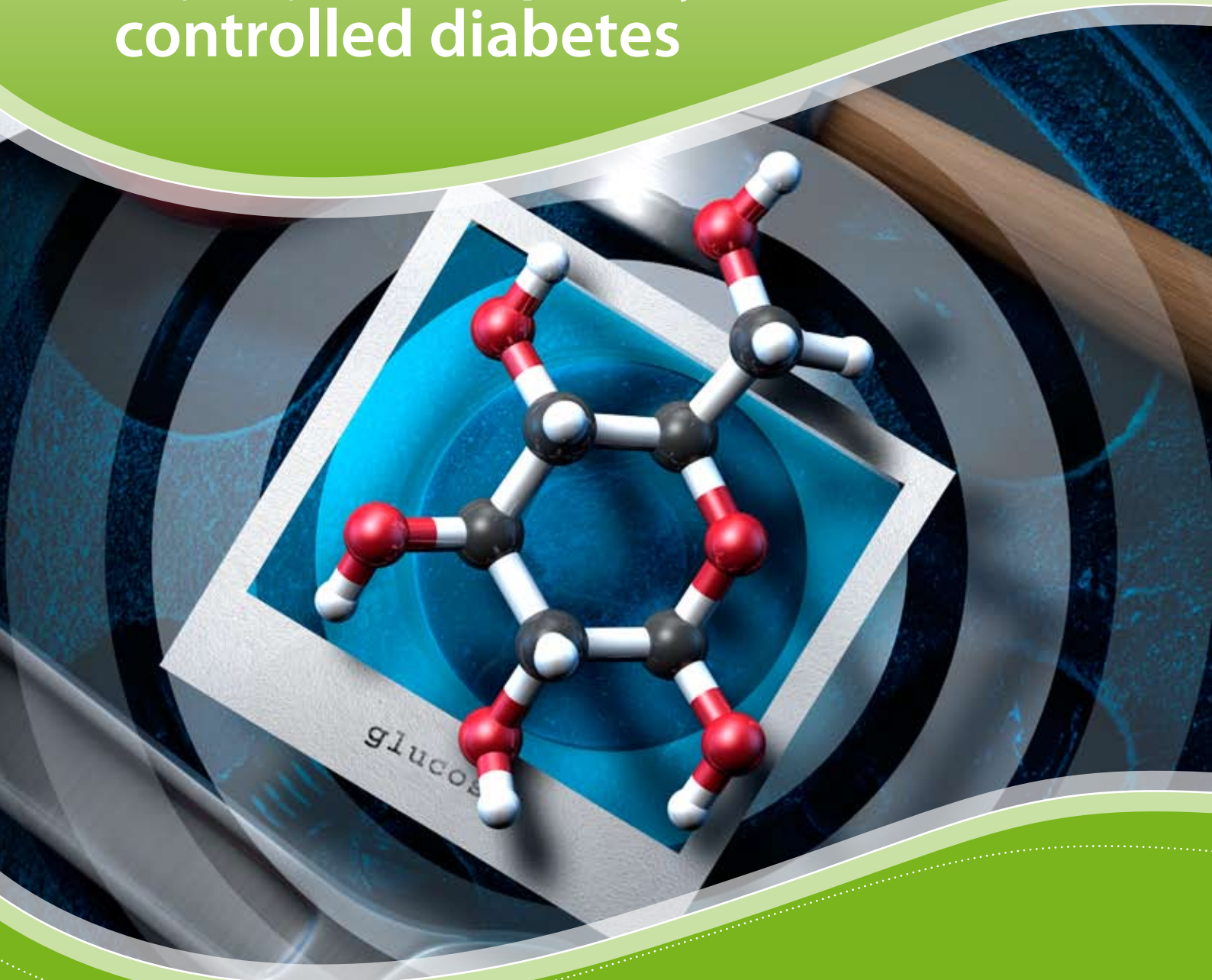
CLINICAL AUDIT

Stepping up treatment in people with poorly controlled diabetes



RNZCGP endorsed
CQI credits
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Valid to December 2018

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Background

Type 2 diabetes is a progressive disease characterised by insulin resistance, progressive loss of β-cell function and reduced insulin production, leading to hyperglycaemia. The mainstay of treatment for patients with type 2 diabetes is individualised lifestyle modification, e.g. focusing on improving diet and increasing exercise. Oral hypoglycaemic medcines are often initiated at the time of diagnosis; metformin is first-line, followed by a sulphonylurea, and sometimes additional oral anti-diabetes medicines, such as arcabose or pioglitazone. For many people, glycaemic control is less able to be achieved using oral medicines alone as their diabetes progresses over time. Many of these people will eventually require insulin to control glycaemic levels. New Zealand guidelines recommend that insulin initiation for people with type 2 diabetes can be managed in primary care where possible, with additional support as required.

In most people with type 2 diabetes, management follows a defined pathway:

1. Lifestyle modification – physical activity, dietary changes and smoking cessation advice
2. Initiation of metformin
3. Addition of a sulphonylurea
4. Initiation of insulin, usually with the cessation of the sulphonylurea

Each step is taken when there is a lack of control despite good adherence with the previous steps. For some patients, steps may overlap or be skipped altogether, e.g. some patients with very high HbA_{1c} levels at diagnosis may progress straight to insulin. In addition, other oral medicines, such as pioglitazone or acarbose, may be used as alternatives to or alongside the more conventional medicines in some patients. New Zealand guidelines recommend that initiation of insulin should be considered for any person with type 2 diabetes if their HbA_{1c} level is > 64 mmol/mol, or symptoms of hyperglycaemia are present despite appropriate treatment.

Ideally, a target HbA_{1c} level should be individually agreed upon after a discussion with the patient at the time of their diagnosis or soon after, and then regularly revisited. Keeping HbA_{1c} levels below this target is a measure of good control. An HbA_{1c} > 64 mmol/mol is considered a marker of poor control. The decision to step up treatment, particularly to initiate insulin, needs to be balanced with other factors, such as the patient's age and therefore their long-term risk of complications, the patient's ability to manage a more complex treatment regimen, appropriate family/caregiver support and the patient's acceptance of the need for insulin.

For further information, see: "Improving glycaemic control in people with type 2 diabetes: Expanding the primary care toolbox", BPJ 53 (Jun, 2013) and "Initiating insulin in people with type 2 diabetes", BPJ 42 (Feb, 2012).

Recommendations for this audit

The aim of this audit is to identify people with type 2 diabetes enrolled in the practice who would benefit from more intensive management, such as the initiation of insulin.

The recommendation for the audit is that all patients with type 2 diabetes should have a predefined HbA_{1c} target recorded in their notes, and be undergoing lifestyle interventions and prescribed appropriate medicines, so that their HbA_{1c} is under their target level. Any patient who is not meeting their target HbA_{1c} requires further assessment and should have their treatment stepped-up as per New Zealand guidelines.

Audit plan

Summary

Identify patients in the practice with type 2 diabetes who have an HbA_{1c} result > 64 mmol/mol in the previous twelve months. Assess whether they have a target HbA_{1c} recorded in their notes. The patient's notes should indicate that the clinician reiterated and discussed the importance of diet and lifestyle measures and the need for proper compliance with medicines. The clinician should also have intensified the patient's treatment in order to reduce their glycaemic levels; this may have involved initiation of insulin.

Criteria for a positive outcome

The patient has type 2 diabetes, has had an HbA_{1c} result > 64 mmol/mol in the previous twelve months, ***and***:

1. Has a target HbA_{1c} recorded in their notes, AND;
2. The clinician has investigated the reason for increasing HbA_{1c} and attempted to gain better glycaemic control by:
    a. Reiterating the need for adherence or diet control/ exercise, AND;
    b. Intensifying the patient's treatment in order to gain better glycaemic control

Recommended audit standards

As the long-term outcomes associated with poorly controlled diabetes are severe, the standard for this audit should be high. A recommended standard would be for 90% of patients with HbA_{1c} > 64 mmol/mol to have had their treatment reviewed and intensified. There should ideally be an improvement in the achieved percentage between the first and second audit cycles.

Data

Eligible people

All patients with type 2 diabetes who had an HbA1c > 64 mmol/mol at some point in the past 12 months are eligible for this audit.

Identifying patients

You will need to have a system in place that allows you to identify these eligible patients. Many practices will be able use their PMS reporting system, such as best practice intelligence or a similar product, to find all patients with an HbA_{1c} > 64 mmol/mol. Alternatively, if a reporting system is not used, patients can be identified by running a 'query' through their PMS system for HbA_{1c} results > 65 mmol/mol.

Sample size

The number of eligible patients will vary according to your practice demographic. If a large number of patients are be identified, a random sample of 20-30 patients should be taken (the first 20-30 results returned is sufficiently random for the purposes of this audit).

Data analysis

Use the data sheet to record your data. A positive result is any patient that has a tick in column A, B and C. Any patient without a tick in column A, B or C is a negative outcome.

Calculate your percentage achievement by adding up the number of audited patients with a "positive result" (all those with a tick in column D) and dividing this by the total number of patients audited.

Identifying opportunities for CQI

Taking action

The first step to improving medical practice is to identify the criteria where gaps exist between expected and actual performance and then to decide how to change practice.

Decide on a set of priorities for change and develop an action plan to implement any changes.

It may be useful to consider the following points when developing a plan for action.

Problem solving process

- What is the problem or underlying problem(s)?
- Change it to an aim
- What are the solutions or options?
- What are the barriers?
- How can you overcome them?

Overcoming barriers to promote change

- What is achievable – find out what the external pressures on the practice are and discuss ways of dealing with them in the practice setting
- Identify the barriers
- Develop a priority list
- Choose one or two achievable goals

Effective interventions

- No single strategy or intervention is more effective than another, and sometimes a variety of methods are needed to bring about lasting change
- Interventions should be directed at existing barriers or problems, knowledge, skills and attitudes, as well as performance and behaviour

Review

Monitoring change and progress

It is important to review the action plan against the timeline at regular intervals. It may be helpful to consider the following questions:

- Is the process working?
- Are the goals for improvement being achieved?
- Are the goals still appropriate?
- Do you need to develop new tools to achieve the goals you have set?

Following the completion of the first cycle, it is recommended that the doctor completes the first part of the CQI activity summary sheet.

Undertaking a second cycle

In addition to regular reviews of progress, a second audit cycle should be completed in order to quantify progress on closing the gaps in performance.

It is recommended that the second cycle be completed within 12 months of completing the first cycle. The second cycle should begin at the data collection stage. Following the completion of the second cycle it is recommended that doctors complete the remainder of the CQI activity summary sheet.

Claiming MOPS credits

This audit has been endorsed by the RNZCGP as a CQI Activity for allocation of MOPS credits. General practitioners taking part in this audit can claim credits in accordance with the current MOPS programme. This status will remain in place until **December 2018**.

To claim points for MOPS or CPD online please enter your credits on your web records. Go to the RNZCGP website **www.rnzcgp.org.nz** and claim your points on 'MOPS online' for vocationally registered doctors, or 'CPD online' for general registrants. Alternatively MOPS participants can indicate completion of the audit on the annual credit summary sheet which is available from the College on request.

As the RNZCGP frequently audit claims you should retain the following documentation, in order to provide adequate evidence of participation in this audit:

1. A summary of the data collected
2. A Continuous Quality Improvement (CQI) Activity summary sheet

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www.bpac.org.nz

December 2013

Data sheet – cycle 1

Audit: Stepping up treatment in people with poorly controlled diabetes

	A	B	C	D
Patient	**Is an HbA_{1c} target for the patient recorded in their notes?**	**Has the need for medicine adherence, diet and exercise been discussed with the patient?**	**Have oral medicine doses been increased, new oral medicines added, the need for insulin discussed or insulin initiated?**	**Positive result? (i.e all three boxes ticked)**
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			Total Positive Results:	

	/		× 100 =	%
Total Positive Results		Total No. Patients		

Please retain this sheet for your records to provide evidence of participation in this audit

Data sheet – cycle 2

Audit: Stepping up treatment in people with poorly controlled diabetes

	A	B	C	D
Patient	**Is an HbA_{1c} target for the patient recorded in their notes?**	**Has the need for medicine adherence, diet and exercise been discussed with the patient?**	**Have oral medicine doses been increased, new oral medicines added, the need for insulin discussed or insulin initiated?**	**Positive result? (i.e all three boxes ticked)**
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			Total Positive Results:	

	/		× 100 =	%
Total Positive Results		Total No. Patients		

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RNZCGP Summary Sheet – CQI Activity

DOCTORS NAME	

The activity was designed by (please tick appropriate box):

- ☐ RNZCGP
- ☑ Organisation e.g. IPA/PHO/BPAC (name of organisation) bpac^nz
- ☐ Individual (self)

TOPIC	**Stepping up treatment in people with poorly controlled diabetes**
Describe why you chose this topic (relevance, needs assessment etc):	

FIRST CYCLE

1. DATA	Information collected
Date of data collection:	
Please attach: ▪ A summary of data collected **or** ▪ If this is an organisation activity, attach a certificate of participation.	

2. CHECK	Describe any areas targeted for improvement as a result of the data collected.

3. ACTION	Describe how these improvements will be implemented.

4. MONITOR	Describe how well the change process is working. When will you undertake a second cycle?

Please retain this sheet for your records to provide evidence of participation in this audit

SECOND CYCLE

1. DATA	Information collected
Date of data collection:	
Please attach: ▪ A summary of data collected **or** ▪ If this is an organisation activity, attach a certificate of participation.	

2. CHECK	Describe any areas targeted for improvement as a result of the data collected.

3. ACTION	Describe how these improvements will be implemented.

4. MONITOR	Describe how well the change process is working. Will you undertake another cycle?

COMMENTS	

Please retain this sheet for your records to provide evidence of participation in this audit