

Glucose Self-Monitoring in Diabetes

NHS Diabetes published a report on self-monitoring of blood glucose (SMBG) in Type 2 diabetes in March 2010. People with poor glucose control are more likely to suffer from complications of diabetes, like ischaemic heart disease and microvascular disorders such as renal and eye disease. They are also more likely to die from a diabetes related cause. The NHS Diabetes report can be found at:

www.diabetes.nhs.uk (PDF 1.5MB)

People with Type 1 diabetes and people with Type 2 who use insulin should be monitoring blood glucose levels as part of their self-management programmes.

The NHS Diabetes recommendations on self-monitoring for all people with Type 2 diabetes are that:

- SMBG with appropriate structured education should be available to people receiving sulphonylurea treatment to identify hypoglycaemic episodes
- In keeping with the recommendations contained within NICE Clinical Guideline CG87, SMBG should only be provided routinely to people with Type 2 diabetes not treated with insulin or sulphonylureas where there is an agreed purpose or goal to testing
- SMBG should be used only within a care package, accompanied by structured education which should include clear instructions as to the place of monitoring and how results can be used to reinforce lifestyle change,

adjust therapy or alert healthcare professionals.

This should include regular reviews to identify and support those who find it useful while discouraging those who gain no clinical benefit from continuing to test

- Individuals with non-insulin treated diabetes who are motivated by SMBG activity and use the information to maximise the effect of lifestyle and medication should be encouraged to continue to monitor
- Staff training in the use of SMBG to support changes in lifestyle and self-adjustment of medications is required
- Savings from a reduction in SMBG in individuals with non-insulin treated diabetes should be used to provide both structured education and training for professionals
- Future research should focus on how to identify those who will gain most from SMBG and establish how they integrate it successfully into their approach to self-management.

Measuring Blood Glucose Control

NICE also recommends that people with Type 2 diabetes should expect to have their long-term glucose control checked every 2-6 months. Laboratory measurement of the amount of HbA1c will give an indication of the overall blood glucose level over previous months.

Benefits of Self-Monitoring

Self-monitoring has the potential to provide considerable benefits to some people with diabetes. These include:

- Establishing the relationship between their physical symptoms and their blood sugar
- Providing reassurance
- Assessing the effects of specific behaviours
- Promotion of adherence to self-management
- Empowering them to take more control over their healthcare and ability to contribute to a physician's evaluation of their status

The data from clinical trials show that in patients treated by lifestyle modification or oral agents, SMBG with appropriate education and clear objectives leads to an improvement in blood glucose control. The improvements in blood glucose control when SMBG is used without education and clear objectives are so small as to be of doubtful clinical benefit.

With the increasing prevalence of diabetes, new treatments and the desire to improve control and outcomes, the cost of this condition to the NHS will continue to increase. Commissioners will therefore need to give consideration to the cost effectiveness of their prescribing decisions.

As part of regular reviews and monitoring, healthcare professionals should provide people with diabetes with detailed advice and information about their glucose testing options. For people with diabetes to obtain the maximum benefit from self-monitoring, however, it is essential they know what the results mean for them personally.

This does require a programme of information, education and support.

Patient Education

In separate guidance, NICE has recommended that structured education be offered to all people with diabetes at the time of diagnosis and then, as required, based on a formal, regular assessment of need. The detailed guidance can be found at:

www.nice.org.uk/Docref.asp?d=68383

The Diabetes National Service Framework (NSF) highlights the crucial part that patient education has to play in enabling people with diabetes to effectively take control of their condition, by including referral for structured education as a dimension of systematic care.

Consideration should be given to ensure that self-monitoring and education strategies are aligned and that people with diabetes are informed about the benefits that SMBG can bring, allowing them to choose the most appropriate method for them.

This should include an explanation of how to self-monitor, how to interpret the results and how to use the results to make any appropriate lifestyle changes. This has the potential to improve both the quality and the efficiency of blood glucose self-monitoring.

Diabetes National Service Framework

Full information on the aims and role of the Diabetes NSF can be found at:

www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_4002951

Further copies of this leaflet can be ordered from Prontaprint, by emailing diabetes@leicester.prontaprint.com or tel: 0116 275 3333, quoting DIABETES141

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