

Australian Patient Safety Bulletin

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Centre for
**Research Excellence
in Patient Safety**

Articles in this Bulletin have been summarised by staff and PhD students from the the NHMRC Centre of Research Excellence in Patient Safety. The Centre, housed within Monash University's Department of Epidemiology and Preventive Medicine, supports a broad program aimed at fostering high-quality research and teaching in the field of patient safety. Among the Centre's staff are practicing clinicians and researchers with skills in epidemiology, biostatistics, health services management, health policy and human factors. The Centre provides PhD research training to graduates from a broad spectrum of medical and non-medical backgrounds. If you are interested in doing institution-based research or undertaking post graduate study in the field of patient safety, we are happy to offer advice and offer a limited number of PhD scholarships.

Human Factors Seminar and Lecture Series : **Keynote speaker: Professor Sidney Dekker**

The Centre of Research Excellence in Patient Safety (CRE-PS) is privileged to have Professor Sidney Dekker as our first international keynote speaker. Professor Dekker is Professor in Human Factors and System Safety and Director of Research at the Lund University School of Aviation (LUSA), Sweden. Professor Dekker's specialties and research interests are in human error, system safety, human factors of new technology, constructions of risk, reactions to failure and criminalization, and organisational resilience.

This seminar and lecture series is aimed at both frontline and managerial professionals from across the Australian healthcare sector and other high risk industries. Specifically, the seminar and lectures seeks to impart a deeper appreciation of how human factors knowledge can help address some of the unique challenges facing today's health system and how it can provide practical solutions to promote patient safety and quality improvement.

Seminar date - Thursday 6th December 2007

Venue: Charles Latrobe Lecture Theatre
Ground Floor, Royal Melbourne Hospital Function and Convention Centre

Grattan St, Parkville, Victoria 3050

Seminar time - 09.00 - 16.55
(Registration opens 08.30)

Lecture series dates: December 10th, 11, 12th 2007 and January 22nd, 23rd and 24th 2008

Venue All lectures will be held in the AMREP Seminar Room, Alfred Hospital, Commercial Rd, Prahran Melbourne 3004

Lecture times: All lectures 4-6 pm

For registration details, venue, accommodation and parking information go to www.CREpatientsafety.org.au
Enquiries to Peta McLaughlin 03 9903 0245 or Catherine Pound on 03 9903 0891

In this issue

The impact of a closed-loop electronic prescribing administration system on prescribing errors, administration errors and staff time: a before-and-after study. 2

Qualitative evaluation of an electronic prescribing and administration system. 2

The effect of adherence to practice guidelines on depression outcomes. 3

The inverse relationship between mortality rates and performance in the hospital quality alliance measures. 3

A national survey of medical morning handover report in Australian hospitals. 4

Pay for Performance, Version 2.0? 5

"America's Best Hospitals" in the Treatment of Acute Myocardial Infarction. 5

Identifying high-quality hospitals: consult the ratings or flip a coin? 6

Effectiveness of Teaching Quality Improvement to Clinicians: A Systematic Review 6

Effectiveness of strategies for informing, educating, and involving patients. 7

The rise of the doctor-manager. 7

The inverse relationship between mortality rates and performance in the hospital quality alliance measures. 8

Doing good quality research: Part 3. 8

The CRE in Patient Safety is funded by the Australian Commission on Safety and Quality in Healthcare and designated as a NHMRC Centre of Research Excellence. The CRE is based in the Department of Epidemiology & Preventive Medicine, Monash University, Alfred Hospital.

Collaborating institutions include: Bayside Health, University of Queensland, Melbourne Health, Southern Health, Wimmera Healthcare Group, ACT Health, ANU Centre for Health Stewardship, Victorian Institute of Forensic Medicine, CSIRO, Medical Defence Association of Victoria, Peninsula Health, Queensland Health, Australian Centre for Health Innovation, South Australian Department of Health, Western Australian Department of Health, Australian Institute for Health and Welfare (AIHW), Commonwealth Department of Health and Ageing, Australian Council for Healthcare Standards (ACHS), Victorian Department of Human Services, Monash University Department of General Practice, Clinical Excellence Commission, Melbourne Pathology, Peter MacCallum Cancer Centre, Princess Alexandra Hospital, Boston University, (US) Veterans' Affairs, (US), Imperial College School of Medicine. (UK), Bergen University (Norway).

The impact of a closed-loop electronic prescribing and administration system on prescribing errors, administration errors and staff time

Franklin BD, O'Grady K, Donyai P, Jacklin A, Barber N. *The impact of a closed-loop electronic prescribing and administration system on prescribing errors, administration errors and staff time: a before-and-after study. Qual Saf Health Care 2007; 16: 279-284.*

Automated systems for medication prescribing, dispensing and administration are believed to reduce medication-related errors and improve efficiency. The majority of studies have been undertaken in the USA and results cannot be extrapolated to countries where different arrangements for prescribing and supplying medications exist.

This UK study examined the impact of a "closed-loop" automated system on the prevalence and clinical significance of medication-related errors and on staff time. The system included electronic prescribing, ward-based automatic dispensing, barcode patient identification and electronic medication administration records.

The study was conducted in one general surgical ward in a teaching hospital, and used a pre- and post-intervention design. Data were collected 3-6 months before and 6-12 months after introduction of the system.

Results: Significantly fewer prescribing errors were observed post-intervention (2.0% of all orders post-intervention vs 3.8% pre-intervention); with the clinical severity of errors remaining unchanged. There was a non-significant trend towards more errors being detected before the medication was given. Medication administration errors fell from 8.6% to 4.4% overall, and from 7.0% to 4.3% for non-IV doses, both of which were statistically significant. Failure to check patient identity fell from 82.6% of cases pre-intervention to 18.9% post-intervention, a significant reduction.

It was surprising that total compliance was not achieved, as the medications could not be accessed unless the barcode was scanned. This finding was explained by staff circumnavigating the system, e.g. by sticking a barcode on patients' furniture and scanning that rather than the wristband. Time spent prescribing more than doubled using the electronic system. Ward pharmacy time also increased, from 68 to 98 minutes per day. Nursing staff spent less time on drug rounds but more time on medication-related activities outside rounds.

TAKE-HOME MESSAGE: An automated system comprising electronic prescribing, ward-based automatic dispensing, barcode patient identification and electronic medication administration records can significantly reduce prescribing and medication errors, but at the cost of increased staff time.

The potential for errors may still persist, particularly if staff members engage in informal and unintended practices. Initial evaluations of such systems should be seen as a starting point for their further development and ongoing assessment.

Qualitative evaluation of an electronic prescribing and administration system



Barber N, Comfort T, Klecun E. *Qualitative evaluation of an electronic prescribing and administration system. Qual Saf Health Care 2007; 16: 271-278.*

Automated medication prescribing and administration systems are being introduced in many hospitals to reduce the incidence of medication-related errors and improve decision making. Evaluations of these systems have focused on a limited number of process outcomes and have not addressed the socio-technical perspective or how individuals and organisations use and adapt to the technology in a specific setting.

This qualitative study evaluated a "closed-loop" system comprising electronic prescribing, ward-based automatic dispensing, barcode patient identification and electronic medication administration records piloted in one general surgical ward in a UK teaching hospital. A socio-technical framework was used to assess technical performance of the system, attitudes of staff towards it and changes to work practices and the delivery of care. Data were generated through observation of staff and individual and focus group interviews with nursing, medical, pharmacy and management staff and analysed using discourse analysis.

Results: The system became stable three months after its introduction. A number of operational problems were noted, relating to the software, the speed of the computer, the design of the drug cabinet and trolleys and difficulty accessing the workstations. While many problems could be rectified, a number of shortcomings persisted, including incompatibility of the system with several drugs.

Staff members were largely unprepared for this stabilisation period, expecting the system to arrive fully functional. Doctors' and nurses' attitudes changed over time, from hesitation and doubt to overall acceptance, although doctors remained concerned about the system's inadequacies and suggested there was insufficient clinician input into its development. Pharmacists were the main drivers of the system and embraced it enthusiastically.

All staff required initial training and support throughout the stabilisation phase. Once tailored to meet local requirements, the system became integrated into ward practice. Its use shaped the work processes of nurses, doctors and pharmacists, and communication patterns between different professionals changed.

Unexpected changes that occurred include that it became evident that staff viewed the paper drug chart as a means of performing quick assessments of patients' clinical status, and felt that with their replacement a significant and important element of their work practice had been lost.

TAKE HOME MESSAGE: Time and effort are required for automated medication systems to become embedded into the clinical setting. Commercially produced systems may not be suitable for a particular setting without considerable adjustment, limiting their potential to decrease errors and even providing opportunities for additional errors.

Staff attitudes can affect the implementation process, while the technology may have foreseen and unforeseen effects on work processes. These effects are likely to be context-specific and may change over time.

The effect of adherence to practice guidelines on depression outcomes

Hepner KA, Rowe M, Rost K et al. *The effect of adherence to practice guidelines on depression outcomes. Ann Intern Med 2007; 147(5):320-9.*

Depression practice guidelines have been developed using expert consensus and are based on findings from high quality research studies. However, like other guidelines, adherence to recommendations provided in the guidelines by clinicians is patchy at best.

In this article Hepner et al assess the relationship between adherence to a set of practice guidelines for management of depression in general practice and outcome measures of depression symptoms and persistent depression at 12, 18 and 24 months. The researchers also assessed the level of performance in relation to aspects of the guidelines to identify where deficits in the management of depressed patients existed.

Twenty guideline-based quality indicators were developed. Examples of indicators included: whether patients were provided with education, how often they were followed up, whether they were appropriately treated, whether assessment of efficacy of treatment was periodically assessed, whether treatment was adjusted among non-responsive patients, whether patients were appropriately referred to a mental health specialist and whether suicide and alcohol assessments were made. The average score across the 20 indicators was used to create an overall depression quality index (DQI).

Data was obtained through secondary analysis of data collected by self report of patients as part of a quality improvement project between the years 1996-98.

Results: A total of 1131 primary care patients from 45 practices in the US were recruited. Two thirds of participants were females, and more than 70% were white. Only 7% were aged over 65 years and most had at least attained high school education.

While GPs had provided all participants with some education about depression and most GPs did well at recognising and monitoring depression over the succeeding months, they did not do well at following through on treatment over more extended time. Less than half the patients completed a minimum treatment with antidepressants or psychotherapy, and those who were not actively treated were not monitored closely. Less than 40% of patients with persisting depression at 6 months had their treatment adjusted. Conversely, only 45% of those in a low-risk group (whose depression had resolved) were taken off their antidepressant therapy at 6 months. There was a low rate of referral to mental health specialists for complex patients.

After controlling for case mix, the study demonstrated that those patients who received the lowest quality of care as assessed by the DQI were more likely than those who did well against the score to demonstrate depression symptoms at 12, 18 and 24 months and to have persistent depression at 18 and 24 months.

TAKE HOME MESSAGE: This study has provided a proven link between guideline adherence and outcome. Greater adherence to a selected set of practice guidelines for management of depression in this study resulted in a lower burden of depressive symptoms. As Krumholz states in his editorial accompanying this article, "Ultimately, if we cannot demonstrate that better adherence to the recommended strategies is associated with better patient outcomes, we need to consider new strategies".¹

¹ Krumholz H. *Guideline recommendations and results: the importance of the linkage. Annals Int Med 2007; 146(5):342-43.*

The inverse relationship between mortality rates and performance

Jha AK, Orav EJ, Li Z, Epstein AM. *The inverse relationship between mortality rates and performance in the hospital quality alliance measures. Health Affairs 2007; 26(4): 1104-1110.*



Public reporting of hospital quality data is prolific in the United States. In this article the authors advocate that performance indicators provide a means for tracking hospital performance and that reporting these data to the public allows patients to select high-quality providers creating incentives for hospitals to improve care.

The Hospital Quality Alliance (HQA) is a national program in the US that has recently started to release public reports on

process-based indicators of care.

The aim of this study was to determine whether performance on ten HQA indicators for three conditions (AMI, CHF and Pneumonia) is related to risk-adjusted, in-hospital mortality rates. Indicators are listed in Table 1. These measures were selected on the basis that financial incentives were offered for reporting them so the data collection was the most complete.

Table 1. HQA performance indicators used to calculate summary score

AMI	CHF	Pneumonia
Aspirin at arrival	Left ventricular function assessment	Antibiotics provided within 4 hours or less
Aspirin at discharge	ACE inhibitor for LVS dysfunction	Pneumococcal vaccination
Beta-blocker on arrival		Oxygenation assessment
Beta-blocker at discharge		
ACE inhibitor for LVS dysfunction		

For each hospital, the researchers calculated three weighted averages for the HQA performance indicators relevant to three conditions. The HQA average scores for each hospital were then linked to the Medicare Provider Analysis Review (MedPAR) data set, which is an administrative data-set holding discharge data on all fee-for-service Medicare beneficiaries.

All patients aged over 65 discharged with an ICD-9 diagnosis code of AMI, CHF or pneumonia were included and inpatient mortality was the primary outcome variable of interest. Separate risk-adjustment models were built for each of the three conditions, but each included adjustment for co-morbidities, race, age, sex and hospital characteristics.

Results: Complete performance indicator data was obtained from 3,720 hospitals (80% of all acute care US hospitals). After adjustment for patient and hospital characteristics, the odds of death for patients in hospitals in the highest performing quartile on the indicator summary scores were compared to patients in hospitals in the lowest performing quartile. For each of the three conditions, the odds of death for each of the three clinical conditions were as follows: AMI – OR= 0.91 (95% CI: 0.86- 0.96), CHF – OR= 0.92 (95% CI: 0.88-0.98) and Pneumonia – OR= 0.90 (95% CI: 0.86- 0.95). The authors calculated that approximately 2,200 in-hospital deaths would have been avoided if all hospitals had the mortality rates of those in the highest performing quality quartiles.

The authors note that a limitation of this study is that the main outcome of interest was in-patient mortality, yet many of the measures being assessed, such as beta-blockers at discharge, are unlikely to influence in-hospital mortality. Therefore, the authors believed these results are likely to indicate that hospitals which perform well on the selected indicators may perform well on other unmeasured processes of care.

Comment: A critical question to ask is whether the indicators collected actually reflect the quality of in-hospital care. Whether or not a person arrives in hospital on aspirin and beta-blockers or has received pneumococcal vaccination likely doesn't in an Australian context - it more likely reflects quality of care in the community.

TAKE HOME MESSAGE: This study demonstrated that high performance on ten HQA process-of-care indicators was significantly related to lower in-patient mortality rates in this population. While, on face value it appears an important finding it requires careful consideration. Clearly there is an association, however it should not be inferred that it is causal.

A national survey of medical morning handover report in Australian hospitals



Fasset MJ, Hannan TJ, Robertson IK, Bollipo SJ, Fasset RG. A national survey of medical morning handover report in Australian hospitals MJA 2007; 187(3): 164-5.

Clinical handover is the transfer of information and responsibility for patient care from one doctor, or medical team, to another within the broader context of care. In 2005, 53 Australian hospitals, classified as accredited for basic physician training, responded to a questionnaire survey to identify use, structure and format of a type of clinical handover; the medical morning handover report (MMHR). The aim of MMHR is to help to ensure adequate transfer of information and responsibility between after-hours and day personnel in hospitals.

Results: The survey showed that those hospitals with a higher level of Royal Australasian College of Physicians (RACP) accreditation were more likely to use MMHR but that overall only 58% of hospitals routinely carried out MMHR (n=31). Handovers in those hospitals took an average of 15-30 minutes, focused on complete handover of cases, was chaired by a consultant, included no formal teaching and was used to discuss ward problems occurring overnight.

The authors note that this low rate of MMHR use is not in keeping with recently published Australian Medical Association guidelines or with the RACP accreditation requirements that a consultant-led handover should be conducted. They conclude that greater commitment is needed to encourage MMHR use, potentially linking to other accreditation processes to ensure compliance.

TAKE HOME MESSAGE: This survey shows that the uptake of clinical handover procedures is still alarmingly low in many Australian hospitals, pointing to the need for systems and programs to encourage clinical handover practices that assist doctors across metropolitan and rural hospitals. The AMA guide to clinical handover, *Safe Handover: Safe Patients*, provides more information and is available at: <www.ama.com.au>

Pay for Performance, Version 2.0?



Lee TH. Pay for Performance, Version 2.0? *N Engl J Med* 2007; 357(6): 531-3.

The Geisinger Health System's new approach to elective coronary-artery bypass grafting (CABG) is part of the search for an alternative to traditional 'fee-for-service' care. This US scheme promises that 40 key processes will be completed for every patient who has elective CABG. It has become the subject of debate on an international stage.

Although Geisinger does not guarantee good clinical outcomes, it does charge a standard rate that covers care for related complications during the 90 days after surgery. The 40 processes are mostly based on "proven care benchmarks" that come directly from American College of Cardiology and American Heart Association guidelines and are prominent in the critical pathways for cardiac surgery in many hospitals.

There are also a number of new innovations, mostly focusing on preadmission and post discharge steps. For instance, the Geisinger scheme requires that there is post discharge follow-up to ensure that patients are taking their medications correctly, participating in a rehabilitation program and refraining from smoking. In addition, an aspect that differentiates Geisinger is that it guarantees that all 40 benchmarks will be achieved for every elective CABG. This proved difficult to ensure at first but after Geisinger surgical teams created and implemented systems to improve compliance, they are now hitting 100% of benchmarks. Geisinger has some encouraging early data suggesting its complication rates may have decreased since the scheme was introduced but the numbers are too small to draw firm conclusions.

TAKE HOME MESSAGE: It is uncertain whether this case based approach might emerge as a new form of pay for performance but the experience gained by learning how clinicians need to collaborate to ensure that clinical pathways are followed is a valuable one.

"America's Best Hospitals" in the Treatment of Acute Myocardial Infarction.

Wang OJ, Wang Y, Lichtman JH, Bradley EH, Normand ST, Krumholz HM. "America's Best Hospitals" in the Treatment of Acute Myocardial Infarction. *Arch Int Med*. 2007; 167(13):1345-1351.

The U.S. News & World Report's (USNWR) annual issue of "America's Best Hospitals" is the most recognised publication

that ranks and rates hospitals for overall care and speciality. With acute myocardial infarction (AMI) being a common as well as a life-threatening condition, hospitals ranked highly for cardiac services would be expected to rate highly on performance of care for this group of patients. Wang et al set out to ascertain whether ranked hospitals in the 2003 U.S. News & World Report had lower risk-adjusted mortality rates for patients with acute myocardial infarction (AMI) compared with non-ranked hospitals for that year.

Use of a validated mortality risk model endorsed by the National Quality Forum along with administrative data from Medicare, enabled calculation of risk-adjusted mortality rates for approximately 268,000 patients from 3860 hospitals (including some 13,500 patients from the top 50 ranked hospitals).

The top 50 hospitals for 'Heart and Heart Surgery' are ranked according to a rating system based on 3 empirical measures:

- inpatient mortality rates for cardiovascular conditions;
- reputation amongst a group of randomly selected cardiologists; and
- an infrastructure score encompassing nurse-patient ratios; patient discharges; palliative or hospice services; level of trauma services; and a technology index score including services for angioplasty, cardiac catheterisation, open heart surgery, and radiological tools such as MRI.

Hospitals ranked by the USNWR were compared with a cohort of non-ranked hospitals for which Medicare data was available. Both groups of hospitals were characterised by affiliation with a medical school and on-site facilities for performance of coronary artery bypass graft (CABG) surgery.

Patients sampled were Medicare patients aged over 65 years, with a principal discharge diagnosis of AMI. Both patient groups were similar in age, gender and prevalence of comorbidities. Those admitted to ranked hospitals were more likely to have a secondary diagnosis of hypertension, unstable angina and AMI; whereas those admitted to non-ranked hospitals were more likely to have a history of CABG.

Results: The mean inpatient and mean 30-day mortality rates were significantly lower in ranked versus non-ranked hospitals. However, there was noticeable overlap in the distribution of hospital-specific mortality rates, with one-third of ranked hospitals performing outside the best performing quartile, and a number of non-ranked hospitals performing within the best performing quartile for this patient group.

These high performing hospitals were overlooked by the USNWR. Such discrepancy could be related to the methodology that USNWR is based on, with one-third of their ranking score based on reputation, which was not included in the methodology of this study by Wang et al.

TAKE HOME MESSAGE: Hospital profiling systems that rank and rate hospitals need to be considered in terms of the details of the patient population, criteria and methodology they are based on. Such ranking and rating systems undoubtedly have a role in providing guidance for consumers. More importantly, they have a potential vital role in identifying opportunities for quality improvement for providers as they strive to provide optimal care for their patients.

Identifying high-quality hospitals: consult the ratings or flip a coin?



O'Brien SM, Peterson ED. Identifying high-quality hospitals: consult the ratings or flip a coin? *Arch Int Med.* 2007; 167(13):1342-1344.

America has seen copious publications of ratings, rankings and scorecards from numerous agencies. These are aimed at consumers to assist them with their selection of hospitals and physicians. This editorial by O'Brien and Peterson comments on the article by Wang et al (summarised above), and raise issues around reliability, accuracy and consistency of the rating of health care providers.

For almost two decades, the U.S. News has annually ranked America's hospitals, published as "America's Best Hospitals" by the U.S. News & World Report (USNWR), with the aim of helping patients find the best hospital. This rating system is based on a combination of empirical measures, including reputation of the facility according to specialists, outcomes based on risk-adjusted mortality rates, and the facility's structural characteristics such as nurse-bed ratios and advanced technology.

Although these quality performance rating systems share a degree of agreement, divergence is frequently apparent, especially when it comes to true performance of specific hospitals. This can lead to inaccurate ratings. The authors refer to the article by Wang et al (summarised above) which showed that, while risk-standardised mortality rates associated with acute AMI were significantly lower ranked hospitals compared with non-ranked hospitals, there were some non-ranked hospitals that demonstrated better than expected mortality rates. These were overlooked by USNWR.

The authors comment that the findings of this case study on AMI are not unique, and highlight challenges associated with measurement of health care quality. The growing emphasis on quality performance ratings has been shown to motivate an investment by hospital leadership in the process of quality improvement.

TAKE HOME MESSAGE: Performance ratings and rankings need to be interpreted with care, due to the potential for inaccuracy, inconsistency and exclusion. Consistently poor reports however, should prompt action.

Effectiveness of teaching quality improvement to clinicians: a systematic review

Boonyasai RT, Windish DM, Chakraborti C, Feldman LS, Rubin HR, Bass EB Effectiveness of teaching quality improvement to clinicians: a systematic review. *JAMA.* 2007;298:1023-1037.

Quality improvement (QI) programs are designed to teach the basics of recognising and addressing problems inherent in complex medical systems. A lack of standardised processes to reduce medical errors and inadequate communication among multiple layers of caregivers are specific problems that need to be addressed, particularly as patients have complicated healthcare needs and compressed hospital visits.

As of 2003, in order to maintain accreditation, medical schools are required to include QI curricula within their training programs for medical residents. Additionally, QI classes are also part of training programs for medical students and continuing education programs for working doctors. In this article, Boonyasai et al evaluated the effectiveness of various QI curricula by systematically searching medical databases for articles mentioning QI in health care.

Results: A total of 39 articles were identified describing structured QI programs aimed at teaching students and clinicians QI methods. Most of the QI programs demonstrated an improvement in students' and clinicians' knowledge of QI concepts following these sessions, as measured by QI concept tests. However, those articles that evaluated the effect of training programs on patient outcomes had a varied response. Some articles showed improvement in patient outcomes after the QI programs while others showed no effect at all.

Mandatory QI classes aim to improve the quality of medical care. While they appear to successfully teach doctors how to recognise and address problems, they do not necessarily improve patient outcomes. In explaining this further, it might be that patients receive the correct diagnoses when they visit a hospital's Emergency Department yet other organisational factors such as a shortage of medical supplies due to mishandled orders or lack of organisation in the hospital's Medical Record's Department could affect the patient's treatment and ultimately, their outcome.

Nevertheless, the researchers noted that the following characteristics were common in programs that led to positive patient outcomes:

- students and clinicians were provided with active guidance from QI experts throughout the problem-solving process;
- students and clinicians were taught to address problems with small steps of trial and error; and
- students and clinicians received ongoing reviews of their own performance.

TAKE HOME MESSAGE: QI curricula aim to improve the quality of medical care and successfully teach doctors' new concepts. However, there is a less well defined link to their impact on patient outcomes. Identifying characteristics of training programs that improve patient outcomes can help medical training programs identify more effective QI curricula.

Effectiveness of strategies for informing, educating, and involving patients

Coulter A. & Ellins J. *Effectiveness of strategies for informing, educating, and involving patients. BMJ 2007; 335(7609): 24-27.*

Does encouraging patients to take a more active role in their health care improve the quality, efficiency and health outcomes of that care? In this study, the authors have sought to address this question by collating and evaluating evidence of the impact of patient-focused interventions described in the literature, with an emphasis on those derived from systematic reviews.

The strategies evaluated in the study are grouped into four categories of patient focused interventions, according to the overall aims to improve health literacy, clinical decision making, self care and patient safety. In comparing and assessing the impact of interventions designed to encourage patient participation, four outcomes were measured; (1) patient knowledge; (2) patient experience; (3) use of services and costs; and (4) health behaviour and health status.

Results: A total of 129 systematic reviews and a number of other studies were identified that addressed these strategy and outcome categories. Overall, most systematic reviews found the evaluated interventions to have a beneficial effect for the selected outcomes. More specific details of findings are given for each intervention category.

- 1. Improving health literacy:** Written information was found to be useful for improving patient knowledge and experience when provided in conjunction with professional consultation, especially when personalized to a patient's individual circumstances. Leaflets had little effect when given without verbal advice. Web-based information was found to benefit disadvantaged populations the most. Few studies have shown these interventions to be effective for reducing inequalities in health status.
- 2. Improving clinical decision making:** Patient decision aids were found to facilitate shared decision making, and to be cost effective when combined with counselling. Training clinicians in communication skills, and providing coaching and question prompts for patients has also been found to be effective, though barriers to the use of these innovations, such as fear of undermining the clinician-patient relationship, are noted.
- 3. Improved self care:** While information-only self-care interventions were found to be largely unsuccessful, self-help programs supported by clinicians were found to improve health outcomes for patients with a number of chronic conditions. A number of self-care interventions are yet to be adequately evaluated.
- 4. Improved patient safety:** Evaluation of strategies to engage patients in improving the safety of their care is limited. Simplification of dosing regimens has been the most effective way of improving adherence to treatment, and encouraging patients to ask health workers if they have washed their hands has been an effective infection control strategy.

TAKE HOME MESSAGE: While more evaluation needs to be done, there is considerable evidence that strategies to engage patients in their own care can be effective in improving the quality, efficiency and outcomes of that care. Health literacy is central to the success of all other patient-focused interventions.

The rise of Doctor - Manager



Day M. *The rise of the doctor-manager. BMJ 2007; 335(7613): 230-231.*

In the weeks leading up to the appointment of the first medical director of the National Health Service (NHS), it is reported in this short feature article that England's NHS Chief Executive, David Nicholson, has called for increased clinical input into the management of the NHS. Nicholson would like to see doctors applying for all advertised NHS Chief Executive positions within the next two years, since he believes the health service would benefit if clinicians worked with health managers.

A number of senior figures in the NHS have supported this idea, claiming that doctor-managers are more likely to make patient safety a priority, and that their understanding of doctor-patient interactions will enhance quality of care and efficiency. It is suggested that doctor-managers will more effectively deal with "awkward consultant surgeons", whose reluctance to modify work practices has been found to diminish productivity.

However, others have responded by pointing out that employing as many doctors as possible into executive NHS posts will not necessarily improve the service since not all doctors have management skills, and that in fact very few doctors in the UK have ever had senior management experience. Furthermore, not all doctors would wish to work in a management role, particularly as there is a widespread view that the current medical directors of NHS Trusts have a difficult job with little power, training or support.

In light of these misgivings, one chief executive has said that the medical profession must help to change the situation since doctors represent an under-utilised intellectual and managerial resource.

Meanwhile plans are being devised by the Academy of Medical Royal Colleges and the NHS Institute for Innovation and Improvement to incorporate compulsory management and leadership skills training into undergraduate and postgraduate medical courses. In addition, the Faculty of Medicine at Imperial College in London is developing a programme that combines medical education with a master's degree in business administration. These new courses are intended to identify doctors with the interest and ability to become senior managers of the future.

TAKE HOME MESSAGE: A number of senior figures in the UK National Health Service believe that improvements can be made to patient safety, quality of care, and efficiency of services if more doctors are appointed to chief executive positions in the NHS. In response to claims that few UK doctors have the skills or desire to take on senior management positions, plans are being devised to introduce compulsory management and leadership skills training into medical courses in the UK.

Pay for performance in healthcare: strategic issues for an Australian experiment

I A Scott Pay for performance in health care: strategic issues for Australian experiments Med J Aust 2007; 187 (1); 3135

This article provides an overview and critique of selected large scale pay for performance programs. The author also proposes a framework for how pay for performance programs may be approached in the future for Australia.

Pay for performance programs are increasingly being applied throughout Western developed countries health care system. The underlying assumption of these programs is that by aligning reimbursement of the health care provider (as an individual or collective) to their performance against a defined quality or safety measure will improve care.

The concept on the surface is attractive because it is simple, appears to be quite logical and may be the mechanism that prompts more rapid change in the health care system.

However, the impact of pay for performance programs on improving the efficacy and efficiency of health care is difficult to evaluate from the completed studies. The existing studies vary in the rigor of research method, nature of the evaluation and the setting in which the program was implemented.

The article summaries that the research to date suggests pay for performance programs have had only modest gains in performance and the majority of the work is in ambulatory care with a focus on prevention. One of the inherent limitations is the availability of reliable, valid measures that are readily collected. It highlights that the design and implementation of these programs needs greater thought, transparency and rigor.

In the future, funders and policy makers are likely to continue towards using pay for performance programs to drive change in our health care system and in health provider behaviour. The article discusses some of the key issues that should be considered in the future. The author advocates phased pilot demonstration projects with appropriate governance and an interdisciplinary approach that requires the expertise of clinician, economists and epidemiologists.

TAKE HOME MESSAGE: This article is worthwhile reading by researchers, clinician and managers as it provides a clear overview of an important issue that will become more relevant in the near future.

Doing good quality research: Part 3

STEP 3: Elements of research study development

In the March edition of the Bulletin, we outlined how to develop a research question, including the need to scan the literature and develop robust research aims and hypotheses. In the June edition, we provided a summary of different study designs and when they should be used. In this edition, we will outline the practical aspects you should to consider before embarking on a project including ethical considerations, and potential funding bodies.

When embarking on research it is important to consider whether it requires review by a Human Ethics Committee. If your research has negligible risk and involves the use of totally non-identifiable data about humans, ethical review may not be necessary. However, if you plan to publish your findings, the publisher usually requires you to have obtained ethics approval. For the full rundown on whether your project needs Ethics Committee endorsement, you should read "When does quality assurance in health care require independent ethical review?" which can be found at: http://www.nhmrc.gov.au/ethics/human/conduct/guidelines/_files/e46.pdf

Quality improvement should be a core activity of all hospitals and health institutions. Many projects aimed at improving quality can be undertaken without the need for additional funding. This can usually be determined by developing a project plan. Most importantly, you should determine who is going to do the research, how long it will take (including different stages of the project, milestones and deliverables) and what resources will be required. Timelines are often very difficult to determine, especially if you haven't done research before. If you are not sure how long the project will take, ask for advice from others who have done research. A rule of thumb is to estimate how long it will take, and then double it! Don't forget to budget for statistical advice and you should consider involving an epidemiologist to assist with the study design, especially if you want to publish your findings.

If, after having outlined the project plan and budget, you determine that external funding is required, there are many hundreds of potential funding bodies. The NHMRC offer project grants to support individuals and small teams of researchers undertaking biomedical, public health and health services research in Australian universities, medical schools, hospitals and other research institutions. A good site providing useful information on how to write a grant application has been developed in South Australia and can be found at: <http://grantsregister.econtent.net.au/checklist.html>. You might also consider browsing through the Directory of Philanthropy (published by Philanthropy Australia) which lists more than 350 trusts and foundations providing funding and tips on how to apply for grants, write submissions, and details important tax information. The Directory costs \$75.

In our next edition of the Australian Patient Safety Bulletin we will discuss the most difficult question of all: how do you develop research which is sustainable in the long-term? As a national centre with a core purpose of promoting research excellence in patient safety, we are more than happy to provide people interested in undertaking research with advice and assistance. Feel free to contact us via email at sue.evans@med.monash.edu.au