

The Diabetes Ward Champions programme: A new concept of link nursing, improving inpatient care through upskilling of ward healthcare professionals

Claire Neely

In 2016, a Diabetes Ward Champion programme was created to improve diabetes inpatient care at Kingston Hospital NHS Foundation Trust. The 1-year programme provided protected training time, knowledge and skills to support nursing staff caring for inpatients with diabetes. Education and change initiatives instigated by the eleven Champions included training for ward colleagues, a medication-provision protocol for day-case patients admitted overnight unexpectedly and a display magnet to alert staff to diabetes diagnoses whilst maintaining inter-patient confidentiality. Overall patient satisfaction increased by 20% across the following year, suggesting a positive correlation with Diabetes Ward Champions. Champions reported that the programme was relevant to clinical practice, increased their confidence in managing diabetes and developed their ability to influence change.

High-quality diabetes nursing care improves the experience and outcomes of hospital inpatients with diabetes (NHS Digital, 2017a; Watts and Rayman, 2018). However, a lack of adequate training ensuring that nurses have the necessary knowledge and skills in the specialist field of diabetes may lead to failure to effectively meet patients' clinical needs, resulting in referral back to the specialist, loss of patient confidence in hospital staff and extended length of stay.

The Diabetes Ward Champion programme at Kingston Hospital NHS Trust provides nurses with protected training time to equip them with the skills and knowledge to be the voice of diabetes education on their ward, and the opportunity to make positive changes within their ward areas and drive improvements in diabetes inpatient care.

Background

The National Diabetes Inpatient Audit (NaDIA) is an annual audit of diabetes inpatient care in

England and Wales. NaDIA allows hospitals to benchmark their inpatient diabetes care, assess the quality of care and prioritise improvements in service provision to inpatients. The 2016 NaDIA results showed that around one in six hospital beds were occupied by a person with diabetes and that, despite improvements on the previous year, almost one in three patients experienced medication errors (NHS Digital, 2017a).

Kingston Hospital, in South West London, is a 383-bed district general hospital participating in NaDIA. Kingston's 2016 NaDIA results highlighted a need for improvements to inpatient care in the following areas: upskilling of ward healthcare professionals; timing and suitability of meals; and ability of patients to self-administer insulin and self-test blood glucose levels (NHS Digital, 2016). Consequently, a Quality Improvement Group for Kingston Hospital NHS Foundation Trust was formed, focusing on improving skills in diabetes care and ensuring that these became embedded in regular practice.

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Article points

1. The Diabetes Ward Champion programme grants selected nurses protected time to participate in training and aims to equip them with skills and knowledge to act as a diabetes resource in their ward and to facilitate sharing of knowledge and skills across wards.
2. The programme has improved patient care at Kingston Hospital both directly, through the care delivered by the Champions themselves, and indirectly, through sharing of knowledge with colleagues and patients.
3. Since the inaugural programme, a network group for Champions has been created to continue the drive for change, led by two DSNs, and a second cohort of Champions, including two pharmacists, has been recruited.

Key words

- Diabetes Ward Champions
- Education
- Inpatient care
- Service delivery

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Diabetes nursing support

At the time the Quality Improvement Group was initiated, the diabetes nursing team comprised 2.2 full-time-equivalent DSNs, covering both inpatients and outpatients. The element of their role that involved educating staff at all levels was frequently deprioritised due to heavy workload, and although ward nurses had historically been encouraged to become “link” nurses, with a remit to support the flow of skills and knowledge from specialist nurses to ward staff, this role had become less attractive. With many specialties competing for their ward nurses to be the link nurse, the staff education element, in addition to other responsibilities such as conducting audits, was perceived as overwhelming and an increase in workload.

Instigating the Diabetes Ward Champion programme at Kingston Hospital

The Diabetes Ward Champion programme was initiated in 2017 to address this decline in diabetes knowledge and make the link nurse role more attractive. The programme grants selected nurses protected time to participate in training and aims to equip them with diabetes knowledge to act as a diabetes resource in their ward and facilitate sharing of knowledge and skills across wards. The role title Diabetes Ward Champion was intended to promote a sense of value for the role, instead of a mere workload increase that had become associated with the term link nurse.

Training Diabetes Ward Champions

Candidate selection

The application process for the Diabetes Ward Champion programme was designed to raise an expression of interest from nurses who wanted to improve diabetes care and who were self-motivated to carry out the role. Prerequisites included at least 6 months’ qualification as a registered general nurse with an interest in diabetes care. Additionally, candidates were asked to define what they felt needed to be changed in their clinical area. Ward managers were required to provide a reference and confirm their support for the programme and willingness to release the successful candidate to attend training.

Programme participants

In the first cohort, all 15 nurses who applied were recruited. Twelve nurses attended the first session and 11 completed all six education days and progressed to drive change in their clinical areas. One nurse could not attend the full programme due to sickness and hence dropped out.

Diabetes Ward Champion programme

Successful applicants were enrolled into a 1-year programme comprising six classroom-based modules, one per month, to provide the theory to support diabetes inpatient care, followed by support to put theory into practice (*Figure 1*). The project was based on two programmes: Diabetes

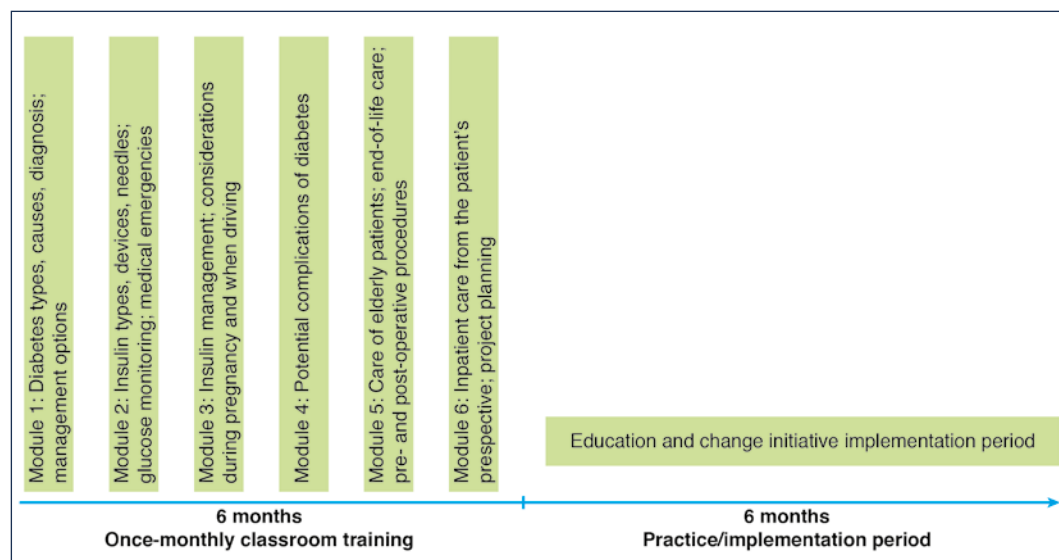


Figure 1. The Diabetes Ward Champion Programme education structure.

Clinical Champions (run by Diabetes UK and Novo Nordisk; Diabetes UK, 2020) and the Novo Nordisk-funded MERIT (Meeting Educational Requirements, Improving Treatment) course (Hicks and McAuley, 2007). As MERIT had already been accredited, the concept was adapted for this project.

The six modules were adapted from MERIT, a modular training programme providing GPs and practice nurses the opportunity to improve their diabetes knowledge so they can better support their patients. MERIT was adapted with Trust funding, with minor changes to wording to reflect an inpatient setting, such that it remained accredited by the Royal College of Nursing and Skills for Health, and could be credited toward nurses' continuing professional development requirements.

Diabetes Ward Champions had direct contact details for the DSNs to facilitate individual support during the 1-year programme, and the opportunity to shadow a DSN to realise a more hands-on approach to learning. Additional training included coaching in Lean Process Improvement (Jones and Mitchell, 2006; Westwood et al, 2007), introducing Champions to problem-solving techniques and the basic principles of how to conduct an improvement project. Champions learned to identify the cause of problems and make improvements to benefit the healthcare team and patients, and to follow a simple process to test the success of implemented changes.

Assessment of effectiveness

A 19-item questionnaire was developed by the author to assess effectiveness of the teaching based on the Champion's knowledge level (*Box 1*). This questionnaire was completed at the beginning of the course and repeated following the six study days. Feedback from ward managers was requested via a six-item questionnaire (*Box 2*) at the end of the programme.

At the end of the year, an 11-item questionnaire (also developed by the author) was completed by the Champions to evaluate the programme (*Box 3*). A follow-up day was held, at which Champions presented their work and achievements. Each nurse was awarded a Diabetes Ward Champion badge to identify themselves to other staff and patients.

Box 1. 19-item questionnaire to assess the effectiveness of teaching based on Champions' knowledge levels pre- and post-study days.

1. How would you diagnose diabetes?
2. Give three common symptoms of diabetes
3. Give a definition for Type 1 diabetes mellitus
4. Give a definition for Type 2 diabetes mellitus
5. What is a HbA_{1c}?
6. List the injection sites commonly used for insulin administration
7. If a person injects into the same area frequently, what may happen?
8. After administering the insulin injections, why is it necessary to hold the needle into the skin for at least 10 seconds?
9. Should needles be left on pen devices?
10. What angle should be used in adults for an injection with shorter needles (4 mm, 5 mm, 6 mm)?
11. If using an insulin with NPH component, what needs to happen to the insulin prior to administration?
12. Does insulin have to be stored in the fridge?
13. What level is a hypo?
14. How do you treat a hypo on the ward?
15. When should we check for ketones and how?
16. How are feet affected by diabetes?
17. What is the difference between DKA and HHS?
18. Which macronutrient has greatest effect on blood glucose levels?
 - a. Fat
 - b. Protein
 - c. Carbohydrate
19. Why should a bedtime snack be available for a patient treated on insulin?

Box 2. Six-item ward manager questionnaire to assess programme effectiveness after 1 year.

1. What do you see as the role of the Diabetes Ward Champion in your area?
2. Have they met these expectations and how?
3. Do you feel there has been an impact on other healthcare professionals by having a Diabetes Ward Champion?
4. Have you found it a benefit to have a Ward Champion in your area?
5. Was it an issue releasing your Champion for the 6 study days?
6. Is there any other feedback you would like to add?

Education and change initiatives

Six Champions provided educational information boards for their ward areas; in three cases, these were complemented by face-to-face education for healthcare professionals on the ward. Key themes included foot checks; understanding how to treat hypoglycaemia and where the hypoglycaemia treatment kit is located; and insulin administration. These link into the Quality Improvement Standards currently being measured within the Trust for diabetes.

Box 3. 11-item Champion questionnaire to assess programme effectiveness after 1 year.

1. Were there any sessions that you found particularly useful? If so, tell us how you have put the learning from these session(s) into practice
2. Are there any further sessions that you would have found useful?
3. How relevant overall was the training you received to your plans as Ward Champion? Please expand if any training in particular influenced your plans directly
4. How would you rate the Ward Champions programme overall?

| | | | |
|------|--------------|------|-----------|
| Poor | Satisfactory | Good | Excellent |
|------|--------------|------|-----------|
5. Would you recommend the programme to peers? Please give reasons

| | |
|-----|----|
| Yes | No |
|-----|----|
6. For the following statements, please circle the most relevant statement to you. As a result of the Ward Champions Programme:
 - a. I feel more confident to lead change in my locality

| | | | | |
|-------------------|----------|-----|-------|----------------|
| Strongly disagree | Disagree | n/a | Agree | Strongly agree |
|-------------------|----------|-----|-------|----------------|
 - b. I have further developed my skills and knowledge to help influence change locally

| | | | | |
|-------------------|----------|-----|-------|----------------|
| Strongly disagree | Disagree | n/a | Agree | Strongly agree |
|-------------------|----------|-----|-------|----------------|
 - c. I am more aware of local and national resources that will enable me to influence change for diabetes care

| | | | | |
|-------------------|----------|-----|-------|----------------|
| Strongly disagree | Disagree | n/a | Agree | Strongly agree |
|-------------------|----------|-----|-------|----------------|
 - d. I am more aware of Diabetes UK and its resources for healthcare professionals

| | | | | |
|-------------------|----------|-----|-------|----------------|
| Strongly disagree | Disagree | n/a | Agree | Strongly agree |
|-------------------|----------|-----|-------|----------------|
7. Tell us how the programme has impacted on you personally and helped you to influence change locally
8. Have you experienced any career development or change in role as a result of the programme?
9. Has the Ward Champions programme contributed to other areas of personal development not necessarily linked to your plans as Ward Champion?
10. What were your objectives as a Ward Champion?
11. How have you impacted on the quality of diabetes care in your clinical environment?

One Diabetes Ward Champion created the slogan “Insulin pre-meal is a BIG Deal” to highlight the importance of correct timing of insulin administration. An eye-catching poster was devised to illustrate this slogan (along with other information) and displayed on the ward focus board. Laminated signs were placed around the wards to remind staff. Additionally, the slogan was included in the “BIG 4”, which refers to four key messages promoted weekly by the ward. A Champion in a surgical ward considered diabetes medication provisions for day-case patients who unexpectedly stayed overnight and had not brought their own medication. A reminder for patients to bring in any diabetes medications and equipment required in case of an overnight stay was added to the pre day-case checklist. An education project developed a mini flipchart to be attached to the medicine trolley, containing

information regarding hypoglycaemia and when to administer insulin.

Substantial impact was reported by the ward manager from a project in which a display magnet was designed to highlight to staff that a patient has diabetes but wishes to keep that fact confidential from other patients. Although no user data were collected, the impact was reported to the Quality Improvement team, which then collected feedback from the general staff, and confirmed that the sign was very helpful in identifying patients with diabetes. This sign has now been implemented across the hospital and is used on all diabetes communication throughout the hospital to help staff identify these patients.

A further project highlighted the importance of educating healthcare assistants on food delivered to inpatients with diabetes. Building upon this, development work is now being undertaken by the inpatient dietitian and catering team, considering carbohydrate content and foods available for inpatients with diabetes.

**Assessment of effectiveness
Champion knowledge evaluation**

Seven of 11 Champions completed the knowledge evaluation questionnaire at the beginning of the course and ten completed the questionnaire following the six study days (*Figure 2*).

The average knowledge score increased from 12.6 (out of 19) to 16.1 points (66.3% to 84.7%). All participants achieved a higher score after training than at baseline, indicating an increase in knowledge; the average improvement was 3.5 points.

Ward manager feedback

From seven ward managers surveyed (three ward Champions had the same ward manager), four responses were received. These four managers reported a benefit to their wards through having a Diabetes Ward Champion. Responses indicated benefits including that Champions were able to share their knowledge with the ward and provide updates on diabetes care. Ward managers reported that the Champion projects encouraged learning and provided resources to improve the clinical environment.

None of the ward managers involved in the programme perceived a problem in releasing

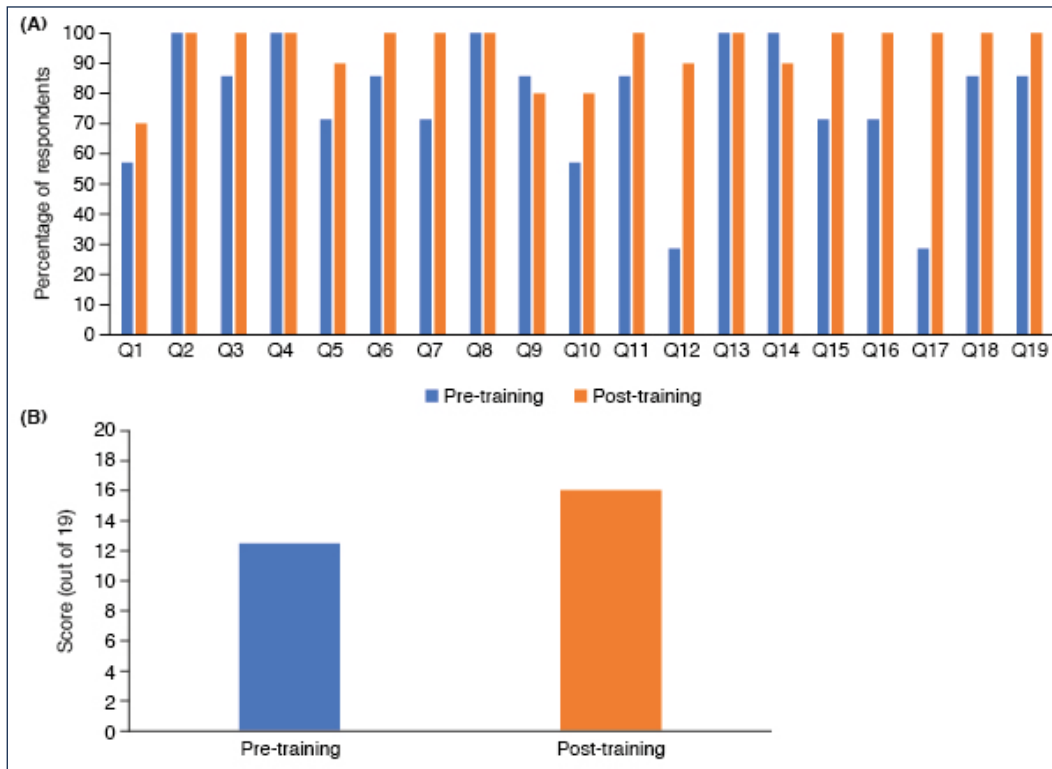


Figure 2. Pre- and post-training questionnaire responses (pre-training, n=7; post-training, n=10). (A) percentage of respondents who achieved a partially or completely correct answer to each question; (B) average questionnaire score for all respondents.

Champions to attend training sessions and all reported a positive impact from the Diabetes Ward Champion programme on other healthcare professionals, such as healthcare assistants, junior doctors, pharmacists and other nursing staff. They also described a specific contribution within the ward environment from their Champion(s), such as providing educational information boards for nurses in the staff room, promoting diabetes information amongst patients and visitors via booklets, and innovating the use of a display magnet on patients' bed boards to highlight that they had diabetes.

Post-participation programme evaluation

Three of the 11 Champions completed a programme evaluation at the end of the year. Specific feedback included the following: the programme was relevant to clinical practice in their wards; they would recommend the programme to others; and the programme had increased their confidence in their approach to diabetes and developed their skills and knowledge to influence change. Responses showed that the

training improved patient care both directly, as delivered by the Champions through their own increased understanding, and indirectly, through the sharing of knowledge with colleagues and patients. Champions reported increased awareness of the resources available to share with patients and that the programme helped to facilitate sharing of knowledge and ideas within the hospital, guided by diabetes nurse specialists. The programme "provided active learning" but was "like a collaborative to make change".

Inpatient satisfaction survey and key bedside audits

Of 32 people who were questioned in an inpatient satisfaction survey, 29 were satisfied with their overall diabetes care whilst in hospital. Two key bedside audits carried out by the Quality Improvement Partnership (QIP) group in May 2019 showed that two out of three patients were treated in accordance with local guidelines for all of their episodes of hypoglycaemia, and four of five individuals admitted with active foot disease



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received a foot risk assessment within 24 hours of admission.

Discussion

The Diabetes Ward Champion programme at Kingston Hospital NHS Trust provided selected nurses with protected training time and support to enable them to be the voice of diabetes education on their ward and give them the opportunity to make positive changes within their ward areas and drive improvements in diabetes inpatient care. In the general hospital ward, hypoglycaemia in people with diabetes has been previously associated with increased patient mortality (Turchin et al, 2009). It may also be interpreted as a warning of impending clinical deterioration and could therefore serve as an indicator for increased monitoring, more aggressive treatment of infection and more intensive case management.

In their hospital audit, Ndebu and Jones (2018) observed that, whilst awareness of hospital hypoglycaemia guidelines was high, nurses on non-diabetes wards may have been less likely to recognise all hypoglycaemia symptoms and to manage episodes of hypoglycaemia per those hospital guidelines. In line with these findings, Diabetes UK suggests that “an educated inpatient workforce leads to improved patient experience and shorter lengths of stay” (Watts and Rayman, 2018). The Diabetes Ward Champion programme allowed the Champions to be “enablers” in educating staff at all levels and leading change initiatives that resulted in marked improvements in diabetes inpatient care within the Trust.

The Kingston Hospital NHS Trust Quality Improvement Group has initiated audits to measure the progress of improvements in diabetes care within the Trust, which are overseen by a newly recruited Inpatient Nurse. The Trust’s 2016 NaDIA results indicated that patient satisfaction regarding the quality of diabetes care offered by Kingston Hospital had decreased since previous audits (NHS Digital, 2017b). The Diabetes Ward Champion programme has successfully contributed to addressing this: the 2018 patient survey showed that overall patient satisfaction increased from 77% in 2016 and 2017 to 91% in 2018. Although these results should be interpreted with caution due to the possibility of a bias in the response based on

patients’ beliefs or values, a positive correlation is suggested between patient satisfaction and introduction of the Diabetes Ward Champions. An internal January 2019 spot-check of staff knowledge and awareness showed that knowledge of the correct level at which to treat a hypoglycaemic episode had seen an overall improvement of 12%, although staff profile variations between audits require the results to be compared with caution. In other areas of improvement, the internal QIP audit showed that foot risk assessment rates within 24 hours of admission increased from 66.7% in 2017 to 80% in 2019.

Study limitations

A limitation of the study was the low number of respondents in the programme evaluation surveys. Only three of 11 Champions completed a programme evaluation at the end of the year, and hence the results cannot be generalised. The impact of the Diabetes Ward Champion programme could be assessed more effectively if there were higher survey response rates to evaluate participants’ and ward managers’ feedback. This issue has been addressed in subsequent cohorts by implementing changes in obtaining feedback: now participants are not provided with a certificate unless feedback is completed. Feedback surveys could also be improved by making questions more specific and closed in nature to allow a simpler analysis. For example, the current question of “What level is a hypo?” could be rephrased to “What blood glucose level results in a hypoglycaemic episode (‘hypo’)?”

Conclusion and future plans

The Diabetes Ward Champion programme has improved patient care at Kingston Hospital both directly, through the care delivered by the Champions themselves, and indirectly, through sharing of knowledge with colleagues and patients. The programme has also been associated with increased patient satisfaction.

Since the inaugural programme, a network group for Champions has been created to continue the drive for change, led by two DSNs. A second cohort of Champions has been recruited, with priority given to recruiting from clinical areas that did not already have a Champion and to increasing Champion numbers in areas with a high volume

of inpatients with diabetes, such as the acute admissions ward and emergency department. Two pharmacists have also been recruited to become Diabetes Champions. ■

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