The diabetes team: Implementing skill mix and changing working roles for the community

Trish Birdsall, Gail Nixon, Samson O Oyibo

Citation: Birdsall T, Nixon G, Oyibo SO (2013) The diabetes team: Implementing skill mix and changing working roles for the community. *Journal of Diabetes Nursing* **17**: 168–74

Article points

1. National statistics suggest that the prevalence of diabetes is rising. Increasing demand and dynamic population characteristics present a challenge for the specialist diabetes team, who must rapidly adapt to successfully respond to local need.
2. The authors examine the changes that have occurred within a specialist diabetes team in the city of Peterborough.
3. The results indicate that the diabetes team should continually seek new ways of working, whilst maximising the skills and expertise of each individual in the team.

Key words

- Changing roles
- Diabetes care
- Diversity
- Skill mix

Authors

Trish Birdsall, Senior Diabetes Specialist Nurse, Cambridge Community Services; Gail Nixon Professional Lead in Diabetes, Cambridge Community Services; Samson O Oyibo, Consultant Physician, Peterborough City Hospital.

Over the last decade diabetes teams have seen many changes, including the use of new treatments and the recent shift back to older insulins. A move to structured education programmes has also occurred, with a rise in expert patients, community nurse-led clinics, hospital interventions and implementation of new guidelines. There has been a need to review old roles whilst implementing new roles and maintaining a high standard of care which meets the targets set in the National Service Framework for diabetes (Department of Health, 2002). This article aims to explore the "changing work force" for the current diabetes team where roles have been removed, reviewed and implemented in order to provide a diabetes service that meets the demands of the community in Peterborough.

The Impact Diabetes Report projected that the annual NHS spending on diabetes in the UK will increase from £9.8 billon to £16.9 billon over the next 25 years (Hex et al, 2012). This means the NHS would spend 17% of its budget on diabetes. Peterborough has a population of 184 500 and ethnic minorities such as the Asian community comprise 15.5% of the population (Office for National Statistics, 2011). There are also ethnic minority groups within the European community, meaning Peterborough's true ethnic minority representation is likely to be nearer to 20% of the population.

Peterborough has had the largest influx of asylum seekers, refugees and new migrants in the country (East of England Local Government Association, 2012). Cambridgeshire also has the largest traveller population. Therefore, there is a need for the diabetes team to be aware of local profiles to respond effectively to local need.

History of the diabetes team

Before reviewing how the specialist diabetes team has responded to population changes and diversity, we must first look at its history. In the 1980s, three DSNs began working in the local area. Employed by the Primary Care Trust (PCT) at that time, these DSNs were based in a secondary care setting working alongside a consultant diabetologist. This had its advantages at the time but was seen as simply a support for the consultant and mainly followed a medical model approach for patient care.

In the late 1990s, due to the increasing diabetes prevalence, available funding allowed the team to employ three more DSNs to focus on diabetes in primary care, managing adults, paediatrics, inpatients, outpatients, GP referrals and pregnant women. During the next 12 months and with the increasing paediatric diabetes prevalence, a business plan was developed using evidence from the Department of Health (DH; NICE, 2004) to successfully employ a paediatric diabetes specialist nurse (PDSN). A secretary was employed to assist with administration and inputting data onto the diabetes register and a medical secretary was employed to assist the consultant. All patient data were recorded manually by the DSNs.

Involvement in a Government-led changing workforce programme enabled the recruitment

of two healthcare assistants to develop the role of diabetes care technician (DCT). The DCT received training to perform the gold standard annual review for people with diabetes, initially working in secondary care consultant clinics, then later into primary care where the majority of their work is now focused.

Developments in primary care led to a more robust management structure and the first DSN team to be employed in primary care. This initiated the idea to move from a secondary care setting into a primary care setting. The philosophy of the Peterborough diabetes team is one of supported self-care for people with diabetes; however, having diabetes clinics in acute general hospitals is not the right milieu for this to occur. In 2002, when the new Peterborough City Hospital was being planned, the diabetes team felt that this would be a good time for the diabetes team to move into the community.

This process started with the search for a more cost-effective environment that would meet everyone's needs and in 2005, the PCT decided on a new build alongside an existing GP surgery. The building was completed in June 2008 and opened in October that year. Named the Healthy Living Centre (HLC), the building was designed for the management of long-term conditions and is occupied by the specialist team, community podiatrists, dietitians as well as other healthcare professionals. The HLC is easily accessible and is located approximately 1 mile from the city centre.

Roles were removed, renewed and implemented in order to provide better diabetes services.

Changing roles at the HLC

Delivering diabetes services to meet the needs of people with diabetes encouraged the team to review old job roles, skills and recognise individual team members' competencies and ability to deliver more than one role. New projects such as the development of the DCT, retinal photography and introduction of independent nurse prescribers were just the start of this new review.

Clinical lead role (previously known as DSN team leader)

The DSN role has been around for approximately 60 years. They play a vital role in preventing expensive complications of diabetes, supporting people with complex needs and, critically, in providing primary care teams with expertise that aims to reduce emergency hospital admissions (Hicks, 2012). Each DSN has the appropriate level of skills, expertise and experience. The clinical lead role is a vital position as professional lead for the DSNs. The role was initially split into 30% management and 70% clinical. This started to change with the recruitment of a long-term conditions lead, tasked with development of the diabetes services in line with the National Service Framework (NSF) and changing workforce. The job description was to be changed to encompass the managerial role but still allowed for some clinical work, reversing the role to 70% management, 30% clinical.

This clinical lead had to develop managerial and leadership skills beyond just recruitment and staff welfare, although these were still an important part of the position. The role involved implementing coping strategies to deal with conflict resolution, as the changes in the specialist roles sometimes challenged the traditional roles. The responsibilities around budgets for education, service level agreements and staffing new posts would now be part of the clinical lead's role.

The team has had to embrace new directions such as Care Quality Commission (CQC) and a change in trust leadership with all the uncertainties this has encompassed. The role of the CQC is to register all providers of health and social care services according to essential standards of

Page points

1. Delivering diabetes services to meet the needs of people with diabetes encouraged the team to review old job roles, skills and recognise individual team members' competencies and ability to deliver more than one role.
2. The clinical lead role now involves implementing coping strategies to deal with conflict resolution, as the changes in the specialist roles sometimes challenged the traditional roles. The role also includes responsibilities around budgets for education, service level agreements and staffing new posts.

Table 1. Roles for the DSN.

Educational	Clinical
● DESMOND educators	● Insulin pump group start
● PDAC educators	● Insulin therapy start sessions
● NVQ assessors	● Glucagon-like peptide-1 receptor agonists start sessions
● Associate lecturer at the university	● Working with podiatry team
● Staff educator and mentor	● Telephone helpline service
● Student educator and mentor	● Diabetes reviews during home visits
● Patient group education	● DSN-led diabetes clinics in general practice
● Development of clinical guidelines	● DSN-led clinics at HLC
● Development of patient information leaflets	● Multidisciplinary team meetings
● Insulin administration course for healthcare assistants	● Clinical support for consultant clinics
● Registered nurse induction training (Diabetes Link Nurses)	● Triage emergency patients at HLC
● New doctors induction training	**Antenatal care management**
● Midwives diabetes update session	● Diabetes in pregnancy telephone consultation service
● Mandatory training sessions for secondary care registered nurses	● Antenatal/gestational diabetes care
	● Pre-pregnancy assessment and counselling
	● Nurse-led diabetes in pregnancy sessions
	● Clinical support for joint diabetes–antenatal clinics

DESMOND=Diabetes Education and Self-Management for Ongoing and Newly Diagnosed; HLC=healthy living centre; NVQ=national vocational qualification; PDAC=Peterborough dose adjustment course.

quality and safety (Saunders, 2012). It has been acknowledged that, in recent times and following the introduction of Agenda for Change (DH, 2005), a new role has emerged to be involved in managing the team at a more strategic level.

The role of DSNs

The role of the DSN has evolved in recent years in response to the increasing number and expectations of people with diabetes, the availability of new therapies and devices and Government directives influencing the health economy (Hill, 2011). Being placed in a community setting has encouraged DSNs to work more autonomously, running independent nurse-led clinics within the centre and GP surgeries, as outlined in the survey conducted by Diabetes UK and the Association of British Clinical Diabetologists (Hill, 2011). Five DSNs within the team are independent prescribers and assist people in receiving the right treatment at the right time. The DSNs' roles are shown in *Table 1.*

New roles in antenatal care management

Developments within antenatal care offered an opportunity to review the increase of clinics. Approximately 1 in 250 pregnancies are complicated by pre-existing type 1 or type 2 diabetes. Furthermore, it is estimated that up to 3.5% of pregnancies in the UK are complicated by gestational diabetes (Stenhouse, 2013). The increase in number of pregnant women in the Peterborough area has led to changes in the way the team manage this group of people with diabetes. Each week, the multidisciplinary diabetes specialist team, comprising a diabetes physician, obstetrician, midwife, dietitian and DSN hold two antenatal clinics with the aim of optimising pregnancy outcome within a secondary care setting. These changes are based on recommendations by DH (2007) and the Confidential Enquiry into Maternal and Child Health (2007). These roles are shown in *Table 1.*

The roles of the administration team

Since moving into the new community setting, all communication regarding patient management is reflected through an IT system. Each member of the team has undergone comprehensive training. A post for an IT coordinator was implemented. This role has two responsibilities; firstly, to oversee the IT

Table 2. Roles for the administration team.

Administration	Clinical
● Coordinating the IT system	● Annual reviews for people with diabetes
● Data inputting: quality and protection	● Screening for diabetes complications
● Providing templates to ease caseloads	● DESMOND training to become lay educator
● Information gathering and audits	

DESMOND=Diabetes Education and Self-Management for Ongoing and Newly Diagnosed.

Page points

1. The team's healthcare assistants became fully qualified diabetes care technicians. This is a varied role which has the potential to include specialised training in areas such as retinal photography and podiatric research.
2. A review of the telephone helpline showed an increase in number of calls and because of this, administrative staff were asked to assist the DSNs.
3. The *Best Practice Tariff for Paediatric Diabetes* (NHS Diabetes, 2012) has enabled paediatric diabetes to become a commissioning priority. To achieve the high standards of the tariff, an adult DSN now focuses more in this area and is currently studying to obtain the necessary qualification for caring for paediatric diabetes. In addition, a second paediatric diabetes nurse is being recruited.

and clinical governance section of diabetes care and secondly, to have the skills of a diabetes care technician (Trend, 2011). The roles of the administrator are shown in *Table 2*.

The roles of the DCT

As mentioned previously, three healthcare assistants all qualified as DCTs and now have diverse roles. Two DCTs are currently training to become lay educators in the Diabetes Education and Self-Management for Ongoing and Newly Diagnosed (DESMOND) programme. One of these two members of staff has completed her training in retinal photography. This highly specialist role involves taking retinal photographs and is a valuable service targeting patients with diabetes who have not attended their usual retinal screening. Photographs are image-linked with Hinchingbrooke Hospital where the central database is held. Our third DCT is currently involved in research with the podiatry department looking at the use of antibiotics.

In February 2013, the DH announced that there would be an independent review on training and support for healthcare assistants (DH, 2013), saying:

> *"Healthcare assistants provide some of the most personal and fundamental support that people get."*

Collectively the three care technicians perform over 600 annual reviews for patients with diabetes each month. There roles are shown in *Table 3*.

Table 3. Roles for diabetes care technicians.

Education	Clinical
● DESMOND educators	● Annual diabetes reviews in community
● Research (podiatry, gestational diabetes, etc)	● Retinal photography
● Patient education	● Counselling
	● Clinical support for DSN and consultant clinics

DCT=diabetes care technician; DESMOND=Diabetes Education and Self-Management for Ongoing and Newly Diagnosed.

Changes to telephone helpline

Following the identification of increased telephone calls to the helpline from people with diabetes, relatives, carers, health professionals and allied health professionals, this service was reviewed to assist the DSN workload. Following this review it was agreed that two people in the administration team would take all messages from the helpline, distinguish clinical from non-clinical calls and then refer to the appropriate staff. Each day a designated DSN and PDSN are available to triage calls, which include clinical and emergency calls in relation to adults, paediatrics and pregnant women. This has improved the cost-effective, responsive and productive use of the DSN time. Previously the allocated DSN dealt with all calls and this was very time-consuming (Birdsall et al, 2008).

Changes to the paediatric service

As mentioned previously, a PDSN was successfully employed approximately 12 years ago and managed a large caseload of over 160 children from birth to 18 years. The PDSN provided consistent, high-quality care to the children, young people and their families. Added support from an adult DSN who specialises in pump therapy both for adults and children has been instigated to assist the PDSN. The increased prevalence of diabetes in children, evolving therapies, demand for pump therapy as recommended by NICE (2008) and the recently introduced 13 care standards set out in the *Best Practice Tariff for Paediatric Diabetes* (NHS Diabetes, 2012), have given us the opportunity to review the service challenges.

This best practice tariff has enabled paediatric diabetes to become a commissioning priority (Campbell and Waldron, 2012). To achieve the high standards of the tariff, an adult DSN would now focus more in this area and is currently studying to obtain the necessary qualification for caring for paediatric diabetes. In addition, a second PDSN is being recruited to work in secondary and primary care. A pilot study for the next 12 months aims to involve the adult consultant and adult DSN who currently oversee a young adults clinic to work alongside the paediatric team to establish a transitional clinic in line with the tariff. The roles of the PDSN are shown in *Table 4*.

Table 4. Roles for the paediatric diabetes specialist nurses.

Educational	Clinical
● Staff educator and mentor	● Insulin pump group start
● Student educator and mentor	● Insulin therapy start sessions
● Patient group education	● Working with social services
● Education and training to school staff	● Patient telephone helpline service
● Development of clinical guidelines	● Clinical support for consultant clinics
● Development of patient information leaflets	● Multidisciplinary team meetings
● Registered nurse induction training (Diabetes Link Nurses)	
● New doctor induction training	
● Mandatory training sessions for secondary care registered nurses	

The roles of the consultant

The consultant diabetes service moved from the hospital in February 2009 to the HLC but remained as hospital activity, using hospital notes initially. In October 2010, the activity transferred from the hospital trust to community services and used the IT system (SystmOne®) for medical records. There are now three general diabetes clinics and one emergency foot clinic every week at the HLC. One consultant works mostly at the HLC but also runs antenatal clinics in secondary care. The other two consultants hold clinics at the HLC but work mostly in secondary care including the emergency department, antenatal clinic, endocrinology, inpatient care and young persons diabetic service. All this cannot function without secretarial support to overseeing patient calls, clinical correspondences and consultant clinics. The roles for the consultant at the HLC are shown in *Table 5*.

Table 5. Roles for the consultant at the Healthy Living Centre.

Educational	Clinical
● Twice monthly multidisciplinary team meetings to discuss complex cases	● Assess patients with diabetes referred by their GP
● Monthly business meetings to discuss diabetes services	● Follow-up of people with diabetes post hospital discharge
● Participation in PDAC	● Diabetic foot clinic
● Research	● Advice to DSNs concerning individualised care
● Audit	

PDAC=Peterborough dose adjustment course.

The roles of the inpatient diabetes nurse

This role stemmed from the original preconceived idea of the specialist nurses working alongside the consultant and following instructions on the wards concerning the care of people with diabetes.

The role soon developed, as more hospital ward staff referred directly to the diabetes team for advice and follow-up visits. A designated nurse started to filter this work and the role became integrated into the team. Following a review of services, this role was included in the block contract to provide services in secondary care. The role initially included attendance at the consultant-led clinic, inpatient care and antenatal care but because of increasing diabetes prevalence accompanied by increased admission rate to secondary care, the inpatient role has had to develop in line with other specialist nurses to cope with the new treatments, complex needs of inpatients, and address medication errors as highlighted by the *National Diabetes Inpatient Audit* (Healthcare Quality Improvement Partnership, 2012).

Secondary care recognised the vast amount

Page points

1. The consultant diabetes service moved from the hospital to the Healthy Living Centre (HLC) in February 2009. Consultants at the HLC hold multidisciplinary meetings twice a month to discuss complex cases and monthly meetings to discuss diabetes services.
2. The inpatient diabetes nurse role was developed to work alongside the consultant in diabetes emergencies and in special circumstances, including pregnancy, renal failure and peri-operative care. This role is important in bridging the gap between primary and secondary care.

"... the diabetes team needs to be evolving into new areas, looking at new ways of working but at the same time using the skills, knowledge and expertise of each individual in the team to reach their full potential."

Table 6. Roles for the inpatient diabetes nurses

Educational	Clinical
● Continuous hospital registered nurse education sessions	● Inpatient care for diabetes emergencies
● Continuous doctor education sessions	● Care for patients with diabetes in special circumstances (peri-operative care, pregnancy and delivery, renal failure, stroke, acute coronary syndrome etc.)
● Diabetes link nurse update sessions	● Closing the gap between primary care and secondary care
● Inpatient education	● Liaising with the community DSNs for post-discharge care for patients with diabetes
● Ensuring adherence to clinical guidelines	

of work done by the inpatient nurse and in 2010 employed a diabetes nurse in the hospital under their management. Over time the service has evolved and the community specialist nurses now work together with the hospital-employed inpatient diabetes nurse. This allows a good communication channel with the DSNs and the HLC who will continue to care for people with diabetes in the community. The roles of the inpatient diabetes nurses are shown in *Table 6*.

In conclusion, for Peterborough to meet the high rise in numbers and the diverse cultures with diabetes, the diabetes team needs to be evolving into new areas, looking at new ways of working but at the same time using the skills, knowledge and expertise of each individual in the team to reach their full potential. ■

We would like to thank Dr JM Roland, DSNs, DCTs and the administration team for their contribution to this article and their continued support.

Birdsall EP, Nixon G, James J et al. (2008) Diabetes specialist nurse telephone helpline: A survey of incoming and out-going calls. *European Diabetes Nursing* **5**: 104–7

Campbell F, Waldron S (2012) Children and young people diabetes networks: Where are they now and where are they going? *Diabetes Care for Children & Young People* **1**: 45–6

Confidential Enquiry into Maternal and Child Health (2007) *Diabetes and pregnancy: Are we providing the best care? Findings of a national enquiry*. CEMACH London. Available at: http://bit.ly/WaGm35 (accessed 02.05.2013)

Department of Health (2005) *National job profiles*. DH, London. Available at: http://bit.ly/9sSR5X (accessed 02.05.13)

Department of Health (2007) *National service framework*. DH, London. Available at: http://bit.ly/9t5pjq (accessed 02.05.13)

Department of Health (2013) *Patients to get better care from healthcare assistants*. DH, London. Available at: http://bit.ly/17q3S0N (accessed 08.05.13)

East of England Local Government Association (2012) *Assessing migrant labour reliance in Local Enterprise Partnerships across the East of England*. EELGA, Bury St Edmonds, Suffolk. Available at: http://bit.ly/ZPfZ5e (accessed 08.05.13)

Healthcare Quality Improvement Partnership (2012) *National Diabetes Inpatient Audit*. HQIP, Leeds. Available at: www.hscic.gov.uk/diabetesinpatientaudit (accessed 08.05.13)

Hex N, Bartlett C, Wright D et al (2012) Estimating the current and future costs of Type 1 and Type 2 diabetes in the UK, including direct health costs and indirect societal and productivity costs. *Diabet Med* **29**: 855–62

Hicks D (2012) Where have all the DSNs gone? *Journal of Diabetes Nursing* **16**: 220

Hill J (2011) Are you fit for purpose? The development of a competency framework for diabetes nursing in the UK. *Practical Diabetes* **28**: 397–9

NHS Diabetes (2012) *Best practice tariff for paediatrics diabetes*. NHS Diabetes, Newcastle Upon Tyne. Available at: http://bit.ly/HZaPaX (accessed 02.05.13)

NICE (2004) *Type 1 diabetes in children young people and adults*. CG15. NICE, London. Available at: www.nice.org.uk/cg15 (accessed 02.05.13)

NICE (2008) *Continuous subcutaneous insulin infusion for the treatment of diabetes. Diabetes Insulin Pump Therapy*. TA151. NICE, London. Available at: www.nice.org.uk/TA151 (accessed 02.04.13)

Office for National Statistics (2011) *Peterborough Population*. Available at: http://bit.ly/13xSuO0 (accessed 08.05.13)

Saunders R (2012) Still Falling Short. *Diabetes Update*. Summer 25–8

Stenhouse E (2013) Diabetes in pregnancy: The challenges posed. *Journal of Diabetes Nursing* **17**: 14–6