

Prescribing...

Blood Glucose Test Strips in T2DM Nov.2018

- ✚ The cost of test strips for self-monitoring of blood glucose has risen significantly on the islands
- ✚ Testing is essential for patients on insulin with T1DM or T2DM.
- ✚ It is not necessary for patients who are well controlled with oral treatments including sulphonylureas and pioglitazone i.e with HbA1c within the agreed range and no evidence of hypoglycaemic episodes.

Background

Self-monitoring of blood glucose (SMBG) is essential for people with T2DM on insulin therapy and can be required short-term for a very limited number of people on other hypoglycaemic agents. Measurement of HbA1c is the primary outcome measure and not blood glucose. Current evidence is that the overall effect of self-monitoring of blood glucose on glycaemic control in patients with type 2 diabetes who are not using insulin is small up to six months after initiation and subsides after 12 months. There is no evidence that SMBG affects patient satisfaction, general well-being or general health-related quality of life ¹. It wastes resources and may be linked with increased anxiety.

The Formulary and Prescribing Panel and the Specialist Diabetes Service have recently developed guidelines on when to test, the usual quantities to be prescribed and preferred test strips. These will be adapted gradually over the coming months and are follows :

1. When to test

Where SMBG is not serving a specific purpose in the management of the patient's condition it is a waste of resources, causes unnecessary pain to the patient, increases depression and anxiety in some patients and has not been shown to improve outcomes. The local Specialist Diabetes Service recommends that it should be used only if it is going to be an integral part of the patient's self-management education i.e. if patients are clear about the purpose of monitoring , as well as how and what action to take in response to results. The continued benefit of self-monitoring should be assessed in a structured way each year ^{2,3,4,5}.

Prescribers are advised to now

- Review all T2DM patients prescribed blood glucose test strips (BGTS).
- For people on all oral therapies if the HbA1c is within the agreed range and the patient is otherwise well with no symptoms to suggest hyper- or hypo-glycaemia, routine SMBG is not required and should be stopped.
- NICE and the DVLA advise that **car drivers** on oral diabetes treatments that may cause hypos must report to them if they have had more than one episode of severe hypoglycaemia in the last twelve months.
- Severe hypoglycaemia is defined as an episode of hypoglycaemia that required the assistance of another person.

Therefore SMBG will only be funded at public expense in T2DM in the following circumstances and usual quantities:

- ✚ Patients on insulin treatment : quantity to be prescribed to cover quantity used.

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- ✚ Patients on maximal dose sulphonylurea therapy in whom Insulin treatment seems inevitable, or in whom there have been documented hypoglycaemic episodes attributable to oral therapy : testing may be done up to once or twice daily. Usual maximum quantity if needed : 50 strips per 1-2 months.
- ✚ During inter-current illness, on advice from the DSNs : quantity to be prescribed to cover quantity used.
- ✚ Pregnancy: prior to conception and during pregnancy including gestational diabetes: quantity to be prescribed to cover quantity used.

N.B. The Diabetes Service can be contacted for advice if there is any uncertainty.

2. Preferred test strips in T2DM

In the limited instance where SMBG is needed, only test strips costing £10 or less per box of 50 are considered cost-effective. There is little variation between the different meters in their ability to provide an accurate reading of blood glucose. Patients are often offered free meters by the companies through patient groups or magazines. These are more often the newer meters with high cost strips and inevitably patients will request a prescription for these strips from their GP practice.

The Diabetes Service has four "preferred" meters for routine use whose strips all cost less than £10 per box. Having a preferred formulary meter and a clear policy to review each patient for clinical appropriateness before initiating prescribing of strips will ensure that this does not occur and will minimise spend on test strips. There is no evidence to suggest that greater clinical benefits are achieved by using the more expensive BGTS over the less costly ones.

It is proposed that, gradually over the next 6 months, prescribing in the Bailiwick will be streamlined to use only the testing strips with the lowest acquisition costs for routine use in T2DM. Strips for T1DM will be reviewed as soon as practicable. Significant savings can be made which will be available to treat other patients. The four "preferred" meters use strips all costing less than £10 per box.

The meters, strips and strip costs are as follows

Meter	Strips	Cost 50 strips
Wavesense JAZZ	WaveSense Jazz	£8.74
WaveSense JAZZ Wireless	WaveSense Jazz Duo	£8.74
Glucomen Aero 2k	Glucomen Aero Sensor Strips	£9.95
Glucomen Aero	Glucomen Aero Sensor Strips	£9.95

Ref : Drug Tariff November 2018

The aim of the guideline is that, in time, only strips for the preferred meters will be funded. Patients may either buy one of the preferred meters , possibly obtain one free of charge from their surgery or be referred to the Diabetes Service for a routine appointment during which they may be offered one of the preferred meters also free of charge. This will also serve as an opportunity to change old meters which may no longer be accurate.

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References :

1. Cochrane Database Syst Rev. 2012 Jan 18;1:CD005060. Self-monitoring of blood glucose in patients with type 2 diabetes mellitus who are not using insulin. Malanda UL1, Welschen LM, Riphagen II, Dekker JM, Nijpels G, Bot SD. <https://www.ncbi.nlm.nih.gov/pubmed/22258959>
2. NICE Guidance <https://www.nice.org.uk/guidance/ng28>
3. UK DVLA <https://www.gov.uk/diabetes-driving>,
4. Diabetes UK <https://www.diabetes.org.uk/Guide-to-diabetes/Life-with-diabetes/Driving>
5. HSE Ireland <https://www.hse.ie/eng/services/publications/clinical-strategy-and-programmes/report-on-self-monitoring-of-blood-glucose-smbg-in-type-2-diabetes-mellitus.pdf>