

Addressing barriers to diabetes care and self-care in general practice: A new framework for practice nurses

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Article points

1. Research has shown that addressing barriers to diabetes management in older adults leads to improvement in HbA_{1c} levels and self-care.
2. The authors describe how a general practice surgery in Cambridgeshire developed and piloted a new approach to diabetes annual reviews that focuses on the person with diabetes and aims to identify and address barriers to optimal diabetes care and self-management.
3. Feedback from the practice nurses involved was variable but demonstrated that the main advantages of this approach was its ability to be tailored to the nurse and its focus on the daily life of people with diabetes.

Key words

- Barriers to self-care
- Patient-centred diabetes care
- Practice nurses

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There has been extensive research on the barriers to diabetes care and self-management and whilst patient-centred care is heralded as the best method of overcoming these barriers, target-driven systems can make this difficult to deliver. This paper describes a pilot study of a new approach to conducting diabetes annual reviews that was carried out across 17 general practices in Cambridgeshire. This involved the use of a questionnaire which aimed to identify barriers to care for people with diabetes. Practice nurses involved were encouraged to give feedback and an evaluation of the approach was conducted using practice visit notes, interview data and observations.

There has been extensive research identifying barriers to diabetes care and self-management (Simmons et al, 1998; Conrood, 2001; Glasgow et al, 2001; Tripp-Reimer et al, 2001; Zgibor and Songer, 2001; Nam et al, 2011). A recent randomised controlled trial, which looked at identifying and addressing barriers to diabetes management among older adults in the US, demonstrated improvements in HbA_{1c} and self-care (Munshi et al, 2013). At the centre of this approach is the person with diabetes, their life context and recognition that diabetes control is not just about medication and the usual topics discussed in consultations. In short, many aspects of a person's life can provide obstacles to good diabetes self-care. Although difficult to define, patient-centred care has been described as consisting of three elements: communication, continuity of care and concordance (Stewart, 2001; Irwin and Richardson, 2006) and many health professionals would agree these are integral to providing a quality service. The trend in the UK to strive towards health outcome targets (Oldani, 2010) can make patient-centred care difficult to deliver in primary care. However, given the complexities of diabetes, it is vital that diabetes

healthcare professionals are supported to consider the person's life and barriers to self-management.

This article describes a programme carried out in general practices in Cambridgeshire, which was designed to facilitate the process of identifying and tackling barriers to diabetes care. It also describes issues that emerged during its delivery to general practices.

Method

In 2008 a Cambridgeshire practice, which had recently taken an interest in developing its diabetes service, agreed to develop and pilot a new approach to identifying barriers to diabetes care. A questionnaire was developed to systematically identify barriers to care and answers to the questions were linked to categories identified in previous research, including educational, psychological, physical and social barriers (Simmons, 1998; 2001). Strategies were then developed to address the responses based on the local context. The resulting process of identifying barriers and then linking to potential solutions became known as the "Barriers Framework" (see *Table 1*). The questionnaire was sent to all people with diabetes at the practice

Table 1. Structure of the Barriers Framework.

Component	Barriers Framework content
People with diabetes	The framework particularly targeted those with: <ul style="list-style-type: none"> • HbA_{1c} ≥75 mmol/mol (9%) • Uncontrolled hypoglycaemia • Uncontrolled blood pressure and uncontrolled lipids, despite treatment • High triglycerides (>8 mmol/L) • Hospitalisation/cardiovascular events in past 12 months • Diabetes under secondary care
Pathways	The resource folder provided a series of referral pathways for people with: <ul style="list-style-type: none"> • Poor glycaemic control • Low levels of activity and dietary issues • Blood pressure problems • Raised cholesterol levels • Depression • Barriers to care
Resources	The resource folder provided: a model recall letter; a copy of the barriers questionnaire; a management plan proforma; evaluation documentation; and a series of links to national and community resources complementing the above referral pathways.
Recall process	People with diabetes were contacted for a baseline appointment via a model recall letter, which included the barriers questionnaire. The letter explained the process and they were asked to complete the questionnaire before attending their appointment.
Baseline appointment	If people had not filled in the questionnaire, they were asked to do so in the practice. If literacy or visual issues were identified, the practice nurse or healthcare assistant completed it with them. The following clinical measures were then collected: <ul style="list-style-type: none"> • Blood pressure • Height, weight, body mass index and waist measurement • Urinalysis dipstick (sent for midstream specimen of urine, if possible infection) • Early morning urine sent for albumin:creatinine ratio • Foot check: pulses/sensation • Smoking and alcohol status • Retinal screening • Blood samples: HbA_{1c}; liver function tests; creatinine; HDL and LDL cholesterol; triglycerides; full blood count etc.
Annual review	Using the data gathered at the baseline appointment, individual care plans were constructed with the person with diabetes and targets and aims were agreed for each issue identified. Healthcare professionals were encouraged to use the resource folder to support referrals, education and planning.
Follow-up	A follow-up appointment was scheduled for 6 months after annual review, to collect further data and to revisit the care plan.
Evaluation	Evaluation sheets were provided so participating practices could consider the benefits and limitations of the Barriers Framework.

“Using the data gathered at the baseline appointment, individual care plans were constructed with the patient and targets and aims were agreed for each issue identified”

Page points

1. A questionnaire was sent to all people with diabetes prior to their annual review. The aim of this questionnaire was to assess any potential concerns that the person had regarding their care.
2. The lead nurse took written notes at 73 visits to 17 Cambridgeshire practices between November 2009 and March 2011. Visits were arranged to discuss implementation of the Barriers Framework and promote the integrated care team.
3. The lead nurse running the pilot study noted that flexibility was key when implementing the framework and it was important to work with the requirements of each practice.

prior to annual review, to help identify barriers. The questionnaire asked about the difficulties experienced, including whether and why they were worried about their diabetes, how they would improve local diabetes services and what they believed prevented themselves or others from improving their diabetes (Simmons, 1998). Based on the answers to this questionnaire, the lead practice nurse compiled local resources such as leaflets, websites and phone numbers in a resource folder. The questionnaire and clinical results were then used alongside the resource folder to create person-specific management plans.

The lead nurse in this pilot was then invited to join the local diabetes integrated care team (Hollern and Simmons, 2011) and share the approach developed in her practice with the 17 other practices served by the team. It was envisaged this would help develop community links, raise awareness of the new integrated care team and offer resources to practices wishing to update their diabetes knowledge and reappraise their consultation styles. In rolling out the Barriers Framework, the lead nurse started to arrange meetings with other practice nurses in the area responsible for diabetes reviews and also other relevant practice staff.

Data collection and analysis

The lead nurse took written notes at 73 visits to 17 Cambridgeshire practices between November 2009 and March 2011. Visits were arranged to discuss implementation of the Barriers Framework and promote the integrated care team. A social scientist was employed to evaluate the broader integrated care initiative and interviewed the lead nurse to discuss the context of the notes taken. The social scientist also conducted observations of the approach having been implemented in one practice and not yet in another.

This research was undertaken as part of a larger study of integrated diabetes care and, as such, semi-structured interviews were also conducted with the integrated care staff. The written notes, interview and observation notes were then manually analysed and themes were coded to identify the components of the programme delivered and recurrent issues generated during implementation.

Description of the approach

The Barriers Framework was presented as a new method of conducting annual reviews, targeting people with poor glycaemic control ($HbA_{1c} \geq 75$ mmol/mol [9%]) and focused on treating the person in a holistic manner, rather than purely based on clinical outcomes. The practice was encouraged to send people with diabetes a brief questionnaire about barriers to care (Simmons, 1998) prior to annual review. Each nurse was encouraged to consider responses as psychological, social, environmental, financial and educational factors that could be associated with poor glycaemic control. A resource folder was provided to each practice nurse, to help overcome these barriers. For example, if language barriers were identified, contact details for interpreting services and multilingual documents were readily available in the resource folder.

During the practice visits, the lead nurse used case studies drawing on her own use of the Barriers Framework to demonstrate how it could be used to develop care plans. As these sessions unfolded, discussions at each practice identified further education and training that practices nurses felt they needed. This often related to medication and foot care. The visits also included detailed discussion of the referral pathways (Table 2), with emphasis on using the structured diabetes patient education courses provided locally and also the use of the integrated care team to reduce burden when dealing with particularly challenging barriers.

Key issues

Flexibility

When describing implementation, the lead nurse noted that it was important for her to be flexible and work with the requirements of each practice. This was apparent in the written notes, which report that half the practices found the postal nature of the questionnaire burdensome. The rationale for pre-sending the questionnaire was to reduce the influence of the nurse on each person's answers. However, practices often asked people with diabetes to complete it as they waited, or fill it out during their consultation. In a number of instances, people with low levels of literacy or who spoke little English were assisted by the nurses who either went through the questionnaire with them or arranged for translations to be made. Such adaptation of the

Table 2. Referral pathways and professional involvement.

Barriers	Intervention after assessment	Professional involvement
Psychological issues, including: <ul style="list-style-type: none"> • Lack of motivation and self-efficacy • Denial and unhelpful health beliefs • Needle phobia • Priority setting • Financial issues 	<ul style="list-style-type: none"> • Goal setting and motivational interviewing • Counselling • Time management • Social support • Cognitive behaviour therapy • Personalised strategy 	<ul style="list-style-type: none"> • Healthcare assistant • DSN • Psychologist • Citizens Advice Bureau (for financial issues)
Family issues (inadequate support and obstruction)	<ul style="list-style-type: none"> • Identify abuse • Joint family care plan • Practice nurse home visit 	<ul style="list-style-type: none"> • May need social services • DSN • Dietitian
Unsupportive environment (lifestyle choices, insulin injections etc.)	<ul style="list-style-type: none"> • Meal and activity plans • Information regarding medications/products 	<ul style="list-style-type: none"> • DSN • Dietitian
Unsatisfactory past care (including attitudes of healthcare professionals)	<ul style="list-style-type: none"> • Identify ethnicity or gender issues • Personalised care • Staff training 	<ul style="list-style-type: none"> • May need psychologist (if behaviour of the person with diabetes is a problem) • DSN
Communication issues (low educational status)	<ul style="list-style-type: none"> • Communication plan • Education 	<ul style="list-style-type: none"> • DSN • Local education authority
Physical comorbidities (non-diabetes)	<ul style="list-style-type: none"> • Identify management plan 	<ul style="list-style-type: none"> • Community matron • Specialist advice
Psychiatric comorbidities (e.g. depression)	<ul style="list-style-type: none"> • Identify management plan and practice nurse role 	<ul style="list-style-type: none"> • Community mental health team
Diabetes management side effects	<ul style="list-style-type: none"> • Improved diabetes tools (glucose monitoring, insulin needles etc.) 	<ul style="list-style-type: none"> • DSN
Educational issues (diabetes knowledge)	<ul style="list-style-type: none"> • Improved materials • Patient education 	<ul style="list-style-type: none"> • DSN • Practice nurse training
Personal finance	<ul style="list-style-type: none"> • Detailed assessment and advice 	<ul style="list-style-type: none"> • Social services • Citizens Advice Bureau
Physical access to services	<ul style="list-style-type: none"> • Transport • Home visits • Care services closer to home 	<ul style="list-style-type: none"> • DSN • Other professionals, such as dietitian, podiatrist
Poor range of services	<ul style="list-style-type: none"> • Evening/weekend services • Emergencies • Exercise groups • Supermarket tours 	<ul style="list-style-type: none"> • DSN • Involve practice manager
Appointment system	<ul style="list-style-type: none"> • Information management • Staff management • Staff skills 	<ul style="list-style-type: none"> • Practice staff

“The Barriers Framework was presented as a new method of conducting annual reviews, targeting patients with poor glycaemic control”

Page points

1. Practice nurses reported that the introduction of the Barriers Framework encouraged them to consider their own educational needs.
2. Practice nurses also reported that the framework allowed them to return to a more holistic consultation style and allowed them to consider the structure and importance of the annual reviews.
3. Whilst the reception of the framework was mostly positive, some participating nurses and GPs voiced frustration at changing their routines.

guidelines was common in other areas too, such as the collection of the suggested baseline clinical measures.

Education

It was also noted that discussions around the Barriers Framework encouraged the practice nurses to begin identifying gaps in their education. The lead nurse became a reference point and advocate for nurses wanting more information. As a result of requests for education around foot problems, training from the integrated care team's podiatrist was routinely offered to practices. The lead nurse also kept the other nurses informed of local courses, online resources and other educational opportunities. Practice nurses were able to reflect on the multi-dimensionality of diabetes and seek training where their information was lacking.

Holism

The lead nurse frequently described the Barriers Framework as returning to a "holistic" consultation style, allowing for broader health and wellbeing issues to be raised and addressed within the diabetes consultation. One practice nurse using the framework reported that she was enjoying her job again, after feeling pressured to "get the numbers down" at the expense of focusing on caring for the person with diabetes. The lead nurse described the approach as being more consistent with an "old school" style of nursing, suggesting targets were a competing agenda for nurses.

Structural

The framework was considered especially useful by the nurse participants, as one remarked it allowed them the opportunity to review the responsibilities around annual reviews. By breaking down individual tasks associated with an annual review, nurses became clearer about its structure and importance. A significant consequence of this was that the lead nurse was able to promote longer annual review appointments, or to identify appropriate tasks that could be shared with healthcare assistants.

Built on trust

Another recurring issue was that the Barriers Framework highlighted the importance of trust between individuals and the team, both internally within practices and also between primary care and the integrated care team. Within the practices, staff

noted the different relationships the practice team had with people with diabetes and the importance of these relationships. Similarly, the nurses suggested that if the integrated care team was to succeed, trust would have to play a central role. Related to this, the lead nurse noted the importance of communicating with the practice nurses and how this enabled them to develop stronger relationships.

Change, extra work and constraints

Whilst the reception of the framework was mostly positive, some participating nurses and GPs voiced frustration at changing their routines. For example, one GP reported that they already provided a good enough service to people with diabetes. Others explained they felt overworked and frustrated and therefore were reluctant to take on extra work. Such statements highlight problems associated with changing processes, especially when accompanied by other time pressures.

Discussion

We have presented the components of the Barriers Framework and described how the approach was received by participating nurses. Of particular interest is the questionnaire, as from a research perspective, it demonstrates the difficulties of using paper-based data collection tools. There was resistance to using a postal questionnaire (requiring additional administrative effort), but less resistance to asking the questions in a consultation, as this was deemed more time efficient and person focused. The importance of time constraints over the potential influence of the nurse on answers is not surprising. However, it is worth noting that the person with diabetes may have provided different questionnaire responses as a result.

The Barriers Framework promoted intervention components such as multifaceted professional interventions, patient education and enhanced nurse role (Renders et al, 2001); however, a significant degree of flexibility was required to make these acceptable to nurses. Whilst it was designed to work as a comprehensive package, the option of only adopting those aspects that complement existing practices seemed to be part of its appeal. The ability of the lead nurse to deliver a multi-component programme such as this is vital, especially the ability to recognise the variable dynamics in practices and being able to tailor appropriate solutions. Equally,

practices need to be willing to recognise the limitations of their current procedures and adapt locally available resources to their needs and the requirements of people with diabetes.

There was a sense amongst some nurses that using the Barriers Framework allowed them to return to a more holistic style of nursing, rather than the drive towards targets. This is promising considering previous research regarding the concerns nurses have had (including loss of job satisfaction) over the impact of Quality Outcome Framework targets (McDonald et al, 2007). In 2009, McDonald et al described the changing role of the nurse as more “professional”, with a focus on technical knowledge; however, MacDonald et al also stated that less emphasis is placed on experiential learning, judgement and holism. Furthermore, they also suggested that computerised templates and new target-focused culture was seen by many nurses as changing the consultation process in a way which threatened the delivery of person-centred care (McDonald et al, 2009). Rather than purely a data collection tool, the questionnaire in the Barriers Framework could be used by nurses to prompt discussion around the daily life of the person with diabetes and allowed nurses to identify areas of change alongside the individual. The approach certainly resonates with a less target-oriented style of nursing, but equally addresses the lifestyle factors that are so important for diabetes control and therefore addresses targets that practices strive to meet.

Unfortunately, no evaluation of the programme’s efficacy has been conducted. Implementation was not systematically measured and adoption evidence is limited. Teams rolling out new health initiatives often face such difficulties. The Barriers Framework demonstrated the importance of maintaining a flexible attitude towards implementation; however, this may have been at the detriment of a more robust evaluation. As this programme was rolled out alongside promoting the integrated care team, it would also be difficult to extrapolate the effectiveness of this programme in isolation. Yet, what we have been able to show is how some elements of the Barriers Framework were adapted and responses to its introduction. We also acknowledge the omission of exploring “facilitators” to self-care but would like to address this in future work.

Conclusion

The individual components of the Barriers Framework were reassessing annual review structure, use of a questionnaire, case study discussion, education and training, referral pathways, use of integrated care team and management plans for people with diabetes. Practices showed variable interest in the approach, largely due to time constraints. For those practice nurses that engaged most, the programme presented an alternative method for approaching annual reviews at a time of increased pressure to achieve Quality and Outcomes Framework (QOF) targets. Although numerous issues arose in implementation, a high degree of flexibility ensured that it was amenable and applicable for participating nurses. ■

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Page points

1. Rather than purely a data collection tool, the questionnaire in the Barriers Framework could be used by nurses to prompt discussion around the daily life of the person with diabetes and allowed nurses to identify areas of change alongside the individual.
2. No evaluation of the programme’s efficacy has been conducted. Implementation was not systematically measured and adoption evidence is limited.

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