The Dangers of Measurement

Peter Cameron

Head of State Trauma Registry, Dept Epidemiology & Preventive Medicine, Monash University

An increasingly computerised world with linkages and information networks covering most aspects of our existence may appear like nirvana to health epidemiologists and administrators alike. There is enough information stored in electronic data bases to measure and compare process measures and outcomes across the whole spectrum of healthcare.
In parallel we have a movement to align institutional/clinician payment and staff promotion to the numbers generated from this data, a seemingly more objective measure of performance.

What do we know about healthcare systems exposed to payments for performance?

In general, the numbers will improve, the data will improve and administrators will either make the numbers improve or lose their jobs. Clinicians will mostly disengage and try to treat the patients in the face of more administrative bureaucracy.

Can we measure clinical improvements without losing the clinicians and creating perverse behaviour? Can we introduce financial inducements to promote improvements in health outcomes?

Along with the obligation to utilise data to improve the performance of our health system, we also have an obligation to research the effect that our measurements are having. This will include both quantitative and qualitative techniques.

There are two schools of thought: either we refrain from using data until we know that it is of good quality or we publicise bad data or data of questionable quality in the hope that it will then improve.
There are risks associated with using data of bad quality or misinterpreting data:

1. hospitals/clinicians might start turning away high-risk patients
2. hospitals/clinicians might manipulate data by up-coding to improve performance
3. good hospitals/clinicians might be tarnished with a bad reputation. This will undoubtedly affect public confidence and morale within an institution
4. undue attention may be placed on a narrow clinical domain resulting in neglect of other service provision
5. the process of measuring performance with quality indicators may be discredited.

It is imperative that people collecting and reporting on quality indicators are vigilant for perverse effects of incentives/disincentives on data quality. Responsible collection of quality indicator data necessitates that we:

i. Use credible data and have cross validation measures in place including
    1. multiple data sources
    2. linking with outcome
    3. avoiding using data simply because there is a lot of it!
ii. Have adequate risk adjustment. The level of risk adjustment depends on purpose.
iii. Measure more than one quality indicator. The place of shadow indicators and suites of indicators (as opposed to single indicators) is uncertain
iv. Clinician experts need to be engaged in understanding how data are analysed (e.g. Victorian State Trauma Registry, ANZDATA)
v. Measure qualitative aspects of quality in parallel

There is a temptation to measure the mountains of information now available to us. In fact, it would be irresponsible not to utilise the data available to us. However, a cautious approach to analysis of this data is warranted given the potential adverse consequences of wrongly using the data.

Technology allows the rite of passage: The use of record linkage for research into health

James Semmens

Head, Health Services Research, Curtin University of Technology

Background: Record linkage of health service data to allow the development of models to evaluate health service outcomes, particularly at the population level, is a priority in Australia and internationally. The Western Australian Data Linkage System (WADLS), established in 1995, is unique in Australia and one of seven comprehensive record linkage systems in the world. It brings together around 20 million records from more than 30 population-based health datasets and includes the core elements of all hospital discharge data, birth and death records, cancer registrations, cancer records and mental health services data. Other recent additions include Commonwealth datasets such as the Medical Benefits Scheme, Pharmaceutical Benefits Scheme and residential care data for West Australians. Record linkage is performed using probabilistic matching of patient names and other identifiers to create dynamic master linkage keys between the datasets. The state of linkage is continuously updated as new data becomes available.
Record linkage has been used in WA to support public health surveillance, aetiological and primary prevention research, studies of the utilisation, adverse effects and patient outcomes of health and mental health care services. Dissemination of outcomes has translated to changes in clinical care, improvements in patient outcomes and influenced health policy. Important concerns regarding governance, ethics, and patient privacy have been addressed.
Analysis and interpretation
The WADLS has now been used in over 350 distinct health related studies. Recent examples include the assessment of trends and outcomes of patients receiving surgical care; a study of travellers' thrombosis (DVT) in passengers arriving on international flights; the physical status of mental health patients; and long-term health outcomes for prisoners after their release.

Strategy for change: The benefits of data linkage have included: cost-efficiency of research; adding value to existing information assets; conservation of patient privacy; healthcare utilisation for chronic disease management; established benchmark standards for surgical care in a variety of specialties; and improvements in patient safety and population-health. A comprehensive strategy of outcome dissemination has resulted in over 800 scientific papers and conference presentations have been carried out for clinicians, healthcare administrators, policy-makers and planners, and consumers.
Effects of change
The WADLS is now an integral component of the community infrastructure to evaluate the provision, use and outcomes of health care. It is contributing to the national strategy to promote record linkage nationally and internationally. The research methodology developed will be available to other Australian states and territories and is of particular relevance given that NSW has established the Centre for Health Record Linkage in November 2006.

Review of accreditation

Margaret Banks,
Policy Team Leader, Australian Commission on Safety and Quality in Health Care

In November 2006, Australian health ministers requested a national review of current accreditation arrangements across all settings of health care. By March 2008, the Australian Commission on Safety and Quality in Health Care will provide an alternative model of accreditation that includes minimum safety standards to health ministers. Phase one of the consultation process is completed and it elicited a rich source of information which formed the basis of the Accreditation Concept Plan, considered by health ministers in July 2007.
Phase two of the consultation process commences in August 2007. Discussions will focus on the Accreditation Concept Plan, approved by health ministers as the basis of further discussion with stakeholders. Changes that are ultimately recommended to health ministers in March 2008 must meet the tests of relevance, sustainability and affordability. During phase two of consultations stakeholders will examine the Accreditation Concept Plan and consider whether the changes meet these tests.

The relationship between accreditation criteria results and clinical indicators

Marjorie Pawsey[1], Johanna Westbrook[2], Brian Johnston[3], David Greenfield[4], Jeffrey Braithwaite[5], Robert Gibberd[6]
[1]ACHS, Sydney NSW, Australia, [2]University of Sydney, Sydney NSW, Australia, [3]ACHS, Sydney NSW, Australia, [4]University of NSW, Sydney NSW, Australia, [5]University of NSW, Sydney NSW, Australia, [6]university of Newcastle, Newcastle, Australia

Aim: Accreditation organisations including the Joint Commission and the Australian Council on Healthcare Standards (ACHS) are obtaining data from health services in order to compare accreditation processes with clinical indicator (CI) performance. This study aims to establish whether there is a relationship between accreditation surveys and the corresponding CIs in health services. Put simply, we ask: do health services with superior survey results have better clinical performance as measured by CIs, and vice versa?

Method: The results from over 700 hospitals that had an accreditation survey during 2003–2005 were obtained. These consisted of 19 core (mandatory) criteria and 24 other criteria that were scored from 1 to 5. The CIs for these health services for years 2001–2005 were linked to the survey data. The CIs are rates which were converted to z-scores, based on the deviation from the national average for that year. The health services survey results were compared to the results from the CIs.

Results: The criteria level score of 3 (moderate achievement) was common, ranging from 70% to 86%, with 2 (some) and 4 (extensive) being less common and 1 (little) and 5 (outstanding) were infrequent. Thus, there was not a lot of variation in the scoring of the survey data. In contrast, the CI results showed considerable variation. Using analysis of variance (ANOVA) to assess the degree to which the survey criteria scores predicted the CI values, we found that the survey criteria explained less than 10% of the variation in the CI rates. In particular, the mean rates for the two most common criteria scores (3 and 2) were usually very similar. In one case, the triage scores for a health service with a survey score of 1 (little achievement) for the criterion "Patients have access to health care appropriate to their needs", also had a poor rate for all triage times. However, this was not always the case with three health services with a score of 4, (extensive achievement), for "Information for patients is readily available for their rights and responsibilities" had a mean triage score of 64% compared to a national average of 78%. The results for the other CIs will be presented.

Conclusion: Most indicators have considerable variation between and within a health service; there are rates that are both statistically better and worse than the average. This indicates that the role of CIs is to identify areas for quality improvement in a health service. In contrast, accreditation surveys are based on a more global view of the health service, and do not identify particular clinical areas that may cause the score to vary. Surveyors may not use the CI results when surveying. Thus it appears that both measures are required since they perform different tasks. We discuss the implications of our research for accreditation, surveying and quality improvement.

The accreditation of Australian general practices – the journey into the electronic age with AccreditationPro.

Marisa Vecchio, John Aloizos AM, Richard Choong, Kylie Fahey, Jacqueline Moody, Natalie Petrakis
Australian General Practice Accreditation Ltd/Quality in Practice Pty Ltd, Brisbane, Qld, Australia

Introduction: Since 1997 Australian general practices have accessed an accreditation framework against standards developed for the profession by the Royal Australian College of General Practitioners. In this time Australian General Practice Accreditation Limited (AGPAL) has conducted over 12,000 peer-led survey visits. Increasingly, practices wanted a simplified process and tools to help them prepare for accreditation and also provide a quality framework against which they could monitor improvement. Additionally, the results of the Red Tape Review of general practice (2002), provided the impetus for Quality In Practice (AGPAL's wholly-owned subsidiary), to develop *AccreditationPro. AccreditationPro* is the first computer-based system in Australia designed exclusively to support and guide general practices through accreditation. The automated web-enabled tool integrates the standards, self-assessment, survey, reporting and quality improvement activity and additionally provide benchmarking capacity between practices.

Method: Qualitative and quantitative measures were used to develop AccreditationPro. Qualitative data was obtained through three focus groups comprising of practice staff, customer and staff feedback, planning meetings with members and the board, survey of IT representatives. Quantitative data was gathered via a survey of 320 peer surveyors on IT usage and capability and an accreditation/ primary health care environment scan that assessed available tools.

Results: The research identified five issues. Addressing these was the foundation for developing *AccreditationPro.*

1) Surveyors and practice teams find the bureaucracy (red-tape) associated with accreditation a burden. The model needed to simplify the process and not elevate it through increased software complexity – the tool needed to be simple and intuitive. (2) Those practices that excel at accreditation wanted to be recognised and rewarded. (3) Accreditation for other health care markets is gaining momentum and any framework to streamline quality improvement, which would incorporate accreditation, had to be transferable against other standards. (4) An overarching safety and quality agenda in Australia was demanding better data collection methods from accreditation agencies and performance measures. (5) The need for increased consistency at the peer review assessment phase of accreditation.

Discussion: *AccreditationPro* was launched on 1 July 2006. Over 2000 practices have accessed AccreditationPro and 650 practices have completed their self-assessments. Over half of respondents indicated the ease of use; 91% indicated it is useful in understanding the standards; and 68% reported preparation time savings between 5-15 days, with a third of those saving more than 15 days *AccreditationPro* demonstrates the ability for practices to work through the standards in real time and with educational links to assist interpretation and understanding of the standards. It allows the active capturing of performance data to provide a benchmarking capability across primary care and collection of feedback to enable standards development. It also provides a quality framework for practices which is accessible by the entire practice team to enable more efficient preparation and ongoing compliance against the RACGP standards, as well as capturing practice generated quality improvement initiatives which are forming the basis for practice-led quality plans and continuous quality improvement.

Australian adaptation of the ISMP Medication Safety Self Assessment tools

Helen Stark, Jocelyn Lowinger, Maria Kelly, Karen Kaye
[1]*University of Sydney, Sydney, Australia,* [2]*University of NSW, Sydney, Australia*

Introduction: To adapt and field test for Australian use two risk assessment tools developed by US-based Institute for Safe Medication Practices (ISMP): the *Medication Safety Self Assessment® for Hospitals* and the *Medication Safety Self Assessment® for Antithrombotic Therapy.*

Methods: ISMP approved a New South Wales quality use of medicines organisation to adapt the medication safety self-assessments for use in Australian hospitals. Initial adaptations were made by a multidisciplinary advisory group with expertise in the area of medication safety. In adapting the tools, the advisory team considered differences between the North American and Australian environments in terms of hospital practice, drug distribution systems, legislation and product availability. The adapted versions of the ISMP tools were field-tested in a range of hospitals across Australia incorporating public and private, metropolitan and rural, teaching and non-teaching and specialty hospitals. The field test feedback was collated and discussed within a multidisciplinary steering committee, the field test hospitals and the project team to arrive at the final adapted tools.

Results: Field testing was a valuable experience for hospitals. The ISMP tools uncovered gaps in medication safety processes and some hospitals have revised processes as a result. Other benefits included:

- Identifying areas of need in medication safety processes, especially in areas that had not previously been considered
- Development of a prioritised medication safety plan for the next 12 months
- An opportunity to engage a multidisciplinary team to discuss medication safety issues
- Highlighting differences in understanding of different disciplines regarding medication safety

Challenges associated with completing the self-assessments included:

- In some cases, perceptions that the self-assessment was too long, detailed and time-consuming
- Difficulty in maintaining multidisciplinary involvement over the entire process, particularly with medical staff
- A perceived lack of relevance of some questions to some institutions, particularly private and small hospitals
- Some concerns about scoring and the potential use of the data for benchmarking purposes

Discussion: Some of the barriers have been addressed in the final revisions to the tool. Many of these so-called "barriers" related to the participants' lack of familiarity with the self-assessment process and concerns about use of the results for benchmarking. Over time and with regular use, hospitals will become more familiar with the self-assessment process. This has been evidenced in other countries such as the USA and Canada, where hospitals have been using the tools for some years. Support structures need to be available to assist hospitals through the process of self-assessment.
The medication safety self-assessments are specifically designed to help hospitals take a proactive and system-based approach to medication safety. They will assist hospitals in meeting their obligations for accreditation and can drive change by identifying and measuring areas for improvement in medication safety.

Quality indicators in trauma: A study of validity

Cameron Willis, Susan Evans, Johannes Stoelwinder, Peter Cameron
Centre of Research Excellence in Patient Safety, Monash University, Melbourne, Victoria, Australia

Background and study objectives: Quality Indicators (QIs) are routinely used in trauma. However, little information exists regarding the link between process measures and outcomes. Indicators in trauma systems were originally promulgated in 1987 by the American College of Surgeons Committee on Trauma (ACSCOT) and were designed to identify patient groups at risk of poor outcomes. Four in-hospital QIs based on those proposed by ACSCOT are currently employed to measure the quality of care delivered by the Victorian State Trauma System (VSTS). In addition, the Victorian State Trauma Registry (VSTR) is able to collect data on 10 ACSCOT QIs. This study aimed to investigate the ability of the four VSTS and 10 ACSCOT QIs to identify patient groups at risk of a worse outcome as measured by increased mortality, longer lengths of hospital stay and greater use of the intensive care unit (ICU).

Methods: This study analysed data from the VSTR from January 2001 to March 2006. Cases were restricted to blunt trauma, with an Injury Severity Score (ISS) of more than 15 and aged 16 years or more. Univariate and multivariate techniques were used for data analysis.

Results: The study included 5104 cases. The most commonly flagged indicator related to laparotomy not performed within two hours of arrival at the emergency department (ED) (67.4% of applicable cases), while the least commonly raised QI concerned deep vein thrombosis (DVT), pulmonary embolus (PE) and decubitus ulcer (Decub) development (2.6%). There were a number of counter intuitive results. Of the QIs investigated, two were associated with decreased mortality (laparotomy not performed within 2 hours of arrival at ED and subdural or epidural haematoma receiving craniotomy more than 4 hours after arrival), two with reduced lengths of stay (failure to activate trauma team at major trauma service (MTS) and laparotomy not performed within 2 hours of arrival at ED) and four with reduced use of the ICU (failure to activate trauma team at MTS, patients with GCS < 9 who are not intubated, patients with GCS<13 who do not receive a head CT within 2 hours and comatose trauma patient leaving ED before mechanical airway established). Three were associated with increased mortality (abdominal surgery performed more than 24 hours after arrival at ED, interval of more than 8 hours between arrival and treatment of blunt compound tibial fracture and non-fixation of femoral diaphyseal fracture in adult trauma patient), three with longer hospital lengths of stay (cranial surgery performed more than 24 hours after arrival at ED, abdominal surgery performed more than 24 hours after arrival at ED and all patients developing DVT, PE or Decub) and one with increased use of the ICU (all patients developing DVT, PE or Decub).

Conclusions: These findings suggest that some of the present QIs may not be appropriate for the VSTS or other similar trauma systems. The counter-intuitive results for many of the investigated indicators demonstrate significant measurement problems. These results may be due to poor QI definition or the influence of patient and clinician factors. However, those indicators found to be associated with adverse patient outcomes represent a solid foundation for developing, refining and evaluating future QIs for trauma care. Additional investigation of these QIs in comparative trauma systems would provide useful insights into the validity of these measures at the system level.

Mental health outcomes

Aaron Groves

The ambulatory surgery initiative in a public health service

Pamela Tindall, Mark Salmon
Department of Health, Western Australia, Australia

The state piloted the Ambulatory Surgery Initiative (ASI) in July 2004 at two metropolitan secondary hospitals. The initiative provides an alternative referral option for low-risk, non-admitted surgical procedures that can be performed quickly as additional work at secondary hospitals (as distinct from referral to a tertiary hospital waiting list). It was developed and implemented to reduce public waitlist and patient wait days and improve utilisation of hospital facilities. Seven metropolitan secondary hospitals and one regional hospital are now part of a mainstreamed ASI. From commencement (July 2004) to December 2006, ASI 'completed cases' totalled 11,129. Current activity is 650-700 cases per month. Other health sites throughout the state are also working towards establishing ASI.

Specialties undertaken include gastroenterology, ophthalmology, urology, gynaecology and general surgery and other mainstream low-risk procedures that meet the hospital's theatre and resource capacity. Specialists work in a private capacity on the basis that their fee for the procedure is bulk-billed to Medicare Australia, hence the patient has no out-of-pocket expense. The bulk billing arrangement is consistent with the Australian Health Care Agreement between the Commonwealth and the state. For a patient to be treated under ASI: (i) a doctor's referral to an individual (named) specialist is required; and (ii) prior to treatment, the patient must indicate their informed election to be seen as a private (non-admitted) patient.

Advantages of ASI

- improved utilisation of secondary hospital resources (efficiencies in theatre utilisation have been achieved)
- improved utilisation of teaching hospital resources (focus is on acute and complex caseloads)
- improved waitlists and wait times. Department figures show elective waitlists and wait days the lowest they have been since 2004. Average wait days in December 2006 = 109 compared with 120 in December 2005.

(For most patients being directly referred and treated under ASI, the wait time can be as low as 14 days).

- Endoscopy services are in a better position to manage colonoscopy procedures arising from the National Bowel Cancer Screening Program implementation in the state.

An increasing number of clinicians are partnering this initiative with the department through agreement to do additional work under the ASI Business Rules. The rules underpin the structure for ASI processes and practices. The state government, through the Minister for Health, provides legal protection to participating clinicians under the umbrella of medical indemnity and protocol agreements. Participating hospitals provide nursing staff, theatre facilities, non-medical staff, equipment, consumables and prostheses as required. General Practitioners (GPs) and patients are becoming increasingly aware of the ASI as a referral option and are choosing to elect ASI through a 'direct referral to a named clinician'. This is easing pressure on tertiary waitlist management and helping to reduce the anxiety felt by patients who might otherwise face longer waiting times on tertiary hospital waitlists. The department has been promoting this initiative to GPs through GP divisional offices. GPs can access comprehensive information about ASI and an electronic referral form at the department's website or they can obtain advice from the ASI Project Manager.

Managing the wait: responding to the consumer

Ken Ooi, Lyn English
The Queen Elizabeth Hospital, Adelaide, SA, Australia

Introduction: The emergency department (ED) consumer advisory working group was formed in 2004. The group includes a local general practitioner, consumers, carers, mental health representatives and a mix of junior and senior medical and nursing staff from ED. Objectives of the group are to improve patient care by highlighting the consumers' perspective, provide a fresh outlook on old problems and review priorities, as consumers' priorities are often different to clinicians. There is an increasing focus on the way patients are managed while waiting definitive review and treatment in the ED. In the current ED model, little patient care occurs in the waiting room despite the prolonged periods spent there. The ED consumer advisory group chose "managing the wait" as a focus for improvement in 2006. Three main areas were identified as potential clinical risks or as causes of patient dissatisfaction. The environment, communication and access to early treatment.

Methods: Pre- and post-intervention surveys were used to assess patients' understanding of the triage process, expectations of waiting times, patients' satisfaction with their ED experience, the impact of the intervention and to identify future areas to be addressed. Identification, discussion, proposing solutions and seeking consensus was considered to be a valuable process for the group.

Results: *Environment*
Signage has been changed in ED to be more consumer-friendly, for example "Triage Nurse" has been changed to "Patient Assessment Nurse – Please report here first". Curtains have been installed to screen off ambulance patients when they arrive to improve privacy during triage. Even chairs have been tested in different arrangements in order to decrease patients' view of barouches and toilets and still maintain the triage nurse's overview.

Communication: Lack of information about the triage process and why people wait to see a doctor in the ED are major factors in patient dissatisfaction. This can lead to increased rates of people leaving before being seen. An information brochure and a DVD have been produced which explain the triage process and reasons for delay. A Vietnamese translation is also available and we aim to make other languages available.

Early access to treatment: Traditional ED model involves little patient care until the patient is taken into a cubicle and seen by a medical officer. Emergency practice now recognises that care starts when a significant intervention occurs and a patient enters a clinical pathway. The ED was successful in gaining a Clinical Practice Improvement (CPI) grant to assist in developing a nurse-led model of early assessment and intervention teams to be based in the waiting room. Also we integrated the Nurse Standing Order Packages, the Nurse Initiated X-ray Competency Packages and the Advanced Practice Nursing programs.

Discussion: The team approach (consumers and staff) provides varied perspectives to raise issues in order to improve the quality of care and treatment. Ongoing commitment to improving communication in the ED will remain a high priority for the group, including communication between staff and carers or other third parties where appropriate. Numerous opportunities for change have been identified and the group is dedicated to the ongoing improvement of safety and quality within the ED.

A new clinical system for effective discharge planning

Cathy Daunt

Princess Alexandra Hospital, Brisbane, Queensland, Australia

The objectives of this project were to redesign a clinical discharge system:

- To reduce LOS
- Increase discharges by 10am leading to a higher bed availability from 10am weekdays-easing access block from ED
- Enhance the patient experience
- Standardise a basis for tracking and communicating estimated discharge date to improve co-ordination between teams and enable patient discharges "'to be planned"
- Improve care planning coordination and communications among all ward services via daily multidisciplinary team meetings using standardised referral methods
- Daily prioritisation and co-ordination of activities related to Patient Care, including early commencement of Allied Health interventions, scripts and discharge summaries
- Improve the number of discharges in the morning to promote draw up from the emergency department

A new clinical discharge system was designed:

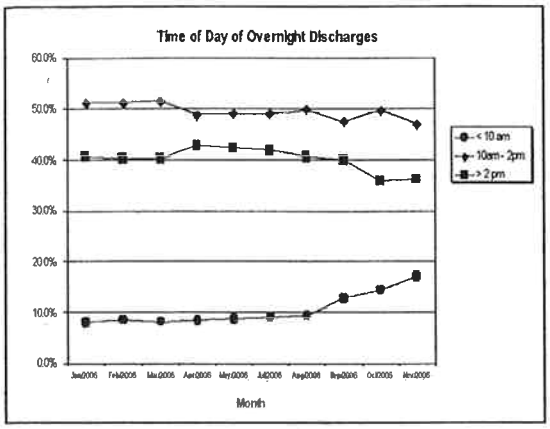
- Redesign and standardise a new clinical system to enhance an efficient and effective discharge
- Estimated date of discharge: Ensuring all patients have a recorded estimated date of discharge to provide a discharge 'milestone; for multidisciplinary teams to aim towards using LOS data
- Whiteboard tracking: Investigate the use of generic whiteboard tracking for a highly visible and transparent approach to daily care planning
- Customised provisional diagnosis handover list: Investigate the use of generic provisional diagnosis nursing handover sheets which list the estimated discharge date and document the individual patients' discharge plans
- Daily multidisciplinary planning meetings: Provide a structured method that enables a consistent approach to proactive discharge planning throughout a patients' stay to ensure safe and efficient discharges
- Allied health referrals: Standardise the process for Allied Health Referrals and develop mechanism to centrally document and track allied health referrals
- Timely completion of pharmacy scripts and dispensing of discharge medication: To take a proactive approach to ensuring discharge medications are dispensed ahead of discharge date and departure time
- Timely electronic discharge summaries: To take a proactive approach to ensuring the completion of timely and meaningful discharge summaries to facilitate a more timely and safe discharge
- Delay tracking: Investigate the use of HBCIS Delay Tracking module to record the source of discharge delays

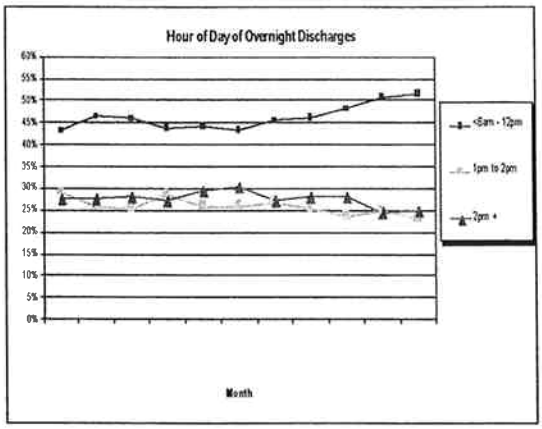
The results to date include:

- The number of discharges by 10 am has increased with the number discharges between 10am-2pm and after 2pm decreasing. Data indicates there has been over a 59% increase in discharges before 10 am since July 2006.
- The average length of stay for acute overnight patients has also decreased since August 2006 from 7.95 days in August to 6.96 days in November 2006
- Standardised basis for tracking and communicating the estimated discharge date and improved co-ordination between teams which enables patients discharge "to be planned"
- Improved care planning, prioritisation and coordination via daily ward multidisciplinary team board meetings
- Number of discharge scripts sent to pharmacy the day before discharge is also slowly increasing.
- Since the implementation of the 'discharge by 10am' initiative there has been a significant change in hospital culture and a heightened awareness towards facilitating early discharges by 10am. There has been improved communication and collaboration between allied health, nursing and medical teams improving care planning and coordination.

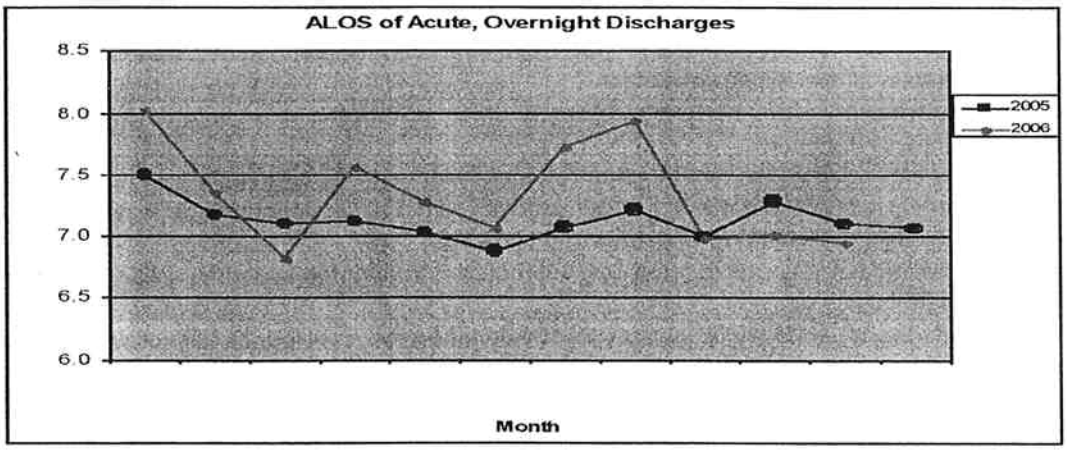
The results to date include:

- The number of discharges by 10am has increased with the number discharges between 10am-2pm and after 2pm decreasing. Data indicates there has been an over 59% increase in discharges before 10 am since July 2006.





The average length of stay for acute overnight patients has also decreased since August 2006 from 7.95 days in August to 6.96 days in November 2006



What consumers want from primary healthcare – consistent quality in the non-acute care setting

Russell McGowan,
President, HCCA

Most attention to date has been focussed on quality frameworks within hospitals but hospitals are usually not the appropriate paces to manage those of us living with chronic conditions. What is it about primary and specialist healthcare in this country that channels so many of us into the expensive and sometimes unsafe tertiary hospital system?

Applying the triple A CEO dimensions of quality to an analysis of the primary care sector reveals sub-optimal performance that can only be corrected by more effective collaboration between those providing and those receiving the services. This results in a challenge to clinicians to empower consumers to self-manage their chronic conditions to relieve pressure on beleaguered tertiary resources and enable primary healthcare professionals to direct more efficient use of secondary and tertiary healthcare resources.

Hospital care of residents living in residential care facilities: Profile, patterns of utilisation and quality and safety of care

Sanjay Jayasinghe[1], Lis Young[1], Nancy Santiano[1], Adrian Bauman[3], Jeff Rowland[2], Hugh Dickson[2]
[1]*The Simpson Centre for Health Services Research, Liverpool, Australia,* [2]*Liverpool Health Service, Liverpool, Australia,* [3]*University of Sydney, Sydney, Australia*

Background: A new-born Australian has a 20-34% chance of residing in an aged care home sometime before death. Residents in RCFs are likely to be frequent users of acute hospital services. However, there is a paucity of Australian data on the volume and the characteristics of the patient flow between these two sectors. Quality and safety of the hospital experience of RCF residents also remains unexplored. Infirmities associated with advanced age hampers eliciting reliable information from this group of consumers. To overcome this problem employing appropriate proxies to respond on their behalf is required.
This study was conducted to determine the patterns of utilisation and characteristics of RCF residents accessing a Tertiary Referral Centre (TRC) and to explore the quality and safety of care they receive in the TRC.

Methods: An observational study of all residents presenting to the TRC's Emergency Department (ED) during a nine month period. Administrative databases and information held by RCFs were used to estimate utilisation rates. The experiences and perceptions of acute care services were explored for a convenience sample of this group 2-3 days post-hospital discharge using the Picker Patient Experience Questionnaire (PPE). The carer within the RCF and a relative who visited the resident in hospital acted as proxy respondents.

Results: Proportion of RCF residents of all ED presentations was 2.3%. Number of residents accounting for these presentations was 526. Approximately a tenth presented more than three times. Two-thirds of these ED presentations resulted in an admission as an inpatient with a mean length of stay of 11.85 (±SD 9.67).
Carers reported the highest proportion of problems (53.1%) for the PPE hospital care dimension of 'continuity and transition'. A similar proportion of carers and relatives (45%) reported a problem for 'the level of their involvement with patient's hospital care'. Approximately half of the relatives felt that 'they did not receive adequate emotional support from hospital staff'.
The likelihood of RCF staff reporting a problem for 'continuity and transition' (OR 3.58, CI 1.72-7.45) and 'information and education' (OR 2.62, CI 1.14-3.01) was higher if the resident had been admitted as an inpatient. Similarly, a significantly higher (p=.005) proportion of relatives reported a problem for this dimension for admitted episodes. 'Low level care status' and 'hospital presentation related to a fall' were the other factors that increased the odds of reporting problems.
Main themes emerging from free text data of the interviews were 'hospital staff citing privacy legislature as a reason for not sharing patient information' and 'poor quality and inadequate content of discharge summaries'.

Conclusions: Factors at patient and the organisational level impacted significantly on problems relating to quality and safety of care being reported. Poor communication between the two sectors emerged as a major issue. It is likely that if communication about patient/resident were seamless, re-attendances and re-admissions might be reduced. Knowledge on the nature and the volume of patient flow between the sectors is necessary to design and implement strategies to optimise care for this group of consumers.

Grass roots quality – A simple approach to implementing a quality improvement framework for health professionals working in the community

Suzanne Corcoran

Bendigo Health, Victoria, Australia

Introduction: This abstract briefly describes the formal process of supporting clinicians working in the community to act as departmental 'champions' for the implementation of quality improvement activities in an environment where there had been little structure to support and promote quality improvement.

Methods: Departmental 'Quality Representatives' were recruited by the Quality Improvement Manager to effectively support the implementation of a quality improvement framework across a group of community services based at a large regional health service. Clinicians were supported and informed to act as a resource for their manager and colleagues through the development of the following:

- 'Quality Representative' role statement outlining key responsibilities of the position
- Attendance at monthly workshops facilitated by the Quality Improvement Manager, providing information as requested by the 'Quality Representatives' through a six-monthly staff education needs survey
- Attendance at an annual education day, providing consistent information regarding quality processes and accreditation requirements
- Participation in accreditation focus groups, providing several 'Quality Representatives' with the opportunity to highlight results and outcomes of successful departmental quality activities to auditors
- Regular meetings with the Quality Improvement Manager within their own department, providing advice regarding implementation and evaluation of strategies and the monitoring of progress with the departmental quality plan
- Completion of clinical audits within their own department according to the central auditing schedule
- Registration of quality activities by the 'Quality Representative' or by other staff as supported by the 'Quality Representative' in the electronic database used to store all organisational quality results and outcomes per department or clinical program
- Dissemination of achievements and other quality improvement related information at staff meetings

Results:

- 100% of all departments have at least one 'Quality Representative' with some departments having five
- 100% of all departments have a regularly scheduled meeting with the 'Quality Representative' and Quality Improvement Manager in addition to attendance at the monthly 'Quality Representative' Workshop
- 80% of departmental quality activities are registered in the organisation's electronic Quality Improvement Summary Database by 'Quality Representatives', informing the development of self-assessment documents and quality plans
- Average attendance at the monthly 'Quality Representative' workshops is more than 75%
- 'Quality Representative' retention rate of 70% with 90% positions replaced within one month
- Compliance with all relevant accreditation processes

Discussion: The recruitment and development of 'Quality Improvement Representatives' has effectively and simply supported the implementation of a quality improvement structure for community-based services within this organisation.

Pre-operative antibiotics prophylaxis – Experiences from a Taiwanese medical centre setting

Shei-Ling Ku[1], Ching-Shui Huang[2], Chei-Ming Lin[3], Jing-Shan Huang[4], Der-Fang Chen[1], Pa-Chun Wang[5], Ya-Hui Chen[6]
[1]Operation Room, Cathay Medical Center, Taipei, Taiwan, [2]Division of General Surgery, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, [3]Division of Urology, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, [4]Division of Neurosurgery, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, [5]Quality Management Center, Cathay Medical Center, Taipei, Taiwan, [6]Cathay Medical Research Institute, Taipei, Taiwan

Introduction: Proper administration of prophylactic antibiotics is critical to prevent post-operative wound infection. This study introduces the quality improvement measures taken in a medical centre with an aim to enhance antibiotics administration appropriateness.

Methods: This study was conducted in a prospective manner in the operation theatre from a Taiwanese medical centre. Appropriateness of prophylactic antibiotics administration is defined as "proper antibiotics use within 60 minutes before surgical incision". "Time of antibiotics administration" and "time of incision" were recorded in minutes for all total knee replacement, total hip replacement, trans-abdominal hysterectomy, trans-vaginal hysterectomy, cardiac coronary bypass surgeries from 2002. The quality improvement measures, including: modification of clinical pathway, re-engineering of workflow, establishment of standard operation procedure, and re-assignment of accountability are introduced during the study period from 2002-2007. The appropriateness of prophylactic antibiotics administration is retrospectively reviewed and compared between groups before and after quality improvement interventions.

Results: The appropriateness rate was 52.3% at pre-improvement stage (year 2002-2004), 88.8% at improving stage (2004-2005) and near 100% at maintaining stage (2005-present). The appropriateness rate at present time is superior to all other peer International Quality Improvement Project (IQIP) participant hospitals.

Discussion: Prophylactic antibiotics need to be administered at proper time with proper dose prior to surgery. Appropriateness of prophylactic antibiotics administration may need delicate coordination among patient transportation, operation, and anesthesia teams. Our high appropriate rate proves to help in reducing wound infection and improving patient satisfaction.

Improvements in quality of services in healthcare organisations through accreditation

Bhupendra Rana, Girdhar Gyani
National Accreditation Board for Hospitals and Healthcare Providers (NABH), New Delhi, India

Introduction: Consumer awareness and demand for quality has lead healthcare providers to think on improvement in terms of value addition to the consumer. Data collected from accredited hospitals shows that the changes brought in through accreditation have helped in improving the quality of its services in real terms.

Methods: A customised questionnaire was sent out to accredited hospitals which provided adequate information to establish the outcome stated above. The questionnaire required information related to selected parameters from five different chapters of accreditation standard. These chapters include Care of Patients (COP), Management of Medication (MOM), Hospital Infection Control (HIC), Facility Management and Safety (FMS) and Human Resource Management (HRM). The parameters selected in these chapters were as follows:
COP: Treatment orders are signed, named and dated by concerned doctor; care plan is countersigned by the clinician in-charge within 24 hours; CPR training, recording and analysis.
MOM: Sound alike and look alike medications are stored separately; medication orders are written in a uniform location in the medical records; documentation of medication administration; adverse drug events reporting and analysis; recording of batch and serial number of implantable prosthesis in the patient's medical record and master log book.
HIC: Documentation of hospital infection control program; antibiotic policy – documentation and implementation; hand hygiene for healthcare providers; hospital associated infection data.
FMS: Equipment maintenance (inventory, logs, inspections, calibrations); maintenance plan for medical gases; mock drills to train on fire and non-fire emergencies; staff education and training for management of hazardous materials.
HRM: Defining job description and specifications for staff; regular health checks of staff dealing with direct patient care are done at least once a year and findings are documented; personal files of each staff member are maintained.

Results: The respondents in this survey enthusiastically endorsed the national accreditation program and identified a number of benefits. Information provided by the hospitals clearly indicate the change due to accreditation process .It has lead to improved practices in respect of above mentioned parameters and therefore enabled hospitals in providing quality services. Hospitals were practicing few things on piecemeal basis but the accreditation process made them to establish the requirements in a systematic and uniform manner.

Discussions: This study supports the idea that an holistic and culturally-relevant accreditation system is both possible and beneficial for national health care services. It provides a strengthened foundation for capacity building as well as increased credibility in the system. It was little difficult for the care-providers including clinicians to accept the change but an intensive education and training program helped them understand the relevance which ultimately proved its value.

Successful implementation of three tools for specialty-based learning from incidents

C Snijders[1], RA van Lingen[1], WPF Fetter[2], A Molendijk[1]
[1]Isala klinieken, Zwolle, Netherlands, [2]VU University Medical Center, Amsterdam, Netherlands

Objectives: To implement a voluntary, non-punitive incident reporting system in Dutch Neonatal Intensive Care Units (NICUs) for specialty-based learning; to introduce and test PRISMA-Medical[1] as a systems-based method for identification and classification of the causes of incidents; and to introduce a safety culture survey for the evaluation of safety practices.

Methods: In July 2005, a Neonatology System for Analysis and Feedback on medical Events (NEOSAFE) was introduced in 8 NICUs and 1 paediatric surgery ICU in The Netherlands. Following the example of an Australian study[2], voluntary, non-punitive incident reporting was introduced to establish specialty-based learning from incidents. An incident was defined as any unintended event which (could have) reduced the safety margin for the patient. Multidisciplinary Patient Safety Committees (PSCs) collected and analysed incidents and provided feedback to their unit in a blame-free manner. From July 2005, incident reports have been collected centrally for specialty-based analysis. In November 2005 and May 2006, interrater reliability of PRISMA-Medical was examined, performing Î statistics on test cases executed by PSC members. In May 2005 and June 2006, a validated safety culture survey[3] was distributed to all unit employees, and multi-level regression analysis was performed to determine the factors that contributed to the number of incidents reported.

Results: PRISMA-Medical was reliable (Î 0.68 and 0.72 in November 2005 and May 2006, respectively) for the classification of the causes of incidents. During the first year 5225 incident reports were collected (136 reports on 100 admissions, compared with 18/100 in 2002-2004). Medication incidents were most frequently reported (28%), although incidents with intravascular lines and mechanical ventilation were most serious (n=22/60 serious incidents (37%)). Analysis of incidents with medication, intravascular lines and mechanical ventilation during the first 6 months identified 8% technical, 27% organisational, 62% human and 3% patient-related causes (mean 2.5 causes/incident). The safety culture survey (overall response rate 80% in 2005, 76% in 2006) showed a significant increase in the number of incident reports in June 2006 compared to May 2005, and a significant association between the number of incidents reported and a non-punitive approach to error.

Conclusions: We successfully implemented three tools for specialty-based learning from incidents: a specialty-based, voluntary, non-punitive incident reporting system to increase the number of incident reports; a safety culture survey to evaluate the effect of safety practices; and PRISMA-Medical as a reliable method for the classification of multiple causes of incidents. Future research should focus on the development of systems-based preventive strategies and their impact on patient harm.

1. van der Schaaf TW, Habraken MMP. PRISMA-Medical. A brief description. Eindhoven University of Technology, Faculty of Technology Management. August 2005
2. Beckmann U, Baldwin I, Hart GK, Runciman WB. The Australian Incident Monitoring Study in Intensive Care: AIMS-ICU. An analysis of the first year of reporting. Anaesth Intensive Care 1996;24:320-9.
3. Sorra JS, Nieva VF. Hospital Survey on Patient Safety Culture. AHRQ Publication No 04-0041. Rockville, MD: Agency for Healthcare Research and Quality. September 2004

Improving clinical handover – Steps taken to support clinicians in the delivery of safe, effective clinical handover

Annie Moulden, Sherene Devanesen, Simon Fraser, Kathy Byrne, Sue Kirsa, Doug Travis, Patricia McGarrity
Victorian Quality Council, Melbourne, Victoria, Australia

Clinical handover is a recognised issue in maintaining patient safety. Evidence for this can be found in Sentinel Event Program Annual Reports, outcomes of health service inquiries, coroner's recommendations and the international literature. Whilst the importance of good clinical handover has been recognised internationally, there is limited research to guide the development of best practice standards. Work has been undertaken to summarise the information available, identify the key issues, share current work and develop tools to provide support to clinicians. A pilot project is planned for early 2007 to evaluate the tools.

Clinical handover is a complex issue with limited evidence-based solutions. It was initially unclear where to focus work to improve clinical handover. A consultative approach, with input from a broad range of stakeholders, was used to determine the way forward. Consultation was used to identify key issues and to determine if issues were consistent across different settings.

Initial steps included the development of an information sheet summarising the current understanding of patient safety issues related to clinical handover and suggested system improvements. A survey of all health services within the state was conducted, to identify the particular type of clinical handover that was seen as an issue. Metropolitan and regional health services identified shift-to-shift, acute to community and inter-hospital transfers as the most problematic. Some differences were observed in the rural setting. Analysis by discipline occurred also. (Graphs will be used to demonstrate results.) Survey participants were asked to identify areas they would most like to see work directed. Two clear areas resulted; training in clinical handover and communication skills, standardised tools to support clinical handover. A decision was made to develop standardised tools.

The initial emphasis on the development of clinical handover tools related to a minimum data set. A Clinical Handover Workshop was held to provide a forum for discussion about clinical handover and to further develop a minimum data set.

Presentations, group work and discussion at the workshop emphasised the need for organisational commitment to improving clinical handover. This resulted in a shift in the project work to developing a suite of tools to support clinicians and outline the organisational support necessary to ensure safe effective handover.

A pilot project will commence in early 2007 to evaluate the appropriateness and acceptability of the clinical handover tools. This will involve a number of metropolitan and regional health services. A decision has been made to do further work with rural health services to identify the key problems and determine if the same solutions are appropriate. At this point in time the issues appear to be different from those in regional and metropolitan health services.

Posters: Human Resources for Health

Poster 74

Application of Balanced Scorecard Methodology to Improve Staff Performance at an Operation Room Setting

Ya-Hui Chen[1], Ching-Shui Huang[2], Chei-Ming Lin[3], Jing-Shan Huang[4], Der-Fang Chen[5], Pa-Chun Wang[6], Shei-Ling Ku[5]
[1]Cathay Medical Research Institute, Taipei, Taiwan, Province of China, [2]Division of General Surgery, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, Province of China, [3]Division of Urology, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, Province of China, [4]Division of Neurosurgery, Department of Surgery, Cathay Medical Center, Taipei, Taiwan, Province of China, [5]Operation Room, Cathay Medical Center, Taipei, Taiwan, Province of China, [6]Quality Management Center, Cathay Medical Center, Taipei, Taiwan, Province of China

Introduction: In today's competitive health industry worldwide, hospitals have to re-engineer employee incentive to comply with organisation objectives. Balanced scorecard (BSC) methodology is used in an operation room setting to establish comprehensive strategies with aims to improve staff performance.
Methods: There are 4 major objectives for operation room management improvement, including: 1) Improve staff computer skill; 2) Improve patient identity verification; 3) Reduce operation room turnaround time; 4) Reduce ambulatory surgery waiting time. The BSC methodology was introduced since Oct. 1 2005. The measures taken to improve staff performance are: stepwise increase computer skill training hours, re-design work flow, establish standard operation procedure to enforce surgical patients identity verification, develop incident report and feedback system, and re-engineer ambulatory surgery scheduling system.
Results: The application of BSC shows a significant improvement in all 4 dimensions: (1) Time for on-site-job computer skill training is increased from 0 to 10 hours/month; (2) Patient identity verification rate is increased from 34.8% to 95.2%; (3) Operation room turnaround time is reduced by 4.3 minutes in average; (4) Average ambulatory surgery waiting time is reduced from 46.7 minutes to 28.5 minutes.
Discussion: We find BSC is an useful methodology to develop comprehensive management strategy and to reshape organisation consensus. The BSC methodology can help operation room manager in monitoring staff performance with its ultimate goal to improve hospital competitiveness.

Poster 127

Facilitation Of Recruitment And Retention Of Allied Health Staff In A Rural Setting Through The Development Of Specialist Skills And Mentoring: A Pilot Project

Liz McCourt
Stawell Regional Health, Stawell, Victoria, Australia

In 2003-2004, our organisation was successful in obtaining $40,000 funding through the Workforce and Innovation Unit of the Department of Human Services for a pilot project under the Rural Workforce Strategy.
Prior to this time, our organisation had experienced significant challenges with recruitment and retention of allied health staff. Professional isolation had been identified as one of the main factors contributing to leaving rural allied health positions in the region.
The aim of our project was to trial a model of mentoring and professional support with a larger health organisation with the goal of meeting individual therapist's needs. The model needed to be applicable to both different disciplines of allied health, and to a rural setting. The project needed to address both the individual's needs (for example, professional support, skill acquisition and development of specialty areas of interest), and those of the organisation, considering that many new graduates have limited skills and competencies.
A successful formal relationship was developed with the mentoring organisation, which included a contract and clear terms of reference.
Participants in the program set their own learning and development goals in conjunction with appropriate clinicians from the mentoring organisation.
The evaluation of this project was extensive. Self-reports and pre-and post- project questionnaires indicated the project had the following impacts: Increased length of stay in the position; increased job satisfaction, increased level of skill / knowledge, increased ability to provide interventions based on best practice, increased perception of level of professional support
Participants reported that the mentoring project was a major determinant in their acceptance of a position at our organisation. Our organisation successfully completed this project in 2003-2004.
We were successful in obtaining a further grant for the year 2004-2005. The 2004-2005 project continued with the recruitment and retention focus of new and recent graduates, but also provided specialist support for up to 2 days for our senior, experienced staff. Again, the funding supported 'mentoring fees', travel and accommodation.
Our senior staff elected to pursue long-held objectives, such as attending the Gait Lab at a large city hospital. Whilst not impacting necessarily on their retention (some are married to 'locals'), all reported an increase in job satisfaction, and a sense of being of value to the organisation.
Whilst our Pilot Study was in some ways limited owing to the small number of participants, we believe several generalisations can be made regarding approximate level of support, and the cost of that support, for clinicians at different levels and in different situations. Further impacts were also discovered.
DHS funding for these projects ceased in June 2005. Our organisation and the mentoring organisation have continued the program. The concept continues to meet the needs of a variety of disciplines and clinicians at different levels of practice, providing us with a powerful tool in recruitment and retention of high quality staff.

Poster 156
Introduction Of Perioperative DEU To Increase Recruitment And Retention Of Nurses

Sujatha Venkataraman
Calvary Healthcare,ACT, ACT, Australia

Introduction: The organisation recognised a need to enhance both the clinical experience of undergraduate nurses and recruitment to the speciality of peri-operative nursing. This resulted in the implementation of a Dedicated Education Unit (DEU) that had shown benefit in other nursing specialities nationally.

Methods: The Perioperative DEU has been utilised in a limited form in several other health care facilities, although Calvary chose to expand the DEU to be inclusive of all areas of the Perioperative unit including rotations through Anaesthetics, Scrub/Scout, PACU. This ensured undergraduate nursing students obtained in-depth knowledge and skills to enable them to feel confident to work within a dynamic team environment.

Local universities were very keen to establish a formalised relationship to progress the implementation of a DEU. The primary barrier to implementation proved to be current employees who anticipated a DEU would significantly impact on their work loads. This was over come via the introduction of a series of in-services provided by the university staff to ensure clinical staff had an in-depth understanding of the process and education tools. The staff were also provided with information in a folder which was placed at easily accessible spots like the tea room. The folder contained information regarding the concept of DEU related articles, students, their rosters and what they were allowed to do. Wide publicity was provided by using a DEU board to provide all staff with information and updates on the DEU. In addition to training a marketing campaign ensured all staff were aware of the implementation of a DEU. These strategies resulted in all clinical staff being willing to accept the DEU and often saw benefits in a DEU.

Once this was done our focus turned to ensuring that the students were prepared well to come into this critical care unit. Students from all year groups would rotate through the DEU. Thus the Orientation session was developed at a level that was capable of meeting the needs of all students ensuring that they were safe when they came into the unit. They were provided with an orientation book, PINN manual (Perioperative Information for the Novice Nurse), and a workbook that would serve as a guide for both the students and the preceptor. Based on the year level, students were then placed with preceptors on rotations through different specialties including scrub/scout, Sterile Supply unit, Anaesthetics, PACU, Endoscopy unit and Preadmission clinic.

Results: This DEU resulted in all third year students expressing an interest to come back to the hospital and 83% applied for New Graduate placement in the Perioperative unit. This resulted in all positions in the Perioperative Graduate programmes being filled. The graduate programmes run for one year, which ensures that we will have these staff for at least one year, with one expressing an interest to study further and specialise in this area. In addition both clinical staff and students have expressed high satisfaction in the DEU program.

Discussion: The implementation of the DEU in the Perioperative field is an important step to aid in recruitment of nurses in this often forgotten area of specialisation. The success of the DEU both for staff in the unit and for the Students indicates that although it was met with resistance from staff initially it serves as an important tool in recruitment. A longitudinal study of all third year DEU students will be undertaken to determine if the DEU has been influential in graduate nurse retention within the Perioperative field and within the nursing workforce.

Poster 158
Development of an Advanced Practice Nurse role for regional aged care facilities

Angela Crombie, Heather Nixon, Jenni Ham
Bendigo Health, Bendigo, Victoria, Australia

Introduction: The Aged Care Advanced Practice Nurse project was a collaborative approach by Bendigo Health Care Group and the Bendigo and District Division of General Practice to enhance recruitment and retention of skilled health professionals in the aged care system. The project explored the development of an advanced practice nurse role for aged care services and examined innovative methods for providing timely, skilled assessment and diagnostic support to aged care facilities when residents become clinically unwell. The project sought to enhance general practitioner service and support for residential aged care facilities and to provide additional support systems for nurses working in residential care.

Methods: A project Reference Group, comprising key stakeholders, helped to guide the project in achieving its objectives and outcomes. An RN Div 1 who had both advanced acute clinical assessment skills and advanced knowledge of gerontological nursing practice was appointed to the role of Aged Care Advanced Practice (ACAP) nurse. The ACAP nurse kept a journal to record both qualitative and quantitative data regarding the role.

Two data collection sheets were developed to: 1] Determine the resources that facilities have available for the acute care of residents; and 2] Determine management issues, such as staffing and procedural issues, regarding the acute care of residents. A survey of staff working in the residential aged care homes that trialled the ACAP Nurse role was also undertaken post-project to gain their perspective on the role.

Results: The number of referrals to the ACAP Nurse averaged out at almost 7 residents being referred each month over the nine months that the role was fully operational. The ACAP Nurse was able to manage 65% of these referrals independently, which indicates that GP workload would have been reduced. Almost 70% of referrals were from a low level facility. Falls/trauma, infection and pain were the main reason for referrals, accounting for 32% of all residents referred.

Discussion: The clinical usefulness and potential impact on the rural health workforce is difficult to evaluate quantitatively, however the ACAP Nurse role seemed to provide significant benefits particularly in reducing GP workloads sourced from low level residential care facilities. The current and increasing shortage of both RN Div 1s and GPs provides the impetus to investigate new models of aged care service delivery based on changes to the existing workforce structure.

The project demonstrated that there were benefits in implementing an Aged Care Advanced Practice Nurse role, however the lessons learned and careful consideration of the potential impact of the role and model on the rural health workforce, indicates that an Aged Care Nurse Practitioner model based on similar methodology may provide additional benefits.

Posters: Patient Safety and Quality

Poster 1
What's an Interpreter? - Giving our Clients a Voice

Lena Dimopoulos[3]

[1]Australian Association of Gerontology, Melbourne, Victoria, Australia, [2]Australian Hum,an Resources Institute, Melbourne , Victoria, Australia, [3]Eastern Health, Melbourne, Victoria, Australia

In 2003, after Eastern Health (EH) trialled and implemented an integrated language service strategy, to improve the use of interpreter services across all programme areas, staff continued to report reluctance by patients to ask for, or accept, professional interpreter services offered. After interviewing patients/carers, who had English language difficulties, we were able to determine the variety of reasons why there was reluctance to ask for/utilise such services.

Following community consultations, a wide range of service providers from various government-funded sectors were interviewed, regarding similar issues of concern with their clients. The 'Interpreter Brochure' developed by EH was as a direct result of taking on board anecdotal information forwarded by staff to the Transcultural Services Unit, which was then researched through direct interviews with clients and other service providers. The whole project was initially trialled to address the language difficulties aged patients were experiencing at the Peter James Centre, an aged care rehabilitation facility within EH. The whole health service had policies and procedures in place for staff to determine interpreter need & provide appropriate services, but the issue of reluctance to use the service by the patients was a hurdle we needed to overcome. The research needed to be done to verify and address the reasons why there seemed to be a reluctance by community members to use a service which would 'give them a voice'.

EH was able to develop an 'Interpreter Brochure', initially in 14 community languages, which addressed these issues of concern, and apparent lack of knowledge, various ethnic communities had about professional interpreter services. The brochure was developed to act as a trigger for community members with English language difficulties, and service providers, to ensure professional interpreter services were requested and utilised, when appropriate.

The generic formatting of the 'Interpreter Brochure' has made it possible for any government funded service agency to utilise with their client base. The brochure is available, free of charge, to agencies outside EH by making the document easily available on the EH website and by using a 'distribution model' developed in 2004. The brochure receives approx. 90 hits per month from agencies interested in using the document.

The outcome for EH patients/carers is improved knowledge about professional interpreter services, which has lead to a decrease in reluctance to accept such services, when experiencing English language difficulties.

EH conducts annual language services audits to track how well it utilised professional interpreter services and coverage rates for patients needing language assistance. As part of our risk management procedure we recently incorporated language and cultural issues on our 'Risk Management Incident Reports'.

Poster 6

Risk Minimisation Across Care Settings in a Palliative Care Service Through Shared Documentation and Records

Robyn Ellis, Elizabeth Summers
Curtin University of Technology, Perth, WA, Australia

Introduction: Geraldton Palliative Care Service is made of 3 service providers, each of the three service providers had independent documentation and records with a patient profile being the only common document (which was photocopied and distributed to all providers on admission to the service). Often there was repetition of history taking or of clinical assessments.

Identified Problem: Palliative patients move through various settings, each with independent documentation.

- Discussions with patients and the outcomes from these were not always communicated to all service providers.
- Patient and families wishes were not always met.
- Data analysis suggested that fall reduction was not occurring in the hospice setting with 46% of documented falls being in this area (considering the hospice setting is allocated greater nursing hours per patient day than the general setting this was less than satisfactory).
- Only 78% of patients died in their place of choice.

Aims: To develop shared documentation and patient records, in ownership of the patient, which is utilised by all service providers, and including: Risk assessments and the introduction of care planning documentation.

Desired Outcomes: A dignified death can only be achieved through active involvement of the patient, their family and all health care professionals involved in their care. Improved transfer of care for patients. Falls in hospice to be reduced by 50% and have falls prevention occurring in the home setting also. Assessment and care planning documentation that directly involves the consumer will be responsive to their needs, with 90% of patients dying in their place of choice.

Methodology: Workshops with all service providers: SWOT analysis undertaken to identify gaps; Ensured each organisations needs would be met; Further evaluation of the SJOG Geraldton risk assessment tools which were used in documentation to ensure appropriate for all settings; Development of shared documentation and records.

Outcomes: The outcomes following the introduction of the new documentation are:

Reduced repetition of history taking or clinical assessments, Ensures timely documentation of care needs, accessible to all service providers. Record is utilised by all service providers including Medical Practitioners which has reduced duplication, provided an accurate record of the course of the patient's illness and wellness and provided patient centred care. Responsive to patient and families wishes and updates as required. Development of individualised care plans which includes strategies to manage risk. Reflection of continuity of care and documents strategies that are transferable across all care settings. In the ownership of the patient ensuring they are meaningful and appropriate to them and responsive to changing needs and phrases of illness. It empowers individuals and families in a time that they often feel powerless and has evolved over time so as to continue to meet their needs as well as the needs of the service providers.

Further enhances palliative care delivery within our region.

Did we achieve desired outcomes?

63% reduction of falls in palliative care.

Improvement from 78% to 83% of palliative patients die in their place of choice, with the introduction of documentation; not our desired 90%, but still an improvement and an area we need to continue to improve.

Poster 12

The Happy Migrant Effect - A qualitative study of the perceptions of negative experiences of hospital care by patients with little or no English

Pamela Garrett, Hugh Dickson, Lis Young, Anna Klinken Whelan, Roberto Forero
University of NSW, Sydney, Australia

Introduction: Racial and ethnic disparities in quality of care have been shown to exist in most medical disciplines, emergency departments and in overall health outcomes. Multiple studies indicate that patients who speak little or no English receive poorer health care and are less likely to receive access to preventative care. There is a large international literature that demonstrates that patients frequently do not receive evidence-based care; that the rate of preventable medical errors remains unacceptably high; and, that clinical practices vary significantly across hospitals and clinicians.

Negative events are however, rarely understood through the lenses of the hospital patient. The acute care patients may be culturally and linguistically diverse, hold a range of constructions of appropriate care, and a variety of priorities about what is important in healthcare. We were interested in the kinds of negative events patients with limited English had experienced? What strategies might contribute to preventing or minimising such events?

Methods: Focus groups were conducted in seven languages - Arabic, Vietnamese, Italian, Chinese languages, Spanish, Serbian and Croatian. 49 patients and nine (9) carers from non-English speaking backgrounds attended. The objective was to understand the experience and the construction of experience of acute care hospital patients with little or no English. Negative or positive accounts were not specifically sought. Analysis was undertaken using a constructivist grounded theory approach.

Results: The study found that patients perceived that some very negative events had occurred in hospital including communication errors, neglectful care, medication errors, poor information provision, diagnostic errors and treatment delays. Some of these were constructed by the patients as life-threatening.

The study found that many patients with little or no English were quite accepting of these negative events. The implications of acceptance of very negative events have been linked in the study to an emergent concept cynically coined "The Happy Migrant Effect". It is a construct reflecting the overwhelming powerlessness associated with an inability to communicate, a positive comparison of the healthcare system with the healthcare in their country of origin, patriotism for their new country, and belief systems that support social desirability, acceptance and compliance. Advanced age and poor socio-economic status may also contribute, although they were not specifically assessed.

Conclusions: The concerning implication of the "Happy Migrant Effect" is that the health system may lack important data on patient safety. This may help explain why ethnic disparities in care and in hospital outcomes, documented in many international studies, are frequently elusive and difficult to address.

Poster 27

The Rapidly Developing Role of the Quality Manager in the Modern Radiation Therapy Department

Lynn Cheetham, Joy Brumby
Peter Macallum Cancer Centre, Melbourne, Vic, -

Introduction: The concept of quality is not a new one. We have always tried to achieve quality outcomes for our patients. What is new is the recent move to more systematically assessing and monitoring the level of quality we achieve in the workplace. This has now been formalised in some departments with the introduction of full-time Quality Managers. This poster introduces and discusses some of the quality areas covered by a newly created Radiation Therapy Quality Manager position.

Discussion: The Radiation Therapy Quality Manager assumes many responsibilities - including development of the quality management system, document control, incident investigation and internal audits. In addition to the establishment of appropriate systems to monitor and improve care and service delivery, the role includes the development of education programs and liaison with internal and external customers. The quality manager represents the department on the Divisional Quality Committee, relevant hospital steering committees and in external forums as required.

Creation of the role has provided opportunities for radiation therapists to be more involved in the hospital decision making processes and accepted as equal partners in the hospital quality management team.

Conclusion: The appointment of a quality manager has raised the profile of radiation therapy related quality activities at both the divisional and hospital level. The position is accepted as an integral part of the hospital quality management team, and continues to evolve within the radiotherapy service and the hospital.

Poster 29

Setting up a standardised Medical Emergency Team reporting system across an area health service as a Patient Safety Initiative

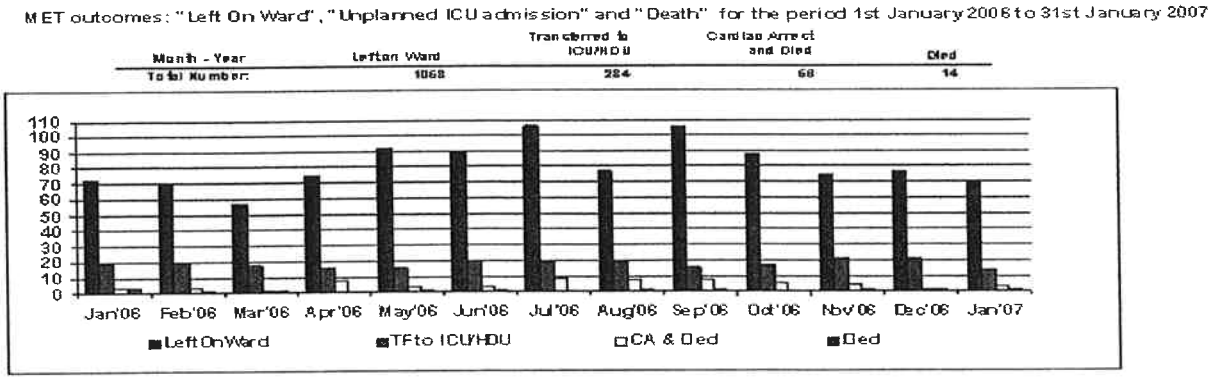
Nancy Santiano, Lis Young, La-Stacey Baramy
The Simpson Centre for Health Services Research, Liverpool, NSW, Australia

Rapid Response Teams such as the Medical Emergency Team (MET) have replaced Cardiac Arrest Teams in most hospitals in Australia and abroad. Monitoring and evaluation are integral components of the MET if the system is to effectively fulfil what it purports to achieve: minimise the occurrence of serious adverse events among in-patients. Prior to 2005, data collection within the 6 acute hospitals in an Area Health Service (AHS) was not fully standardised. On a daily basis, a senior nurse clinician conducts a medical record review of patients who have had a MET call, cardiorespiratory arrest (CA), deaths without NFR orders or admissions to ICU from the general wards. The medical records are reviewed for MET outcomes and antecedents.

On-going discussions with clinicians during 2003 and 2004 identified the need for restructuring MET reporting that had been in place for a number of years. The MET stakeholder committee (representatives from each hospital) oversaw the standardisation of the MET data collection as a tool for MET across an AHS. A data architecture supported by a user-friendly ACCESS database that reflected the current and future reporting needs of MET across an AHS was the objective of the stakeholder committee. Data definitions were agreed upon to ensure both the consistency and the reliability of MET data; data that could support accurate, valid and timely reporting. The stakeholders collaborated closely with floor clinicians to improve all aspects of the proposed reporting system. The MET form and later the reports were piloted, as part of an iterative process to achieve as close a fit as possible with the specifications and expectation of the users. Following this extensive and ongoing consultation process with clinicians at the clinical interphase, a standardised MET reporting system was finalised late 2006.

A consensus building process with clinical ownership had been integral to the evolution of the reporting system. Flexibility is an important attribute of this system. Reporting on the data can be adjusted to meet the needs of clinicians for both audit, evaluation and research purposes. Standard reports are generated on a daily, weekly and monthly basis. Trend reports are provided at the end of each calendar year.

The figure below shows a subsection of a monthly report.



An evaluation of the reporting system is underway. Key informant interviews are planned and will be analysed for emergent themes that will inform future development of MET reporting.

This paper will report on the challenges and pitfalls associated with the introduction of a standardised MET reporting system across an AHS. Results of an evaluation of the reporting system will be presented Nancy will you have time to do this?

Poster 30

Information Technology at the Point of Care: How it can improve Quality Safety and Efficiency

George Margelis
Intel Digital Health Group, Sydney, NSW, Australia

There have been many claims that information technology's use in healthcare, often called ehealth, will dramatically affect the quality and safety of healthcare delivery whilst also saving money. A number of studies have shown some benefit, ranging from improved accuracy in patient identification to better implementation of the five rights of medication administration. However, there have also been studies which have shown a negative effect.

To date one of the major drawbacks of information technology systems is that they have not been available at the point of care. With the advent of new devices such as the Mobil Clinical Assistant and the Computer on Wheels the technology has been able to supplant the current work flow rather than try and change it. This has had positive effects in a number of trials where it has been implemented.

In this paper we look at a number of implementations of point of care information technology from around the world and investigate the claim that improvements can be made in quality, safety and efficiency by utilising systems. We will examine what features of the systems offer such benefits, and what the major issues are in implementing such systems. It is often said that the change management aspects of implementing new technology are the most difficult. We will look at examples where this has been overcome, and discuss what was done to do this. We will also look at where implementations have been less successful due to such issues, and look at why this was.

Finally we will look at possibilities for the future and see what changes need to be made to hardware, software and processes to provide further value from information technology in healthcare. We will glimpse in to the research efforts of major players to see what we can expect in the future and how healthcare practice may be changed as a result.

Poster 32

Improving Quality of Care for Patients with Delirium, New Initiatives Following a Delirium Audit in Acute Medical Inpatients

Sisira Jayathissa, Yvonne Smith, Leagh Caldwell, Greg Young, Jill Lane
Hutt Valley DHB, Lower Hutt, New Zealand

Delirium is a common problem among elderly hospital patients. In a retrospective review of ICD–10 codes in 2000 only 10 patients out of 1963 medical discharges over 65 years had a primary or secondary diagnosis of delirium. We carried out a prospective audit over a two month period in 2001 to determine the frequency of delirium among acute medical inpatients over the age of 65 years.

During the study period 317 patients were admitted to the medical wards of Hutt Hospital. Sixty-eight percent were over 65 years of age. 23.4% patients had delirium at the time of first screening and 5.7% developed delirium during the hospital stay giving a total frequency of 29.1%. Delirium was associated with high inpatient mortality (7% versus 3.7%) and morbidity (96% versus 31%), increased length of hospital stay (8 versus 4 days) and higher level of home support requirements (52% versus 19%) at the time of discharge, compared to age and sex-matched controls.

This data was presented at several hospital meetings to increase awareness of delirium among health workers and managers. During the following years significant new initiatives occurred, including the appointment of a delirium liaison nurse, supported by psychogeriatrician and geriatricians, and establishment of a working group to look at managing delirium patients.

This group developed a new policy to look at all aspects of management of patients with delirium including a flip chart as a quick reference guide. This colour-coded chart is available in all medical and surgical areas where patients with delirium are managed. The Hutt Valley District Health Board recognised this new initiative by presenting the Chairman's Quality Award to the Team.

The delirium liaison nurse's role has evolved over the last few years. She has become one of the major resources in managing hospital patients with delirium. Her role involves liasing with medical and nursing teams in optimising management of patients with delirium, communicating with the families, facilitating transfer of patients between services and discharge planning.

Use of trained health care assistants as minders for patients with delirium has increased significantly following the audit partly as a result of increased awareness of delirium. The health assistants help in comforting and re-orientating patients, preventing wandering and falls. A random audit on notes of 18 patients requiring minding indicated that confusion was the causes for use of minders in 16. This audit also revealed that minding has been used appropriately in most cases.

The quality of care for patients with delirium at our hospital could be improved further. The delirium liaison nurse is not utilised in all delirium patients. The physical environment for nursing these patients is still not optimal. Follow up for discharged patients is not uniform and often inadequate. Future effort is ongoing to dedicate special area of the ward for patients with delirium. A re-audit is planned to determine the adequacy and quality of management of delirium patients following these intiatives.

Poster 33
Look At Me! Look At Me! My Life Is Back On Track!
Maximising Potential Of Clients After a Health Crisis Requiring Allied Health Intervention

Suguna Paul
General and Geriatric Rehabilitation Medicine, Concord, NSW, Australia

The Frail Aged and Elderly members of our community generally enjoy good health care services provided by Geriatricians, Allied Health, Nursing, and Community Support staff, both in hospital and community settings.

The purpose of this quality project was to address the outpatient discharge process, after intervention involving one or more allied health service providers following a health crisis.

A number of clients who attended this facility reported they were not yet ready for discharge, as they feared social isolation. They lived on their own, lacked family support, had lost confidence outdoors, and experienced panic, discouragement and depression. They had enjoyed outings to the hospital with transport provided, the opportunity to socialise, and benefited from the therapists' professional input.

A Working Party comprising of a Physiotherapist, Occupational Therapist, a Social Worker, an Occupational Therapy Assistant and an Enrolled Nurse was formed. They decided to run a Transition Group, which would attempt to bridge the gap between discharge and clients reaching their full potential in the community. Clients fitting the criteria were selected for the groups, which ran once a week for six weeks. The programme included socialisation, exercise, games, cooking, craft, current affairs, and provision of information regarding clubs, day centres and other leisure activities. The finale was a trip by public transport to a local shopping centre for lunch and shopping.

Pre- and post- group surveys for outdoor confidence and awareness of community leisure activities awareness were conducted.

Table 1. Results of Day Hospital Transition Group Survey

Survey Question	Pre-Transition Group (%)	Post-Transition Group (%)	Improvement (%)
Clients who felt confident going out	27	72	45
Clients aware of social groups	36	100	64
Clients who exercised	100	100	0
Clients who walked frequently	0	90	90
Clients happy with their level of social activities.	54	90	36

The above outcomes were encouraging with client confidence, awareness of social groups, walking frequency and satisfaction with own level of social activity improving remarkably. This facility intends to continue running this program so that clients in this target group can be assisted to achieve their full potential and enjoy a better quality of life in the broader community.

Poster 42
Inter-Rater Reliability of the Australasian Triage Scale for Mental Health Patients

Anne Creaton, Donald Liew, Melissa Wright
Melbourne Health - Royal Melbourne Hospital, Victoria, Australia

Introduction: Integration of psychiatric services into general healthcare has resulted in significant mental health demands on emergency departments (ED). The Australasian Triage Scale (ATS) influences healthcare access and ED key performance indicators; yet it may be a deficient tool to sort urgency among mental health cases. This study evaluated inter-rater reliability of the ATS for adult mental health patients.

Methods: Ninety trieurs (raters) from public hospitals were shown six video vignettes of simulated mental health cases presenting to ED. Three vignettes depicted busy ED conditions; three depicted quiet conditions. Raters assigned ATS categories to cases based on perceived clinical urgency. Data was collected on certain rater traits: familiarity with mental health triage guidelines, state of origin and hospital-type worked in.

Primary outcome was inter-rate reliability for each case.

Secondary outcomes were rating tendencies and dispersion for groups, categorised by the above rater characteristics and background level of ED activity.

Differences in categorical outcomes between groups were analysed by chi^2; the opartchi method was used to evaluate differences in rating tendency and dispersion between groups.

Results: The ATS had poor inter-rater reliability for individual cases and poor reliability between rater groups. Busy ED conditions and South Australian origin were significantly associated with a tendency to assign higher ratings.

Discussion: The limited capacity of ATS to sort mental health patients results in poor inte-rater reliability, particularly in busy environments. A more robust, validated, standardised, national triage tool for mental health patients is needed.

Poster 44
Promoting Clinical Risk Management in Community Health

Alison Brown[1], Paula Bacchia[2], Shannon Checklin[3]
[1]Victorian Healthcare Assoication, Melbourne, Australia, [2]Whitehorse Community Health, Melbourne, Australia, [3]Australian College of Health Service Executives, Melbourne, Australia

While the community health sector is a relatively low risk environment, the future direction of community health in chronic disease, ambulatory care and programs that span the acute–primary interface mean that the risk profile of the sector is changing. There has been recognition of the need for a sector wide approach to clinical governance and more specifically a uniform approach to clinical risk management reporting. Currently the Victorian community health sector does not have a centralised system for reporting of incidents to assist retrospective analysis of clinical risks in the community health sector. An approach that focussed on prospective risk identification was needed. The purpose of this presentation is to describe the outcomes of a project to develop a framework and tools for clinical risk management specific to the community health sector in Victoria.

In 2006 a working group was formed to develop appropriate resources to assist community health services in managing clinical risk. Following a literature search and review of existing resources a pilot was conducted by managers with 9 disciplines/programs from 8 community health centres of a clinical risk identification tool, risk register, practical guidelines and training resources for managers.

The pilot highlighted the need for concise and detailed process guidelines for clinical managers implementing prospective clinical risk identification with staff. The importance of reducing excessive focus on numerical risk ratings in a risk register and promoting discussion, analysis and prioritisation of clinical risk among staff was evident from the pilot. Using the pilot feedback and external consultation a framework document and tools for community health clinical risk management were developed. The clinical risk management framework provides background on the theory of risk management, a managers guide to implementing clinical risk management with staff and reporting to the board, education resources for staff and tools for risk identification, analysis, monitoring.

The focus on prospective risk identification used in the framework resulted in a bottom up approach to risk assessment, which had numerous benefits. The involvement of clinical and non-clinical staff in prospective identification of clinical risk enabled increased awareness of clinical risk and promoted open discussion of mistakes and clinical risks among staff at the service level. The clinical risk management framework provides a step-by-step guide that can be used by any primary health care service that relies mainly on prospective identification of risk to assist in improving the quality and safety of services.

Poster 46
Team Centred Behaviour Based Approach to Correct Site Safety System Implementation

Alison Hales
South Perth Hospital, Como Western Australia, Australia

Method: Continuous consultation and collaboration with all major and key stakeholders in the core business saw the Correct Site Safety System developed in 6 key components.

1. Development of an Educational Resource Tool and Organisational Safe Work Policy and Procedures.
2. Development and Implementation of the Correct Site Surgery Count Sheet a "One Stop Shop".
3. Development and Implementation of Observation and Case Documentation Audit Tool for Phase One and Phase Two to measure user friendliness and compliance.
4. Development and implementation of a Variance Reporting System to assist the Organisation in the early identification of potential negative situations , at Risk Behaviours and enhance Near Miss reporting.
5. Near Miss Data reporting in line with the Organisation's Incident and Accident Reporting System and investigated using a Root Cause Analysis Framework.
6. Development of a Behaviour Based Safety System Educational Resource Tool to enhance sustainability, augmentation and standardisation of the Correct Site Safety System.

Results: Evaluation and feedback on External Education Resource Tool, prior to implementation of the Correct Site Safety System, was obtained from 73% of nursing staff. Of this 88%found the Resource Tool relevant and invaluable, 6%found it valuable and 6% did not respond.

Audit results for the first MR66A document that was introduced for trial over an eight week period.

Demonstrated outstanding commitment 5 changes only made to Initial document and document Trial 2 began. 100% compliance with the initiation of the "Time Out" component of the system. 85% compliance with completion of all parts of the documentation in line with the system guidelines, however 41% of document audited revealed inappropriate use of abbreviations. Second Audit of documentation revealed a 100% improvement in areas of abbreviation use.

Major Stakeholders Audit revealed 85% satisfaction with the System and stated that there was nil significant disruption to flow of their surgical list or impact on their business.

Discussion: The continuous consultation and feedback mechanism saw early ownership of the system. The Correct Site Safety System is now an integral part of the organisation's Orientation Program. Significant increase in Near Miss reporting has been recorded. Audit results support the success of the staged implementation process. It is anticipated that the nomination, appointment and training of the behaviour based observation peer persons "BOPPERS" will surpass the formal Audit Process and release the Power of Safe Work Practices to us. -The front end user of the System.

Poster 55
Talking the Talk: How A Structured Communication Tool Can Improve Patient Safety

Jackie Sincock, Margaret Martin
Flinders Medical Centre, Bedford Park SA, Bahamas

Introduction: Effective communication is an essential component of providing safe care. A structured communication tool, originating in the US Navy, called SBAR (Situation Background Assessment Recommendation) is being implemented. Baseline data demonstrated that 85% of the most serious adverse events since January 2005 had communication identified as a contributing factor. The organisation has been working through the implementation of the tool with the addition of an I for Introduction.

Methods: The implementation of I-SBAR was formulated into 2 tiers - an intensive implementation in 2 pilot sites and organisational wide education to spread the concepts to all clinical staff.

Sessions were held in the pilot sites to identify communication issues and to introduce I-SBAR. A pre- implementation survey was completed by 47 staff.

Tracking and direct observation were also used to understand how the team communicated clinical information.

A nursing leadership training session was conducted and utilised clinical role plays and scenarios to maximise learning and discussion around strategies to improve clinical communication within the team.

Results: From the pilot site sessions, the contributing factors to poor communication included language barriers, low skill mix, unclear documentation, lack of fundamental communication skills, limited access to the right staff and high workload.

The pre- survey indicated that 98% of staff experienced difficult communication both within and between professional groups, 27% staff stated that they only sometimes prepared what they were going to say before discussing patient issues with another staff member and 64% of staff surveyed agreed that standardised communication would support safer care.

100% of nurse leaders believed role play was most effective in demonstrating the difficult issues around clinical communication and how a structured tool is applicable in their team.

Tracking and observation supported the results that clinical communication was often unprepared and that the success of the communication is reliant on the individual giving or receiving the information.

To support standardised communication within the pilot sites lanyard prompts have been distributed to clinical staff.

Discussion: The development of a broad education strategy for I-SBAR has been necessary given the mobile nature of the health care workforce.

The challenges for staff in adopting the principles of a structured communication strategy (I-SBAR) required modifications to the implementation and education strategy. Utilising role play provides the most useful learning tool for the pilot sites.

The initial focus on the nursing leaders to model behaviour and promote standardised communication within their team is most effective in improving staff satisfaction and patient safety.

Poster 60

"Residential Aged Care Coronial Communiqué": providing case studies of deaths reported to the Coroners Office to improve clinical care in Residential Aged Care Facilities

Joseph Ibrahim[1], Rhonda Nay[2], Zoe Davies[1], Adam O'Brien[1], Carmel Young[1], Amanda Charles[1], David Ranson[1]
[1]Victorian Institute Forensic Medicine, Southbank Victoria, Australia, [2]La Trobe University, Bundoora Victoria, Australia

Improving patient safety requires the optimal use and dissemination of information obtained from investigations of preventable patient deaths. In 2003, the Clinical Liaison Service successfully established the first electronic newsletter about lessons from deaths investigated by the Coroners' Office, "The Coronial Communiqué". The success of this much needed newsletter and the volume of information available required the introduction of a second newsletter designed specifically for aged care.

Objective: To ensure information obtained from the Coroners investigation into systems failures that contributed to preventable patient deaths is available in a comprehensible medium that is relevant to residential aged care staff and general practitioners.

Method: The "Residential Aged Care Coronial Communiqué" was designed using criteria that evolved from our experience with the first newsletter: (a) focus on a single theme relevant to the clinicians and care staff, in aged care (e.g. physical restraint, falls, use of medication) to heighten discussion about the topic, (b) a minimum of three actual cases to engage the reader, the case reports are selected and summaries written by clinicians using the key principles identified previously*, (c) commentaries from a recognised expert to provide the research information about optimal clinical practice and another commentary from a recognised nurse leader to advocate for change in practice, (d) reference to key national and international resources, (e) free subscription, (f) limit content to four A4 pages, (g) electronic distribution and (h) quarterly publication.

Results: The inaugural "Residential Aged Care Coronial Communiqué" was launched in October 2006 by the State Minister for Ageing (Victoria) and has gathered an initial solid readership base. Subsequent issues are posted on our website and sent to registered subscribers. Initial unsolicited and anecdotal response is favourable and includes examples whereby the newsletter has influenced change in practice. The newsletter has also been accepted and registered by the National Library of Australia as being of national significance.

Conclusion: The "Residential Aged Care Coronial Communiqué is another step towards removing the barriers to accessing information obtained from the Coroners investigation into systems failures. The design of the newsletter according to explicit criteria specifically selected to engage our audience is critical to communication. In 2008, we will formally evaluate the impact of the newsletter on prompting system change to practice.

*Ibrahim JE, et al The Coronial Communique: helping clinicians understand the safety and quality lessons from the Coroner's findings and recommendations. The Second Australian Conference on Safety and Quality in Health Care. Canberra, ACT, Australia 2004.

Poster 64
Lessons Learned From The Identification And Management Of An Increased Incidence Of Severe Ovarian Hyperstimulation Syndrome At A Tertiary Obstetric Hospital In Melbourne, Australia

R.Geoffrey Steele, Mary Draper
Royal Women's Hospital, Carlton, Victoria, Australia

Introduction: Ovarian Hyperstimulation Syndrome (OHSS) is an exaggerated response to ovulation induction, which is a common treatment for infertility. OHSS is a rare self-limiting disorder with a broad spectrum of potentially life threatening clinical manifestations related to increased capillary permeability and fluid retention. During 2004, an increase number of admission for severe OHSS to the high dependency unit (HDU) of our institution was noted (17 admissions compared to 3 during 2003). We report on how the increased incidence and severity of this rare condition was managed and the lessons that were learnt.

Methods: Identification of the increased incidence came from a number of sources. Concerned medical and nursing practitioners from the HDU drew the issue to the attention of the Clinical Governance Unit. Medical staff from the Reproductive Biology Unit also noted an increased incidence.

Monthly reviews of HDU data and hospital discharge data further supported the impression.

Using the database of the HDU, 17 admissions to HDU with severe OHSS during 2004 were identified. A retrospective manual audit by HDU staff was then performed. Risk factors for OHSS, its management and outcomes were collated.

Furthermore an investigation by the Reproductive Biology Unit into ovulation induction was performed.

Change in practice was implemented and a follow up audit performed.

Results: A change in the formulation of one of the gonadotrophin hormones used in the process of inducing ovulation was found. This more potent formulation meant that the dose used to produce ovulation could be reduced.

Patients at higher risk of OHSS were observed more closely and embryo transfers, which previously may have precipitated or increased the severity of OHSS in these high risk patients, were delayed.

The incidence of severe OHSS during 2004 was 0.5% or 17 admissions from 2731 stimulated cycles. During 2003, the incidence of severe OHSS during 2003 was 0.1% (3/2691) and it returned to 0.1% during 2005 (3/2800).

Discussion: Identification of the issue from a number of sources increased the urgency of the investigation and the ease of implementing change.

The rare and severe nature of the condition also assisted implementation.

Despite the routine collection of information and formation of databases, manual retrospective review of the records was required.

Clinicians played the major role in identifying the problems and driving the process of change. This had a positive influence on the success of implementation.

Repeat audit and data collection was an essential part of the process.

Comparison of our institution's experience is very difficult as the rarity of this syndrome and the lack of data kept or published by other reproductive biology units is poor.

Poster 67
Clinical Governance Implementation Using ISO 9000:2000 Quality Management System: A Case Study in Two Public Hospitals in Indonesia

Hanevi Djasri
Gajah Mada University, Jogjakarta, Indonesia

Introduction: Clinical governance implementation to improve clinical quality can be done through integration both organisational management and clinical management. There is opportunity that hospitals with a comprehensive quality management system like ISO 9000:2000 have success to put the basic concept of clinical governance into practice. The objective of this study is to determine the impact of an ISO 9000:2000 quality management system implementation on the clinical governance implementation and on clinical quality improvement activity in the hospital.

Method: Case study in 2 (two) public hospital at East Java Province, Indonesia. Interview and document analysis was use for data collection.

Result: two hospitals making comparable result. Almost all of basic clinical governance standards: (1) clinical care accountability; (2) Policy and strategy; (3) Organisational structure; (4) resources allocation; (5) communication; (6) Professional development; (7) effective measurement, were implemented and have supported from ISO 9000:2000 quality management system.

Discussion: ISO 9000:2000 quality management system implementations with focus to clinical care can help to present clinical governance in hospital.

Poster 70

Formative implementation in multisite piloting of a standardised mental health documentation suite

Anthony Weller, Amanda Kivic
Queensland Health, Brisbane, Australia

Safety of mental health consumers, carers, staff and the community, is increased with an associated reduction in adverse events when a suite of evidence-based standardised documents that includes mental health assessment, risk assessment and treatment is implemented.

A key recommendation of a formal review of mental health sentinel events in Queensland Health proposed the development of a standardised process for assessment and treatment by mental health services. This paper will provide a formative evaluation on the development of this documentation suite by reviewing the evidence-based literature, outlining the governance structures and describing the role that key stakeholders played in shaping the clinical utility of the standardised documents. The framework for the delivery of the training will be described with reference to the technology utilised, the quality of its implementation, alternative delivery procedures, the partnerships formed and organisational service readiness. Finally an outline will be provided on the auditing processes developed for monitoring the fidelity of the implementation with reference to sustainability of the quality and safety capacity of mental health services.

Poster 71

Consumer Perceptions Of Using Self-Assessment Outcomes In Mental Health To Engage Meaningfully In Care Planning

Jennifer Black, Thomas Callaly
Barwon Health Community and Mental Health, Geelong, Victoria, Australia

This abstract will describe an 18 month project which endeavoured to engage consumers and carers in the evaluation, development and implementation of effective strategies for the use of Self-Assessment Outcomes to fully benefit the consumer receiving the service. The project involved consumer surveys and interactive workshops to elicit the views of consumers and carers and develop strategies and resources to engage them in the education and training of clinicians.

- The project team worked collaboratively with consumers, carers and clinicians to achieve the following:
- Successful engagement of 11 area mental health services
- Successful engagement of consumer and carers from 11 area mental health services.
- Production of a suite of training materials for clinicians.
- Production of a set of promotional materials, which were designed by consumers and carers.
- Formulation and delivery of a training package on education and training skills for consumer and carer consultants.
- Development of sustainable training within organisations involving consumers and carers.

A formal evaluation of the impact of the project on participating organisations was conducted as well as consumer and carer experiences of being involved in the process. By the completion of the project many services had written policies and an established working group to consider integration of self-assessment data into clinical practice. Current data available at the time of this abstract indicates that:

- 28%of services indicated that they had been using Outcomes Data in case planning but 72% indicated that they had future plans to do this.
- 61% of the services had had consumer consultants involved in training with 44% of carer consultants involved.
- 33% of services had consumer and carer consultants jointly involved in training.
- 78% of services agreed to future commitment to involving consumers in training.
- 73% of consumer and carer consultants believed that the project had helped change the views of clinicians
- 80% of consumer and carer consultants believed that their involvement had been positive for their service and 100% believed that it had been a positive experience for them and many articulated that it had raised their profile within the organisation.
- In response to feedback about the promotional materials 27% of consumers had previously heard about self-assessment with only 4% of carers surveyed having any knowledge.
- After reading the materials 52% of consumers, 57% of carers and 60% of clinicians felt that they would be more motivated to be involved.

The results indicated that the greatest opportunities are in using a self-assessment process to promote dialogue between consumers, carers and clinicians. Consumers also indicated an opportunity to use the information to map their journey of recovery, set goals for care planning and monitor early warning signs.

Poster 78
Customer Quality In Health Care

Jafar Tabrizi, Andrew Wilson, Peter O'Rourke
School of Population Health, Brisbane- QLD, Australia

Quality improvement literature usually conceptualises two principal dimensions of quality in health care, "service quality" and "technical quality". Service quality refers to the non-health aspects of care and reflects how the customers receive the services and the way and the environment in which heath services are provided. Technical quality refers to the clinical or disease specific aspects of care and deals with what the customers receive relative to what is known to be effective, and largely reflects issues related to the health care providers.

The current model, however, largely ignores the critical role of the characteristics of the patient or customer. Consistent with broader literature on active and empowered patients this paper proposes a third principal dimension, "Customer Quality", to incorporate aspects of the health care user's responsibility in health systems as well as their capacity for self-management and contributing to improving quality of health care services. "Customer Quality" is the characteristics customers need for effective involvement in health care processes, decision making and action to improve the quality of care delivered and received.

Evidence supports that efficient involvement of customers improves the quality of delivered care and health outcomes. Not only does customers' engagement not clearly address the core part of the nature of the health care processes but also health care customers do not have the required capability for decision-making and self-management. This reality shows that improving quality in health care needs a strong focus on "Customer Quality" as a new paradigm, simultaneously with improving "service quality" and "technical quality". The concept of "Customer Quality" identifies practical steps that can be taken by health care customers based on knowledge (why and what to do), skill (how to do) and confidence (want to do).

Poster 79
Customer Quality And Type 2 Diabetes In Australia

Jafar Tabrizi[1], Andrew Wilson[2], Peter O'Rourke[3]
[1]School of Population Health-UQ, Brisbane, QLD, Australia, [2]Queensland Health_University of Queensland, Brisbane, QLD, Australia, [3]Queensland Institute of Medical Research, Brisbane, QLD, Australia

Background: Quality in health care can be seen with three principal dimensions, service, technical and customer quality. Service quality deals with the non-health aspects of care such as good relationship between patients and care providers and easy access to the delivered care. Technical quality is related to the clinical features of health care, such as the right medication in the right dose and customer quality refers to the individual's capacity for effective involvement in health care processes, decision-making and taking care of their own health.

Objective: To measure customer quality of people with Type 2 diabetes in relation to the self-management

Methods: A cross-sectional survey of 603 people with Type 2 diabetes was carried out in Australia. The 13-item Patient Activation Measure was used to evaluate customer quality based on self-reported knowledge, skills and confidence in four stages of self-management: 1) believing the patients' role is important, 2) having the confidence and knowledge for taking action, 3) taking action and 4) staying the course even under stress.

Results: All participants achieved scores at the level of stage one but ten percent did not achieve score levels consistent with stage 2 and a further 16% did not reach the actual action stage. Almost three quarters reported capacity for taking action for self-management and more than half of these (38%) reported the highest Customer Quality score and ability to change the action by changing health and environment. Participants with a higher level of education attainment, better diabetes control status and those who maintain continuity of care reported a higher Customer Quality score, reflecting higher capacity (knowledge, skills and confidence) for self-management.

Conclusion: Specific capacity building programs for health care providers and people with Type 2 diabetes are needed to increase their knowledge and skills, and improve their confidence to develop self-management ability for improving the quality of delivered care and achieving better health outcomes.

Poster 92
A structured analysis of medication errors: a multi-site study

Anne Gardner[1], Beverly O'Connell[2], Miyuke Takase[3], Carmel Condon[4], Chantal Ski[5], Linda Baker[1], Joan Ostaszkiewicz[2], Barbara Hanna[6]

[1]Cabrini - Deakin Centre for Nursing Research & School of Nursing, Deakin University, Melbourne, Australia, [2]Southern Health, Deakin University & School of Nursing, Deakin University, Melbourne, Australia, [3]Department of Nursing, Tottori University, Yonago Campus, Yonago, Japan, [4]School of Nursing, Deakin University, Warrnambool, Australia, [5]Centre for Palliative Care, St Vincent's Health & University of Melbourne, Melbourne, Australia, [6]School of Nursing, Deakin University, Geelong, Australia

Introduction: Medication safety has been identified as a major priority in Australia. Recent research has found that many adverse drug events associated with hospital admissions could be prevented. However there is a need for further strategic research to address the gaps in knowledge and practice with regard to medication-errors, as there is currently no data that accurately describes the nature of medication errors in Australia. The purpose of this study was to identify the frequency, types and outcomes of medication errors in six Victorian metropolitan, regional and rural health care institutions.

Methods:The study was a retrospective review of medication errors recorded in six Victorian healthcare institutions' risk management recording systems over the calendar year for 2004.

Results: The aggregate data from the six hospitals identified errors in administration as the largest proportion of medication errors (80%), followed by prescribing, dispensing and transcribing errors. The most frequently identified administration errors were omission of drug, incorrect dose, incorrect medication and incorrect infusion rate. Drugs most frequently involved in these errors were from the cardiovascular, analgesia and endocrine/metabolic therapeutic class index. Most medication errors resulted in no adverse event (83%). Over 75% of completed incident reports did not provide an indication of why the error occurred.

Discussion: The results provide baseline data for future comparative analysis as part of the participant institutions' measures to strengthen their medication systems to reduce the risk of medication-related adverse events. Interventions aimed at reducing medication errors associated with the administration of medication and errors related to the administration of cardiovascular drugs in particular, are warranted. Further research is recommended to improve reporting of causes of medication errors.

Poster 95
Preventing Wrong Gas Delivery to Patients

Peter Mason

Fliinders Medical Centre, Adelaide/SA, Australia

Introduction: Incidents involving the inadvertent administration of the wrong gas to patients are a world-wide problem and can lead to severe adverse patient outcomes. Over the last 12 months, our organisation had observed an increased number of incidents reported via AIMS (Australian Incident Management System) and an increased MET (Medical Emergency Team) call rate relating to the issue. A Patient Safety Advisory published by the Department of Health also indicated this type of incident was being reported at greater levels than before.

Methods/Results: An 'expert' panel was created involving medical, nursing, biomedical engineering and safety and quality staff in an attempt to discover what critical factors were creating the increased incident rate. The panel reviewed each reported incident, current literature on the issue, spoke to staff and clinical units were visited and audited.

Reconnection to air rather than oxygen returning from a procedure or another unit was the most common reason of error.

30% of the clinical units had at least one incorrect air /oxygen set up (most commonly, incorrect colour flow nipples; white = oxygen, black = air supply).

Poor lighting and other medical equipment within the immediate area contributed to the potential for error during connection were identified as potential contributing factors.

Three different brands of flow meters were in use and black air 'nipples' were not readily available from the Supply Department.

Discussion: The panel reviewed different improvement strategies based on their ability to 'error proof' or 'error reduce,' any potential risks and barriers to implementation and cost factors. These included:

1. Creation of two different non-interchangeable gas delivery tubings for air and oxygen (currently not available)
2. Develop a device to alter the function of medical air flow as a strong visual barrier
3. Removal of all air flow meters and deliver nebulised medication via oxygen
4. Removal of all air flow meters and deliver nebulised medication via air driven electric pumps.

Option 2 (Develop a device to alter the function of medical air flow as a strong visual barrier) was selected as the most viable alternative. A black moulded plastic (clearly labelled AIR) has been developed to fit over the black air nipple as a strong visual /physical barrier. All air outlets will be fitted with the device and a wide education campaign will be undertaken of all ward based staff. AIMS will be monitored for further incidents to evaluate the effectiveness and the results will be available by August 2007.

Poster 110

High Compliance with a Protocol for the Management of Bleeding Peptic Ulcer Disease Improves Patient Outcomes

Peter Bampton, Jayne Sandford, Bev Draper, Graeme Young, Rob Padbury
Flinders Medical Centre, Bedford Park, SA, Australia

Introduction: Bleeding peptic ulcer disease remains a common cause for acute admission to hospital. Endoscopic management has resulted, in clinical trials, in a reduction of rebleeding rates to 7-15%, surgical intervention rate of 5-9.5% and mortality of 4-5% for patients with major stigmata of GI bleeding (Lau, NEJM 2000, Cipoletta Gastrointest Endosc 1998). Endoscopic management relies upon adrenalin injection, coagulation using a thermal modality and a proton pump infusion, with appropriate triage of patient to high dependency if unwell and early consideration of surgical intervention. We wanted to see whether the adoption of a protocol could give similar results in the clinical, as distinct from trial, setting.

Methods: We developed an agreed protocol for the management of bleeding peptic ulcer disease. This encompassed triage according to a recognised risk scoring system (Rockall Score) as well as decisional supports to ensure that management was as per the protocol. All consultant staff on the roster (there were 14 in the period covered) and registrars were educated on the protocol. All patients admitted to our tertiary hospital between Jan 2004 and December 2006 were prospectively entered on to a computerised spreadsheet which was integrated with the hospital patient management system. This spreadsheet enabled prospective recording of critical decisions and outcomes.

Results: One hundred and fifty patients were admitted with a bleeding peptic ulcer over the 2 years studied, representing 28% of our admissions for non-variceal upper gastrointestinal bleeding (150 of 541). Seventy (47%) of patients had major stigmata of GI bleeding on endoscopy. All of these patients had at least one form of endoscopic therapy, with 45 (63%) having the preferred approach of two modalities of therapy. Of those that had endoscopic therapy, 87% were given a PPI infusion as per protocol. Rebleeding (as defined by need for further blood transfusion or development of haemodynamic instability) occurred in 13 patients (8.7%), three of whom went to surgery (surgical intervention rate of 2%). There were 6 deaths (mortality of 4%). Seventy two of the 150 (48%) patients had major stigmata of GI bleeding – these had higher rebleed, surgery and mortality rates (14%, 4% and 6% respectively) We contrasted this with an audit performed over 6 months in 1999-2001, examining patients with major stigmata of GI bleeding where PPI infusion was not given and where only one modality of endoscopic therapy was used. In this audit, rebleeding rates were higher (9 of 33 – 27%) as were rates of surgical intervention (4 of 33 – 12%), mortality was less (1 of 33, 3%). These differences were not statistically significant ($p = 0.09$ for rebleeding) due to small numbers.

Discussion: Our hospital is a tertiary hospital which covers acute gastroenterology for our region, with medical staff from three different hospitals contributing to the after hours cover. Therefore, the introduction of an agreed protocol had potential challenges but with a prospective recording of critical decisions and outcomes and regular monitoring of these outcomes we were able to achieve adherence to protocol in the majority of cases. Whilst the numbers are small, we believe that we have effected a clinically significant change, nearly halving rebleeding rates (27 to 14%) and reducing surgical intervention by two thirds (12% to 4 %) rates in patients at high risk of rebleeding since the protocol was introduced. This suggests that we have been able to get the "clinical evidence into practice" and improve the management of our patients.

Poster 116

Managing Junior Medical Staff After Hours Workloads with Changes to In and After Hours Practice

Tim Bright, Vincent Nieuwenhuijs, Margaret Walker
Flinders Medical Centre, Adelaide, South Australia, Australia

Background: In 2005 a review of surgical patients requiring MET calls showed that the majority of MET calls arose from the surgical High Dependency Unit (HDU), and that the majority of these patients were treated on the ward with simple interventions. By increasing the seniority of the medical staff in the HDU, a reduction in MET calls to 33% of previous levels was made. A secondary benefit was noted in a reduction of calls made to after hours staff to review HDU patients. This lead to further work evaluating after hours care across the surgical division

Methods: Using Clinical Practice Improvement guidelines, a mission statement was formulated **'To reduce the volume of after hours work by changing in and after hours practice'**

Issues affecting patient safety included lack of structure to after hours care, poor handover of patients, excessive paging of medical staff, junior staff working in an isolated environment without access to senior colleagues and issues of work distribution between medical staff.

Interventions included:

- conducting audits of the volume/type of work performed by after hours staff
- auditing what percentage of after hours work was left over in hours work
- formalising an after hours team

- instituting a formal handover of in and after hours staff
- creating job task boards and instituting regular after hours ward rounds
- having nursing handover in hours identify and communicate in hours medical staff work.

Results: Junior after hours staff are happier if they have a more senior colleague identified/available;

Ward cover is provided by the most junior medical staff, while more senior staff cover the Emergency Department;

Creating jobs boards and regular ward rounds reduces the necessity for nursing staff to page ward cover;

In hours identification of work reduces the overall volume of after hours work;

80% of after hours work involves simple routine tasks. This percentage did not change as a result of interventions;

40% of after hours work is left over from the in hours team. Interventions reduced this to 30%.

Discussion: Audit of after hours work provides the basis to trial interventions to improve after hours care. These interventions should relate both to in and after hours practice. Creating structural changes to the way medical tasks are communicated improves the ability of staff to complete those tasks. Whether junior staff are the appropriate doctors to assess unwell patients after hours remains debatable

Poster 118
Development of a trigger and screening tool to detect medication errors in a quaternary teaching hospital

Melita Van De Vreede, Shin Choo
Bayside Health, Melbourne, Victoria, Australia

Introduction: Medication errors are a major concern in the health system. It is well-documented that they are under-reported and frequently go undetected. Our current medication error reporting system is an online reporting system which is utilised mainly by nursing staff who report medication errors due to problems with medication administration. Clinical pharmacists identify inappropriate prescribing, medication omissions and drug interactions but are only available on wards on weekdays.

This paper describes a pilot to determine whether a modified trigger and screening tool is beneficial, in addition to voluntary reporting, to identify medication errors, to quantify the rate of errors and to detect system problems.

Method: An existing adverse drug event (ADE) trigger tool which uses antidotes and abnormal laboratory results to quickly identify medication errors was modified to broaden the range of triggers and methods of screening medication charts. The aim was to develop a systematic method of detecting a broader range of medication errors. The tool was intended to be used by a pharmacist, nurse or doctor to identify patients with comorbidities and medications that increase the risk of a medication error occurring.

The tool contains separate sections which identify patients at higher risk of an error, by age, previous adverse reactions, comorbidities, medications prescribed, abnormal laboratory results, antidotes prescribed and whether a pharmacist has reviewed the patient.

Results: A preliminary pilot of the tool was conducted on 50 patients in the Emergency Department (ED) setting. The tool appeared promising but patients were only in ED for less than 24 hours so it was less likely that errors would be detected.

The tool was further modified, a pharmacy student piloted the tool in 105 patients who were admitted to ED then transferred to specific medical units for longer than 1 day.

Four medication errors were detected: two prescribing errors and two overdoses. The prescribing errors were a patient prescribed oxycodone, who had a previous adverse drug reaction to this drug and a patient prescribed two drugs for migraine that were contraindicated. The overdoses detected were morphine which required naloxone to reverse its effects and a patient prescribed potassium when the potassium serum level was 5.8mmol/l. None of these errors were reported on the hospital incident reporting system and staff had not detected the prescribing errors.

As the errors detected were not been reported in the current reporting system, we could not validate the tool against it. This confirmed our suspicion that the two systems identify different types of errors.

Conclusion: The pilot has shown that the modified tool is capable of detecting errors otherwise not picked up with our usual system. The tool could be added to our existing system as a medication error detection tool that may be used by nursing, pharmacy or medical staff. This finding echoes a recent publication that recommends using more than one method to detect adverse events. The additional information can enrich data collection that will in turn improve our medication safety and quality program.

Poster 119
Intravenous potassium chloride: Do health professionals in hospitals really know the risks?

Melita Van De Vreede, Sally Wilson, Michael Dooley
[1]Bayside Health, Melbourne, Victoria, Australia, [2]Victorian College of Pharmacy, Monash University, Melbourne, Victoria, Australia

Introduction: The risk of inadvertent intravenous bolus potassium chloride administration resulting in a serious adverse outcome is well-documented.

A large multi-centre study was conducted in Victoria in 2006 to identify the barriers to the use of pre-mixed intravenous potassium chloride solutions. This included a survey to determine the awareness of doctors, nurses and pharmacists regarding the use and risk associated with intravenous potassium chloride (IV KCl) in their hospitals. An audit of current IV KCl prescription and administration practices, in areas where the use of pre-mixed solutions were problematic, was also conducted concurrent to the survey. The project was coordinated and managed by a major metropolitan teaching hospital. This paper reports on first results from the survey.

Methods: Six hospitals in Victoria were involved in this study: three large metropolitan teaching hospitals, one specialist hospital and two rural hospitals. Each site identified a project officer to manage the project and convened a site reference group to oversee the project. A self-administered questionnaire was developed for doctors and nurses and another for pharmacists and site project reference group members to determine their knowledge and awareness of current practice regarding intravenous potassium chloride availability, prescription and administration. Awareness of the 2003 Australian Council for Safety and Quality in Health Care (ACSQHC) IV KCl alert, barriers to implementing recommendations, and personal involvement in near-miss or adverse events related to intravenous potassium chloride use were also sought.

Questionnaires were issued to a random sample of 1017 doctors, 1336 nurses, 289 pharmacy and site project reference group members. Completed questionnaires were collected at each individual site and returned to the main investigating hospital for data entry and analysis.

Results: The survey involved the distribution of 2642 questionnaires; 930 were returned (response rate = 35.2%). The response rate for individual respondent groups varied between hospitals and ranged from 26 to 52% for nurses, 9 to 26% for doctors and 33 to 100% for pharmacists/site project reference group members, depending on the hospital.

Analysis has shown that 39% of doctors and nurses combined (n=737) and 57% of pharmacy staff and site project reference group respondents combined (n=194) were aware of the 2003 ACSQHC alert. In addition, some staff knew that ampoules had been removed for safety reasons but were not aware of the Alert. Forty-six instances of individual involvement in near misses or adverse events related to IV KCl use were documented by respondents. These incidents involved administration incidents, product selection errors and dose/ solution concentration problems.

Conclusions: These first results show a large variation in staff knowledge on IV KCl. The near-miss events reported demonstrate that these risks cannot be ignored. There is a need for orientation and ongoing education programs for hospital staff regarding high risk drugs to prevent serious adverse events in the future.

Funding Acknowledgement: This project was supported by a grant received from Baxter Healthcare Pty Ltd. The development, conduct and analysis of the project was independent of Baxter Healthcare.

Poster 122
Reality Bites : Coming To Grips With Patient Safety

Rowena Richardson, Catherine Jamieson, Linda Sawrey
Patient Safety Centre, Queensland, Australia

Introduction: By mid-2006 Patient Safety Officers had been employed in thirty seven Health Service Districts across Queensland as an integral support measure from the newly instituted Patient Safety Centre. Armed with a basic knowledge of incident management processes, system analysis tools such as Root Cause Analysis (RCA) and Human Factor Engineering (HFE), this group of dedicated and highly motivated health professionals took on the complexity of the health care system. The goal for Patient Safety Officers was to reduce preventable harm and enhance patient care safety.

Problem statement: The idealism of Patient Safety Officers was quickly challenged by the realities associated with complex patient safety issues. To be successful, Patient Safety Officers' competencies have required high level leadership and system thinking which includes acting in a consultancy role to executive leadership. They have been the "movers and shakers", creating tension, and consequently initiating significant change. This has called for a different, and developing, set of skills to the initial criteria upon which the Patient Safety Officers were selected.

Motivation: The purpose of this study is to explore the experiences of Patient Safety Officers over a twelve month period, the criticality of culture change inherent to the success of this position, and ultimately the reduction in patient harm.

Method: This is a descriptive study as statistical data does not reflect the journey of the Patient Safety Officer. The data upon which this study is based is derived from discussions with Patient Safety Officers and the accumulation of anecdotal evidence, as well as the presenters' personal experiences.

Results: Patient Safety Officers report that, while they effectively use a range of incident analysis tools and follow the recognised patient safety agenda, the generation of incident analysis reports, including sets of recommendations, were insufficient triggers to bring about localised and systemic change. The key inhibitors to change have been identified as: culture and intrinsic behaviours associated with the different professions within health care, inadequate resources, excessive workload and resultant stress.

Despite these problems, senior executives appear to desire change and turn to the Patient Safety Officer as the key individual to precipitate and support change. The role of the Patient Safety Officer has therefore become pivotal to clinical governance and requires strong leadership skills.

Discussion: Queensland Health and the Patient Safety Centre are justified in perceiving the introduction of the Patient Safety Officers as a success story. This position is being viewed by health care staff at the base level right through to executive management as the "missing link" in improving safety within our hospitals. However, what the Patient Safety Officers believed to be their core job description twelve months ago has dramatically changed. The Patient Safety Officers themselves have been deemed to be the "change agents" for hospital behaviour and culture. The skills that are now required of this group include strong political astuteness, diplomacy, superior negotiation adroitness, conflict management, and the ability to control tension. For Patient Safety Officers to continue to be successful in bringing about reform in Queensland Health, their competencies must go beyond incident analysis to include understandings about organisational culture, learning, change, politics, and conflict. This, at times, requires a flack jacket!

Poster 126
Analysis and the subsequent management for intra-operative pressure ulcers

RU-CHING HUANG, Wei-Fang Wang, Hsiu-Chu Huang, Hsiu-Li Hu, Shu-Hung Lee
National Cheng Kung University Hospital, Tainan, Taiwan, Province of China

Introduction: Pressure ulcers have been one of the foremost important indices for quality control in nursing care. In operating room, patients are usually anesthetised and placed in fixed positions throughout the surgical procedures. Since switching position is almost impossible during operation, hence the occurrence of pressure ulcers increases. Development of intra-operative pressure ulcers not only significantly increases medical expenses and prolongs duration of hospital stay, but also attenuates contentment with medical service and results in unwanted legal problems. Therefore, prevention and management of intra-operative pressure ulcers becomes an important research issue in our center. The objectives of current research project were:

1. To determine the risk factors for intra-operative pressure ulcers.
2. To investigate the understanding and actions taken by the nursing staff in dealing with intra-operative pressure ulcers.
3. To evaluate the outcomes following introduction of prevention strategy for pressure ulcers.

Methods: We retrospectively collected the available medical information regarding intra-operative pressure ulcers, and compared the occurrence following intervention by introducing prevention strategy for intra-operative pressure ulcers. We utilised an assessment chart and questionnaires for recording the development of intra-operative pressure ulcers and assessing the understanding of relevant topics in the department. Strategy in prevention and management of intra-operative pressure ulcers were then delivered to our nursing staff. The response rates were 96%, 90% and 85% for before, during and after intervention, respectively.

Results: Compared with 2004, prolonged operations (> 6 hours) increased by 18 cases (71.2%) in 2005. The occurrence of pressure ulcers was also increased by 0.04% accordingly. In all surgeries undertaken in supine position during 2005, incidence of pressure ulcers increases in the sacrum, scapula and upper shoulder regions. Factors associated with poor practice in prevention of intra-operative pressure ulcers were insufficiency of devices (35%), inadequate preparation time (27.4%), short of staff (16.8%) and unfamiliar with the grading of pressure ulcers (8.8%). Using single-variant analysis between characteristics of personnel and understandings or handling of pressure ulcers, we detected statistically significant differences in (1) ability in updating information about caring for and prevention of pressure ulcers, (2) senior staff, (3) training background in the related fields, and (4) higher levels of education. Spearman's correlation showed folding of bedding, padding of clothing, dejection, nutrition and levels of protein-T (all $P< 0.01$), supine position and volume of irrigation (both $P< 0.05$) were significantly related to the grading and occurrence of pressure ulcers. Paired sample t-tests also revealed significant differences between understanding/handling of pressure ulcers and the introduction of prevention strategy. Due to extremely high implementation rates (89 to 92%), there were no significant differences between individuals within the department throughout the study periods.

Conclusion: The study underscores that application of pressure ulcer assessment chart during patient admission to the operating room, and enhancement of multiplicative protection strategy may reduce the occurrence of intra-operative pressure ulcers. Post-graduate courses and quality assurance in management of pressure ulcer are equally essential in providing a better care for intra-operative skin defects.

Poster 135
"Too Many Pills": Reducing the Risks of Polypharmacy in the Older Patient in the Acute Care Setting

Katrina Stott, Judith Flis, Nicholas Zwar
University of New South Wales, Sydney, Australia

Introduction: Our population is ageing and the number of medications being taken by our older patients is increasing. This paper reports on a study that assessed the prevalence of polypharmacy, in a group of older patients presenting to the Emergency Department at a district hospital.

Method: A total of 100 patients / carers and General Practitioners were interviewed to assess the extent of polypharmacy over a period of 2 months. A standardised assessment form was used to assess the patient's medication history and demographic background.

Results: 100 patients were assessed using a standardised assessment form. The mean age of all study participants was 80.7 years. The most common reasons for presentation were respiratory problems, falls including collapse and cardiac problems. Co-morbidities were common and 98 patients interviewed had more than two diagnoses. The average number of medications taken by the participants was 7, and 76 patients were found to be taking more than four medications concurrently (ie. Polypharmacy). Adverse drug reactions were identified in 33 patients, non-compliance by 32 patients and confusion over medication regime by 37 patients.

Conclusion: The study found a high prevalence of polypharmacy related to medicines taken by this group of older patients attending the district hospital. Interventions proposed to address these medications issues and prevent older patients with a medication related problem include a Home Medicines Review. Further study will be undertaken to assess representation rates and results from the Home Medicines Review being undertaken in conjunction with general practitioners and local pharmacists.

Poster 138
Implementing an Equipment Change to Improve Patient Safety at a Public Hospital

Verna Wallroth, Filomena Ciavarella, Jodie Burns, Sue Kirsa
Peter MacCallum Cancer Institute, Melbourne, Australia

Introduction: An inpatient suffering from throat pain, caused by their cancer treatment, was due for a regular dose of pain-relieving mouthwash (cocaine 0.5%). In order to measure the dose accurately, the nurse used a hypodermic syringe to draw up the dose. This was standard practice at the hospital at the time. Being distracted, the nurse forgot to decant the medication into a measuring cup and placed the hypodermic syringe into a kidney dish alongside the patient's other intravenous medications. The nurse went to the patient's bedside to give the mouthwash. However, as the patient was in significant pain, the nurse became distracted, and inadvertently gave the syringe containing the oral mouthwash intravenously. Although the patient suffered no adverse effects, the incident highlighted the need to implement systems' improvements.

Methods: As this was a high risk incident, the Clinical Risk Manager immediately carried out a case review (as per standard practice). This included performing staff interviews, a medical record review and liaison with both the Quality Use of Medicines Pharmacist and Pharmacy Director. Several issues were identified and a detailed incident report was generated. The incident was subsequently referred to and discussed at the appropriate patient safety committees.

The consensus was to implement a barrier to prevent syringes containing oral liquids from being physically compatible with any intravenous equipment. The Medication Safety Committee took responsibility for implementing this.

In liaison with the Clinical Product Advisor, the Medication Safety Committee performed a thorough review of available products on the market. After a testing and trialling period, the product chosen was an oral medication syringe that was physically incompatible with the additive port of our intravenous lines. The syringe chosen was also coloured orange, to provide a visual alert that it contained an oral rather than a parenteral liquid.

Staff training was provided at various forums and the product was rolled out successfully in all clinical areas (including ambulatory care e.g. Radiotherapy and Chemo Day Ward)

Results: Since launch in August 2006, almost 7000 syringes have been supplied to clinical areas. The three sizes available are: 1ml, 3ml and 10ml. As expected the Head and Neck Unit have been the biggest users thus far.

Discussion: An oral syringe was implemented along with caps for opioid liquids to prevent spillage and facilitate drawing up of accurate doses. Feedback from nursing staff indicated that the chosen product was difficult to use, particularly at night when the black markings were difficult to read.

During the implementation period a number of issues with the chosen product were identified which required further testing, education and review of chosen product.

Conclusion: Since the introduction of these syringes, there have been no further incidents of this nature.

Poster 142
Best Quality and Safety Practice in Managing Skin Integrity

Leonie Gardiner[1], Anne McMurray[2]
[1]Peel Health Campus, Mandurah, Australia, [2]Murdoch University, Mandurah, Australia

This presentation reports on a successful quality and safety improvement initiative at Peel Private Hospital (PPH) in Mandurah, Western Australia as part of developing a culture of evidence-based practice in the hospital. The project was designed to develop a consistent and sustainable best practice model for managing skin integrity and preventing skin breakdown in hospital, which is a priority in terms of the burden of care and cost to the health care system. A large body of literature exists to support the need for best clinical practice related to skin care, but it is generally limited to a focus on the aetiology of skin and pressure areas and the biomechanical aspects of care rather than comprehensive strategies for prevention. We adopted a multi-stage program to redress this situation. This included an audit of skin breakdown; mapping current policies and practices; reviewing the literature on clinical guidelines and research evidence related to prevention strategies; analysing current management of incontinent and other patients at risk of breakdown; evaluating a number of products and practices, and documentation practices relevant to preventing skin breakdown. The findings show significant quality improvement across all aspects of care. They have been used to inform policies and protocols for inpatient services and discharge planning for home and residential care, and as a basis for educational material developed for staff, students, patients and family carers.

This initiative was funded by Medibank Private.

Poster 147
Cleaning Up Narcotic Use – With SOAP....the "Safe Oxycodone Administration Promotion!

Stephen Lim, Debbie Bridgeford
[1]Armadale Health Service, Armadale WA, Australia, [2]Armadale Health Service, Armadale WA, Australia

This project aimed at determining the causes of adverse events relating to oxycodone administration and to implement strategies to improve Oxycodone prescription and administration, with the ultimate aim of reducing Oxycodone or Morphine prescription/ administration errors and associated patient harm by 100%.

Following a thorough analysis of patient incident data (from AIMS – Australian Incident Monitoring System) of errors/adverse events associated with Oxycodone administration, and a survey of nursing staff, it was evident that confusion existed with the various narcotic preparations and the lack of guidelines or resources to assist staff prescribing or administering these medications.

A multidisciplinary working party was established and strategies implemented that raised staff awareness of appropriate prescribing requirements, various preparations available, their indications (ie. slow or immediate release) and their interchangability. Regular audits of medication charts, a no-tolerance approach to inappropriate prescribing, and acknowledging/rewarding staff complying to appropriate prescribing requirements resulted in reducing patient incidents and improved staff narcotic knowledge.

To conclude, the SOAP – patient safety project, driven by a multidisciplinary team which included the Director of Medical Services as the executive sponsor, assisted in developing systems for staff to improve their knowledge and prescription of Oxycodone/morphine preparations. The sustainability of this project is being maintained by the Pharmacy department with ongoing education focusing on the various oxycodone/morphine preparations, the successful implementation of auxiliary labels identifying slow release preparations and the no tolerance approach to opioid prescribing.

Poster 150
The Relationship among Knowledge, Attitude and Practice of Physical Restraint

Man-Shu Su
National Cheng-Kung University Hospital, Tanin, Taiwan, Province of China

Methods: Using a structured questionnaire, convenience sampling consisted 601 with equivalent to or more than three-months working period in a medical center in southern Taiwan.

Results:

(a) average correct response rate of restraints knowledge was 90.6%; it reflects that the lowest response rate (42.4%) in "Emergency Reactions", as well as, working unit and restraint knowledge scores have a significant difference in statistics (p? .05).

(b) Restraints attitudes had its average located between uncertain and agree; which amongst them, it reflects that 67% nurses gathers complex emotions towards restraint use on patients, moreover, there were significant differences in attitude towards restraint according to nursing ladder, marital status, religion, seniority (ps? .05).

(c) On top of this, unit, nursing ladder, educational background, marital status, religion, and restraint practice scores also had a significant difference in statistics (ps? .01).

(d) Nurse's primary nature is associate with restraint knowledge, attitude, and practice, which explores restraint knowledge and seniority (r= .98) reaches a statistical standard (p? .01). There were significant correlations between restraint attitude and age (r= .13), seniority (r= .18) (ps? .01). Restraint practice's correlations between age (r= .18) and seniority(r= .15), which all accomplish a significant standard in statistics (ps? .01).

e) Restraint attitude, knowledge, and practice were positive relationship (r= .16 , r= .20) which all shows a statistically significant standard (ps? .01); however, there were no significant relationship between knowledge and practice of physical restraint.

f) The above results expressed that the higher seniority had higher scores of knowledge about restraint. Married, religious, older, and in higher ladder staff were more unfavourable attitude toward restraint used. As well as intensive care unit, married, in higher ladder, higher educated background, longer seniority, and older nursing staff had preferable performances in physical restraint practice.

Discussion: Nursing staff trainings with urgent reactions towards patients' insecure actions should be enhanced; furthermore invited intensive care unit nursing staff with longer seniority, in high ladder, and high level of educational degrees act as clinical preceptor that also shares their restraint experience on patients.

Poster 154
Together Is Better: Providing Multi-Service Drought Relief At The Farm Gate

Duane Attree[1], Shirley Rutherford[1], Alana Brennan[2], Emma Brentnall[3]
[1]Rochester & Elmore District Health Service, Rochester, Australia, [2]Campaspe Shire Council, Campaspe Shire, Australia, [3]Campaspe Primary Care Partnership, Rochester, Australia

Purpose: To outline the value of connected leadership between community and service providers to provide services to drought affected communities.

A period of eight years of drought in northern Victoria has had major consequences for the health and well-being of the dairy farming and related business communities. An initial partnership between the local rural health service and local government was formed to work collaboratively to identify issues and plan service change in a sustainable manner.

The catchment population of approximately 6,800 is essentially a conservative Anglo-Saxon demographic characterised by privacy, pride and resistance to "charity".

Methods: Early work focussed on the development and maintenance of social networks through community get-togethers. Evidence of significant stress, depression and breakdowns were then addressed through active development of specific services. In addition, other health concerns were identified including high blood pressure, diabetes, headaches, indigestion, cancers and continuing anxiety. Broader issues of relationship stress in families, neighbourhoods and local businesses were also highlighted as a highly volatile and a potent community issue.

Results: Services such as Social Work, Health Promotion and workplace specific health programs e.g. for tanker drivers, milk processors, farm and irrigation suppliers, had some impact, but those worst affected were still isolated. Information obtained from 150 attendees at a "Blokes Night Out" was used by the lead health agency to build a further collaboration with other agencies. The local Community House, Primary Care Partnership and Department of Human Services were partnered with to provide further services.

A research partnership with Deakin University to develop a health impact assessment was used to assist in confirming previously observed issues and high-lighted the differing ways in which men and women responded to the drought impact. All of this information was incorporated into a submission to the Gardiner Foundation.

The Farm-Gate Men's-Link program, funded by the Gardiner Foundation, is a shared effort between the partners and local

community, where all farms in the area are visited by a Social Worker and Shire drought worker with information, interest, concern and the capacity to work with farming families to ensure they receive the social, financial and health support they need.

This collaboration, with leadership from the health service, has demonstrated not only that together-is-better but also provides highly effective and measurable outcomes. The "drop-in" on 120 farms to date has a 100% success rate in resident engagement with information provision, a listening ear, counselling on the spot and follow up support through referral or re-visiting. Data shows that common feelings of failure, shame and embarrassment are being addressed by this method with relief has been the most commonly voiced response. As a result, in excess of 30% of "drop in" visits have resulted in self-referrals for counselling and other related services provided by the lead health agency.

Discussion: Partnership models work because of connected leadership and communication between community and service providers. Work will shortly begin on post-drought planning with continuing effectiveness enhanced by secure funding. Significant contributions by the partner agencies in staff time and resources have made this successful program possible.

Poster 155
Improved Survival With In House Overnight Neonatal Consultants

Jim Holberton[1], Andrew Watkins[1], Simon Fraser[2]
[1]Mercy Hospital for Women, Heidelberg, VIC, Australia, [2]West Gippsland Healthcare Group, Warrigal, VIC, Australia

Introduction: The delivery of healthcare in Neonatal Intensive Care Units (NICU) has greatly increased in complexity, particularly in the last decade. Our unit, staffed with a single registrar overnight, had increased in volume and intensity such that further after hours manpower was required. A decision, based on several considerations, including: service delivery, training and supervision, was made for the staff neonatologists to stay routinely in house over night the first for an Australian NICU. Consultants were rostered in-house 5 nights a week and neonatal fellows 2 nights per week. The aim of this study was to compare 12 months of NICU admissions prior to the change (Epoch 1), with a second one-year cohort of infants afterwards (Epoch 2).

Methods: Detailed analysis of every NICU admission of both cohorts was undertaken. Comparisons were made from objective data available from medical note reviews on: mortality, severity of disease on admission (CRIB II), and morbidity including sepsis, intraventricular haemorrhage, retinopathy of pre-maturity, chronic lung disease and length of stay.

Results: The most important comparisons between the two groups are listed in Table I.

	Epoch 1	Epoch 2	P Value
NICU Admissions	378	392	NS
CRIB II Score	4 (2-8)	4 (2-8)	NS
Gestation in Weeks	31 (28-35)	32 (29-35)	NS
Birth weight in Grams	1615 (1121-2537)	1762 (1096-2650)	NS
Inborn Infants	273 (72%)	272 (69%)	NS
Infants of multiple births	92 (24%)	69 (18%)	<0.05
Death - All	**40 (10.6%)**	**25 (6.4%)**	**<0.05**
Deaths -"Non-lethal", Inborn	**28/270 (10.4%)**	**14/267 (5.2%)**	**<0.05**

Table 1: Numbers are total values (%), or median values (inter-quartile range). "Non Lethal" excludes infants born less than 23 weeks of gestation, and those infants born with lethal chromosomal / congenital abnormalities. NS=Non Significant, NICU= Neonatal Intensive Care Unit, CRIB II= Clinical Risk Index for Babies II.

There were no significant differences between cohorts in: chronic lung disease, retinopathy of pre-maturity, episodes of sepsis, intraventricular haemorrhages, duration of ventilatory support or length of stay. Registrar and nursing staff feedback was generally very positive.

Discussion: This study which describes the first Australian NICU experience with in-house overnight consultants shows a clinically and statistically significant decrease in mortality. Although there are more infants from multiple births in the first cohort, this is not an independent risk factor for neonatal mortality. In house night senior medical (consultant or fellow) cover in Canadian NICUs has shown a significant decrease in early mortality in inborn infants admitted after hours compared with units without such cover. In house after hours consultants have been suggested for: trauma surgeons, obstetricians, and adult and paediatric intensive care physicians. This study adds weight to the growing evidence of improved outcomes with senior medical personnel, on site after hours and is the first to show an overall reduction in NICU mortality.

Poster 159
Improving Patient Comfort In Colonoscopy

Bev Draper, Peter Bampton, Jayne Sandford, Graeme Young, Robert Padbury
Flinders Medical Centre, Adelaide, Australia

Introduction: Our endoscopy unit performs approximately 1200 colonoscopies per year. Ninety per cent of these patients have conscious sedation without support of an anaesthetist. Whilst anaesthestic support has been advocated for all patients having a colonoscopy, this adds considerably to the cost of the procedure, which is particularly relevant given the expected increase in colonoscopies resulting from the roll out of the National Bowel Cancer Screening Program from 2006. Anecdotal evidence from patient complaints and staff observations of a wide range of sedation practices between proceduralists led to the development of a Clinical Practice Improvement Project to improve patient comfort during colonoscopy, looking at sedation practice and use of anaesthestic support.

Methods: Initial baseline data was collected in September 2004. Patient comfort was measured on all inpatient and same day patients leaving the Endoscopy Unit following colonoscopy. The patient completed a questionnaire on discharge and included

- perceived comfort level using a pain rating score 0-10, (where 0 is no pain and 10 is unbearable).
- patient expectations
- the type and amount of sedation given
- use of reversal agents
- number of patients with an extended recovery time (>2 standard deviations from the average).

Following baseline data collection and analysis, a project team was formed consisting of a gastroenterologist, colorectal surgeon, anaesthetist and nursing staff to identify issues and plan interventions. Interventions implemented were : 1) revision of patient information given prior to procedure, 2) education on the use of the standard midazolam / opiod combination, 3) individual feedback and de-identified comparison to peers of proceduralists patient satisfaction rates and sedation usage, 4) re education in resuscitation procedures and airway management and 5) the introduction of CO2 as an insufflation gas.

A sub study was conducted in February 2006 to better understand if factors could be identified that predicted intolerance of a procedure. This showed that patients who had been on anxiolytics or have a history of anxiety were more likely to tolerate colonoscopy poorly, rating their pain as moderate to unbearable (scoring 6–10). An extra anaesthetic list commenced in November 2006 to accommodate these patients.

Results: Patients experiencing minimal or no discomfort (score of 0-1) improved by 17% (60%–70%) and the number of patients experiencing severe to unbearable pain (score 8 – 10) has been more than halved (10% to 4%)

- Patients whose expectations have not been met have decreased by 16% (7.8% to 6.5%)
- The amount of sedation used has increased on average : midazolam by 20% (5mg to 6mg) and fentanyl by 17% (100mcg to 120mcg)
- Use of reversal agents have remained stable
- There has been no significant increase in recovery time (80mins to 90mins, p=ns)

Discussion: Whilst there have been challenges in changing individual practice, interventions have been made to improve patient comfort for patients undergoing colonoscopy. An increase in the amount of sedation is being used with no increase in the recovery time of patients or the increased use of reversal agents.
We have been able to develop criteria to assist with predicting patients who are more likely to have poor pain tolerance, namely those who are anxious and/or taking anxiolytics, making better use of anaesthetic supported lists.

Poster 161
Implementation Of A Chest Pain Assessment Service

William Parsonage, Charles Denaro, Tony Brown, Adam Scott, Kristina O'Dwyer
[1]Royal Brisbane and Women's Hospital, Brisbane, Australia, [2]Clinical Practice Improvement Centre, Brisbane, Australia

A trial of a Chest Pain Assessment Risk Stratification Pathway in a major tertiary facility. Emergency, Cardiology and Internal Medicine departments demonstrated significant patient bed-nights saved, and reduced time to appropriate treatment.

A key contributor to the savings was implementation of after hours Exercise Stress Testing (EST).

The next steps for the project include development and implementation of standardised versions of the pathway in selected tertiary hospitals, followed by a roll-out to other tertiary hospitals, and ultimately to regional and rural hospitals.

The scope of the project includes endorsement of clinical indicators to benchmark results across different types of hospitals across the State.

Poster 164

Enhanced Patient Safety with a Web Based Electronic Medication Management System in Two Regional Victorian Hospitals

Chris Turner, Barbara Westwood PhD

[1]Society of Hospital Pharmacists of Australia, Melbourne, Victoria, Australia, [2]RHAN Spoke Coordinator, School of Rural Health Shepparton, University of Melbourne, and ERH Project Officer, Shepparton, Victoria, Australia

Introduction: Echuca Regional Health (ERH) is a 50 acute bed general hospital 200km north of Melbourne servicing a population of around 35–40,000. The pharmacy department provides a comprehensive service to the 18 bed Cohuna District Hospital (CDH) 70km away. Patient safety was compromised by a high rate of unexplained missed medication doses at ERH and problems with legibility and clarity of hand written drug orders at CDH identified in 2003. A joint pilot project to introduce the Hatrix Medchart e-medication management system into a rural hospital to address these problems went live in February 2006 in a 19 bed medical ward at ERH and at CDH. This is the first use in a rural hospital with other sites in metropolitan Melbourne, Sydney, Canberra, Darwin and Otago (New Zealand).

Method: The system uses wireless enabled laptop Computers On Wheels (trolleys) or COWs wheeled to the patients' bedside. Doctors prescribe directly into the electronic medication chart and nursing staff record administration at the bedside. Within ERH connection occurs directly to a server by wireless local area network. Linking CDH and GP clinics with the ERH server is a highly secure wide area network connection. After some initial problems the information technology infrastructure has proven to be quick, reliable, and secure.

Results: Three months after introduction of Hatrix illegibility of medication orders reduced from 13% to 0% and unexplained missed doses of medication from 7% to 0.4%. High risk incident reports were reduced by 50%. This is sustained at 12 months. Greater accountability at all stages in the medication management process was achieved. It is more clear who has done what, when, and why. A range of online references, drug formulary and allergy alerts support prescribing. Other decision support tools developed by pharmacy staff including a drug interaction alert database based on Hansten's Top 100, dose range alerts and use of the rules engine that alerts prescribers to incorrect dose strengths, frequency or incompatibilities.

Visiting Medical Officers can view/modify medications via the Net from their private practice rooms. Pharmacy staff can review medication charts from any computer and with improved communication of pharmacy comments and interventions. For CDH patients, medication review by pharmacists is now performed daily on-line compared to the previous once weekly visiting service. This approach may have benefits for many rural settings.

Discussion: The Hatrix Medchart e-medication system achieved the aim of enhancing patient safety by reducing errors in medication prescribing and administration. A major issue is adequate training and support for users. Early complaints by doctors that prescribing is more time consuming and by nurses that administration of medications takes too long was minimised with familiarity and outweighed by the benefits. Regular software enhancements and attention to training needs have improved user acceptance of the system to enable full utilisation of its features. Future plans include use of the complex infusion module in 2007, an interface with pathology reports, implementation of the aged care module, and development of an interface with the pharmacy system.

Poster 178

A Regional Audit of Dosage Administration Aids in Aged Care Facilities

Annette Carruthers, Kialie Naughton

Hunter Urban Division of General Practice, Newcastle, Australia

Within the boundaries of our Division of General Practice, there are seventy Regional Aged Care Facilities (RACFs). As part of the Aged Care Panel initiative, a network of five Regional Medication Management Committees has been established and supported by the Division to ensure all local RACFs have the opportunity to participate in Medication Advisory Committees (MACs) constituted according to best practice. This strategy was developed due to recognition that MACs are a key to the implementation of quality use of medicine but that one of the barriers to the successful establishment of MACs within RACFs has been the failure to engage General Practitioners due to time and resource constraints. This initiative ensures that all RACFs have access to GPs with interest and expertise in Aged Care. Sixty-five facilities have committed to participate in this initiative. Membership of each of the five regional committees also includes two general practitioners, a geriatrician and a pharmacist. A peak medication advisory committee provides strategic advice to the Division and the chairs of the five committees and co-ordinates the activities of the regional MACs.

In response to concerns expressed by aged care facility representatives, an initial activity of the regional MACs was to conduct an audit of the accuracy of packing of dosage administration aids compared to the charted medications. The goal of the audit was to measure the incidence and severity of medication incidents in the provision of dosage administration aids for aged care facility residents, to identify the system issues contributing to the incidents and to make recommendations to reduce medication incidents.

Each participating RACF audited one full set of dosage administration aids for all residents receiving medication. In total, 6972 dosage administration aids were audited and variances between the medication chart and medication supplied documented.

There were 301 incidents detected from 6972 packs for 2480 residents. This equates to an incident rate of 4.3% of packs and 12% of residents. The nature of variances included medication missing from the pack, wrong medication or wrong strength dispensed, incorrect labelling or dose instructions and supply of ceased medication. The cause of variances included failure to chart or communicate change in medication, prescription not supplied or illegible, failure of GP to sign chart and pharmacy error. The types of medication subject to variance was also analysed.

The audit found that the frequency of incidents in packing of dosage administration aids in RACFs is unacceptably high and deserves attention. Frail elderly residents are particularly vulnerable to medication adverse events. Every effort should therefore be made to reducing their exposure to error in the supply of their medication. The themes in the incidents include poor communication, poor systems and human error. Recommendations include rationalisation of medication use in the elderly, development of guidelines for packing of dosage administration aids and streamlining systems for communicating changes in doctors orders between GPs, pharmacists, and RACFs.

Poster 182
Evaluating a Fall Review Program in the Aged Care and Rehab Units

Anita Ko, Chan Daniel, Van Nguyen, Jo Stroud, Denise Houston, Loo Ping Ng, Lourna Eschadia
Bankstown Hospital, Sydney, NSW, Australia

Background: Falls are the leading causes of injury in the hospitals. Forty percent of older people experience one or more falls during their hospitalisation. Patient falls continues to be a major problem for hospital. It is costing Australia $498.2 million in 2001and it is also leading to unsatisfactory quality of life for the elderly people.

Aim: Reduce the number of falls in the Aged Care and Rehab Units.

Methods: It is a multi-disciplinary approach quality promotion program. Team members meet every month to review data from the Incident Information Management System (IIMS). Interventions such as assessment and identification of patient at risk of fall on admission; review and limiting high risk medications; changing work practise during high risk period; setting up safe rooms which are close to nursing station and with better staffing ratio; increase physical therapy and daily living activities intervention and follow-up continually in Fall Clinic after discharge implemented. Intervention plans are monitored and evaluated by the team members closely on the effectiveness of the intervention.

Results: After the implementation of the fall prevention program, staff were more aware of the risk factors associated with patient falls and able to implement appropriate prevention strategies. Universal fall precautions played an important role in the reduction in patient fall numbers. There were about sixty to seventy percent reductions of fall incidents in the target high risk time frame. Consequently, lead to an eleven percent of the reduction of fall incident in the ten month study period in the Aged Care and Rehab Units.

Discussion: The finding does reinforce the important of early assessment and fall prevention intervention for at risk patients. Environmental factors such as patient acuity, staff workload and occupancy rate of the department may impact the number of fall but do not reflect in the assessment tool nor in the IIMS. Incorporation of the above environmental factors may further improve on clinical practise on fall prevention.

Poster 184
Evaluation Of The Effectiveness Of A Hydration Monitoring Tool In Aged Care Facilities

Melissa Sapuppo, Wendy Hellier
Michael Court Hostel, Seaford, Victoria,, Australia

Dehydration is a common and dangerous problem in aged care facilities. Older adults stand at increased risk of dehydration secondary to a variety of factors contributing to a decreased fluid intake and increased fluid losses.

Decreased thirst perception, confusion and dementia affect individuals' ability to recognise fluid needs, whilst the existence of mobility disorders, communication difficulties and acute illness, limit ones' capacity to respond and address such needs. Dehydration may contribute to altered mental and functional state, onset of fatigue, dizziness, constipation and increased risk of pressure sore formation. The outcomes of such can lead to a higher incidence of falls, increased rates of infection, diminished quality of life and in extreme circumstances, premature demise.

Aged care facilities have a duty of care to provide the fundamental requirements for maintaining health and wellbeing. Risk management procedures are essential to minimise the occurrence of incidences which could compromise resident care. It was therefore aimed to develop and implement a tool to monitor resident fluid intake and reduce risk of dehydration in aged care.

A hydration monitoring tool was introduced within a psychogeriatric hostel accommodating up to 17 residents aged over 65 years. Residents' needs were attended by a team of nursing and auxiliary support staff with a staff to resident ratio of 1:5. A hydration chart was kept for each resident with prompts for fluid provision at intervals throughout the day. A total fluid intake was calculated for each day and a minimal volume threshold was established to alert staff of residents at risk of inadequate hydration.

Hydration charts were trialled over a period of six months following a single staff training session. A documentation audit revealed 100% of charts (n=17) had complete fluid intake data over the week prior to the audit date. Daily fluid totals were completed for 60% of charts over the same period. No residents had been placed on hydration alert over the 7 day period and the average fluid intake recorded was 2.3 litres. Evaluation of the hydration record tool revealed that 86% of staff (n=7) believed the chart instructions were clear and simple to apply with 86% reporting to feel very confident in completing documentation. 100% reported the time for completion to be less than 5 minutes whilst 57% of staff reported to have received adequate training in the use of the record charts.

A simplified hydration record chart serves as an effective means of monitoring fluid intake for individuals in aged care with a high level of staff acceptance and minimal increase to staff duties. Record charts serve to enhance resident safety by ensuring the documentation and communication of information among staff thus minimising the risk of omissions. A flexible design allows charts to be adapted to the individual needs of the resident or care facility whilst allowing inclusion of prompts for the provision of other prescribed dietary supplementation as required.

Poster 185
Breaking Down the Levels of Risk Registers and Improving Safety and Quality in Health Care.

Richard Johnson
[1]ACHSE, WA, Australia, [2]AuSRM, VIC, Australia

Using the Quality Improvement Steps – Plan, Do, Act and Study, responsibility and ownership of Risk Registers have been successfully transferred to the Middle Manager level from the original Top Manager level. This has improved the number of risks being identified and mitigated. This is primarily due to middle managers understanding the benefits and how risks affect their unit.

Set the Policy

Detailed risk registers to be implemented to the middle manager level.

Risk registers to be developed following Department of Health Risk Assessment Table and Risk Management policy.

Risk register to cover all operational issues relevant to each unit.

Develop the Process

Middle Managers complete risk register training and develop risk register for their unit with Risk Management Co-ordinator support and guidance.

Review of risk registers conducted every three months. New risks, existing risks and treatment strategies reviewed.

Top management informed on high and extreme risks and risk treatment strategies.

Risk registers agenda item at Unit Quality Improvement/Risk Management meetings and Unit meetings.

Organise and Implement

From the Department of Health Risk Assessment Table develop Excel spreadsheet to be used to record risks.

Include risk treatment strategies, risk owners, risk priority level, time frames, risk category and EQuIP criteria.

Risk Management Co-ordinator to facilitate simplified education on risk registers to be conducted for middle managers.

Resource manual to be developed and provided to act as a reference for middle manager and clinical staff.

Demonstrate to the middle managers the benefits of risk registers and how they can work for them.

Measure and Review Performance.

Risk register reported to Area Manager level quarterly.

Quarterly risk register reviews ensure living document and risk treatment strategies are followed up.

Patient Safety Climate surveys conducted. ACHS compliance in Risk Management.

Results: 63% of staff aware of the risk registers. 91% of staff aware of at least two risks in their unit. 100% of units with risk registers. All units are reviewed quarterly. 367 risks recorded on the risk registers. Latest Periodic Review with ACHS achieved EA for Risk Management.

Future: Implementation of an electronic risk register database throughout health service to improve efficiency and reporting. Recruit Risk Liaison Officers (current members of staff that want to be risk champions) to assist with identifying risks in their unit, educating staff regarding risk registers, clinical incident reporting and basic risk management principles.

Conclusion: All Risk Management processes/results flow and are/can be recorded in risk registers. For middle management to be in control and responsible for risk registers it becomes a very powerful Risk Management and Quality Improvement tool.

Poster 186
The Role Of Family In Rehabilitation After Stroke

Tatjana Barskova, Gabriele Wilz
Technical University Berlin, Department of Clinical and Health Psychology, Berlin, Germany

Introduction: The onset of a severe disease, like stroke, causes changes that occur not only in physical and /or mental capacities of the patient but also in the broader pattern of social relations in his/her family. Family members who act as primary caregivers for a long time may be challenged to redefine their identity and adjust to alterations in communication and intimacy in their relationship with the patient. The process of family adaptation to the change is complicated and the degree to which the family adapts affects both the recovery of the patient and the psychosocial well-being and health of his/her relatives. One goal of the study was to test specific hypotheses concerning the interdependence of the stroke survivors' recovery and their caregiving partners' attitudes and health. The other aim was to find an applicable method for investigating causal effects on the rehabilitation of chronically sick persons in longitudinal studies with medium-sized samples.

Method: The recovery of 81 stroke survivors regarding the physical and mental functioning in everyday life and their caregiving partners' health and attitudes were assessed twice, once after the patients left the hospital and again one year later. The main measuring instruments were the Patient Competency Rating Scale, the Beck-Depressions-Inventory, the World Health Organisation Quality of Life Questionnaire as well as the Gießener Complaint Questionnaire 24 (a German self-reported measure of somatic problems with a psychological causal component). We applied the structure equation modeling and the cross-lagged partial correlation analysis (CLPC) for testing causal effects.

Results: The results of the data analysis from both methods: the cross-lagged partial correlation analysis and the structural equation modelling suggest that patients' difficulty in carrying out any of the routine activities of daily living affects spouses' outcome more strongly than the reverse. This relationship applies for spouse's depression, his/her satisfaction with social relationships, and spouse's environmental well-being. The spouses who reported more psycho-somatic problems and those who had the lower values on the scale 'acceptance of the changed post-stroke life situation' seemed to have a negative effect on the patients' convalescence concerning mental functioning and not the reverse. The difference between both corresponding partial correlation coefficients was highly significant. Further, the output of the CLPC-test appeared more unambiguous than those of the SEM analysis procedure.

Discussion: Particularly stroke survivors' recovery in cognitive and emotional areas seems to be influenced by psychosocial factors such as the caregiving partners' acceptance of a post-stroke life-situation. In contrast to this, the research suggests that the patients' recovery regarding motor functioning is not substantially affected by the partners, rather the patients' difficulties with motor functioning influence their partners' health. Family caregivers merit attention in their own right as part of various rehabilitation interventions designed to reduce the incidence of handicaps after stroke. We recommend the CLPC for investigating causal effects in the complex interdependence of chronically sick persons' convalescence and their family members' health and state of mind in medium-sized samples.

Keywords: Caregivers' health, rehabilitation, stroke, longitudinal study, structural equation modeling, cross-lagged partial correlation analysis

Poster 193
Early Detection And Management Of Falls Risk In Older Adults: Exploring The Use Of The Quickscreen" Tool In Barwon Health Primary Care Clinical Practice Settings

Sue Morgan
Barwon Health, Geelong, Australia

Clinicians used a question from the Service Co-ordination tools (DHS, Victoria), to screen all new clients >65 years of age (n=210). A sub-sample was then offered a Quickscreen" to identify personal risk factors for falling (n= 57). A telephone survey was conducted three months later to determine behaviour change and client attitude towards the screening process. A focus group was also conducted with 4 clinicians involved in the pilot.

Results: Nineteen percent of clients declined a Quickscreen". The number of risk factors identified during screening ranged from 0-8, (average 1.4 risk factors). At follow-up (n=34); 47% of client's reported that they had read the information sheets and 50% had followed recommendations, 65% agreed that the screening process had reduced the likelihood of a fall in the future.

Discussion: The pilot increased identification of falls, and management of falls risk by older clients. However, not all clients wanted to or valued participating in a screening program offered during a podiatry or physiotherapy appointment. In the 6 months prior to the pilot, the Primary Care Team had identified 18 clients requiring assessment following a fall. In the 3 months of the pilot, 69 new clients were identified as having had a fall (35 of these clients were offered a SAFE home assessment as part of usual practice). In addition, 123 new clients who would not previously have been identified as being at risk of a fall (because they had not yet fallen) were recommended as appropriate for having a Quickscreen".

This pilot evaluation focused on the efficacy of screening as part of a clinical process. Is an early screening tool useful for changing behaviour in older adults and when is the best time to undertake screening? This was a concern expressed by

staff participating in the trial, as the introduction of falls screening increased the appointment time by up to 15 minutes, which would impact significantly on client throughput and waiting time. The pilot indicated that 19% of new clients would not want to be engaged in a screening process during their appointment. Clinicians suggested that this was because the activity was out of context with the purpose of the client's appointment and confusing because of the increase of assessment activity in the session. For those clients who did engage in the screening process, 74% either read the information sheets or acted on recommendations supporting the assumption about positive client engagement, as outlined in the Health Belief Mode (Janz and Becker, 1984).

The screening process was only perceived positively by 65% of clients. This attitude was likely to be influenced by their personal results of screening (30% had no risk factors identified). Staff perception of the usefulness of the screening process was gauged through a focus group session and provided an explanation for some of the quantitative findings as previously discussed. The learnings from the pilot will be used to inform local management decisions about falls screening activity and to support continuation within Primary Care as part of health promoting practice.

Poster 194
Creating Safety – Addressing Seclusion and Restraint Practices

Rinaldo Bellomo[1], Jennifer Williams[1], Bee Mitchell-Dawson[2], Amgad Tanaghow[2], Eddie Gibbons[1], Graham Burrows[1], Alan Wolff[1], Tony Weaver[1], Ruth Vine[2], Clare McGinness[1], Helen Walters[2]

[1]Victorian Quality Council, Victoria, Australia, [2]Chief Psychiatrist & Clinical Policy and Standards Unit, Mental Health Branch, Victoria, Australia

Background: The National safety priorities in mental health: a national plan for reducing harm, endorsed by the Australian Health Minister's Advisory Council (October 2005), has identified seclusion and restraint practices as one of the four national safety priorities in mental health. The Victorian Quality Council (VQC) and Chief Psychiatrist's Quality Assurance Committee (QAC) have formed a partnership to support the development and implementation of the Creating Safety: Addressing Seclusion and Restraint Practices project to enable clinicians to apply best available evidence to clinical practice.

Project Aim: Creating Safety: Addressing Seclusion and Restraint Practices project aim is to strengthen and support safety in adult acute mental health inpatient units and to minimise wherever possible, the frequency and duration of the use of seclusion and restraint.

Objectives:

- To identify contributing factors to seclusion and restraint use and to establish alternative strategies to minimise its use
- To address variable standards of practice by developing and implementing a statewide best-practice training and education curriculum
- To reduce wherever possible the frequency and duration of the use of seclusion and restraint.

Features of the project:

1. The project has been designed along two concurrent streams.
   - The first stream is the development and implementation of a training and education curriculum to promote clinical best practice. The training and education component has been developed collaboratively with specialist public mental health services with the assistance of external expert facilitation. This component was informed by a comprehensive review of literature on seclusion and restraint practices and a revised Chief Psychiatrist's clinical guideline on seclusion practice.
   - The second component of the project is the selection of four to six adult acute mental health inpatient units as project sites. These project sites have been provided with external expert facilitators and some direct and indirect financial assistance to enable multidisciplinary inpatient teams to identify the enablers and barriers to reducing seclusion and restraint use. These teams are developing, implementing and will evaluate strategies to minimise, wherever possible, the use of seclusion and restraint.
2. A communication and consultation plan has been developed to ensure all relevant stakeholders including consumers and carers have input into the development of a training and education curriculum that promotes best practice and to provide input to the project.
3. An evaluation framework has also been established to evaluate the project. This methodology will enable the project mental health services to share learning from the project.

Poster 195
Encouraging Quality Improvement in Aged Care and Rehabilitation Services

Jane Palmer
General and Geriatric Rehabilitation Medicine, Concord NSW, Australia

In 2003, the establishment of a Community Quality Committee paved the way for facilitation of quality improvement (QI) projects within this community aged care and rehabilitation service. By 2005, although staff understanding and awareness of QI was improved, the number of projects completed by teams within the service was still lower than desired. In 2006, the Quality Committee aimed to improve this situation.

Methods to facilitate completion of projects included maintenance of an electronic QI database, feedback to staff via newsletters and team meetings regarding projects successfully completed, liaison with team leaders to ensure their team was working on a project, offering mentoring to teams, promotion of "quality tools" training courses, and coordinating a Quality Forum showcasing the completed projects at the end of the year. The Forum was evaluated by survey and results were compared to those from the Quality Forum, also coordinated by the Quality Committee, held in 2005.

Table 1 displays results achieved by the Quality Committee.

Table 1

	2005	2006	Improvement (%)
% of community teams completing a QI project	56	89	33
No. of projects completed	6	12	100

In 2005, 87% of staff agreed that the forum was interesting and motivational, increasing to 100% in 2006. In 2005, 93% of staff found the forum helpful or learnt something that would help them in their own quality project, increasing to 100% in 2006. The survey also resulted in some valid suggestions regarding how to improve future quality forums.

The Quality Committee successfully facilitated more community aged care and rehabilitation teams to complete QI projects than in the previous year, when only half as many projects were completed. This has encouraged the Quality Committee to expand its efforts to improve the quality of healthcare in this aged care and rehabilitation service and to focus on both inpatient and community services, particularly the links between the different service types. The Quality Committee plans to continue the quality forum annually, with some changes as per staff suggestions, to enhance the benefits to staff and their level of interest in quality improvement.

Poster 202
Improving Hand Hygiene – Results of the Victorian Quality Council (VQC) Hand Hygiene Pilot Project 2004 -2006

Anne-maree Kelly[1], Lindsay Grayson[2], Mary O'Reilly[3], Jennifer Williams[4], Lesley Lewis[5], Joanne Cocks[6], Maureen Canning[7], Jane Hellsten[8], Margaret Balla[9], Lisa Jarvie[10], Clinton Dunkley[11], Diana Quin[12], Peter McDougall[13], Sue Kirsa[1]
[1]Western Health, Vic, Australia, [2]Austin Health, Vic, Australia, [3]Box Hill Hospital, Vic, Australia, [4]Bayside Health, Vic, Australia, [5]Regional Infection control practictioners, Vic, Australia, [6]St. Vincent's Hospital, vic, Australia, [7]Southern Health, Vic, Australia, [8]Bendigo Health, Vic, Australia, [9]Royal Victorian Eye and Ear Hospital, Vic, Australia, [10]Austin Health, Vic, Australia, [11]Department of Human Services, Vic, Australia, [12]Victorian Quality Council, Vic, Australia, [13]Victorian Quality Council, Vic, Australia, [14] Victorian Quality Council, Vic, Australia

A reduction in the number of health care acquired infections is a key priority for improving the safety and quality of health care in Victorian health services. Poor hand hygiene among healthcare workers is known to be one of the largest problems associated with health care acquired infections and is a major factor in the spread of antibiotic resistant pathogens, including methicillin resistant staphylococcus aureus (MRSA), within hospitals. A number of publications have demonstrated that the use of an alcohol-chlorhexidine hand hygiene product along with a successful behavioural change methodology can achieve a sustained increase in hand hygiene compliance and a significant reduction in health care acquired infections.

A key strategic aim for VQC was to develop a practical model for sustained improvement in hand hygiene practices for Victorian health services to reduce the risk of hospital acquired infections and to demonstrate how changing hand hygiene practice will improve patient safety through cultural change, education, professional behaviour change and measurement.

In May 2004 the Victorian Quality Council initiated a 12 month hand hygiene pilot project, incorporating six pilot health services and supported by a coordinating centre. The aim of the project was to assess current hand hygiene practice and improve hand hygiene compliance across four metropolitan and two regional hospitals as part of a multifaceted hand hygiene culture-change program. The overall aim was to reduce hospital acquired MRSA infections.

Methods: The pilot project incorporated a number of strategies including the introduction of an alcohol-chlorhexidine hand hygiene product; education of healthcare workers regarding hand hygiene practices; ongoing promotion of hand hygiene practices via a range of communication and promotional tools; feedback of hand hygiene compliance at both individual and organisation levels; active involvement of institutional leaders; collection and feedback of three outcome indicators including hand hygiene product usage in litres/1000 bed days/month; rates of nosocomial infection; and rates of hand hygiene compliance.

A validated hand hygiene observational tool was used to measure hand hygiene compliance in study wards in each pilot hospital before and after the introduction of an alcohol-based handrub. Healthcare workers were observed by trained personnel for a number of hand hygiene opportunities at pre-intervention, three to six months,12 months and 18 month stages.

An implementation process evaluation of the pilot was completed in July 2005 to identify refinements to the model based on pilot hospitals experiences and to inform the development of options for a broader implementation. At the end of this evaluation the pilot was extended for a further 12 months.

Results: The results of the 24 month pilot project showed that hand hygiene compliance increased significantly in the six pilot hospitals, that there were fewer MRSA clinical isolates identified than would have been expected prior to the intervention and that the pilot project appears to have prevented a number of patients from developing MRSA bacteraemia.

Poster 214
Health Promotion for Older People – Developing a Lifestyle Option

Helen Corbett, Angela Mucic, Justin Offerman
[1]Bundoora Extended Care Centre, Victoria, Australia, [2]Northern Health, Victoria, Australia

Introduction: For older people within our health system the primary focus is based on a medical model of disease or condition treatment, with eventual discharge to home or a community setting. This presentation highlights the effectiveness of an 8 week multidisciplinary evidence based health promotion program developed using a small grant from a Centre Promoting Health Independence (sub-acute hospital) in Melbourne, Australia. The local community boasts a high level of cultural diversity and social disadvantage.

Methods: The program was developed specifically for people over 60 who have had a recent diagnosis like Diabetes Mellitus or obesity, or who have experienced a first critical incident such as stroke or heart attack. The program aimed to provide an option for clients that focused on the promotion of a healthy lifestyle (disease prevention) rather than disease management, treatment or control, and to prepare participants to make the transition to community based physical activity programs. The program also aimed to empower clients by focussing on increased levels of physical activity, improved knowledge of nutrition and factors that affect wellbeing, and recognition of general health promotion messages. Patients received education sessions followed by a tailored gymnasium program. The multidisciplinary education sessions were delivered by physiotherapy, dietetics, nursing, podiatry, occupational therapy, continence and health promotion.

Results: Education session content was reviewed as a result of participant feedback, and an additional session dealing with continence was added. Pre- and post-measures of weight, strength, endurance, blood pressure, pulse rate and health promotion knowledge were taken. Results indicate an overall reduction in weight, blood pressure and pulse rate, and an increase in strength, endurance and knowledge of health promotion messages. There were also self-reported improvements in mood and wellbeing at 3 month follow-up focus groups.

After a trial period the program has now been integrated into the Community Therapy Service, and has also been successfully delivered in a community setting.

Conclusion: The program has successfully reoriented the health system by providing an effective option for older patients that supports a change in lifestyle, rather than treatment disease and management.

Poster 216

Designing programs to reduce risk of Vitamin D deficiency amongst dark skinned and veiled people: community reported barriers to uptake of effective interventions

Caroline Brand[2], Dianne Couch[1], Abi Hodan[1], John Wark[3]

[1]Doutta Galla Community Health Service, Melbourne Victoria, Australia, [2]Royal Melbourne Hospital, Melbourne Victoria, Australia, [3]Melbourne University, Melbourne Victoria, Australia

The cities of Moonee Valley and Melbourne have the second-largest number of public housing dwellings in Victoria and many high-rise blocks prominent on their skylines. The most recent arrivals to both cities are people from the Horn of Africa countries and most of these people are living in the high-rise public housing estates.

In 2003 Moonee Valley City Council (MVCC) Maternal and Child Health nurses reported an increased incidence of Vitamin D deficiency in women and young children in Moonee Valley. This prompted further investigation by MVCC, the Doutta Galla Community Health Service (DGCHS) and the Moonee Valley Melbourne Primary Care Partnership (MVM PCP). Results of a 10-month study of pregnant dark skinned and/or veiled women conducted by the Royal Women's Hospital in Melbourne provided supporting evidence of this increased incidence.

A local partnership began meeting in 2004 with the aim to reduce Vitamin D deficiency in dark skinned and veiled women and children in the Moonee Valley Melbourne area. The collaboration, supported through the Moonee Valley Melbourne Primary Care Partnership (MVM PCP), included MVCC, Melbourne Health, University of Melbourne, DGCHS, City of Melbourne, Flemington and North Melbourne Community Centres and the Office of Housing.

A community research project was conducted in August-October 2005 in collaboration with the Clinical Epidemiology and Health Service Evaluation Unit, Melbourne Health to examine the socio-cultural issues that might influence the uptake of Vitamin D management strategies.

Within an exploratory study design qualitative data was collected using five community based consumer interview groups with a total of 34 participants from the MVMPCP geographical catchment area purposive sampling of community dwelling people 18 years or more, who were dark skinned, or veiled was undertaken. Data was subject to independent thematic analysis which was then reviewed by the project partnership group.

The findings indicated that 90% of the female focus group participants had been diagnosed with Vitamin D deficiency through antenatal consults or as a result of visiting a GP with joint pain. However young women, unless pregnant, and men were unaware of their risk of deficiency. Some of the focus group findings included: inconsistencies in information provided by health professionals, difficulties obtaining appropriate exposure to sunlight and a lack of information on culturally appropriate supplements,

The results demonstrated the need for a comprehensive health promotion response involving health providers and community partnerships to meet the complex needs of these communities.

This presentation will discuss the health system, health provider and consumer cultural and religious factors that should inform content development and delivery of a community based health promotion program to reduce risk of vitamin D deficiency amongst dark skinned and veiled community groups at high risk in metropolitan Melbourne. It also will also outline a comprehensive health promotion approach which is being developed to reduce the risk of vitamin D deficiency in these high-risk groups.

Poster 217

A National Initiative To Optimise Acute Post-operative Pain Management: The APOP Project

Kylie McIntosh[1], Angela Wai[2], David Maxwell[3], Lisa Pulver[4], Donna Taylor[4], Anne Reeves[5], Anna Tompson[6], Greg Peterson[6], Marion Robertson[7]

[1]Department of Human Services/Victorian Drug Usage Evaluation Group, Melbourne, Victoria, Australia, [2]National Prescribing Service, Sydney, New South Wales, Australia, [3]New South Wales Therapeutic Advisory Group, Sydney, New South Wales, Australia, [4]University of Queensland, Brisbane, Queensland, Australia, [5]South Australian Therapeutic Advisory Group/Department of Health, Adelaide, South Australia, Australia, [6]University of Tasmania, Hobart, Tasmania, Australia, [7]Melbourne Health/Victorian Drug Usage Evaluation Group, Melbourne, Victoria, Australia

Background: The acute post-operative pain (APOP) project aims to promote pain assessment, safe and effective analgesic prescribing and communication at discharge. The first phase of the project consists of a baseline audit of current practice. The second phase involves the implementation of targeted educational interventions followed by a re-audit to assess change in clinical practice. This paper presents the first phase of the project.

The APOP project is a national quality improvement initiative funded and supported by the National Prescribing Service, in collaboration with state quality use of medicines/drug use evaluation groups.

Methods: A cross-sectional audit of surgical patients in hospitals (public and private) was designed. Quality indicators were developed to evaluate current practice. Inclusion criteria were patients requiring post-operative hospitalisation for a defined 48 hour period – the first 48 hours after return to the ward post-procedure, and/or post-care of an Acute Pain Service (APS) or cessation of patient-controlled analgesia or epidural. Each hospital was allocated a target of 50 eligible patients.

Data collected from a medical record audit included medical and chronic pain history, pre-operative pain education, pain assessment (including pain scores and pain scales used) and analgesics prescribed in the 48-hour period, analgesics prescribed at discharge and communication to the patient of a pain management plan at discharge.

Results: A total of 62 Australian hospitals, both public and private, are participating in the study, which commenced in October 2006. To date, data on over 1000 patients have been submitted. Approximately 60% of patients were female and the mean age was 54 years (range 14-92). The most common type of surgical patients recruited to the study were orthopaedic (30%), abdominal (26%) and obstetrics and gynaecology (22%). Around a third (35%) of patients were documented to have received some form of pre-operative education regarding post-operative pain management. A total of 57% of patients had at least one pain score documented post-operatively, with the most common pain scale used reported to be the Numeric Rating Scale. Almost all patients (99%) were prescribed analgesia; 98% of patients were prescribed at least one opioid, 28% of patients were prescribed a non-steroidal anti-inflammatory and 70% of patients were prescribed a preparation containing paracetamol. Opioids prescribed included oxycodone (37%), morphine (28%), fentanyl (5%), pethidine (2%) and tramadol (18%). Upon discharge, 52% of patients were prescribed at least one analgesic. A pain management plan was documented to have been communicated to 20% of patients upon discharge.

Discussion: Results of the baseline audit have been used to develop a suite of multifaceted educational interventions, including an academic detailing card, PowerPoint feedback presentations, bookmarks and posters. Baseline results will be provided to participating hospitals as feedback during the educational interventions in early-mid 2007. A repeat audit of practice will be carried out following the intervention period.

Poster 226
Fall Reduction in the Cardiac Stepdown Unit

Roslyn Chataway, Jan Rawles

Queen Elizabeth Hospital, South Australia, Australia

Introduction: The Cardiac stepdown unit is one of the ward areas with the highest incidence of falls at our 300 bed public teaching Hospital. The aim of the Clinical Practice Improvement (CPI) initiative was to analyse why the number of falls is higher in this ward area, brainstorm with staff, patients and their carers why falls occur, and implement changes to reduce the number of falls.

Methods:

Survey: A Patients and Carers survey was conducted in the Cardiac stepdown unit, (n=30, r=100%) with 90% of patients and their carers willing to participate in falls prevention strategies. 60% of patients and their carers thought that enough information was available on how to prevent Falls.

Brainstorming: A multi-disciplinary team brainstormed potential reasons why falls occur and strategies to decrease the number of falls were organised. Different strategies were implemented at fortnightly intervals over several months to see if any particular strategy for falls prevention were beneficial.

Results: There has been a slight decrease in the number of falls experienced on the ward following the introduction of a streamlined process of patient assessment and the implementation of specific strategies if the patient is deemed to be in a high risk group for falls. The process enables patients, carers and staff to feel empowered, and facilitate in the process of reducing the number of falls that occur.

Mobility Chart: A 'Mobility Chart' was adapted using a similar design as a local aged care facility, regularly utilised by patients to offer a seamless system between acute and aged care providers. The mobility chart clearly highlights to staff caring for patients, what level of assistance is required at a glance. Red, yellow and green 'dots' are placed in five categories of assistance, bed mobility, transfers, mobility, toileting and showering. Corresponding coloured dots indicate if the patient requires hands-on assistance, stand-by assistance, or are independent with their activities. The mobility chart is located on the wall above the bed head and staff can easily read and assess the patient's requirements at a glance.

Falls Risk Assessment Tool: A Falls Risk Assessment Tool developed by the Safety and Quality Council of Queensland was also introduced as an aid to staff assessing risk and therefore the patients abilities whilst in hospital. All staff are encouraged to read and assess the patient's requirements especially if their level of risk is deemed to have changed in any way.

The combination of a Falls Risk Assessment Tool and a Mobility Chart system will be rolled out to all ward areas on 7 May 2007, following staff education.

Discussion: The system utilised a team approach, (nursing, medical, allied health and consumers) in order to have all hospital staff aware and participate in actively averting patient falls. The simplicity of the design aids patients and staff to easily apply the principles to falls prevention strategies and has been well received by patients and their carers.

Poster 231
Communication – An innovative idea to improve safety and quality

Machiraju Venkata Ramadevi
Sydney West Area Health Service, NSW, Australia

"Any act by which one person gives to or receives from another person information about that person's needs, desires, perceptions, knowledge or affective states. Communication may be intentional or unintentional, may involve conventional or unconventional signals, may take linguistic or non-linguistic forms, and may occur through spoken or other modes".[1]

Aim: Communicating for Clinical project was introduced by Clinical Excellence Commission as a pilot for one month period with an aim to promote communication mechanisms among the health care teams/individuals who are directly or indirectly involved in delivering patient care. Blacktown Hospital in Sydney west Area Health service was one of the pilot sites, which took this project on board.

Background: In its capacity-building role, the CEC identified education in communication as an area for priority action. The communicating for Clinical Care (CFCC) Project has been actioned to address this need for education in communication. Effective communication in essential for good patient care. Lot of adverse events can occur due to breakdown in communication. A lot of events can be averted by clear, simple and precise communication.

Methodology: DVDs consisting of communication scenarios, which were 1-3 minutes in length, were designed to test at the chosen demonstrated sites. These DVDs consisted of trigger videos intended for a group of individuals who are directly or indirectly involved in delivering patient care. Facilitators were trained who could lead the teams in the respective areas in the Blacktown Hospital.

Planning and Implementation:

A facilitator training session was conducted by CEC to educate project officers who will liaise with the project.

The project officer formed groups and identified Surgical, Medical, O&G wards to administer the sessions. The facilitators were trained by the project officer in the form of "Train the trainer" sessions to lead them in the identified wards.

The aim of the project was to identify factors that influence effective and ineffective communication.

Provide a platform for the participating teams to clearly recognise seven steps of framework for effective teamwork.

Trigger the training teams to identify the potential risks for ineffective communication.

Understand how important is simple and precise communication among working teams

Recognise the responsibilities among the team to deliver quality patient care.

Recognise the patient's privacy issues while communicating.

Outcomes and Evaluation:

Training and evaluation forms were distributed to the facilitators and also the individuals participating in each session.

A total of seven sessions were conducted with 72 people attending those sessions which comprised of multi-disciplinary personnel.

Key messages from each session were identified and noted for future training.

Effect of communication as part of change management in the organisation was recognised.

Future Scope:

This project has identified the gaps that exist among the healthcare teams due to ineffective communication.

This framework provides a starting point for educating health care teams / individuals who are directly or indirectly involved in delivering patient care as the teams now recognise the deficiencies and can redirect their attention. Quality interventions can be put in place in the form of Clinical Practice Improvement projects and extend this project to other facilities across the area as an Independent project.

References: (National Joint Committee for the Communicative Needs of Persons with Severe Disabilities, 1992, p. 2)

Poster 236
Post-Anaesthetic Assessment Of "At Risk" Special Needs Patients – Working Collaboratively For Improved Patient Safety

Tony Bajurnow
Fellow of ANZ College of Anaesthetists, Melbourne, Australia

Providing oral health care to patients with intellectual and/or physical disability residing in minimally supervised accommodation is coordinated through the Special Needs Unit. When the patient is referred to the Day Surgical Unit (DSU) for anaesthesia, the anaesthetic department manages their anaesthetic and medical problems. As part of the DSU Clinical Care Review Program it was identified that Special Needs Dental (SND) patients were at risk of developing complications after discharge from the DSU. A retrospective review of care identified that SND patients are now more likely to be discharged to a de-institutionalised environment where medically qualified staff are not available to oversee recovery even though complications following general anaesthesia and oral surgery may be serious and require treatment by a medical practitioner. Previously the management of these problems was uncoordinated and lacked continuity of care. Often the attending locum had no information about the patient's medical, anaesthetic or dental problems, also, the clinical management by the locum, and the outcome, were not reported back to the treating hospital. This lack of communication compromised the continuity of care of the patient. Information regarding post- operative complications was identified as a contributing factor allowing appropriate changes being made to the future management of the patient.

Current practice provides

1. Relevant information to the carers,
2. An offer of coordinating a visit by a Medical Locum Service or the carers can arrange for their own LMO to visit.
3. Feedback from the Locum Service to the DSU.

An evaluation of the process between 1st of August 2005 and 31st July 2006 showed that 216 out of 278 patients (78%) were reviewed by the locum service and 100% of SND patients were given the relevant information for an informed medical review to be conducted at their residential facility.

This process incorporated the development of a database identifying the patient's medical history, communication ability, length and type of surgery and associated anaesthetic problems.

It was anticipated that less than 5% of patients would require medical practitioner intervention post- discharge. Process auditing identified that 11% required intervention e.g. adjusting patient's medication, instructing staff on methods of controlling bleeding and increasing the patient's analgesia.

This presentation will describe how a specifically designed database was developed following process mapping of what was involved in the medical review of DSU patients, the outcome of the review, and the problems encountered in the process.

Poster 253

A socio-cultural-technical integrated approach which involves end-users through the design and implementation process can develop an information communication technology which incorporates patient safety initiatives: A case study of an electronic medical handover system

Ming Chao Wong, Kwang Chien Yee, Paul Turner
School of Information Systems, University of Tasmania, Tasmania, Australia

Introduction: Electronic health has not delivered the promise to transform the safety of the healthcare system. Importantly, evidences are emerging to suggest the implementation of information communication technology might adversely affect patient safety. While many of these failures are attributed to the lack of socio-cultural-technical consideration, the exact process of utilising socio-cultural understanding to inform information technology design remains uncertain. This presentation aims to contribute significantly to the field of electronic health in patient safety by the description and demonstration of an end-user centred, socio-technical integrated design and implementation of an electronic clinical handover system, which incorporates multiple patient safety features.

Methods: This project firstly utilised qualitative research methodology to generate in-depth socio-cultural contextual insights of clinical handovers at a department of a tertiary referral hospital. A total of 30 observational sessions and 30 interviews with participants of clinical handovers were performed. The data was coded using open, axial and selective coding and analysed drawing on the principles of grounded theory. Specific patient safety issues were clearly documented. The researchers then utilised design workshops to involve end-users, drawing on the principles of participatory design. Whiteboards and drawings were used to develop the initial prototype. The researchers then utilised five cycles of prototype, workshop, feedback and revision; to further understand and define the design specifications. A real-life version of the electronic clinical handover system was then released to end-users for final testing. Extensive feedback and revision mechanisms were utilised to finalise the design.

Results: The observations and interviews revealed significant differences between the "perceived" clinical handover process by clinicians and the real-life clinical handover practice. Patient safety issues, identified through the generation of a socio-cultural understanding of the clinical handover process, were incorporated into the information technology design. These features included information and content re-engineering, prioritisation and establishment of accountability. Other issues, outside the scope of clinical handover, which affected patient safety, including admission practice, patient list availability and follow-up of investigations were also included. The design workshops identified many information fields that clinicians intended to have for clinical handover. Rapid prototyping, however, provided significant revisions to the initial system. Importantly, clinicians found it hard to visualise and verbalise system requirements which might support their work. Multiple revisions and adjustments were required during the prototyping process and real-life testing. The final product incorporated many safety features which not only might support clinical handover but also might support other clinical activities identified through the observation process.

Discussions: Our study demonstrated a few very important issues for information technology design to support patient safety initiative in healthcare. Firstly, clinicians might have a clouded understanding of their workflow and work process. Observations are required to provide a holistic contextual understanding. Secondly, clinicians might have difficulties in describing the system that would help their workflow. Design workshops with rapid prototyping and revision are essential. Thirdly, real-life testing is essential as prototyping might not reveal all problems. Finally, information technology to support patient safety might be possible, through the application of end-user centred, socio-technical integrated design and implementation process.

Poster 254
Fast Track Colorectal Surgery – A Rural Perspective

Moya Anderson, Tracey Moore, William Ross, Ned Abraham, Jenny Rodwell
Coffs Harbour Health Campus, Coffs Harbour, Australia

Fast track colorectal surgery is a multi-modal rehabilitation approach to patients undergoing colorectal surgery. The aims of fast track colorectal surgery is to reduce the patients surgical stress response, optimise pain relief and support early mobilisation and oral nutrition. Extensive pre-operative education in advance of the procedure is crucial for enhancing post-operative rehabilitation by ensuring patients are aware of the fast track protocol which assists in reducing patients' level of anxiety, need for pain relief and provides a basis for working in collaboration with health care personnel.

The fundamental changes to colorectal surgery using the fast track approach includes the following:

- Extensive pre-operative education
- Carbohydrate loading 2 hours pre-operatively
- Fasting 2 hours pre-operatively
- Transverse incision
- Nil naso-gastric tube or abdominal drains
- Maintain intra-operative normothermia
- Patient controlled epidural analgesia (PCEA) for pain management
- Early mobilisation - 6 hours post- surgery
- Early resumption of diet
- Post-operative protein drinks.

The successful implementation of fast track colorectal surgery was attributed to the multidisciplinary team's willingness to embrace the fast track colorectal surgery approach. The team consisted of surgeons, anaesthetists, physiotherapists, dieticians and nursing staff from pre-admissions, operating theatres, recovery, surgical unit and discharge planners. The multidisciplinary team developed a patient education brochure and evidence based clinical pathway to support the fast track colorectal surgery approach. The implementation process was facilitated by the support of a project officer who provided education to staff, followed patients through their inpatient journey and fine-tuned the fast track approach.

The journey to date is that over the past 6 months 22 patients have undergone the fast track colorectal surgery approach. The outcomes include a reduction in median length of stay from 10 days to 6 days with nil adverse events related to the fast track protocol. In addition, all patients surveyed 28 days post- surgery reported a high level of satisfaction with the 'fast track approach' to colorectal surgery including education received pre-operatively, pain management post - operatively and level of fatigue.

Poster 258
Loads Of Rubbish! One Hospital's Experience of Waste Management Review and Revision

Iris Freeman, Sharon Nicholls
Glengarry Private Hospital, Perth WA, Australia

Introduction: Care of the environment and the associated topic of waste management are becoming increasingly important to society, evidenced by their now regular appearance in mainstream political debate. The waste generated by the healthcare industry, and hospitals in particular, causes significant environmental impact. This abstract will outline one hospital's need to quickly and effectively review and revise its waste management following two unwelcome waste disposal incidents.

Methods: In July 2006 the Hospital Risk Manager was asked to attend the local council landfill waste disposal facility, following the discovery of two disposable used suction bottles and a number of soiled dressings in a bag contained within the general waste stream. This followed an earlier incident where used wound dressings and suction tubing had also been found.

Results: Following the first incident, a meeting was held between Hospital Executive, Department of the Environment, the hospital infection control nurse and infection control consultants in order to identify and discuss appropriate risk management strategies. These included: the surveying of staff knowledge of waste segregation and the provision of education with emphasis on waste segregation guidelines. A lack of an agreed definition between hospital sites and agencies dealing with clinical waste resulted in some confusion among staff who worked between multiple sites.

Despite the risk management strategies implemented by the hospital the second incident occurred, following which the hospital closely examined not only the waste management practices and habits of staff but also the broader implications of current waste management contracts. This highlighted that each of the general, clinical, confidential and sharps waste streams were managed by a different supplier, with no incentive from each for collaboration or waste reduction. The processing of multiple invoices and payments also had administrative implications with regard to time, cost and overall clarity. A decision was made to consolidate the number of waste management suppliers (excluding sharps) to one. Two additional waste streams were also to be introduced: paper only and co-mingled recycling. Negotiations resulted in initial

estimated savings of $8000 per annum as a result of charging for clinical waste based on kgs rather than number of bins emptied. The supplier also took a more visible role within the hospital, being involved in regular staff education and waste audits, as well as providing benchmarking details. This was followed by close collaboration between the hospital, infection control consultants, the Department of the Environment and the waste supplier to ensure effective waste management processes and practices were in place. Eye-catching posters clearly outlining waste segregation details were also produced in consultation with the supplier.

A root cause analysis of the second incident led to a change in the process of waste bag distribution and collection within the operating suite. Education sessions were held for all hospital staff on the topic of waste management and pamphlets were attached to each staff member's payslip outlining guidelines. The new waste management contract commenced Dec 2006 and to date, no further adverse incidents have occurred.

Discussion: Although waste management may constitute a small percentage of total hospital running costs (< 0.5% in this case), its impact can be far reaching and potentially disastrous for the hospital and wider society in general. This example highlights that collaboration between all people and agencies involved is essential for effective management.

Poster 266
Exploring Factors Affecting Inadvertent Perioperative Hypothermia

Elaine Pavlos, Leanne Monterosso
Edith Cowan University, Perth, Western Australia, Australia

Introduction: Inadvertent perioperative hypothermia is an unwanted but common occurrence during a patient's admission. Published research has demonstrated that mild perioperative hypothermia may contribute to complications such as altered drug metabolism, increase post-operative pain, increased incidence of wound infections, increased intraoperative bleeding, increased incidence of myocardial events, increased adrenergic activation these factors all contribute to increased length of stay and decreased patient satisfaction. Hypothermia is one of the most frequently reported complications in patients who undergo surgery and can effect up to 60% of surgical patients (Moss 1998). The purpose of this study was to explore the reasons why 1.42% of surgical patients at the hospital developed a sub-optimal core body temperature immediately after elective surgery This figure of 1.42% is three times greater than the Australian Council of Health Care Standards (ACHS) national aggregate of 0.53% or lower, thus representing a significant clinical problem that could be effectively managed by simple nursing interventions.

Method: This descriptive study collected data pre-operatively, intra-operatively and post-operatively for all elective surgical cases between the hours of 0800 – 1800 hours during a two week period. Three specific data collection tools were developed from the literature. The sample consisted of n = 134 patients. The compliance rate for the collection of data by nursing staff was high at 96%.

Results: During this period 13.17% of patients had a body temperature of less than 36 degrees Celsius on admission; 41% of patients had a temperature of less than 36 degrees Celsius post-operatively; 2.3% of post-operative patients had a body temperature of less than 35 degrees Celsius in recovery. Distribution of patients is graphed, pre-operative and intra-operative data is analysed, risk factors are detailed.

Discussion: This study was initiated to identify why does perioperative hypothermia occur? Can nurses by manipulation of the patient's perioperative environment reduce the incidence?

The outcome of this study identified risk factors that contributed to a sub-optimal body temperature. Patients at risk from hypothermia were identified to particular surgical sub-groups these included gynaecology, urology and plastic surgery. Environmental risk factors included low body mass index, time of admission and length of procedure. From this study recommendations for practice were developed in the form of thermoregulation guidelines. These guidelines support nurses to identify patients at risk and implement simple nursing interventions to keep patients normothermic during their admission. The hospital is now within the norm for Clinical Indicator 3.3.

Poster 267

"Capturing immediate Improvement supports Improvement": One organisation's recognition of the value of projects designed to improve the quality and safety of health care services.

Marie Hills
Queensland Health, Queenland, Australia

Purpose: It is imperative to recognise the value of projects designed to improve the quality and safety of health care. In the first instance this relates to the value of immediate improvements to service delivery. In the second instance it relates to the value of capturing and demonstrating such improvements.

Issues: A review was conducted of processes associated with undertaking and capturing activities as part of the organisation's commitment to demonstrating ongoing improvements in quality and safety of service delivery. Inclusive of this review was consideration of the requirement to report such activities as part of a formalised Quality Accreditation Process [Australian Council on Healthcare Standards]. Quality Activities as defined by the ACHS (EQuIP 5-7, 2002) are those activities "Which measure performance, identify opportunities for improvement in the delivery of care and service, and include action and follow-up".

In support of this, the organisation operates within an adopted Evaluation and Quality Improvement Program Framework [EQuIP]. A high level of staff commitment to ongoing improvements in service delivery within this framework was recognised as part of the review. However, a number of issues became apparent, including:

- Lack of knowledge/understanding by some replanning, conducting and reporting improvement activities;
- Lack of confidence through previous negative experiences e.g. lack of recognition; incomplete projects;
- Inconsistency in processes followed and limited resources in some areas;
- Need for better support for those involved with activities at varying levels e.g. unit, division and organisation;
- Gaps in understanding the value of documenting, capturing and share activities planned and undertaken;
- Often little recognition of those completing activities and their achievements.

Memorable quotes from staff include: "We are good at doing, not at capturing" .. "You mean you want me to capture what we do." .. "Because we didn't document to support the work we had done, we lost the service."

Result: Subsequently a new Quality Activity Framework to meet current and future organisational needs was considered; with a two stage process for introducing streamlined processes and the ability to capture, recognise and share improvement in service delivery.

Discussion: The two stages considered as part of the new framework were:

1. The Quality Activity Cycle; and
2. Triple R Reward and Recognition Program.

The newly developed "Quality Activity Cycle" involving streamlined processes has been introduced to incorporate 5 stages, these being preparation (including approval), undertaking of review, introduction of change, measurement of outcomes and reporting of improvements; with documentation inclusive in all stages.

The introduction of the new cycle included an official launch, implementation plan and staff support; and development of a Quality Activity Package, with contents including:

- Information Brochure and Checklist;
- Diagrams outlining the Cycle;
- Forms for Notification, Progress Updates, and Reporting of Activities Undertaken; and
- Actual example staff can step through to develop their understanding of 'process in practice'.

The 'value of capturing' improvements activities has also been highlighted, and includes:

- Recognising the commitment of staff to achieve improvements e.g. recognition to support staff retention;
- Reinforce the organisations focus on, and commitment to a culture of continuous improvement;
- To share improvements and support data collection e.g. to support funding, sharing case mix information;
- To offer support and encouragement to others; and
- To raise awareness of those receiving services, including patients and families.

Stage one of the Quality Activity Framework is now utilised to add twofold value i.e. immediate improvements to service delivery from activities undertaken; and through the capturing and demonstrating of improvements made.

Stage two is currently being rolled out to better enhance the capabilities of the framework. The 'Triple R Reward Program focuses on three key factors, ie. the need to REPORT, the importance of RECOGNISING those involved, and the benefit of REWARD to create incentive to others.

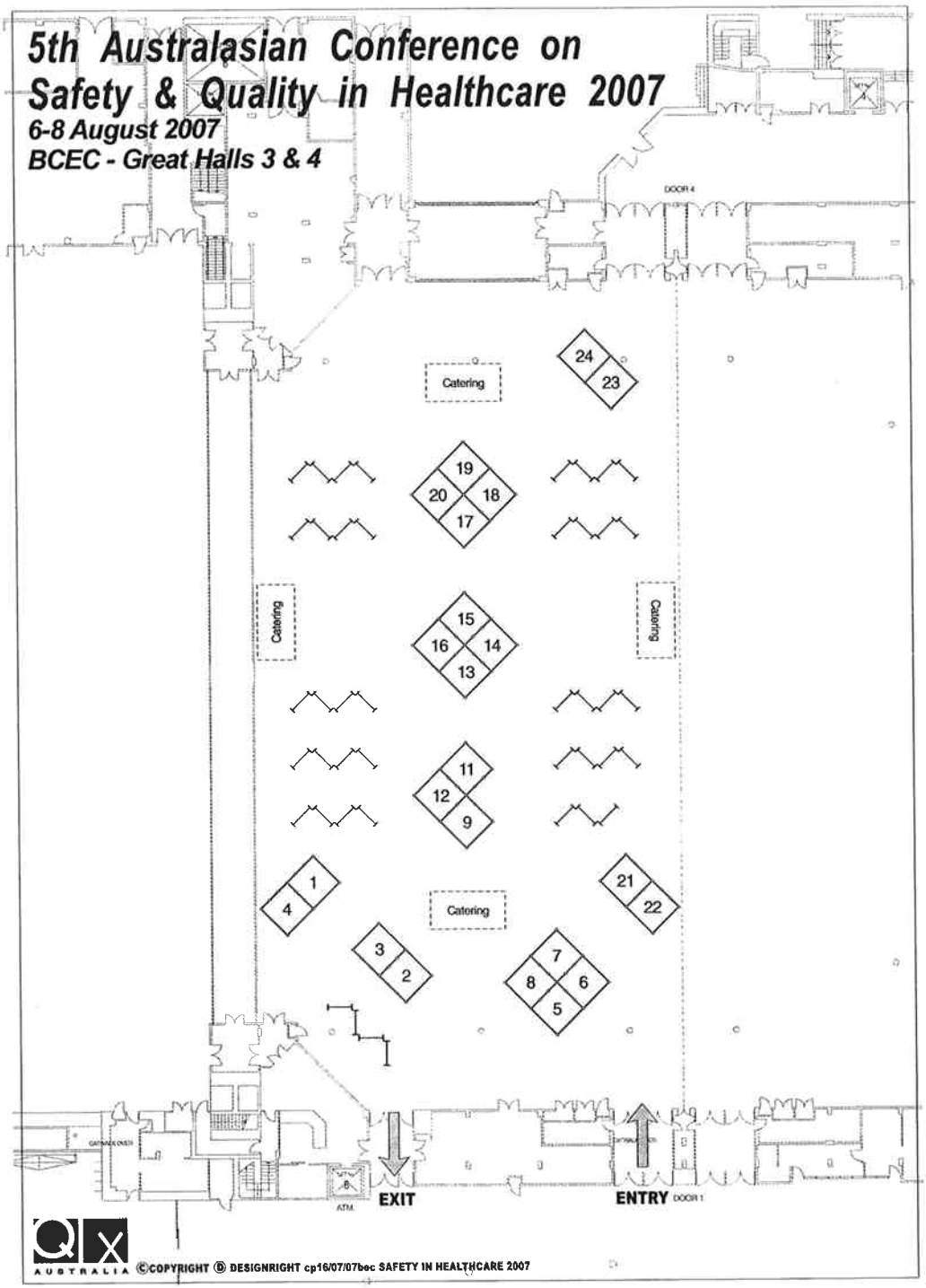
Wednesday 8 August - Day Three - Posters and notes

Speakers List

Presenting Author	Title	Other Authors	Email	Page No.
Andrews Julie	The role of health insurance funds in improving quality and safety in health care		sue_bradshaw@medibank.com.au	32
Ashby Jenny	Supporting Consumer Participation with a large health service		jenny.ashby@austin.org.au	36
Banks Margaret	Review of Accreditation		margaret.banks@safetyandquality.gov.au	123
Boult Maggie	Using audit data to develop a predictive model of success for endovascular repair of abdominal aortic aneurysms		maggi.boult@surgeons.org	25
Braithwaite Jeffrey	Between the devil and the deep blue sea: Patient safety and risk in hospitals		j.braithwaite@unsw.edu.au	121
Brand Caroline	Engaging Non Procedural Medical Staff in Quality Improvement Activities: Results of the General Medical Indicator Project (GMIP)		Caroline.Brand@mh.org.au	23
Cameron Peter	The dangers of measurement		peter.cameron@med.monash.edu.au	122
Clarke Sean	Interdisciplinary Team Research		sclarke@nursing.upenn.edu	73
Corcoran Suzanne	Grass Roots Quality - A Simple Approach to Implementing a Quality Framework for Health Professionals Working in the Community Setting		scorcoran@bendigohealth.org.au	130
Cuncins-Hearn Astrid	Developing a national audit of surgically related deaths with a web based system for data entry linkage		astrid.cuncins-hearn@surgeons.org	26
Curran Denise	Building Skills for redesign		denise_curran@health.qld.gov.au	35
Daunt Cathy	A New Clinical System for Effective Discharge Planning (Improve Access by Reducing Exit Block)		cathy_daunt@health.qld.gov.au	127
Dennis Christine	Strategic Planning and Change Management		christine.dennis@health.sa.gov.au	34
Dwyer Alison	Helping Doctors Help Themselves: Organisational Strategies to support poorly performing and eat risk junior medical staff		alison.dwyer@mh.org.au	36
Eccles Simon	Electronic Care Pathways		simon.eccles@nhs.net	31
Flanagan Brendan	Comprehensive Evaluation Of A Simulation Based Undergraduate Medical Course In Patient Safety		brendan.flanagan@southernhealth.org.au	28
Gee Christine	Private Hospital Speaker - how the funds measure performance outcomes		ChrissG@toowongprivatehospital.com.au	32
Groves Aaron	Mental Health Outcomes			125
Hall Chris	Variable life adjusted display - a new methodology highlighting variation to improve quality of hospital care	Kirstine Sketcher-Baker	ChrisJ_Hall@health.qld.gov.au	24
Hibbert Peter	Demonstrating the power of us- the development of the Anaesthetic Crisis Management Manual		peter.hibbert@apsf.net.au	35
Jayasinghe Sanjay	Hospital Care of Residents Living in Residential Care Facilities: Profile, Patterns of Utilization and Quality and safety of care		s.jayasinghe@unsw.edu.au	129
Ku Shei-Lin	Pre operative antibiotics Prophylaxis -Experience from a Taiwanese Medical Centre Setting		201385@cgh.org.tw	131
Lui Siu-fai	Team work to enhance quality patient care through the use of clinical information technology		luisf@ha.org.hk	75
Lyon Pauline	Improving Patient Safety and Outcomes by Changing the Healthcare Culture Using Crisis Resource Management (CRM) Principles.		pauline_lyon@health.qld.gov.au	33
Mackson Judith	Self Assessment of quality indicators in prescribing and use of medicines across settings		jmackson@nps.org.au	26

Presenting Author	Title	Other Authors	Email	Page No.
Margettes Craig	Safe Doctors - Fair Systems; supporting clinicians to give safety quality care		Craig_Margetts@health.qld.gov.au	37
Mason Vicky	Board of Management reporting on clinical governance in community health		vicky.mason@dch.org.au	27
McGowan Russell	What consumers want from primary healthcare - consistent quality in the non acute care setting		sheuberger@achs.org.au	128
McGuire Shane	Credentialing And Clinical Privileging - Protecting Patient Safety		mcguires@dhsv.org.au	30
McKean Sue	Measuring Performance - A Private Hospital Perspective		Sue.McKean@uchealth.com.au	32
McMillan Alison	Safer System Saving Lives - What did we find and lessons learnt		alison.mcmillan@dhs.vic.gov.au	31
Moulden Annie	Improving Clinical Handover - steps taken to support clinicians in the delivery of safe, effective clinical handover		annie.moulden@rch.org.au	132
Ooi Ken	Managing the Wait: responding to the Consumer		ken.ooi@nwahs.sa.gov.au	126
Parker Dianne	Patient Safety: Putting it all Together		dianne.parker@manchester.ac.uk	23
Pawsey Marjorie	The Relationship Between Accreditation Criteria Results and Clinical Indicators		sheuberger@achs.org.au	123
Phillips Jan	Better Workplaces Staff Opinion Survey - Workplace Culture Improvement		sara_tinoco@health.qld.gov.au	34
Phillips Sue	NICS Using Research evident to change clinical practice.		sphillips@nicsl.com.au	121
Preen David	Chronic Disease Management in the Australian Community Setting: Approaches to evaluation using cross-jurisdictional linkage		david.preen@uwa.edu.au	24
Rana Bhupendra	Improvements In Quality Of Services In Healthcare Organisations Through Accreditation		nabh@qcin.org	131
Reinecke Ian	Implementation of E-Health in Australia		Gabrielle.Lloyde@nehta.gov.au	31
Rizzali Coral	A Consumer View of Quality and Safety through electronic health records		crizzali@bigpond.net.au	31
Russo Antonio	Consumers make a difference to health professional education and accreditation of training courses		arusso@technicalsa.net.au	29
Semmens James	Technology allows the rite of passage: The use of record linkage for research into health		James.Semmens@curtin.edu.au	122
Sketcher-Baker Kirstine	Variable life adjusted display - a new methodology highlighting variation to improve quality of hospital care	Chris Hall	Kirstine_Sketcher-Baker@health.qld.gov.au	24
Snijders Cathelijne	Successful Implementation of Three Tools for Specialty Based Learning from Incidents		c.snijders@isala.nl	132
Soon Eveline	Every Patient Every Time - Improving Hand Hygiene		Eveline.Soon@mh.org.au	29
Stark Helen	Performance Indicators and Medication Safety (PIMS) Project		hstark@stvincents.com.au	124
Tindall Pam	The Ambulatory Surgery Initiative in a Public Health Service		pam.tindall@health.wa.gov.au	126
Vecchio Marisa	The Accreditation of Australian General Practices - the journey into the electronic age with AccreditationPro.		mvecchio@qip.com.au	124
Wakefield John	Learning from the National Open Disclosure Standard Pilot	Cherie Ryan Luis Prado Rick Iedema	john_wakefield@health.qld.gov.au	38
Watson Marcus	Use of simulation labs to improve clinical skills		marcus_watson@health.qld.gov.au	33
Wickham Shirleen	Consumers A Driving Force		shirleen.wickham@dhhs.tas.gov.au	29
Willis Cameron	Quality Indicators in Trauma A Study of Validity		cameron.willis@med.monash.edu.au	125
Youngson Robin	Getting to the heart of patient safety - compassion and caring		Robin.Youngson@waitematadhb.govt.nz	74

Exhibitor Booth Details



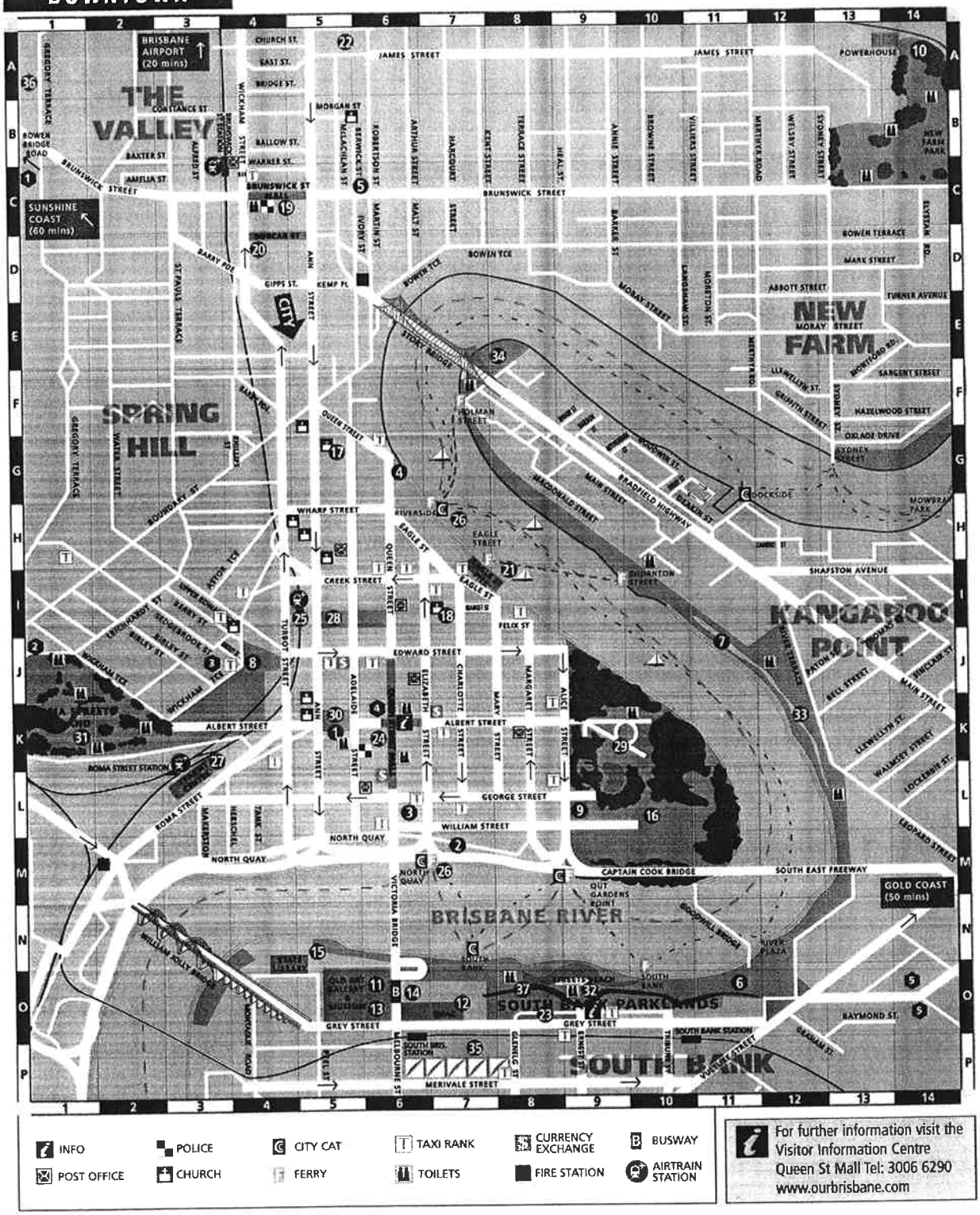
Organisation

Australasian Association for Quality in Health Care - AAQHC	5
Australian Commission on Safety and Quality in Healthcare	8
The Australian Council on Healthcare Standards - ACHS	6 & 7
Baxter Healthcare	21 & 22
Clinical Excellence Commission	15
Cognitive Institute	18
Compact Business Systems	11
Hatrix	24

Organisation

HealthSolve Pty Ltd	23
HESTA Super Fund	12
Howard Wright Ltd	9
Medibank Private	1 & 4
RiskMan International Pty Ltd	19
Patient Safety International	14
Press Ganey/rL solutions	13
QPS Benchmarking	17
Queensland Health	2 & 3
The University of Queensland Health Insitu	16
Victorian Quality Council	20

DOWNTOWN



INFO · POLICE · CITY CAT · TAXI RANK · CURRENCY EXCHANGE · BUSWAY
POST OFFICE · CHURCH · FERRY · TOILETS · FIRE STATION · AIRTRAIN STATION

For further information visit the Visitor Information Centre
Queen St Mall Tel: 3006 6290
www.ourbrisbane.com

HISTORICAL & CULTURAL SIGHTS

1	City Hall & Museum of Brisbane	K5
2	Commissariat Stores	M7
3	Conrad Treasury Brisbane	L6
4	Customs House	G6
5	Judith Wright Ctr of Contemporary Art	C5
6	Maritime Museum	O11
7	Naval Stores	J11
8	Old Windmill	J4
9	Parliament House	L9
10	Powerhouse Centre for Live Arts	A14
11	Qld Art Gallery	O6
12	Qld Conservatorium of Music	O7
13	Qld Museum	O6
14	Qld Performing Arts Centre	O6
15	Qld State Library	N5
16	Qld University of Technology	L10
17	St John's Cathedral	G5
18	St Stephen's Cathedral	I7

SHOPPING & DINING

19	Brunswick Street Mall	C4
20	Chinatown Mall	D4
21	Eagle Street Pier	I8
22	James Street	A5
23	Little Stanley Street	O8
24	Queen Street Mall	K6

TRANSPORT

25	Central Station	I5
26	River Cruise Wharves	H7 + M7
27	Transit Centre	K3

PARKS & GARDENS

28	Anzac Square	I5
29	City Botanic Gardens	K9
30	King George Square	K5
31	Roma Street Parkland	K1
32	South Bank Parklands	O8
33	Kangaroo Point Cliffs	K12
34	Captain Burke Park	E8

VENUES

35	Brisbane Convention & Exhibition Centre	P7
36	RNA Showgrounds	A1
37	Suncorp Piazza	O8

HOSPITALS

1	Royal Brisbane Hospital (public)	See C1
2	St Andrews Hospital (private)	J1
3	Holy Spirit Hospital (private)	J3
4	Travellers Medical Service (gen.practice)	K5
5	Mater Hospital (public & private)	O14