

Rewarding good practice: improving blood pressure management

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ARTICLE POINTS

- 1** Achieving and demonstrating improved blood pressure management in diabetes is incredibly important.
- 2** Good chronic disease management is at the heart of the new GP contract.
- 3** Developing a balance between patient need and financial incentive is vital.
- 4** Improved teamwork and advanced use of technology supports service delivery.
- 5** It is important to recognise the practice nurse role in delivering practice-based programmes of diabetes care.

KEY WORDS

- Audit
- Standards
- Blood pressure
- Information technology

Introduction

With the increasing workload in primary care as part of the NHS Plan (Department of Health, 1997), the new General Medical Services contract (nGMS; British Medical Association, 2003) and clinical governance requirements, the development of practice-based programmes of care must balance patient need with financial incentives. The mix of skills within the team, along with increased use of technology, must both support and demonstrate quality care. In implementing change-management of blood pressure in diabetes, which coincided with moving to 'paper-light' status, a whole-system approach was shown to ultimately reward both patient and practice.

As a practice nurse, my role in provision and coordination of care for our patients with diabetes has increased significantly. With an ever increasing number of people with diabetes coming under GP care, the senior partner and myself undertook further professional learning to support the development of improved coordinated, consistent care for those with diabetes best managed within our practice programme.

With the looming new General Medical Services (nGMS; British Medical Association, 2003) contract and plans to become 'paper light', the recording of information on our computer system to ease the process of audit became a priority (see *Figure 1*). To provide a baseline to initiate change in practice, I undertook an audit of blood pressure management in relation to whether all people with diabetes in our practice had measurements taken within a 12-month period and if target blood pressure levels had been achieved. To compare practice against what was recorded, I audited both manual and electronic records. The audit was repeated at a later date to hopefully demonstrate improvement and so complete the audit cycle.

In the initial audit, the standard for those patients having had their blood pressure measured in the previous 12 months was set at 90%. Although manual search of paper records demonstrated achievement

of this standard, only 68% could be supported by electronic data. In setting the baseline standard for achieving target blood pressure, I used the nGMS maximum threshold indicator of 55% of patients achieving a target blood pressure of 145/85 mmHg or under. Again, I compared manually recorded data against electronic records. We fell short of both standards here, achieving 45% in practice, but only being able to electronically demonstrate achievement of target blood pressure control in 32% of patients.

The initial audit resulted in a number of recommendations for change in practice that would address shortfalls in both holistic hypertension management as well as accurate data recording. Key areas of work would focus on clinical protocols for diabetes care, accurate computer data recording and achieving the best 'skill mix' within the team to best use resources and improve clinical outcomes.

nGMS: bringing about change

Good chronic disease management is at the heart of the nGMS contract's Quality and Outcomes Framework. Under the Framework, practice computer systems will be examined and data extracted nationally to inform primary care trusts (PCTs) of activity. In progressing nGMS and abandoning our paper-based system, a practice project review group was established, with a core data input team.



Figure 1. Paper records in the Maples Medical Centre. With the nGMS contract looming, the recording of information on computer systems rather than manual paper records became a priority.

This provided a focus group for introducing and addressing planned improvements in diabetes care.

The computer system at the practice is EMIS (Egton Medical Information System), and the initial task was to look at the existing diabetes template. With support from the primary care trust information technology team we amended our own template to include all local minimum data set requirements and combined this with the EMIS nGMS templates to reflect all quality indices.

With practice nurses increasingly taking lead roles in the management of chronic disease, clinical protocols of care serve to identify the roles and responsibilities of those implementing them. Our existing diabetes care protocol needed updating in line with best practice and the available evidence base. To be effective, the protocol needed collaboration and agreement from every team member while reflecting intended changes in the delivery of our practice-based programme.

A second nurse was employed to support developments in delivering primary care-led diabetes services by freeing up the senior practice nurse to focus on delivering enhanced diabetes nursing care, with support from a nursing team. Involving patients in agreeing target blood pressures,

lifestyle changes to improve blood pressure control, regular monitoring and medicine reviews was a key area of activity.

The healthcare assistant was supported with some additional training to input and view data, and weekly team meetings facilitated coordinated care in reviewing individual roles and responsibilities in blood pressure management.

Sharing diabetes and hypertension clinical protocols with our district nursing team for use with our housebound patients ensured they were offered the same level of care and that all data was recorded on to the computer template.

Information technology

Technology advances aided the monitoring of target achievement and benefited audit. The EMIS system has a programme called *Population Manager*, which provides information on progress against nGMS quality indicator targets and identifies those patients on the diabetes register who have not had blood pressure checks in the previous 15 months and those whose last reading was above 145/85 mmHg. It is updated every two days (see Figure 2).

Outcomes

Presentation and evaluation of the results of the initiative could just focus on

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1 The project was about a whole-system approach to change how the practice managed high blood pressure in diabetes patients, as opposed to focusing solely on blood pressure measurement results.

2 Sharing knowledge with the whole primary healthcare team regarding target levels to reduce complications, frequency of monitoring, referral and treatment options has encouraged stability and consistency.

3 Switching to electronic consultation has facilitated teamworking and nursing advancement within the practice as the team support each other in learning and developing its potential

4 The EMIS system's *Population Manager* provides up-to-date information on progress towards nGMS quality indicators and helps to identify those patients who have not had blood pressure measured in the previous 15 months and those who have not achieved target levels.

numerical values of blood pressure monitoring, but the project was about a whole-system approach to change how we manage high blood pressure in our patients with diabetes. Engaging 'hearts and minds' in the whole team was needed, and the desire was to deliver a service built around the needs of people with diabetes balanced against financial incentives for primary care to increase its focus on managing chronic disease.

The impetus for change, particularly among the practice team, was clearly strong and provided the opportunity to influence developments. Having a focus group to steer the agenda ensured regular team contact and review of progress.

Developing a comprehensive computer template ensured we were all collecting relevant, consistent data which supported ongoing audit and monitoring activity.

Revision of our clinical protocol to encompass national (National Institute for Clinical Excellence [NICE, 2002]; National Service Framework [NSF; Department of Health, 2002]; British Hypertension Society [Williams et al, 2004]; Diabetes UK [Diabetes UK, 2000]) and local (Manchester Local Diabetes Service Advisory Group, 2001) guidelines with regard to blood pressure management has provided an evidence base for how we practice. Sharing knowledge with the whole primary healthcare team regarding target levels to reduce complications, frequency of monitoring, referral and treatment options has encouraged stability and consistency.

With the ever increasing workload within the practice, the expanding role of the practice nurse has to be recognised. The senior practice nurse's role has been allowed to expand and evolve in the delivery of person-centred, integrated diabetes care as described by MacKinnon (2002); working more closely with the GP lead and providing an accessible resource to both the patients/carers and other health professionals who all benefit from shared knowledge.

Switching to electronic consultation has facilitated teamworking and nursing advancement within the practice as we support each other in learning and

developing its potential for supporting patient care with clear records of blood pressure recordings, blood monitoring, advice given, medication review and planned follow up.

Implementing the NSF for diabetes (DoH, 2002) will rely on integration across both the health and social care domains. The wider, multidisciplinary primary healthcare team will be a focus of activity; while the majority of patients with chronic disease can attend the practice, there are a number of people with diabetes who are housebound who rely on district nurses to coordinate their care. Ongoing work with our district nursing team will support this integrated approach to care with regular contact to discuss best management of blood pressure.

The expert resource of a DSN providing monthly clinics has supported inhouse developments to provide an easily-accessible multidisciplinary diabetes team. Overall, this has resulted in referrals to secondary care now being the exception in people newly diagnosed with diabetes.

To demonstrate the successful implementation of recommended changes in practice we would expect to see improvement in blood pressure monitoring and control. The original baseline audit, completed only five months prior to this initiative, showed that although we were achieving a set standard of blood pressure recording, we could not demonstrate the fact electronically. The aim, therefore, was to improve clinical practice and the use of information technology to support high quality diabetes care.

Re-auditing

Under the nGMS contract, we as a practice are required to achieve the quality standards aspired to by 31 March 2005. To assess our progress, in June 2004 I chose to re-audit against the original standard for measurement in the previous 15 months (i.e. 90% of patients having had their blood pressure measured, and the nGMS standard of 55% of patients achieving 145/85 mmHg or under in their last blood pressure reading). This time my audit data was retrieved from EMIS *Population Manager* alone, as required in the future.

Blood pressure checked in previous 15 months

Data extracted from EMIS on 18 June 2004 revealed that 89% (203/231) people with diabetes had their blood pressure recorded in the previous 15 months. This information was easily accessible and, compared to initial audit figure of 68%, demonstrated significant improvement in retrievable qualitative data.

Last recorded blood pressure <145/85 mmHg

Data extracted from EMIS on 18 June 2004 showed that 48% of those with diabetes had achieved the set blood pressure target, compared with the standard of 55%. At the baseline audit six months previously, achievement of target blood pressure could only be demonstrated electronically for 32% of patients.

These results therefore demonstrate an improvement in electronic recording as well as providing early indicators of improving management of blood pressure.

Future recommendations

As we further advance the technology used in our practice, ongoing training for the whole team has begun in earnest. Some members of the team are more adept than others, but it is early days. Technology must support patient care in the provision of key data across all health and social sectors and aid audit of care to demonstrate standards of care provision. Our EMIS system's *Population Manager* provides up-to-date information on progress towards nGMS quality indicators and helps to identify those patients who have not had blood pressure measured in the previous 15 months and those who have not achieved target levels.

The aim of implementing changes was to improve a clinical area, and thus patient experience, and also to improve teamwork and advance our use of technology.

Varying degrees of progress across all change areas did hinder consistent development, but that can easily be attributed to the demands of 'the day job'; certainly our plan to go paper light had to shift by four months for this reason.

Having a core project team meant that

some staff were excluded from all the activity, and there needs to be a subsequent sharing with these members. Involving the wider practice team in plans to develop diabetes services, regular reviews and patient access to professional advice will ensure all staff are aware that diabetes is a priority area of activity.

Progressing work of the core data input team in entering blood pressure information from external sources will ensure consistent recording and recalling of patients for blood pressure monitoring.

We have made some progress on the development of a comprehensive practice programme of care for our patients with diabetes: the clinical protocol review, the GP is now more involved along with the other partners, and nurses are aware of effective interventions in those with sub-optimal blood pressure control. However, as more than 50% of our population with diabetes are under GP care and consultant referral is now virtually nil, we will see an ever-increasing demand on clinic time to accommodate ongoing patient care. Nevertheless, management of blood pressure has undoubtedly moved forwards in achievement of quality indices.

Patient involvement

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Figure 2. The EMIS computer system is used to record data electronically at Maples Medical Centre. Records are updated every two days.



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1 Involving patients in setting agreed blood pressure targets and management plans supports patient empowerment, but we must remember to focus on what is important to the patient.

2 Involving the district nurses in inputting data from annual reviews of housebound patients on a computer template will facilitate access to practice IT systems to view patient records while supporting integrated care pathways.

3 With the introduction of clinical governance into the NHS and its emphasis on patient-centred quality care being ever improved upon, we have to be able to demonstrate as well as celebrate our successes.

important to the patient. Patients appear more concerned with lifestyle issues, quality of life and possible complications, while healthcare professionals place more emphasis on diet, treatment, monitoring, etc, as reported by Genev (1992).

Validating disease registers to include onset of diabetic complications and even early indicators such as microalbuminuria and hypertension will highlight those who require closer monitoring and surveillance in the future.

Involving the district nurses in inputting data from annual reviews of housebound patients on computer template will facilitate access to practice IT systems to view patient records while supporting integrated care pathways.

There is a need to further develop the management of housebound patients with complex chronic disease to ensure equitable and appropriate access to professional care. Working with the PCT to explore the potential for advanced practitioners case-managing this high risk group of patients could alert the GPs to poor blood pressure control and provide medication reviews and ongoing surveillance.

Conclusion

The St Vincent Declaration (1990) recommended the implementation of standards to sustain improvement and reduce complications, which included: 'comprehensive programmes for [...] control of diabetes and its complications, with self-care and community support'; 'raise awareness [...] among healthcare professionals'; 'implement effective measures for the prevention of costly complications'; and 'establish monitoring and control systems using state-of-the-art technology for quality assurance'.

More than a decade later, the NSF for diabetes (DoH, 2001; DoH, 2002) built on this in advising how the development of frontline clinical staff can support delivery of a comprehensive service built around the needs of people with diabetes. It too recommends 'a service which encourages partnership in decision making'; 'high quality care [...] support to optimise the control of blood glucose, blood pressure';

'regular surveillance' and 'agreed protocols and systems of care'.

Have we as a practice done our bit towards implementing the improvements aspired to over the last 15 years? Of course we have, but with the introduction of clinical governance into the NHS and its emphasis on patient-centred quality care being ever improved on, we have to be able to demonstrate as well as celebrate our successes. ■

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