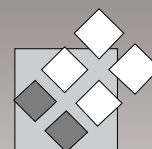


CLINICAL AUDIT

The laboratory investigation of  
**Tiredness**  
in Primary Care



Valid to September 2013



**bpac**<sup>nz</sup>  
better medicine

## Focus of this audit

This audit focuses on female patients who are of menstruating age (15 – 50 years). This group of patients may become tired due to a variety of causes, which include lifestyle, psychological or physical factors.

Anaemia will frequently be investigated as a physical cause of tiredness in this group, due to the demands of blood loss from menstruation. Iron deficiency is the most likely cause of anaemia and the most appropriate test in this situation is ferritin. Full iron studies (including iron and transferrin/saturation) are not required.

Megaloblastic anaemia as a result of vitamin B12 or folate deficiency is much less common and is rare in the presence of a normal blood count. Therefore vitamin B12 and folate tests should only be requested if a complete blood count shows evidence of macrocytosis.

This audit focuses on:

- Ferritin should be the sole “iron” test for checking for iron deficiency
- Vitamin B12 and folate tests are only requested if there is evidence of macrocytosis on the complete blood count

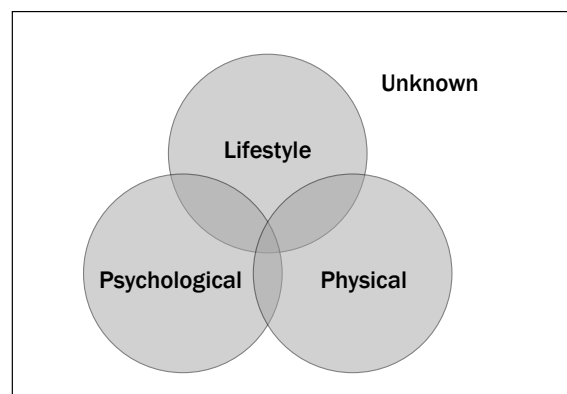
## Background

Tiredness can be a complex complaint for doctors to investigate. In many situations the tiredness may be just “tiredness”, or the result of lifestyle, psychological or physical causes, or a combination of these factors. Less frequently, tiredness will be the indication of a serious clinical diagnosis. The challenge for the GP is to be able to diagnose significant disorders without over investigating minor conditions.

Causes of tiredness presentation can be usefully divided into three overlapping groups. Many presentations will not fit into these groups and the cause will remain unknown.

**Lifestyle causes** may be the result of:

- Significant life stresses
- The demands of occupation or family
- Diet – over or under consumption of food
- Alcohol and street drugs
- Exercise – over or under exercise
- Sleep disorders



**Psychological causes** often overlap with lifestyle causes of tiredness. Anxiety, stress and interpersonal difficulties affect quality of life and are often amenable to intervention. Depression requires early identification because of the morbidity and threat to life associated with untreated depression.

**Physical causes** can also make someone tired. These physical causes may not always be obvious. They may include:

- Co-morbidities
- Medications – many drugs cause tiredness
- New conditions presenting as tiredness

## Plan

### Indicators

1. Serum ferritin is the sole test of iron status used when checking for iron deficiency
2. Vitamin B12 and folate are only requested if there is evidence of macrocytosis on the complete blood count

### Criteria

1. The patient notes record that serum ferritin is the sole blood test of iron status ordered when checking for iron deficiency
2. The patient notes record that vitamin B12 and folate are only requested if there is evidence of macrocytosis on the complete blood count

### Standards

1. 90% of the patient notes record that serum ferritin is the sole blood test of iron status ordered when checking for iron deficiency
2. 80% of the patient notes record that vitamin B12 and folate are only requested if there is evidence of macrocytosis on the complete blood count

# Data

## Eligible people

This audit includes women aged between 15 and 50 years of age being investigated for tiredness and who have had blood tests to determine iron and/or vitamin B12 and folate status.

## Identifying patients

You will need to have a system that allows you to identify women aged between 15 and 50 years of age who have had requests for 'iron studies', 'ferritin', 'vitamin B12' or 'folate'. Women in this age group who are being investigated for conditions other than tiredness should be excluded.

## Sample size

The number of eligible patients will vary according to your practice demographic. It would be optimal to identify 20–30 patients. If you identify more, take a random sample of 20–30 patients whose notes you will audit.

## What data should be collected?

The following information should be collected:

- For patients being investigated for iron deficiency, was serum ferritin the sole test of iron status?
- For patients being investigated for vitamin B12 and folate deficiency was there an initial complete blood count with evidence of macrocytosis prior to the request for vitamin B12 and folate?

## Data analysis

Use the data sheet to record your data: Then calculate the percentage of patients who had serum ferritin as the sole test of iron status and the percentage of patients who had a vitamin B12 and folate tests performed following an abnormal complete blood count.

Compare these percentages to the standards set in advance by the practice team. Standards are suggested in this audit but may also be set at a practice/practitioner level. Discussion amongst peers may be useful in establishing standards.

# Data sheet – cycle 1

## Audit: The laboratory investigation of tiredness

| Was serum ferritin the sole test of iron status? |        | Was vitamin B12 & folate only ordered after abnormal CBC? |        |
|--------------------------------------------------|--------|-----------------------------------------------------------|--------|
| Patient                                          | YES/NO | Patient                                                   | YES/NO |
| 1                                                |        | 1                                                         |        |
| 2                                                |        | 2                                                         |        |
| 3                                                |        | 3                                                         |        |
| 4                                                |        | 4                                                         |        |
| 5                                                |        | 5                                                         |        |
| 6                                                |        | 6                                                         |        |
| 7                                                |        | 7                                                         |        |
| 8                                                |        | 8                                                         |        |
| 9                                                |        | 9                                                         |        |
| 10                                               |        | 10                                                        |        |
| 11                                               |        | 11                                                        |        |
| 12                                               |        | 12                                                        |        |
| 13                                               |        | 13                                                        |        |
| 14                                               |        | 14                                                        |        |
| 15                                               |        | 15                                                        |        |
| 16                                               |        | 16                                                        |        |
| 17                                               |        | 17                                                        |        |
| 18                                               |        | 18                                                        |        |
| 19                                               |        | 19                                                        |        |
| 20                                               |        | 20                                                        |        |
| 21                                               |        | 21                                                        |        |
| 22                                               |        | 22                                                        |        |
| 23                                               |        | 23                                                        |        |
| 24                                               |        | 24                                                        |        |
| 25                                               |        | 25                                                        |        |
| 26                                               |        | 26                                                        |        |
| 27                                               |        | 27                                                        |        |
| 28                                               |        | 28                                                        |        |
| 29                                               |        | 29                                                        |        |
| 30                                               |        | 30                                                        |        |
| <b>Total</b>                                     |        | <b>Total</b>                                              |        |
| <b>%</b>                                         |        | <b>%</b>                                                  |        |

## Data sheet – cycle 2

### Audit: The laboratory investigation of tiredness

| Was serum ferritin the sole test of iron status? |        | Was vitamin B12 & folate only ordered after abnormal CBC? |        |
|--------------------------------------------------|--------|-----------------------------------------------------------|--------|
| Patient                                          | YES/NO | Patient                                                   | YES/NO |
| 1                                                |        | 1                                                         |        |
| 2                                                |        | 2                                                         |        |
| 3                                                |        | 3                                                         |        |
| 4                                                |        | 4                                                         |        |
| 5                                                |        | 5                                                         |        |
| 6                                                |        | 6                                                         |        |
| 7                                                |        | 7                                                         |        |
| 8                                                |        | 8                                                         |        |
| 9                                                |        | 9                                                         |        |
| 10                                               |        | 10                                                        |        |
| 11                                               |        | 11                                                        |        |
| 12                                               |        | 12                                                        |        |
| 13                                               |        | 13                                                        |        |
| 14                                               |        | 14                                                        |        |
| 15                                               |        | 15                                                        |        |
| 16                                               |        | 16                                                        |        |
| 17                                               |        | 17                                                        |        |
| 18                                               |        | 18                                                        |        |
| 19                                               |        | 19                                                        |        |
| 20                                               |        | 20                                                        |        |
| 21                                               |        | 21                                                        |        |
| 22                                               |        | 22                                                        |        |
| 23                                               |        | 23                                                        |        |
| 24                                               |        | 24                                                        |        |
| 25                                               |        | 25                                                        |        |
| 26                                               |        | 26                                                        |        |
| 27                                               |        | 27                                                        |        |
| 28                                               |        | 28                                                        |        |
| 29                                               |        | 29                                                        |        |
| 30                                               |        | 30                                                        |        |
| <b>Total</b>                                     |        | <b>Total</b>                                              |        |
| %                                                |        | %                                                         |        |

# Identifying opportunities for CQI

## Taking action

The first step in taking action is to identify where gaps exist between expected and actual performance and decide on priorities for change.

Once priority areas for change have been decided on, an action plan should be developed to implement any changes.

The plan should assign responsibility for various tasks to specific members of the practice team and should include a timeline.

It is important to include the whole practice team in the decision-making and planning process.

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

- 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
- How can you overcome them?

# Review

## Monitoring change and progress

It is important to review the action plan against the timeline at regular intervals with the practice team. It may be helpful to discuss 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 practices complete the first part of the CQI activity 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 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 **4 November 2013**.

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](http://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 (included as Appendix 1).

# Appendix 1: 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<sup>nz</sup>

Individual (self)

**TOPIC**

**The laboratory investigation of tiredness in primary care**

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?

## SECOND CYCLE

|                                                                                                                                                                               |                                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <b>1. DATA</b>                                                                                                                                                                | <b>Information collected</b>                                                       |
| Date of data collection:                                                                                                                                                      |                                                                                    |
| Please attach:                                                                                                                                                                |                                                                                    |
| <ul style="list-style-type: none"><li>▪ A summary of data collected <b>or</b></li><li>▪ If this is an organisation activity, attach a certificate of participation.</li></ul> |                                                                                    |
| <b>2. CHECK</b>                                                                                                                                                               | Describe any areas targeted for improvement as a result of the data collected.     |
|                                                                                                                                                                               |                                                                                    |
| <b>3. ACTION</b>                                                                                                                                                              | Describe how these improvements will be implemented.                               |
|                                                                                                                                                                               |                                                                                    |
| <b>4. MONITOR</b>                                                                                                                                                             | Describe how well the change process is working. Will you undertake another cycle? |
|                                                                                                                                                                               |                                                                                    |
| <b>COMMENTS</b>                                                                                                                                                               |                                                                                    |
|                                                                                                                                                                               |                                                                                    |



## AUDIT CHECKLIST

Date:

1  Audit Planning

### FIRST CYCLE

2  Data collected

3  RNZCGP Summary Sheet completed

4  MOPS Credits claimed

### SECOND CYCLE

5  Data collected

6  RNZCGP Summary Sheet completed

7  MOPS Credits claimed

See page 8 for details on claiming MOPS credits

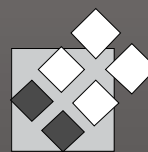
**bpac<sup>nz</sup>**

10 George Street

PO Box 6032, Dunedin

phone 03 477 5418

free fax 0800 bpac nz



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