Integrated Care System
Shropshire, Telford and Wrekin

NHS
Shropshire, Telford and Wrekin

Commissioning Policy: Continuous Glucose Monitoring (CGM) for children and young people aged under 18 years with type 1 or type 2 diabetes

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Version No.:	Version 5
Approval Date:	08/01/2024
Review Date:	08/01/2026

Document Control Sheet

Title:	Commissioning Policy: Continuous Glucose Monitoring (CGM) for children and young people aged under 18 years with type 1 or type 2 diabetes		
Electronic File Name:	<<Filename – using insert field, filename option to create a link to the actual filename>>		
Placement in Organisational Structure:	Medicines Management Team, Delivery and Transformation		
Consultation with stakeholders:	Dr Kathryn MCrea, Consultant Paediatrician with an interest in Diabetes and Endocrinology Shropshire, Telford and Wrekin ICS Diabetes Clinical Advisory Group		
Equality Impact Assessment:	Equality impact assessment underway (Jan 24)		
Approval Level:	Commissioning Working Group and Integrated Delivery Committee		
Dissemination Date:	05/02/2024	**Implementation Date:**	05/02/2024
Method of Dissemination:	Stakeholders, specialist staff, STW netformulary		

Document Amendment History

Version No.	Date	Brief Description
Version 5	19/7/23	Update to previous Continuous Glucose Monitoring (CGM) for Type 1 Diabetes in Children and Young People aged up to 19 years policy

The formally approved version of this document is that held on the NHS Shropshire, Telford and Wrekin website: www.shropshiretelfordandwrekin.nhs.uk

Printed copies or those saved electronically must be checked to ensure they match the current online version.

Contents

1 Introduction

This policy has been developed following recommendations from the National Institute for Health and Care Excellence (NICE) guidance: Diabetes (type 1 and type 2) in children and young people: diagnosis and management [NG18].

Continuous Glucose Monitoring (CGM) technologies are cost-effective, NICE approved interventions which reduce the risk of acute events such as diabetic ketoacidosis (DKA) and hypoglycaemia and improve HbA1c/time in range, which reduces the risk of longer-term complications.

Evidence demonstrates that CGM can provide clinical benefits over standard self-monitoring of blood glucose (SMBG) in the diabetes populations.

Intermittently scanned continuous glucose monitoring (isCGM) consists of a subcutaneous sensor which continuously measures the glucose levels in the interstitial fluid. The user can obtain real-time data as well as trends by scanning the sensor with a reader device. The information provided gives a glucose level and information regarding the rate of change of glucose levels.

Real-time continuous glucose monitoring (rtCGM) consists of a subcutaneous sensor which continuously measures the glucose levels in the interstitial fluid. Data on glucose level and direction/rate of change is automatically sent to a display device (a handheld monitor or smartphone) and the user can obtain real-time data as well as trends. The user can then analyse data and respond to changes in real-time or can make changes to insulin delivery, dose or timing based on retrospective data or trends.

CGM models allow users to set alerts for high and low glucose levels. Some CGM devices can be used alongside (non-integrated) continuous subcutaneous insulin infusion (CSII).

Hybrid Closed Loop (HCL) systems use a combination of real-time glucose monitoring from a CGM device and a mathematical algorithm to direct insulin delivery through CSII. NICE are currently reviewing this technology and will only recommend if the companies and NHS England agree a cost-effective price for the systems on behalf of the relevant health bodies. HCL systems are not covered by this policy.

NHS STW consider CGM devices available on FP10 prescription to be first line for individuals requiring CGM. Specialist CGM devices are available through specialist diabetes services for individuals with more complex needs.

2 Purpose

The purpose of this policy is to define the eligibility criteria and initiation process for CGM, for children and young people aged under 18 years with insulin-treated diabetes.

3 Identification of patients eligible for CGM

Consideration of whether a person may be appropriate for CGM, may form part of their annual diabetes review, or at an earlier review based on clinical need as decided by the treating healthcare professional.

4 Eligibility criteria for CGM

Children and Young People with T1DM

All children and young people with T1DM are eligible for rtCGM, alongside education to support children and young people and their families and carers to use it.

Individuals should be offered a choice of rtCGM devices, based on their individual preferences, needs, characteristics, and the functionality of the devices available.

Offer isCGM to children and young people with T1DM aged 4 years and over who are unable to use rtCGM or who express a clear preference for isCGM.
In May 2023, isCGM was licensed for children aged 4 years and over.

Continuous glucose monitoring should be provided by a team with expertise in its use, as part of supporting children and young people to self-manage their diabetes. In STW this is our Paediatric Specialist Diabetes Teams in secondary care.

Children and Young People with T2DM

Offer 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 isCGM for children and young people with type 2 diabetes aged 4 years and over who are on insulin therapy if:

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

See **Appendix 1** for Eligibility Criteria Flowcharts for Children and Young People under 18 years with type 1 or type 2 diabetes.

5 Choice of CGM

When offering CGM to children and young people with diabetes, choose the appropriate device with them, based on their individual preferences, needs, characteristics, and the functionality of the devices available.

Factors to consider when choosing a CGM 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 (taking into account the age and abilities of the child or young person and whether the device needs to be used by others).
- Fear, frequency, awareness and severity of hypoglycaemia
- Psychosocial factors
- The child or young person's insulin regimen or type of insulin pump, if relevant (taking into account whether a particular device integrates with their pump as part of a hybrid closed loop or insulin suspend function)
- 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
- How unpredictable the child or young person's activity and blood glucose levels are and whether erratic blood glucose is affecting their quality of life.
- Whether the choice of device will impact on the child or young person's ability to attend school or education, or to do their job.
- Whether the child or young person takes part in sports or exercise when glucose levels will need additional management.
- Whether the child or young 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

When choosing a CGM device, if multiple devices meet the person's needs and preferences, offer the device with the lowest cost.

Consider prescribable CGM where appropriate as these devices have the lowest cost.

- Dexcom One prescribable rtCGM is licensed for age 2 upwards.
- FreeStyle Libre 2 prescribable rtCGM (with smartphone) and isCGM (with reader) is licensed for age 4 upwards. (LibreLinkUp app for following)

In transitional care, the CGM device needs to be reviewed and in the absence of a clear indication for high cost rtCGM, a discussion on change to prescribable CGM should be made.

Where specialist CGM e.g. Dexcom G6, Guardian 4 Sensor is appropriate, it will be initiated by specialist diabetes teams in secondary care and will be supplied following Blueteq approval via the NHS supply chain.

See **Appendix 2** for prescribable CGM device comparisons.

6 Process for initiation of CGM

CGM should be provided by a team with expertise in its use to support children and young people to self-manage their diabetes.

Prescribable CGM

Initiation, monitoring and review by specialist services, with request to primary care for continued prescribing of sensors/transmitters.

Specialist CGM

Application for specialist CGM must be made through the Blueteq system.
Clinicians must complete the Blueteq form providing sufficient information to evidence the need for specialist CGM. This will be assessed by a member of the Medicines Management Team and approved if appropriate.

Self-monitoring of blood glucose (SMBG)

Advise children and young people with diabetes who are using CGM (and their families or carers) that they will still need to take capillary blood glucose measurements (although they can do this less often). Explain that this is because:

- they will need to use capillary blood glucose measurements to check the accuracy of their CGM device
- they will need capillary blood glucose monitoring as a back-up (for example, when their blood glucose levels are changing quickly or if the device stops working).

Provide them with enough test strips to take capillary blood glucose measurements as needed.

Ensure they are using the STW preferred choice of blood glucose and ketone meter and test strips. Refer to STW netFormulary.

If the children and young people are not currently using a formulary meter, please request/complete a switch to an appropriate formulary meter. Patients will require enough test strips to self-monitor capillary blood glucose as needed. 1x50 test strips every three months is recommended for the majority of patients, some may require more if regular calibration of devices is needed.

7 Continuation of CGM

Monitor and review the child or young person's use of CGM as part of reviewing their diabetes care plan and explain to them the importance of continuously wearing the device.

If the child or young person is not using their CGM device at least 70% of the time:

- ask if they are having problems with their device
- look at ways to address any problems or concerns to improve their use of the device, including further education and emotional and psychological support.

We would expect to see the following benefits from using a CGM device:

- an improvement in HbA1c
- an increase in time spent in range
- a reduction of BGTS used
- a reduction in hospital admissions and episodes of severe hypoglycaemia.

8 Related Documents

The following documents contain information that relates to this policy:

- Commissioning Policy: Continuing Glucose Monitoring (CGM) in adults with insulin-treated diabetes (including pregnancy)

- Commissioning Policy: Continuous Subcutaneous Insulin Infusion (CSII) without CGM in adults and children with Type 1 Diabetes

9 Advice and Training

Training for healthcare professionals can be organised through CGM manufacturers as well as online.

For information on CGM and driving refer to
Assessing fitness to drive: A guide for medical professionals

9.1 Advice

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Deputy Director, Medicines Management
NHS Shropshire, Telford and Wrekin
Email: elizabeth.walker@nhs.net

Fiona Smith
Transformation and Commissioning Partner - Community
NHS Shropshire, Telford and Wrekin
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10 Compliance Monitoring

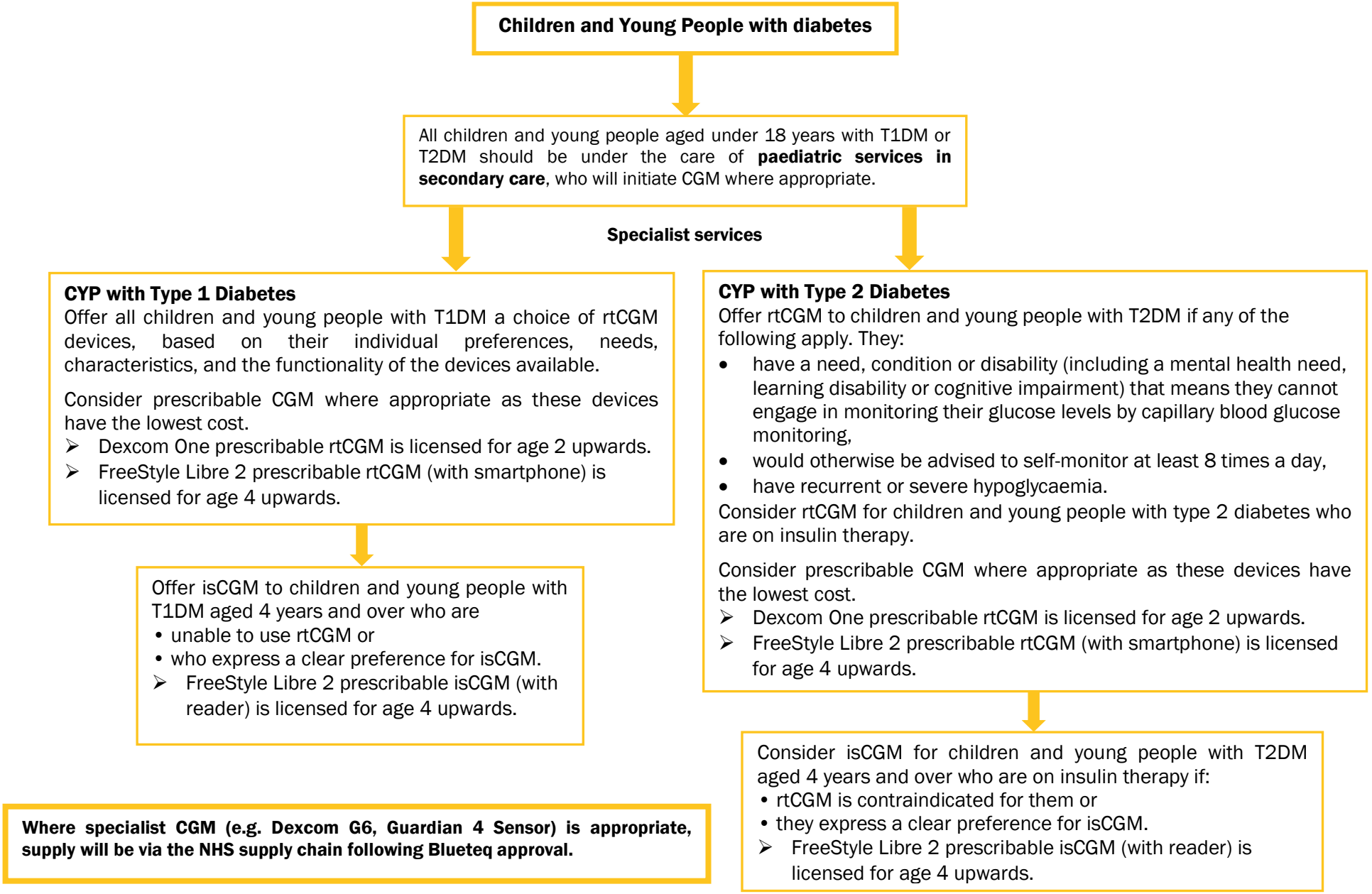
The Medicines Management Team will regularly audit Blueteq applications and ePACT2 to monitor the use of prescribable CGM and appropriate requests for specialist CGM.

11 References

- NICE Guidance, Diabetes (type 1 and type 2) in children and young people: diagnosis and management [NG18], May 2023, https://www.nice.org.uk/guidance/ng18

12 Glossary

Term / Abbreviation	Explanation / Definition
isCGM	Intermittently scanned Continuous Glucose Monitoring
rtCGM	Real-time Continuous Glucose Monitoring
Prescribable CGM	Low cost CGM available on FP10
Specialist CGM	High cost CGM only available via the NHS supply chain


Children and Young People with diabetes
All children and young people aged under 18 years with T1DM or T2DM should be under the care of paediatric services in secondary care, who will initiate CGM where appropriate.
Specialist services
CYP with Type 1 Diabetes
Offer all children and young people with T1DM a choice of rtCGM devices, based on their individual preferences, needs, characteristics, and the functionality of the devices available.
Consider prescribable CGM where appropriate as these devices have the lowest cost.
➢ Dexcom One prescribable rtCGM is licensed for age 2 upwards.
➢ FreeStyle Libre 2 prescribable rtCGM (with smartphone) is licensed for age 4 upwards.
Offer isCGM to children and young people with T1DM aged 4 years and over who are
• unable to use rtCGM or
• who express a clear preference for isCGM.
➢ FreeStyle Libre 2 prescribable isCGM (with reader) is licensed for age 4 upwards.
CYP with Type 2 Diabetes
Offer rtCGM to children and young people with T2DM 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 prescribable CGM where appropriate as these devices have the lowest cost.
➢ Dexcom One prescribable rtCGM is licensed for age 2 upwards.
➢ FreeStyle Libre 2 prescribable rtCGM (with smartphone) is licensed for age 4 upwards.
Consider isCGM for children and young people with T2DM aged 4 years and over who are on insulin therapy if:
• rtCGM is contraindicated for them or
• they express a clear preference for isCGM.
➢ FreeStyle Libre 2 prescribable isCGM (with reader) is licensed for age 4 upwards.
Where specialist CGM (e.g. Dexcom G6, Guardian 4 Sensor) is appropriate, supply will be via the NHS supply chain following Blueteq approval.