Putting patients at the heart of an integrated diabetes service

In this Future Hospital Programme case study, Dr Parijat De introduces the DiCE model: an integrated diabetes service in Birmingham that works seamlessly across primary and secondary care. Initial findings exemplify the benefits of putting patients at the heart of service redesign.

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Key recommendations

- Establish a dialogue with key stakeholders in your trust and/or CCG; it can be a lengthy discussion regarding the cost effectiveness and overall mutual benefits of a joined up primary and secondary care diabetes service.
- Prepare for these discussions and make the trust aware of how they will gain from increased (freed-up) capacity.
- Engage primary care about the benefits they may see from reduced hospital referrals, and upskilling of staff.
- Meet with practices to discuss and agree on referral criteria, frequency of clinics, dates and times.
- Ensure robust governance/audit structures are in place, including appropriate and safe IT sharing and usage, prescribing and onward communications.
- Ensure protocols and pathways are in place and understood by practices and the need for ongoing audit of service.
- Discuss individual practice needs well in advance to help direct learning. Be clear on expectations from the outset.
- Ensure buy-in for general practitioners (GPs) and practice nurses (PNs) with a consultant or diabetes specialist nurse. Facilitate joint consultations as a way of upskilling GPs and PNs.
- Consider setting a minimum number of visits for specialist consultations with individual practices: this can prevent it becoming a ‘lip service’.
- Provide the opportunity for each practice to provide timely feedback on any clinical issues/concerns after specialist consultation – this can be done through emails, phone and advice and guidance.
- Make sure there are regular audits on pre-set clinical measures and key performance indicators (including participation in National audits), including satisfaction surveys.

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- Ensure that there is patient involvement and participation from the very outset and through the entire process (perhaps through engaging a local patient group).

The challenge

There is a high prevalence of diabetes in the Sandwell and West Birmingham catchment population. In addition, there are significant morbidity and mortality associated with diabetes with significant unmet needs. Before our interventions, diabetes care was full of gaps and duplication n service meaning there was an inability to build capacity and capability in primary care. These complex issues meant we were unable to improve the management of diabetes patients.

Specific issues were:

- a lack of clinical engagement and partnership between primary and secondary care
- a lack of clear guidelines about which patients were to be managed, where, and by whom
- a lack of joined-up care, care planning and patient engagement
- a lack of clarity regarding finances and responsibility
- a lack of robust clinical governance structure.

This meant there was little opportunity for patient to learn, engage and self-manage because of lack of knowledge, skill base and poor uptake of previous structured diabetes education programmes. Patient information was not being adequately shared between primary and secondary care because our IT systems were not integrated. On occasion, this led to delays in accessing appropriate and safe care. Duplication of services and delays in communication and referrals were commonplace.

Our solution

For patients

Improve patient satisfaction and enhance quality of life through establishing:

- continuity of staff for a patient so they can see the same set of specialist doctors and nurses
- rapport with patients
- support for self-managing their condition
- a positive experience of care for patients and carers alike.

It was important to establish seamless working between primary and secondary care to ensure that patients are seen in the most appropriate setting, following agreed protocols and pathways. We wanted to bring care closer to patients, reduce their need to travel and reduce the number of patients who ‘do not attend’ (DNA).

Support self-management was another key element of our service improvement. We sought to achieve this by educating, guiding and supporting patients to improve control of their condition and reduce HbA1c.

For staff, trust and primary care

We thought we could improve capacity by improving the organisation and ability of primary care to support the self-management of patients with diabetes. Patients would only be referred to specialists when required.

We wanted patients to seek early help from specialists to avoid hospitalisations. We hoped to reduce hospital and A&E admissions with hypertension and high glucose levels (diabetic ketoacidosis (DKA)) by engaging with complex patients, providing them with the knowledge and confidence they needed to manage their condition and ensuring that primary care had enough expertise and support.

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Improving appropriate referrals to secondary care was crucial. Our solution to this was to increase expertise and improve capacity in secondary care. We refer only the six complicated diabetes patient category to the hospital: T1DM, adolescents, pregnancy, foot, renal and pump patients.

We have been driving an increase in the uptake of structured education programmes like DAFNE and X-PERT – which support self-management early. X-PERT is available in Asian languages and given the large Asian population in our area, this has been very important.

Specialists sit-in with GPs and PNs during clinical consultations, doing joint consultations, case notes reviews, undertaking didactic lectures and updates on new medications (includingGLP-1 and insulin). This has improved the communication between primary and secondary care. We have developed and agreed a process of email communication and advice and guidance so that a seamless process of patient care continues long after the specialist team have left.

For the health economy

We are now able to provide care without financial boundaries. Appropriate referrals are made irrespective of where the patient is seen and who pays for it. Finances are sorted through a mutual trust and organisation/CCG agreement. It does not interfere with patients and the kind of care they receive. Initial financial arrangements were based on a block contract and sessional payment for consultants/specialist time and this continues to be the agreed financial arrangement currently. .

Outcomes

- **Diabetes management skills have improved in primary care considerably**
  Evidenced by staff satisfaction surveys, improvement in HbA1c and quality of referrals to secondary care.

- **Improved patient satisfaction**
  Patients like this service, which is closer to their homes, and attendance rates are good. This is evidenced by patient satisfaction survey and reduction in DNA rates.

- **Improvements in HbA1c levels**
  Audits from five practices have shown reductions in HbA1c levels (2010-2012). Such results will translate into reduced future diabetes related complications.

- Cape Hill Medical Practice – 57%
- Regent Street Medical Centre – 50%
- Saraphed Health Centre – 56%
- Lodge Road Medical Practice – 62%
- Victoria Health Centre – 50%

- **Routine new hospital referrals have decreased significantly**
  As evidenced by reduced GP referrals for routine new patients and increased in Advice & Guidance referrals (67 referrals from December 2012 to May 2014). There have been increased referrals for more specialist clinics like renal, adolescent, pump and antenatal clinics.

- **Primary care values this service**
  Surveys of GPs and patients show that primary care colleagues value this service enormously. This model of community working has been praised by GP/PN in staff satisfaction surveys with over 95% of users very happy with the service (2012).

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- **Formulary compliance and value for money prescribing has increased**
  As a result of group working, evidence-based and cost effective medicine prescribing has increased. Likewise, there has been an overall and a much better awareness of what drugs/testing strips/insulin/devices need to be prescribed as per formulary.

- **Increased uptake of structured education programmes in the community**
  From January 2012 to December 2013, patients attended X-PERT education programmes in the community, with 82% attending 1 session and 63% attending 4 sessions (23 programmes – 13 patients per programme). We also conducted our first ever X-PERT in Asian language, attended by 14 patients in March 2014 – this has been increasing ever since and many more patients are now enrolling into this programme.

Methods

Phase 1: The Smethwick Pathfinder Project

The Smethwick Pathfinder project initially involved two GP practices in Smethwick – the Smethwick Medical Centre and Cape Hill Medical Centre.

This was so successful that under the Right Care Right Here (RCRH) Programme (Community & our local Trust joint venture), the model was expanded, by popular demand in 2010, to 5 other practices. In 2011, we established and expanded this further to involve 2 more practices in Aston, Birmingham.

Based on what we had previously learned along the way, the quality of this service has improved over the years. The typical model we have pioneered, with enthusiastic support from the primary care teams, centres around **providing joint diabetes clinics within GP practices every 2-3 months**.

- GP practices identify cohorts of difficult patients with problems of one sort or another – including high HbA1c over 69mmol/mmol.
- These patients meet with a consultant/DSN for a one off advice where a management plan is created in a parallel clinic.
- The primary care team then take this plan forward and put it into practice.

We decided on criteria (for both the consultant and DSN) for referrals to these joint clinics according to locally agreed pathways (mainly any difficult or complex diabetes patient with HbA1c > 69 mmol/mmol), frequency of clinics, and how to deal with interim queries. On-going communication through local GP practice and the need to maintain an ongoing audit of the process was also discussed and agreed beforehand.

Phase 2: DiCE: Diabetes in Community Extension

More recently, the model has evolved. **Sandwell & West Birmingham CCG** (500,000 population), in collaboration with secondary care providers **Sandwell & West Birmingham Hospital Trust** (SWBH) & **Birmingham Community Healthcare** (BCHC) have redesigned their existing diabetes service model into the DiCE model.

The CCG commissioned us to deliver a community diabetes service based on our successful model of Smethwick Pathfinder Project in all 99 practices from 1 April 2014. We named this model DICE: Diabetes in Community Extension.

The typical model centres around:

- providing joint diabetes clinics within GP practices, 4 hours every 8 weeks
- practices identify difficult diabetes patients, including those with Hb1Ac > 69mmol/mmol
- they attend a one-off local GP clinic by an assigned team of consultant/DSN
- a management plan is agreed for implementation by primary care team

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Options to suit individual practice to support diabetes patients include: virtual clinics (telephone/skype), joint consultations (8-10 patients every 8 weeks), case notes review and advice and guidance – via telephone, video conferencing or email during normal working hours (manned by individual DiCE team). Wherever possible, telephone and email enquiries would be dealt with on the same day, with a maximum turnaround time for non-urgent enquiries of 2 working days (clinical information electronically with their DiCE team through SystemOne, Graphnet or similar).

A diabetes local improvement scheme was also commissioned by the CCG during 2014-15 to complement the DiCE service in primary care. The financial model was based on block contract and sessional payment.

It was hoped that through a wider dissemination of the above model, closer working with every GP practice would become the norm. The ultimate aim would be to help primary care manage the vast majority of type 2 diabetes patient locally.

Staffing

Numerous staff have been involved in this project, through the Smethwick Pathfinder Project to the current DICE model. Apart from hospital diabetes consultants and specialist nursing staff, our hospital executive lead and Trust board has been very supportive and involved throughout. A number of locality GP leads with special interest in diabetes have been closely involved with other CCG steering group members throughout the planning, implementation and execution phases of the project. Our local diabetes support group have played an instrumental part in the entire project with their insightful comments and contributions.

Key learning

Challenges faced **before** setting up the community clinics.

1. **Setting up a dialogue with primary care colleagues**
   Convincing stakeholders in the CCG about the benefits of such a joined-up primary care/specialist diabetes working was the biggest challenge we faced.
2. **Engaging trust/CCG about the financial commitments**
   A mutually agreed service like this required a lot of planning. We emphasised that the trust would gain from freed-up capacity and improvement in new to follow-up ratio. Likewise, we would be able to achieve a complex way of working through job planning exercises for consultants and DSNs. Similarly, primary care would benefit from reduced hospital referrals, upskilling of staff and improvement of quality and outcome framework (QOF) parameters.
3. **Agreeing the particulars with primary care**
   We set up numerous meeting with GP practices and lead GPs/commissioners to agree on dates/times and frequency of clinics. We used these meetings to agree on a referral criteria which proved to be an organisational challenge. It was important to ensure robust governance/audit structures were in place, including appropriate and safe IT sharing and usage, prescribing and onward communication.
4. **Ensuring the integrity of protocols and pathways**
   It was a challenge to ensure these remained in place and were clear to practices amidst all the changes taking place. We also had to work to reiterate the need for ongoing audit of the proposed new service.
5. **Directing learning and managing expectations**
   We discussed individual practice needs well in advance to help direct learning and appropriate upskilling. Another challenge was managing expectations of the many different clinical and managerial stakeholders involved in the project.

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We also faced a number of challenges **after** setting up the clinics.

1. **Convincing GPs/PNs to sit-in with consultants/DSNs as part of a joint consultation**
   Although this has been achieved in around 80% or practices, this continues to be on ongoing challenge in the remaining 20%. The CCG is closely monitoring this.
2. **Ensuring specialist consultations are acted upon**
   The CCG is now keeping a record of practice visits and will soon be rolling out a questionnaire survey. All practices get a least six visits by the consultant/DSN team which is also being monitored by the CCG.
3. **Providing timely feedback on any clinical issues/concerns after specialist consultation**
   This is being encouraged, mostly through emails and the agreed Advice & Guidance service.
4. **Participation in regular audits**
   Audits are conducted on pre-set clinical measures and key performance indicators, including satisfaction surveys. All practices are also encouraged to participate in the national diabetes audit.
5. **Ensuring continuation of contract and financial model**
   It is important to monitor this in order to account for this specialist service.

What next?

It has been an eventful journey from our initial Smethwick Pathfinder project to the DiCE model of care. There is also considerable interest from other CCGs to replicate the model. Our model of diabetes care is innovative because it is one of the first projects delivered on such a scale in the UK, where patients are at the heart of the service. It is liked by clinicians and patients alike and is changing how chronic disease is managed by primary and secondary care. The DiCE model won a national Quality in Care award in 2014 and has been praised for its simplicity and effectiveness. This exciting work in progress is being undertaken in a difficult financial climate; demonstrating a great step towards providing first class care for every diabetes patient.

Who's been involved?

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