

Promoting self-management and independence in older people with diabetes

Joy Williams

The number of older people with diabetes is increasing; this is due to both the rising prevalence of diabetes generally as well as greater life expectancy. Older people with diabetes have a specific need to optimise blood glucose control in order to manage complications and supporting them to self-manage their condition is important. This article will focus on the physical and psychological challenges faced by older people with diabetes and promoting self-management, with an emphasis on optimising management by reviewing the individual's care and treatment regimen, and balancing this with safety. This article will also acknowledge the role of family and carers in helping older people with diabetes to self-manage their condition.

The number of older people with diabetes is growing; this mainly due to increasing prevalence of diabetes generally and because people are living longer. Diabetes is particularly prevalent in older age, with research showing that up to 25% of those over 85 years of age are diagnosed with type 2 diabetes (Peck, 2003). People in this group have specific needs to optimise their outcomes and this can be helped through promoting self-management.

This article will focus on promoting self-management in older people, with an emphasis on the specific needs of this group. Discussion will include optimising management by reviewing care and treatment regimens whilst considering safety. The challenges facing older people will be discussed, with some advice on how these can be overcome. The article will also acknowledge the important role of family and carers in helping older people with diabetes to self-manage their condition.

Education

Education is essential when helping people of all age groups to self-manage their diabetes; it is suggested that ongoing education improves knowledge of the

condition and maintains motivation (NICE, 2003).

Management of diabetes is predominantly undertaken by the person with diabetes, but DSNs have a key role to play in supporting these people through education. Diabetes education is an integral part of diabetes management and should be recognised as a continuous process to help the person with diabetes gain the knowledge, skills and information required to optimise their diabetes control (Funnell et al, 2009).

Diabetes education should be offered at the time of diagnosis and with an annual reinforcement to maintain the motivation to continue lifestyle changes (National Collaborating Centre for Chronic Conditions, 2008). It is important that education is concordant with NICE guidance, structured, underpinned with theory, delivered by trained educators, quality assured and audited (National Collaborating Centre for Chronic Conditions, 2008).

Older people should be encouraged to take part in group education and it may be helpful for them to be accompanied by a carer or family member. However, as in other groups, different teaching styles need to be employed to match the learning style of the individuals (Funnell et al, 2009). If the person has

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Article points

1. The number of older people with diabetes is growing; this mainly due to increasing prevalence of diabetes generally and because people are living longer. Older people have a specific need to optimise their outcomes and this can be helped through promoting self management.
2. There should be an emphasis on educating older people with diabetes to self-manage their condition, for example, in recognising the symptoms of hypoglycaemia. Family members and carers should be involved in this education.
3. Comorbidities associated with older age should also be taken into account and there should be an emphasis on safety. Older people should be supported in self-management by the use of accessible equipment.

Key words

- Diabetes
- Older people
- Self-management

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1. There are unique physical challenges that face older people with diabetes, including reduced mobility, increased risk of vascular disease, renal impairment, visual and hearing problems, as well as cognitive decline.
2. Psychological challenges, such as, loss of status, social isolation, depression, bereavement and adjustments to the ageing process can also make managing diabetes in older people challenging for the individuals themselves and for the DSNs caring for them.
3. Hypoglycaemia is more frequent and severe in older people and it is known that frequent episodes of hypoglycaemia can lead to the loss of warning signs of hypoglycaemia. People may also become less aware of hypoglycaemia as they get older due to impaired glucagon and hormone responses.

hearing difficulties, they should be seated where they can see and hear well. Seating a person with hearing impairment against a wall reduces the noises and distractions from behind and makes listening easier. The facilitator should ensure only one person speaks at a time to avoid confusion and should maintain good eye contact with the group to ensure understanding.

Managing diabetes in older age

Diabetes is a complex medical disorder associated with both acute and chronic complications. Acute complications include hypoglycaemia, diabetic ketoacidosis in type 1 diabetes and hyperglycaemic hyperosmolality state in people with type 2 diabetes. Chronic complications can include cardiovascular disease, nephropathy, neuropathy and retinopathy, and the longer a person has had diabetes, the more likely they are to have the chronic complications.

In addition, there are unique physical challenges facing older people including: frailty; reduced dexterity and mobility; reduced independence; an increased prevalence of vascular disease; renal impairment; impaired vision and hearing and cognitive decline.

Psychological challenges may also be problematic for older people with diabetes, for example, loss of status, social isolation, depression, bereavement and adjustments to the ageing process (Sinclair, 2009). These competing complications make managing diabetes in older people challenging for the individuals themselves and for the DSNs caring for them.

Aims of control and safety

Safety is a primary concern when caring for people with diabetes. The Diabetes Control and Complications Trial Research Group (1993) has shown that maintaining good glycaemic control slows the progression of chronic diabetes complications in type 1 diabetes. Furthermore, the UK Prospective Diabetes Study (1998) recognised that in type 2 diabetes the higher risk of complications is associated with a history of hyperglycaemia; any improvement in glycaemic control is likely to reduce the risk of chronic diabetes complications. Therefore, optimising diabetes control improves all outcomes for people with diabetes.

For this reason, the guidance on treating type 2 diabetes advises initiating oral hypoglycaemia therapy when the HbA_{1c} value

is >48 mmol/mol (6.5%) and intensifying treatment as HbA_{1c} rises (National Collaborating Centre for Chronic Conditions, 2008). Yau et al (2012) suggest there are no benefits to older people in having tight HbA_{1c} control and they recommend relaxing targets to 64–74 mmol/mol (8.0–8.9%).

Overly tight control for people treated with a sulphonylurea or insulin puts them at risk of hypoglycaemia and this can be particularly dangerous in older people since hypoglycaemia is generally under recognised in this age group (Sinclair, 2009). Older people may be less likely to be able to recognise and treat a hypoglycaemic episode, so prevention is key. When an older person has an episode of hypoglycaemia, falls are more common (Schwartz et al, 2002) and thus, fractures (Nicomemus and Folsom, 2001), leading to a loss of confidence and independence. In addition, major cardiovascular events and mortality have been associated with hypoglycaemia (Bonds et al, 2010).

Hypoglycaemia is more frequent and severe in older people (Sinclair, 2009) and it is known that frequent episodes of hypoglycaemia can lead to the loss of warning signs of hypoglycaemia (De Galen et al, 2006). People may also become less aware of hypoglycaemia as they get older due to impaired glucagon and hormone responses (Sinclair, 2009). In addition, older adults may have more neuroglycopenic manifestations of hypoglycaemia, including dizziness, weakness, delirium and confusion, rather than adrenergic manifestations, such as tremors and sweating (Brown et al, 2003). In older people, these neuroglycopenic symptoms may be easily confused with other causes and, therefore, it is not surprising that hypoglycaemia is under recognised in older people (Sinclair, 2009), or that symptoms are misdiagnosed.

Other conditions that may affect older people can also cause further problems, for example, renal impairment can lead to hypoglycaemia. As such, diabetes medications should be reviewed regularly in conjunction with renal assessments. Other life-limiting conditions may also limit the benefits of intensive therapy in older adults with diabetes, for example, cardiovascular disease or chronic obstructive pulmonary disease. Following guidelines for diabetes management in older people (National Collaborating Centre for Chronic Conditions, 2008) it is recommended to involve the person with diabetes

and a family member or carer in setting an agreed goal for HbA_{1c} that is safe for the individual.

Specific areas of concern in older people

Diabetes care should always be centred around the person with diabetes, with outcomes focusing on improving the quality of life and maintaining physical and mental health. Treatments should match the person's lifestyle; for example, if they eat meals at irregular times or do not wish to regularly monitor blood glucose, then a sulphonylurea would not be a good choice.

Blood glucose monitoring

Blood glucose monitoring in older people should be as manageable as possible; their monitor should be one that is easy to use and one that can be held comfortably if dexterity is impaired. Some blood glucose monitors have a backlit screen that makes it easier to read and this may be useful in promoting independence and self-management in older people.

Insulin use and prescriptions

If insulin therapy is required, the DSN should choose a device to suit the person's ease of use and the insulin therapy matched to the device to promote independence and self-management (Da Costa et al, 2002). Independence can be promoted through the careful selection of the appropriate insulin delivery device and regimen. Trimble et al (2005) assessed the use of a tool to predict insulin self-administration skills. This tool was adapted from the "clock drawing skills" tool devised by Shulman (2000), which is used in cognitive assessments. In this assessment, the person is given a circle of paper to represent a clock face and is asked to draw the numbers and set the hands to ten past eleven. In the study, Trimble et al (2005) found that an inability to draw this correctly or symmetrically correlated with a poor ability to self-administer insulin. If there is doubt over a person's ability to self-administer insulin, it is helpful to arrange for a district nurse to supervise.

In older people, care must be taken in prescribing drugs as impaired renal or liver function can delay the excretion of the drug, increasing its duration of action or potency. The risk of hypoglycaemia is increased with sulphonylureas or insulin when there is renal impairment. People treated with insulin or sulphonylureas are at risk of hypoglycaemia and

they and their relatives or carers should be advised about the signs of hypoglycaemia, its treatment and how to avoid hypoglycaemia. The older person should be advised to seek advice following a hypoglycaemic episode to review treatments. This education should be reiterated regularly.

Polypharmacy can complicate management by causing the individual to become confused with their medications; this may lead to medication adherence issues. The GP should take the lead with prescribing, giving careful consideration to treatments, particularly if there is a change in the person's condition, or if renal or liver function deteriorates.

Diet and exercise

Diet and exercise are an essential part of diabetes management. It is recommended that all people with diabetes receive dietary advice appropriate to their needs (National Collaborating Centre for Chronic Conditions, 2008); this can help them with making healthier choices and making small sustainable changes to improve their health outcomes, so reducing or postponing the need for medication. Sometimes older people do not have control over their food choices; for example, family members may do the shopping, or they may be reliant on ready-prepared meals delivered to their home. If a family member or carer is involved in shopping, it is suggested that this person attend the dietitian appointment alongside the person with diabetes so that current advice can be understood. The National Collaborating Centre for Chronic Conditions (2008) recommend that everyone should have access to nutritional advice but access may vary across different regions.

Activity should be encouraged even in older people with reduced mobility, who will find a reduction in joint pain if muscles surrounding a joint are strengthened (National Collaborating Centre for Chronic Conditions, 2008). Further health benefits from increased activity include increased stability, reducing the individual's risk of falls and improved physical and mental wellbeing.

Comorbidities and safety

Older people with diabetes may have arthritis causing pain with movement, which can lead to foot deformities or pressure on the feet heralding callous formation and pressure ulcers. All people with diabetes should be advised to check their feet daily

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1. If insulin therapy is required, the DSN should choose a device to suit the person's ease of use and the insulin therapy matched to the device to promote independence and self-management.
2. In older people, care must be taken in prescribing drugs as impaired renal or liver function can delay the excretion of the drug, increasing its duration of action or potency. The risk of hypoglycaemia is increased with sulphonylureas or insulin when there is renal impairment.
3. Older people with diabetes should be advised about the need for healthy diet and regular activity. Family members or carers may need to be involved in supporting these older people to make healthy choices.
4. Healthcare professionals should closely monitor older people with diabetes in order to manage any comorbidities, including neuropathy.

“Given the complexities of managing comorbidities and other issues in older people with diabetes, the multidisciplinary team should be involved in planning and delivering individualised care to this group of people.”

for colour changes or breaks in the skin (Diabetes UK, 2013). A family member or carer may need to be involved.

Retinopathy is a modifiable risk factor in diabetes, so it is important for the individual to have annual retinal screening. Routine eye checks by an optician can ensure prescriptions for spectacles reflect the current needs of the individual. In addition, other conditions can be identified and treated early to protect vision. Visual impairment reduces a person's ability to live independently, especially if it presents in older age. If eyesight is impaired then independence can be promoted by ensuring there is adequate lighting for the person to be able to see.

Regular dental reviews are recommended as mouth infections can destabilise diabetes, or can cause toothache, which may lead to a poor appetite. Poorly fitting dentures can make chewing difficult and food difficult to digest. If the person loses weight or does not wear the dentures for a period of time then the dentures may no longer fit. Dental check ups are advised if a problem is suspected.

Depression can cause people to become socially isolated (NICE, 2009), making them less able to undertake any form of activity or to make healthy eating choices. This can impact on their weight, causing deterioration in their diabetes. The DSN has an important role in assessing those people who may require treatment for depression.

If manual dexterity is a problem then difficulties can arise when using kitchen implements, so tools such as electric tin openers and jar openers can promote independence. In the home, access to storage should be safe and easy without involving the older person climbing to reach above their head.

Collaborative working

NHS Diabetes' (now part NHS Improving Quality) *Commissioning guidance for older adults with diabetes* (2010) endorses developing collaborative networks to promote service development to improve both social care and clinical outcomes for older people with diabetes. The person with diabetes and their relatives or carer must be involved in the management planning and decisions about their care. Older people with diabetes should also have access to prompt expert advice and know where and how to access this care (NHS Diabetes, 2010).

Diabetes UK (2010) has a sample care plan for the

use of people in care homes. There is no nationally approved care plan to provide written information for people with diabetes, although some areas have also developed local care plans. These could be useful in promoting independence in older people and for information to be shared between healthcare professionals.

Conclusion

Given the complexities of managing comorbidities and other issues in older people with diabetes, the multidisciplinary team should be involved in planning and delivering individualised care to this group of people (NHS Diabetes, 2010). The DSN is well placed to provide expert care and advice in managing this specific client group. Partnership working between the older person and the DSN can tailor care and treatments to the individual, considering safety in reducing both acute and chronic complications of diabetes and respecting the person's wishes. This is central to promoting self-management and independence in older people with diabetes. ■

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