

Primary care implications of the new SMBG consensus statement

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Article points

1. There is little guidance on self-monitoring of blood glucose (SMBG) for primary care professionals.
2. The SMBG consensus gives healthcare professionals a theoretical base to work from.
3. The consensus encourages standardisation of access to all monitoring facilities for every patient.
4. For the new General Medical Services contract, the consensus can help healthcare professionals see the context in which SMBG may benefit the range of people with diabetes.

Key words

- Self-monitoring of blood glucose
- Consensus
- Empowerment
- New GMS contract

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Self-monitoring of blood glucose (SMBG) provides significant benefit (Moore and McQuay, 2005), but there are no specific clinical guidelines for primary care teams on achieving good glycaemic control. In this article, Roger Gadsby discusses the recent consensus statement that aimed to provide a framework to put SMBG into perspective, especially with regard to its potential implications.

A recent review of randomised controlled trials showed that there is significant benefit with self-monitoring of blood glucose (SMBG) in people with diabetes (Moore and McQuay, 2005). However, there are currently no specific guidelines for primary care teams that give clinical advice on how to achieve good glycaemic control or that explicitly recommend provision of the materials that allow for SMBG. While the new General Medical Services (nGMS) contract sets HbA_{1c} targets through quality indicators (Department of Health [DoH], 2004) and the National Institute for Clinical Excellence (NICE) has emphasised the need for SMBG (NICE, 2002), guidance is not provided on how to achieve these targets or implement the guidance at practice level.

A recent consensus statement (Owens et al, 2004; updated in Owens et al, 2005; *Tables 1 and 2*) hopes to provide a framework that puts SMBG into context and demonstrates how it is beneficial to people with diabetes. It is hoped that the results of the consensus will

lead to change not only in day-to-day general practice, but also in the way in which primary care teams educate people with diabetes. People with diabetes should then understand and feel able to take control and self-monitor blood glucose – helping them achieve improved outcomes.

What the results mean in practice

Little guidance currently exists on SMBG for primary care professionals. This, in part, may explain the variations in patient care that exist in general practice. In one practice, for example, SMBG may not be offered at all unless a patient asks specifically about it, while at another, SMBG may be offered to all patients with diabetes, as an adjunct to good quality care.

Top-down decisions from primary care organisations (PCOs) add to the variation regarding the costs of SMBG strips, which means that some areas are restricting the supply of strips regardless of patient need. Without doubt, these factors have led to an inequality of patient care.

Table 1. The process of reaching a consensus (Owens et al, 2005).

- Eight diabetes specialists put together recommendations for SMBG.
- The original consensus (Owens et al, 2004) needed to be more inclusive of all groups involved in diabetes care to reflect the regional and multidisciplinary backgrounds of care providers.
- A series of meetings was held in six locations across the UK.
- There were 292 attendees, including GPs, diabetes specialist nurses, PCO managers, clinicians and nursing staff from community, primary care and secondary care sectors.
- The meetings tested the level of agreement with the initial consensus report. Delegates were asked to complete a questionnaire – before and after a group discussion – that tested their attitude towards 32 statements taken from the original consensus.

The SMBG consensus helps to address this variation, collecting scientific research to give healthcare professionals – across a range of disciplines including those directly involved in PCO decisions – a theoretical base to work from. The updated document (Owens et al, 2005) represents a major step forward and gives an authoritative and standardised viewpoint that can now be applied nationwide. It will effectively change the working practice of the primary care professional, providing guidelines that can be applied throughout the healthcare system, regardless of where the patient is seen.

The consensus will allow healthcare professionals in primary care to give clearer guidance to people with diabetes on how, and how often, blood glucose should be monitored. It also serves to provide a framework for good practice. Its universal approach should address the inequality in the way people with diabetes are treated across the country.

This empowerment represents a whole new approach to diabetes care and promotes the self-management of the disease (DoH, 2001). It respects the rights of people with diabetes and allows them to decide for

themselves what is appropriate for their needs at that particular time based on an informed decision.

The consensus encourages standardisation of access to all monitoring facilities for every patient, wherever they live in the country. It also puts the individual patient at the centre of care, emphasising the requirement to assess need on an individual basis – deciding the frequency of SMBG according to that assessment only.

Another important practical implication of the consensus is that people with type 1 or type 2 diabetes need to be able to monitor more frequently both in times of illness and when therapy has been changed, so that they can know how their blood glucose levels are responding.

The impact on the nGMS contract

The nGMS contract was introduced in April 2004 (DoH, 2004). It has a Quality and Outcomes Framework that rewards practices for achieving levels of process and outcome in various domains. There are 99 points that can be achieved through the fulfilment of 18 indicators in the clinical sphere of diabetes. None specifically mention SMBG; because of this, general practitioners (GPs) and nurses are left without explicit clinical guidelines on how to achieve good glycaemic control. However, 27 of the points relate to HbA_{1c} levels, of which 16 points will be awarded for achieving an HbA_{1c} of 7.4% or less in 50% of the people with diabetes on the practice register and 11 points will be awarded for obtaining an HbA_{1c} of 10% or less in 85% of people (Table 3).

The 3 points for HbA_{1c} process and the 27 points for HbA_{1c} quality indicate the importance of good glycaemic control in high-quality diabetes management. There is a sound evidence base to show the value of good glycaemic control, as measured by HbA_{1c}, in the prevention of long-term

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1. The consensus will allow healthcare professionals in primary care to give clearer guidance to people with diabetes on self-monitoring of blood glucose (SMBG).
2. This empowerment represents a whole new approach to diabetes care.
3. The consensus encourages standardisation of access to all monitoring facilities for every patient.
4. SMBG is an essential procedure to achieve the new General Medical Services contract treatment goals.

Table 2. Some key points from the consensus (Owens et al, 2005).

- All people with type 1 diabetes should have access to SMBG at least four times per day as required.
- Pregnant women with type 1 diabetes, as well as those with type 2 diabetes requiring insulin and patients with gestational diabetes requiring insulin, should use SMBG at least four times per day to include both fasting and postmeal blood glucose measurements.
- People with type 2 diabetes who are using a conventional insulin regimen and who have stable control should monitor their blood glucose two or three times a week.
- Drivers with diabetes should test their blood glucose before commencing any journey and at regular intervals on long journeys.

complications in diabetes (UK Prospective Diabetes Study [UKPDS] Group, 1998).

SMBG is an essential procedure to achieve these important treatment goals and prevent disease complications. It can enable those with poor overall glycaemic control to monitor their day-to-day blood glucose levels, to understand the relationship between their prescribed treatment, food intake and physical activity and to achieve concordance between these various factors to achieve near normal glycaemic control. For people with diabetes who require insulin treatment, SMBG is mandatory to enable appropriate insulin dose adjustments to be made, to optimise glycaemic control and to achieve the HbA_{1c} targets stated in the Quality and Outcomes Framework, all of which will protect the future quality of life by reducing the risk of complications (Diabetes Control and Complications Trial Research Group, 1993).

Type 2 diabetes

Blood glucose levels tend to be more predictable in people with type 2 diabetes (Pickup, 2003). The UKPDS showed clearly that type 2 diabetes is a progressive condition with a gradual and almost inevitable

deterioration in glycaemic control over time. In people with type 2 diabetes, commonly used anti-diabetic agents have been shown to not affect progression of the condition (UKPDS Group, 1998).

SMBG allows people with diabetes to recognise the impact that lifestyle factors that they can control – such as diet and exercise – have on their condition. It may, therefore, have an important role to play as part of an integrated self-care package for people with type 2 diabetes.

While the consensus cannot change the lack of explicit guidelines on SMBG within the nGMS contract, it can help healthcare professionals to see the context in which SMBG may be beneficial to the range of people with diabetes.

Encouraging active participation of people with diabetes

A central point of the consensus is that individuals with diabetes should be able to understand the reasons why they are using SMBG. When people with diabetes are fully aware of the reasons behind the testing process and the significance of results, successful self-management is encouraged. It is crucial that individuals understand why they are testing and know the target range of blood glucose levels they are aiming for. Understanding these points will mean that the individual is more likely to carry out the test.

On a day-to-day basis, people with diabetes need to understand what the results mean in terms of lifestyle and treatment and to know that they have the ability to adjust some factors accordingly. By monitoring changes in blood glucose, people with diabetes can actively see how factors such as diet, exercise, stress levels, other illnesses and the weather have an impact on their condition. The influence of external factors on blood glucose can be demonstrated through changes in the test

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3. People with diabetes need to understand what the SMBG results mean in terms of lifestyle and treatment and to know that they have the ability to adjust some factors accordingly.

results and the healthcare professional can educate the person with diabetes on how to manage such changes. Where appropriate, people with diabetes can be taught to adjust treatment according to their test results and to change lifestyle factors that are directly influencing their blood glucose levels.

When a person with diabetes is involved in the education process about the benefits of regular SMBG, effective self-management can then help to reduce complications and long-term risk (Hampson et al, 2001). SMBG is an effective tool through which healthcare professionals can teach people with diabetes about managing their condition and its treatment. Empowered and educated people with diabetes can achieve improved outcomes for themselves.

Conclusion

The new consensus document represents the only SMBG guidelines currently available for the primary care sector. The document expresses clearly the importance of SMBG and states that there should be no restrictions placed on it. The consensus strives to place the needs of the individual with diabetes at the centre of treatment, and to educate the individual on the importance of achieving good glycaemic control through SMBG. It potentially allows the primary care team to see how targets set by the nGMS contract may be achieved, and one of its aims is achieving standardised care based on clinical need.

Without this document, and a standard consensus of what constitutes good clinical practice, people with diabetes are subject to inequalities through lack of knowledge, lack of education or PCO restrictions. Universal adoption of this consensus would mean an end to the patient inequality that has increased in the absence of clinical guidelines. ■

Table 3. Diabetes quality indicators (DoH, 2004).

- **Diabetes quality indicator 5 (Dm5)** covers the percentage of patients with diabetes who have a record of HbA_{1c} or equivalent in the previous 15 months – the minimum threshold is 25 % and the maximum threshold, to earn the full 3 available points, is 90 %.
- **Diabetes quality indicator 6 (Dm6)** covers the percentage of patients with diabetes in whom the last HbA_{1c} value was less than 7.4 % (or an equivalent reference range, depending on the local laboratory) in the last 15 months. The minimum threshold is 25 % and the maximum threshold, to earn the full 16 available points, is 50 %.
- **Diabetes quality indicator 7 (Dm7)** covers the percentage of patients with diabetes in whom the last HbA_{1c} was less than 10 % (or an equivalent reference range, depending on the local laboratory) in the last 15 months – the minimum threshold is 25 % and the maximum threshold, to earn the full 11 available points, is 85 %.

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