

**Meredith A B Makeham**

BMed(Hons), MPH(Hons), PhD, FRACGP, is Clinical Lecturer, Discipline of General Practice, The University of Sydney, New South Wales. meredith@gp.med.usyd.edu.au

Charles Bridges-Webb AO

MBBS, MM, MD, FRACGP, is Director, The Royal Australian College of General Practitioners NSW Projects, Research and Evaluation Unit, Sydney, New South Wales.

Michael R Kidd

MBBS, MD, FRACGP, is Professor and Head, Discipline of General Practice, The University of Sydney, New South Wales.

Lessons from the TAPS study

Managing investigation results – is your practice system safe?

The Threats to Australian Patient Safety (TAPS) study collected 648 anonymous reports about threats to patient safety from a representative random sample of Australian general practitioners. These contained any events the GPs felt should not have happened, and would not want to happen again, regardless of who was at fault or the outcome of the event. This series of articles presents clinical lessons resulting from the TAPS study.

Clinical lesson

General practices need systems in place to ensure that investigation results are received, checked, communicated to patients and appropriately acted upon. Clinicians in any setting must take responsibility for ensuring that all results are checked and that action has been taken regarding all investigations that they have performed or requested.

Case study

A woman, 72 years of age, presented to a hospital emergency department with a history of abdominal bloating, reflux and discomfort over many months. Nine months previously she had been referred by her GP to a hospital outpatient clinic for a gastroscopy. On the day of the procedure, the patient was told by a hospital registrar that all appeared normal, and she had ceased her proton pump inhibitor medication. The gastroscopy report was sent to the GP, and said: 'normal, biopsy sent'. When the patient's hospital notes were reviewed 9 months later in the emergency department, the histopathology report suggested that there was mild gastritis with the presence of *Helicobacter pylori*. The GP had not seen a copy of the histopathology report and the patient had not been notified of the abnormal result by anyone at the hospital.

Comment

This report illustrates the need for systems that ensure that all abnormal investigations are followed up. The abnormal histopathology findings were not communicated to either the patient or the GP by the hospital clinician involved in this case. A flag on the GP's file that the biopsy results were outstanding may have prompted the GP to chase up this result.

■ **The TAPS study found that errors in the process of providing health care were reported by general practitioners more than twice as often as deficiencies in a clinician's knowledge or skills. Approximately 20% of these process error events concerned investigations. In addition, some reported events that related to investigations included filing system and recall errors, which accounted for a further 10% of reported error events.**

Errors in the management of investigation results

The TAPS study collected 648 reports from a representative sample of New South Wales GPs.¹ There were several areas described where processes around investigations had failed.² The most problematic area in terms of potential for harm was related to the management of investigation reports. This occurred when investigation reports were filed before the GP had seen them, GPs missed an abnormal result (for example on a second page of a report), and abnormal results were noted by the GP but then not followed up.

The Australian Critical Incident Study of the mid 1990s identified four stages where incidents relating to tests and investigations were commonly found to have occurred: arranging the test, the testing process, communication of results to GPs, and follow up of results with the patient.³ It was found that over half of the incidents associated with investigations could probably have been prevented through more efficient systems for maintaining and passing on test results, and recalling patients for follow up.

In terms of medicolegal risk, up to 50% of medical negligence claims arising in general practice result from a failure to diagnose a patient's condition, and these claims commonly arise from a failure in the practice's test result management system.⁴

The case study presented also highlights a failure in hospital communication with general practice, which was a common finding in the TAPS study. This type of error accounted for close to 10% of all process error events reported.²

Errors in investigation processes found in the TAPS study

- Incorrect patient identification, eg. treating a patient's urinary tract infection based on another patient's investigation results that had been incorrectly filed
- Errors in the process of requesting investigations, eg. ordering an investigation for a patient and accidentally putting the details of another patient on the form
- Incorrect tubes accidentally used when blood samples were collected
- Delays in receiving abnormal pathology results
- Reports being filed without the GP having seen them
- GPs not noticing that there was a second page attached to a pathology report and missing the report of abnormal pathology.

Lessons in preventing errors relating to investigation processes

- Ensure the investigation you are requesting, or the report upon which you are acting, corresponds to the correct patient
- Be vigilant in your practice system of checking and acting on all investigation results. Daily downloading and checking results electronically may avoid some of the errors related to unseen reports being accidentally filed or missing results being overlooked
- Use recall and reminder systems in your practice to follow up outstanding investigation results from other providers and appropriately act upon all abnormal results that you receive.

Conflict of interest: none declared.

Acknowledgement

The TAPS study was funded by a NHMRC PHC project grant. Meredith Makeham was a NHMRC scholar and received additional support under the Researcher Development Program, PHC RED Strategy, funded by the Commonwealth Department of Health and Ageing.

References

1. Makeham MA, Kidd MR, Saltman DC, et al. The Threats to Australian Patient Safety (TAPS) study: incidence of reported errors in general practice. *Med J Aust* 2006;185:95–8.
2. Makeham MA, Stromer S, Bridges-Webb C, et al. Patient safety events reported in General Practice: A taxonomy. *Qual Saf Health Care* 2008;17:53–7.
3. Bhasale A, Norton KJ, Britt H. Tests and investigations. Indicators for better utilisation. *Aust Fam Physician* 1996;25:680–1.
4. Bird S. Missing test results and failure to diagnose. *Aust Fam Physician* 2004;33:360–1.