

Continuous Glucose Monitoring (CGM)

For Children with Type 1 Diabetes

Patient Information Leaflet

October 2020



What is Continuous Glucose Monitoring (CGM)?

CGM uses a small device (a sensor) that sits under your skin to measure your glucose levels continuously throughout the day and night. These measurements are sent wirelessly to a hand held monitor or mobile phone which allows you to see trends in your glucose levels and alerts you to highs and lows. A CGM system measures your glucose level every few minutes, so you see a graph of your glucose levels over time. The sensor doesn't actually measure your *blood* glucose level; it measures the amount of glucose in the fluid that surrounds the cells in your body (called "interstitial fluid"). Glucose levels in the interstitial fluid lag behind glucose levels in your blood by up to 15 minutes, and the lag time is longest if your blood glucose level is changing rapidly, for example after eating or if you are exercising. For this reason CGM does not replace finger prick blood glucose checks - particularly if you are thinking of changing your treatment (e.g. taking more insulin or treating a hypo).

How can CGM help me?

A CGM system can be used whether you wear a pump or use injections for your insulin delivery. It provides hundreds of readings a day, and can help to provide a very clear idea of how long you are spending with high and low glucose levels. It can show you what is happening after your meals or during activities without the need for multiple finger prick tests.

The data continuous glucose monitoring can provide gives a much more detailed and comprehensive picture of diabetes control than blood glucose testing alone. CGM has the advantage of being able to provide this information even whilst you're asleep.

In combination with a detailed food and activity diary, continuous glucose monitoring can offer the opportunity to make dietary, dosage and lifestyle changes to help keep your blood sugars at a more stable, target level.

What NICE say about CGM for children:

The National Institute of Clinical Excellence (NICE) has made some recommendations about offering CGM to Children and Young People.

It should be **offered** to children who:

- *have frequent, severe hypos*
- *have hypo unawareness with serious consequences (e.g. seizures, anxiety)*
- *can't recognise, or tell somebody about hypo symptoms (e.g. because of developmental or neurological issues).*

It should be **considered** for children who:

- *are under school age*
- *play high levels of sport (eg compete at regional or national or international level)*
- *have other issues that make diabetes management more difficult (eg anorexia or steroid treatment)*
- *have high blood sugar levels despite a lot of support and insulin adjustment.*

How can I get CGM?

If you feel that CGM would be of benefit to you then please ask a member of the diabetes team. We can discuss it in more detail and arrange a trial of CGM for 4-6 weeks.

We have CGM equipment that we can loan out for a 4-6 week trial period. This block of time can be used for "diagnostic" purposes to help you and your child see more

clearly what is happening with blood glucose levels and to help support changes that may help achieve more stability.

The best way to use CGM is to combine it with regular review of data and a re-visit of aspects of diabetes education for example carbohydrate counting, managing exercise. We will arrange these based on each individual child and family's needs.

Process for starting CGM

- Discussion in diabetes clinic and agreement that CGM is something you and your child would like to try
- CGM Education session to discuss CGM in more detail and show you and your child the equipment.
- Discussion with family and young person on commencing CGM at home using virtual technology to get set up with help and support of company rep.
- Telephone review in 1-2 weeks to review data virtually, consider further changes to diabetes management
- MDT or nurse face to face clinic after 3-4 weeks to review data, manage any concerns, consider changes to diabetes management
- Telephone review in 1-2 weeks to review data virtually, consider further changes to diabetes management.
- Equipment will be returned at this stage. We will ask you to complete a feedback questionnaire. - What was good about CGM? What not so good? How has it helped you?

Long term CGM

If you and the diabetes team feel you have benefitted from CGM we can make an application to the local healthcare commissioners (responsible for considering funding requests) for on-going funding so that CGM can be part of your daily diabetes management.

CGM alone and CGM used intermittently will not help improve diabetes control. CGM can help support management of diabetes when used regularly (each day) and when the information it provides is used to make changes that help improve overall blood glucose levels. CGM is expensive.

For these reasons, we will ask you to sign a contract with us agreeing that the CGM will be used consistently and together with healthy lifestyle choices to manage your diabetes. We will review this regularly and make recommendations regarding discontinuation of funding if this agreement is not upheld.

CGM does not suit everyone and the diabetes team can help you and your child explore other options for helping to manage diabetes.

References

<http://www.diabetes.co.uk/cgm/continuous-glucose-monitoring.html>

NICE Diabetes in Children and Young People Quality Standard QS 125; July 2016
Association of Children's Diabetes Clinicians (ACDC); A Practical approach to the management of CGM/FGS in type 1 Diabetes Mellitus in Children and Young People under 18 years; October 2019

K Wright/J Birch September 2020

Version 2

Who to contact for advice

Paediatric Diabetes Nurse Specialists during office hours 08.30- 16.30

- **Office:** 0161 922 5262 (Mon-Wed)
- **Karen Wright** 0161 922 4844 (Mon-Thur)
- **Paediatric Dietitian** 0161 331 5165 (Wed-Thurs)

Mobile: 07760991621(Karen),

Out of hours: 0161 922 6000 - hospital switchboard and ask for on-call paediatric registrar

Other Useful Contacts or Information

NHS Direct

Patient Information Centre

Diabetes UK

If you have any questions you want to ask, you can use this space below to remind you

If you have a visual impairment this leaflet can be made available in bigger print or on audiotape. If you require either of these options please contact the Patient Information Centre on 0161 922 5332

If you require an interpreter, please ask an appropriate person to contact our central booking office between Monday to Friday 8am to 5pm on 0161 922 6991 to arrange this for you.

語言 翻譯及病者支持服務 (LIPS):

如果閣下需要翻譯員在您的預約當日幫助您的話 請找一名合適的家庭成員 **0161 922 6991** 聯絡本中央預約辦事處來您您安排 我們的辦公時間是星期一至星期五 上午 8 時至下午 5 時

Językowo Tłumaczeniowa Usługa Pomocy dla Pacjenta (Language, Interpretation and Patient Support Service LIPS):

Jeśli potrzebujesz pomocy tłumacza w trakcie swojej wizyty, proszę poprosić odpowiedniego członka rodziny o skontaktowanie się z Centralnym Biurem Zamówień (*Central Booking Office*), w celu zorganizowania tłumacza pomiędzy poniedziałkiem a piątkiem w godzinach od 08:00 - 17:00 pod numerem **0161 922 6991**.

لینگویج، انٹریپٹیشن اینڈ پیسٹ سپورٹ سروس (Lips)

اگر آپ کو اپنی اپائنٹمنٹ کے لئے مترجم کی مدد کی ضرورت ہو تو براہ مہربانی اپنے خاندان کے کسی موزوں فرد سے کہیں کہ وہ ہمارے سنٹرل بنگ آفس سے پیر سے جمعہ 8.00 بجے صبح سے 5.00 بجے شام کے دوران 0161 922 6991 پر فون کر کے اس کا بندوبست کریں۔

Document control information

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