Teaching carers how to administer insulin: A residential care home project

Nneka Agbasi

This article gives an account of a how a diabetes specialist nursing team took the lead to teach care home staff to administer insulin to their clients. It provides information on the planning of the project, risk assessment, competencies, clinical supervision and the teaching plan. It also describes the goals achieved and challenges encountered with the project.

In a position statement document, Diabetes UK (2014) states that "Older people with diabetes often have other long-term health conditions such as dementia, mobility and sensory problems, making self-care difficult. Many are dependent on care providers." As has already been reported, people are living longer (Mortimer and Green, 2015). This puts pressure on the NHS to deliver high-quality care, prevent hospital admissions, prevent social exclusion, encourage a certain level of independence and promote safety for a growing number of elderly and frail people (NHS Providers, 2016).

Residential home carers are non-registered nursing staff who ensure that all aspects of their clients' activity can be achieved. From clinical experience, this could range from supporting personal hygiene and administration of medication to dealing with diabetes emergencies. Therefore, it is important that carers receive relevant and adequate training to deliver high-quality care (Care Quality Commission, 2008), and it is essential that DSNs continue to identify training needs to residential care home managers.

This article gives an account of a project delivered in a residential care home in Enfield to teach staff how to safely administer insulin to clients with diabetes requiring insulin therapy.

Planning

In our Trust, the district nurse (DN) caseload is increasing every day as patients in secondary care are discharged into the community much earlier for continuation of care. A DN team in one area could have up to 19 patients requiring insulin administration between the hours of 9 am and 10 am. As a result, a local residential care home approached our DSN team requesting training to allow their own staff to administer insulin therapy to enable better glycaemic control for their clients. The following reasons were given:

- The community nurse's growing caseload resulted in clients not receiving insulin at the right time on a daily basis.
- Both clients and carers often became anxious as they thought the clients had been missed.
- The clients who received their insulin late were having additional snacks to prevent hypoglycaemia.
- The carers felt it was difficult to achieve acceptable glycaemic control for their clients.
- The care home management felt that their carers needed more training in managing the complexities of diabetes care and insulin administration.

The DSN team discussed the request and reflected on the insulin initiation given to people

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Article points

1. In this project, residential care home staff were trained to administer insulin therapy to their clients.
2. The theoretical training took place over three afternoons and was followed by practical training delivered by district nurses.
3. The training allowed more regular and reliable insulin administration for the care home residents and allowed district nursing resources to focus on other, more complex cases.
4. However, delay in holding a refresher course 1 year later meant that carers were unable to continue administering insulin for 3 months, emphasising the need for annual training schedules.

Key words

- District nursing
- Insulin administration
- Residential home carers
- Training

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1. Before initiating this pilot project, a risk assessment was performed, revealing that the training needed to be at the appropriate level for the carers, insurance would be necessary to protect both clients and carers, and funding would be required to provide a high-quality glucose meter, with regular quality assurance testing, for the staff.
2. Ongoing supervision from senior nurses was also essential, and so support from the district nursing and care home assessment teams was arranged.
3. Funding was provided by the care home managers and the district nursing service.

with diabetes in follow-up clinics, in which their current diabetes management and treatment pathways are assessed. Patients and family members have been taught how to administer insulin successfully through ongoing supervision and telephone contact with the team. However, it was important to carry out a risk assessment to ensure that patient and staff safety was not compromised (Care Quality Commission [CQC], 2016).

Risk assessment

The diabetes specialist nursing team performed the risk assessment. The following was taken into consideration:

- The ability of the carers to understand the training was essential, as many carers may have very basic knowledge of diabetes care. However, this could also be said of the patients and family members with no background in healthcare who have successfully been taught insulin administration by DSNs in the follow-up clinics. Nonetheless, the training presented a number of challenges, and the DSNs in the team agreed that appropriate ongoing supervision following training was necessary to support the carers.
- Appropriate insurance was needed to protect both staff and clients against the risks associated with insulin administration, and to protect residents from receiving unsafe care (CQC, 2016).
- A registered, quality-assured glucose meter that is tested on a daily basis by all staff using it, and on a monthly basis by an approved quality assurance laboratory, was needed to ensure the accuracy of clients' blood glucose measurements. Achieving this meant additional spending, especially for the monthly quality assurance tests for the care home. The actual figure of the cost is unavailable; however, the care home managers were willing to explore this and ensure quality assurance for the better management of their clients.

Ongoing supervision by senior community nurses was essential to ensure that the carers' practice was up to date and competent (Nursing and Midwifery Council, 2015). Therefore, the service managers for the DSN team, DN team and care home assessment (CHA) team matrons were all involved in the decision-making process. It was agreed that the caseload managers for the DN teams and CHA matrons would provide ongoing support to the care home staff.

The DSN team designed an information pack with all the requirements that needed to be addressed before the training could commence, including:

- A proposal detailing the patient safety issues highlighted from the risk assessment.
- An insulin administration competency framework, created to inform and support carers in achieving these skills.
- A consent form for the residential care home managers to confirm that they had met all the requirements and addressed the issues highlighted in the risk assessment.

These packs were sent out to the service managers and care home managers. The care home managers signed the consent form. The CHA team and the DN specialists agreed to take responsibility for providing ongoing supervision to the care home staff.

Funding

Funding new projects in the NHS is approached in a tactful manner. The commissioners were not approached in this case because it was a pilot project and a request from the residential care home. The DSN team wanted to know the challenges and potential outcomes of the project before taking any further action to seek funding. The care home managers and the DN service funded the training and the CHA team funded the venue. The DN service contributed because the project meant that the care home clients could be released from the DN caseload and be treated by the carers. This enabled the DN team to take on more complex roles.

Teaching style

The residential care home had the opportunity to choose either a single 1.5-day course or three half-day courses, which took place in the afternoon. It chose the three half-day courses owing to staffing issues.

To have their competency signed off, the care home staff had to both complete the training

sessions and receive a practical evaluation with their individual mentors. Therefore, two matrons from the CHA team and two caseload managers from the DN team attended to follow up on the practical part of the training. These mentors had already attended the primary care diabetes course provided by the Trust every year, which covers all aspect of diabetes care for clients in the community, and were up to date with their diabetes competencies.

In the practical assessment, the carers were accompanied by their mentors, who had a competency document which included questions and a performance checklist sheet. The mentor watched the carer go through the process of administering insulin to five clients in total. Thereafter, the mentor would decide to sign off the carers or highlight concerns to the care home managers and DSN team.

In total, 25 residential care home staff attended the course, including a registered mental health nurse, care home managers, an operational director, an adult nurse, senior carers and junior carers.

It was important that the teaching should be interactive. From personal experience, afternoon training can be challenging for attendees because they have been working in the morning; therefore, they can feel very tired and may lose concentration during the afternoon teaching session. With this in mind, group work, discussions, workshops and scenarios were used to keep staff engaged.

Microsoft PowerPoint was used not just to present the teaching in a professional manner but also to enhance and stimulate learning during the training, as described by Jones (2003). However, it is important that the quality of information provided through these means is robust and engages learning. The teaching was specific and relevant, with graphics and pictures helping to link theory to practice and enable better understanding. All handouts were given at the end of the presentation, except for leaflets used in the teaching session to engage staff in learning. From clinical experience, staff who receive their handouts before teaching lose concentration and feel more anxious for time.

Content

It was essential that the residential home carers had a background knowledge of diabetes before being taught how to administer insulin. Therefore, the training was divided into the following sessions:

- The fundamentals of diabetes care; definition of diabetes; and the types, complications and treatment of diabetes.
- Diabetes emergencies, including hyperglycaemia and hypoglycaemia, diabetic ketoacidosis and hyperosmolar hyperglycaemic state.
- Blood glucose monitoring.
- Nutritional assessment and physical observations.
- Insulin and insulin safety.
- Device workshop, quiz and scenarios.

Evaluation

The course was evaluated using questionnaires (*Box 1*). Comments from the staff included:

- "Can I have a refresher next year?"
- "The practical was really useful."
- "Made me feel confident to administer insulin."
- "Lots of practice, the course was insightful."
- "Well organised."
- "Great sessions, interactive."
- "Need a good venue for the next two teaching sessions."

Ratings of excellent, good and poor were used to assess the participants' views about the training. Of the different sessions, the fundamentals of diabetes was rated excellent by 85% and good by 15%. Diabetes emergencies and blood glucose monitoring were rated excellent by 90% and good by 10%. Insulin and the device workshop and scenarios were both rated excellent by 95%. This feedback reflects participants' understanding of the course, and the teacher felt assured by these comments.

The other assessment used was a class quiz including the overall teachings; role-play scenarios, in which carers used demo pens and soft objects to practise administering insulin on each other; and role-play scenarios regarding hypoglycaemia and hyperglycaemia. Questions were asked during these scenarios to ensure that the carers had a better understanding of insulin administration.

The assessment process is currently being reviewed to ensure that the training becomes more robust. For example, exams are being considered at the beginning and end of the training to assess carers' understanding of the theory before they

Box 1. Questions asked in the evaluation questionnaire.

- Were the support materials useful? If not, please comment.
- Please rate the subject covered today as excellent, good or poor.
- Were the expected learning outcomes achieved?
- Is there anything you would like to change?
- Do you have any additional comments?

Box 2. Questions asked in the questionnaire given at the training update.

- Was the insulin administration training useful?
- Was the practical element of the training easy?
- How confident and well prepared were you to go on to administer insulin?
- How many times did you give insulin in the week?
- How long did it take before you were administering insulin to clients?
- How was the quality of support and ongoing supervision?

can progress to the practical part of the course. If they fail the test, an action plan will be developed between the DSNs, mentors and carers.

Follow-up

The DSN team followed up after 6 months and 1 year to assess the benefit of the training. Six months after the training, 19 care home staff were still administering insulin. The staff on regular night duty did not administer insulin, because their clients were on once- or twice-daily insulin regimens, which were not given at night. No insulin error was recorded. All 19 carers had their insulin administration competency signed off by their mentors.

One year on, however, the care home staff's insulin training expired in March 2016, and no contact was made to the DSN team at that time to provide training updates. Therefore, the care home stopped its staff from giving insulin and requested an update to ensure that they met their CQC standards. The DNs took over insulin administration. From enquiry, funding delayed the process of giving the staff an update.

The CHA team took the lead on arranging funding for the training update. Again, the DN service agreed to fund the training.

Insulin training update

The training update was a half-day, afternoon session to reflect and provide updates on insulin, insulin safety and administration. Attending carers received the update in June 2016 and resumed administration of insulin afterwards. Twelve staff attended, mainly senior and junior carers and their managers. Four staff could not attend due to staffing issues and seven had left. The care home recruited nine new carers, who will require training for insulin administration.

Individual questionnaires were given to the staff attending the update to assess their experience of the project to date, from initial training to completing their competency (*Box 2*).

Information provided in the questionnaire showed that 99% of the carers started giving insulin within 3 weeks. Overall, 85% did not encounter any problems with supervision, and 90% said they were only supervised by the CHA team, without any support from the DNs.

The DNs were unable to provide support as planned, due to increased caseload and staffing issues. However, they nominated a diabetes link nurse from their team to provide ongoing support to the care home staff. The care home managers were happy with the agreement. The carers were also advised to keep a record of the DNs' monthly support and highlight concerns to their managers where they had not been supported.

The pros and cons

This project was a good experience, and the DNs, care home managers and CHA team felt it was a good idea. However, there were also some negative outcomes.

Pros

- The DN team were able to give back the care home clients on their caseload. This enabled the team to take on more complex patients and other people living with diabetes in their own homes requiring insulin therapy.
- The Community Trust saved money from the reduced number of DN visits. This cost was redirected into other areas of need.
- The clients received their insulin at the right time. This reduced the level of anxiety for both clients and staff.
- There was a reduction in the number of hospital admissions for diabetes emergencies. Carers were able to manage more diabetes emergencies and had fewer ambulance call-outs, where previously they would have had to call the ambulance to treat every hypo.
- The care home has not recorded any insulin errors since the training.
- The carers felt more confident in insulin administration and dealing with diabetes emergencies. They felt more able to identify high glucose levels and to assess their clients and escalate concerns.
- A cross-section of the clients, selected by the care home managers for interview, were happy for the carers to administer insulin as prescribed.
- The clients felt that the insulin was administered appropriately.

However, it is important to note that the comments of these selected clients cannot be used

to represent the view of all clients in the care home. The majority of clients in the home have cognitive impairment, such as dementia, and it was difficult to obtain client feedback on the project.

Cons

- The care home manager stated that they did not receive support from the DNs after the training.
- The care home staff stopped giving insulin after their training period of 1 year had expired. This caused a gap of 3 months before they could continue giving insulin. This could have been avoided with early notification and pre-arranged training. An annual training agreement has been put in place to avoid this happening again.

Discussion

In the NHS, we are constantly looking for ways to improve quality of care; however, when an idea is identified, it automatically highlights the challenges of delivering it in the real world. To do so takes persistence, effective communication, documentation, dialogue, risk assessments, team effort, follow-up, diplomacy, honesty and determination.

This project gives insight into the complexities of implementing a new idea. It also highlights the benefits of upskilling care home staff to deliver safe care for people with diabetes. However, it cannot be applied to all care homes, as others may not be able to meet the criteria set by the DSN team.

The NHS continues to look into ways of saving costs to reduce its billion-pound deficit. Training staff to be competent and confident in dealing with diabetes emergencies will reduce emergency call-outs and reduce unnecessary hospital admissions, and the CQC continues to emphasise the need for care home staff to be competent in the skills and knowledge used in providing care to clients.

As the population of people living with diabetes continues to increase in the UK, the need for training in diabetes care, especially for care home staff, will also continue to rise. However, care homes must always ensure that they have the insurance to cover their staff and clients against risks associated with insulin administration before deciding to train their staff to administer insulin.

This project has been successful because of joint working of multidisciplinary teams and follow-up to evaluate the process. Insulin administration is not a skill that can be easily acquired owing to the safety issues involved. It should be monitored and ongoing support provided. Performing a risk assessment before any clinical task is beneficial not only to clients but also to staff: one needle-stick injury from an infected patient could change the life of a carer.

In conclusion, this article shares the experience of a project to educate residential home carers to provide high-quality diabetes care to their clients, and it raises awareness of the possibility to teaching additional skills given the right supervision. However, it is not a research article and cannot be generalised, as other DSNs may have a different experience and outcomes. Research needs to be done in this area to evaluate the validity and credibility of this process.

Residential homes should continue to recognise the need to educate their staff the moment they accept a client living with diabetes, and DSNs should continue to explore ways of providing support to all healthcare professionals, both registered and unregistered practitioners, because we work better together. ■

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