Targeted diabetes education for care home teams

Maggie Shepherd, Jackie Jones, Julie Frost, Ken MacLeod

Following an audit of care homes in Devon in 2001, which revealed significant gaps in care, a multidisciplinary team of diabetes experts in the South West developed guidelines and clinical standards of care for people with diabetes in care homes. Subsequently the Pan-Peninsula Diabetes Education initiative was launched, to improve diabetes care throughout the South West Peninsula through a rolling programme of educational courses. This included courses for staff within care homes; target groups include managers, care assistants and cooks within care homes, as well as nurses working in nursing homes. This article details the courses provided and attendees' evaluations of the courses.

In England, 12% of people aged over 65 years have diabetes (The Information Centre, 2006), and in the UK 20% of people over the age of 85 years have diabetes (Department of Health, 2003). Nearly a decade ago, Diabetes UK highlighted the lack of knowledge about the prevalence of diabetes within residential and long term care homes and the provision of diabetes care for care home residents (British Diabetic Association, 1999). It was suggested that elderly people with diabetes living in residential and nursing homes were a forgotten population (Benbow et al, 1997).

Since that time a small number of studies have investigated the prevalence of diabetes in UK care home settings, with reported prevalence ranging from 3.5% to 12% (Sinclair et al, 1997; Benbow et al, 1997; Taylor and Hendra, 2000; Sinclair et al, 2001; Aspray et al, 2006a; Shah et al, 2006). However, figures from many of these studies may be underestimates because of the methodologies used to identify people with diabetes; for example, postal surveys as opposed to glucose tolerance tests. More than 25% of care home residents may have diabetes, although the condition is frequently undiagnosed in this population (Sinclair et al, 2001; Aspray et al, 2006b). Ensuring equity of access and care for all members of the community is a priority for the Department of Health (2001).

In 1999, the British Diabetic Association (now known as Diabetes UK) produced *Guidelines of Practice for Residents with Diabetes in Care Homes*, which recommended individualised care plans, protocols of diabetes care, policies on screening for diabetes on admission, and training programmes for carers. However, diabetes management remains poorly structured in many UK care homes and the educational needs of formal carers are often not met (Taylor

Article points

1. More than 25% of care home residents may have diabetes, although this is frequently undiagnosed.
2. Diabetes management in many UK care homes is poorly structured and the educational needs of formal carers are often not met.
3. The Pan-Peninsula Diabetes Education (PPDE) initiative, launched in 2003, runs educational courses for all care home staff, including managers, care assistants and cooks, as well as nurses.
4. Educational sessions are well attended and highly evaluated by participants.
5. Care home residents also benefit from increased staff education.

Key words

- Diabetes
- Care homes
- Residential care
- Diabetes education

Authors' details can be found at the end of this article.

Page points

1. Policies for screening for diabetes within care homes on admission, individualised care plans, and protocols for diabetes care within care homes may still be lacking.
2. A postal audit of care homes in North, Mid, East Devon and Exeter in 2001 (now covered by Devon PCT) highlighted gaps in care similar to those identified nationally.
3. A multidisciplinary team of health professionals involved in diabetes care in the South West of England developed a document entitled *Diabetes Care for Life* in 2001 to address the issue of diabetes care in care homes.

and Hendra, 2000). Standards of care appear variable; in particular, the lack of structured, diabetes-related assessment of residents on entry in 60–79% of homes has been criticised (Taylor and Hendra, 2000; Shah et al, 2006). Although annual reviews may be conducted in up to 94% of cases (Shah et al, 2006), this high percentage may be related to the introduction of the new General Medical Services (nGMS) contract and Quality Outcomes Framework (QOF) targets. Annual reviews have also been conducted in some cases by visiting diabetes specialist nurses (DSNs) (Patterson and Dawson, 2006).

Knowledge of diabetes care among care staff may be poor (Sinclair et al, 1997). Concerns frequently relate to dietary needs, poor glycaemic control, hypoglycaemia and blood glucose monitoring (Diabetes UK, 2006).Frequency of blood glucose monitoring appears variable, with only 50% of residents with diabetes in care homes in South Wales having regular blood glucose monitoring (Sinclair et al, 1997). In contrast, high rates of glucose monitoring have been reported in patients controlling their diabetes with diet and oral hypoglycaemic agents, in whom this practice is considered unnecessary (Aspray et al, 2006a).

Policies for screening for diabetes within care homes on admission, individualised care plans, and protocols for diabetes care within care homes may still be lacking (Aspray et al, 2006a). Although the justification for testing elderly residents has been debated (Paterson, 1993), undiagnosed diabetes may be a risk factor for the development of hyperosmolar non-ketotic coma and increased mortality (Wachtel et al, 1991). Identification and treatment of hyperglycaemic symptoms can improve quality of life in these residents (Sinclair et al, 2001).

Audits

A postal audit of care homes in North, Mid, East Devon and Exeter in 2001 (now covered by Devon PCT) highlighted gaps in care similar to those identified nationally and outlined above. In response, a multidisciplinary team of health professionals involved in diabetes care in the South West of England developed a document entitled *Diabetes Care for Life* in 2001 to address the issue of diabetes care in care homes. This document, which is simple and clearly laid out, was given, and sent electronically, to every care home in the catchment area.

Diabetes Care for Life (since updated in 2005 [Piper and Tiley]) includes information about diabetes, diet, monitoring of medication, hypoglycaemia, intercurrent illness, skin and pressure care and foot care. It also contains specific guidelines on the various aspects of diabetes care, and sets out four key minimum standards of clinical care for each person in a care home (*Table 1*). Study days were held to support the launch of *Diabetes Care for Life* and to reinforce the messages and key standards set out in the document.

An audit of the four key standards was first undertaken in 2004. This revealed that:

- 34% of residents had been screened for diabetes.
- 77% of those with diabetes had care plans in place.
- 93% of people with diabetes had received an annual review.
- 49% of care homes had a named member of staff trained in the care of people with diabetes.

The Pan-Peninsula Diabetes Education (PPDE) initiative

Subsequently, the PPDE initiative, which aims to improve care through a standardised, collaborative approach to diabetes education throughout South West England (Shepherd et al, 2007), developed annual courses for care home staff, to address their educational needs in relation to residents with diabetes.

This article describes the courses provided for staff in care homes across Devon, and presents the results of course evaluations carried out by attendees.

Aims

The aims of the courses for care home staff provided as part of the PPDE initiative were:

- To provide the opportunity for all care home staff to learn more about diabetes and how to plan and provide diabetes care for residents.
- To increase confidence and knowledge among

Page points

1. Courses were designed by a team of diabetes professionals, based on identified areas of need.
2. All staff in care homes in Devon, including managers, care assistants cooks and nurses, were invited to attend the courses.
3. Separate study sessions were held for each group of staff in order to target their particular needs and ensure relevance.
4. Courses were delivered by DSNs, nurse facilitators, podiatrists, dietitians and PPDE coordinators.

staff, while reiterating the rationale for the guidelines set out in *Diabetes Care for Life*.

Course development

Courses were designed by a team of diabetes professionals, based on identified areas of need. All staff in care homes in Devon were invited to attend the education courses. Target groups included managers, care assistants and cooks within care homes, and trained nurses working in nursing homes.

Separate study sessions were developed for each group of staff in order to target their particular needs and ensure relevance. Half-day sessions were developed for managers, care assistants and cooks, and a full-day session was implemented for trained nurses.

- Sessions for managers included an overview of diabetes, healthy eating and foot care, the rationale for the *Diabetes Care for Life* guidelines and the managers' responsibilities in implementing the guidelines.
- Sessions for care assistants focused on practical care, such as screening residents for diabetes, individualising care and the annual review, as well as healthy eating and foot care.
- Sessions for cooks focused on nutritional aspects of diet and menu planning; these were practical and included cookery demonstrations.
- The full-day session for trained nurses provided an update on modern management of diabetes, including new therapies and insulin administration, screening, monitoring and prevention of complications.

Table 1. The four minimum standards of clinical care for each person in a care home, as set out in *Diabetes Care for Life* (Piper and Tiley, 2005)

Standard 1	Each adult resident in a care home will be screened annually for diabetes
Standard 2	Each resident with diabetes will have their diabetes care documented in their care plan
Standard 3	Each resident will have an annual review of their diabetes in the most appropriate setting
Standard 4	Each care home will have a named member of staff trained in the care of diabetes

- Podiatrists ran sessions on foot care for all care home staff.

Access to retinal screening is a problem for people with diabetes in residential care. The importance of retinal screening in preventing eye problems was emphasised, in the hope that it would encourage homes to make special arrangements for residents to access local screening programmes.

Courses were delivered by DSNs, nurse facilitators, podiatrists, dietitians and PPDE coordinators, using a consistent format across all the courses. Twelve weeks before the sessions commenced, flyers advertising the study sessions were sent out to 250 care homes across the South West by the PPDE administrator.

Course costs were kept to a minimum to ensure that the maximum number of interested participants were able to attend: costs were £10 per participant for a half-day session and £20 for a trained nurse for the full-day session. Additional support was sought from a minimum of two pharmaceutical companies per study session.

Attendance

Twenty-two study sessions for care home staff were held between April 2006 and June 2007 in three different locations across the South West. Each course consisted of separate sessions for managers, care assistants and catering staff.

A total of 484 care home staff from 115 different care homes in the South West attended the study sessions. All courses were fully subscribed, with a mean of 22 participants at each session. This reflected the high local demand for coordinated courses specifically targeted at the care of people with diabetes living in care homes.

Evaluation

At the end of each course, all participants completed a written evaluation, the format of which was consistent across all PPDE courses (Shepherd et al, 2007). Participants were asked to rate the course in terms of relevance, enjoyment and value for money using a 5-point Likert scale (1=poor, 5=excellent). The mean score for relevance and enjoyment was 4, and the mean score for value for money was 5.

The evaluation also allowed participants

to make free-text comments on which aspects of the day they had found most helpful, how the day could have been improved, and the most important things they had learnt. Participants were also invited to make 'any other comments' if they wished.

Attendees considered the sessions to be positive:

'Whole course was constructive.'

They reflected that they had greater awareness of the importance of 'care planning'. The sessions increased knowledge:

'I knew very little about diabetes before the course and went away feeling equipped to use the information learnt in my care home.'

Confidence in caring for residents was also increased:

'The course has given me a greater understanding of how to care for residents who have diabetes.'

Attendees considered that the most important things they had learnt included:

'How to deal with hypos'

'The importance of detecting diabetes'

'Information about annual review'

'Information on standards'

'Not to segregate [people with diabetes] from other residents.'

The cooks particularly enjoyed the cookery demonstrations and increased their understanding in this area:

'[People with diabetes] can eat more foods than I thought.'

They also recognised that residents would benefit from healthy eating:

'No need for special foods, just a good sensible eating plan.'

Attendees considered the courses relevant:

'All topics discussed were essential to work as a carer.'

The importance of ongoing education was also identified:

'Regular updates are essential to keep up with the changes to ways of thinking and care of people with diabetes'.

Further education sessions were requested:

'Very valuable – hope to see more courses in future.'

In some cases, more detail was asked for:

'Would like to attend further sessions and more in-depth lectures'.

The process of continuing education was valued and, encouragingly, managers planned:

'To send staff on future courses.'

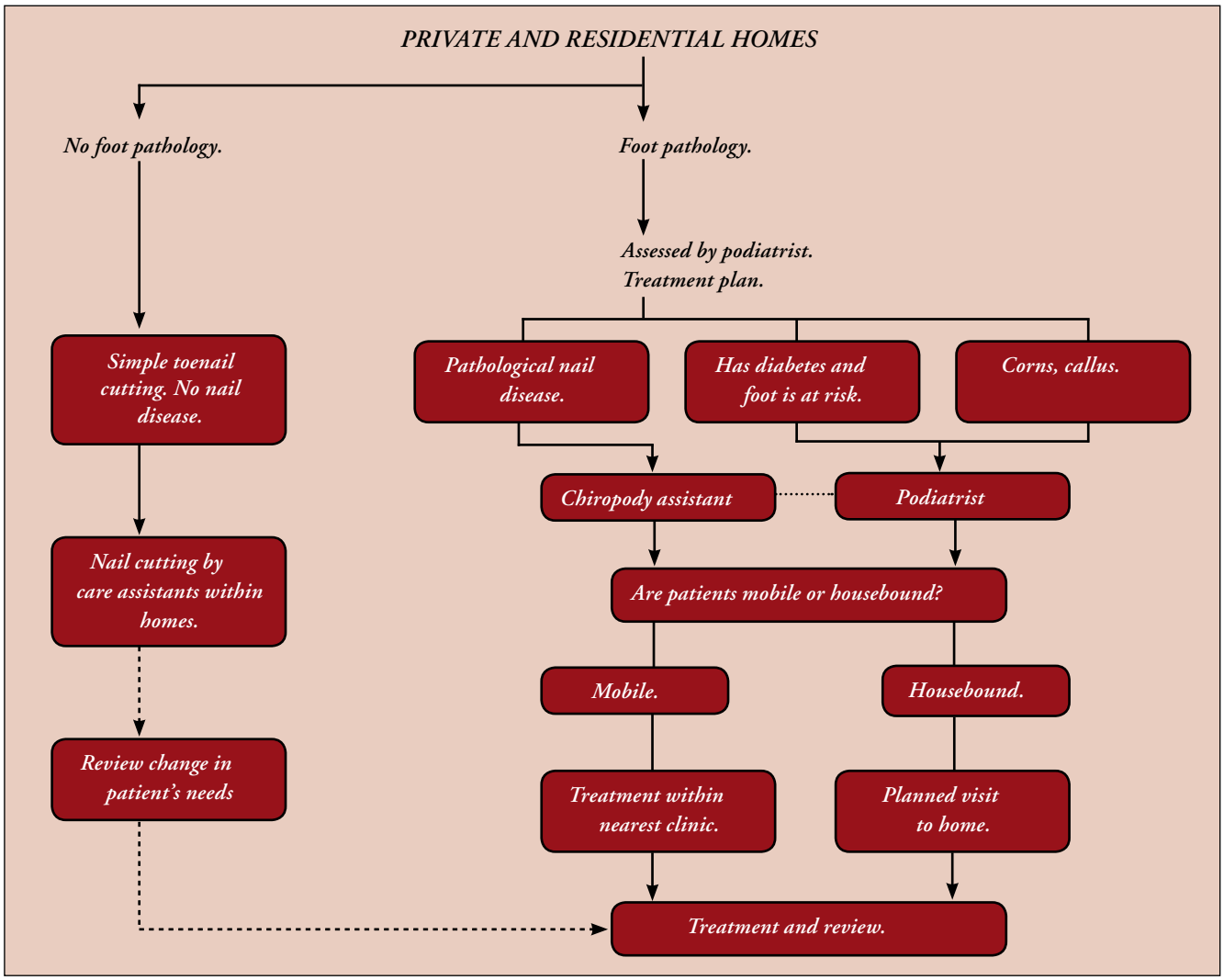

Figure 1. Pathway for referral to the chiropody department from private and residential care homes, developed by local diabetes teams in response to identified need. (Dotted line indicates that the individual could be seen by either professional, depending on the severity of the nail disease. Dashed lines indicate the pathway following a change of patient need.)

Subjective comments from course providers indicated higher levels of knowledge and interest from care home staff following the course. Course providers also noted that care plans drawn up for residents and annual reviews had been carried out.

Individuals with diabetes also benefited from increased staff education, as illustrated by the case of Jack, an 83-year-old man with diabetes who had been living alone. Jack's diabetes was well controlled on twice-daily biphasic human insulin via a disposable insulin injection device. His failing eyesight and difficulty in coping at home led to discussions about the need for residential care. Initially, the residential care home staff felt that he would 'have to be in a nursing home because of his diabetes'. Since attending the course, however, the staff felt confident that they would be able to care for Jack within their care home:

'After the course, we felt confident and no longer afraid of diabetes and able to take Jack into our residential home.'

Discussion

The educational sessions for care home staff were well attended and evaluated. Communication between diabetes teams and care home staff

also improved. Sessions were well received and raised awareness of diabetes and the value of individual care planning. A foot care pathway was developed with the aim of ensuring appropriate use of specialist podiatry services (*Figure 1*). These courses increased knowledge and skills across the staff team within care homes, leading to benefits for residents. However, it is recognised that recent improvements in the uptake of annual reviews within care homes may be a consequence of the introduction of the nGMS contract and QOF targets rather than targeted education.

An audit of the four standards set out in *Diabetes Care for Life* is planned for autumn 2008 in the South West to determine whether the educational courses have improved care in these areas. Screening for diabetes in new residents was poor in the Devon 2004 audit, with only 34% of residents being screened, so this area will be reviewed in 2008, along with the proportion of:

- Residents with diabetes who have a care plan in place (previously 77%).
- Residents with diabetes who have had an annual review (previously 93%).
- Care homes that have a named diabetes lead within the home (previously 49%).

Frequent staff turnover within care homes is recognised as a particular challenge, highlighting the importance of a rolling programme of ongoing education.

Conclusion

Targeted education for care home staff was provided as part of the PPDE initiative. This can improve diabetes knowledge and confidence among staff caring for people with diabetes, and can focus attention on particular areas of care, including annual screening. PPDE aims to offer these training courses for care home staff across the whole of Devon and Cornwall in the future. For further information about the range and availability of educational courses delivered by the PPDE group, see: www.pms.ac.uk/ppdiabe. ■

Authors' details: *Maggie Shepherd is an Honorary Clinical Senior Lecturer at Peninsula Medical School, Exeter; Jackie Jones is a Diabetes Specialist Nurse at Devon PCT; Julie Frost is a Diabetes Nurse Facilitator at Torbay Hospital, Devon; and Ken MacLeod is a Consultant Physician in Diabetes and Endocrinology at the Royal Devon and Exeter NHS Foundation Trust.*

Pan-Peninsula Diabetes Education (PPDE) acknowledges the pharmaceutical companies supporting their educational initiatives.

Aspray TJ, Nesbit K, Cassidy TP, Hawthorne G (2006a) Rapid assessment methods used for health-equity audit: diabetes mellitus among frail British care-home residents. *Public Health* **120**: 1042–51

Aspray TJ, Nesbit K, Cassidy TP et al (2006b) Diabetes in British nursing and residential homes: a pragmatic screening study. *Diabetes Care* **29**: 707–8

Benbow SJ, Walsh A, Gill GV (1997) Diabetes in institutionalised people: a forgotten population? *British Medical Journal* **314**: 1868–9

British Diabetic Association (BDA; 1999) *Guidelines of Practice for Residents with Diabetes in Care Homes.* BDA, London

Department of Health (DH; 2001) *National Service Framework for Older People.* DH, London

DH (2001) *National Service Framework for Diabetes: Standards.* DH, London

Diabetes UK (2006) *Carlisle and District Diabetes Training in Residential Care Homes.* Available at: www.diabetes.org.uk/en/professionals/shared_practice/care_topics/Innovative_care/Carlisle_and_District_Diabetes_Training_in_Residential_Care_Homesbr_January_2006/ (accessed 6 October 2008)

Information Centre, The (2006) *Health Survey for England 2006: Volume 1. Cardiovascular disease and risk factors in adults.* Available at: http://www.ic.nhs.uk/webfiles/publications/HSE06/HSE%2006%20report%20VOL%201%20v2.pdf (accessed: 2.10.09)

Paterson KR (1993) Population screening for diabetes mellitus. Professional Advisory Committee of the British Diabetic Association. *Diabetic Medicine* **10**: 777–81

Patterson R, Dawson P (2006) Undertaking annual diabetes reviews in the nursing home setting: a pilot study. *Journal of Diabetes Nursing* **10**: 10–14

Piper D, Tiley S (2005) Diabetes Care for Life: Guidelines and Clinical Standards of Care for People with Diabetes in Care Homes. Available at: www.diabetes.nhs.uk/downloads/diabetes_care_home_report.pdf (accessed 19 September 2008)

Shah A, Bruce M, Willson C et al (2006) The care of people with diabetes in care homes within a primary care trust. *Journal of Diabetes Nursing* **10**: 8–12

Shepherd M, Frost J, Jones J et al (2007) Insulin initiation in primary care: helping it happen. *Diabetes & Primary Care* **9**: 152–8

Sinclair AJ, Allard I, Bayer A (1997) Observations of diabetes care in long-term institutional settings with measures of cognitive function and dependency. *Diabetes Care* **20**: 778–84

Sinclair AJ, Gadsby R, Penfold S et al (2001) Prevalence of diabetes in care home residents. *Diabetes Care* **24**: 1066–8

Taylor CD, Hendra TJ (2000) The prevalence of diabetes mellitus and quality of diabetic care in residential and nursing homes. A postal survey. *Age and Ageing* **29**: 447–50

Wachtel TJ, Tetu-Mouradjian LM, Golman DL et al (1991) Hyperosmolarity and acidosis in diabetes mellitus: a three-year experience in Rhode Island. *Journal of General Internal Medicine* **6**: 495–502

Page points

1. An audit of the four standards set out in *Diabetes Care for Life* is planned for autumn 2008 in the South West.
2. A rolling programme of ongoing education is necessary because of the high turnover of staff in care homes.
3. PPDE aims to offer these training courses for care home staff across the whole of Devon and Cornwall in the future.