Reducing hospital admission rates for people with diabetes: a systematic approach to improving primary care outcomes

Provided by: NHS Greenwich

Publication type: Quality and productivity example

Sharing QIPP practice: What are ‘Proven Quality and Productivity’ case studies?

The QIPP collection provides users with practical case studies that address the quality and productivity challenge in health and social care. All examples submitted are evaluated by NICE. This evaluation is based on the degree to which the initiative meets the QIPP criteria within the domains of savings, quality, evidence and implementability. The first three domains are given a score which are then combined to give an overall score. The overall score is used to identify case studies that are designated as ‘recommended’ on NHS Evidence. The assessment of the degree to which this particular case study meets the criteria is represented in the summary graphic below.

Proven quality and productivity examples are case studies that show evidence of implementation and can demonstrate efficiency savings and improvements in quality.

Evidence summary

<table>
<thead>
<tr>
<th>Savings</th>
<th>Quality</th>
<th>Evidence of change</th>
</tr>
</thead>
<tbody>
<tr>
<td>0%</td>
<td>10%</td>
<td>20%</td>
</tr>
<tr>
<td>30%</td>
<td>40%</td>
<td>50%</td>
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<tr>
<td>60%</td>
<td>70%</td>
<td>80%</td>
</tr>
<tr>
<td>90%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

% of maximum score

Estimated time to implement (months)

| 0–5 | 7–12 | 13–24 | 25–36 | >36 |

This document can be found online at: http://www.evidence.nhs.uk/qipp
Details of initiative

**Purpose**
To develop a systematic approach to improving the outcomes of people with diabetes by reducing their cardio-metabolic risk. By improving the outcomes of care delivered within primary care, the programme aimed to reduce admission rates to hospital.

**Description (including scope)**
In 2008, people with diabetes living in Greenwich had some of the poorest outcomes in the country as measured through Quality Outcomes Framework (QOF) achievement rates. Only 53.7% of patients with diabetes had an HbA1c <7.5% (DM20), which was in the bottom 1% of PCTs. 76.7% of patients with diabetes had a cholesterol level of <5 mmol/L (DM17), which was also in the bottom 1% of PCTs. 76.9% of patients with diabetes had a blood pressure of <145/85 mmHg (DM12), which was in the bottom 14% of PCTs. As a result, a new initiative was launched to develop a more systematic approach to secondary prevention in primary care. As part of this initiative NHS Greenwich joined a partnership with MSD (UK subsidiary of Merck) to deliver improvements using the established EVIDENCE into PRACTICE™ programme, which provided assisted, structured cardio-metabolic risk management and supported sharing of best practice and continuing professional development. This programme aims to ensure that people with diabetes and those at increased cardio-metabolic risk receive optimal care through the effective implementation of national policy and guidelines, particularly NICE Type 2 Diabetes Guidelines’ (NICE 2009, see contacts and resources). The programme was designed to improve health outcomes of people with diabetes through the implementation of national and/or local guidelines. An additional aim is to ensure that the practices are self sustaining in the future.

The service objectives were:

- To develop a structured approach to managing diabetes in general practice in order to improve secondary prevention outcomes, including blood pressure, HbA1c and cholesterol management.
- To ensure all practice staff were competent and confident in identifying pre-diabetes, managing patient-centred plans and reviews, educating patients about self-management and any other aspects of diabetes care.
- To stratify cardio-metabolic risk in line with the ‘The NHS and Social Care Long Term Conditions Model’ (Department of Health 2005).
- To understand the spectrum of risk that exists in terms of obesity, cardio-metabolic risk and established disease including diabetes, occlusive arterial disease and chronic kidney disease.
- To review performance in relation to NICE diabetes guidelines
- To identify where practices are performing well and define
what needs improvement.

- To explore current diabetes cardio-metabolic risk management, clinical behaviour and interventions.
- To identify people with diabetes who are at greatest risk; for example, people with diabetes and occlusive arterial disease with increased cardio-metabolic risk factors.
- To identify people without established disease who could benefit from a structured lifestyle intervention and cardio-metabolic risk reduction programme.
- To consider what changes to make in terms of clinical behaviour and service provision to improve outcomes.
- To identify any areas of expertise as well as gaps in knowledge and potential training needs.
- To reduce admission rates by improving secondary prevention.

The pilot practices were selected according to a number of criteria, including prevalence rates of coronary heart disease, diabetes registers and deprivation rates. Practices were included if they had a diabetes prevalence that was higher than the national average, a coronary heart disease prevalence that was higher than the national average and/or an index of multiple deprivation score that was higher than the national average.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Long-term conditions.</th>
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| Other information            | The programme and associated support was provided on a service to medicine basis by MSD, a UK subsidiary of Merck. The clinical exercises were conducted during lunchtime sessions and the cost of specialist clinical input into these sessions is included as part of the programme. Preliminary results show greater rates of improvement in all but one of the 17 diabetic medicine (DM) categories in pilot practices were noted compared with non-pilot practices. There were also significant improvements (from baseline) towards NICE targets: 18.4% HbA1c at target, 4.1% blood pressure at target and 4.7% cholesterol at target (standardised rates). In terms of hospital admissions, comparisons between pilot and non-pilot practices results demonstrate a:

- 12% (from 316.5 to 278.8) decrease in outpatient diabetic medicine attendances (in comparison with a 1% increase in the non-pilot group). The measure used was % change in rates of outpatient diabetic medicine attendances per 1000 patients on the diabetic medicine register.
- 8% (3346 to 3096) decrease in all cardiovascular disease admissions (in comparison with a 2% increase in the non-pilot group). The measure used was % change in cardiovascular disease admissions per 1000 patients on the diabetic medicine register. |
0% increase in coronary heart disease and stroke admissions (in comparison with a 6% increase in the non-pilot group). Measure used was % change in rates of coronary heart disease and stroke admissions per 1000 on the diabetic medicine register.

12-month data are currently being extracted from pilot practices and while this has only been completed in the first 9 of the 14 practices, there are continued and significant further improvements.

**Savings delivered**

<table>
<thead>
<tr>
<th>Amount of savings delivered</th>
<th>Savings are the result of reduced admissions in patients with cardiovascular disease and a decrease in outpatient diabetic medicine attendances. The amount of savings based on the 2009/10 data provided are £201,119, or £73,134 per 100,000 population.</th>
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<tbody>
<tr>
<td></td>
<td>• In 2009/10 Greenwich realised cost savings of £201,119 (£177,734 cardiovascular disease admissions, £23,385 diabetic medicine outpatient attendances).</td>
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<td></td>
<td>• Predicted impact following the rollout of the programme to all remaining practices: total predicted cost savings £731,688 (£658,191 cardiovascular disease admissions, £73,497 diabetic medicine outpatient attendances).</td>
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The Greenwich total registered population is 275,000. The primary care diabetic registered population is 11,017. The aim of the programme is to drive sustainable results through optimising the care provided within primary care without the need to provide additional resources beyond those provided through the clinical exercises. However, there has been no analysis of the resource or financial cost associated with any potential increased primary care activity including prescribing costs.

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<thead>
<tr>
<th>Type of saving</th>
<th>The savings are cash releasing to the commissioners, resulting from reduced admissions and a decrease in outpatient attendances.</th>
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<tr>
<td>Any costs required to achieve the savings</td>
<td>Change requires additional resources, but resources are non-recurrent resources. The cost of the EVIDENCE into PRACTICE™ programme is £5500 per practice.</td>
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<tr>
<td>Programme budget</td>
<td>Endocrine, nutritional and metabolic. The programme is being led within public health but its impact covers a number of programme budget areas including endocrine and circulation problems.</td>
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<tr>
<td>Supporting evidence</td>
<td>Regarding prescribing costs, the Greenwich medicines</td>
</tr>
</tbody>
</table>
management team are conducting an analysis of the impact of this programme on prescribing costs. Where this analysis has been conducted in other localities, the overall monthly cost of medications associated with the management of blood pressure, blood glucose (including insulin), cholesterol and anti-platelet medication increased by 5.1% because more patients were identified as having diabetes. However, the monthly cost per patient decreased by 7.1% This reduction in spend per patient was driven by the increased prescribing of low-cost generic medications.

Quality outcomes delivered

<table>
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<tr>
<th>Impact on quality of care or population health</th>
<th>Implementing the recommendations in NICE clinical guideline 87 has a large positive impact on the quality of care. Additionally NHS Greenwich adds training to fill any gaps identified by the evidence provided in CG87. There is evidence of improved cardiovascular control through:</th>
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<tr>
<td></td>
<td>• improved % blood pressure control</td>
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<tr>
<td></td>
<td>• improved % cholesterol control</td>
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<td></td>
<td>• improved % HbA1c control.</td>
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</table>

Impact on patients, people who use services and/or population safety

No impact on patient safety.

Impact on patients, people who use services, carers, public and/or population experience

Patient experience may be improved through using an evidence-based streamlined service.

Supporting evidence

The focus of this work was to enable practices to deliver better care by, for example, critically reviewing how care is provided and highlighting areas for development. The service was facilitative: it did not see patients directly and was not prescriptive in terms of care planning. However, GPs independently called in patients for review and these patients would have had their care plans reviewed and updated.

Evidence of effectiveness

Evidence base for case study

The evidence base is NICE clinical guideline 87 on type 2 diabetes.
Evidence of deliverables from implementation: More than one documented example of implementation in more than one organisation.

Where implemented: NHS England. This case study is from NHS Greenwich.

Degree to which the actual benefits matched assumptions: Same as expected.

If initiative has been replicated how frequently/widely has it been replicated: The NHS Greenwich Pilot practices form part of a wider national pilot of 250 practices nationally. These practices were selected using a series of inequalities markers such as deprivation index, diabetes prevalence and coronary heart disease prevalence.

Supporting evidence: This work formed part of the wider Greenwich Public Health Programme. The overall aim of the programme was to make a step-change in the quality and consistency of primary and secondary prevention services provided at a primary care level in the borough and included:

- Ensuring stronger and more consistent referral relationships between primary care teams and primary prevention services (such as stop smoking services, physical activity programmes and psychological therapy services).
- Increasing the skills and confidence of primary care practitioners to operate as high-quality wellbeing healthcare providers, as well as providers of care for people who are ill. This involves a cultural shift towards a proactive approach to prevention through routine and opportunistic screening approaches in practices and other settings.
- Implementing a major new vascular risk screening programme, in line with Department of Health requirements and the London-wide vascular risk programme.
- Improving the uptake of screening and immunisation programmes in the borough.
- Making a significant improvement in the effective management of patients with existing conditions (such as heart disease and diabetes) through high-quality, effective secondary prevention programmes in primary care.
- Taking a new, social marketing approach to planning and delivering prevention services to ensure that they are designed around a stronger understanding of the different characteristics (needs, cultures, motivations, aspirations) of the different populations within the borough, together with a strong understanding of the practical issues that improve access and support a good uptake of services.
- Investing in the training and development of the primary care workforce to extend their health promotion roles.
Details of implementation

<table>
<thead>
<tr>
<th>Implementation details</th>
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<tr>
<td>In this initiative MSD provided a team of 3 facilitators who worked with practice teams to engage them in the programme and to ensure agreed milestones were achieved within agreed timescales. The facilitators are all PRINCE 2 trained project managers. Their role is to engage with practice teams and to ensure that they progress through the programme milestones within agreed timescales. The facilitators do not provide any clinical support but will engage with local specialists to provide this support. The level of service provided is the same as that provided to a locality that procures this service on a fee-for-service (£5500) basis. The practice teams were mainly made up of GPs, nurses, healthcare assistants and administrative support. The skill mix around management of diabetes varied from practice to practice and the programme was adapted to accommodate this variation at practice level. Practice size ranged from single-handed practices through to the largest practice in the trust. Clinical support was provided by the local secondary care consultants and the community diabetes nurse specialist team. This is an outline of the service description:</td>
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| • Undertake a practice-based clinical audit of diabetes care including assessment of cardiovascular risk. Develop, install and run searches within each of the practices to establish this baseline audit at the beginning of the project. Grouping patients according to levels of risk may assist practices to prioritise future service delivery.  
• Provide an aggregated baseline report for all practices included in the project to the PCT. Feed back individual baseline reports to each practice and support practices to better understand and use their own data, to identify areas of unmet need. Feedback will also include generic practice performance data that will provide an overall profile of the practice.  
• Undertake a diabetes confidence mapping to facilitate an understanding of confidence levels in the delivery of diabetes care.  
• Provide an aggregated confidence mapping report covering all practices included in the project to the PCT. Feedback individual confidence mapping reports to each practice.  
• Deliver training needs analysis as a result of the mapping process  
• Devise a template that will guide practices to write |
structured improvement plans identifying what developments are needed, how they will be delivered and in what timescale.

- Work with practices to develop their structured improvement plan for the management of patients with diabetes within the practice. This will be in line with the Greenwich guidelines for the management of diabetes, 2011. Signpost to available education and other support.
- Support practices according to their individual plans. This may include arranging and facilitating a small number of visits/workshops that will bring together practices and lead clinicians (including the Diabetes specialist nurses), for example, to take specific action such as:
  - Systematic cardiovascular risk management
  - Critical reviews
  - Aligning resources, activity and clinical behaviour to patient need
  - Making appropriate interventions and tracking progress
- Signpost practices to relevant training and resources, e.g. Greenwich guidelines for diabetes, which will be used to support all activities associated with the delivery of the Programme.
- Re-run clinical audit data at 6 months and 12 months and confidence mapping at 12 months to assess/measure improvements at practice level and aggregated to PCT level. Provide feedback both to practices and to the PCT of this analysis.
- Organise and facilitate a pan Greenwich Network Meeting (or Area level meetings) where all participating practices will share their learning and compare practice experience and outcomes.

While this was provided to 14 practices in NHS Greenwich on a service to medicine basis as part of the national pilot of EVIDENCE into PRACTICE™, the programme is now provided on a commercial fee-for-service basis. The total cost of the programme is £5500 per practice and this covers the cost of the software, tools, facilitator support, IT support associated with the programme and input into the clinical exercises from a diabetes specialist.

| Time taken to implement | 3-month procurement process, but identifying which area of the programme is required will take longer. Procurement took 3 months in total for NHS Greenwich (it is possible for others to do it in this timescale). However, procurement was one step in the cycle, because issues were identified that needed to be addressed (through joint services needs analysis and diabetes needs assessment) before knowing what to procure. After |

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procurement the actual start of implementation was relatively quick (1–2 months), and overseen by a steering group. The completion of the project from procurement to analysis was 1 year.

<table>
<thead>
<tr>
<th>Ease of implementation</th>
<th>Affects multiple organisations within the NHS.</th>
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<tbody>
<tr>
<td>Level of support and commitment</td>
<td>High-level buy-in was good in this programme because the assistance received from MSD was free as a part of their pilot. Other organisations wishing to implement this programme would need to pay if wanting to use external resource, but significant savings can still be made. High-level buy-in would be required to make the initial investment. Alternatively this initiative may be implemented without outside help but would require investment of resource.</td>
</tr>
<tr>
<td>Barriers to implementation</td>
<td>This programme was part of a wider ‘invest to save’ programme. Securing the investment to deliver a wider programme was a significant barrier and caused considerable delay in implementing the wider programme. There was delay in securing funds to roll out the programme to all practices. After evaluating the pilot across 14 practices, the programme has been commissioned for all remaining practices across NHS Greenwich; these practices are currently working through the programme.</td>
</tr>
<tr>
<td>Risks</td>
<td>During the pilot programme the financial risks were minimal to the organisation, because the service was provided as a service to medicine and, as a result, was provided at no cost. The greatest risk was the potential lack of engagement by practices to be part of the pilot. The programme does require significant investment in time and energy by the practice team. However, the PCT took responsibility for contacting all potential practices, provided them with relevant information and followed up all practices with telephone calls to ensure sign up. On average the practice teams will need to commit around 6–8 hours to the programme over the 12-month period. This time will be made up of 1-hour meetings (usually the weekly clinical meeting is used for this purpose) that take place during the practice lunch break. Many of the administrative tasks, such as practice audits, are completed between the facilitator and the practice manager.</td>
</tr>
<tr>
<td>Supporting evidence</td>
<td>No further information provided.</td>
</tr>
</tbody>
</table>

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Further evidence

Dependencies

None

Contacts and resources

If you require any further information please email: gipp@nice.org.uk and we will forward your enquiry and contact details to the provider of this case study. Please quote QIPP reference 11/0040 in your email.

Department of Health 2005 Supporting people with long term conditions: an NHS and social care model to support local innovation and integration


National Institute for Health and Clinical Excellence (2009) Type 2 diabetes: newer agents. NICE clinical guideline 87

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