

Taking responsibility for test results:

A discussion

The management of test results, in particular the issue of who is ultimately responsible for following up these results, is at times contentious. There is often a lack of agreement and consistency between clinicians, practices and health organisations as to what is reasonable and practical. This is further complicated when multiple clinicians are involved in the management of a patient, especially when this spans both primary and secondary care. There are numerous pitfalls that can occur when managing patient test results and no management system is likely to be fail-safe. Responsibility for developing an effective method of managing test results lies with both the individual clinician and with the professional community within which they practice, e.g. group practice, hospital department, PHO, DHB. The following commentary is intended to provoke thought and discussion about the challenges faced by clinicians and health organisations in managing test results.

Cole's clinical investigation guidelines can be used as a framework

The Medical Council of New Zealand (MCNZ) endorses the use of "Cole's Medical Practice in New Zealand" for best practice principles for the appropriate follow up of patient test results.¹ Other relevant guidance includes "Managing Patient Tests Results – Minimising Error" produced by the Royal New Zealand College of General Practitioners (RNZCGP) and the RNZCGP's Cornerstone accreditation documents.^{2,3} The Health and Disability Commissioner also has an interest in the management of test results. Rulings on specific cases where test results have not been appropriately managed can be found on the HDC website: www.hdc.org.nz/publications/other-publications-from-hdc/articles/2008/managing-patient-test-results

Although there are some differences in the guidance offered, the overriding principles are the same: have a system to track and manage tests and define who is responsible for conveying information to the patient in a timely, clinically appropriate and meaningful manner.

The principles of Cole's

The Cole's Medical Practice in New Zealand guidelines (2013) are a set of principles intended for all registered doctors working in New Zealand. The guidelines are based on generally accepted standards of practice, and from case experience of disciplinary tribunals, in accordance with advice from the Health and Disability Commission.

Cole's lists eight key principles for managing clinical investigations, to ensure patient health and safety:¹

1. If you request a clinical investigation, you should tell your patient why the clinical investigation is recommended and when and how they will learn the results
2. All the relevant parties should understand their responsibilities clearly
3. If you are responsible for conducting a clinical investigation you are also responsible for ensuring that the results are appropriately communicated to those in charge of conducting follow up, and for keeping the patient informed
4. If you are responsible for informing the patient, you should:
 - Inform the patient of the system for learning test and procedure results, and arranging follow up
 - Ensure that staff and colleagues are aware of this system
 - Inform patients if your standard practice is not to notify normal results and obtain their consent to not notifying
 - If other arrangements have not been made, inform the patient when results are received. This is especially important if the results raise a clinical concern and need follow up.

Cornerstone: effective systems for managing test results

Practices who wish to gain RNZCGP Cornerstone Accreditation must meet the following criteria in regards to managing clinical investigations:²

- There is a documented policy that describes how laboratory results, imaging reports, investigations and clinical correspondence are tracked and managed
- All incoming test results or other investigations are sighted and actioned by the team member who requested them or by a designated deputy
- Patients are provided with information about the practice procedure for notification of test results
- The practice can demonstrate how they identify and track potentially significant investigations and urgent referrals
- A record is kept of communication with patients informing them about test results

An overall aim is to ensure that the right people get the right information within the right time frame.

5. Identifying and following up overdue results is an essential, but [sometimes] difficult, office management task. Your system should ensure that test results are tracked successfully. Such a system might be a paper file or computer database that identifies:
 - High risk patients
 - Critical clinical investigations ordered
 - Dates of reports expected
 - Date of expected or booked follow up patient visit
6. The patient's medical chart itself might be flagged in some way to aid this tracking
7. It can sometimes be difficult to contact a patient by telephone, and sometimes they do not attend planned follow up appointments:
 - The number and intensity of efforts to reach the patient by telephone should be proportional to the severity and urgency of the medical problem. All attempts to contact the patient should be documented.
 - If the patient fails to attend an appointment, or you have been unable to speak to them directly about test results which raise a clinical concern, then send a letter to the patient advising them of the action they should take
8. If you order investigations it is your responsibility to review, interpret and act on the results. If you go off duty before the results are known, you should alert the incoming doctor that there are results outstanding. Furthermore, you should check the results when you are next on duty.

Applying the Cole's principles to general practice

The Cole's principles offer a structure to develop personal and practice policies for managing test results. In reality, however, there are many situations where uncertainty exists despite these guidelines. Being aware of the issues which may arise and considering how best to respond in the interests of both the patient and the clinician is beneficial. Time and resource constraints make managing test results a delicate balancing act, but it is vital there are processes in place to ensure patients receive the safest and best possible care.

A practical approach to the management of test results is to first consider whether the test is necessary, and then if the clinical decision is made to proceed with the test, explain the test to the patient, discuss how they would prefer to receive

the results and when the results are expected. The clinician who ordered the test is then responsible for ensuring that they (or a delegated colleague) receive the results, convey these results to the patient and undertake any necessary follow up.

The two key factors are:


1. **Effective communication with both patients and medical colleagues**
2. **Clear lines of responsibility**

First consider if the test is needed

Before requesting a laboratory investigation, the clinician should consider the expected benefits of knowing the test result and then decide if the test is still necessary.

Considerations before ordering a test:

- What is my reason for requesting this test?
- Has this test already been done? Does it need to be repeated?
- Will the test improve patient (or in some cases, family or partner) care?
- Is this the right test or combination of tests for the clinical situation?
- Is it the right time to do the test?
- How will the test result be interpreted?
- How will the test result influence patient management?
- What will be the consequences of a false positive result?
- Are there potential harms of doing this test?

 For further information, see: "Best Tests? The general principles of laboratory investigations in primary care", Best Tests (Feb, 2013).

Communicating with the patient


Once the clinical decision has been made to request a test, the next step is to ensure that the patient agrees to the test, understands why the test is being requested, what condition/parameter is being tested for and the aim of the test, e.g. to confirm or exclude a suspected condition. The clinician and patient then need to discuss how the results will be given, the expected time frame for the results and what form the results will take, e.g. a positive/negative result or a numerical value.

This shared decision making approach improves health literacy, and enables the patient to take a more active role in their care. The patient will know when the results are expected, and can contact the practice if they have not received their results or if their condition changes.

Patient rights and informed consent


Under the 1994 Health and Disability Commissioner Act, patients have the right to be given information about their health or disability, the service being provided, the names and roles of the staff involved as well as information about any tests and procedures required and their test results.⁴

Patients have the right to be notified of **all** test results and should be given their results if they ask for them.¹ If it is practice policy to only inform patients about clinically significant results, this should be explained to the patient and their consent obtained (for not reporting on normal results).¹

 Many practices will have a policy regarding notification; a pamphlet that explains this can be a useful way to back up verbal discussion of this policy.

Issues to consider when informing patients of results:

- Regularly check that phone numbers are up to date in the patient's record
- To manage workload, practices may specify times that the practice nurse is able to be called for results. The full responsibility for this should not, however, be left up to the patient, and the practice should have a system of identifying when results have not yet been given to the patient.
- Have an agreement with the patient as to whether a voice mail message about their results can be left if they are unavailable or if they consent to a family member being informed; relevant issues include ensuring confidentiality and that the patient has received the result
- Text messaging or emailing may be considered as an option for delivering routine test results; relevant issues include ensuring confidentiality, and accuracy with written results

 The introduction of electronically accessible health records into the New Zealand healthcare system ("patient portals") is likely to influence the way that patients interact with clinicians, including how they receive test results.

Delivering bad news

In many situations, the clinician will anticipate when a result is likely to be serious, and will have already made an arrangement with the patient to return for a follow-up consultation in which they can receive their results, or will have already prepared them for receiving the news.


Unexpected bad news is often more challenging to deal with as the patient has not necessarily been prepared for this. Patients may feel extremely anxious if they are asked to return to the practice for their results, especially if it has been suggested that they bring a support person.

Ideally, any result which has the potential to be serious should be informed to the patient in person, although financial and time factors may be a barrier to this for both the patient and practice. This is a decision that is likely to be made on a case-by-case basis.

What to do when the patient is difficult to contact

The Health and Disability Commissioner (HDC) considers that it is the clinician's responsibility to contact patients with significant results, even when the patient has delayed, cancelled or not attended the follow-up consultation.¹

It is good practice to document all attempts to contact the patient in their medical records. If repeated attempts fail consider other ways of contacting the patient depending on the urgency of the clinical situation, e.g. if the result is non-urgent a letter could be sent to the patient advising them of the test result and the suggested course of action.

 Ensure that patient records are regularly updated with multiple contact options.

"Managing the responsibility of test results is a balance between autonomy, efficiency and reliability; too much of one takes away from the others. It is difficult to get all three aspects balanced".

– Dr Steve Searle, General Practitioner

Communicating with other health professionals

It should be the responsibility of the clinician who has ordered the test to ensure that the results are reviewed, the patient is informed and any necessary action is taken.¹

This can mean that the clinician themselves undertakes this role, or that they take responsibility for delegating this to someone else. An effective electronic management system is also an essential part of this process (see opposite: "Have overdue results been identified and followed up?").

Once a test has been requested, responsibilities include:

- Following up the result in the expected time frame
- Following up with the patient if they have not presented for the test (relying on a system that can identify this)
- Ensuring the patient has been notified of their results
- Discussing with the patient the intended course of action in response to the test result, e.g. a repeat or additional investigation, a change of medicine or reassurance; this should be documented in the patient's notes
- Referring the patient to another provider if necessary on the basis of results received
- Forwarding results, particularly abnormal results, to other providers involved in the patient's care, as appropriate
- **Arranging for urgent test results to be followed up after hours;** contact details of the clinician who will follow up the result and the patient's contact details should be included on the request form in case the result requires urgent action. Practices may have a "last resort" arrangement with the local after hours service if they are unable to provide an after hours contact.

The following scenarios may add complexity to the usual practice protocol for following up tests:

When an "after hours" clinician or locum is providing cover

A frequently encountered issue in regards to responsibility for test follow up is clinicians ordering tests for patients who are not usually in their care, e.g. clinicians working in an after hours service. If possible, tests may be deferred until the patient is able to consult with their usual General Practitioner. If this is not possible, the clinician who ordered

the test should provide clear instructions on who is expected to follow up the result.

When a locum is providing cover in a practice, best efforts should be made to ensure that they are aware of the systems the practice has in place to manage test results. "Handover" should ideally occur in regards to patients with outstanding results that will need to be followed up. If a face-to-face handover is not possible, a written summary can be provided or the task system on the PMS can be used to note any follow up that is required. It is reasonable to assume that locums have the same responsibilities with regard to following up test results as the usual clinician they are providing cover for.

When the practice has part-time clinicians or clinicians go on leave

Practices are encouraged to have a system in place for managing results of tests ordered by clinicians who work part-time. Some clinicians will access results from off-site, however, this should not be relied upon when the clinician is not on call. A "buddy system" where a colleague agrees to review the results of another can help to ensure that urgent results are attended to promptly when the clinician is away from the practice. This system also relies on effective communication between clinicians as to what follow up has occurred and what course of action has been agreed to with the patient.

A similar scenario is when clinicians order a test and are not working at the practice again until after the results are expected, or take planned or unexpected leave. Practices should have a plan in place for hierarchy of responsibility in this situation.


"Managing test results for a busy clinician can be difficult. Standards of care have changed considerably over the last 20 years and efficient, effective methods of coping with test results are now expected. Many clinicians now use the concept of 'Protected time' to undertake tasks such as going through the 'inbox' and doing repeat prescriptions; time in which there will be no interruptions to tasks with considerable safety implications."

– Dr Steven Lillis, General Practitioner

Have overdue results been identified and followed up?

Failure to follow up on abnormal or overdue test results is a global patient safety concern. Practices should ensure that the tracking system they use for test results is effective in identifying results which have not been read or actioned. In addition, there needs to be a system in place for identifying patients who have not presented for tests that have been requested.

Any system is not 100% fail-safe, however, there are some strategies that can reduce the risk of missed test results. This includes having standard practice procedures for following up results, including tests which have not taken place, optimal use of the computer-based practice management system (PMS), having an audit system in place to check how the process is performing and using a shared decision-making approach so the patient also takes responsibility in presenting for tests and following up results.

 Some PMS have the ability to set task reminders that alert the clinician when a particular result has not arrived back into their results inbox, when they need to follow up a result or if a patient has not presented for a test. This can provide an excellent easy way to track results, from ordering a test to managing the outcome. Tasks can also be assigned to colleagues, e.g. requesting that the Practice Nurse phones the patient with their results.



When clinicians work at multiple practices

Occasionally results that arrive in the practice are unmatched to a patient. There are several possible reasons for this, e.g. the details of the patient have been entered incorrectly or they are no longer registered at the practice. However, the reason may be that the results have been forwarded to the correct clinician, but the incorrect location, e.g. a General Practitioner who works part-time hours at two different practices.

If results are received for patients not registered to the practice, check if they might be patients at other practices that the clinicians cover. Where possible, forward results to the correct location, and confirm that they have been received. Alternatively, contact the laboratory to report the error.

When copied in to test results ordered by other clinicians

When multiple clinicians are copied in on a request form for a test, results will be sent to each clinician. This can create a particular risk of error if it is unclear who has responsibility for following up results and whether follow up has occurred. It needs to be made very clear who is responsible for following up the test results. Although best practice is for the clinician who ordered the test to be responsible for following up the results, this may not always occur. For example, if a test has been ordered from an after hours clinic and the result is not urgent, it may be assumed that the patient's usual doctor, who is copied into the results, will follow this up.

Unless communication has been received about who is responsible, clinicians who have been copied in to test results should double check that the result has been actioned and the patient has received appropriate follow up. One way to avoid confusion about responsibility for following up results is instead of copying other clinicians in to results, they can be informed about the results (if necessary) in an email or letter.

A common scenario is for primary care clinicians to be copied in to multiple results from tests performed on patients in secondary care, or to be sent instructions to follow up tests, or request additional tests, in a discharge letter. Often the primary care clinician will be unaware of the clinical situation regarding the patient, and they may not have been seen in the general practice for several years, and may even be no longer registered with the practice. It is then very difficult to take responsibility for following up results. In addition, the clinician may feel hesitant to counsel a patient about a result or undertake further investigations when they are uncertain about the clinical context. Responsibility may extend to

informing the secondary care clinician who ordered the test that follow up will not be undertaken (or that further information is required).

In Summary: Checklist for managing test results

1. Was the test needed?
2. Was it the right time for the test?
3. Was the most appropriate test ordered?
4. Was it explained to the patient why the test was ordered?
5. Was there a clear understanding with the patient as to when they would receive their results and in what circumstances, e.g. significant or abnormal results only?
6. Was there a discussion with the patient about how they would prefer to receive their results?
7. Was it clearly defined who was responsible for following up the test result and explaining the result to the patient?
8. Were the results received in the expected timeframe? If not, were they followed up?
9. Was the patient informed of their results in a timely manner?
10. Did appropriate clinical follow up occur based on the test result?

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"I receive literally hundreds of tests copied in from the hospital. I often do not know the clinical situation, and often they are for patients who have not attended the practice for five or more years. These usually originate from ED or a particular hospital clinic. Sometimes there is a letter 'GP to chase up results'. This takes an enormous amount of time and effort for absolutely no return. These patients are usually not enrolled in the practice. I would argue very strongly that they are not my responsibility."

– Dr Jim Reid, General Practitioner

Case reports: lessons to be learnt

The following examples are based on real cases in which communication break-down in regards to responsibility for test results compromised patient safety.

N.B. These reports were received via the bpac^{nz} patient safety incident reporting system, which is currently inactive.

Case report 1: lung cancer diagnosis missed

A patient with a history of COPD presented at an after hours clinic, with a suspected chest infection. The patient was advised to return the next day for a chest x-ray to exclude pneumonia. A pulmonary nodule was detected on x-ray and it was recommended that the patient undergo a CT scan for further assessment. The result was phoned through to the Clinical Leader at the after hours clinic by the Radiologist. The Clinical Leader sent a note to the patient's named General Practitioner advising that follow-up was required. The General Practitioner had not seen the patient for ten years and did not receive the letter from the Clinical Leader, but did receive the x-ray report. The General Practitioner, after seeing the result had been telephoned, assumed that the after hours clinician who ordered the x-ray was taking responsibility for patient follow up. The patient changed General Practitioners shortly afterwards and the report was faxed to the new practice. The new practice assumed the previous General Practitioner had actioned follow up. The patient presented to the new General Practitioner one year later with a persistent cough. A repeat chest x-ray was requested and it showed a large tumour.

This case report shows how adequate follow up can be missed when one clinician assumes that another has taken action on test results. Each of the three clinicians assumed that one of the other two was taking responsibility to follow up the original x-ray. However, there was no successful contact between clinicians that may have resulted in earlier diagnosis and treatment.

Case report 2: practice communication fail

An abnormal laboratory result for a patient was notified to a General Practitioner by phone one evening when they were away from home for a few days. The General Practitioner decided the result needed to be actioned the next day and informed the laboratory to fax the result to the practice as per usual procedure, with the intention it would be viewed by another clinician the next morning.

The General Practitioner made three phone calls to the practice the next day to follow up:

- Call one – could not get through to the practice
- Call two – left a message on the lead clinician's mobile
- Call three – left a message on the nurse's answer phone

Upon returning to work two days later, the General Practitioner noticed the faxed result, which had been scanned by a receptionist but not viewed by a clinician. A family member of the patient had also phoned the practice and spoken to a nurse, but this conversation had not been properly documented. The first nurse's phone was found not to be working and the lead clinician had not checked their phone message. The patient was urgently admitted to hospital for treatment.

This reveals how patient follow up can be delayed when messages are missed due to breakdowns in communication. It also highlights potential problems when the clinician who ordered the test is away from the practice when the results are received. It shows how important it is that information is relayed directly between clinicians and other practice staff. Would a 'handover' prior to going on leave, to delegate responsibility for follow up to another clinician, or an electronic task reminder in the PMS for the practice staff have changed the outcome for this patient?

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References

1. St George IM. The management of clinical investigations. Chapter 14 in St George IM (ed.). Coles medical practice in New Zealand, 12th edition. Medical Council of New Zealand, Wellington. Available from: www.mcnz.org.nz/assets/News-and-Publications/Coles/Chapter-14.pdf (Accessed Aug, 2014).
2. The Royal New Zealand College of General Practitioners - Aiming for excellence. Available from: www.rnzcgp.org.nz/assets/documents/Standards--Policy/A4E2012revision4web.pdf (Accessed Aug, 2014).
3. The Royal New Zealand College of General Practitioners - Managing patient test results. Available from: <http://www.rnzcgp.org.nz/assets/documents/Publications/College-Resources/Managing-Patient-Test-Results-July-2005.pdf> (Accessed Aug, 2014).
4. Code of health and disability services consumer's rights. Available from: <http://www.hdc.org.nz/media/24833/leaflet%20code%20of%20rights.pdf> (Accessed Aug, 2014).

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