Integrated health and social care evidence reviews

What works in managing long-term conditions through enhanced primary care services?

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We have evaluated seven NHS Vanguard projects across the range of models over the past two years. Some of the Multispecialty Community Provider vanguard sites we have worked with have developed models of enhanced primary care as part of their programme.

Here we present the findings of our review of literature[1] on elements of best practice in enhanced primary care support for people with long-term conditions (LTCs). We also highlight the barriers to effective primary care support for this group of people and shine a spotlight on diabetes management as a case study.

Please get in touch with our Head of Research, Dr Stephen Boxford, for more detail or to continue the conversation.

1 Context

1.1 The scale and impact of long-term conditions in the UK

A 2014 report by the House of Commons (HoC) Health Committee concludes that long-term health conditions (LTCs) are one of the greatest challenges to the NHS in England (HoC Health Committee 2014). More than 15 million people in England currently live with a long-term condition, a figure projected to rise further over the next ten years (DHSC 2015), and studies show the prevalence of LTCs is increasing as the population ages (Taylor et al. 2014).

In particular, the number of people living with more than one LTC is rising. The NHS framework for LTC care notes that there were 1.9 million people with two or more long-term health conditions in 2008, a figure expected to rise to 2.9 million in 2018 (NHSE 2017a).

The treatment of long-term conditions incurs immense costs for the health and social care system as a whole. The Department of Health estimated that people with LTCs are the biggest users of healthcare services, with treatment and care for long-term conditions absorbing 70% of acute and primary care spending in England (DHSC 2015). For example, in 2014 care for long-term conditions accounted for: 55% of GP appointments;

[1] If you would like details on the methodology used for the literature review, or a full bibliography, please get in touch with the Cordis Bright research team: info@cordisbright.co.uk

68% of outpatient and A&E appointments; and 77% of inpatient bed days (HoC Health Committee 2014).

1.2 Key definitions

Enhanced primary care is an increased level of clinical and social support provided to patients in the local community. It can include nurses, care coordinators, therapists, wellbeing support workers and other professionals working alongside local GPs to empower patients to self-care and stay well for longer (NHSE 2016).

Long-term health conditions (LTCs) are defined by the National Institute for Health and Care Excellence (NICE) as conditions that cannot, at present, be cured but are controlled by medication and/or other treatment and/or therapies (NICE 2015). National guidelines on multimorbidity (NICE 2016) note that long-term conditions include:

- Physical health conditions such as diabetes, high blood pressure, heart disease or arthritis;
- Mental health problems such as anxiety or schizophrenia;
- Ongoing conditions such as learning disabilities;
- Frailty;
- Chronic pain;
- Sensory impairment such as sight or hearing loss; and
- Alcohol and substance misuse.

Multimorbidity refers to the presence of two or more long-term health conditions. At least one of the conditions must be a physical health condition (NICE 2016).

Medicine optimisation is a person-centred approach to safe and effective use of medicines, to ensure individuals obtain the best possible outcomes from their medicines. Shared decision-making is an essential part in this process, as well as seeking to use the best available evidence to guide decisions about the care of the individual patient, taking into account their needs, preferences and values. The process often involves medicine reconciliation and medication reviews (NICE 2015).

Self-management refers to the tasks individuals undertake to live with one or more chronic condition, and includes the medical management, role management and emotional management of their conditions. Self-management support is complex and can involve many different services (Taylor et al. 2014).

1.4 The current policy context

NHS England's Five Year Forward View from 2014 recognises the challenge posed by long-term conditions (NHSE 2014). The report highlights that existing models for dealing with long-term conditions are neither sustainable nor desirable:

> *Long term conditions are now a central task of the NHS; caring for these needs requires a partnership with patients over the longer term rather than providing single, unconnected "episodes" of care" (NHS England, 2014).*

There are two inter-related aims for this new strategic direction: more person-centred care, and greater self-management for conditions (NHSE 2017c). Health care for people with long-term conditions must also be proactive, rather than reactive, and focus on supporting patients to self-manage:

> *The sheer scale of the LTCs challenge for modern healthcare systems means that we need a shift – away from the 'medical model' of illness… towards a model of care which takes into account the expertise and resources of the people with LTCs and their communities. (NHS England, 2017).*

There is currently significant diversity in the composition and context of enhanced primary care services that support people with long-term conditions. However, NHS England has adopted the House of Care model as its approach to supporting people with LTCs and delivering person-centred, self-managed care (NHSE 2017a). The House of Care model (Figure 1) was developed by the King's Fund (Coulter et al. 2013). It is based on Diabetes UK's Year of Care 2011 pilot model (Diabetes UK et al. 2011) and evaluations of other primary care projects across England that seek to deliver person-centred, holistic care for people with LTCs.

Figure 1: House of Care model

Source: NHSE 2017a

The House of Care framework for long-term condition care identifies four interdependent components, all of which must be present to deliver person-centred primary care for people with LTCs (NHSE 2017a):

- **Commissioning.** This should not simply be procurement but a system improvement process, the outcomes of each cycle informing the next one.
- **Engaged, informed individuals and carers.** This should enable the individuals to self-manage and know how to access the services they need.
- **Organisational clinical processes.** This should be structured around the needs of patients and carers using the best evidence, co-designed with service users where possible.
- **Health and care professionals working in partnership,** listening, supporting and collaborating for continuity of care (continuity in terms of information, condition management and relations with health care providers/professionals).

2 Best practice in management of long-term conditions through enhanced primary care

2.1 Key messages

Our review of the literature identified the following key best practice considerations for LTC management through enhanced primary care services:

Core principles

1. **Person-centred care.** This means that the person should be at the centre of their care, with their individual needs, preferences, health priorities and lifestyle taken into account. This principle crosscuts all guidelines as an essential component to the management of multimorbidity, medicines optimisation, diabetes and long-term conditions more generally.

2. **An approach to care that takes account of multimorbidity to improve quality of life.** This requires the identification of multimorbidity, either opportunistically during routine care, or proactively using electronic health records, and the development of an individualised management plan to improve quality of life.

Infrastructure and process

3. **Commissioning.** This should not simply be procurement but a system improvement process, the outcomes of each cycle informing the next one.

4. **Engaged, informed individuals and carers.** This should enable the individuals to self-manage and know how to access the services they need.

5. **Health and care professionals working in partnership**, listening, supporting and collaborating for continuity of care (continuity in terms of information, condition management and relations with health care providers/professionals).

Diagnosis and delivery

6. **Medicines should be optimised** and this should be in line with The Royal Pharmaceutical Society's four guiding principles to medicines optimisation (NICE 2015; NHS England 2017b): (1) understand the patient experience, (2) evidence-based choice of medicines, (3) ensure medicines use is as safe as possible, and (4) make medicines optimisation part of routine practice.

2.2 What is official best practice guidance for the management of LTCs in primary care?

The National Institute for Health and Care Excellence (NICE) and NHS England have issued some key guidelines relevant to enhanced primary care services for people with long-term conditions:

- NICE (2016). *Multimorbidity: clinical assessment and management*, NICE guideline NG56.
- NICE (2015). *Medicines optimisation: the safe and effective use of medicines to enable the best possible outcomes*, NICE guideline NG5.
- NICE (2017). *Type 2 diabetes in adults: management*, NICE guideline NG28.
- NHS England (2017). *House of Care – a framework for long term condition care*.

Below we synthesise the key recommendations from these guidelines. We also assess the evidence base for each guideline, focussing on the elements of best practice that are most relevant to the management of LTCs through primary care services.

2.2.1 Person-centred care

The principle of person-centred care crosscuts all NICE and NHS England guidelines as essential to the management of multimorbidity, medicines optimisation, diabetes and LTCs. Person-centred care means that the individual should be at the centre of their care, and their needs, preferences, health priorities and lifestyle considered.

There is a strong evidence base for the importance of individualised and person-centred approaches in the management of long-term conditions, with particularly strong evidence regarding the importance of person-centred support for self-management.

A 2014 systematic review of self-management support for LTCs identifies personalisation as a key factor in effective interventions (Taylor et al. 2014). The review specifies that support should be tailored to individuals, taking into account culture and beliefs, the condition and the person's position on the disease trajectory.

Qualitative studies have suggested that generic self-management classes are not effective, and linked modest results of randomised controlled trials of chronic illness self-management programmes, such as the Expert Patients Programme to their lack of personalisation. They find that self-management support is more likely to be effective when it takes into account variability in lifestyle, coping mechanisms, other conditions and socioeconomic circumstances (Kennedy et al. 2007; Gately et al. 2007).

2.2.2 Identification of multi-morbidity and individualised management plans

A two-step approach is recommended, involving (i) identification of multimorbidity, either opportunistically during routine care or proactively using electronic health records, and (ii) the development of an individualised management plan. It aims to

improve quality of life for people with multimorbidity. NICE recommends management plans consider (NICE 2016):

- How health conditions and treatments interact with quality of life.
- Individual needs, treatment preferences, lifestyles and ambitions.
- Benefits and risks of following recommendations from guidance on single health conditions.
- Improving quality of life by reducing treatment burden, adverse events and unplanned care.
- Improving coordination of care across services.

This approach has considerable overlap with the person-centred approach, with additional focus on medicines optimisation, organisational clinical processes and coordination of care. The evidence base for these elements is discussed elsewhere in this review

2.2.3 Commissioning

In the House of Care model, commissioning of services for people with LTCs is thought of as a system improvement process rather than simply procurement. The outcomes of each commissioning cycle should inform the next one (NHSE 2017a).

NHS England's 2014 *Commissioning for Effective Service Transformation* report notes that *"commissioning is not a linear process, but a cyclical one",* and that evaluation should occur throughout the duration of contracts, contributing to service reviews which identify further opportunities for improvement (NHSE 2014). This is also reflected in NHS England's 'Commissioning Cycle' and Implementation Handbook (NHSE 2017d), a guide to help commissioners of health and care services to commission for service transformation, and which is recommended by NHSE as tool for supporting the implementation of integrated LTC care services to improve outcomes and experience for people.

2.2.4 Engaged and informed patients and carers

Patients and carers who are engaged and informed should know how to access the services they need and be better able to self-manage their LTC (NHS England 2017a).

The evidence base indicates that in order to self-manage, patients need to understand their LTC, the care required, and have confidence in their capacity to self-manage. To achieve this knowledge and self-efficacy, patients need clear channels of communication with clinicians, sufficient health literacy and the opportunity to develop self-management skills in a person-centred way. We explore each of these factors below. However, it should be noted that evidence highlights that self-management is only effective when paired with quality clinical care and support.

The role of self-management

A systematic review (Taylor et al. 2014) highlights the importance of self-management for LTCs, and concludes that commissioners and healthcare providers should actively promote a culture whereby supporting self-management is a normal, expected, monitored and rewarded aspect of care. Five components to self-management support are identified, of which four concern patient education and engagement (Taylor et al. 2014):

- Provision of education about the long term condition
- Provision of psychological strategies to support adjustment to life with a long term condition
- Provision of strategies to support adherence to treatments
- Practical support tailored to the specific LTC
- Social support, when appropriate.

Knowledge and self-efficacy

Knowledge about one's condition is important for self-management of LTCs. Taylor et al.'s systematic review (2014) notes a strong evidence base for the importance of patient education in improving clinical outcomes for people with LTCs.

As well as having knowledge and understanding of one's own condition, having self-efficacy (i.e. the confidence to carry out a behaviour necessary to reach a desired goal) is highlighted across the literature as key to effective self-management of LTCs (see for example Inoue et al. 2013; Bodenheimer et al. 2002).

Self-management skills

Education focussed on self-management is particularly important in this context (Rogers et al. 2008). A review of randomised controlled trials concluded that self-management support programmes are most effective at improving clinical outcomes and reducing costs of care when they teach self-management skills rather simply provide information about the condition (Bodenheimer et al. 2002).

Although Bodenheimer et al. (2002) suggested self-management education programmes comprising patients with diverse LTCs may improve outcomes and reduce costs, more recent primary research and systematic reviews highlights the importance of individualised, person-centred approaches to self-management support. Personalisation of interventions supports their integration into daily life and accounts for existing adaptations and strategies (see for example Kennedy et al. 2007; Taylor et al. 2014; Rogers et al. 2008).

Health literacy and clear communication

Primary research highlights the importance of considering individuals' health literacy within health education and self-management programmes, and improving health literacy. For example, a cross-sectional study (Inoue et al. 2013) in Japan found health literacy

was positively associated with a patient's understanding of diabetes and with their self-efficacy. The association was particularly strong for communicative health literacy (the ability to extract health information and derive meaning from communications, and apply it to changing circumstances) and critical health literacy (the ability to critically analyse information and use this to achieve greater control over life and situations).

Inoue et al. (2013) also found clear communication between doctors and patients was independently associated with patients' self-efficacy and understanding of diabetes care.

Synergy with quality, regular clinical review and support

However, self-management interventions are not a substitute for high quality care, as highlighted by Taylor et al.'s (2014) systematic review. Rather than patients being left to simply self-care, effective supported self-management should empower patients to access the best clinical care and support. If not paired with clinical support, the limited reach of self-management interventions can instead exacerbate health inequalities.

2.2.5 Health and care professionals working in partnership and coordination of care

> This requires listening, supporting and collaborating for continuity of care. Continuity of care entails continuity in terms of information, condition management and relations with health care providers and professionals (NHS England 2017a).

In 2013 the King's Fund published a review of co-ordinated care for people with LTCs which found care co-ordination was particularly relevant to people with LTCs, who may encounter difficulties navigating a fragmented health care system (Coulter et al. 2013). An evaluation of enhanced primary care practices for diabetes management also identified collaborative working between different GP practices and professionals as a key success factor (Hull et al. 2013).

The King's Fund identified several mechanisms which have been shown to improve care coordination. These include (Coulter et al. 2013):

- At a clinical and service level, a single entry point is important as a base from which care co-ordination can be supported. Named care co-ordinators can support the process of care co-ordination by providing a source of personal continuity to patients and carers as well as enabling access to care through multidisciplinary teams.

- At a functional level, effective communication between members of the multidisciplinary team is essential. There is a need for shared electronic health records to support the process, but a 'high-touch, low-tech' approach has value in promoting face-to-face communication, fostering collaboration and enabling meaningful conversations about the needs of patients with complex needs.

That said, the review (Coulter et al. 2013) found little concrete evidence for a positive association between better care co-ordination and improved patient experiences, care outcomes and financial efficiencies and noted that the lack of evaluations made drawing definitive conclusions difficult.

2.2.6 Medicines optimisation

NICE (2015) and NHSE (2017b) both endorse The Royal Pharmaceutical Society's guidance for the safe and effective use of medicines in health and social care. This is based on four principles:

- Aim to understand the patient's experience.
- Evidence-based choice of medicines.
- Ensure medicines use is as safe as possible.
- Make medicines optimisation part of routine practice.

Medicines optimisation is important for all people taking one or more medicines. NICE highlight its particular relevance to people with LTCs (NICE 2015):

> *As the population ages and life expectancy increases, more people are living with several long-term conditions that are being managed with an increasing number of medicines. Maintaining a careful balance gets more difficult for people and health professionals, particularly when also trying to reduce health inequalities of the population… Optimising a person's medicines is important to ensure a person is taking their medicines as intended and can support the management of long-term conditions, multimorbidities and polypharmacy.*

Existing literature supports the importance that is placed on medicines optimisation in LTC management. A systematic review of polypharmacy found *"inappropriate"* pharmacy was associated with negative health outcomes for older people (Patterson et al. 2012). In a subsequent review, the King's Fund suggest these findings are likely to be relevant for younger patients also (Duerden et al. 2013).

2.3 Are there any other best practice considerations?

Our review of the research literature identified some additional factors that aid effective management of LTCs in the community but which were not included in the guidance documents considered in the section above. We outline these factors and review the available evidence below.

2.3.1 Telehealth and technological solutions

A range of telehealth[2] solutions are being implemented to support LTC management. Overall, the evidence regarding impact is mixed, especially with regards to cost effectiveness and healthcare service utilisation. Although there is high-quality evidence to suggest telehealth can deliver similar if not better clinical outcomes for people with LTCs

[2] Telehealth is the use of technology for the regular monitoring of vital signs so that unusual activity can be detected before the situation becomes critical. It is a tool for preventative and anticipatory care, and directly involves clinicians as an integral part of the service (NHS Commissioning Assembly 2015).

compared to usual care (Henderson et al. 2013; Barlow et al. 2007; Whitehead et al. 2016; Inglis et al. 2011), the improvements depend on the type of telehealth delivered, the context, and what "care as usual" entails. It is therefore difficult to draw definitive conclusions about its transferability.

For example, a systematic review of home telecare for elderly people and people with LTCs (Barlow et al. 2007) found the most effective telecare interventions were automated vital signs monitoring (for reducing health service use) and telephone follow-up by nurses (for improving clinical indicators and reducing health service use). Another systematic review (Whitehead et al. 2016) of mobile phone and tablet apps for LTC self-management suggested that apps improved health outcomes for people with LTCs through enhanced symptom control. However, further evaluation is needed to draw conclusions about impact. A meta-analysis (Inglis et al. 2011) suggests telemonitoring and structured telephone support are acceptable to patients with chronic heart failure (CHF) and can improve outcomes and reduce costs compared to treatment as usual.

2.3.2 Discharge management

A systematic review of randomised controlled trials of disease management programmes for older people with heart failure found the following characteristics were crucial to improving post-discharge outcomes (Yu et al. 2005):

- An in-hospital phase of care;
- Intensive patient education;
- Self-care supportive strategy;
- Optimisation of medical plan;
- Ongoing surveillance and management of clinical deterioration;
- A cardiac nurse and cardiologist should be actively involved; and
- A flexible approach to delivering follow-up care.

2.4 Are there barriers to effective management of long-term conditions?

NHS England's framework for long-term condition care states that (NHSE 2017a):

> *The barriers to great care for people with long term conditions… can best be summed up as failure to provide integrated care around the person.*

Our review of the literature identified barriers to effective LTC management. Below we outline the key barriers identified by NHS England and other sources.

2.4.1 Single condition services

Services that only deal with single conditions and adopt single condition guidelines are less likely to involve holistic approaches to care and introduce risks of inappropriate polypharmacy (NHS England 2017a).

2.4.2 Lack of care coordination

A lack of co-ordinated care can result in people being unaware of who they can approach when they have a problem, and result in nobody having a generalist's overview of the individual's total care and support needs (NHS England 2017a).

2.4.3 Emotional, psychological and social support

Research has shown the key role social networks can play in determining health outcomes over time. A study using multiple regression modelling has highlighted this link for people with LTCs (Reeves et al. 2014). Ensuring social networks and community involvement are harnessed may be both desirable and cost-effective in supporting people with LTCs (Reeves et al. 2014):

> *Personal social relationships and the availability of social capital at the community level may be key to the mobilisation of resources needed for long-term condition self-management to be effective.*

NHS England highlights a lack of focus on the mental health and wellbeing of people with 'physical' health problems, and the barriers this poses to effective LTC management (NHS England 2017a).

2.4.4 Fragmented care

If services are not designed using a whole systems approach, healthcare is isolated from other key services people with LTCs need to access such as social care, transport, employment, benefits and housing. This can lead to a failure to support people with non-medical offers such as those provided by the voluntary sector (NHS England 2017a). This barrier links to the role of social networks identified above.

2.4.5 Lack of informational continuity

Without informational continuity, it can be difficult to access care records across settings, and patients themselves may not have access to their care records (NHS England 2017a). In part this is due to inflexible national IT systems (Coulter et al. 2013).

2.4.6 Reactive services

Reactive services identify vulnerable people when they are already in need of extra support. More predictive or pro-active services identify and target vulnerable people with additional support, avoiding hospital admissions or deterioration of their condition (NHS England 2017a).

2.4.7 Lack of care planning consultation

This is when services treat people as passive recipients of care, rather than encouraging self-management and recognising individuals' expertise on how their condition affects their life (NHS England 2017a).

2.4.8 Buy-in from professionals

As Kennedy et al. (2007) show, the principle of self-care raises tensions between patient autonomy and professional responsibility and the delivery of evidence based care; this can pose a barrier to GP's support of self-care programmes. They recommend that self-care support should be aligned with GPs' core values of developing relationships with their patients, and enhance their professional autonomy.

2.4.9 Existing health care structures

The way health services are structured and delivered shapes patient behaviour and use of health services. Kennedy et al. (2007) have suggested that polyclinics, which offer a wider range of services than GP practices and were designed with self-care in mind, may support LTC self-management more effectively than GP surgeries, designed with professionally-led care in mind.

Coulter et al. (2013) also highlight that GP contracting and incentive systems are not always aligned to support approaches to self-management and care planning for LTCs.

2.4.10 *Time*

Considerable time is required to embed new programmes, especially multi-disciplinary and collaborative programmes. For example, a literature review on large scale general practice cites Tower Hamlets as a case study; after years of collaborative partnerships and investment, it was eventually funded as an NHS England Vanguard Multispecialty Community Provider (Pettigrew et al. 2016):

> *It highlights the significant level of prior investment and experience of collaboration needed to reach this stage of organisational maturity and, importantly, provide evidence of its impact.*

3 Spotlight on diabetes management through enhanced primary care

Management of and care for diabetes is complex and time-consuming due to its multiple risk factors and wide-ranging complications. Optimal management of the condition requires involvement from many healthcare areas. This is both complex and costly; diabetes care accounts for up to 10% of NHS expenditure (NICE 2017). Due to the importance of lifestyle changes, complexities of treatment and possible side effects, patient education and self-management are important aspects of diabetes care (NICE 2017). Here we shine a spotlight on best practice considerations for diabetes management in primary care as a case study for wider LTC management through enhanced primary care.

3.1 What are the official guidelines on diabetes management?

The NICE guidelines on management of type 2 diabetes in adults (NICE 2017) outline four priorities for best practice:

- **Patient education.** Structured education should be offered to patients and their family upon diagnosis, with annual reinforcement and review. Education should be evidence-based, personalised and have specific aims and learning objectives. It should be delivered by trained educators, who have time and resources to develop and maintain their skills. It should be appropriate to individuals' cultural, literacy and cognitive needs.
- **Dietary advice.** This should be integrated into a personalised diabetes management plan along with other aspects of lifestyle change.
- **Blood pressure management.** Medication should only be added if lifestyle advice does not reduce blood pressure. Blood pressure should be measured every one to two months.
- **Blood glucose management.** Patients should be included in decisions about their target. Self-monitoring of blood glucose levels for adults with type 2 diabetes should only be offered under particular circumstances[3].

NICE guidelines also emphasise the need to take a person-centred approach to diabetes care, especially in the context of multimorbidity, with needs reassessed and medicines reviewed regularly. However, guidance on the best form or context for providing such support was not identified.

[3] According to NICE, self-monitoring can be offered if: the person is on insulin; there is evidence of hypoglycaemic episodes; the person is on oral medication that may increase their risk of hypoglycaemia while driving or operating machinery; or the person is pregnant, or is planning to become pregnant (NICE 2017).

3.2 What is the supporting evidence base?

3.2.1 General diabetes management

This review identified evidence supporting the education and personalisation strands of NICE's recommended approach to diabetes care.

General evidence on the importance of patients being informed and engaged in managing their LTC care is outlined in section 2.2.4. A study by the Care Quality Commission (CQC) (2016) provides further evidence on the importance of education specifically for diabetes care and management, and on the importance of this education being personalised. Their qualitative research with adults with type 1 or type 2 diabetes, commissioners and staff delivering community diabetes care highlights the need for the development of diabetes education courses that are appropriate to everyone, including for people with a learning disability for example, so everyone can gain the knowledge and skills they need to manage their diabetes or the diabetes of the person they care for.

The CQC report also highlights the importance of personalised care and support. It recommends that local plans are developed to support people to self-manage in a way that suits their individual needs, and that professionals develop a personalised care plan in collaboration with individual patients (CQC 2016). This finding is also borne out by the literature; a systematic review of targeted interventions for socially disadvantaged adults with type 1 or type 2 diabetes identified common features of effective interventions (Glazier et al. 2006). These included: cultural tailoring of the intervention, delivery by community educators, and one-on-one interventions with individualised assessment and reassessment. Didactic teaching and interventions that focussed purely on diabetes knowledge were found to be consistently associated with the worst outcomes.

3.2.2 Diabetes management through enhanced primary care

Emerging evidence suggests enhanced primary care services can play a key role in diabetes management and treatment (accepting that "enhanced primary care" is a general catch-all term).

One inner London Primary Care Trust implemented system change from 2009 to 2012 to enhance diabetes care delivery in a primary care setting. GP practices were grouped into networks, and each network had a multidisciplinary team that could develop a diabetes management and care package for type 2 diabetes patients. The evaluation found primary care practice networks (given sufficient investment into financial, organisational and education resources) achieved clinically significant improvements in diabetes care in a deprived and ethnically diverse community. The evaluation identified the key role in success played by collaborative working between practices, high quality information sharing and engagement between primary and secondary care (Hull et al. 2013).

Evidence also supports the effectiveness of group primary care clinic sessions designed to meet diabetic patients' complex needs. A randomised controlled trial investigating the clinics' impact found they improved the process of diabetes care and were associated with better outcomes for participants (Wagner et al. 2001).