorithm: Control IQ	Yes – 2 calibrations per day, in addition to the basic 200 strips and lancets **per annum**. Total cost p. a £241.00	Yes	No
Medtronic Guardian 4*	7-day sensor, 12-month rechargeable transmitter. Fixed urgent low glucose alert and optional predictive low glucose alert. Data sharing with HCP's, and with relatives/carers via CareLink connect smartphone app.	**Yes, compatible with:** Insulin Pump: Medtronic 780G Algorithm:	Minimum 200 strips and lancets **per annum** - £52 p.a. [1]	Yes	No
Medtronic Simplera Sync	7-day sensor	**Yes, compatible with:** Insulin Pump: Medtronic 780G Algorithm:	Minimum 200 strips and lancets **per annum** - £52 p.a. [1]	Yes	No
Medtrum A8TouchCare Nano*	14-day sensor Rechargeable transmitter.	**Yes, compatible with:** Insulin Algorithm:	Minimum 200 strips and lancets **per annum**		

NOTE: not for new patients	Optional low glucose alerts. Data sharing with HCP's, and with relatives/carers	Pump: Medtrum A8 Touchcare Nano; Medtrum APGO	- £52 p.a. [1]	Yes	No

LIST 2:

- **Stand-alone CGM devices not compatible with HCL**
- **Available on FP10 only**
- **All have optional low and high glucose alerts**
- **Speciality features appropriate for specific clinical conditions or compatibility with certain CSII devices**
- **All devices have sharing capability for HCP's but not all offer sharing with relatives/carers**
- **Please note prescribing should be in line with the NEL Blood Glucose Test Strips Guideline**

Device Name	**Key features of device**	**CSII/Closed loop compatibility and HCL cost-effective combinations**	**Estimated annual cost per individual[2]**
Abbott FreeStyle Libre 2 **NOTE: not for new patients** Note device is classified as isCGM for those using device via a FreeStyle Libre 2 Reader device (non-smartphone users)	14-day sensor, no transmitter required Optional reader device if no smartphone access Optional low and high glucose alerts Data sharing with healthcare team, friends/relatives/carers via LibreLink App	No	£912.50 (sensors)[3] CBG testing: - Minimum 200 strips and lancets **per annum** - £52 p.a. [1]
GlucoRX AiDEX	14-day sensor, 4-year transmitter Data sharing with HCP's and relatives/carers.	No	£778.74 (sensors and transmitter)[5] CBG testing: - Minimum 200 strips and lancets **per annum** - £52 p.a. [1]

DEXCOM ONE **NOTE: not for new patients**	10-day sensor, 90-day transmitter Optional reader device if no smartphone access Data sharing with HCP's only (via DEXCOM Clarity software).	No	£900 (sensors and transmitters)[6] CBG testing: - Minimum 200 strips and lancets **per annum** - £52 p.a. [1]
Dexcom ONE +	10-day sensor, no separate transmitter required	No	£898.92 (sensor)[7] CBG testing: - Minimum 200 strips and lancets **per annum** - £52 p.a. [1]

[1] Based on use of 4 test strips and lancets per day at a cost of £0.26 per unit.
[2] Cost as per National Drug Tariff July 2024.
[3] £35.00 per 14-day sensor – 26 sensors per annum. No transmitter
[4] £37.50 per 15-day sensor – 24 sensors per annum. No transmitter.
[5] £29.76 per 14-day sensor – 26 sensors per annum. £19.95 per 4-year transmitter - assume £4.98 p.a
[6] £23 per 10-day sensor (36 sensors per annum); £18 per 3-month transmitter (4 transmitters per annum)
[7] £24.97 per sensor working (36 sensors per annum)

Appendix 2: Initiation and transfer of prescribing of continuous glucose monitors (CGM) for adults living with type 1 diabetes in North East London – accessed via the NEL Primary Care Portal: Medicines Guidelines – Diabetes – North East London

T1DM CGM pathway transfer of care NEL V

Appendix 3: Training on Continuous Glucose Monitoring for Healthcare Professionals and People Living with Diabetes– accessed via the NEL Primary Care Portal: Medicines Guidelines – Diabetes – North East London

CGM Healthcare Professional Training