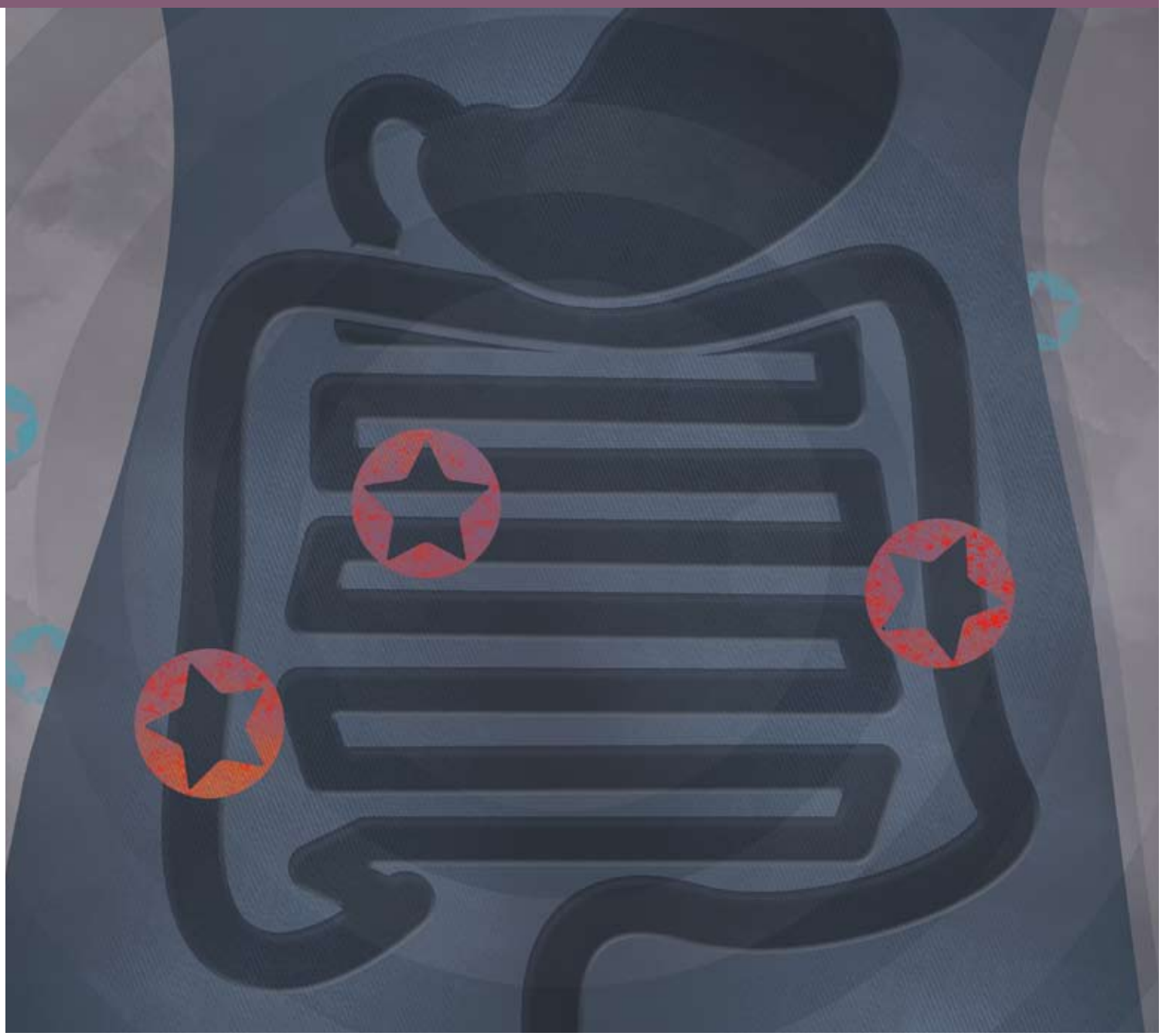
CLINICAL AUDIT

Investigating

Infectious Diarrhoea



Valid to November 2019

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Background

Most patients presenting with acute diarrhoea can be reassured that their condition is self-limiting, and management is focused on preventing dehydration. Patients can be advised to seek further treatment if their symptoms worsen or are persistent.

Laboratory investigation is rarely indicated for the majority of patients with acute diarrhoea. In some patients, however, investigation will be necessary. This is indicated by the presence of risk-factors that increase the pre-test probability of a notifiable bacterial infection or that suggest the patient's risk of complications is higher (Table 1). Testing usually follows a simple algorithm – faecal culture and microscopy is used as the "first-line" test, with further tests, such as *Giardia* and *Cryptosporidium* antigen tests or stains for ova and cysts, added if there is a risk of these pathogens being present.

When a faecal stool test is necessary, usually only one stool sample should be sent for analysis. The same sample can be used for bacterial culture, microscopy and antigen tests. The less commonly used ova and cysts and *Clostridium difficile* tests can require up to three samples on separate days. Clinical information, including the indication for testing, should be included in the laboratory request, as some tests may be declined if an appropriate indication is not present.

Table 1: Tests to request for a patient with risk-factors (New Zealand Laboratory Test Referral Guidelines, 2013)

	What box to tick			
	Culture	**Giardia/Crypto**	**Ova and cysts**	***C. difficile***
	What sample should be collected?			
	Fresh stool	Fresh stool	Stool in fixative	Fresh stool
	How many samples should be collected?			
Risk factor	1	1	1 – 3 (on separate days)	1 – 3 (on separate days)
Diarrhoea, no risk factors	No tests	No tests	No tests	No tests
Food handler	✓			
Age under five years	✓			
Child-care attendance	✓	✓		
Rural residence/exposure	✓	✓		
Raw seafood ingestion	✓			
Bloody diarrhoea	✓			
Recent antibiotics or chemotherapy				✓
Recent hospitalisation				✓
Age over 70 years				✓
Immunocompromised	✓	✓	✓	
Recent overseas travel	✓	✓	✓	
Diarrhoea lasting more than two weeks	✓	✓	✓	

Audit plan

Summary

This audit focuses on the laboratory investigation of infectious diarrhoea in a patient of any age. Laboratory investigation should only be performed if the patient has risk-factors for atypical aetiology or an increased likelihood of complications. Patients who have had a faecal culture performed in the previous twelve months should be identified, then records assessed to check that that only one sample was taken, and that each test requested was indicated as per the laboratory test guidelines.

Criteria for a positive outcome

The patient has had a faecal culture requested in the previous 12 months, and:

1. Only one sample was sent, and;
2. The patient had an indication for testing, and;
3. If any addition faecal tests were requested, the patient also had an indication for that test

Recommended audit standards

A recommended audit standard for this audit would be for at least 80% of patients who had faecal culture testing performed to:

- Have had only one sample sent and
- Have an indication for each test clearly recorded in the patient's notes or on the laboratory form.

Data

Eligible people

Any patient enrolled in the practice who has had a faecal culture requested in the previous twelve months is 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 a faecal culture and microscopy recorded from the previous twelve months.

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 (or take the first 30 results returned).

Data analysis

Use the data sheets provided below to record your first and second audit cycle results.

A positive result is any patient who has a "Yes" in columns A and B and a "No" in column C or a "Yes" in columns A, B, C and D. Record this as a tick in the "Positive result" column.

Calculate your percentage achievement by adding up the number of positive results and dividing this number 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.

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

The plan should assign responsibility for any actions to specific members of the practice team and should include realistic timelines.

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

- 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 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 practitioners complete the first part of the CQI activity summary sheet (Appendix 1).

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 practitioners complete the remainder of the CQI activity summary sheet.

The Royal New Zealand College of General Practitioners

Claiming MOPS credits

This audit has been endorsed by the RNZCGP as a CQI Activity for allocation of MOPS 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 MOPS programme. This status will remain in place until **November, 2019**.

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

Record your completion of the audit on the **MOPS Online credit summary**, under the **Continuous Quality Improvement/Audit of Medical Practice** section. From the drop down menu, select the audit from the list or select "Approved practice/PHO audit" and record the name in the notes. "MOPS online" can be completed by 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. An Audit of Medical Practice (CQI Activity) summary sheet (included as Appendix 1).

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Data sheet – cycle 1

Investigating infectious diarrhoea

Patient	A	B	C	D	
	Was an indication for faecal culture recorded? Y/N	Was only one sample sent for initial analysis? Y/N	Were other investigations for diarrhoea requested? Y/N	If yes, was an indication for the test recorded? Y/N	**A positive audit result?** ("Yes in A and B + No in C" OR "Yes in A, B, C and D")
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				Total % of audited patients with a positive result	

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

Data sheet – cycle 2 Investigating infectious diarrhoea

Patient	A	B	C	D	
	Was an indication for faecal culture recorded? Y/N	Was only one sample sent for initial analysis? Y/N	Were other investigations for diarrhoea requested? Y/N	If yes, was an indication for the test recorded? Y/N	**A positive audit result?** ("Yes in A and B + No in C" OR "Yes in A, B, C and D")
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				Total % of audited patients with a positive result	

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APPENDIX 1

Audit of Medical Practice (CQI activity) Summary Sheet

Topic:	**Investigating infectious diarrhoea**
The activity was designed by (name of organisation if relevant):	**Bpac^{nz}**
Doctors Name:	

FIRST CYCLE

DATA:	Date of data collection:

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

ACTION:	Describe how these improvements will be implemented.

MONITOR:	Describe how well the 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

DATA:	Date of data collection:

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

ACTION:	Describe how these improvements will be implemented.

MONITOR:	Describe how well the process is working.

COMMENTS:	

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