

Barriers to the delivery of high-quality care for care home residents with diabetes

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Article points

1. Care home residents with diabetes are highly vulnerable owing to the lack of appropriate skills of healthcare practitioners to meet their needs.
2. Good communication, relationship-building and leadership skills are fundamental for DSNs to enable change to be implemented within the care home, thus improving quality of care.
3. The *Good Clinical Practice Guidelines for Care Home Residents with Diabetes* offer support for tackling the barriers to the delivery of high-quality diabetes care.

Key words

- Care homes
- Older people
- Quality care

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The age of the UK population is increasing, resulting in many people living with multiple long-term conditions, such as diabetes. Many older people who have complex health needs reside in care homes. The aim of this article is to raise awareness of the diabetes-related problems that exist for older people living in care homes, including the barriers to the delivery of high-quality diabetes care. The authors focus on the *Good Clinical Practice Guidelines for Care Home Residents with Diabetes* (Diabetes UK, 2010), which discusses the shortfalls in delivery of care, identifies possible barriers and their consequences and highlights the tools that can support change.

As the average age of the UK population is rising, people are living with increasing frailty and multiple long-term conditions (LTC; Diabetes UK, 2010), such as diabetes, which can affect general health and wellbeing. The treatment of each LTC can impact negatively on other LTCs, thus increasing the complexity of care. Factors affecting diabetes management in older people in particular include the presence of diabetes-related complications and impaired cognitive ability, which can lead to difficulty in taking medications at the dose and time prescribed.

Background to diabetes in care homes

Approximately 26% of care home residents in England have diabetes (Diabetes UK, 2010), and older people who are mentally ill have an even higher rate of diabetes (Aspray et al, 2006). Delivery of high-quality diabetes care in care homes can be a complex process and is

often compromised by barriers specific to the environment and the older person's needs.

The presence of diabetes has been shown to double the risk of admission to a care home (Tsuji et al, 1995). Despite increasing numbers of people with diabetes living in care homes, diabetes knowledge and education of those delivering the care is often suboptimal, which results in uninformed care, lack of timely intervention and increased hospital admission rates. In addition, there are rapid changes taking place in the organisational structures that should be supporting care home staff in the delivery of care, and new evidence continues to emerge on the efficacy of different antidiabetes agents, thus increasing debate on new approaches to the management of type 2 diabetes. The practical application of the science of the newer therapies in the older person has also recently been highlighted (Barnett, 2010; Evans, 2010).

As people are living with diabetes for longer, it can be assumed that the benefits of improving key areas of diabetes management may include enhancing quality of life (QOL) in people who have poor glycaemic control owing to the presence of hypo- or hyperglycaemia.

There are relatively few published reviews on diabetes management in care homes that support the achievements of improved outcomes following good diabetes care delivery (Grobin, 1970; Cantelon, 1972; Benbow et al, 2001). Evidence from research is often limited in its application to the management of diabetes in older people as the age ranges of the study cohorts often have an upper age limit of 70–75 years, which is lower than the average age of the people with diabetes who reside in care homes.

Deficiencies in diabetes care in care homes

The British Diabetic Association (BDA, 1999; now Diabetes UK) guideline highlighted many deficiencies in the diabetes care being delivered in care homes and provided a framework for change. Although these guidelines have been published, they have not been implemented by many diabetes services or care homes, thus leaving key deficiencies in care unaddressed.

Based on data from published studies, literature reviews and the experiences of a multidisciplinary working group, flaws in the delivery of diabetes care appear to continue, as identified in the *Good Clinical Practice Guidelines for Care Home Residents with Diabetes* (Diabetes UK, 2010). The following shortfalls were identified:

- Restrictive, task-orientated work routines.
- Lack of care planning in relation to diabetes.
- Inadequate dietetic guidelines.
- Unstructured, indistinct medical involvement and treatment review.
- Inadequate diabetes knowledge among care home staff – no structured educational programmes.
- Lack of audit tools.
- Lack of outcome data.

The current NHS changes in relation to commissioning (Department of Health [DH], 2010) address the concern that if clinicians

from all areas of the diabetes service are not involved in directing the focus of change in the localities, resources may be diverted away from older people. The residents in care homes (where arguably the impact of resource allocation will have greatest effect) may then remain the often “forgotten population” (Diabetes UK, 2010).

Continuous government-led changes aimed at ensuring that high-quality care is being received in the most cost-effective manner may also have a positive impact on diabetes care. At present, primary care organisations are focusing on implementing the Quality, Innovation, Productivity and Prevention agenda (DH, 2009), which has partially superseded the Darzi agenda (DH, 2008) for high-quality care.

Improvements in the care of older people with diabetes will result in reduced rates of hypoglycaemia and unnecessary admission to hospital. Specific areas of diabetes care to consider may include initial diagnosis, as this condition often goes unnoticed. Older people with diabetes may have atypical presentations, further complicated by ageing and medications; therefore, additional skills in diabetes management may be needed by care home staff.

Improving diabetes management in care home residents

Diagnosis and treatment

Clinical presentations may appear complex in this population. In the authors’ experiences, some residents in care homes may have been previously misdiagnosed with type 1 diabetes, but actually have type 2 diabetes. Such individuals may have needlessly endured years of insulin therapy and hypoglycaemia.

Treatment choices that have historically been chosen for the individual may include antidiabetes agents that have been started, stopped and restarted in different combinations with other medications. Their insulin regimens may now be very complicated as, over time, different clinicians have tried different approaches to manage glycaemic control in the individual. In addition, inappropriately high doses of insulin taken at the wrong time of the day may increase the risk of side-effects. A lack

Page points

1. The British Diabetes Association (BDA, 1999; now Diabetes UK) guideline highlighted many deficiencies in the diabetes care being delivered in care homes and provided a framework for change; these guidelines have not been implemented by many diabetes services or care homes.
2. Continuous government-led changes aimed at ensuring that high-quality care is being received in the most cost-effective manner may have a positive impact on diabetes care.
3. Specific areas of diabetes care to consider for improvement may include initial diagnosis, as this condition often goes unnoticed. Older people with diabetes may have atypical presentations, further complicated by ageing and medications; therefore, additional skills in diabetes management may be needed by care home staff.

Page points

1. It is important that screening for diabetes and related complications and that treatment decisions should be completed on admission to a care home, and then annually thereafter as a minimum.
2. It is important to be able to identify depression among individuals admitted to care homes and to be able to access the necessary referral route for assessment and management of any mental healthcare requirements.
3. Polypharmacy and renal and hepatic function should be considered at the commencement of treatment and periodically thereafter to reduce risk of potential over-medication at the usual doses recommended for a younger person and the risk of side-effects.

of information regarding why this has occurred may persuade the consulting clinician to restart diabetes therapy from the beginning, as this may be the safest option.

Additional considerations for diagnosis and treatment of people admitted to care homes include: they may have diabetes but have not been diagnosed; they do have diabetes but may not have had an annual review assessment for a long time; and they may have existing, undiagnosed complications of diabetes. Therefore, it is important that screening for diabetes and related complications and treatment decisions should be completed on admission to a care home, and then annually thereafter as a minimum.

Informed and skilled staff

Increasing complexity in diabetes management is occurring at a time when more and more diabetes care is being designated to the community/primary care setting to be delivered by GPs and practice nurses. These healthcare professionals often feel overwhelmed and unsupported by the structure of community services, in particular for older people, in their localities (DH, 2007).

Care home residents with diabetes are highly vulnerable (Diabetes UK, 2010) owing to the lack of appropriate skills by healthcare practitioners to meet their needs within the primary and community care settings. The lack of informed care increases an older person's susceptibility to infection, hypoglycaemia and rates of unplanned hospital admissions (Duffy et al, 2005) in comparison with their counterparts who do not reside in care homes and have higher levels of physical and cognitive abilities (Diabetes UK, 2010).

Admission to a care home can be traumatic for the individual and his or her relatives. In many cases, the resident has had to move from their own home in which they may have lived for most of their lives, moving away from their friends and family. This can be a frightening time. They may now also have reduced levels of independence. Therefore, it is important to be able to identify depression among these individuals and to be able to

access the necessary referral route for assessment and management of any mental healthcare requirements. Assessment of mental health needs, including cognitive ability, is important in maintaining or improving general wellbeing.

Management plans

The development of a management plan that includes specific diabetes management needed at the time of admission to a care home is essential for high-quality care. Prior to admission, the person's health may have deteriorated leading to weight loss, lack of regular nutrition or forgetfulness (resulting in the individual neglecting to take medications or accidentally taking more than required). The impact of this is often not considered when assessing HbA_{1c} levels. Where HbA_{1c} results are high, if the previously omitted medication is suddenly given as prescribed or doses are increased without consideration to the deterioration in health, there may be negative effects such as hypoglycaemia caused by over-medication.

All medications prescribed for older people should be used with caution. Polypharmacy and renal and hepatic function should be considered at the commencement of treatment and periodically thereafter to reduce risk of potential over-medication at the usual doses recommended for a younger person and the risk of side-effects.

Support for care home staff

Specialist influence and support for care home staff is essential for improving the delivery of diabetes care for care home residents. Supporting the delivery of diabetes care to reduce risk of short-term complications should be considered to be within the remit of job descriptions of DSNs working in adult care. Acknowledging this concept, in some areas care home DSNs have been employed to support diabetes management in addition to the specific needs of older people. Such an approach is considered to be cost-effective, as a DSN visiting groups of people in the care home can influence care delivery through staff education and can help to increase the knowledge of healthcare assistants working in the care home. Therefore, DSNs potentially have an impact

Table 1. Barriers and consequences to the delivery and receipt of diabetes care in care homes.

Organisational barriers to care delivery	
Care home staff often do not have easy access to diabetes education.	<ul style="list-style-type: none"> ● Higher risk of hospital admissions because problems are not detected early enough; infections resulting in unmanageable symptoms such as hyperglycaemia.
There are often minimum staffing levels in care home, which can become reduced with staff sickness.	<ul style="list-style-type: none"> ● Non-individualised diabetes care at key times of the day when staffing levels are further reduced; medications and food may be offered at inappropriate times of day to suit the organisation of the home rather than the resident, potentially leading to hypoglycaemia.
High staff turnover.	<ul style="list-style-type: none"> ● May reduce the level of skills and knowledge in the care home as staff leave. However, staff tend to move on to other care homes, thus information can be naturally disseminated.
Task-orientated care (which is often necessary owing to low staffing levels).	<ul style="list-style-type: none"> ● Set mealtimes and toilet and medicine rounds may lead to problems such as mistiming of medications and potential hypoglycaemia, which may remain untreated and can result in hospital admissions; incontinence may occur if the individual is hyperglycaemic as staff may be busy and unable to assist a person to the toilet area.
Admission to hospital	
Lack of early identification of problems.	<ul style="list-style-type: none"> ● Increased rates of unplanned admissions to hospital.
Strange, noisy environment; unknown staff; residents not being kept involved or informed of decisions made.	<ul style="list-style-type: none"> ● The resident has increased levels of confusion and inability to be independent, lack of opportunity to share in decision making and increased vulnerability owing to passive receipt of care.
Diabetes-related issues may not be addressed early enough.	<ul style="list-style-type: none"> ● Increased lengths of hospital stay (National Diabetes Support Team, 2008).
Lack of diabetes knowledge among ward staff.	<ul style="list-style-type: none"> ● Uninformed delivery of care (National Diabetes Support Team, 2008).
Specific diabetes-related barriers	
Lack of screening for diabetes complications.	<ul style="list-style-type: none"> ● Often it is not known that screening is required. Preventable problems can lead to major consequences such as blindness and amputations.
Lack of dietary understanding by care home staff; rigidity of meal times and long overnight fasts.	<ul style="list-style-type: none"> ● Large amounts of food taken closely together with long overnight fasting results in erratic blood glucose levels.
Cognitive impairment and increased reliance on others.	<ul style="list-style-type: none"> ● Communication difficulties, which may result in acute problems, such as hypoglycaemia, not being recognised by staff.
Lack of medication reviews; lack of hepatic and renal monitoring.	<ul style="list-style-type: none"> ● People with HbA_{1c} levels lower than the national target of 7% (NICE, 2010) may have frequent episodes of unrecognised hypoglycaemia; people with high HbA_{1c} levels may continue with hyperglycaemia and potential infections; increased risk of drug reactions.
Glucose monitoring being implemented with no review of the results.	<ul style="list-style-type: none"> ● Painful blood tests taken several times per day lead to poor experiences; a lack of blood results review leads to no change in management and therefore no improvement in glycaemic control.
Personal barriers	
Dirty spectacles or wrong prescriptions; ill-fitting dentures, particularly if there has been weight loss.	<ul style="list-style-type: none"> ● Food may appear unappetising; it may be difficult to use utensils and to eat.
Taste may be diminished; previous stroke and general poor health, medication or unmanaged pain may reduce appetite.	<ul style="list-style-type: none"> ● It can be difficult to eat an average-sized portion of food; normal quantities may be off-putting. Stroke may cause different textures to be unmanageable; food may need to be softened or liquidised.
Psychological barriers.	<ul style="list-style-type: none"> ● Individual psychological barriers to receipt of diabetes care may be in place because of perceptions and previous experiences.

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on the quality of care being delivered to future residents and also reducing hospital admissions for existing and future residents with diabetes.

DSNs are key to the implementation of the recommendations of the Diabetes UK (2010) guidelines. Good communication, relationship-building and leadership skills are fundamental in this role and enable change to be implemented within the care home, thus improving quality of care. To reduce the barriers to good diabetes management in care homes (see *Table 1*), a supportive, non-judgemental approach is needed. Having a flexible and adaptable approach to support and mentorship is necessary to meet the differing needs of each care home, and a specific educational and facilitatory strategy needs to be agreed between the DSN and the care home.

NICE (2008) identified key points in the curriculum of a structured education programme for people with type 2 diabetes that can be used as a basis for education of care home staff:

- The definition of diabetes.
- General health messages.
- How to deal with missed or refused meals.
- When to take medications, and their actions.
- Medication side-effects (e.g. hypoglycaemia).
- The importance of screening for complications of diabetes.
- Safe use of insulin and good injection technique.
- Provision of education for all care home staff and, where possible, the person with diabetes, aiming to support self-management and independence.
- Provision of mentorship to implement new knowledge and to develop skills.
- Provision of specialist care to individuals who require it.

Guidelines

The Diabetes UK (2010) guidelines will be used to support diabetes services in care homes. They address the lack of national and local guidance or best practice by highlighting the need for improvement in care delivery and the barriers to the delivery of high-quality care (*Table 1*). Thus, these guidelines offer support to organisations

to clearly identify how they are going to tackle this area of diabetes care and identify the plan within the diabetes strategy. Such a plan should aim to:

- Achieve high standards of care for all people with diabetes as set out in the *Diabetes National Service Framework: Standards* (DH, 2001a) and the *National Service Framework for Older People* (DH, 2001b).
- Maintain the highest degree of QOL and wellbeing without subjecting residents to unnecessary and inappropriate medical and therapeutic interventions.
- Provide sufficient support and the opportunity to enable residents to manage their own diabetes where this is a feasible and worthwhile option.

The Diabetes UK (2010) guidelines have drawn attention to screening for diabetes in the care home population, dietary requirements, mental health needs, needs of residents from ethnic minority groups, effective glycaemic control and the importance of the recognition of hypoglycaemia. The document has identified that foot care, ophthalmology and individually appropriate end-of-life care needs special consideration. In addition, specialist workers, care planning and educational support is clearly highlighted as a requirement for the delivery of good care.

The guidelines have acknowledged existing tools and developed others such as educational and training tools, the Resident's Diabetes Passport, a policy on delegation of insulin delivery and a care home audit tool.

Conclusion

Through exploration of the demographics, the development of the Diabetes UK (2010) guidelines and consideration of changes required to address barriers to clinical and practical diabetes care, the present authors have intended to draw attention to the inequity of care delivery that still exists within diabetes management in many care homes. In this way, it is hoped that such barriers will be diminished, thus reducing the consequences of poor diabetes management and improving QOL for older people with diabetes. ■