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

Simone Stromer
MBBS, FRACGP, is a PhD candidate, Discipline of General Practice, The University of 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

Reducing the risk of patient harm

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

Creating safe systems of patient care and maintaining them is an important part of safe clinical practice. Problems within the practice environment and in the process of providing treatment can lead to threats to patient safety.

Case study

A patient presented to a multi-doctor general practice and the reporting general practitioner performed an ear syringing procedure for removal of wax. The GP used a disposable plastic 20 mL syringe with a cutoff butterfly needle. The kidney dish that was used to draw up the water used in the syringe was already in the room and was presumed to be sterile. Its wrapping was broken but it was still in its bag. The procedure was performed uneventfully. Six days later, the patient returned with severe bilateral otitis externa that required referral to an ear, nose and throat surgeon for treatment. The reporting GP later found out that the kidney dish in the consulting room had been used earlier by another GP in the practice. The other GP had decided to put the dish back in its wrapping to prevent anyone else from using it.

Comment

In this case the general practice had a responsibility to have systems in place to ensure that standards for sterilisation were always maintained. Even when a practice has a set of written protocols for sterilisation and other aspects of infection control, it is essential that all staff members know what they are and adhere to them at all times. While it was not clear whether the patient's infection was related to the use of an unsterilised dish, patient harm could have been avoided in this case by having a staff member responsible for reviewing each consulting room at the end of each consultation session and ensuring that all used equipment was taken away for appropriate cleaning and sterilisation.

The TAPS study[1,2] found that some reported errors in general practice were: a direct result of a lack of safety in the physical environment of the practice; due to problems with equipment being used; or related to failings in the processes used in providing services or treatments to patients.

Reports were classified as either relating to the 'process' of providing health care, or the 'knowledge and skills' required to provide care.[2] A small proportion of reports in the process group (1%) related to either processes involved in maintaining a safe physical environment or in performing treatments including procedures and immunisations. This did not include reports where errors resulted from a clinician lacking the knowledge or skills to undertake a procedure or perform an immunisation, which accounted for 3% of all 'knowledge and skills' related errors.[2] An incident monitoring study of Australian general practice conducted in the mid 1990s described a similar small number of 'equipment' related incidents.[3]

Although reported relatively infrequently, a number of patients were reported to have been at risk of significant harm due to these types of process failures. Examples included patients suffering significant physical injury when slipping on broken tiles or falling from examination couches in the practice, or when infection control was not adequate.

One important type of treatment process error related to problems with immunisation practices, such as administering a different vaccine than intended[4] or failing to constitute a vaccine correctly.[5] A recurrent process error was detected through the TAPS study when a number of general practitioners reported cases of administering only the diluent of a preparation of a meningococcal vaccine due to a perceived problem in the packaging of the preparation.[5]

The Royal Australian College of General Practitioners (RACGP) publication *Infection control standards for office based practices*[6] provides guidelines on the cleaning of reusable equipment, sterilisation, monitoring, documentation, and validation. Guidelines on ensuring safe immunisation practices can be found in the RACGP publication *Standards for general practices*.[7]

Table 1. Lessons in preventing errors in the process of providing treatment

- Ensure your practice has clear written protocols on practice systems such as sterilisation, and ensure that all GPs and other staff in the practice have an awareness and understanding of these protocols
- Ensure your practice performs routine audits of the refrigerator and stocking room to ensure that all items are labelled correctly and can be accessed conveniently and safely by staff and that any expired stock is removed
- Avoid physically separating the active ingredient and diluent of vaccines that require re-constitution in the refrigerator where they are stored – when possible choose products where all ingredients for vaccines requiring reconstitution are presented in a single dose package[5]
- Keep your practice's physical environment, including chairs, flooring, and examination couches, well maintained

Errors in providing treatment reported in the TAPS study

- Practice staff being unfamiliar with routine procedures such as how to process contaminated instruments
- Failure in immunisation processes, including problems in vaccine storage and reconstitution
- Hazards in the environment of practices that risked physical injury of patients, particularly elderly patients
- Children falling from examination couches due to insufficient supervision when their parents and GP were distracted.

Conflict of interest: none declared.

Acknowledgment

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 AL, Miller GC, Reid SE, Britt HC. Analysing potential harm in Australian general practice: an incident-monitoring study. Med J Aust 1998;169:73–6.
4. Reid S, Britt H, Miller G, Bhasale A. Childhood immunisation. Aust Fam Physician 1996;25:919–20.
5. Makeham MAB, Kidd MR, Card G. TAPS study highlights menjugate vaccine administration error. Aust Fam Physician 2004;33:679.
6. The Royal Australian College of General Practitioners. Infection control standards for office based practices. 4th edn. Melbourne: The RACGP, 2006.
7. The Royal Australian College of General Practitioners. Standards for general practices. 3rd edn. Melbourne: The RACGP, 2005.

AFP CORRESPONDENCE afp@racgp.org.au