

Using data to improve the care of people with diabetes across Oxfordshire

Rea RD^{1,2}, Lumb A^{1,2}, Tan GD^{1,2}, Owen K^{1,2}, Thanabalasingham G^{1,2}, Latif A^{3,4}, Swan P⁵, Scott ⁶, Jones D¹, Gillott E⁷, Honour Smith R⁷

1. Oxford Centre for Diabetes, Endocrinology and Metabolism, Oxford University Hospitals NHS Foundation Trust
2. NIHR Oxford Biomedical Research Centre
3. GP, Eynsham Medical Centre and Deputy Clinical Lead, West Locality, OCCG
4. Clinical Lead, Long Term Conditions, Oxfordshire CCG
5. Transformation Programme Manager – Planned Care and Long Term Conditions, OCCG
6. Assistant Project Manager, OCCG
7. Primary Care Business Intelligence, NHS South, Central and West Commissioning Support Unit

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Abstract

Data from GP practices and Hospital Trusts has long been used to understand the quality of care received by people with diabetes. However annual data collection is too infrequent to see what difference rapid changes in practice make to diabetes care. We developed a diabetes dashboard modelled on the National Diabetes Audit, which provided monthly updates on key care components. The data was displayed at both individual GP level as well as at a Locality level (now PCN level) and CCG level. Discussion about the Dashboard was incorporated into regular GP practice visits by Diabetes Consultants and Community Diabetes Specialist Nurses which occurred twice a year to nearly every GP practice in the CCG. Twice yearly locality meetings also reviewed the data at locality level and provided a forum for sharing 'best practice'. Over the last 2 years significant improvements have been seen particularly in the achievement of the 8 key care processes and the attendance at structured education within 1 year of diagnosis.

The Diabetes Dashboard has been integral in the improvement of care for people with diabetes in Oxfordshire. It continues to evolve with data now displayed at Primary Care Network (PCN) level and ongoing work to align the dashboard with the NDA coding. The dashboard was most effective when used within the context of supportive clinical engagement.

Introduction

The National Diabetes Audit (NDA) was originally developed to help improve services and monitor the impact of the Diabetes National Service Framework (2001) (1). It has been reporting the care of people with Diabetes since 2004. Since 2012-13 there has been no significant improvement in the percentage of people achieving all 8 key care processes in people with Type 1 diabetes and a fall in

the percentage in those with Type 2 Diabetes (2). The achievement of the three treatment targets both in people with Type 1 and in those with Type 2 Diabetes has improved slightly, but remains low.

There are (or were until recently) several key features of the NDA which has meant that it was difficult to use the NDA data to drive service improvements. Firstly, the data was always historical and in some years, significantly out of date. For example the Care Processes and Treatment Targets data for England in 2015-16 (January 2015-March 2016 data) was released on 31 January 2017, over 2 years after some of the initial data in the audit. More recently there has been an attempt to address this. On 11 July 2019 the third quarterly data covering data from Jan 2018 to Dec 2018 was released, shortening the time between the data collection and the publication of the audit results.

Another key aspect of any service improvement is the engagement of clinicians and a shared ownership of the issues that need to be addressed (3). Although participation in the NDA is a key component of NHS England CCG Improvement and Assessment Framework (now superseded by the NHS Oversight Framework), it is left up to individual CCGs as to how they use the data to stimulate local improvement in both primary care and secondary care.

Oxfordshire CCG covers 70 GP practices with over 30,000 people with Diabetes. We developed a diabetes dashboard, modelled on the NDA, and set within a clear clinical supportive context which addressed some of the constraints of the national audit process.

Intervention

Clinicians and commissioners in Oxfordshire met with the local Commissioning Support Unit (South Central and West CSU – SCW CSU) to define the requirements for a diabetes dashboard which would be used to drive improvements in diabetes care within Oxfordshire. Key elements were identified:

- Data would be refreshed every month and a cumulative achievement would be reported
- Data would be extracted from GP systems and hospital systems with minimal amount of additional work, then reported together in the dashboard
- Data extraction would be regulated under a Data Sharing Agreement signed by each GP practice to ensure proper Information Governance
- Data would be presented at individual GP practice level as well as Locality (now PCN), Oxfordshire CCG, National and top decile performing CCGs as reported by the latest NDA figures
- Data would be available to all GP practices who signed the Data Sharing Agreement to enable transparency across the CCG
- Each GP practice would be able to rapidly identify which patients required additional support to achieve their treatment targets and complete their 8 key care processes from the dashboard by the provision of pseudonymised data.

Importantly, the development of the dashboard was a collaboration between the Business Intelligence department of SCW CSU, the local commissioners and local primary, community and secondary care clinicians who would subsequently use the dashboard. Crucially it was one component of a much larger Diabetes redesign project which was partly funded by a successful bid

to the Diabetes Transformation Fund from 2017. This enabled several other key initiatives to start which enabled the dashboard to be used most effectively. These included:

- GP practice visits by a Consultant Diabetologist and Community Diabetes Specialist Nurse. These took place twice a year in each GP surgery (63 out of 70 GP practices signed up to this with all completing 2 MDT visits as part of the Locally Commissioned Service). The visits lasted an hour and provided a supportive clinical context in which to discuss individual patients as well as review the dashboard and identify potential improvements in care (Figures 1 and 2)
- Diabetes Locality meetings where a GP and Practice Nurse from all practices in the locality (6 localities in Oxfordshire CCG) met to share best practice, review the dashboard, participate in specific diabetes education and learn about new service developments eg National Diabetes Prevention Programme which was being rolled out at the same time (Figure 3). Again these meetings were part of the Locally Commissioned Service. These locality meetings have now evolved into quarterly PCN meetings. The dashboard data was used at these meetings to identify practices that had significantly improved their diabetes care and those that need additional clinical or administrative support to achieve similar improvements (Figure 4). Importantly the clinical context was not one of 'performance management' but rather understanding where the opportunities were for improved care by sharing resources and ideas.

Results

Since the service started in September 2017 there has been a significant increase in the percentage of people with Type 1 diabetes receiving all 8 key care processes in Oxfordshire as advised by NICE (4). This has risen by over 25% within the last 2 years despite there being a much smaller rise in the overall England value (6.4%) (Figure 5). Over the last year there has also been a rise in the percentage of people with Type 1 diabetes achieving all 3 treatment targets (4) within Oxfordshire from 20.3% to 24.7% (22.2% to 25.8% with the new targets) whilst the England percentage has not changed significantly (18.6% to 20% for the old targets and 18.9% to 19.6% for the new targets) (Figure 6).

Similarly for people with Type 2 diabetes there has been a substantial rise in the percentage receiving all 8 key care processes within Oxfordshire over the last 4 years from 51.6% to 76.7% despite no significant increase across England (53.9% to 54.3%) in the same time period (Figure 7). Currently there has been a smaller improvement in the achievement of the three treatment targets from 40.2% to 41.1% within Oxfordshire, mirroring a small improvement within England from 40.4% to 41.7%. However with the new treatment targets which were launched in 2017-18 (percentage of people who have cardiovascular disease who have been prescribed a statin, rather than percentage of people with cholesterol less than 5.0mmol/l) (5)) there has been a slight rise from 39.2% to 40.8% in the last year, just above the England average of 40.5% (Figure 8).

Conclusion

The implementation of the Diabetes Dashboard has played a significant role in improving the care of people with diabetes within Oxfordshire. Since the introduction of the dashboard in September 2017 significant and rapid improvements have been seen in people with Type 1 and Type 2 diabetes receiving all 8 key care processes. The dashboard is effective in highlighting which care processes have been undertaken by which patients and who has achieved the 3 treatment targets at an individual practice level every month. This provides a focus for discussions at the MDT meetings and enables productive sharing of learning at Locality (now PCN) level.

The diabetes dashboard can also generate a list of people who have received 7 of the 8 care processes. This can be further broken down into which care processes have not been completed. This aspect of the dashboard has been used very successfully by a number of practices to rapidly improve their percentage of patients receiving all 8 care processes.

Several years ago the measurement of microalbuminuria was removed from the Quality Outcomes Framework (QoF), one of the mechanisms whereby General Practitioners are remunerated for their work. This has led to a decline in the percentage of people receiving this care process within England (from 66.2% to 61.1% for people Type 2 Diabetes in the last year). However the implementation of the Oxfordshire diabetes dashboard within a robust clinical context has enabled people with diabetes to continue to receive high quality diabetes care. 83.9% of people with Type 2 diabetes had their urine tested for microalbuminuria and 70.8% of people with Type 1 diabetes received this care in Oxfordshire (compared to 49.3% of people with Type 1 diabetes in England). This highlights the importance of developing the dashboard in conjunction with clinicians from primary and secondary care so that the clinical utility of each of the care processes can be highlighted and people can continue to receive good clinical care.

Other aspects of the dashboard have been helpful in improving care. This includes a section which highlights the numbers of people who are not coded as having diabetes, but have either received diabetes-related investigations (eg HbA1c) or have diabetes-related correspondence from secondary care (eg letter from the diabetes department). This has enabled GP practices to update their diabetes register, ensuring that there is a complete record of all people with diabetes in their practice.

There are a number of sections of the dashboard which are not as actively used by clinicians as the care processes and treatment targets sections. These include the record of the number of attendances (new and follow up) in secondary care by people with diabetes and the prescribing data. We are working closely with the Medicines Optimisation Team within the CCG to make this section relevant and helpful in driving improved care.

The diabetes dashboard continues to evolve. Recently the data has been re-formatted from Localities to Primary Care Networks. This is to enable practices to highlight within the new structures where their diabetes care is performing well and where additional support is required. Discussions are underway to incorporate local Retinal Screening data which was part of the original national 9 key care processes.

As the National Diabetes Audit changes (eg new treatment target for Cholesterol) so the local diabetes dashboard will need to take into account the new metrics and reflect these. The hospital

data (outpatient and emergency attendances) continues to be looked at to see how it can be improved and made more useful in clinical discussions as well as commissioning metrics.

The Oxfordshire diabetes dashboard has also had an impact on the National Diabetes Audit. For example data from the dashboard highlighted the inconsistency between the recording of smoking in QoF and the NDA (in QoF a patient is coded as a non-smoker for the rest of their lives if they have not smoked for 5 consecutive years while in the NDA this required ongoing annual coding until recently). The codes used to generate the denominator for attendance at structured education have also been reviewed as a result of local queried from the diabetes dashboard.

Over the last 2 years the diabetes dashboard has become an integral tool in both stimulating and measuring improvement in diabetes care within Oxfordshire. The use of data within a supportive clinical context, with active engagement from primary, community and secondary care clinicians in collaboration with commissioners and SCW CSU has proved invaluable. Further work is ongoing to improve the dashboard and enable rapid and significant improvements in triple target achievement and reduce the morbidity associated with diabetes.

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