Australian Patient Safety Bulletin

Newsletter of the NHMRC Centre for Research Excellence in Patient Safety
October 2005
Issue 1

Welcome to the inaugural edition of the Australian Patient Safety Bulletin which will be published quarterly.

Last year there were more than half a million articles published in more than 4,600 journals indexed on Medline. The average clinician has very little available time in busy work schedules to keep abreast of the literature. This newsletter will collect pivotal papers and information from key journals and the popular press, interpret the results and summarise key findings. This will assist you in keeping up with the literature relating to Quality and Safety issues.

The objectives of the newly formed national NH&MRC Centre of Research Excellence (CRE) in Patient Safety is to promote and develop resources to improve patient safety.

The intention is that through better identification and understanding of factors affecting patient safety, we will strengthen the evidence base for developing and implementing system improvements to reduce the occurrence of adverse events, and to continually improve the safety and quality of care for patients in Australia.

Our work will involve linking collaborative groups and identifying where research is underway but not yet published.

In the establishment of this new work it is important to ensure that we are best meeting your needs. Comments are welcome and can be made to CREinPatientSafety@med.monash.edu.au

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In this issue

The September 7th edition of JAMA focussed on the impact that extended working hours had on various aspects of patient safety and on the doctor's mental health. The editorial by Dawson and Zee[1] makes worthwhile reading.

Systematic review of how long working hours affect doctors' lives.

Fletcher, K., Underwood, W, Davis, S et al. Effects of work hours reduction on residents' lives. JAMA 2005: 294(9) pp1088-1100.

There are arguments for and against having doctors work long hours. The argument for doctors working long hours is that it provides continuity of care, improves patient-doctor communication skills and provides doctors with more clinical experience. By working longer hours, doctors maintain the workforce. If doctors worked fewer hours there is the risk that this might lead to restricted access to doctors, and more errors due to escalation in workload.

The argument against working extended hours is that it leads to sleep deprivation which has been associated with increased risk of injury to the doctor, stress, and poorer performance on simulated tasks and standardised tests. A previous systematic review identified that there was insufficient evidence that reducing working hours of junior doctors improved patient safety.[2] In this systematic review, fifty four articles were assessed to identify the impact that reducing doctors' working hours had on quality of life and educational experience. Only studies in the US were included.

Results: there was only one major article which was of good study quality - a randomised trial in an ICU[3]. The majority of studies were poorly designed and did not adjust for confounders. The review found that it was difficult to make any informed decision about whether reducing work hours improved quality of life and affected doctors' acquisition of knowledge because of the paucity of good articles to review. It suggested that shorter working hours may lead to improved quality of life. Whether this, in turn, results in better patient outcomes has not been established. There was mixed evidence that reducing working hours impacted on the education received by doctors in the short term, and no studies had evaluated long-term effects (ie whether in 5 years time the doctors are less proficient as a result of having reduced hours earlier in their career).

Take home message: More research needs to be done to evaluate whether reducing doctors' working hours affects performance. It likely improves their quality of life, but the jury is still out on whether it affects their clinical performance.

1. Dawson, D. and Zee, P Work hours and reducing fatigue-related risk: good research vs good policy. JAMA. 2005; 294; 1104-06.
2. Fletcher, K, Davis et al Ann Inter Med 2004: 141;851-57.
3 Lockley, SW, Cronin, JW, Evans, JJ et al. Effect of reducing interns weekly hours on sleep and attentional failures. N Eng j Med 2004; 351:1829-37.

Study comparing lack of sleep with alcohol consumption

Arnedt, JT., Owens, J., Crouch, M et al. Neurobehavioural performance of Residents after heavy night call vs alcohol ingestion. *JAMA* 2005; 294: 1025-1033

This US study of 34 doctors (14 interns, 15 second-year residents and 5 third-year residents) assessed the impact that a heavy work schedule had on clinical performance. Participants were allocated to two groups: (1) those working 4-week day time clinical rotations averaging 44 hours per week and (2) those working approximately 90 hours per week and having to work 34-36 consecutive hours every fourth or fifth night.

At baseline, doctors were asked to rate their level of sleepiness, and were required to participate in two tests. The first test assessed response time to a stimulus and the second test was a simulated driving task, where doctors were required to keep their vehicle in the right lane and drive at a constant speed. Following these tests they were asked to gauge how they performed each test and the effort expended to achieve their level of performance.

Following baseline tests the group working fewer hours were given alcoholic drinks to produce a blood alcohol concentration of 0.05g%. Those working longer hours were given a placebo alcoholic drink. Tests and self-assessment were repeated for both groups.

Results: Compared to doctors working fewer hours who had a blood alcohol concentration of between 0.04 to 0.05g%, doctors working long hours without alcohol -

- had comparable reaction times, lapses, and errors
- had more impaired concentration when using the driver simulator.
- were more likely to rate the effort needed to undertake tasks as quite a lot or extreme

Take-home message: This paper adds to evidence that longer work hours produce error-producing conditions for doctors. Doctors' performance when working 80 to 90 hour weeks was equivalent or worse to that of an intoxicated doctor.

Effectiveness of medical emergency teams

MERIT study investigators Introduction of the medical emergency team (MET) system: a cluster-randomised controlled trial. *Lancet* 2005; 365: 2091-97

This Australian study was aimed at assessing the effectiveness of having hospital emergency teams available to assess and provide early resuscitation for patients who are progressively becoming increasingly unstable in hospital. The emergency team consisted of at least one doctor and one nurse from the emergency department or ICU.

The cluster-randomised controlled trial was implemented in 23 hospitals across five states. The outcomes being measured included the effectiveness of MET in reducing the incidence of cardiac arrest, unplanned admissions to intensive care units and deaths.

Control hospitals continued with what they were currently doing to manage deteriorating patients. Intervention hospitals were provided with education detailing (1) the criteria for calling the MET, (2) the importance of these criteria in identifying deteriorating patients, (3) the need to call the MET quickly if criteria were met and (4) how to call the MET.

Aside from posters in clinical areas and having the calling criteria attached to all new ID badges, the study team played no further role in education during the study period.

Results: During the study period, both the control and intervention hospital had improved adverse outcome rates. Compared to control hospitals, implementation of the MET -

- was not successful in reducing unplanned admission to ICU, deaths or cardiac arrests; and
- resulted in more calls being made for assistance by ward staff (mean calls per 1000 admissions=8.7 vs 3.1, p=0.001) and proportionately fewer calls being made which were associated with a cardiac arrest(16% vs 52%, p<0.001).

The MET was often not used when it was indicated. For example, it was used on only 36% of eligible occasions less than 15 minutes before the event which led to an unplanned admission to ICU, and on only 25% of occasions where it lead to unexpected death (not related to a cardiac arrest). Some of the reasons why the MET did not make significant improvement to outcomes include:

(1) It may not work

(2) It may not have been adequately implemented. Perhaps if different outcomes were chosen or if education was more sophisticated, broad-based and continuous throughout the study period, it may have made a greater impact.

(3) It may not have been implemented for a long enough period of time or in enough hospitals to show a difference. Some interventions take a long time to achieve uptake and acceptance.

(4) Control hospitals may have been contaminated as a result of being in the study eg. through media interest in the project

Take-home message: The impact of MET teams remains unclear.

Reducing pethidine use in emergency departments.

Kaye, KI, Graudind, A., Rotem, T et al. Pethidine in emergency departments: promoting evidence-based prescribing. Med J Aust 2005; 183(3): 129-133

This Australian study was aimed at reducing the prescription of pethidine in 23 emergency departments. Pethidine is no longer accepted as a first line treatment for acute pain. Compared to morphine, it provides no additional analgesia benefit, is shorter-acting, and has similar side effects. It has dangerous toxicity side effects and drug interactions and is the drug most often requested by drug abusers seeking opiods.

A total of 47 public hospitals were invited to participate in the study and 22 accepted. Of those refusing to participate, 12 became the “control” arm. The intervention comprised providing three-monthly education to clinical staff via (1) distribution of guidelines, (2) posters in clinical areas, (3) presentations and small group discussion and (4) departmental meetings in which results of three monthly audits were discussed.

Results: In both the self-selected (non-random) intervention group and the non-participating control group, prescribing of pethidine reduced over a twelve month period compared to baseline. Pethidine use decreased 62% in intervention hospitals (4669 to 1793 units) and 56% in control hospitals (1476 to 648 units). Morphine and tramadol use increased 47% and 53% respectively in intervention hospitals and 22% and 39% in control hospitals.

Take home message: Pethidine use should be discouraged as a first line drug of choice for acute pain. Its use is declining, even in hospitals where interventions have not specifically targeted this issue. Another way to eliminate its inappropriate use is simply by complementing education with pethidine formulary restriction, a method with demonstrated effectiveness[1]

1.O’Connor, AB., Lang, VJ, Quill, TE. Eliminating analgesic merperidine use with a supported formulary restriction. Am J Med. 2005; 118(8):885-9

Linking databases can help in follow up of test results.

Schiff GD, Seijeoung K, Ksonjar N, et al. Missed hypothyroidism diagnosis uncovered by linking laboratory and pharmacy data. Arch Intern Med 2005; 164: 574-577.

Medical errors can result when test results are not followed up in a timely manner. This study looked specifically at the follow up of abnormal results of a thyroid function test; specifically elevated thyroid-stimulating hormone (TSH). A TSH level of 20mU/mL was selected as a cut-off because patients with this level unequivocally warranted follow up. The hospital's laboratory and pharmacy IT systems were linked at patient level to ascertain whether all patients with elevated TSH levels were receiving levothyroxine.

Where there was no pharmacy order dispensed for patients with elevated TSH, they were contacted by phone to see if the script had been filled by an outside pharmacy or whether the elevated level was due to over-treatment of hyperthyroidism.

Results: Of the 982 patients with recorded TSH levels greater than 20mU/mL, 54 were unable to be contacted and 23 patients or 2.3% of all patients were found to have a missed diagnosis of hypothyroidism. The reason for these 23 patients "slipping under the radar" was not identified, however many had blood tests taken in the ED with no subsequent recorded encounters or had results identified after they had been discharged.

Take home message: Errors of omission such as missed diagnosis identified in this study have been implicated in resulting in twice as many adverse events as acts of comission.[1] Data linkage, such as that shown in this study, offer huge potential in reducing errors.

1 Wilson RM, Runciman WB, Gibberd RW, Harrison BT, Newby L, Hamilton JD. The Quality in Australian Health Care Study. Med J Aust 1995; 163(9):458-71.

Future direction for quality and safety in Australia

Paterson R, (Chair, Review Team) National Arrangements for Safety and Quality of Health Care in Australia. The Report of the Review of Future Governance Arrangements for Safety and Quality in Health Care 2005. Available at: http://www.safetyandquality.org/

With the term of the Australian Council for Safety and Quality in Health Care (the Council) winding up on June 30 2006, a Review Team was commissioned by the Council to advise on how safety and quality should progress into the future.

While acknowledging the work of the Council in raising awareness of quality and safety and developing important national policies and standards, the report identified a lack of formal links and partnerships between Council, jurisdictions and other key bodies, as hampering its effectiveness.

In outlining where priorities should lie, the Review Team has focused heavily on the importance of public reporting. In the future, there will be greater emphasis on providing measures of quality against standards. National datasets on safety and quality will be developed. It is expected that this will assist in addressing the gap in knowledge about current safety and quality problems, what effect recent initiatives have had, and the capacity that exists for improvement.

National standards to address key areas of patient harm will be targeted, and might include medication misuse, health care associated infections, inappropriate use of blood products, patient falls, and pressure ulcers. A role of the new safety and quality body will also be to identify and disseminate nationally consistent 'best practice' policies and standards that are demonstrably effective in improving patient care e.g. national standards in regard to Open Disclosure and Credentialing and protocols for medication use.

The dissemination of national standards will -

- avoid duplication of effort
- help to ensure consistency in the delivery of care, and
- promote the coordination of care across the continuum (e.g. between GP clinics and hospitals, whether public or private).

The role of accreditation in both quality improvement and in the implementation of agreed national standards will likely be enhanced.

"…the Review Team has formed the view that there remains a place for a national body to lead patient safety and quality improvement in Australia, but that its *functions* and *purpose* must be clearly defined, it must have effective *links* with jurisdictions and key stakeholders, and its advice must be *implementable*."

Bundaberg Hospital deja vu

Morton AP. Reflections on the Bundaberg Hospital failure. Med J Aust. 2005 Sep 19;183(6):328-329

This article and its accompanying editorial[1] provides an overview of what went wrong in Bundaberg and provides direction for Queensland Health and healthcare as a whole. This article focuses on the lack of effective systems that enabled Dr Patel to work in Bundaberg and the corporate structures that focused more on cost-cutting and revenue raising than on adopting safer systems. Both this article and the editorial discuss the importance of having accountable organisations which are better able to mould effective teams and deal with poor performance.

1. Van Der Weyden MB. The Bundaberg Hospital scandal: the need for reform in Queensland and beyond. Med J Aust. 2005 Sep 19;183(6):284-5.

Risk factors for falls

Krauss, M., Evanoff B., Hitcho, E et al. A case control study of patient, medication, and care-related risk factors for inpatient falls. J Gen Intern Med 2005; 20: 116-122.

This US case control study was aimed at identifying risk factors for patient falls in an acute in-patient hospital. Patient falls are among the most common adverse events reported in hospitalised patients, and have been attributed to many factors including trauma, debilitating disease, environmental hazards, age, mental status, length of hospital stay and gender.

To identify risk factors for falls, each of the 106 falls entered into the adverse event database during a six-week period was compared with characteristics of three randomly selected control cases who were matched for length of stay (n=318).

Results: Factors significantly associated with falling included: having gait/balance deficit or lower extremity problem (RR 9.0 95%CI 2-41), being confused (RR3.6 95%CI 1.6-8.4), taking sedatives/hypnotics (RR 4.3 95%CI 1.6-11.5), taking diabetes medication (RR3.2 95%CI 1.3-7.9), being classified as up with assistance compared to bathroom privileges (RR8.7 95%CI 2.3-32.7), and having increased patient to nurse ratio of > 3 patients per nurse (RR 1.6 95A%CI 1.2-2).

Take home message: Identifying high risk patients can assist in determining placement of at-risk individuals and fall prevention strategies. Such strategies should include frequently scheduled mobilization for those with gait or balance problems or lower extremity problems.

Teaching effective communication techniques

Leonard, M, Graham, S, Bonacum, D. The human factor: the critical importance of effective teamwork and communication in providing safe care. Qual Saf Health Care 2004; 13: 85-90.

Communication failures are the leading cause of inadvertent patient harm. This article documented ways in which formal communication checklists were used to improve the transfer of information in a US health care system. The first example describes the use of a nursing checklist to assist in transferring critically important pieces of information in a predictable structure to doctors and at shift changes. It contained four elements: (1) situation - what is going on with the patient, (2) background - what is the clinical background, (3) assessment - what do I think the problem is and (4) recommendation - what would I do to correct it.

The second example describes the use of a checklist when transferring patients. One checklist was developed for the transferring unit and another for the receiving unit.

The third example describes the introduction of formalized briefings by all members of the surgical team which was implemented after the patient had been anaesthetized. A briefing chart was developed and implemented as relevant to the case. The list outlined questions which should be asked (eg any anticipated problems, a need for pathology, radiology, transfusion) and issues needing to be verified (eg ID patient and site, x-ray available, special instrumentation, patient positioning, post-op pain management).

Embedding standardised tools and behaviour into care processes was demonstrated to be well accepted. Simulation was used to assist in training procedures.

Take home message: Training healthcare workers to use techniques and tools to ensure that appropriate information is transmitted effectively will reduce communication errors and improve safety in complex care environments.

What's in the news?

The Courier Mail 16/9/05.
Junior doctors not supervised.
Two Hervey Bay doctors whose orthopaedic surgery abilities were criticised in a Queensland Health report were victims of allegedly grossly inadequate supervision. The two overseas-trained senior medical officers were regularly rostered for duty when there was no one in the district available to supervise them. They were at one stage on call every second night, creating a potentially unsafe situation for both them and their patients.

A review into problems in the hospital's orthopaedic department, commissioned by Queensland Health and conducted by the Australian Orthopaedic Association in 2004/05 found the treatment of orthopaedic patients received in the region was unsafe. It led to a shutdown of orthopaedic services at the Hervey Bay hospital in May.

Sydney Morning Herald 17/9/05:
Mentally ill stranded as units close.
The NSW Government is closing community mental health centres and moving programs back into hospitals. Dr Matthews, deputy Director-General of NSW Health said that providing mental health services in hospitals was the best way of creating efficiencies and therefore treating more people. This is contested by others such as Patrick McGorry (University of Melbourne, Dept of Psychiatry) who believes it is a step backwards and is a form of institutionalization.

The Age, Melbourne 21/9/05:
Hospitals fail to meet waiting targets.
In July, Victoria introduced new targets for emergency departments. The targets lower the benchmark for admission from 12 to eight hours, and aim to get patients who do not need admission discharged within four hours. Eighty per cent of patients must be treated within those times. Statistics in the first month of operation identified that 66% of patients were admitted within eight hours and the 74% of patients were discharged within four hours.

The Advertiser, Adelaide 20/9/05:
Post code care: mental health crisis.
In a new policy strategy aimed at managing pressure points within a health service, mental health patients will be managed by hospitals in their local area. This means that in some instances patients will be transferred to hospitals without specialist staff and without beds, where they could wait for days to receive a bed.

The Courier Mail 24/9/05
Internal Report- Our hospital's health.
In this article, performance indicators for each Queensland hospital are listed, along with how each hospital "measured up".
The article states -

> "Significant differences in the performance and outcomes of similar-sized Queensland public hospitals have been revealed following the release of the Measured Quality Hospital Reports yesterday. Withheld for almost three years, the reports cover most aspects of the medical services and administration of the state's 59 hospitals from how long each patient stays, through to the daily cost of providing linen on each hospital bed…. For the purpose of statistical accuracy, the report divides hospitals into four distinct categories based on size and similar types of volumes of services and similar geographical areas….The report also acknowledges the data has been analysed and adjusted to take into account statistical variations "to provide the most meaningful benchmarking data possible".

The table below lists the indicators collected

Condition	Definition
Acute myocardial infarction	Rate of patients who have died in hospital within 30 days of an admission for acute myocardial infarction (heart attack)
Heart failure	Rate of patients who have died in hospital within 30 days of an admission for heart failure
Stroke	Rate of patients who have died in hospital after an admission for stroke
Pneumonia	Rate of patients who have died in hospital within 30 days of an admission for pneumonia
Diabetic foot	Number of patients who were admitted for diabetic foot, where an amputation of the foot or leg occurred
Fractured neck of femur	Rate of patients who have died in hospital following an admission for fractured neck of femur. Fractured neck of femur is a condition that affects the elderly population
	Number of patients admitted for a fractured neck of femur where a complication of surgery resulted
Knee replacement	Number of patients admitted for a knee replacement where a complication of the surgery resulted
Hip replacement	Number of patients admitted for a hip replacement where a complication of the surgery resulted
Hysterectomy	Rate of possible complications resulting from treatment in hospital for hysterectomy
Colorectal carcinoma	Number of complications resulting from surgery for colorectal carcinoma.

Some useful information:

The Agency for Healthcare Research and Quality is an excellent source of information. Those wanting to develop clinical guidelines should first peruse the website http://www.ahrq.gov/clinic/ to identify what others have developed.

A consumer telephone number is available for members of the general public who suspect they have experienced an adverse drug event - The Adverse Medicine Events (AME) Line on 1300 134 237. Calls are charged at the rate of a local call from anywhere within Australia

An interim report of the Queensland Health Systems Review was released in July 2005, with the Final Report expected for release on 30th September 2005. This report complements the Bundaberg Commission of Inquiry. It can be accessed via the following link: http://www.health.qld.gov.au/health_sys_review/

The Australian Government commissioned the Productivity Commission to undertake a research study to examine issues impacting on the health workforce including the supply of, and demand for, health workforce professionals and proposed solutions to ensure the continued delivery of quality healthcare over the next 10 years. The study is to be undertaken in the context of the need for efficient and effective delivery of health services in an environment of demographic change, technological advances and rising health costs. The position paper is located at: http://www.pc.gov.au/study/healthworkforce/positionpaper/

SEMINAR

Bristol ten years on: what's changed and where are we going?

Wednesday December 14th 2005, 10:00 – 16:00

Location: AMREP Seminar Room, Alfred Hospital, Prahran, Victoria 3181
(see below for map)
Cost: $50
Book online: ecommerce.med.monash.edu.au

In July 2001 the British Royal Infirmary Report was published in the UK, outlining the extent to which substandard care was delivered to children undergoing cardiac surgery spanning a ten-year period. In the Report, it was stated, “It would be reassuring to believe that it could not happen again. We cannot give that reassurance. Unless lessons are learned, it certainly could happen again, if not in the area of paediatric cardiac surgery, then in some other area of care.”

In this workshop, we pose the questions,

- “Have lessons been learned?”
- “What progress has been made in the last ten years?”
- “What does the future hold for safety and quality?”

Experts and leaders from the safety and quality field will discuss these questions. Clinicians and those from the field of cognitive engineering will discuss how hospitals will change in the future and how efforts to improve safety and quality need to look ‘outside the square’. This workshop is intended to encourage discussion and debate. The audience includes safety and quality managers, clinicians and those wishing to undertake future research in the area.

Map of the area and parking available at http://www.med.monash.edu.au/epidemiology/about/contacts.html
Enquiries to 03 9903 0996

About the CRE for Research Excellence in Patient Safety

The Centre of Research Excellence in Patient Safety is funded by the Australian Council for Safety and Quality in Health Care (Safety and Quality Council), and is designated as a National Health and Medical Research Council (NH&MRC) Centre of Research Excellence. The Safety and Quality Council is a joint initiative of Australian, State and Territory Governments. Collaborating institutions include Bayside Health, University of Queensland, LaTrobe University, Melbourne Health, Austin Health, Southern Health, Wimmera Health Care Group, Australian Capital Territory (ACT) Health/ Australian National University's (ANU) Centre for Health Stewardship, Victorian Institute of Forensic Medicine, CSIRO, Medical Defence Assciation of Victoria, and Peninsula Health.

Safety+Quality COUNCIL

Chief Investigators

Professor John McNeil, MBBS, MSc, PhD, FRACP, FAFPHM

Head, Department of Epidemiology & Preventive Medicine, Monash University. John is Chair of the Quality Committee of the Metropolitan Ambulance Service and Chair of VPHREC. He has held senior medical appointments at the Austin, Alfred and Monash Medical Centre. He has a longstanding interest in the patient safety field, cardiovascular epidemiology, public health and drug safety. His particular interest lies in improving our ability to measure the quality of care delivered; such that reliable, risk adjusted data can be used to benchmark performance between healthcare settings in Australia and internationally.


Prof John McNeil

Professor Peter Cameron MBBS, MD, FACEM

As a practicing clinician in the field of Emergency Medicine and an academic, Peter is interested in translating theory into practice. He is currently involved in a number of studies evaluating the management of trauma patients from the pre-hospital stage until after discharge from hospital. He is Head of the State Trauma registry and also Chair of the State wide Emergency Access reference Committee, looking at better ways to manage acutely ill patients from community through to discharge. Peter is currently Acting Director of the Centre.


Prof Peter Cameron

Professor Don Campbell MBBS(Hons) MD M Med Sci FRACP. Don is Director of the Monash Institute of Health Services Research and holds an appointment as a Physician at Monash Medical Centre. Don's interests lie in the implementation of chronic disease programs in the hospital setting, particularly related to implementation of evidence-based clinical decision making tools.


Prof Don Campbell

Professor Stephen Duckett BEc, MHA, PhD, FASSA, FCHSE, FAICD. Stephen is Professor of Health Policy and Dean of theFaculty of Health Sciences, at La Trobe University. Stephen has has held the position of Secretary of the Commonwealth Department of Human Services and Health and is currently Chair of the Brotherhood of St Lawrence and Chair of the Board of Bayside Health. He has extensive experience in the use of quantitative data to measure the incidence of adverse events. Stephen's interest lies in the application of data into practice.


ProfStephen Duckett

Professor Paul Myles, MBBS, MPH, MD, FFARCSI, FANZCA

Director, Department of Anaesthesia and Peri Operative Medicine, Bayside Health.

Paul's roles have included Head of Anaesthesia Research where he devoted a great deal of time to enhancing the quality of recovery and the quality of life for patients undergoing anaesthesia. He brings to the Centre his expertise in developing and coordinating large trials and has extensive experience in translating research findings into improved patient safety outcomes.


Prof Paul Myles

Prof Penelope Sanderson, BA(Hons), MA, PhD (Engineering Psychology). Professor of Cognitive Engineering and Human Factors, The University of Queensland. Fellow of the Academy of the Social Sciences in Australia. Distinguished International Colleague Award, Human Factors and Ergonomics Society (USA), 2004. Penelope brings to the Centre her expertise in cognitive engineering, a system-based approach to improving the fit between people and the socio-technical systems within which they work.


Prof Penelope Sanderson

Professor Just Stoelwinder MBBS, MD, FRACMA, FACHSE, FAFPHM. Just Stoelwinder is Chair of Health Services Management, Department of Epidemiology and Preventive Medicine, Monash University and Director of Medibank Private Ltd. With a background in healthcare leadership, Just will provide expertise in applying organisational change strategies and mechanisms to coordinate patient care into the design of clinical service improvement and redesign initiatives.


Prof Just Stoelwinder

Executive Officer

Sue Evans BN, GDipClinEpi

Sue is completing a PhD investigating whether an intervention based on input from clinicians can improve the reporting of error by healthcare workers. Past roles have included assisting in the establishment of a statewide reporting system, member of the South Australian Metropolitan Hospitals Quality Committee and member of an expert group in the establishment of the Victorian Infection Control Nosocomial Infection Surveillance System (VINISS). She joined the Centre two months ago and is responsible for coordinating activities of the Centre.


Sue Evans