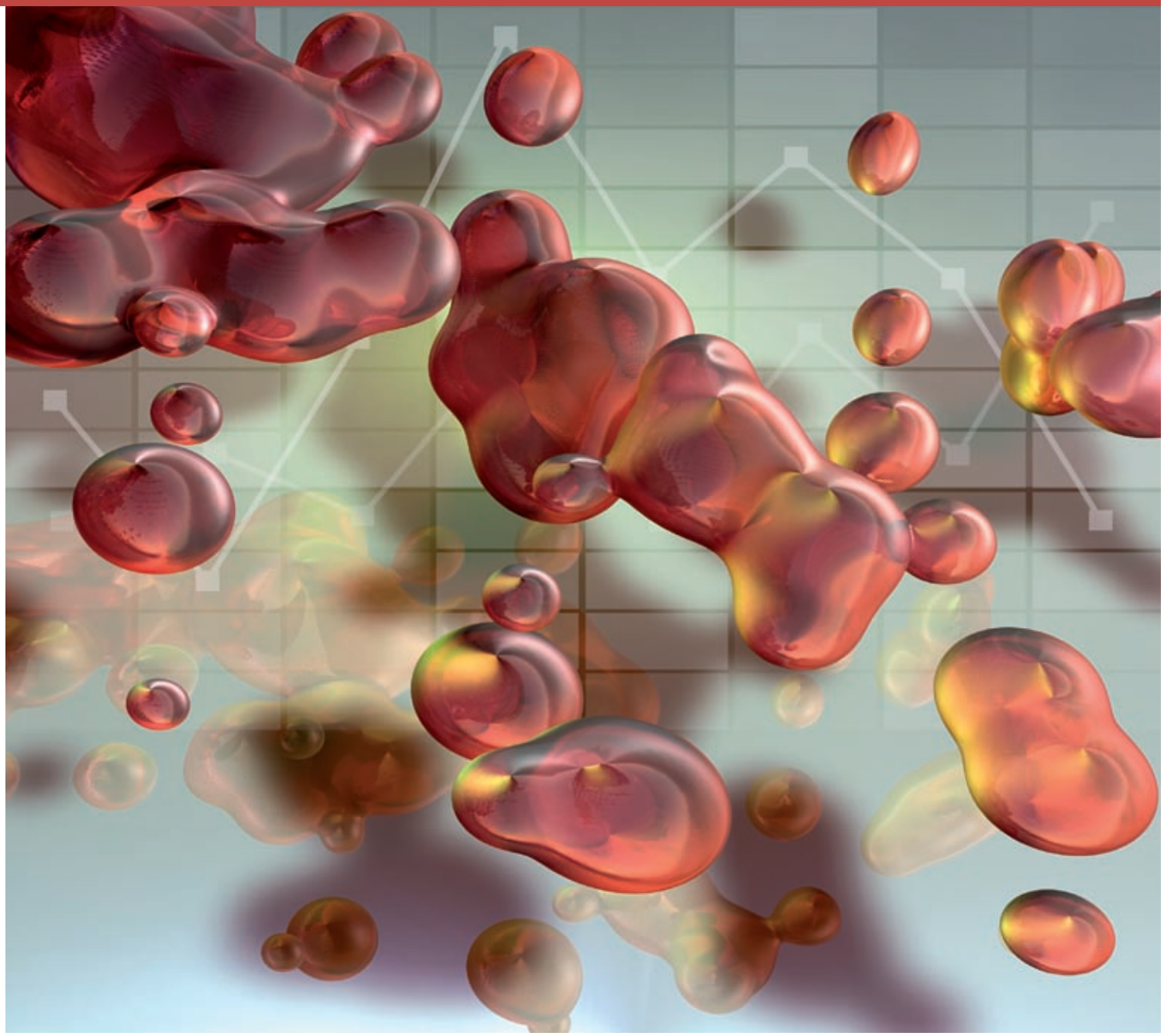
CLINICAL AUDIT

Safe and **Effective** Use of **Warfarin**



Valid to June 2024

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Background

Warfarin is a medicine frequently associated with adverse drug reactions in New Zealand. Improving the safety of warfarin treatment involves educating patients, ensuring that patient notes are complete and easy to access, and adhering to safe prescribing practices.

Patient education involves sharing information about bleeding risk, diet, medicines and testing. All patients should be fully informed prior to beginning anticoagulation treatment and then have their management discussed regularly during treatment.

Accurate and complete recording of patient information means that any prescriber is able to easily access key information about the patient's management. This includes not only that the patient is prescribed warfarin, but the condition for which it is prescribed, the brand of warfarin, the planned duration of treatment, the target INR range, their INR levels, when INR testing last occurred and when it should next occur. The latest INR result and current warfarin dose should also be clearly stated in the patient's notes. This information should be immediately obvious to anyone accessing the notes, i.e. a locum or practice nurse. This can be done in several ways in most practice management software, e.g. using a "screening" entry in Medtech which makes the information easier to find rather than identifying it from a number of consultation notes.

Safe prescribing means that all necessary information is available to the pharmacist on the prescription and also to the patient (on the medicine label). A prescription for warfarin should include:

- The brand name of the prescribed warfarin (this is in contrast to the usual recommendation to only prescribe medicines by generic name; warfarin has a narrow therapeutic range and there may be differences in bioavailability between brands of warfarin)
- Labelling that highlights the importance of ongoing INR monitoring, e.g. "Take the dose instructed by your doctor or nurse. You need regular INR tests to make sure this dose is safe for you", instead of labels such as "PRN" or "as instructed"

Regular INR testing is used to ensure that anticoagulation is effective and allows warfarin doses to be changed as required. For most people, e.g. patients with atrial fibrillation, the recommended target INR range is 2.0 – 3.0. Some people with prosthetic valves or haemodynamically significant valvular disease require a higher INR, e.g. within the range 2.5 – 3.5.

To minimise confusion and ensure safe and effective anticoagulation, it is recommended that a systematic, practice-wide approach to warfarin treatment and the maintenance of INR levels within target range is adopted. Common protocols should cover:

- How to initiate warfarin for patients in primary care, i.e. indications and recommended INR range, starting doses, frequency of monitoring, who will follow patients and their warfarin treatment
- Patient education including the provision of appropriate written material
- A standard method of recording that a patient is on warfarin plus other key information, i.e. the current warfarin dose, most recent INR result and when the next INR test is due
- How to monitor warfarin treatment, significant medicine interactions, modifying warfarin dosage and frequency of INR testing
- If the practice has a supply of vitamin K (phytomenadione) and where it is kept

Audit plan

Summary

All patients in the practice who are currently being treated with warfarin can be audited to assess whether they have been prescribed warfarin safely. The following information should be readily available in their patient record or in the patient's notes:

1. All necessary information regarding a patient's warfarin treatment
2. Information regarding a patient's last INR and when the next INR test should be requested

Criteria for a positive result

For a patient to be considered a positive result for the audit, their notes should contain all of the following information:

- That the patient is taking warfarin
- The condition for which they are taking warfarin
- Their target INR range

- When the warfarin was initiated
- When the warfarin will be stopped, i.e. the duration of treatment
- The brand of warfarin
- The current warfarin dose
- The date of their most recent INR test
- The result from their most recent INR test
- When their next INR test should be requested

Recommended audit standards

Given the level of risk associated with warfarin and the high number of adverse medicine events reported each year in New Zealand, the standard for this audit should ideally be high. A recommended standard would be for 90% of patients to have all the required information recorded in the patient notes. In addition, there should ideally be an improvement in the achieved percentage between the first and second audit cycles.

Data

Eligible people

All patients within the practice currently prescribed warfarin 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 to identify patients by running a 'query' through their PMS system. Identify all patients who have had a prescription for warfarin.

Sample size

The number of eligible patients will vary according to your practice demographic. If you identify a large number of patients, take a random sample of 30 patients whose notes you will audit (the first 30 results returned is sufficiently random for the purposes of this audit).

Data analysis

Use the data sheet provided to record your data. A positive result is any patient who has a tick in each of the "Patient notes" columns. The percentage achievement can be calculated by dividing the number of patients with a positive result by the total number of patients audited.

Identifying opportunities for Audit of Medical Practice

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.

Once a set of priorities for change have been decided on, an action plan should be developed to implement any changes.

Taking action

It may be useful to consider the following points when developing a plan for action (RNZCGP 2002).

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

- Identifying barriers can provide a basis for 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 developed previously at regular intervals. It may be helpful to review 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 Audit of Medical Practice summary sheet (Appendix 1).

Undertaking a second cycle

In addition to regular reviews of progress with the practice team, 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 practices complete the remainder of the Audit of Medical Practice summary sheet.

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Claiming credits for Continuing Professional Development (CPD)

This audit has been endorsed by the RNZCGP as an Audit of Medical Practice activity (previously known as Continuous Quality Improvement – CQI) for allocation of CPD credits; **10 credits** for a first cycle and **10 credits** for a second cycle. General practitioners taking part in this audit can claim credits in accordance with the current CPD programme.

To claim points go to the RNZCGP website:
www.rnzcgp.org.nz

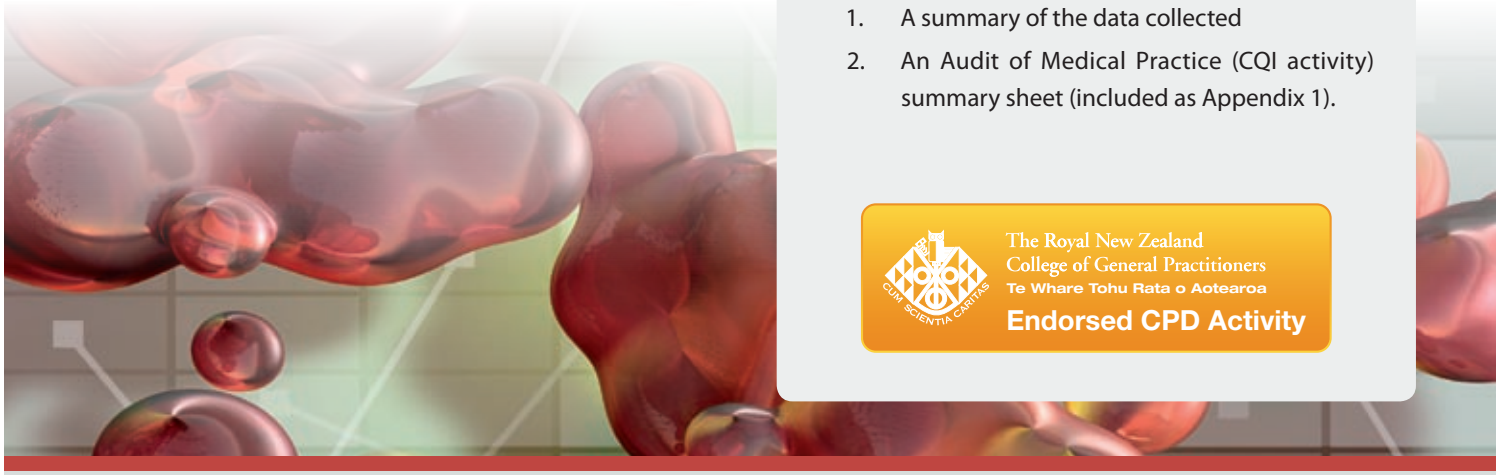
Record your completion of the audit on the **CPD Online Dashboard**, under the **Audit of Medical Practice section**. From the drop down menu select "**Approved practice/PHO audit**" and record the audit name.

General practitioners are encouraged to discuss the outcomes of the audit with their peer group or practice.

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. An Audit of Medical Practice (CQI activity) summary sheet (included as Appendix 1).

The Royal New Zealand College of General Practitioners
Te Whare Tohu Rata o Aotearoa
Endorsed CPD Activity



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Data sheet – cycle 1 The Safe and Effective Use of Warfarin

Patient	The patient's notes or records include the following information: (tick if information is present)										
	Patient is on warfarin	Condition	Target INR	Start date	End date	Brand	Dose	Date of last INR	Date of next INR	Their last INR result	**A positive audit result?**
1											
2											
3											
4											
5											
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Please retain this sheet for your records to provide evidence of participation in this audit.

Data sheet – cycle 2 The Safe and Effective Use of Warfarin

Patient	The patient's notes or records include the following information: (tick if information is present)										
	Patient is on warfarin	Condition	Target INR	Start date	End date	Brand	Dose	Date of last INR	Date of next INR	Their last INR result	**A positive audit result?**
1											
2											
3											
4											
5											
6											
7											
8											
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Please retain this sheet for your records to provide evidence of participation in this audit.

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APPENDIX 1

SUMMARY SHEET
Audit of medical practice (CQI activity)

Topic:
Safe and effective use of Warfarin

Date:

Activity designed by (name of organisation, if relevant):
Bpac^{nz}

Doctor's name:

Results discussed with peer group or colleagues?
☐ Yes ☐ No

Date:

FIRST CYCLE

DATA: Date of data collection:

CHECK: Describe any areas targeted for improvement as a result of analysing the data collected. (If the findings have any implications for health equity, please include this.)

ACTION: Describe how these improvements will be implemented.

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

AUGUST 2016

SECOND CYCLE

DATA: Date of data collection:

CHECK: Describe any areas targeted for improvement as a result of analysing the data collected. (If the findings have any implications for health equity, please include this.)

ACTION: Describe how these improvements will be implemented.

MONITOR: Describe how well the process is working.

COMMENTS:

AUGUST 2016