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Safety Innovations In Practice (SIIP) Program

Mark I

Compendium of project reports

July 2002

Australian Council for Safety and Quality in Health Care
The Australian Council for Safety and Quality in Health Care was established in January 2000 by all Australian Health Ministers to lead national efforts to improve the safety and quality of health care, with a particular focus on minimising the likelihood and effects of error. Council reports annually to Health Ministers.


Further information on the work of the Council can be found at www.safetyandquality.org or from the Council Management Group — Tel 02 6289 4244, Fax 02 6289 8470 or Email safetyandquality@health.gov.au

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## Contents

Acknowledgments ........................................................................................................................................... 2  
Directory of general terms .......................................................................................................................... 6  
Executive summary ..................................................................................................................................... 9  
Introduction ................................................................................................................................................ 11  

1 Overall findings and implications .............................................................................................................. 13  
   Overall findings ........................................................................................................................................ 13  
   Implications ........................................................................................................................................... 17  

2 Involving consumers .................................................................................................................................. 20  
   Lessons for safety innovation .................................................................................................................. 20  
   Strengthening consumer involvement ..................................................................................................... 21  
      ▪ Listening to consumers’ needs and preferences about safe and quality health care ....................... 21  
      ▪ An innovative alliance between patients and volunteers ................................................................. 23  
   Using consumer feedback to improve safety ............................................................................................... 25  
      ▪ Doctors learning about adverse events from the patient’s perspective ........................................... 25  
      ▪ Finding new ways to gain and use feedback from Indigenous consumers ....................................... 27  
   Providing information to consumers ......................................................................................................... 27  
      ▪ Using video to help patients move safely in hospital ...................................................................... 27  
      ▪ Using video to educate patients about pain relief medications ..................................................... 29  
   Involving consumers in continuity of their care ......................................................................................... 31  
      ▪ Helping older people to manage their medicines ......................................................................... 31  
      ▪ Coordinating health care following lung transplant surgery ......................................................... 32  
      ▪ Helping patients to manage medication following hospitalisation ................................................ 34  
      ▪ Written discharge advice for parents from a paediatric emergency department ............................ 35  
      ▪ A checklist to help patients manage their medicines .................................................................... 36  

3 Supporting those who work in the health system ..................................................................................... 37  
   Lessons for safety innovation .................................................................................................................. 37  
   Education .............................................................................................................................................. 38  
      ▪ An innovative approach to training junior doctors ......................................................................... 38  
      ▪ Helping nurses to recognise and manage respiratory depression ............................................... 40  
      ▪ New technique provides nurses with the opportunity to increase skills ....................................... 42  
      ▪ Developing educational tools for clinical incident investigation ............................................... 44  
      ▪ Health professionals turn media-wise to educate on aggression .................................................. 46
Guided decision-making ................................ ................................ ................................ ................................ ........... 48
  ♦ Focusing on five high alert medications to improve patient safety .......................................................... 48
  ♦ Making emergency departments safer for patients ...................................................................................... 49
  ♦ Standardising the process for documenting wounds .................................................................................. 51
  ♦ Helping endoscopists to improve sedation techniques ............................................................................... 52
  ♦ Making medication resources available and accessible ................................................................................ 54
  ♦ Helping staff decide how to move patients safely ....................................................................................... 56
  ♦ Best practice pain relief options for women in labour ............................................................................... 58

Communication ........................................................................................................................................... 59
  ♦ Assisting health professionals to deliver culturally sensitive care .............................................................. 59
  ♦ Identifying and communicating with hearing impaired patients ............................................................... 60
  ♦ A practical guide to working with the media ............................................................................................... 62

Managing risk .................................................................................................................................................. 63
  ♦ Harnessing peer power to influence behaviour .......................................................................................... 63
  ♦ Spreading the word not the germs ............................................................................................................. 65

4 Redesigning systems ................................................................................................................................. 67

Lessons for safety innovation .......................................................................................................................... 67

Streamlining processes .................................................................................................................................. 68
  ♦ Incident analysis and systems redesign combine to achieve safer epidural practice .................................. 68
  ♦ Taking the guesswork out of pathology labels ............................................................................................. 70
  ♦ Standardising emergency trolleys in Queensland ....................................................................................... 72
  ♦ Improving procedures for x-rays ............................................................................................................... 73
  ♦ Coordinating processes to make x-rays safer and better ........................................................................... 74
  ♦ Closer liaison between ward and pharmacy reduces medication error ..................................................... 76
  ♦ Systems to improve operating theatre safety in a rural health service ....................................................... 77

Managing risk .................................................................................................................................................. 79
  ♦ Safer manual handling of the large dependent patient ............................................................................... 79
  ♦ A rethink of patient induction to identify and manage risk ...................................................................... 81
  ♦ Helping acute care patients reduce their risk of falls ............................................................................... 83
  ♦ Enhancing treatment of pressure ulcers ..................................................................................................... 84
  ♦ Patient sitters reduce the risk of self-harm in impulsive, confused patients ............................................. 86
  ♦ A look at the factors that contribute to falls in hospital ............................................................................ 88

Medication safety ............................................................................................................................................ 89
  ♦ Minimising medication error by developing the right tools ...................................................................... 89
  ♦ Safer use of opioids for cancer patients in acute care .............................................................................. 91
  ♦ Investigating admission-related prescribing errors .................................................................................... 93
  ♦ Storing medicines safely ............................................................................................................................. 95
  ♦ Making sense of medication ordering in a big city hospital ..................................................................... 96
  ♦ Getting medication administration right through standardisation ......................................................... 97
  ♦ Identifying prescribers to reduce medication error ................................................................................... 99
  ♦ Keeping individual medications by the patient’s bedside .......................................................................100
5 Improving data and information ......................................................................................... 103

Lessons for safety innovation .............................................................................................. 103

Data collection and incident reporting systems .................................................................. 104
- Encouraging patient feedback about complications ......................................................... 104
- Improving medication incident reporting in a rural hospital ........................................... 105
- A Territory-wide system for involving clinical pharmacists in incident reporting .......... 107
- Using routinely collected data to monitor adverse events ............................................... 109
- A new data collection tool to minimise accidents ......................................................... 109

Learning from data collection ........................................................................................... 110
- Using performance indicators to assess quality and safety ............................................. 110
- Retrospective data and a control study yield data on patients at risk of falls ................. 111
- Collecting data to support action on pressure ulcers ..................................................... 113
- Bridging the gap between actual and reported aggression .............................................. 115

Abbreviations ....................................................................................................................... 117

Index of participating organisations .................................................................................. 118

Australian Council for Safety and Quality in Health Care ............................................... 119
Directory of general terms

access to information ........................ 54, 77, 93
admission to hospital ....................... 81, 93, 101
aged care ................................ ........ 31, 51, 111
aggression management ................... 46, 87, 115
airway management ................................ .... 38
ambulatory epidural ................................ .... 58
antibiotics ................................ ................... 65
blood specimens ................................ ......... 70
breakthrough methodology ..................... 51
catheter insertion ................................ ......... 42
champions .............................................. 44, 53, 63, 64, 75, 94, 102
checklist ................................ ..... 36, 39, 56, 84
chest pain ................................ .............. 49, 74
clinical incident investigation ...................... 44
communication problems ............................ 60
consumer consultation ....................... 44, 56, 93
consumer education ......................... 23, 27, 29, 31, 34, 36, 48, 58, 59, 78, 84
consumer feedback .............. 21, 25, 27, 58, 104
cultural appropriateness ......................... 21, 31
data collection .......................... 68, 107, 109, 110, 113
digital imagery ................................ ............ 51
discharge advice .......................... 31, 34, 35, 101
drug switch protocol .............................. 72
equipment ................................................ 88
epidural analgesia ............................... 40, 58, 68, 89
emergency department ............... 35, 49, 72, 74
emergency trolleys ................................ .......... 72
evironmental safety .................................... 84
hospital acquired infection ............ 63, 65
human patient simulator ......................... 38, 40
incident reports ........................................ 44, 55, 61, 83, 105, 107, 109, 115
infection control ....................................... 63, 65
interpreter services ................................ 59
labels ................................................. 70, 89
large patients .......................................... 79
leadership ........................................... 22, 45, 53, 55, 59, 61, 92, 97, 111
literature review ... 39, 40, 42, 44, 48, 50, 63, 83, 89, 96, 110, 113
lung transplantation ................................... 32
manual handling ........................................ 27, 56, 79
media ......................................................... 62
medication charts .............................. 96, 97
medication dispensing ....................... 76, 91
medication ordering .......................... 96
medication safety .................. 29, 31, 32, 34, 36, 48, 52, 54, 68, 76, 89, 91, 93, 95, 96, 97, 99, 100, 105, 107
medication storage .............................. 95, 101
mentors ..................................................... 44
mobility .................................................. 23, 83
morbidity data ................................ ........... 109
near misses .............................. 93, 107, 109
NSAIDs .................................................. 48
obstetrics ................................................ 58
operating theatre ........................................ 77
opioids ................................................ 40, 91
oversedation ........................................... 52
pareto chart .......................................... 53, 73
pathology specimen labelling ...................... 70
patient booking system .......................... 77
patient sitters ............................................ 86
patient-controlled analgesia ................. 29
patient-held medical record ................... 32
PDSA cycle .......................................... 18, 19, 53, 73
performance indicators .......................... 110
pharmacy .......................................................... 29, 34, 48, 76, 91, 93, 97, 99, 107
pressure ulcers .................................................. 81, 85, 113
protocols .......................................................... 42, 49, 52, 53, 54, 58, 69, 79, 114
questionnaires .................................................... 23, 31, 39, 41, 64, 98
radiology ............................................................ 73, 74
respiratory depression .......................................... 40
risk management .................................................. 63, 65, 80, 81, 83, 85, 86, 88, 105, 111
sedation techniques ............................................... 52
skills training ...................................................... 38
SSRIs ..................................................................... 48
staff training ......................................................... 38, 40, 42, 44, 46, 48, 53, 56, 63, 68, 72
stakeholder consultation ....................................... 49, 101
video ..................................................................... 27, 29, 42, 46
video production company .................................... 27, 30, 46
visual reminders ..................................................... 63, 65
volunteers ............................................................. 23, 25
wound documentation .......................................... 51
x-rays .................................................................... 73, 74
Executive summary

Australian Health Ministers established the Australian Council for Safety and Quality in Health Care in January 2000 to lead and coordinate national efforts to improve the safety and quality of health care in Australia.

The Council has embarked on a program of funding health care providers to undertake local initiatives to improve health care safety. Mark I of the Safety Innovations In Practice (SIIP) program provided funding of up to $10,000 each to over 60 projects nationally. Recipients of SIIP funding comprise a wide range of hospitals and health care organisations.

The Council considers national dissemination of the reports of these projects to be an important opportunity to promote innovative tools and approaches. This compendium summarises the project reports submitted by each participant in the program. However, it does not represent an evaluation by Council nor a validation of project findings.

The projects are presented in categories, reflecting the Council’s key action areas:

- **Involving consumers** — including innovative use of consumer feedback, providing better information to consumers and the consumer’s role in maintaining continuity of care.

- **Supporting health professionals to deliver safer care** — through development of innovative educational strategies and tools, guided decision-making, improved communication between health professionals, patients and families, and strategies that support health professionals to manage risk.

- **Systems redesign** — including strategies to streamline processes, manage risk, and improve priority areas such as medication safety.

- **Better use of data and information** — by using incident reporting and management systems to improve identification of adverse events and by exploring existing data collections in order to learn from data and identify better practice.

To facilitate access to information across these categories, a directory of general terms is included in the compendium (see page 7).

Findings

The initial response to safety innovation through the SIIP program is encouraging, and there has been great interest in the program and its outcomes. Safety is a high priority and it is clear that many people are already working at a local level to improve the safety of the care they provide.

While time frames were short, the outcomes from many projects are promising. Further evaluation will be required to determine the success of the interventions in the longer term.

**Ten key lessons derived from project experiences** are outlined and highlight the importance of leadership in establishing and sustaining safety improvements, the **value of research, planning and networking** to provide context for improved safety practices, and the important role that consultation with staff, patients and other stakeholders can play in effective and sustained improvement.

The project outcomes suggest that health professionals and organisations can support safety innovation in practice by:

- **Adopting a systems approach** — redesigning and simplifying the systems within which health care is delivered.
• **Promoting partnerships** — including multidisciplinary approaches which involve a range of health and allied professionals as well as consumers.

• **Using a combination of approaches** — undertaking research, data collection, system redesign and education in integrated interventions.

The SIIP projects summarised in this compendium identify some obstacles and possible solutions encountered in exploring safety innovation. They also highlight areas for further work, including the need to broaden the context of local initiatives beyond the acute care setting, to target funding for safety innovation in priority areas and to enable sufficient time and resources for achieving outcomes. These will be explored by Council in the review of Mark I and the development of SIIP Mark II.

The value of SIIP will be seen both in the sustainability of the improvements initiated and in the applicability of their concepts to a wider range of settings. It remains for individual health professionals, managers and organisations to take up the challenge of implementation and to test the applicability of tools and practices for their own context.
Introduction

Australian Health Ministers established the Australian Council for Safety and Quality in Health Care in January 2000 to lead and coordinate national efforts to improve the safety and quality of health care in Australia.

The Council’s work particularly focuses on looking at how systems within and between health care services can be redesigned and simplified to make health care safer. Acknowledging that in order to be relevant, change needs to be made at a local level rather than imposed from outside, the Council has embarked on a program of funding health care providers to undertake local initiatives to improve health care safety.

Mark I of the Safety Innovations In Practice (SIIP) program provided funding to over 60 projects nationally within a range of hospitals and health care organisations. This compendium presents a summary of each project, and draws together some lessons learned from the SIIP program so far.

The Council considers national dissemination of the reports of these projects to be an important opportunity to promote innovative tools and approaches. Following a review, the Council intends to initiate Mark II of the SIIP program.

Process for funding projects

The SIIP program was advertised nationally on 27 October 2001 with applications closing on 16 November 2001. Organisations were required to complete the SIIP application form which included a one-page description of the project and how the SIIP finding would be used.

The response to the program was very positive. The Management Group received 226 applications, 65 of which were recommended for funding of up to $10,000. Processes surrounding the review and short listing of SIIP applications were as follows:

- each application was assessed by a member of the Management Group (usually with broad knowledge of the SIIP application subject);
- each application was reassessed by the SIIP team in the Management Group to ensure consistency and for short listing purposes.
- applications were assessed by state or territory. In the short listing process each application was reviewed with consideration of the following:
  - number from the state or territory
  - spread across the state or territory (metropolitan, rural/remote)
  - CEO ranking
  - number of projects from that organisation.
- projects needed to fit within the SIIP selection criteria as stated in the application form;
- jurisdictions were provided with the shortlist of applications and given feedback on organisations already receiving any funding and local knowledge of particular projects to assist the assessment panel in making final decisions;
- the final assessment was carried out by a panel of Council members. The panel considered the merit of each short listed application and also took into account the spread and range of projects; and
projects recommended for funding included a range of topics such as medication safety, consumer involvement, system/process redesign, incident reporting and clinical audit.

Successful applicants were notified in December 2001 and individual funding agreements were sent to successful participants for signature. All successful projects had agreements in place by early February. Most projects were completed by mid-May 2002, with project reports submitted by the end of May 2002.

Structure of the compendium

This is a compendium of the project reports submitted by each participant in the program. Each report has been edited to highlight key findings but they have not been evaluated by Council nor their findings validated.

The projects have been organised into categories to make them easier to read and refer to, but there is considerable overlap and many of the projects actually ‘fit’ into more than one category. For example, many of the projects in Chapter 4 (system redesign) also involved data collection and consumer participation. The categories reflect four of the five key action areas of the Council:

- involving consumers;
- supporting health professionals to deliver safer care;
- systems redesign; and
- better use of data and information.

The fifth action area, raising awareness and understanding, was not included as a category because it reflects a broader Council role and is not as relevant at a local, clinical level.

Each chapter begins with a summary that highlights the main lessons learned and significant features of the projects within that category. Each project report is preceded by a ‘headline’ which is also used in the table of contents, as well as a box that summarises the main points about the project and its findings. The project reports themselves have been retained in the format requested of participants, including a brief description of the project, followed by summary points about what worked best, what could have been done differently, and lessons that have been learned for others.

Chapter 1 looks at the overall findings and implications of this round of the SIIP program. While the timeframes were short and it is not possible at this stage to review the sustainability of the changes initiated by the SIIP projects, there are some common themes and lessons that can be drawn from the work so far.

Two indexes are included in the compendium — a directory of general terms to assist readers to find projects that are in different chapters but may focus on the same area (eg falls prevention) (see page 7); and an index of participating organisations (see page 118).
1 Overall findings and implications

This chapter aims to draw together overall findings from the SIIP projects that are summarised in later chapters, and outline the implications of the changes that have been initiated at local level. The timeframe for the projects was short (about three months). Sustaining change in the longer term, and considering its wider applicability, are two important issues to be addressed.

A number of projects cover similar health safety concerns but do so from different directions, or apply local solutions to an issue that may have been previously examined on a larger scale. The goal of SIIP is to promote involvement and to build capacity for safety improvements particularly in settings where this may not otherwise be possible. Overall, the projects strike a balance between sharing understanding and practice and fostering local ownership of safer health care.

Overall findings

The SIIP projects represent a wide range of issues, approaches and settings, from a project to standardise emergency trolleys in three hospitals in rural Queensland, to a multi-faceted approach to standardising medication ordering in a Melbourne teaching hospital. However, there are some common themes that highlight both the good news about uptake of the Council’s safety messages at local level, as well as cautionary tales about the difficulties of making changes in complex systems such as hospitals.

The good news

A number of common themes show widespread adoption of the Council’s messages at a local level.

Taking a systems approach

- Acknowledging safety as an issue and system failure as the cause of safety problems

  “What worked best? Articulation of medication safety as an organisational priority in the Bayside Health Strategic Plan 2001–2005, and the creation of a sense of urgency throughout the organisation that medication safety is a priority, by using incident reports and Coroner’s reports to encourage discussion and action.” (Bayside Health, Victoria)

- Working towards redesigning and simplifying systems

  “The introduction of pre-printed sticky labels for specimen collection has a wider application throughout The Canberra Hospital, at a minimal cost of purchasing a printer drawer for already existing ward area printers. This will promote consistency in specimen labelling and reduce the impact of incorrect labelling on both patients and staff.” (The Canberra Hospital, ACT)

- Recognising the importance of sustaining system change

  “An important strategy of this project was to ensure sustainability of the program. This was achieved by participants being asked to become members of the Cultural Diversity Committee. There is a commitment to conduct the training seminars twice a year.” (Calvary Hospital, ACT)
Involving consumers

- Listening to patients’ perspectives about their care and about adverse events
  “This project has the potential to be incorporated into junior medical officer education programs around Australia. The experience of meeting with a patient who has suffered an adverse event face-to-face and talking with them about that experience appeared to be a very worthwhile experience for junior medical officers” (North Sydney Health, NSW)

- Empowering people to be involved in their own care
  “This tool (patient-held medical record) enables better communication both between patient and doctor and between doctors via the patient. Shared care, with the patients playing an integral part of their own management, will produce safer, better and more satisfactory health care.” (Sir Charles Gairdner Hospital, WA)

- Using consumer feedback to augment information from data collection
  “All health services could take similar steps to test the preferred participation methods of users or potential users of their services, and the groups that represent them, in improving safety and quality in their health service.” (Flinders Medical Centre, SA)

Ensuring work is well-grounded

- Looking at the evidence for best practice through literature reviews and existing guidelines
  “The project commenced with an extensive literature review to determine existing best practice in clinical incident and adverse event investigation and issues of consumer involvement.” (South West Health, Bunbury Network, WA)

- Finding out what others are doing
  “The project involved contact with stakeholders to identify specific needs within each area of the hospital and contact with paediatric centres across Australia to inform them about the project, and request copies of charts for ordering medications and recording administration.” (Royal Children’s Hospital, Victoria)

- Investigating all available resources
  Significant time and expertise were invested in determining available resources and educational opportunities. This resulted in increased use of staff expertise (eg the Speech Pathologist), engaging external expertise (eg Better Hearing Australia) and determining immediate priorities for physical resources (hearing loop with attachments). (Yarram and District Health Service, Victoria)
Promoting partnerships

- Multidisciplinary approach
  “The Working Party consisted of a cross section of staff including nursing, allied health, operational support, building and maintenance, clinical products/purchasing and occupational health and safety. The multidisciplinary team was able to problem-solve patient handling issues and prioritise equipment needs and practices to best meet the needs of the patients and organisation.” (Princess Alexandra Hospital and District Health Service, Queensland)

- Involving a range of health professionals
  “The video scenarios include patients, relatives, nurses, a physiotherapist and a medical orderly, and multidisciplinary hospital employees in patient, relative and staff roles in clinical and non-clinical contexts.” (Royal Hobart Hospital, Tasmania)

- Collaborating with other organisations
  “Collaboration between jurisdictions involved in the measurement and analysis of quality data was commendable. This allowed for sharing of ideas and problems encountered, allowing the project to build on what others had done and to propose solutions that would be acceptable to all parties.” (Department of Health and Community Services, NT)

Using a combination of approaches

- Research, data collection, system redesign and education in integrated interventions
  “The project strategies included a literature search and critical review to identify best practice and relevant documentation; gaining commitment and support for the project from all staff; developing and delivering an education program to health care staff; identifying and trialing an alternative method of hand cleansing; and monitoring infection rates.” (Queen Elizabeth Hospital, Adelaide)

  “The combination of consultation, didactic presentation, small group demonstration and practice plus checklist encouragement to use the flow charts has not only been a team building exercise but a successful step toward a safer workplace.” (Port Kembla Hospital, New South Wales)

The project reports show clearly that the initial response to safety innovation through the SIIP program is encouraging, and there has been great interest in the program and its outcomes. It is clear that safety is a high priority and many people are already working at a local level to improve the safety of the care they provide. SIIP funding has enabled many organisations to initiate innovative processes for system change.

A striking feature of project reports was their demonstration of the enormous effort, enthusiasm and high level commitment which individuals and organisations brought to the undertaking. The level of planning, open sharing of ideas and willingness to reflect on the successful and less successful features of implementation augurs well for ongoing collaboration and for the future of safety innovation.

The outcomes from many of the projects are promising, although the timeframes were short and in many cases preliminary results only were available at the time of reporting. Further evaluation will be required to determine the success of the interventions in the longer-term.
Cautionary tales

- Ideas that sound like they’ll be cost-effective might not be (e.g., using volunteers to educate patients)
- A single approach might not work (e.g., designing materials without engaging the audience)
- Additional tools may be needed to support the sustainability of the safety improvement practice (e.g., clinical education to accompany systems redesign)
- Don’t underestimate the time and energy it takes to make even a small change in a complex system (e.g., changing to computer-generated rather than handwritten pathology labels)
- You don’t have to do everything from scratch: someone else may have explored the issues and identified effective solutions.
- Participants need to understand the implications (in terms of time and energy) of being involved in the project (e.g., withdrawal of a key project member halfway through can disrupt the momentum).
- Don’t start anything unless you have the support of senior staff and management.
- Don’t limit the lifespan of your project’s products (e.g., tools and resources) by making them too context-specific.

Sustainability and wider implementation

Most organisations intend to continue the work begun by the projects.

"The funding obtained from the Safety Innovations In Practice program enabled the initiation of a program for identifying and reviewing high alert medications in the hospital. This program will be developed and expanded further using the methods formulated for the project." (Royal Hobart Hospital, Tasmania)

In order to sustain change, organisations will have to maintain the momentum they have generated so far, as well as ensure the continuing commitment of staff and resources. Allowing enough time for planning and research, communicating with and involving all stakeholders, and not underestimating the time and energy needed to promote change are all important lessons from this round of projects. Change must be able to be maintained independent of budget rounds or of particular committed individuals.

The Council intends to review the outcomes of existing projects and will be particularly interested in the sustainability of the work initiated through SIIP Mark I.

The applicability of the projects in this first round of SIIP funding to other areas will vary widely. Many projects deliberately kept their resources generic or considered ways that they could be adapted for use in other areas. Achieving a balance between local relevance and not duplicating effort is paramount.

"The Aggression Survey Tool could be used by any health service experiencing a lack of consistency between documented and anecdotally reported incidents. The education, policy and procedures are relevant for any health service using a similar program." (Kimberley Health Service, NT)

"The results of this project suggest that improvement in the technique of conscious sedation is achievable. The guidelines for conscious sedation developed as part of this project could easily be implemented in other hospitals around the country." (Royal North Shore Hospital, Sydney)
Key lessons for safety innovation in practice

A number of common factors were identified as crucial to the effectiveness of the projects. They can be summarised as ten key points informing how safety innovation can be implemented and sustained at the local level. Many project reports either featured these elements or noted that project outcomes might have been improved if greater emphasis had been given to incorporating one or more of them.

- **Leadership** — Ensure active commitment of management and senior clinicians and that the project team has some authority.
- **Research** — Understand your context and setting, and establish the evidence base to facilitate the identification of improvement strategies. Use local data to establish a sense of urgency throughout the organisation, and to encourage staff to challenge the status quo.
- **Networking** — Find out what others are doing and adapt where possible. Build on existing systems in your organisation.
- **Planning** — Think about who needs to be involved from the start, what processes need to be followed, how long it will take, and how it is going to be done.
- **Time** — Do not underestimate the time and energy required to make even simple changes in complex system such as hospitals. Make sure everyone understands the timeframe and what is expected within it, and make sure time lines take into account unexpected obstacles to change.
- **Involvement** — Identify and involve all stakeholders from the start. Ensure the project team is multidisciplinary and well-balanced. Identify and use human resources — get everyone on board and harness goodwill and enthusiasm.
- **Consultation** — Consult widely and communicate regularly to encourage ownership of the process.
- **Simplicity** — Start small and work up. Sometimes very simple, common sense changes to systems can make a big difference.
- **Integration** — Use a combination of approaches: for example, simplifying a process is more likely to succeed if it is supported by research, data collection and education.
- **Sustainability** — Make sure that the project has capacity to be integrated into your setting so it can be maintained over time.

Implications

In addition to the ten lessons outlined above, a number of project findings raise implications at different levels. These may assist those in government or health management who are concerned with establishing and improving frameworks for safety innovation, whether at national, state and regional level, or within specific health care settings.

Implications for further funding

Lessons learned from the first round will be taken into account for any future rounds of SIIP. Issues to consider include:

- Broadening beyond the acute care sector (eg aged care, mental health and primary health care settings);
- Targeting more specific categories of projects, and providing separate themes with specific criteria (eg priority areas such as safe staffing and integration of services);
• Increasing timeframes for project completion; and
• Encouraging applicants to demonstrate mechanisms for sustainability of proposed projects and identify outcomes and perceived benefits.

**Implications for government and management**

• Promoting access to information, networking and communication — encouraging organisations to find out about successful interventions developed by others and adapt them to their own setting.
• Encouraging development of mechanisms to ensure sustainability of change processes.
• Considering ways to promote wider implementation of good ideas and successful interventions.
• Taking a long term view — examining interventions that have been sustained over time when considering future directions or further funding.

The Council maintains a close interest in the unfolding progress of SIIP projects: the lessons learned provide a strong basis for taking forward key themes in safer health care delivery. The program will continue, with a commitment from Council to a second round of funding — SIIP Mark II — to commence later in 2002.

**Next steps**

The value of SIIP will be seen both in the sustainability of the improvements initiated and in the applicability of their concepts to a wider range of settings. It remains for individual health professionals, managers and organisations to take up the challenge of implementation and to test the applicability of tools and practices for their own context. There are four key steps to consider when reviewing the projects in this compendium and their relevance to another health setting. Together, these follow the PDSA cycle (Plan, Do, Study, Act), an accepted methodology for conducting small, time-limited safety and quality improvement activities.
The diagram below sets out some practical steps for applying health safety issues locally. It could be used as a starting point for any reader interested in adapting a specific project for their own organisation.

**Investigate the context**
- Contact the project officer for the project you are interested in
- Obtain the detailed project report, literature review, tools and resources (if any)
- Find out what other similar organisations are doing.
- Assess unique issues for your organisation (see box below).

**PLAN a change**
- Think about who needs to be involved, how long it will take, and how it is going to be done.
- Ensure the project team is multidisciplinary and well-balanced.
- Identify and use human resources — harness goodwill and enthusiasm

**ACT on the results**
- What mechanisms are needed to sustain improvement?
- How will ongoing monitoring be incorporated?
- Ongoing review/planning for improvement
- Future plans

**STUDY its effects**
Gather information on:
- The outcomes
- The impact on your organisation
- The implications for your organisation of implementing the change

**DO it in a small test**
Run the project
- Collect data
- Monitor progress
- Continually monitor and review

**Unique issues for your organisation**
- Can you adapt an existing project to your setting and still maintain local ownership?
- Can you integrate the change with and build on existing systems in your organisation?
- Have you checked your organisation’s protocols?
- What processes are needed (e.g., approval from ethics or research committee)?
- What resources will be needed (both human and financial)?
- How do you gain and maintain participant and stakeholder commitment?
- Have you clarified roles and responsibilities?
2 Involving consumers

Some of the most innovative SIIP projects show a consumer-led approach to change and education on safety improvement. Projects in this chapter examine:

- strategies to strengthen consumer involvement in patient safety, including the use of hospital volunteers to assist patient induction;
- innovative use of consumer feedback, including one project where patients spoke to clinicians about their experiences of adverse events;
- providing better information to consumers, for example videos on pain relief and safe movement in hospital; and
- the consumer’s role in maintaining continuity of care — simple solutions such as medication checklists, better information for parents when their babies and young children are discharged, as well as a patient-held health record, all show how consumers have a vital role in the continuity of their own care.

Projects in this chapter move beyond passive consumer involvement, which emphasises giving information to consumers, to demonstrate different ways of achieving active consumer involvement in their own care and in changing the way that health care is delivered. A commitment to listening to and learning from consumers is evident in the projects. Consumers are encouraged to become involved in their care from the beginning and are empowered to care for themselves after they leave hospital. Partnership with consumers in the safety and quality of their care is an important link in a multidisciplinary approach to health care and in reducing adverse events.

An important finding to emerge from these projects is the need to provide context for consumer feedback. In one South Australian health setting, consumer feedback was benchmarked with data from the wider community, while other projects sought to augment evidence from the literature with consumer feedback.

Lessons for safety innovation

Strengthening consumer involvement
- Models for consumer participation that reflect the needs and preferences of consumers facilitate their active involvement in changing the system.
- Consumer involvement in reducing adverse events is supported by providing consumers with information about hospital safety issues and encouraging them to ask questions.

Using consumer feedback to improve safety
- Providing junior doctors with the opportunity to interact with patients who have experienced an adverse event may increase their understanding of the effects of these events on patients.

Providing information to consumers
- Video provides a useful format for presenting information to patients in a range of health settings.
- Video can be a more efficient way of disseminating routine information to patients than individual interview.

Involving consumers in continuity of their care
- Ensuring that patients who are discharged from hospital have the knowledge to manage their medications at home reduces the likelihood of medication errors.
Involving consumers

- Patient-held records help to ensure that up-to-date information about the patient’s medications is readily accessible to all health practitioners involved in their care.
- Patients on potentially dangerous medications when admitted to hospital may benefit from procedures to manage these medications.

Strengthening consumer involvement

Listening to consumers’ needs and preferences about safe and quality health care

Consumer participation in safety and quality: the search for a consumer-focused model — Flinders Medical Centre, SA

Models for consumer participation that reflect the needs and preferences of consumers facilitate their active involvement in changing the system. In this project, consumers and members of the broader community were consulted about how they would prefer to be involved in improving the safety and quality of the health service. Consumers are now able to provide feedback through their preferred methods and a mechanism is in place to support their continuing active involvement.

The aim of the project was to develop a more consumer-focused participation model for Flinders Medical Centre (FMC) by determining ways in which consumers would prefer to be involved in improving the safety and quality of the health service. Three different methods were used to gain consumer perspectives on whether, and how, they would prefer to be involved:

- face-to-face interviews with 100 users of FMC services (inpatients/outpatients);
- two focus groups with 20 consumer/community representatives from consumer/community groups whose members use FMC services, and telephone interviews with four representatives who could not attend the focus group; and
- two questions in the South Australian Department of Human Services phone survey ‘Health Monitor’ to gain a broader community perspective (sample size: 2,005 people).

Consumers of FMC services reported similar preference patterns for involvement in improving safety and quality of hospital services, as those who were members of the broader community. Primary preferences were for passive activities (eg satisfaction surveys, phone surveys and writing letters, rather than more active involvement eg in focus groups, public forums, working groups or committees).

Representatives of consumer and community groups made several contributions including:

- a role in educating hospital staff on the needs of consumers, as well as the services their group offers; and
- participation in FMC committees, groups and public forums, and provision of comments on FMC reports, policies and educational material, especially where these were relevant to their respective groups.

As a result of the project, FMC developed a model of participation that ensures:

- methods are in place in all wards/departments to enable all consumers of FMC services to provide feedback through most preferred methods (ie written or phone surveys);
- FMC facilitates more active involvement of consumers by a staged developmental approach to improve mechanisms, relationships and supports for consumers; and
• more active participation of consumer and community representatives in hospital forums by formalising relationships with these groups and developing mechanisms to enable more consistent ways for them to participate.

As a consequence of conducting this project, FMC will adopt a capacity building framework for consumer participation. Capacity building focuses on the development of FMC (organisation and staff) and its consumers to achieve and sustain its goal for more active consumer participation to improve the safety and quality of health care and services it provides and improve health outcome for consumers. The three elements identified as critical to the development of consumer participation at FMC are:

• organisational commitment and leadership;
• workforce development; and
• consumer development.

These three elements are underpinned by three factors (collaboration, staged development and long-term commitment) and have been taken into account in the FMC plan for consumer participation.

**What worked best?**

• *Flexible approach to consumer participation* — This enabled consumer and community representatives who were unable to attend a focus group to participate in the project through phone interviews.

• *Comparison of results* — Benchmarking FMC consumer interview results by comparison with survey results of the broader community, identifying similar participation preferences between the two groups.

• *Use of existing expertise* — A mental health consumer who was trained and experienced in interviewing other mental health consumers. This appeared to increase response rate and honest feedback from FMC mental health consumers.

**What could be done differently?**

• *Longer timeframe* — Have a longer timeframe to organise and conduct focus groups.

• *Larger study sample* — Have a bigger sample size of consumer and community representatives for the focus groups or individual interviews.

• *Increase staff involvement* — Interview staff to confirm organisational perceptions of staff preferences.

**Lessons learned for others**

• *Survey needs and preferences of consumers* — All health services could take similar steps to test the preferred participation methods of users or potential users of their services, and the groups that represent them, in improving safety and quality in their health service.

• *Meet local needs* — Develop a model of participation that reflects preferences of your own consumers, rather than impose a model based on what you think consumers should comply with. An imposed model of participation is likely to result in a lack of consumer willingness to be involved and disappointment and frustration on the part of the health service.
• **Develop feedback mechanisms** — These need to be in place first, with an ongoing commitment to develop the capacity of the health service and consumers to achieve and sustain the goal for more active consumer participation.

### Tools and resources

- Interview format for consumers who were users of FMC services.
- Guide for focus groups and individual interviews for consumer/community representatives.
- Questions asked in the SA Department of Human Services phone survey Health Monitor.
- Additional resources available on request include “FMC Consumer Participation Plan” and report on survey results.

### Further information

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**An innovative alliance between patients and volunteers**

**Welcome on board: a patient-orientation approach to decreasing adverse incidents in hospital — Modbury Public Hospital, SA**

Consumer involvement in reducing adverse events is supported by providing consumers with information about hospital safety issues and encouraging them to ask questions. This project aimed to empower patients and increase their understanding of particular safety issues. Volunteers were trained to provide new patients with information, including a list of questions they could ask health care providers about medications, falls/mobility and intravenous therapy.

“Welcome On Board” aimed to involve selected general medical inpatients in monitoring their own safety and thus reducing adverse events. The desired project outcomes included increased questioning by, and general empowerment of patients; a reduction in unsafe incidents, especially related to medications, falls and intravenous therapy; and positive reactions of staff to the increased involvement of patients in their care.

The project trained volunteers to inform new patients about hospital safety issues. The project team developed information for staff and patients and a comprehensive kit for the volunteers. The Unit Manager identified patients suitable for inclusion (exclusion criteria included confusion, dementia, language other than English, inability to read) and the volunteers were then responsible for undertaking the trial enrolment process with willing patients. The project, including the information sheets and consent forms, was approved by the hospital’s Research Ethics Committee.

New patients were given information by volunteers about safety in hospital, including a laminated list of possible questions to ask the nursing, medical and allied health staff about particular “risky” issues — medications, falls/mobility and intravenous therapy. During the initial interview and at follow-up visits by the volunteers, the importance of asking all staff relevant questions was emphasised. After discharge, a telephone interview was conducted to determine whether the patient had asked any of the possible questions, whether they had received any useful information as a result and what the attitude of the staff had been to any questioning.

Staff questionnaires were circulated during and after the three-month trial period to detect whether any difference had been noticed in the volume of questions asked and, if so, the staff member’s reaction. Questionnaire responses showed there was little change in the rate of questioning by patients. Staff professed themselves ready, willing and able to answer questions as necessary. Patients did not admit any change in level of questioning but expressed...
appreciation of the personal support of the volunteers and the telephone interviewer. Incidents (medication, falls and intravenous therapy) in the ward were reduced from 22 to 15 compared with the same period in 2001.

**What worked best?**

- **Positive influence of volunteers** — All patient interviewers (volunteers) had health care backgrounds and were able to explain the project and answer patient’s project specific questions. A relatively brief training session was conducted by the Project Manager, for volunteer interviewers.

- **Communication with consumers** — An overwhelmingly positive response to the telephone follow-up, undertaken by an administrative assistant with excellent interpersonal skills and telephone manner, was reported. High participation in the follow-up questionnaire has led to other uses of this technique for assessment of patient satisfaction with various hospital procedures. Extra time spent communicating with patients — whether by clinical staff or volunteers — can considerably enhance the patient’s experience of hospitalisation. It also provides valuable information about the patient.

- **Reduction in unsafe incidents** — While this is not solely attributable to the project (other variables were neither measured nor controlled), the project forms part of the hospital’s ongoing effort to improve patient safety.

**What could be done differently?**

- **Pursue multiple strategies** — The age and ethnicity profile of a metropolitan teaching hospital general medical ward means that between 25 and 55 per cent of patients were excluded. Of those deemed eligible, a further small proportion declined. This demonstrates a need for alternative safety strategies for the confused/demented and non-English speaking or reading patients.

- **Develop a patient information video** — With voice-over in several languages a video could be shown to all patients as soon as their clinical condition allowed. Volunteer input was excellent but time-consuming and limits the ability to extend the project to all patients.

- **Measure effectiveness** — Anecdotal evidence was ambiguous while the follow-up interviews revealed many patients had not used the suggested questions. However there were indications that some questioning may have improved patient outcomes. Moves to open disclosure and consumer involvement suggest that the project approach is worthy of further development in spite of little evidence of change. Dissemination of the safety message and encouragement of patients to participate in their care is likely to improve their experience and outcomes.

**Lessons learned for others**

- **Give volunteers a new role** — Find out what your volunteers are capable of and interested in doing. You may be surprised! Volunteers have assisted in a number of projects including falls prevention by alerting nursing staff if nominated patients attempt to move without assistance.

- **This may not be the easiest way** — If you have the resources, it may be better to develop a video to run through in-house TV systems, supported by educational materials for patients and staff.
Using consumer feedback to improve safety

**Doctors learning about adverse events from the patient’s perspective**

**Patients educating clinicians — a new paradigm for reducing adverse medical events — North Sydney Health, Sydney**

Providing junior doctors with the opportunity to interact with patients who have experienced an adverse event may increase their understanding of the effects these events have on patients. This project used a three-hour education session to bring together junior medical officers and patients. Attitudes and understanding of doctors was improved and many consumers gained closure to the adverse event through participation.

The Patients Educating Clinicians project investigated junior medical officers’ understanding of and attitudes toward adverse medical events. The project used the unique knowledge and experience of patients who had been involved in an adverse medical event in order to provide junior doctors (in their first and second year of work) with first-hand knowledge of the effects that these events have on patients.

A Steering Group was established which included individuals with knowledge of junior medical officer education, medical ethics, questionnaire design, clinical practice improvement methodology, and individuals who represented patients who had experienced adverse medical events.

All interns and junior registered medical officers employed by North Sydney Health were invited to participate in a three-hour education session, and were given time off their routine clinical duties to attend. The Chief Executive Officers/Directors of Medical Services of all hospitals supported the program. Before participating in the session, the junior doctors were asked to fill in a questionnaire which asked them about their attitudes towards adverse medical events and their understanding of the effect that such events have on patients. The questionnaire also gathered information on their knowledge of the support available for medical staff involved in adverse medical events.

The education session contained: an introduction to the program; small group discussion (involving one patient, five junior doctors and a facilitator); group discussion without the patient present; an interactive session discussing the management of the adverse events and ways in which it could be improved; and a session on personal and hospital resources available to support doctors involved in an adverse event.
After the session, the junior doctors filled in the questionnaire again, in order to determine whether the experience resulted in any significant change in attitude or knowledge. The patients involved in the project were also asked to complete a questionnaire about the session.

**What worked best?**

- **Improved understanding of the impact of adverse events** — The program resulted in statistically significant changes in the attitudes and understanding of the junior doctors.

- **Patient involvement and commitment** — The patients were willing to speak about traumatic experiences and showed a great belief in the value and importance of the project. Many of them stated that participation in the project had helped them to gain a kind of closure to their experience.

- **Patient–doctor relationship** — The interaction between the patients and junior doctors and the obvious rapport that developed between them. Some junior doctors were obviously moved by the experience and many expressed surprise that an adverse medical event could affect an entire family for many years.

**What could be done differently?**

- **Recruit patients through consumer organisations** — Initial attempts to identify patients through the Medical Error Action Group proved unsuccessful and expensive. In future, patients will be approached through different avenues — there are many organisations which recognise the importance of such a project.

- **Have a pool of potential participants** — It was quite difficult to find the “right” type of patients for this project, recognising the impact that the sessions could have on junior doctors if patients blamed the medical profession. Developing a pool of potential participants would be useful.

- **Use multiple approaches for recruiting doctors** — In general, mechanisms for communicating with junior doctors are poorly developed. Numerous strategies (flyers in pigeon holes, personal phone calls) needed to be employed to ensure attendance. These were time consuming and a more structured, regular communication process would greatly facilitate the project. Presenting the session in a regularly scheduled education session held for all interns in Northern Sydney Health would increase the numbers attending.

**Lessons learned for others**

- **Adapt the project locally** — This project has the potential to be incorporated into education programs around Australia. The experience of meeting with a patient who has suffered an adverse event face-to-face and talking with them about that experience appeared to be a very worthwhile experience for junior doctors.

- **Use alternative ways of carrying out the project** — While probably not as confronting, the session could also be delivered in the form of a videotape, thus enabling widespread exposure of junior doctors to this important topic.

<table>
<thead>
<tr>
<th><strong>Tools and resources</strong></th>
<th><strong>Further information</strong></th>
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<tbody>
<tr>
<td>Questionnaire for junior doctors used to assess the effectiveness of the program</td>
<td>Liz Millar</td>
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<tr>
<td>Questionnaire for patients used to collect information on their experience of the programme.</td>
<td>Tel: (02) 9926 5665;</td>
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<tr>
<td>PowerPoint slides of presentations during the education session.</td>
<td>Email: <a href="mailto:LAMillar@doh.health.nsw.gov.au">LAMillar@doh.health.nsw.gov.au</a></td>
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Finding new ways to gain and use feedback from Indigenous consumers

Implementing a culturally appropriate patient satisfaction survey across the five Northern Territory public hospitals — Department of Health and Community Services, NT (progress report)

The Department of Health and Community Services (Northern Territory) strategic intent is ‘to create and enhance a Territory wide network of services which delivers continuing improvement in the health and well being of Territorians’. Enhancing the capacity of individuals and community groups to control and influence the way that health services are delivered cannot be underestimated. Aboriginal people are the major clients of Northern Territory hospital services. Contemporary methods of gaining patient feedback do not necessarily capture the needs and views of this client group.

Some work has been done on culturally appropriate patient satisfaction surveys in the past, however this has been secular and not implemented Territory wide. The use of information from standardised survey tools and collection methods can enhance planning of service delivery. The commencement of the Aboriginal Interpreter Service has provided additional expertise and capacity on how best to capture meaningful dialogue on culturally appropriate health services.

This project is currently in progress and a full report will be available in the near future.

Providing information to consumers

Using video to help patients move safely in hospital

Patient education video: manual handling and mobility — Calvary Hospital, ACT

Video provides a useful format for presenting information to patients in a range of settings. This project produced patient education videos with the aim of improving patient understanding of safe handling methods. The videos will be shown in a number of areas in the hospital and are expected to improve handling safety for both patients and staff.

Two short patient education videos were produced to improve patient understanding of manual handling equipment and mobility techniques that may be used by patients with staff during their hospital stay. The videos will be available on Calvary’s in-house video system to inpatients, in the pre-admission clinic, and on medical wards and clinical areas.

What worked best?

- **Consultation process** — Consultation was extensive involving all levels of staff, from clinical staff to executive members. Given the timeframe of the project, it was necessary for relevant areas to respond quickly with comments on the script. The coordinators received constructive comments by the deadline from all areas including consumer representatives and the timeframe was met.

- **Use of a production company** — Channels of communication were always open between consultation groups, the coordinators, and the production company. The advice given by the production company from the outset was invaluable and contributed to both videos being well developed, clear, and of high quality. Because of this expert advice the coordinators will be able to send one copy of each video to other Calvary Health Care organisations. Using the words of the video’s introduction (provided separately) they can film their own introduction and make copies that are personalised for their organisation.
• Positive response from staff — All staff were positive and enthusiastic, identifying with the need to improve patient understanding of safe handling methods. The response from staff reflects how important they see the project in terms of improving handling safety for both patients and employees. This level of ownership has meant that the project has been both relevant and highly applicable to their work.

What could be done differently?

• Longer timeframe — Project coordinators thought it appropriate to film the video in a hospital setting so that patients would get a realistic idea of what to expect during their stay. As there is a current bed shortage (a world-wide occurrence) it was not possible to film on any random day. The coordinators, crew, and staff (actors) were required to film on an extended public holiday which is usually less busy than most weekdays. This meant that filming had to wait until the Easter period, giving the team less than the desired time for post-production, which is usually the longest and most expensive part of making a video.

• More staff available to take part in video — There were two main reasons why staff were preferred over actors in the video:
  – it was more efficient for the coordinators to use staff as it would have been necessary for actors to undergo manual handling training; and
  – the budget for the video did not include costing for actors. As filming was conducted on a public holiday, the availability of staff was minimal which meant that the same staff were used in multiple scenes of the video. This may detract from the ‘reality’ of the video.

• More appropriate length of video — Education in the acute setting needs to be as concise as possible. However, due to the complexity of manual handling issues, the videos are slightly longer than would be ideal. Although the videos achieved the aims of the project, there are other handling issues which could be addressed by video education but which were outside the scope of the budget for this project.

Lessons learned for others

• Adapt the project locally — The patient education video is a tool that could be implemented in other health settings such as health centres, GP clinics and hospitals. The video would need to be changed to reflect specific organisational philosophy, values and identification if necessary.

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<th>Tools and resources</th>
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<tr>
<td>• Patient Education: Manual Handling, Volume 1, General</td>
<td>Emma Enzerink, Amber Brentnall</td>
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<td>• Patient Education: Manual Handling, Volume 2, Mechanical Equipment</td>
<td>Calvary Health Care ACT</td>
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<td>PO Box 254, Jamison Centre ACT 2614</td>
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<td>Email: <a href="mailto:emma.enzerink@calvary-act.com.au">emma.enzerink@calvary-act.com.au</a></td>
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Using video to educate patients about pain relief medications

Patient information project/acute pain relief — Albury Wodonga Anaesthetic Group, NSW

Video can be a more efficient way of disseminating routine information to patients than individual interview. This project developed a patient information video to empower patients to safely manage post-operative analgesia. The script for the video was based on input from patients as well as hospital staff and individual patient comments were very positive.

Data from three hospitals in the Albury Wodonga region indicated that 30 per cent of adverse patient drug-related outcomes related to analgesic use. Data from the acute pain service indicated that 1–2 per cent of patient-related non-compliance with protocols related to patient-controlled analgesia usage. Input was received from a variety of sources, which indicated that patient information needed to address a range of areas:

- **input from pharmacy** — patient confusion about generic preparations, patient confusion about multiple products containing paracetamol, safe storage of medications, contraindications to non-steroidal anti-inflammatory use, risk of adverse reactions to patients using other patient’s medications;

- **input from nursing staff** — confusion about the pain relating scale, patient’s lack of knowledge about the need to keep pain under control;

- **input from medical staff** — the need to notify early about complications, understanding that pain should be under control rather than taken away completely, the need to discuss concerns about pain relief before it is organised, the need for patients to be fully informed about potential complications prior to procedures, understanding failure rates related to analgesic techniques;

- **input from medical administration** — factors that may affect length of stay, the need to stress that pain management review is done differently in different hospitals, the need to keep patients fully informed about potential problems and complications, encouraging an individual approach to patient information; and

- **input from patients** — the reasons why a certain pain relief modality was chosen, the options available for pain relief, complications or problems to look for, non-pharmacological measures to help control pain, when to ask for pain relief, the risk of overdose.

Based on this input, a script was drafted to cover the areas raised, using a patient/doctor interaction format to encourage empathy with the patients and to show patients a role model for questioning and querying the information received. The script was distributed widely to patients, allied health, nursing staff, medical staff and pharmacy for further comment, and their input incorporated into the script. A local theatre company was approached to act out the script, which was modified to encourage scene breaks and changes to prevent visual fatigue to viewers.

Once the video was produced and edited, a questionnaire was devised to assess the effect of the video in giving basic knowledge, to assess any changes in behaviour, and to see if the extra information allayed or increased patient anxiety. While a change in patients’ knowledge about safety issues regarding analgesic use could not be detected, and there was no significant change in patients’ reported behaviour, patients viewing the video felt they had significantly more knowledge about pain relief, and this did not equate to an increase in patient anxiety. Individual patient comments were very positive.

Given the positive nature of the individual comments, the video was then more widely distributed. It is shown on the hospital television channels twice a day and is available for
individual viewing at a ward level. The video will be distributed to doctors’ surgeries, pharmacies and the local library. The effectiveness of the video will be monitored through the acute pain service in Albury Base Hospital. Non-compliance with protocols will be charted, along with pain scores and comments from the ward. This information will take about six months to collect.

**What worked best?**

- *Positive response* — The enthusiasm of the staff and patients in considering which items they felt were important and to have input into the video.
- *Professional production* — The use of a professional production company to make the production more “watchable and interesting”.
- *Video format* — The ability to bring a lot of information together in an easy to present format.

**What could be done differently?**

- *Not to try and introduce too much information* — There may have been an information overload for patients in the amount of information presented.
- *Greater reinforcement of key points* — More frequent use of recapping and written information to reinforce key points.
- *Longer timeframe* — This would allow more time for people to have input and for production.

**Lessons learned for others**

- *Adapt the project locally* — While it would be simple for the current video to be used in other areas, and it has been designed to be as generic as possible, different hospitals have different protocols and methods of running pain relief. The basic script could be altered as necessary for local areas and local actors and video production teams are available in most major centres. Another option would be to use the video but to supplement it with written information emphasising key points and local issues.
- *Be aware of the difficulties involved* — Producing a video is much harder than it looks and integrating a number of different opinions can be a large and daunting task.
- *Take advantage of video* — Video is a more efficient way of disseminating routine information than individual patient interview.
- *Focus on main points* — Do not put too much information in one video, and actively reinforce major points.

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<td>Patient information video on patient-controlled analgesia</td>
<td>Dr. Eric Moyle</td>
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Involving consumers in continuity of their care

Helping older people to manage their medicines

Improvement in education and communication of medication usage in older patients — Division of Aged Care, Bankstown-Lidcombe Hospital, NSW

Ensuring that patients who are discharged from hospital have the knowledge to manage their medications at home reduces the likelihood of medication errors. This project aimed to improve older patients’ understanding of their medication through an education program and a follow-up visit after discharge. As well as increasing their knowledge, patients were more likely to take their medications and medication cards when visiting their GP.

Patients were included in the study if they were aged 65 or greater, on medication and likely to need to manage the medication themselves at home. All patients were given a three-day education program by a registered nurse. Various aspects of the patient’s medication (including brand names, purpose, frequency and dose, and side effects) were explained. The patients were visited once within a week after their discharge. Patients’ understanding of their medication was tested by questionnaires before the education program and again at the home visit.

In total, 45 patients were recruited. At the time of data analysis, 30 patients had completed the education program and had been visited at home after discharge. Nine patients withdrew for various reasons (eg died in hospital, did not complete the education program, did not manage the medication by themselves at home). Six patients were still in hospital. The average total number of medications on recruitment to the study was 8.0 (± 4.5) and the average total number of medications at the home visit was 7.7 (± 4.1).

Patients’ knowledge about their medication was improved through the education program, especially knowledge about medication name, dose, frequency and purpose. At the home visit, all the patients were complying with their medication regimen, and there was an increase in the percentage of patients taking their medication and their medication cards when visiting their GP. Most patients (90 per cent) thought the program was useful and the way that it was conducted was satisfactory.

What worked best?

- Patient participation — Patients were encouraged to actively participate in managing their medication. Their understanding of medication was improved through education.

- GP involvement — Patients were asked to take their medication or medication list to their GPs, which in turn may foster regular medication review, reducing polypharmacy and improve medication quality and safety.

What could be done differently?

- Improve post-discharge communication — Improved communication between hospital and GPs.

- Give patients updated education — Further information could be provided to patients when they have their medication(s) changed.

- More education — This could include further education on the side effects of drugs.
Lessons learned for others

- Adapt the project locally — This program is useful and feasible and could be implemented in an acute hospital setting and become a routine nursing practice in the future.

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| A medication list was made for each inpatient, which included relevant information on their medication, including brand name, purpose, times and doses, and main side effects. | A/Prof. Daniel Chan  
Director, Division of Aged Care, Bankstown-Lidcombe Hospital.  
Tel: (02) 9722 7558,  
Fax: (02) 9722 8275  
Email: Daniel.chan@swsahs.nsw.gov.au |

Coordinating health care following lung transplant surgery

Patient held medical record: lung transplant — Sir Charles Gairdner Hospital, Nedlands, WA

Patient-held records help to ensure that up-to-date information about the patient’s medications is readily accessible to all health practitioners involved in their care. This project developed a patient-held record with the aim of reducing the risk of complications in lung transplant patients by highlighting potential interactions with transplant medications.

Lung transplantation has become part of accepted therapy for patients with end-stage lung disease. Although the role of lung transplantation is well established, it still represents a highly specialised and complex part of medicine, involving procedures and medications unfamiliar to the majority of medical practitioners. Lung transplant patients require life-long anti-rejection therapy that can have significant side effects, and can interact with many commonly used medications. Furthermore, care of these patients requires the coordination of multiple areas of medical expertise through the Transplant Clinic to monitor potential problems and take preventive action. Situations frequently arise where patients are at risk of complications due to new therapies being initiated without consideration of their impact in the context of the transplant.

In order to avoid such occurrences, a patient-held medical record was developed to ensure the most up-to-date patient information is readily accessible to all of the patient’s medical and allied health practitioners. In particular, cautions regarding important active medical problems and potential interactions with unfamiliar transplant medications were highlighted.

Several factors were considered in planning the tool including:

- size and portability as it would be useless if patients felt it to be too cumbersome to take with them on their medical visits; and

- careful prioritisation of information to be kept in the medical record. In discussion with medical, nursing, allied health staff and patients, a core list of essential items was compiled.

The subsequent task was to try and translate these ideas into a practical, user-friendly tool.

The patient-held record was intended to largely supplant the standard medical chart for outpatient care of transplant patients but contain information available in the standard hospital chart. A ring-binder format was selected to maximise exchange of information between the patient-held record and the hospital record and because it could be modified as needed.

The record was developed as a form of practical daily diary to allow the patient to record, for example, all appointments and any non-urgent queries that arose on a day-to-day basis. This produces a record of evolving problems and avoids reliance on patient recall. A separate
Involving consumers

section for medical notes ensures that important medical communications can be easily and rapidly conveyed should letters or hospital charts be unavailable.

Medications continue to be one of the greatest sources of concern to both patients and medical staff. Accurate information on a patient’s medications and dosages forms the cornerstone of safe and rational prescribing. Many transplant drugs require frequent dose variation for instance where drug interactions occur due to a new but temporary therapy such as a course of antibiotics.

The average lung transplant patient is on at least seven different types of medications a day, each requiring up to several doses daily. Some patients are on as many as 20. Remembering their names as well as their frequently changing doses is a difficult task. The patient-held medical record assists patients and health care workers to identify prescribed medications, manage dose changes as well as record additional therapies. It includes a guide to the major side effects and drug interactions of key anti-rejection drugs.

What worked best?

• “Retro-fittable” concept — This allows for simple modification of the record layout for future needs. Easy insertion of new entries and replacement of lost or destroyed pages.

• Size of the medical record — The record is compact and portable yet allows for recording of all key medical information.

• Patient control of information — Possession of the record empowers the patient to more readily participate in decision-making.

What could be done differently?

• Ideal format — If cost were no object, a palm-sized computer would be the preferred format. It would enable regular downloading and email of information to a central reference (eg Transplant Clinic) and would assist travelling patients. Extra memory space would allow storage of more reference material. This is not necessarily an extravagant idea because Transplant patients, while requiring a high intensity of care, are still relatively small in number, due to the limited availability of donor organs.

• Limitations of miniaturisation — The disadvantage of the record’s compact size is its handling difficulty for patients with tremor and poor vision, especially for older patients. Currently this is addressed by allowing for more space and extra pages can easily be added. Alternately, key information could be legibly written by a relative or doctor, as required.

• Doctor and patient adjustment — As with all new concepts that have an impact on the regular practice of others, some resistance to its use has been experienced. A letter of introduction is planned to accompany (or precede) its further implementation as the trial population increases. As implementation progresses, the utility of the record should overcome resistance.

Lessons learned for others

• Adapt the project locally — The use of such a record is adaptable to other Organ Transplant clinics and any medical condition where there is a need for frequent outpatient review (eg conditions such as cystic fibrosis and lung cancer).
• Improve communication between doctors — This tool enables better communication both between patient and doctor and between doctors via the patient. Shared care, with the patients playing an integral part of their own management, will produce safer, better and more satisfactory health care.

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
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Helping patients to manage medication following hospitalisation

Management of patient-owned dangerous drugs (S8) on admission to hospital — North West Regional Hospital, Burnie, Tasmania

Patients on potentially dangerous medications when admitted to hospital may benefit from procedures to manage these medications. This project developed a procedure that provides for safe storage of patient-owned medications in hospital and allows for review and audit of medications upon discharge.

This aim of this project was to develop a procedure for management of patient-owned dangerous drugs. The scope of the project was expanded to include all medications brought to the hospital and to incorporate dispensing safeguards to assist the patients on discharge.

The agreed process for handling of medications is:

- following interviews by medical staff, patient medications are collected and placed in purpose designed bags and delivered to pharmacy for storage; and
- on receipt of discharge scripts, the pharmacy cross checks medications to determine those that have been ceased and those that are being continued but may have different names. This information is provided to the patients.

This process achieves the initial aim of the project — that S8 medications are managed appropriately — as well as enabling pharmacy staff to provide additional information to patients about their medications. This advice includes identification of medications that have been ceased, which can be disposed of by the hospital, and medications that are the same but have different trade names — to avoid double dosing by patients.

What worked best?

Review and audit — The process is a significant improvement on sending medication home with patients as it allows for a medication review and audit.

What could be done differently?

Ensure sufficient staff are available — A staffing crisis within the pharmacy department during implementation of the project created some problems. Staffing options are being examined to rectify this.

Further information

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Written discharge advice for parents from a paediatric emergency department

Automated computerised discharge advice sheets for emergency departments — Mater Misericordiae Hospital, Brisbane (progress report)

A study by the Paediatric Emergency Department has shown that poor recall of discharge advice given to parents is relatively common. This project intends to produce an interfaced software program that is able to produce automated, personalised written discharge advice. The specific aim of the project is to improve patient outcomes post discharge and contain costs by increasing the recall of advice given to parents when they leave the emergency department.

Anticipated outcomes include:

• improvements in parent’s awareness of the true significance of the diagnosis and associated symptoms;
• increases in parent’s awareness of significant symptoms that should prompt an earlier medical review;
• decreases in inappropriate use of the emergency department;
• decreases in readmission rate to the emergency department; and
• increases in satisfaction levels of parents.

Computerised discharge advice sheets to parents will contain the:

• diagnosis
• doctor’s name
• investigations carried out and the result
• a description (in plain non-jargon wording) of the problem, what causes it and how long it might last.
• why a definitive diagnosis can’t be made, if applicable,
• what can be done by the patient to help themselves get well,
• what the patient should not do and why, and what precautions the patient’s contacts should take,
• common effects or adverse effects of the medicine or plan and what to do if any of these should happen,
• what to do if the child fails to improve or worsens,
• follow up requirements, (may require manual appointment to be made)
• who to call or where to go if anything goes wrong.

Progress to date

Considerable time has been spent on upgrading existing advice sheets and protocols. Ten different discharge-to-home presentations have been investigated and discharge advice sheets developed, including care following head injury, treatment of gastroenteritis, treatment of bronchiolitis, treatment of croup, analgesia, care of plaster and care of sutures and other wounds.

This program has the ability to simplify and streamline the current system of providing verbal discharge advice. It is able to provide information in a format that is easily recalled by parents. Combining this program with the discharge screen on the EDIS (Emergency Department Information System).
Information System) will make it easier to use discharge advice sheets, because a sheet will be printed automatically when the patient is discharged.

The program is still under development. Discharge advice protocols have been updated and are currently under review by the senior management of the paediatric emergency department. Discussions have taken place with the IT personnel regarding the modifications to the EDIS system. Work on this project is expected to be completed by the end of July 2002.

The success of this project can be easily measured by repeating the earlier study to investigate if parents have a better understanding of the care their child received and a greater knowledge of after care instructions. Readmission rates to the Emergency Department will also be investigated, to see if discharge advice improves these rates.

This program could be used by other health care facilities that use HAS programs. Although it would need HAS to agree to incorporate the discharge advice program into the standard EDIS program. Any Emergency Department that utilises the EDIS program would then be able to provide discharge advice sheets to its patients.

A computerised system does not require additional funds for ongoing maintenance and implementation. The development of this new use of technology will enable the Paediatric Emergency Department to provide an increased level of safety of care to patients.

**A checklist to help patients manage their medicines**

**Empowering patients to assist in reducing medication errors — Werribee Mercy Hospital, Victoria (progress report)**

The plan for the project is to produce a simple checklist reinforcing patients’ rights and responsibilities with respect to medications. The checklist will allow consumers a reference, empowering them to question any changes in types or dosages of medication.

**Progress to date**

The checklist has been developed, reviewed and revised by the Medication Management Group involving members from many disciplines within the hospital (eg nursing, pharmacy, medical, social work). It was suggested by the group that there should be an alert for allergies, as well as an area to list all the medications the consumer is currently taking. These suggestions have been incorporated into the design.

A general staff education session has been held to give staff an overview of medication errors and prevention. Ward-specific sessions will commence in June, where the educator will spend time with the ward staff and discuss the introduction of the checklists and other medication error preventative measures.

The information will be made into medication cards for each patient, which can be retained for future reference with other medical services.

A focus group of consumers will be held for discussion of the content and use of the checklist. The number of medication-related incidents is being recorded as a baseline before the introduction of the checklists. A review of the number of medication-related incidents/errors will be undertaken 2–3 months after implementation of the system.

**Further information**

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3 Supporting those who work in the health system

This chapter draws together projects whose primary focus in improving safety is to explore better ways to support health professionals. The projects fall into four major themes:

- development of innovative educational strategies and tools, including use of human patient simulators to provide skills training for nurses and interns;

- strategies for guided decision-making, including protocols and flowcharts to assist in specific contexts, such as high alert medications or presenting symptoms in emergency departments;

- strategies to improve communication between health professionals, patients and families, including workshops to assist health professionals to communicate with patients from different cultural backgrounds; and

- strategies that support health professionals to manage risk, including two different approaches to hand washing which emphasise the potential for better use of existing resources and a strategy to improve available tools.

Key themes to emerge from these projects include recognition of the human element in the safety and quality of health care delivery. The ‘people factor’ informs change at organisational and systems level and is integral to best practice. Projects sought to harness the commitment that individuals bring to improved practice, as seen in the use of role models and “champions” to promote hand washing in an Adelaide hospital, and the emphasis on leadership from senior clinicians in many projects.

The work included in this chapter also demonstrates the strength that derives from adopting multidisciplinary approaches to supporting health professionals and the value of combining interventions in multi-modal approaches to educating and supporting health professionals.

While it is too early to talk about long-term change - many projects have just begun work rather than report uptake or long-term outcomes - sustainability is recognised as an important element in a number of projects. These include a New South Wales project on safer manual handling, which reports encouraging initial improvements but acknowledges the need to review outcomes after 12 months, and an ACT hospital’s approach to ensuring continuing cultural awareness.

Lessons for safety innovation

Education

- Skills training is an important component of continuing education and can help to minimise risk to patients, by assisting health professionals to develop practical strategies to manage real life situations.

- Process analysis can be used to ensure that appropriate educational interventions are designed to address safety and quality issues.

- The safe and efficient use of new techniques is often reliant on adequate training and guidance of staff.

- Educating clinicians and managers in the process of clinical incident investigation supports a systems approach to patient safety.

- Staff involvement in the production of educational resources allows for input and ownership as well as cost savings.
Guided decision-making
• Providing standardised guidelines and consumer education focusing on safety issues associated with high risk medications may help health care professionals to increase patient safety.
• Availability of clinical management protocols for commonly presenting conditions increases consistency in approach across the organisation.
• Standardisation of processes can assist staff in enhancing their capabilities and adding to the efficiency of the process as well as bringing benefits to patients.
• Guiding health care providers in improving their use of techniques can reduce the risk of procedural complications.
• Availability of resources and standardised protocols as well as easy access to them can support health care providers in reducing errors.
• Awareness of safe ways to carry out manual tasks helps to reduce the risk of injury to health care providers and patients.

Communication
• Supporting health care professionals to communicate effectively with patients from different cultural backgrounds improves both the safety of patients and their ability to participate in their own care.
• Processes for identifying patients with communication problems and for facilitating communication with these patients can support health professionals in outlining risks and procedures to patients and improving their participation in their own care.
• Practical guidance on communicating with the media can help senior managers and clinicians to manage media interest in a way that protects the psychological and emotional safety of patients.

Managing risk
• Initiatives that combine the use of role models and champions with education and visual reminders can help staff to change behaviour that increases risks to patients.
• Educational and motivational resources can support health care professionals in reducing the risk of hospital acquired infections.

Education

An innovative approach to training junior doctors
Use of a human patient simulator to evaluate policies, procedures and competencies for emergency airway management — St Vincent’s Hospital, Melbourne

Skills training is an important component of continuing education and can help to minimise risk to patients, by assisting health professionals to develop practical strategies to manage real life situations. In this project, the use of a checklist and flow chart together with a human patient simulator enhanced training of interns in emergency airway management. The training took into consideration the balance between service demands and learning needs and feedback was overwhelmingly positive.

In metropolitan hospitals, airway management in crisis situations is usually the responsibility of senior medical staff. However, in smaller rural centres junior medical staff are often required to manage airways until more senior help is available. Current training involves the use of part task trainers (airway models) to revise this skill. St Vincent’s Hospital has recently obtained a human patient simulator (HPS), a computerised mannequin that can be programmed to mimic patient conditions via sophisticated respiratory and cardiovascular modelling. The ‘patient’ breathes and has a heart beat, pulses, blood pressure and responsive pupils. It responds pharmacologically to drug administration and can be fully anaesthetised and ventilated.
Supporting those who work in the health system

Scenarios can be developed to allow health professionals to practise clinical skills in emergency situations without risk to real patients and in a ‘safe environment’.

This project aimed to rehearse potential system failures and develop practical strategies to manage real life situations involving emergency airway management, and increase the confidence of staff involved in airway management in crisis situations.

Phase 1 involved a literature review in the areas of simulation training, confidence and measuring self-efficacy and airway management. Phase 2 involved project design, implementation and evaluation. A checklist and flow chart were designed following the literature review, and then sent to experts within the hospital. A scenario with the HPS was assessed and trialed before use in the training program.

The training program consisted of two parts:

- Large group training in airway management including review of relevant anatomy, demonstration of airway management by an expert and supervised practice with feedback by an expert. The session was structured around the flow chart and checklist.
- Individual training using the scenario and HPS. The interns were videotaped and the tapes used for debriefing, together with the checklist and flow chart.

Evaluation questionnaires were distributed both pre and post training. Improvements in self-efficacy with HPS training were statistically significant in several areas, and there was a trend for HPS training to be superior to part task training. Participants were satisfied with HPS as a training medium.

**What worked best?**

- **Checklist and flow chart** — These were successful in identifying components of the skills required for teaching. It was also valuable for senior clinicians to work together to develop the tools. The interns were able to refer to the checklist during practice and reflect upon it during the debriefing. In addition, the checklist enabled the interns to identify all the components required for safe airway management.

- **Human patient simulator** — The simulator was a valuable adjunct to the traditional part task trainer used to teach airway management. It allowed interns to apply their knowledge in a ‘real life’ situation. The statistically significant difference between the part task trainer and the simulator highlights the impact this teaching medium had on perceived self-efficacy.

- **Positive response** — The overwhelmingly positive feedback from the interns who participated in the program is very encouraging. HPS training has encouraged skills development among the interns.

**What could be done differently?**

- **Statistical analysis** — Future projects should include a biostatistician on the project design team, and make provision for statistical analysis of results.

- **Considerations for participant recruitment** — Recruitment of some interns was attempted via a letter. This was not as successful as training group recruitment involving personal contact.

- **Measure of self-efficacy** — In future projects, a repeat measure of self-efficacy would be incorporated at six months, to allow for analysis of the effect of training on clinical practice, and retention of skills, confidence and information.
Lessons learned for others

- **Checklist and flow chart** — Both the checklist and the flow chart developed during this program could be used by other institutions for intern airway management training. This approach allows trainers to clarify components of the skills required for safe practice.

- **Human patient simulator** — Other institutions would require access to HPS technology to allow the complete project to be implemented. St Vincent’s Hospital is keen to provide this access and training to other institutions, however funding to cover consumables and associated costs would be required.

- **Considerations for participant recruitment** — Attendance at continuing education events is frequently problematic in the intern group where service demands compete with learning needs. The success of participant recruitment for this inservice was largely due to the relationship between the Medical Education Officer and the interns. A personal approach to participant recruitment in training programs is recommended.

- **Needs assessment for skills training** — Issues in safety and quality should be analysed to ascertain if skills training for interns could minimise risk to patients. Skills training is an important component of continuing education for interns and residents alike, particularly in terms of safe clinical practice.

### Tools and resources

- Checklist and flow chart for airway management
- Scenario for use in simulated training
- Evaluation tools
- Literature review

### Further information

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**Helping nurses to recognise and manage respiratory depression**

**Use of a human patient simulator to review management of post-operative narcotic and epidural infusions — St Vincent’s Hospital, Melbourne**

Process analysis can be used to ensure that appropriate educational interventions are designed to address safety and quality issues. This project focussed on management of iatrogenic opioid-induced respiratory depression. Results show that the nurses improved their knowledge and found the experience and feedback beneficial.

Nurses are the principal health professionals responsible for the care of post-operative patients with epidural analgesia. Epidural analgesia is routine for some large operative procedures and carries with it significant risks, such as respiratory depression. Despite strict protocols and specialist training in epidural management, adverse events can still occur.

The aims of the project were to:

- identify current knowledge of nurses in recognition and management of respiratory depression;
- train nursing staff to recognise and manage respiratory depression due to opioid narcosis; and
- pilot the use of the human patient simulator (HPS) to determine if experience in a crisis scenario could improve understanding and confidence in managing these procedures.

A literature review into the use of the HPS in nursing education, confidence/self-efficacy and competence training was undertaken. This was followed by assessment of written policies and
procedures for epidural and narcotic infusion management, and review of reported adverse events.

Findings from these studies indicated that the current management policies and procedures for post operative epidurals were effective and that no adverse events had been reported. The training program was comprehensive and involved thorough program evaluation and regular program review. However, it was clear that current training did not address management of opioid-induced respiratory depression. Although nurses can administer Narcan (an opioid antagonist used to reverse the effects of respiratory depression), according to specific criteria, many do not feel confident in administering this drug, and rely on medical instruction to do so.

The project design included two training interventions:

- Large group training in opioid-induced respiratory depression using the HPS, which involved early recognition of signs and symptoms of opioid-induced respiratory depression and the correct administration of Narcan. The effects of Narcan were able to be visualised.

- Individual training using a specially designed scenario and HPS. The nurses were videotaped and the tapes used for debriefing. The scenario was designed to mimic a real clinical situation and the nurses were required to respond according to standard hospital policy.

Evaluation questionnaires included a multiple choice test to assess knowledge about opioid-induced respiratory depression and Narcan, and a self-efficacy rating of confidence to assess and manage opioid-induced respiratory depression. Results show that nurses improved their knowledge and found the experience and feedback beneficial.

What worked best?

- **Human patient simulator** — The ability to provide large group bedside teaching allowed the nurses to explore and understand safety issues concerning the care of patients with opioid narcosis. They could apply the theory learned during coursework, through practice in the simulated environment. The HPS allowed the nurses to witness the signs and symptoms of this adverse event and to see first hand the effect of various interventions without risk to a “real” patient.

- **Safe environment** — The nurses who participated in the study saw the simulator as a valuable adjunct to the more traditional didactic epidural course. There was an element of concern about being observed by peers, but the ‘safe environment’ created by the trainers overcame these concerns and resulted in a rich learning experience that the nurses would like to repeat.

- **Highlighting process errors** — The HPS also highlighted process errors made by the nurses. The existence of clearly defined processes does not ensure adherence in clinical practice and this was obvious during the simulated patient experience. As a result, nurse educators are investigating other process issues that could be assessed using the HPS.

What could be done differently?

- **Trial of scenario and large group teaching** — Future projects should include a trial of the scenario and teaching before large group application. This project is viewed as a pilot project but the strategies employed will be implemented and evaluated in future epidural courses offered by the hospital.

- **Personal approach to participant recruitment** — Recruitment was hindered because nurses were not given information about the project before beginning the standard epidural course. In addition, the timeline for the project was restrictive in terms of project design and
implementation. In future projects a longer participant recruitment period is recommended, to allow nurses to overcome barriers to participation such as child care, night duty and rosters.

**Lessons learned for others**

- **Using a human patient simulator** — Other institutions would require access to HPS technology to allow the project to be implemented. St Vincent’s Hospital is keen to provide this access and training to other institutions, however funding to cover consumables and other related costs would be required.

- **Considerations for participant recruitment** — Attendance at continuing education events is always problematic for nurses in terms of rosters and service commitments. Educational interventions need to offer training at a variety of times and over a protracted period to allow for maximum attendance.

- **Analysing safety and quality of performance** — Issues in safety and quality in regard to nursing performance should be analysed to determine if processes are being adhered to in clinical practice. This type of analysis is necessary in as real an environment as possible. The environment can be replicated by using the HPS. Process analysis would ensure that appropriate educational interventions are designed to address safety and quality issues.

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scenario for use in simulated training</td>
<td>Mrs Debbie Paltridge</td>
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<tr>
<td>Evaluation tools</td>
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<td>Tel: (03) 9288 2301; Email: <a href="mailto:paltridj@svhm.org.au">paltridj@svhm.org.au</a></td>
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**New technique provides nurses with the opportunity to increase skills**

**Doppler guided insertion of peripherally inserted central catheters** — Macarthur Health Service Ambulatory Care Continuum, NSW

The safe and efficient use of new techniques is often reliant on adequate training and guidance of staff. This project aimed to establish safe procedures for insertion of PICC lines under Doppler guidance. Training and the development of procedures in the use of the Doppler technique have assisted nurses in improving their cannulation skills as well as reducing the number of failed attempts and infections, improving patient satisfaction and reducing costs.

The Macarthur Ambulatory Care Service is an outreach service that provides substitution of acute (hospital) care in the home. The service inserts seven peripherally inserted central catheter (PICC) lines per month on average for patients receiving medium to long-term therapy by infusion (eg blood transfusion, antibiotics, immunoglobulin). This project aimed to establish safe procedures for insertion of PICC lines under Doppler guidance.

A literature review was conducted on the use of ultrasound to improve assessment of venous access. A one-day workshop for training in insertion of PICC lines and use of audible Doppler (to distinguish venous and arterial blood supply) was attended by both nursing and medical staff. A protocol for the use of the Doppler to aid in the insertion of PICC lines was developed from the material gathered in both educational sessions. A training video was also produced. Staff inserted PICC lines into patients using the newly developed protocol and knowledge gained from attending the training sessions.

Over a two-month period ten consecutive PICC lines were inserted into patients on the ambulatory care service. The data collected on these patients were compared with data collected on the previous ten consecutive PICC lines inserted before the project began.
The use of Doppler to assist in the insertion of PICC lines was very successful. Results show that in the project group:

- there were fewer failed attempts than in the control group;
- there were no infections compared with the control group (which had two); and
- there was a 36 per cent saving in cost per patient, due to the lower number of failed attempts and the use of nursing rather than medical staff.

Results from a survey of the project group revealed that patients were satisfied with the entire process and associated little pain with the procedure.

What worked best?

- **Benefits of Doppler** — These included the ability to distinguish between arterial and venous blood flow; identification of a suitable vein for cannulation; avoiding arterial cannulation; reduced failed cannulation attempts; reduced anxiety level of the patient; versatility of the machine due to its mobile nature.

- **Increasing skill levels of staff** — Providing registered nurses with the opportunity to increase their advanced cannulation skills has increased their job satisfaction. Patient waiting time has also decreased, as patients no longer need to wait until a medical officer is available to perform the procedure. If patients are happy with a service, this also helps to increase staff satisfaction.

- **Cost effectiveness** — Use of Doppler to guide insertions has the potential to save money, because more people can be treated at home (reducing length of stay in hospital), and because of decreased wastage of materials and time.

What could be done differently?

- **Research and evaluation** — Implement a well-designed clinical trial to include other types of venous cannulation (eg short intravenous cannula in the forearm and hand).

- **Target group** — Implement in high-risk patient groups (with poor veins) such as palliative, aged care and paediatric patients.

- **Visual and auditory Doppler** — The benefits of the auditory Doppler may be enhanced by visual feedback. The purchase of a visual Doppler machine would be recommended if funds were sufficient.

Lessons learned for others

- **Consider adapting the project locally** — The safe and efficient insertion of peripheral venous catheters depends on adequate training of a nurse or doctor. This project has proven that the use of a simple device can enhance safe and efficient insertion of catheters by trained individuals. Training of staff and the use of a simple device is transferable to any health setting where catheters are used. The technique could be introduced in every hospital in Australia. The only reservation remains that there is little level one or two evidence other than a clinical trial involving Doppler facilitated internal jugular venous cannulation.

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**Tools and resources**

- Literature review
- Protocol (work instruction)
- Instructional video
- Patient satisfaction survey

**Further information**

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Developing educational tools for clinical incident investigation

Enhancing clinical incident investigation by clinical managers — South West Health, Bunbury Network, WA

Educating clinicians and managers in the process of clinical incident investigation supports a systems approach to patient safety. This project combined a literature review and consumer consultation to inform the development of protocols and guidelines. Through workshops and the use of mentors, clinicians and managers were trained in the process of incident investigation, from summarising an incident through to making recommendations for organisational improvement.

The project began with an extensive literature review to determine existing best practice in clinical incident and adverse event investigation and issues of consumer involvement. Consumers who had either made complaints about quality of care or who had been involved in an incident were invited to attend a focus group.

Draft competencies were developed from the information gathered from these two processes and discussed with senior clinical managers to test their appropriateness and applicability. Policy and guidelines for clinical incident reporting, investigation and management were drafted.

A two-day training program was developed consisting of theory and workshops, supported by action learning sets (ALS). Each ALS had a mentor, who was a senior manager with either clinical or risk management experience. All clinical and senior managers working in acute care settings from all health disciplines were invited to attend. Funding to backfill positions was offered to those with a clinical caseload.

Twenty-six participants attended the workshops and participated in the ALS. Each ALS was provided with a scenario of a clinical adverse event and asked to investigate and report back on an incident and the process of investigation, including:

- a summary of the incident investigated;
- which investigation processes were used (eg interviews, record review etc) and why they were selected;
- the findings of the investigation;
- lessons learned from the incident that could improve patient safety and its application to the current organisation; and
- recommendations for improvement made to the organisation in which the incident occurred.

Following the second workshop there was an evaluation of participant reaction to the program and their perception of the extent of their development in relation to the competencies. Mentors were also asked to provide feedback about the ALS process. All participants were offered the opportunity to continue their learning with an allocated mentor. Ten of the 26 participants have requested this follow-up.

This program was run at one of the five Health Networks in the South West Area Health Service and will be rolled out across the area. One possibility is a “train the trainer” approach.

What worked best?

- Consumer consultation — This was extremely useful for gathering information specific to the organisation and ensured that feedback to participants was more meaningful.

- Funding participants to attend and combining theory with practical experience in multi disciplinary Action Learning Sets — The use of mentors and safety champions provided
senior support for the program. Also highlighted was the opportunity to learn and work collaboratively with other nurses, doctors, managers and allied health workers.

- **Input of participants** — The input of participants to the policies and guidelines for incident investigation was reviewed as part of the second workshop.

**What could be done differently?**

- **Focus on safety** — Establish prerequisites and condense the program to focus on safety culture and clinical incident investigation techniques and action planning.

- **Training and support for mentors** — Provide more training and support to mentors before the commencement of the program.

**Lessons learned for others**

- **Assess pressure for change** — Question why change is needed: it must be more than just a good idea. This program was linked to the implementation of the Australian Incident Monitoring System (AIMS) and development of a clinical risk management program.

- **Ensure strong leadership** — A high level of support from leaders within the organisation is another factor. This project enjoyed an exceptional level of support and commitment from senior staff members, which was evident in their contribution to development and attendance at the two-day workshop, as well as involvement as mentors or participants in the learning sets.

- **Ensure adequate funding** — Project funding was crucial to the success of the program. It helped to ensure availability of casual staff and the release of clinicians from day-to-day duties to focus on learning.

- **Sustain the capacity for change** — Sustaining the capacity for change is likely to be an issue, due to the time required for effective investigation. Factors which can support capacity include:
  - maintaining contact between clinicians/managers and their mentors;
  - understanding the resource implications of changes aimed at improving safety in practice and systems; and
  - making the necessary cultural shift: refocus investigations and take appropriate systems action rather than blame individuals — some quick wins can help here.

<table>
<thead>
<tr>
<th><strong>Tools and resources</strong></th>
<th><strong>Further information</strong></th>
</tr>
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</table>
| The competencies | Jill Porteous  
Project Officer Clinical Risk Management  
c/o Medical Services  
South West Health - Bunbury Network  
Tel: 97221497  
Fax: 97221006  
E-mail: jill.porteous@health.wa.gov.au |
| Policies and guidelines (second draft revised with the input of participants) |
| A reference list of readings given to participants before the first workshop |
Health professionals turn media-wise to educate on aggression
Communication for calm: escalation and de-escalation of potentially aggressive behaviour—Royal Hobart Hospital, Tasmania

Staff involvement in the production of educational resources allows for input and ownership as well as cost savings. In this project, hospital employees played roles in a professionally produced video, which will be used as part of a training program for nurses.

This project involved the production of a video using role-play presentations to explore typical scenarios that can lead to aggressive incidents. The video will be a component of the overall aggression management strategies of the Royal Hobart Hospital.

The video will be incorporated into an education day for nurses that will address aggression management issues in the acute hospital context but it also has potential for use in aggression management education for general hospital employees.

The video was developed for the Royal Hobart Hospital but has potential to be shared with other hospitals. It is specifically designed to be used:

- in a training program, designed to improve the communication and aggression management skills of staff in the acute care setting; and
- as a teaching tool, by a skilled facilitator with a sound knowledge of communications skills and aggression management.

The video presents six role-played scenarios, each of two to three minutes duration, and includes:

- a range of typical scenarios that may lead to aggressive incidents if inappropriately managed (these scenarios include patients, relatives, nurses, a physiotherapist and a medical orderly);
- multidisciplinary hospital employees in patient, relative and staff roles in clinical and non-clinical contexts; and
- positive and negative behaviours within the scenarios, designed to create discussion points within the education day.

The video used skilled multidisciplinary hospital employees and some voluntary external participants. Production was finalised by a professional production company.

What worked best?

- **Use of skilled hospital employees in making the video** — Staff familiarity with the realistic scenarios enabled them to role play effectively without significant scripting. The use of professional actors was beyond the project budget and may not have achieved the desired effect in a similar timeframe.

- **Judicious selection and briefing of a professional production company** — The individuals were able to grasp the concepts to be depicted in the video. Professional techniques enabled depiction of the scenes from various angles and recording of key prompts such as facial expressions and non-verbal behaviours.
Supporting those who work in the health system

• **A consultative approach to script development** — This included input from a skilled facilitator with a sound knowledge of communication skills and aggression management; unit clinical nurse managers; and clinical nurses and health professionals with experience in situations leading to aggressive incidences.

**What could be done differently?**

• **Develop support materials** — The project would be enhanced by inclusion of support/educational material such as facilitator guides and self-directed learning packages. This would enable use of the video in a larger number of contexts and in the absence of a facilitator with extensive knowledge, skill and expertise in aggression management;

• **Consult with experts** — Further consultation with professional/s experienced in script development and video media would enable greater refinement of the concepts to be portrayed;

• **Longer timeframe** — A longer project timeframe would enable greater planning with both the production company and volunteer actors and enable filming to be scheduled at times less disruptive to the normal life routines of volunteer actors.

**Lessons learned for others**

• **Consider national trends in the area when planning** — This project addresses issues that are not limited to the Royal Hobart Hospital. It has the potential to be implemented in aggression management education sessions in other organisations.

• **Ensure that scenarios presented are transferable to multiple contexts without diluting their relevance** — the scenarios in this video are set in the acute context however the principles are transferable.

• **Allow for new and evolving management strategies in the planning phase to prolong the “lifespan” of the video** — management strategies have purposefully not been detailed in the video. This allows the facilitator to incorporate new strategies into the discussion, and as a result it is anticipated that the video should have a relatively long lifespan.

### Tools and resources

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<tr>
<th>Video</th>
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<tr>
<td>Future plans include:</td>
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<tr>
<td>• adaptation of script material to enable its use as a support document in education sessions;</td>
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<tr>
<td>• launch of the video, including a preview by those involved in production and</td>
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<tr>
<td>• further development of the study day with the video’s incorporation.</td>
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### Further information

| Elizabeth Verrell |
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Guided decision-making

**Focusing on five high alert medications to improve patient safety**

*Development of standardised guidelines and education packages for high alert medications in an acute care setting — Royal Hobart Hospital, Tasmania*

Providing standardised guidelines and consumer education focusing on safety issues associated with high risk medications may help health care professionals to increase patient safety. This project used information from the medication-related incident database to identify high alert medications. Guidelines for health care professionals are being developed and patient education leaflets are currently being distributed to patients being discharged on high alert medications.

The Royal Hobart Hospital uses a database to record potential and actual medication-related incidents. To date there has been no formal analysis of the incidents to identify particular medications that are associated with serious events or with a high incidence of events.

The aim of the project was:

- to use the medication-related incident database to identify five drugs (high alert medications) that are associated with a high risk of serious adverse events/error; and
- to develop guidelines for these medications and education packages for health professionals and patients.

The pharmacy database was searched to identify most frequently recorded medications. A number of drugs were excluded from the project largely because guidelines have been recently developed or are under development, or major risk factors have been identified.

Five high alert medications were selected, based on the number of recorded incidents and severity of incidents. They included Tramadol, non-steroidal anti-inflammatory drugs (NSAIDs) and COX 2 inhibitors (CSIs), Amiodarone, Gentamicin, and serotonin specific receptor inhibitors (SSRIs). The pharmacy database revealed a range of problems associated with these medications, including interactions with other drugs, changes in dose due to renal impairment and adverse drug reactions.

An extensive literature review was undertaken on each drug to assess relevant safety issues and formulate guidelines on their safe use. These have been compiled in a booklet, planned for printing and distribution to all Resident Medical Officers and each ward.

Medication information leaflets for consumer/patient education were collated. General leaflets on NSAIDs/CSIs and SSRIs were developed by pharmacy staff. These are currently being distributed to outpatients and inpatients discharged on the high alert drugs.

The project has become an ongoing program and the methods developed in formulating these guidelines will be used for identifying and producing more educational packages.

**What worked best?**

- *Use of data* — Use of previously collected but unused data.
- *Improving skills* — Development of literature review skills among pharmacy staff for use in future packages.
- *Staff training* — Re-education of pharmacy staff on use of the database for recording potential and actual drug-related incidents.
What could be done differently?

- **Exploring other sources of data** — Use a hospital-wide database to identify high alert medications, rather than the pharmacy database.

- **Better evaluation** — Collect data before and after the education packages are released, to assess their impact on medical and nursing staff knowledge (this may still be done as a separate project, but time constraints did not allow analysis as part of this report).

- **Wider participation** — Involve a wider variety of hospital staff (nursing and medical) in developing the education package.

Lessons learned for others

- **Aim for sustainability** — The funding obtained from the Safety Innovations In Practice program enabled the initiation of a program for identifying and reviewing high alert medications at Royal Hobart Hospital. This program will be developed and expanded further using the methods formulated for the project.

### Tools and resources

A number of resources are planned for further development:

- booklets will be distributed to resident medical officers and wards;
- the drugs identified will be featured in the *Drug Bulletin* (one drug per edition) to consolidate the information contained in the booklet;
- posters to be produced and displayed on the wards of the hospital, visible to medical and nursing staff;
- discussion of the drugs as part of the Intern Training Program; and
- presentations to nursing staff via in-service training.

### Further information

Camille Boland and Sarah Herd
Royal Hobart Hospital
Tasmania

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**Making emergency departments safer for patients**

**Establishing clinical management protocols for the most common presenting symptoms to emergency departments — Western Sydney Area Health Service, NSW**

Availability of clinical management protocols for commonly presenting conditions increases consistency in approach across the organisation. In this project a protocol on chest pain management was developed through review of the literature, workshops of the staff working group and consultation with relevant stakeholders. An education package will support implementation of the protocol.

The project brought together a team of emergency department staff from the departments of the three hospitals (with emergency departments) in Western Sydney Area Health Service (WSAHS). A project officer was assigned, and a working group of interested staff brought together to assist with the project.

A priority list of commonly presenting symptoms to the emergency departments across WSAHS hospitals was developed, and the team agreed to develop protocols for the two most common presenting symptoms — chest pain and mental health management/self harm. The protocols were written one at a time, to allow development of a template for future protocols.
The protocol on chest pain management in the emergency department was the first to be developed. An extensive literature review was undertaken, followed by two workshops to develop the management protocol (flow chart), the related standing orders and the associated tools to assist preliminary diagnosis. The flow chart reflects the management of the person from triage to diagnosis. The group met regularly to fine-tune the protocol and related tools.

It was agreed that the management protocol, standing orders and associated tools needed to be part of the medical record, to make the decision-making process more transparent. The final product was then given to relevant stakeholders (ie staff, cardiologists).

It is critical that the protocol is implemented in a planned approach, with sufficient education to ensure its success. The success of the first protocol is particularly important, as it will set a precedent for more protocols. A part-time clinical project officer will be appointed to develop an educational package, and implement and evaluate the chest pain management protocol.

The group has begun developing the second management protocol. It is anticipated that the protocol will be ready following consultations and approval in August 2002.

**What worked best?**

- **Aiming for standardised protocols** — Recognition of the need for developing management protocols for common presenting symptoms.

- **External leadership** — The project was driven by an ‘outsider’ to the emergency departments

- **Efficiency of the process** — Regular and consistent scheduling of team meetings and responsibilities.

**What could be done differently?**

- **Commitment of resources** — Ensure that there is sufficient commitment of resources so that education and implementation can begin as soon as possible after the protocol has been finalised.

- **Look for ways to improve efficiency** — Run at least two groups simultaneously, if a number of protocols are to be produced.

- **Tighter timeframe** — Establish a tighter timeframe (acknowledging that this is difficult for busy clinicians).

**Lessons learned for others**

- **Develop education to assist implementation** — Development of the education package should begin at the stage of final drafting of the protocol, to assist the implementation phase.

- **Think about resources required for the project** — Be aware of the importance of resource commitment throughout the process of development and implementation.

- **Explore mechanisms for efficiency** — Explore options for concurrent processes if there is interest and enough people to be involved.

- **Anticipate the time the project will take** — Protocols take some time to develop and then get approved through various consultancy processes.

**Tools and resources**

- Chest Pain Emergency Department Protocol
- Medical record (draft) incorporating protocol.

**Further information**

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Standardising the process for documenting wounds

Risk assessment and prevention of skin breakdown in older patients — Caulfield General Medical Centre, Victoria

Standardisation of processes can assist staff in enhancing their capabilities and adding to the efficiency of the process as well as bringing benefits to patients. This project aimed to standardise the documentation of wounds in an aged care unit by using digital imagery. Staff involved in the project found that the new system reduced the time taken to document wounds, allowed for a greater capacity to monitor change over time and provided an easy reference for GP and community provider referral on discharge.

The need for the project was highlighted by the absence of a hospital-wide standardised process for documenting and assessing wounds and by the low compliance of staff with existing tools. Before this project, wounds were documented in a written format with descriptions of colour, size (measurements) and condition. This was time consuming and lacked reliability as the descriptions were often subjective. Monitoring the improvement or deterioration of a wound over time was also made more difficult using this non-visual descriptive format.

This project was developed to address these challenges in the acute aged care unit of Caulfield General Medical Centre. The aim was to enhance the existing documentation, assessment and monitoring capabilities of the multidisciplinary team within the unit. These techniques and principles had already been established in other areas of the hospital so that there was an existing level of expertise that could be called upon to assist with the project.

A digital format was introduced for documenting wounds, using a digital camera and a software package that allowed photographs taken of wounds to be stored in a database and printed off in hard copy to be included in the patient’s medical record. The digital image was also used to improve continuity of care post-discharge, through the provision of a hard or electronic image to the community service provider responsible for continuing wound care.

What worked best?

- **Using digital images to document wounds** — This reduced time spent by nursing staff completing the wound risk assessment tool. The visual record of the wound can be used to monitor the progress of the wound over time, enabling better evaluation of the efficacy of wound dressings and other therapeutic techniques. Once established, the digital camera and software were user-friendly and adopted well by the multidisciplinary team.

- **Knowledge of staff** — The project motivated the multidisciplinary team to explore all areas of wound care and raised awareness of the importance of wound assessment and monitoring. It also facilitated peer education and sharing of information and clinical expertise.

- **Impetus for the wound management committee** — The project enabled the existing wound management committee to incorporate opportunities for further improvements into future planning across the hospital. The work of this committee is probably the most important part of the project. Based on a site-wide wound prevalence survey, the committee is working to standardise approaches to wound management hospital-wide. In addition, a project is being developed with The Alfred (using US Institute for Healthcare breakthrough methodology) to identify patients coming to the site with wounds where preventive action may have been possible in the acute hospital.

- **Enhanced communication with external providers** — Feedback from community providers (Royal District Nursing Service, Podiatry outpatient wound clinics) confirmed that the visual images provided on discharge provided superior information to the written forms of
documentation. This gave better continuity in the provision of wound care from the hospital to the community.

**What could be done differently?**

- **IT support person from the inception of the project** — This would enable provision of expert assistance/advice in the purchase and implementation of hardware and software, and the integration of the new equipment into the existing hospital operating environment. The complexity of these issues became evident early on the project.

- **More information on privacy issues** — Having more information on the privacy issues associated with the storing and recording of digital images would enable better planning to address issues of consent, privacy and level of security required for the database.

- **Wider ownership** — Greater ownership at ward level would promote staff involvement and long-term sustainability.

**Lessons learned for others**

- **Consider adapting the project locally** — The system implemented as part of the project could be easily reproduced by large and smaller institutions. The AMWIS software used to produce the images and assist with documentation is a commercially available product (see Tools and resources below).

- **Organise IT support** — The main challenge is to secure good IT support to enable the initial set up of the operating environment. The computer equipment purchased as part of the project is readily available.

**Tools and resources**

- Further information about AMWIS can be obtained by contacting Dr. Nick Santamaria at The Alfred Hospital on 03 9276 3405.

**Further information**

Dr. Max Alexander, Director of Clinical Services
Caulfield General Medical Centre
260 Kooyong Road, Caulfield Vic 3162
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Email: M.Alexander@cgmc.org.au

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**Helping endoscopists to improve sedation techniques**

**Reducing oversedation in endoscopy patients — Royal North Shore Hospital, Sydney**

Guiding health care providers in improving their use of techniques can reduce the risk of procedural complications. This project used a combination of interventions — education, protocol development, recording of sedation reversal agents and physical status scores — to guide endoscopy sedation practice. The use of sedation reversal agents decreased within the timeframe of the project.

The use of sedation reversal agents, such as anexate, in patients undergoing endoscopy is considered by many to be an indirect measure of procedural complications, mostly due to oversedation. Local data collected at Royal North Shore Hospital in 2001 indicated that the Endoscopy unit was the greatest user of anexate within the hospital. Anecdotal evidence also suggested that anexate use in the Royal North Shore Endoscopy unit was higher than in other Endoscopy units in the Sydney area.

In order to reduce the use of anexate and improve the sedation techniques of endoscopists, a project team was formed comprising people with knowledge of the endoscopy process (gastroenterology, anaesthetics, nursing) and of safety and quality (quality assurance, clinical practice improvement). Baseline data were gathered on:
Supporting those who work in the health system

- anexate use in the endoscopy unit over the past 12 months (this was likely to be an underestimate because it had to rely on recording of anexate use by the endoscopist in their report of the procedure).

- the number of adverse events related to oversedation in endoscopy in the past five years.

From this information, it was decided that the project would aim to reduce the amount of anexate used in the endoscopy unit by 80 per cent over four months, using a number of interventions. A second aim was to have 100 per cent of patients assigned an American Society of Anaesthesiologists’ (ASA) classification of physical status score before their procedure.

Current guidelines for conscious sedation were obtained for Australia and New Zealand, the United States and the United Kingdom, and used as “best practice” reference material.

The team used a number of key quality tools to guide interventions. A flow chart was constructed which illustrated the process and a cause and effect diagram relating to oversedation was constructed. Following a multi-voting technique, a pareto chart was developed to indicate the areas in which the team believed that interventions would result in the greatest improvement. Possible interventions were implemented and evaluated using the PDSA cycle (Plan a change, Do it in a small test, Study its effects, Act on the results).

Interventions included education, protocol development, recording of anexate use, and recording of ASA scores. Recording scores was facilitated by desktop, wallet and poster reminders for visiting medical officers, and wall chart reminders in the endoscopy rooms.

At the time of reporting, anexate had been used only once in the previous seven weeks, down from an average of 1.08 times per week in the 12 months before the project started. It was found that giving patients less sedation, while ensuring that they do not experience great discomfort during the procedure, reduces the risks associated with sedation while maintaining patient satisfaction.

What worked best?

- Multidisciplinary team — Formation of a multidisciplinary project team facilitated analysis and improvement of several aspects of endoscopy sedation practice. It also highlighted the need for increased anaesthetic involvement in the unit (this has been forthcoming).

- Success of the interventions — The use of anexate decreased significantly, even within the short timeframe of the project.

- Benefits for patients — The average dose of midazolam given to patients decreased during the project. This was achieved without an increase in pain reports from patients.

What could be done differently?

- Considerations for involvement — The gastroenterologist who was initially on the project team had to withdraw due to over-commitment and was replaced — as a result, the project lost momentum. In future, the duration of the project will be explained to team members and their availability established before the project begins.

- Strength of leadership — Endoscopists failed to routinely record ASA scores for their patients, despite being given a package of tools to aid them in doing so. The project team lacked a “champion” who encouraged peers to record the score in an effort to improve patient safety. In future, such a person would be secured before the project starts.

- Use of more efficient data systems — Difficulty with existing data systems necessitated the design of ward data tracking methods which were labour and time intensive.
Lessons learned for others

- **Wider applicability** — The results of this project suggest that improvement in the technique of conscious sedation is achievable. The protocol for conscious sedation developed as part of this project could easily be implemented in other hospitals around the country.

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ishikawa diagram of the causes of oversedation in endoscopy</td>
<td>Liz Millar</td>
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<tr>
<td>Pareto chart of the causes of oversedation in endoscopy</td>
<td>Royal North Shore Hospital</td>
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<tr>
<td>American Society of Anaesthesiologist’s Classification of Physical Status (made into posters, desktop viewers and ID badge attachments).</td>
<td>Tel: (02) 99265665; Email: <a href="mailto:LAMillar@doh.health.nsw.gov.au">LAMillar@doh.health.nsw.gov.au</a></td>
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**Making medication resources available and accessible**

Improving availability and accessibility to medication resources — Bayside Health, Victoria

Availability of resources and standardised protocols and easy access to them can support health care providers in reducing errors. This project combined improvements to the availability of information about medications with review and standardisation of medication infusion protocols. As well as access to electronic resources, staff are now being provided with medication resource folders which include relevant guidelines and protocols.

Organisational, individual, team, task and environmental factors influence clinical practice and contribute to medication-related error. Coroner’s Case 1860/97 (2001) found that the existence of two different protocols was a contributing factor in a patient death involving potassium chloride. The Coroner recommended that ‘…authors of protocols ensure that inconsistency in protocols covering the same field is avoided and that the protocols are absolutely clear.’

To prevent medication incidents, medication-related information must be both accessible and available to health practitioners. Also, evidence-based literature strongly recommends that standardisation be used as an effective strategy in addressing systemic error.

To address these issues, Bayside Health is undertaking the following activities:

- improving accessibility and availability of medication-related resources (both paper and electronic media) to health care providers throughout Bayside Health; and
- developing standardised infusion concentration protocols.

**Medication-related resources**

Surveys revealed that medical staff and nurses experienced difficulty in accessing hardcopy and electronic medication resources (e.g., MIMS, drug protocols). This was partly due to the lengthy and complex process involved. Following consultation with Information Technology Services and clinical staff, the process was simplified considerably. Access to resources now occurs via two pathways:

- a web browser icon available with the patient clinical information application provides immediate access to all electronic resources (one-step process), or
- access via the Bayside Intranet *Home* page, then *Staff* page (two-step process).

A simple diagrammatic algorithm was developed to inform staff of simplified access to electronic medication resources. This educational tool was placed next to computer terminals
on all wards, and promoted during Medication Safety Awareness Week held in February 2002.
A post-implementation survey has identified that 100 per cent of medical staff and 98 per cent
of nursing staff respondents were aware of the changes implemented to improve access to
MIMS online. Access to hardcopy medication resources (MIMS) has also been improved by
centralising ordering processes.

Medication resources for inclusion into medication resource folders have been identified and
include medication administration and prescribing policies, anticoagulant guidelines,
standardised infusion concentrations, and dose calculation tables. Introduction of medication
resource folders throughout Bayside Health is in progress

**Standardising infusion concentrations**

A review of The Alfred Hospital Australian Incident Monitoring System (AIMS) data revealed
that 18 per cent of incidents reported were medication related, and that 31 per cent of these
were associated with infusion rate errors. For example, amiodarone was prescribed for 30mg/hr
delivery rate, but the infusion pump was inadvertently programmed for 30ml/hr (60mg/hr)
instead of 15ml/hr (30mg/hr).

Infusion protocols that existed for cardiac, diabetic, anticoagulant and analgesic drugs at The
Alfred were collected and reviewed to identify variation. Up to five different infusion
concentration protocols existed for many of these drugs. A medical staff survey revealed that
25 per cent of medical staff identified drug infusion protocols as being inconsistent across the
organisation. Non-standardised drug infusion concentration protocols contributed to many
infusion-related incidents.

Key stakeholders from relevant clinical specialty areas were involved in a consultative process
to develop standardised medication infusion protocols. Medical and nursing clinical and
administrative staff were involved in facilitating the process. Consensus has been achieved on
standardised infusion protocols for most of the drugs. Evaluation of compliance with the new
protocols will begin in July 2002.

**What worked best?**

- **Organisational commitment** — Articulation of medication safety as an organisational
  priority in the Bayside Health Strategic Plan 2001–2005. The creation of a sense of urgency
  throughout the organisation that medication safety is a priority, by using incident reports
  and Coroner reports to encourage discussion and action.

- **Strong leadership from the top** — Strong guiding coalition comprising executive support
  and leadership, and a dedicated multidisciplinary project team that met regularly.

- **Evidence-based strategies for change** — Using change strategies recommended in
  literature to reduce medication errors, such as reducing reliance on memory,
  standardisation, simplification, and improving accessibility to resources.

**What could be done differently?**

- **Increasing participation in the consensus process** — Medical/nursing and administrative
  staff were not always included in the consensus process. In future, both clinical and non-
  clinical health practitioners should be involved throughout. Although senior clinicians were
  involved in final consensus, they were not necessarily involved in the earlier stages. The
  process of achieving consensus may have been more efficient if this had occurred.

- **Clearer guidance on timeframe** — Establishing clear time guidelines for achieving final
  agreement on the standardised infusion concentrations
Lessons learned for others

- **Start by reviewing the literature** — These facilitate the identification of improvement strategies.
- **Demonstrate the need for change** — Use local data to establish a sense of urgency throughout the organisation, and to encourage staff to challenge the status quo.
- **Be realistic about the timeframe** — When developing time lines take into account unexpected obstacles to change.
- **Think about the project team** — A multidisciplinary project team is essential.
- **Involve all stakeholders** — Identify the expert clinical practitioners who the change will have an impact on and work with them to achieve a consensus on decisions.

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<tr>
<th>Tools and resources</th>
<th>Further information</th>
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<tr>
<td>MIMS Online educational tool</td>
<td>Dr Mark Lubliner,</td>
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<tr>
<td>Standardised infusion protocols</td>
<td>Assistant Director Medical Services</td>
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<td></td>
<td>The Alfred, Bayside Health</td>
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<tr>
<td></td>
<td>Commercial Road, Prahran VIC 3181</td>
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<td>Tel: (03) 9276 2706;</td>
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<td></td>
<td>Email: <a href="mailto:M.Lubliner@alfred.org.au">M.Lubliner@alfred.org.au</a></td>
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Helping staff decide how to move patients safely

**Port Kembla Manual Handling Flow Charts — Port Kembla Hospital, New South Wales**

Awareness of safe ways to carry out manual tasks helps to reduce the risk of injury to health care providers and patients. In this project, flow charts to assist in patient transfers were developed and staff trained in their use. Uptake of the use of the flow charts was high and the results encouraging.

Port Kembla Hospital Physiotherapy Department developed flow charts for three patient transfers (bed to chair, chair to stand and assisted walking). They were developed to help staff (physiotherapists, nurses, occupational therapists, wardsmen and doctors) make decisions about a patient’s mobility status, the amount of physical assistance provided and the patient’s environment, to ensure the task is completed safely (ie without injury to the patient or staff member). Using more than minimal assistance is considered to increase the risk of injury.

Project aims included: assessing the value of the flow charts as a staff training tool; consulting staff and patients; reducing manual handling injuries; and improving policies and procedures in manual handling.

Fifty-five staff from two rehabilitation wards at Port Kembla Hospital were trained in the use of the flow charts. Evaluation of the training program showed that most participants found the flow charts useful and intended to use them. Ninety-three per cent of the participants thought the flow charts would make them work more safely and 91 per cent thought that patients would be safer if the staff used the flow charts.

Over a period of six weeks, a sample of 266 patient transfers was assessed with a checklist. Overall, the flow charts were used in 97 per cent of bed to chair transfers, 92 per cent of chair to stand transfers and 82 per cent of walking transfers. However, in 35 per cent of the bed to chair transfers, 66 per cent of the chair to stand transfers and 49 per cent of the walking transfers, one or more of the items in the flow chart was missed.

There were improvements in the way that staff assisted patients for all the transfers, with fewer staff using more than ‘minimal assistance’. Staff also improved their hand placement when
Supporting those who work in the health system

assisting patients. Pulling patients up from under their arms, which was discouraged in the flow charts, fell from 14 per cent for bed to chair transfers in the first two weeks to 0 per cent in the last two weeks. Similar results were found for the other two types of transfer.

There was only one incident report filed during the project timeframe, compared with six incidents reported in the same two months last year. The flow charts have been implemented too short a time for them to be attributed as the cause for this decline. However, the results are encouraging. After they have been in use for 12 months, a conclusion regarding their impact on manual handling injuries may be made.

The flow charts appear to be a useful staff training tool, safely assisting dependent rehabilitation inpatients to transfer from bed to chair, to stand up from a chair and to walk. Most staff consider the flow charts to be useful in deciding how best to perform these transfers.

What worked best?

- Development of flow charts — The bed to chair transfer flow chart was the most valuable and was adhered to most closely by all staff.

- Combining interventions — The combination of consultation, didactic presentation, small group demonstration and practice plus checklist encouragement to use the flow charts has not only been a team building exercise but a successful step toward a safer workplace.

- Individual commitment — The research officer who completed the data collection, teaching, checklists and surveys was the main contributor to the project. With her knowledge of inpatient rehabilitation, positive communication style and dedication to the project it was a resounding success.

What could be done differently?

- Timing of surveys — Staff satisfaction surveys could be distributed to each staff member before and after the implementation instead of weekly.

- Better evaluation — Current transfer techniques could be assessed before implementing the flow chart training so that comparisons can be made.

- Longer timeframe to allow review — The timeframe for the project could be longer to allow follow-up reviews.

Lessons learned for others

- Comprehensive staff training — Crucial to this project was training all relevant staff. The more people were trained, the more transfers that could be monitored and assessed — 14 hours a week for two weeks were set aside to train 55 staff members.

- Acquire all necessary equipment — Before the project begins, ensure all equipment described in the flow charts are readily available (hoists, slings, slide sheets and Jony belts) and that the flow charts are enlarged and placed at every patient bed or in the transfer area to help staff remember the procedure.

- Implementation of flow charts — The flow charts could be implemented in hospitals, nursing homes and other health care facilities. The flow charts could be incorporated into staff orientation and annual development programs. The flow charts may also be helpful for carers of dependent people who live at home. Safety for carers and the dependent person may reduce hospitalisation and institutional length of stay.
Safety Innovations In Practice Program

- **Evaluate treatment outcomes** — Further research may focus on the impact of treatment outcomes when using minimal assistance, height adjustable equipment and Jony belts when assisting dependent patients.

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<tr>
<th>Tools and resources</th>
<th>Further information</th>
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<tr>
<td>• Checklist</td>
<td>Marnie Jones</td>
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<td>• Staff satisfaction and patient satisfaction surveys</td>
<td>Physiotherapy Department</td>
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<td>• Bed to chair flow chart, chair to stand flow chart, walking flow chart</td>
<td>Port Kembla Hospital</td>
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<td></td>
<td>PO Box 21, Warrawong, NSW, 2502</td>
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<td></td>
<td>Tel: (02) 4223 8210; Email: <a href="mailto:jonesm@iahs.nsw.gov.au">jonesm@iahs.nsw.gov.au</a></td>
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**Best practice pain relief options for women in labour**

**Ambulatory epidurals — Gladstone Health Service, Queensland (progress report)**

Gladstone Health Service District is integrating best-practice pain relief options for women in labour, specifically implementing ambulatory epidurals.

**Progress to date**

The project commenced February 2002. A Senior Medical Officer with previous experience performing ambulatory epidurals was nominated to conduct the project with the clinical assistance of a midwife and non-clinical support from the Quality Coordinator. The project is also supported by a specialist anaesthetist and a midwifery nursing team.

To the end of May 2002 the project has:

- provided inservice training ‘Mobilising with Epidurals’ attended by nine nursing and two medical staff;
- conducted a teleconference with the Director of Anaesthetics and obstetric nursing team (King Edward Memorial Hospital) attended by twelve nursing staff, three senior medical officers with anaesthetic privileges and an obstetrics diploma student. Medical staff commented that not only had they learned about ambulatory epidurals, but would make changes to their general anaesthetics as a result of the information gained;
- developed the tools required for implementation — consumer information pamphlet; self directed learning package; competency assessment and records; protocol; medical records proformas; patient satisfaction survey; evaluation checklist
- performed one low-dose epidural according to protocol.

The consumer information pamphlet and learning packages were implemented at the end of May 2002 and midwives are expected to achieve competency by the end of June 2002. All participants in the trial between June and August 2002 will be formally evaluated.

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<th>Further information</th>
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<tr>
<td>Dr Shauna Taylor</td>
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<tr>
<td>Gladstone Health Service District</td>
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<tr>
<td>Email. <a href="mailto:Shauna_Taylor@health.qld.gov.au">Shauna_Taylor@health.qld.gov.au</a></td>
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Communication

Assisting health professionals to deliver culturally sensitive care
Improving patient care through better use of interpreter services —
Calvary Health Care, ACT

Supporting health care professionals to communicate effectively with patients from different cultural backgrounds improves both the safety of patients and their ability to participate in their own care. In this project, a cultural awareness program was conducted for all levels of staff at the hospital. The program was supported by partnerships with relevant government agencies and by the use of practical resources.

This project was initiated by Calvary’s Cultural Diversity Committee in response to a number of factors, including: meeting ACT government guidelines for interpreter use; risk management; and, most importantly, providing equitable provision of health care information to all consumers regardless of their ethnic background.

The Committee worked in partnership with the ACT Office of Multicultural Affairs to conduct a cultural awareness program, based on an existing program which was adapted to meet the needs of hospital staff.

Five one-hour education sessions were conducted for 27 staff who volunteered to participate. All levels of staff participated, from administration officers to psychologists, nursing staff, physiotherapists and occupational therapists. Sessions included general multicultural issues, accessing and working with interpreters, culturally sensitive issues including death and dying, and how to impart this knowledge to each person’s work area. These sessions generated a great deal of discussion, with participants sharing their experiences about caring for patients of different ethnic origins, including indigenous issues.

This strategy was supported by resources to assist staff, including speaker phones for each clinical area, posters guiding staff on how to access interpreter services in the ACT, stickers on all clinical phones that highlighted that any phone is an interpreting tool and also had the appropriate contact details. Cultural dictionaries (from the Migrant Resource Centre) were provided to all clinical areas. Multilingual pain scales for all Patient Controlled Analgesia and epidural machines were produced. A pictorial resource called “Ward Words” was provided as a means of improving communication to non-English speaking clients as well as patients with expressive dysphasia or other communication problems.

An important strategy of this project was to ensure sustainability of the program. This was achieved by participants being asked to become members of the Cultural Diversity Committee. There is a commitment to conduct the training seminars twice a year.

What worked best?

- **Partnerships with other organisations** — Developing partnerships with government agencies such as the ACT Office of Multicultural Affairs, Migrant Health Centre (ACT Community Care) and the Migrant Resource Centre. All of these agencies have been very supportive in assisting Calvary to meet the project objectives.

- **Leadership from the top** — Support and recognition of the value of this project by the Hospital Executive. This enabled staff to be released from their work area to attend the cultural diversity education sessions. This also supported the draft policy relating to interpreter use.
• **Practical resources** — The ability to support the education with practical resources that will assist clinical staff in accessing appropriately qualified interpreters.

• **Ensuring sustainability** — The capacity of the project to be self-sustaining by inviting new members onto the committee.

**What could be done differently?**

• **Longer timeframe** — A longer time period to conduct the program: the tight deadline, combined with the delay in obtaining the grant funds, made the project rushed.

• **Organise the delivery of the program** — The structure of the delivery of the program could be organised better. It was difficult for staff to attend for one hour per week for five consecutive weeks. Ideally, a study day or half day would be better for staff.

• **More consumer involvement** — Inviting ethnic groups to speak to clinical staff on their experience of a hospital admission would have been valuable.

**Lessons learned for others**

• **Developing strong partnerships** — Working in partnership with other organisations has been the key to the success of this project.

• **Adapting the project to other settings** — This project would be easily adaptable to any health setting. Information will be given to The Canberra Hospital, with a view to them adopting a similar program. Copies of the resources have been distributed to ACT Health, Housing and Community Care and to the ACT Division of General Practitioners. The resources that were developed could be adapted for any health service within the ACT and may assist their staff in accessing qualified interpreters.

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<th>Tools and resources</th>
<th>Further information</th>
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<td>Posters and stickers about interpreter services</td>
<td>Jeff Brooks</td>
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<tr>
<td>Multilingual pain scales</td>
<td>Calvary Cultural Diversity Committee</td>
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<tr>
<td>Pictorial resource – ‘Ward Words’</td>
<td>Calvary Health Care ACT</td>
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<td>Email: <a href="mailto:jeff.brooks@calvary-act.com.au">jeff.brooks@calvary-act.com.au</a></td>
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**Identifying and communicating with hearing impaired patients**

**Improving communication for safety — Yarram and District Health Service, Victoria**

Processes for identifying patients with communication problems and for facilitating communication with these patients can support health professionals in outlining risks and procedures to patients and improving their participation in their own care. In this project, a procedure for early detection of hearing impairment was developed along with systems for facilitating communication. Staff educational requirements (both immediate and future) were identified.

To improve the safety and ability of patients to participate actively in their care, this project aimed to develop better systems and processes regarding communication problems, facilitate patients with communication problems to participate in care, improve patient safety through communication of risks and procedures, and enhance staff knowledge of communication issues and strategies.

It was recognised that covering all areas of communication impairment was beyond the means of the multidisciplinary project team group in the timeframe allocated. A communication profile indicated that hearing impairment was the largest area of potential communication breakdown and after consultation this became the focus for the project. The project team concentrated on determining appropriate resources, developing a procedure for early detection...
of those with hearing impairment (along with systems for facilitating communication) and identifying staff educational requirements (both immediate and future).

**What worked best?**

- **Collaborative and evidence-based approach** — The multidisciplinary project team ensured wide-ranging consideration of the types of communication deficits present at YDHS together with the potential safety implications caused by communication breakdown. The team also reviewed data resulting from an audit of admissions, ensuring that decisions about the focus of the project and allocation of resources were based on fact not anecdote.

- **Investigation of physical and educational resources** — Significant time and expertise were invested in determining available resources and educational opportunities. This resulted in increased use of staff expertise (e.g., the Speech Pathologist), engaging external expertise (e.g., Better Hearing Australia) and determining immediate priorities for physical resources (hearing loop with attachments).

- **Development of procedures** — A written procedure outlining processes and practices relating to the management of communication and safety was developed. The procedure outlines potential safety issues from communication breakdown, resources that might assist, and a procedure for aiding those with potential communication breakdown. The document was shown to ward staff at meetings and includes educational opportunities.

**What could be done differently?**

- **Integration with the incident reporting database** — Closer root cause analysis of the YDHS incident report database to establish the relationship between the types of incidents noted and communication involvement would have assisted decision-making about resource allocation. Integrating learning from the project with data from the incident reporting mechanism is an opportunity for the future.

- **Expansion of the project into the community** — Further representation of YDHS community services would have provided a holistic focus. Involvement of community representatives would also have assisted the process.

- **Expansion across the range of communication deficits** — The focus of the project was hearing impairment and although efforts were made to broaden the scope of the resources reviewed and procedures developed, there remains a need to further expand safety-related physical and educational resources across a broader range of communication needs.

**Lessons learned for others**

- **Acknowledge the problem** — Acknowledgement of the potential for communication impairment to have an effect on safety (along with a commitment to remediating identified areas) needs to come from across the organisation.

- **Develop a clear plan** — A clearly defined plan of action with goals, data collection requirements, timeframes and sustainability needs to be developed.

- **Identify budget and resources** — A clearly defined budget needs to be provided outlining the availability of human and physical resources. More efficient use of existing resources should be a priority.

- **Ensure leadership to drive the process** — A leader with the drive to improve this area, supported by a multidisciplinary team, needs to be identified and fostered.
A practical guide to working with the media

Managing the expectations of media and patients in relation to the publicity of complex health situations — The Royal Children's Hospital and Health Service District, Queensland

Practical guidance on communicating with the media can help senior managers and clinicians to manage media interest in a way that protects the psychological and emotional safety of patients. This project has developed a guide to prepare health professionals to respond appropriately to the media in complex health situations.

Patient safety goes beyond physical safety to include psychological and emotional safety. In many complex health care situations, much media interest is generated. If not managed appropriately, this interest can threaten the overall well being of patients and the credibility of the health system.

Many guidelines exist to assist in managing the media. This project focused on developing a document that provides practical advice for senior managers and clinicians in hospitals, to help them achieve a positive result from media communications for both patients and the hospital.

Methods for the project involved reviewing existing media guidelines and policies, identifying key issues to be included in the guide, sourcing appropriate case studies from around Queensland that could be used as examples, holding workshops to identify the most practical approaches to managing media interest, and circulating and focus testing the draft document. The project relied on multidisciplinary expertise related to the media from a variety of settings and sources.

The final guide is written from a clinical user perspective, and draws on actual lessons learned. These include a range of situations, such as:

- responding to media interest in a major medical event (eg separation of conjoined twins);
- managing the release of reports into government-initiated inquiries into hospitals; and
- promoting a positive or ‘good news’ story.

The guide aims to provide a practical guide that will help health executives and clinicians to be prepared when they need to manage the media, so they can protect patient safety and manage the expectations of their patients and the media.
Managing risk

Harnessing peer power to influence behaviour
Changing hand-washing behaviour in health care staff — Queen Elizabeth Hospital, Adelaide

Initiatives that combine the use of role models and champions with education and visual reminders can help staff to change behaviour that increases risks to patients. This project combined these methods to change hand-washing behaviour and thereby reduce the incidence of hospital-acquired infections in patients having hip replacements.

A literature review demonstrated that inadequate hand-washing practices by health care staff contribute to the incidence of hospital acquired infection. The project objective was to change hand-washing behaviour and reduce the rate of hospital acquired infection, particularly in total hip replacements, in order to reduce clinical risks and harm to patients and costs to the organisation.

The project strategies included:

- a literature search, and critical review, to identify relevant documentation;
- identification of best practice;
- gaining commitment and support for the project from all senior clinicians and Infection Control Department staff;
- developing and delivering an education program to health care staff;
- developing and distributing a resource package; and
- identifying and trialing an alternative method of hand cleansing.

Two separate issues had major influences on the project.

- Approximately six weeks after the start of the project, a patient with a totally resistant *Pseudomonas aeruginosa* wound infection was admitted to the intensive care unit from another institution. This necessitated the inclusion of all hospital staff in the project. Visual reminders were circulated throughout the hospital and hand-washing procedures developed and attached next to all hand basins. The rinsing of hands with an alcohol product was required following normal hand washing. The spread of the infective agent was limited to only two other patients and this occurred before the microbiological evidence of the infection became available. It was acknowledged that the hand-washing project contributed to this positive outcome.

- Although the literature strongly advocates the use of alcohol-based hand gel, its availability in Australia is limited. The project aimed to use a product that did not include any other anti-microbial agents and that included a moisturising solution to ensure minimal damage to the hands of health care staff. The trial was deferred until a suitable product was available. The literature suggests that an alcohol-based hand gel with less than 80 per cent ethanol is not effective. Even newly launched Australian products contain no more than 61.5 per cent ethanol, so the search continues.

The infection rate in elective total hip replacements was the main focus of the project due to an increased incidence of hospital acquired infection in that area. A number of other strategies were also implemented including limiting traffic in the operating theatres and ensuring that theatre attire was not worn outside the operating theatres complex. There were no infections in hip replacement patients from September 2001 to February 2002 and the trend rate reduced to
2 per cent (NNIS Benchmark 2 per cent). Reports from nursing and medical staff indicate that from their observations and actions, hand-washing behaviour has been changed.

This project could be easily transferred to other institutions due to its simplicity and the resources developed.

**What worked best?**

- **Appointing role models and champions** — This was a key element of the project and was used to gain support of senior staff. Senior staff members were asked to become "role models" for their staff, especially during ward rounds, which are known for particularly poor hand-washing practice. Clinical Nurse Managers became the "hand-washing champions" and their continual reinforcement to all staff was most effective.

- **Giving all staff "permission to remind those who forget"** — This aimed to overcome a traditional reluctance among health care workers to appear critical of fellow workers’ behaviour. Numerous staff, particularly nurses, reported adopting the strategy and despite some negative feedback, they persisted.

- **Visual reminders** — These were circulated by the Infection Control Department and made an impact on staff due to positioning at various unusual sites (eg in staff bathrooms, elevators and stairwells).

**What could be done differently?**

- **Improve surveillance of staff behaviour** — Original project planning included surveillance of staff behaviour but this proved difficult, except via anecdotal evidence. In lieu of data, literature on hand-washing compliance was applied to staff behaviour.

- **Better evaluation** — Staff questionnaires before and after “product introduction” will provide more information during a planned trial of the alcohol-based hand gel.

**Lessons learned for others**

- **Gain high level support and commitment** — For example among directorate and senior staff.

- **Ongoing education** — Especially for new staff, such as intern and registrar changeover and commencement of graduate nurses. The resource folders provide an opportunity to deliver the message to relieving or nursing agency staff.

- **Use a multi-modal approach to delivering the message** — The visual reminders reinforced the education sessions. Placement of a hand-washing procedure next to each hand basin made the message difficult to ignore.

**Tools and resources**

- resource folders;
- visual reminders; and
- hand-washing procedures.

**Further information**

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Supporting those who work in the health system

Spreading the word not the germs

Developing educational and motivational resources for staff in acute care settings, to prevent infection and promote responsible antimicrobial prescribing practices — Sir Charles Gairdner Hospital, Nedlands, WA

Educational and motivational resources can support health care professionals in reducing the risk of hospital acquired infections. This project developed and trialed a range of resources for informing and motivating staff and was evaluated through staff feedback and pharmacy audit of antimicrobials.

This project was initiated by the Infection Control and Nursing Research Departments, in response to comments from nurses that it would be helpful to have information and reminders about infection control displayed in the hospital. The aim was to develop and trial a range of educational resources for informing and motivating all staff about key infection control practices and responsible prescribing of antimicrobial agents. The project resulted in:

- design and production of eye-catching and informative infection control resources;
- distribution and display of infection control resources throughout the hospital; and
- evaluation of the impact of these resources from two perspectives:
  - staff awareness and feedback; and
  - pharmacy audit of the use of antimicrobials and appropriate management of a selected infection (bacterial pneumonia).

A graphic artist worked with the team to design a series of posters, mouse-pads and pocket cards displaying infection control and antibiotic prescribing information, appropriate for different groups of staff (patient and hospital service assistants, nurses and doctors). Some illustrations were deliberately graphic and provocative for greater impact.

Evaluation of the resources was planned as two separate stages: a survey of staff opinion about the material and an audit of cephalosporin usage before and three months after the implementation of the pocket cards for prescribing intravenous antibiotics. The baseline audit has been completed, with results for the three-month follow-up to be available in August 2002.

Ninety-three staff (mostly nurses but the group included other staff from 12 inpatient wards) responded to a brief face-to-face interview regarding posters and pocket cards. Respondents were assessed on their recall and comprehension of the three key messages displayed: hand washing, standard precautions and antimicrobial guidelines (doctors only). A majority of respondents recalled the hand-washing message and almost half mentioned standard precautions. An increased frequency of hand washing was reported as a result of seeing the posters displayed on the wards.

Most positive comments about the posters related to the presentation and graphics, the importance of the messages, clarity and eye-catching effect. Negative comments related to the style being too graphic or patronising. Additional anecdotal comments referred to some of the posters as unsuitable for the general public, resulting in the decision by some staff to locate the posters away from public areas.

A small number of staff provided feedback about the mouse-pads. The overall perception was that the amount of written information and colour scheme detracted from their effectiveness. Suggested improvements include use of brief “reminder” messages, with graphics and colour.

Doctors’ responses to the pocket cards containing guidelines for prescribing intravenous antibiotics included that the cards were useful and easy to understand, yet none reported having used them. This could be due to the fact that the cards were considered to be too large, needed more information or increased text size.
Safety Innovations In Practice Program

What worked best?

- Multidisciplinary collaboration — Involving a multidisciplinary team (nursing, medical and pharmacy)
- Professional design — Employing a graphic artist to work with the team.
- Method of evaluation — Use of face-to-face interviews for evaluation of resources.

What could be done differently?

- Longer timeframe — Have more time for the development and implementation of the resources before evaluation.
- Collaboration from the early phase — Involve staff from different areas of the hospital during the design phase. This would facilitate a sense of ownership and may improve uptake of resources, particularly in relation to the antibiotic guidelines.
- Improve the design of resources — Create more variety in posters (eg more colour) and assess their suitability for the public. Survey medical staff about the best way to provide information on antibiotic prescribing. Review the content and presentation of mouse-pads.

Lessons learned for others

- A computer disk is available for copying resources.

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<th>Tools and resources</th>
<th>Further information</th>
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| - A computer disk of resources including a pocket card and posters. | Dr. Sue Nikoletti  
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4 Redesigning systems

Many of the projects in SIIP Mark I involved some degree of system redesign. The projects in this chapter deal with major approaches to systems redesign including:

- streamlining processes, including a range of approaches to simplify and standardise how things are done or better coordinate care for patients; and
- managing risk, including rethinking patient induction and assisting patients at risk of self-harm.

A further category of projects highlights a major issue for safety and quality — medication safety. These projects examine aspects of storing, prescribing, dispensing and administering medication to improve patient outcomes. A number explore new technologies and techniques aimed at improving safety.

A key feature of the projects is how to make systems work better for health professionals and consumers. The approaches taken to redesigning systems emphasise the human element of systems, rather than simply relying on protocols and data. Evidence of this can be seen in a project that developed then simulated the clinical application of a new device to reduce medication error in epidural administration. The clinical simulations demonstrated inventive ways that the users of the devices had of challenging the new design, and showed that a combination of systems to deter misuse (eg labelling and colour coding) is more likely to prevent error.

A further lesson, echoed elsewhere in the projects, is that multi-modal approaches are the best means of achieving system redesign and safer health care. Education, time management, skills development and improved technology are among the features of a Western Australia project to improve epidural practice.

Another notable issue to emerge is planning to better manage risk: a number of projects examine systems change to anticipate or prevent adverse events, including identifying and developing strategies to manage patients at risk of falls or pressure ulcers.

Lessons for safety innovation

**Streamlining processes**

- Knowledge of systems gathered from existing data and staff experience can provide the basis for effective systems redesign.
- Simple changes to systems can support a reduction in errors and staff workload as well as promote consistency of processes.
- Standardisation of processes or equipment is more likely to be successful if supported by review of existing knowledge and by training for staff.
- Standardised procedures can improve the quality of patient care by making responses to test results more consistent and ensuring timely follow-up.
- Simplifying a process is more likely to be successful if a number of strategies to change systems are used.
- Linkages between different areas of an organisation can help to ensure the continuity of processes.
- Changes to improve the safety of an organisation or process may involve changes to a number of existing systems and/or the introduction of new systems.
Managing risk

- A risk management approach can be used to provide a framework for changes to improve safety.
- Incorporation of risk assessment as part of the admission assessment process can help to reduce the likelihood of falls and pressure ulcers.
- Identifying patients at risk of injury and factors that increase the risk supports the development of safer systems.
- Preventive measures and a multidisciplinary approach to care that includes staff and consumer involvement can contribute to risk minimisation.
- For patients where first-line clinical management measures (such as increased supervision by staff and ‘bedcheck’ or wandering patient alarms) are not successful in reducing the risk of harm, preventive measures may be needed to ensure patient safety.
- Monitoring and improving environmental safety is an important part of an organisation's quality assurance and risk management activities.

Medication safety

- Medication safety is likely to be enhanced when there are several layers of intervention involved.
- Multidisciplinary teams focusing on an identified problem such as adverse drug events can provide valuable experience and leadership.
- Collaboration with stakeholders and consumers can inform the development of actions to enhance safety.
- Procedures for storing drugs in hospital can play a major role in whether or not adverse drug events occur and should be comprehensively assessed.
- Standardised medication ordering systems in hospitals can increase efficiency and reduce the potential for patients to be given double doses of medications or for doses to be missed altogether.
- Standardisation of the language and definitions used on medication charts helps to reduce duplicate administration of a medication to a patient.
- Patient risk can be reduced by improving the accuracy and accountability of prescribing.
- Systems redesign to improve an organisation’s medication safety needs to include consideration of all stages of the system of drug dispensing.

Streamlining processes

Incident analysis and systems redesign combine to achieve safer epidural practice

Epidural practice improvement program — Bunbury Regional Hospital, WA

Knowledge of systems gathered from existing data collection and staff experience can provide a basis for effective systems redesign. This project reviewed incident reports related to epidural therapy and gathered information directly from staff. Recommendations, competencies and a self-learning module were then developed to address the issues identified.

A review was undertaken of incidents of reported actual and potential adverse effects or events related to epidural therapy. The review began in September 2000 and is continuing. Information collected between September 2000 and July 2001 was collated and identified five main categories of adverse events: medication errors; observations; early cessation of therapy; premature commencement of therapy; and incomplete documentation.

Anecdotal comments from nursing staff were also collated to identify key issues in relation to actual and potential adverse events. Staffing issues and the use of pumps that were not
specifically designed as epidural/pain management pumps were identified as factors affecting the safety of practice. The following recommendations were developed to address these issues:

- reduce the number of staff required to be competent at highest level;
- provide staff with time to complete competency;
- review competency standards;
- review education process;
- limit the use of epidurals to certain units;
- roster appropriate skill mix;
- standard protocol to be introduced and adhered to, to alleviate the need for extra pain control measures;
- develop competencies at basic and advanced levels;
- develop assessor training for senior nurses;
- educate in use of specialised pain management pump; and
- review pump management policies and protocols.

What worked best?

- Existing documentation — Gathering of information on clinical incidents was relatively easy as this was an identified and well-documented risk.
- Multidisciplinary approach — The multidisciplinary approach to changing the process was extremely useful in developing a package which was aligned to and standardised the practices within the units.
- Funded participation in education — Funding participation in the education sessions will ensure that all the competencies are achieved and maintained. The education sessions are not completed at this stage, but should be by the end of June. The funded participation will allow for the assessors in each unit to have the skills and competencies to provide continuing education for the remaining staff.
- Introduction of new pumps — The trial of pumps is continuing and should be completed by the end of June, and at that time the competency related to management of pumps will be completed.
- Wider applicability — The South West Health Area has been restructured from five distinct health services into a single health network, with the policy, procedure and competency packages to be available for use throughout the health region.

What could be done differently?

- Dedicated project officer — The project officer role was shared between a number of people, depending on the stage of the project. For example, the actual development of the competency required both the use of the Acute Pain Service Nurses and the Staff Development team at different points. In hindsight, it would have been better to dedicate one person to the role.
- Narrower focus — The project had a very broad scope, which could have been more focussed given the timeframe.
- Longer timeframe — Provide more time for training and development.
Lessons learned for others

- **Consider adapting the project locally** — The approach to training is one of self-directed learning packages with a practical component. The assessor training provides senior nurses with the skills to assess competency at the unit level.

- **Build on existing systems** — A commitment to training and risk management from organisations is needed to drive such projects. This improvement program can be linked with the newly developed clinical risk programs in this hospital and the AIMS system currently being rolled out throughout the state.

- **Support staff training** — By supporting the implementation of programs such as this with funding and support for staff to attend training, a risk management culture is being supported.

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<th>Tools and resources</th>
<th>Further information</th>
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<td>The competencies, both written and practical</td>
<td>Catherine Scott</td>
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<td>The reviewed policy</td>
<td>Acting Coordinator of Nursing</td>
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<td>The self directed learning package</td>
<td>South West Health</td>
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<td>Readings</td>
<td>Bunbury Regional Hospital</td>
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Taking the guesswork out of pathology labels

Pathology specimen labelling — The Canberra Hospital, ACT

Simple changes to systems can support a reduction in errors and staff workload as well as promote consistency of processes. This project aimed to develop and evaluate a system for generating and using printed labels for pathology specimen containers. Feedback indicates that the system is seen as a positive development, with significant benefits for patient outcomes and efficiency.

This project was undertaken in response to comments from clinicians about problems associated with hand writing patient details onto pathology specimen containers. The new system involved the use of pre-printed sticky labels, generated from The Canberra Hospital’s patient record system (Caresys), for labelling specimen collection containers. To quantitatively measure the effect of the system, the project evaluated the time taken to collect and label blood specimens and the error rate (as measured by variance reports in The Canberra Hospital’s Pathology Department’s database Kestrel). The trial was conducted in a surgical ward with a large venesection workload. Written feedback was obtained from clinical, pathology and clerical staff.

Data collected after the introduction of pre-printed labels indicates that on average it took more time to use pre-printed labels than to hand write labels. Analysis and anecdotal evidence suggest that this is the result of the change process and was influenced by the complexity of the group of patients. There were also changes in the personnel performing the data collection, which may have contributed to the variance.

Staff in all areas remain enthusiastic about the potential for reducing labelling errors, the subsequent decrease in invasive procedures for patients, and reduction in workload for nursing and pathology staff.

The introduction of pre-printed sticky labels for specimen collection has a wider application throughout The Canberra Hospital, at a minimal cost of purchasing a printer drawer for already
existing ward area printers. This will promote consistency in specimen labelling and reduce the impact of incorrect labelling on both patients and staff.

**What worked best?**

- **Data collection process** — The simplicity of the data collection, entry and analysis process.
- **Using existing resources** — The use of in-house IT resources instead of outsourcing, which enhanced the IT skills of staff of The Canberra Hospital’s Information Management Group.
- **Staff response** — The most important benefit was the cooperation and enthusiasm of staff who all accepted the project as timely and valuable.

**What could be done differently?**

- **Wider data collection** — In hindsight, it would have been useful to collect data from a wider range of ward areas within The Canberra Hospital. The surgical ward was chosen because of the number of pathology specimens collected there. However, it closed down for a time during the trial period, which caused disruption and delays. For the sake of consistency, it would have been beneficial to run the before and after trial periods back to back as originally planned. Training and software development time prevented this.
- **Longer timeframe** — Time constraints meant that a mature process was being compared with an immature one. To make a realistic comparison, re-measurement should have occurred (and in fact is occurring) longer after the change.
- **Broader collaboration** — Although the changes to the labelling system were simple and widely accepted by clinical staff, they proved difficult to implement. This may have been mitigated by more collaboration with the Information Management Group in the development of the project. It does however provide an excellent example of the difficulties involved in managing the change process of what, superficially, appears to be a very minor part of a complex organisation.

**Lessons learned for others**

- **Consider adapting the project locally** — It is expected that similar systems could be introduced in other health care settings within the ACT, using the data collected at The Canberra Hospital and the software developed by Information Management Group. Staff and management of other health care settings would benefit from the experience and processes developed by The Canberra Hospital in introducing and implementing changes in specimen labelling processes.

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<tr>
<th><strong>Tools and resources</strong></th>
<th><strong>Further information</strong></th>
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| Software for generating identification labels from the patient record system. | Karen Oliver  
Coordinator, Surgical Services  
Clinical Health Improvement Program  
The Canberra Hospital  
PO Box 11, WODEN ACT 2606  
Tel: (02) 6244 2740;  
Email: karen.oliver@act.gov.au |
**Standardising emergency trolleys in Queensland**

**Reducing adverse patient outcomes by the standardisation of emergency trolleys in three rural/regional hospitals — Innisfail Health Service District, Queensland**

Standardisation of processes or equipment is more likely to be successful if supported by review of existing knowledge and by training for staff. This project investigated and analysed the standardisation of emergency trolleys throughout a health service district. A combination of audit of equipment, review of incident reports and existing literature, and training of staff has led to standardisation of process and equipment in line with best practice.

A multidisciplinary working party was formed, which was representative of all users and of the three hospitals involved (Innisfail, Babinda and Tully). The project involved:

- an audit of existing trolleys and associated equipment, followed by a gap analysis against the Northern Zone Minimum Equipment Guidelines in Health Technology. Consensus was reached on the minimum equipment required on trolleys to enable safe practice;
- a review of past incident forms, which revealed no incidents associated with the use of emergency trolleys;
- review of the Central Zone trials of trolley standardisation, including literature reviews and ARC guidelines, and adoption of their findings, including the recommendation for the Aurion CP/EM 2 and 3 emergency carts to be the standard trolleys for Queensland Health;
- staff training to ensure familiarisation with the proposed new trolley, as part of Advanced Cardiac Life Support education. Ward-based education sessions will be developed to occur when the fully stocked emergency trolleys are introduced, to ensure a smooth transition in the use of the equipment and trolleys; and
- purchase of equipment, including four new emergency trolleys.

The district has standardised emergency trolleys in four department areas by:

- simplifying emergency trolley checking procedures;
- avoiding wasting time searching an unfamiliar trolley in an emergency;
- providing consistency in emergency trolleys and equipment throughout the facility;
- developing networks with Central and Northern Zone project coordinators;
- ensuring consistency between the project and similar projects across the state;
- standardising emergency equipment in line with evidence-based best practice; and
- improving quality of care in a medical emergency, through Advanced Life Support education and training.

**What worked best?**

- **Access to existing knowledge** — The opportunity to network with other project coordinators via teleconference and establish links related to the project was of great assistance. Due to the tight timeframe, it was particularly beneficial to receive information from other coordinators about their experiences with standardising emergency trolleys. This prevented duplication of effort and enabled more efficient and effective use of resources.

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**Further information**

Lesley Harris  
Innisfail Health Service District
**Improving procedures for x-rays**

**Xray Xpress Project — Illawarra Area Health Service, NSW**

Standardised procedures can improve the quality of patient care by making responses to test results more consistent and ensuring timely follow-up. This project aimed to achieve consistent flagging of x-ray results requiring urgent medical attention and timely medical follow-up of clinically significant abnormal results. Standard operations procedures now guide the process from the initial request through to medical follow-up of the result and inclusion of the result in the patient’s medical record.

The focus of the Xray Xpress Project has been to improve the procedure at The Wollongong Hospital for reporting plain films as well as for flagging of urgent results and follow-up of significantly abnormal results.

The methodology for the project included:

- the identification of key stakeholders;
- brainstorming issues and determining cause and effect;
- flow charting the processes;
- prioritising leverage areas for improvement (pareto);
- establishing data sets for steps in the procedures;
- monitoring and evaluating performance; and
- use of the PDSA cycle methodology.

**What worked best?**

- *Involvement of stakeholders* — The project successfully identified the key stakeholders and involved them in the project through a process of regular two-way communication.

- *Rigorous manual data collection* — Considerable time and effort was put into establishing baseline data sets. These will enable ongoing measurement and evaluation.

- *Mapping the process* — Standard operations procedures have now been established which track the process from the initial request through to medical follow-up of the result to the filing of that result in the patient’s medical record.

**What could be done differently?**

- *Earlier opportunities for consumer participation* — Consumer participation was not achieved until midway through the project, notwithstanding efforts to involve consumers at the onset. Consumer participation should have been sought in the planning phase.

- *Early participation by GP representative* — A GP representative was unable to be identified for the project. Ideally, participation from a GP representative would have been sought in the planning phase of the project.

- *More detailed planning* — The project would have benefited from a detailed action plan, which outlined measured stages of progress of the project. Given that the project has separate focal points of inpatient, emergency patient and three separate service sites, it was difficult to achieve equitable distribution of project resources across these foci. An action plan would have assisted this to occur.
Lessons learned for others

- **Consider adapting the project for local use** — The project applied generic tools of quality improvement, which can be readily used in other settings and organisations. Given the short timeframe for the project, it is recognised that the project has achieved a preliminary scan only. The project framework provides the basis for an ongoing larger project, which can also focus on rational medical imaging test ordering.

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<th>Tools and resources</th>
<th>Further information</th>
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| The tools and resources developed include flow charts, a mapping process, emergency department report / follow-up, inpatient request and report process, pareto chart, cause and effect diagram, trend analysis and a schedule for film pick up. | Ceinwen Johnstone  
The Wollongong Hospital  
Level 2, Lawson House  
Crown Street, Wollongong 2500  
Ph: (02) 4222 5852 |

**Coordinating processes to make x-rays safer and better**

**Improving ordering of radiological investigations in the emergency department — Royal North Shore Hospital, Sydney**

Simplifying a process is more likely to be successful if a number of strategies to change systems are used. In this project, the combination of supporting staff in decision-making, stratifying test ordering and coordinating processes decreased the number of inappropriate radiological tests ordered in the emergency department.

Radiological tests are used routinely in the emergency department (ED) to aid patient diagnosis. With the reduction in the number of beds in Australian hospitals, EDs are under increasing pressure to make definitive diagnoses “at the door”, determining whether patients need to be admitted or whether they can be treated on an outpatient basis. Add to this the increasing fear of litigation, and it is not surprising that more and more diagnostic tests are being performed in the ED. Radiological tests are, however, not without risk to patients, as x-rays and CT scans subject patients to varying amounts of radiation. Mobile x-rays, which are performed without the protection of a sealed room, subject the patient and staff to radiation.

In order to improve the ordering of x-rays in the ED, a multidisciplinary team made up of an ED staff specialist, a radiologist, a clinical nurse educator from the ED, two radiographers and a member of the Clinical Practice Improvement unit was formed. Background data were collected on the number of different types of tests ordered by the ED in the past 12 months. From these data, specific tests which were believed to be over-ordered were targeted for intervention, such as mobile chest x-rays.

Mobile x-rays were being ordered rather than sending the patients to the Radiology Department because they were quicker and more convenient for ED staff to access — the average delay for obtaining a mobile chest x-ray was 12 minutes compared with 48 minutes for patients sent to the Radiology Department. Due to the poorer quality of mobile x-ray films and the exposure of staff to unnecessary radiation, an intervention was devised to improve the process for transfer to Radiology for chest x-rays. A new process was put in place which improves the coordination of the ED, Radiology Department and patient porters and which gives ED patients priority in the Radiology department.

Another intervention underway is the stratification of radiological test ordering, where tests are categorised according to their degree of overuse or lack of indications for ordering. Category 1 tests can be ordered by all doctors, Category 2 tests require the approval of an ED Registrar, Category 3 tests require the approval of an ED consultant or visiting medical officer and tests in Category 4 are those thought not appropriate in the ED, being more appropriate to be
ordered on an inpatient or outpatient basis. Indications for performing certain investigations are also being written. Both of these interventions will be accompanied by education about the new ordering system for all doctors, both junior and senior.

What worked best?

- Coordinating processes — Changing the processes involved in ordering chest x-rays and stratifying test ordering have proven to be more effective than education alone in improving ordering of tests by doctors. This has decreased the number of inappropriate tests (thereby decreasing unnecessary exposure to radiation and the risk of contrast reactions) and, in reducing the number of mobile chest x-rays, improved the quality of tests performed.

- Support of champions — This project has received great support from the most senior staff in the emergency, radiology and radiography departments. This has meant that interventions were easier to implement as these staff helped to overcome resistance to change in the “floor” staff.

- Multidisciplinary approach — Involvement of a multidisciplinary team facilitated process changes in several areas of ED and Radiology.

What could be done differently?

- More effective communication — The project had to be delayed due to inter-departmental politics between the Radiology and Emergency Departments. If the Clinical Practice Improvement Unit had been aware of this, the Unit could have worked around them and the project could have started earlier.

- More robust data tracking — Data tracking mechanisms in Radiology are cumbersome and inaccurate, making direct assessment of effectiveness of interventions difficult.

- Longer timeframe — The lead-time to design interventions suitable in this setting means that a 12-month, rather than a four-month, timeframe is more realistic.

Lessons learned for others

- Consider adapting the project locally — The strategies developed during this project could easily be used in other settings. Simple process redesign, stratification of test ordering and written guidelines are generic tools which can be used in all hospital emergency departments. All that is needed is a willingness to change systems in order to increase patient safety and improve patient care.

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<th>Tools and resources</th>
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<tr>
<td>Protocol for “A3 chests” (chest x-rays which would previously have been ordered as mobile chest x-rays).</td>
<td>Liz Millar</td>
</tr>
<tr>
<td>Stratification of radiological test ordering in the Emergency Department.</td>
<td>Tel: (02) 9926 5665;</td>
</tr>
<tr>
<td></td>
<td>Email: <a href="mailto:LAMillar@doh.health.nsw.gov.au">LAMillar@doh.health.nsw.gov.au</a></td>
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</table>
**Closer liaison between ward and pharmacy reduces medication error**

*An investigation of the effect on medication error reduction achieved by the use of a ward-based technician — The Royal Hobart Hospital, Tasmania*

Linkages between different areas of an organisation can help to ensure the continuity of processes. This project aimed to reduce medication errors by having a ward-based pharmacy technician fulfil some of the medication-related roles usually assigned to nursing staff. Patients received medications in a more efficient and timely manner and measurable improvement in missed doses was recorded.

At the Royal Hobart Hospital, drugs on ward medication trolleys are managed by nursing staff. The nurses are responsible for generating drug orders, restocking the drug trolley and removing out-of-date and no longer required drugs. Pharmacy staff, processing inpatient medication orders, are remote from the ward and have no knowledge of factors such as a patient requiring a dose urgently or the expected length of stay of a patient. A lack of continuity of staffing at both the ward and pharmacy level of medication supply currently exists. The result is a poor chain of supply, delays in medication availability and missed doses. Missed doses are a common but overlooked form of drug error, with potential for great impact on the patient.

Four weeks of control data were collected. During the five-week project trial, the pharmacy technician was responsible for management of inpatient medication dispensing and restocking of the drug trolleys from 8 am until noon each weekday (excluding public holidays).

Data collection and analysis included:

- **missed doses**: how many patients went without doses of their medication, and for what reason (collected using voluntary reporting from nursing staff);
- **prescription transit time through pharmacy**: the time taken between arrival and departure of all prescriptions for the ward (collected by pharmacy staff).
- ‘snap audits’ of three drug trolleys: the accuracy of the drugs stored in the trolley was compared to the current medication chart of the patients (nurses and the technician were unaware of what date or time these audits were to occur);
- **script problems**: recorded by pharmacy staff for inpatient scripts from the trial ward;
- **weekend script numbers**: if inpatient medication supply is managed well, only limited scripts for new items/patients should be sent to the pharmacy on weekends or public holidays (as very limited pharmacy staff are available on these days); and
- total cost of returned drugs credited to the trial ward.

**What worked best?**

- **Building relationships** — An excellent working relationship between the pharmacy technician and nurses on the ward was established.
- **Improvement in script transit times** — This indicated that patients were receiving medications in a more timely and efficient manner.
- **Reduction in the number of missed doses recorded by the nurses on the ward** — There was a measurable difference recorded in this particular drug error.

**What could be done differently?**

- **More training** — Increased training of the pharmacy and ward staff on collection of project data.
Redesigning systems

• **Longer timeframe** — The timeframe (five weeks), was insufficient to observe the full impact of the project, as it took two weeks to resolve initial problems and familiarise staff with the new system.

• **Project timing** — Conducting the project over the Easter holiday period, as public holidays possibly distorted some data. It would have been preferable to run the project at a time when public holidays were minimal.

**Lessons learned for others**

• **Consider adapting the project locally** — The model of medication supply used in this project is applicable to any setting where patient specific drugs are stored in individual drawers or containers in the patient care area. This model is of particular use in settings where the supply point for medications (ie imprest cupboard or pharmacy) is physically remote from the patient care area.

• **Provide support to staff** — Use pharmacy training and continuity of staffing to manage the medication supply process. However, appropriate training of staff on the medical ward and in the pharmacy can be difficult during the project, especially where there is a large amount of staff movement.

• **Support linkages** — Establish a direct link between pharmacy and ward, not necessarily at senior level.

• **Keep staff informed** — Distribute comprehensive information sheets and reminder notices in areas where altered procedures are undertaken.

• **Promote reporting** — Provide sufficient training and monitoring of reporting if time and resources allow.

**Further information**

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**Systems to improve operating theatre safety in a rural health service**

**Operating theatre enhancement project — Miles Health Service, Queensland**

Changes to improve the safety of an organisation or process may involve changes to a number of existing systems and/or the introduction of new systems. This project aimed to improve the safety and efficiency of an operating theatre service. This was achieved by providing guidance to staff through readily available policies, procedures and manuals; streamlining the existing patient booking system; and developing a pre-admission check-up system for patients.

This project has improved the safety and efficiency of the operating theatre service at Miles Health Service through:

• developing a centralised resource of policies and procedures available to nurses within Miles Health Service;

• developing an operating theatre resource manual with practical information for theatre staff (eg identification of commonly used instruments);
• developing a sterilising manual with guidelines, tools and information for sterilising department staff;
• developing and implementing a computerised theatre bookings system that tracks patients from their initial specialist outpatient appointment right through their theatre episode with Miles Health Service; and
• reviewing both outpatient and inpatient client flow and developing new flows for greater efficiency.

Outpatient review resulted in development of a package sent out to clients before their theatre episode. The package includes pre-operative instructions, including a “tick list” for the patient’s GP, who performs the pre-admission check-up and work-up if necessary. Inpatient review resulted in redevelopment of the recovery room and various minor procedures such as storage of blood products in the blood bank.

What worked best?

• Computerised theatre appointments booking system — This offered tangible progress, as the multiple books currently in use could be discarded, replaced by a system that offered more functionality than the books (eg waiting list printouts).

• Review and centralisation of policies and procedures — This collected multiple disparate information sources (books, folders, scraps of paper) into a central repository. The repository is computerised, allowing future editing of documents as necessary.

• Pre-admission check-up system — This includes a package that clients take with them through their theatre experience comprising: a letter informing them of their operation date and time, information specific to the procedure they will be undergoing, a checklist for to take to their pre-admission check-up with their GP or the outpatients clinic. The checklist allows the person performing the check-up to note whether or not various tests have been ordered and the results of each investigation, and to indicate if a test was not necessary. At the time of the operation, the consulting anaesthetist can see which tests have been performed, the results, and if a test has not been performed, whether this was intentional.

What could be done differently?

• Use of existing principles to support change — Change management principles should be used as much as possible.

• Stakeholder commitment — Only take on projects where all stakeholders support that project. Even one stakeholder (or stakeholder group) may be able to undermine the project.

• Wider research — Exhaustively research for material that is already available. In this project, more material came to light as the project progressed.

Lessons learned for others

• Consider adapting the project locally — Much of the output generated by this project could be transferred to other health services of similar size. Even procedures and protocols specific to Miles Health Service have been developed from generic tools, made locally appropriate. Further projects like this would be beneficial if undertaken at a district level, as there are many similar health services within a district. Such a project undertaken at an even higher level may result in output appropriate to major teaching hospitals. The value in this project is that it has been undertaken in an area with limited staff and resources.
## Managing risk

### Safer manual handling of the large dependent patient

**Safe manual handling of the large patient — Princess Alexandra Hospital and District Health Service, Queensland**

A risk management approach can be used to provide a framework for changes to improve safety. This project aimed to address patient handling issues related to safely caring for the large patient. Information was gathered on admissions of large patients, existing patient care equipment and clinical factors and a procedure for the management of the large patient developed.

A Large Patient Working Party was established in August 2001 with the objectives of developing a procedure and providing suitable equipment for the care of the large patient.

Two-part time project officers were seconded to assist the Working Party to:

- complete an extensive audit of existing patient care equipment in the hospital;
- conduct market research and equipment trials where available; and
- coordinate and develop a safe work procedure for the management of the large patient.

During the course of the project, several recurring issues became apparent. These include:

- limited data existed regarding the nature and frequency of large patient admissions;
- it was not possible to obtain accurate weights of large patients, which has an impact on patient care such as drug therapy or dialysis treatment;
- the safe working limit of existing equipment was unknown; and
- there was limited ‘off the shelf’ equipment for managing the large patient, so equipment could not be tested before purchase.

### What worked best?

- **Funding of project officers** — Funding was used for two part-time project officers to centrally coordinate and conduct a needs analysis, equipment audit and develop a district procedure for handling large patients

- **Multidisciplinary approach** — The Working Party consisted of a cross section of staff including nursing, allied health, operational support, building and maintenance, clinical products/purchasing and occupational health and safety. The multidisciplinary team was able to problem solve the patient handling issues and prioritise equipment needs and practices to best meet the needs of the patients and organisation.

- **Increased awareness** — The project was focused strongly on clinical issues and as a result increased staff awareness of unsafe practices and developing safer practices to benefit both staff and patients.

### Tools and resources

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
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<tr>
<td>Client pre-operative information package with checklist</td>
<td>Ian Nugent, Clinical Nurse Consultant Charleville Hospital PO Box 219 Charleville QLD 4470 Mobile phone: 0409 061 516</td>
</tr>
<tr>
<td>Operating theatre resource manual</td>
<td></td>
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<tr>
<td>Sterilising manual</td>
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</table>
What could be done differently?

- **Large patient database** — Establish a database to capture information on the admissions of large patients. The aim of the database is to facilitate problem solving at a local ward level; improve communication and sharing of information between clinical areas and identify re-occurring issues for the strategic management of large patients.

- **Workshops in the planning phase** — The project team recently presented at the Queensland Health Large Patient Workshop, which covered a wide range of issues including safe work procedures and equipment available. This forum provided invaluable assistance to the project team and other health facilities. While the Princess Alexandra Hospital is one of the first districts to actively investigate and implement a procedure of management of large patients, similar workshops early in a project planning phase could accelerate project activities for other health facilities.

- **Equipment procurement** — Modify the specification of equipment purchases to improve the quality of information provided by manufacturers and suppliers to include safe working limits prominently displayed on all equipment.

Lessons learned for others

- **Consider adapting the project locally** — The benefits and difficulties outlined above give a framework for improved implementation.

- **Establish a working party** — Set up a multidisciplinary working party with agreed terms of reference.

- **Define the scope of the project** — Define the large patient, decide whether the project will develop a procedure for the hospital or district etc.

- **Take a risk management approach** — This could be undertaken as outlined below.
  - **Identifying the hazards** — Identify the frequency of admission of large patients (eg a chart audit via clinical coders, ward survey or assessment of “large patient database”. Identify the clinical requirements for this population (ie clinical procedures, equipment and patient handling procedures required).
  - **Assessing the risks** — Conduct an equipment audit of existing patient care equipment. Assess clinical issues further to identify and assess the causative factors. This could include workshops or discussion forums at a local, district or state level.
  - **Evaluating the risk** — Balance the clinical needs with equipment available (eg can the organisation adequately manage the care for these patients?, what is required to improve care and facilitate active patient involvement?).
  - **Prioritising and implementing control measures** — Prioritise the equipment needed and source funding. Preference for standardised equipment to assist in bulk purchases and maintenance and services agreements. Develop safe work procedures to support job re-design and equipment provided. Communicate and educate staff

- **Monitoring and review**.

### Tools and resources

- Large Patient Procedure (draft)
- Equipment for Large Patients: Manufacturers and suppliers list
- Hospital Equipment Audit spread sheet
- Audit Tools (equipment audit, large patient database [draft])

### Further information

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A rethink of patient induction to identify and manage risk

Evaluation and redesign of nursing assessment and care planning documentation — St John of God Hospital, Geraldton, WA

Incorporation of risk assessment as part of the admission assessment process can help to reduce the likelihood of falls and pressure ulcers. This project aimed to enable early and comprehensive risk assessment and intervention to prevent or reduce the incidence of falls and pressure ulcers. New clinical practice guidelines to prevent adverse outcomes have standardised the response to risk while allowing for individualised care planning.

This project involved evaluation and redesign of nursing assessment and care planning documentation. Evaluation undertaken for the project highlighted a number of deficiencies including:

- nursing assessment usually focused on medical and surgical history, allergies and medications;
- care planning was often incomplete, poorly documented and seldom demonstrated patient involvement; and
- risk assessment with regard to falls in hospital and development of pressure ulcers was reactive rather than proactive.

In response to this evaluation, nursing assessment and care plan documentation was redesigned to emphasise patient and carer involvement and guide nursing and associated personnel on appropriate management.

Strategies aimed at ensuring appropriate response to calculated risk were developed. These were based on best practice management and included:

- identification of patients at risk and implementation of appropriate measures to prevent falls and development of pressure ulcers on admission;
- early identification of discharge needs and appropriate community referral to prevent readmission and ensure a safe home environment; and
- documentation that allows for evaluation of care in relation to timeframes for completion, expected outcomes and analysis of prevalence of unexpected or adverse outcomes.

As implementation of this project is in its initial phase, it is difficult to assess the ultimate impact on practice and outcome. Phases of the project yet to be implemented include:

- accompanying policies regarding the prevention of falls and pressure ulcers in hospitals;
- audit tools for prevalence of pressure ulcers;
- education regarding skin assessment and grading of pressure ulcers in accordance with the AWMA Clinical Practice Guidelines for the Prediction and Prevention of Pressure Ulcers; and
- health promotion education to standardise messages on falls reduction, smoking cessation, cervical screening, nutrition and physical activity. This education will be linked with state and national strategies and guidelines.

What worked best?

- *Changes to the focus of the assessment process* — The inclusion of health promotion in the nursing assessment process (eg the ‘Stay on your feet’ program, cardiovascular risk assessment, smoking cessation and cervical screening) focused patient/nurse conversation
and the assessment process on healthy lifestyles and promoting wellness and healing rather than illness and disease.

- **Simplification of the care planning process** — This ensured a comprehensive plan of care in consultation with the patient. A well-documented plan of care is expected to refine nursing medical record documentation.

- **Use of a small group of nursing staff, rather than a sole project officer** — Originally a resource decision, this proved an advantage. It provided ward based educators and resource personnel who had been involved in the project from inception to completion. This group had a clear and comprehensive knowledge of the initial evaluation, were involved with the formulation of the documentation, and were constantly promoting the value of the change.

**What could be done differently?**

- **Inclusion of methods to gain support** — Strategies to overcome the initial resistance to change may have overcome negative responses. Although minimal, negative responses to increased documentation and the time spent on completion, may have influenced the opinions of others. Education regarding the prevalence of falls, pressure ulcers, dehydration and malnutrition and its impact on length of stay, resources and overall patient outcome may have promoted risk assessment and documentation of risk minimisation strategies.

- **Wider consultation with clinicians** — Widespread medical consultation regarding the formulation of clinical practice guidelines should have been sought. The implementation of these guidelines must be a multidisciplinary decision requiring consideration of medical, psychological and social history. This ensures responses are made to recognised symptoms as well as their causative factors.

- **One-to-one education at ward level** — This would be preferable to pre-prepared education sessions. The completion of the documentation and its relevance was difficult to teach and promote until it was used and discussed in relation to everyday practice.

**Lessons learned for others**

- **Adopt a risk management approach** — Many organisations currently have risk minimisation schemes in place. Incorporation of risk assessment as part of the admission process ensures documented evidence of completion and accountability for practice.

- **Implement organisation-specific clinical practice guidelines** — The clinical practice guidelines must be organisation-specific and amended as adverse patient outcomes are evaluated and their effect on risk reduction calculated.

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**Further information**

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Helping acute care patients reduce their risk of falls
A collaborative approach to safe mobilisation — Mount Alexander Hospital, Castlemaine, Victoria

Identifying patients at risk of injury and factors that increase the risk supports the development of safer systems. This project aimed to reduce the risk of falls in patients with restricted mobility. Strategies used included the development of guidelines for health care workers to provide consistent education and advice to patients, a risk assessment form to identify patients at high risk of falling, and audit of environmental factors.

Falls prevention is an issue for all acute care services. This project aimed to address an important risk factor for falls within the acute care service — the problem of loss of muscle tone and balance that can occur when usual mobility is restricted by an acute event (eg a wound).

The aims of the project were to:
• reduce the falls risk of patients with restricted mobility at risk of reduced muscle strength and balance;
• develop and implement patient education to promote independence through the correct use of simple mechanical aids;
• promote maximum possible independence in patients while they are in hospital;
• research and evaluate suitable aids to safe mobility including modified bed accessories (eg bed sticks) and pressure relieving footwear; and
• promote safe exercise and strategies to maintain or increase lower limb muscle strength.

A multidisciplinary team (including staff development officer, occupational therapist and nurses with input from a podiatrist and a physiotherapist) worked to develop guidelines that could be used by health care workers to provide consistent education and advice to patients.

The process included:
• literature review to establish current evidence-based strategies for safe mobilisation;
• careful review of incident reports to determine any trends in falls occurrence found that the mental state of the patient was the highest indicator for involvement in a fall — this presented a challenge to the project, as additional education materials need to be developed for those with short-term memory loss;
• development and implementation of falls risk assessment forms to identify patients at high risk of falling;
• environmental audit to identify issues contributing to falls and develop management strategies for these;
• trial and evaluation of safe mobility aids, including liaison for the development of a bedstick to meet specifications;
• development of guidelines for gait analysis; and
• purchase of video camera to enhance patient education — patients can be shown current body dynamics and monitor their own progress (this part of the project has not yet been evaluated).

While the evaluation of this project is not yet complete, it appears that patients’ cognitive abilities are the chief indicator of falls risk within this facility. Education materials are
Safety Innovations In Practice Program

currently under development, and surveys of staff, patients, family/carers will be undertaken to evaluate understanding of mobility exercises and information provided.

What worked best?

- **Integration with existing policies and procedures** — Integration with manual handling/no lift policy and procedures — staff and patients have shown enhanced understanding of these over the course of this project.

- **Inclusion of assessment for mobility facilitation in guidelines for the purchase of patient related equipment** — There is now a more effective approach to decision-making about purchasing, with a consistent approach across disciplines and less duplication of effort.

- **Checklist development** — A checklist was developed to assist with nursing assessment and care planning for patients at high risk of falls, incorporated into admission assessment documentation. This has promoted a consistent approach to the advice and assistance provided to patients.

What could be done differently?

- **Clearer delineation of roles** — Specify roles of all staff when the project begins, not just roles of the project officer and project team, so that all staff have ownership of project.

- **Early development of data collection tool** — Develop electronic data collection tool before commencement to facilitate data analysis.

- **Planning for the change** — Make allowance for change management processes within the project timeframe as this type of project involves changes to both current work practice and documentation.

Lessons learned for others

- **Build on existing systems and documentation**.

- **Present data in a format readily understood by staff**.

- **Embed risk assessment into culture of organisation** — This could be through routine inclusion on appropriate committee and staff meeting agendas.

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Falls risk assessment forms</td>
<td>Pam Holland</td>
</tr>
<tr>
<td>Guidelines for gait analysis</td>
<td>Mt Alexander Hospital</td>
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Enhancing treatment of pressure ulcers

**Prevention and enhanced treatment of pressure ulcers to improve patient care in an acute hospital** — Sir Charles Gairdner Hospital, Nedlands, WA

Preventive measures and a multidisciplinary approach to care that includes staff and consumer involvement can contribute to risk minimisation. This project reviewed recently developed guidelines on pressure care and the effectiveness of the interventions provided. A multidisciplinary approach is being taken to pressure care, including assessment and monitoring. Staff knowledge and use of interventions and patient understanding of pressure care have both been improved.

This project was undertaken to review the efficacy of recently developed clinical practice guidelines for pressure care within Sir Charles Gairdner Hospital and to review the
effectiveness of the interventions provided. The target group included those identified as either having been admitted with, or having acquired a sacral pressure ulcer while in hospital. The project involved:

- identification of a patient with a sacral pressure ulcer who met the inclusion criteria (under 120kg, medically stable);
- application of established clinical practice guidelines;
- team liaison (wound management clinical nurse consultant, pressure care occupational therapy staff, ward staff: nurse, physiotherapist, medical staff);
- stage identification (including photograph and measurement) of the ulcer, and patient consent gained for inclusion in the program;
- assessment of pressure readings and posture in lying and sitting using Xsensor (pressure mapping tool);
- modification to existing pressure relieving devices (ie mattress or seat cushion) if required;
- provision of additional interventions (staff/patient/family/carer education, alternative seating, and/or cushioning) if required; and
- review of patient’s perceived comfort level.

**What worked best?**

- *Increased profile of services available on site* — A multidisciplinary team approach is now taken to pressure care, including assessment and monitoring. Knowledge and use of alternative cushions/mattresses has improved.
- *Education* — Patient/family/carer education has increased awareness through self monitoring to demonstrate level of knowledge regarding what care is required, how it affects pressure, and the possible long-term impact of this aspect of care. Additional education (formal and informal) was requested by staff on the wards involved.
- *Evaluation of pressure relieving devices* — Anatomical at-risk areas have been highlighted. Process and interventions have specified changes and recommendations for use of mattress and cushions available. The time taken to relieve existing pressures and improve reported comfort has been reduced.

**What could be done differently?**

- *Time management* — Adjust caseload allocation to reflect the increased time to establish and conduct the project: Key factors include coordination of patient and staff, organisation of equipment, completion of assessment/intervention/review process, and increased liaison with all staff/team involved in patient’s care.
- *Addressing of process issues* — This includes the organisation of the instrument / environments (eg space and facilities); greater knowledge of research; and an improved data collection sheet.
- *Patient and staff feedback* — The methodology specified a full re-assessment for the review. This was often found to be inappropriate, as it demanded numerous changes in the patient’s position, and therefore a potential impact on care. Often patient and staff feedback indicated the success of the recommendations and/or changes made to comfort and pressure relief.
Lessons learned for others

- **Consider adapting the project locally** — Project strategies could be implemented in similar acute care hospital scenarios. The guidelines could be broadened across the health care industry where there is potential for pressure ulcer development.

- **Adopt a multidisciplinary approach** — This allows a broader perspective of the wound and its impact on care in the given environment. A specialist team approach to treatment allows standardised clinical protocols and practices and enhances pressure management. Flexible structure and timeframes are needed to ensure patient safety, comfort and acceptance.

- **Choose appropriate methods** — This methodology cannot be applied universally to individuals with a sacral pressure ulcer. This study used a smaller sample size than anticipated (six patients) and the treatment of some patients was truncated due to changed medical status, transfer to another hospital or discharge.

- **Review protocols** — This project identified opportunities to improve the protocols in the management of sacral pressure ulcers. It also identified a need to further investigate the current protocol for the underweight patient group. As a result an improved service in seating and pressure management for patients is now offered.

Further information

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Patient sitters reduce the risk of self-harm in impulsive, confused patients

Patient sitters trial — Royal Hobart Hospital, Tasmania

For patients where first-line clinical management measures (such as increased supervision by staff and ‘bedcheck’ or wandering patient alarms) are not successful in reducing the risk of harm, preventive measures may be needed to ensure patient safety. In this project, extended care assistants were employed to continuously observe these patients and ensure prompt attention to any change in behaviour. The patient sitters were considered to have had a positive impact in reducing falls and self-harm from restraints.

Impulsive, confused patients are susceptible to self-harm, which increases their suffering as well as costs to the hospital in terms of treatment and extended length of stay. In this trial, patient sitters continuously observed these patients, ensuring prompt attention to any change in behaviour that might threaten patient safety.

The current nursing shortage, coupled with the high cost of nursing staff, inhibits use of nursing staff as patient sitters. Security guards and hospital attendants have no training in the communication needs or care of the confused, impulsive patient. Personal carers or extended care assistants are better suited to the role of patient sitters as they have some training and are able to assist the nursing staff with basic patient care, where appropriate, such as assisting the patient with their meals.

As a result of the project, a recommendation has been made that the hospital considers the feasibility of introducing patient sitters for impulsive and confused patients who are also disruptive and aggressive.
What worked best?

- **Cost effectiveness and patient sitter role** — The trial employed extended care attendants from an agency, with a flexible twenty-four hours, seven days per week on-call system. Employing extended care assistants appears to be the most suitable, cost-effective method for patient sitting.

- **Preventing patient accidental self harm** — There were no falls, no absconding or any other self-harm incidents when the sitter was present. The patients were notably less agitated after the introduction of patient sitters. Several aggressive incidents occurred while a patient sitter was present, but far fewer than before the introduction of patient sitters with the patients in question.

- **Positive feedback from staff surveys** — All the survey participants reported that the patients became “more settled”, “calmer” or “less agitated” when patient sitters were present. Active impulsive, confused patients are more likely to suffer injury from physical restraint and become more agitated by the presence of physical restraint.

What could be done differently?

- **Broader communication** — Improve communication with unions.

- **Clearer definition of roles** — Define the role of the patient sitter more thoroughly and ensure better communication of the role to the patient sitter and to the ward nursing staff.

- **Training of sitters** — Thorough orientation and education of patient sitters regarding hospital protocols and procedures for aggression and manual handling.

Lessons learned for others

- **Take a multilevel approach** — A combination of approaches is likely to be the best solution to ensuring the safety of impulsive confused patients.

- **Facilitate the process of a trial** — To streamline the process for setting up a trial of patient sitters, organisations should ensure:
  - management and union support and understanding;
  - strict adherence to patient eligibility criteria;
  - funding and timeline for the project are set from the start;
  - patient sitter role is clearly defined to patient sitters and to the ward nursing staff;
  - orientation and education of patient sitters regarding hospital protocols and procedures for aggression and manual handling; and
  - review and evaluation period to ensure sustainability of future patient sitter usage and investigation of alternatives.

Further information

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A look at the factors that contribute to falls in hospital

Falls prevention: identification of environmental risk factors — Royal Adelaide Hospital, SA

Monitoring and improving environmental safety is an important part of an organisation's quality assurance and risk management activities. This project aimed to identify environmental risk factors for falls. Strategies to minimise these risks were considered and an environmental assessment tool developed. A trial of the tool in a sample of patient care areas found that the assessment was quickly and easily administered, relevant and appropriate as an annual quality activity.

This project arose from previous work of the Royal Adelaide Hospital Falls Prevention Working Party. Wide consultation with various wards and departments throughout the Hospital was part of the project, which took place in three stages:

- **assessment of patient care areas** — a representative sample of patient care areas including ward areas, an outpatient department clinic and allied health department facilities. The sample included recently upgraded and older facilities, their patient populations and a range of equipment and environmental requirements. Falls risk issues included: floor surface (slip resistance, colour contrast), lighting, bathrooms and toilets (position of rails, call bells, equipment provided), seating (height, appropriateness), beds and bed areas (height, circulation space), general access and equipment;

- **discussions with clinicians in patient care areas** — focus groups using a representative sample of staff from patient care areas identified potential environmental risk factors and possible solutions. Themes common to those identified in the first stage emerged, leading to the compilation of assessment findings and recommendations for both immediate solutions and redevelopment considerations; and

- **development of environmental falls risk assessment tool** — based on the information generated from stages one and two of the project and designed for use by clinicians.

**What worked best?**

- **Staff involvement** — Staff discussion groups offered a breadth of perspectives on the issues.

- **Inclusion of staff with relevant expertise** — Appointment of an experienced occupational therapist to the project, with awareness of current falls risks and hospital environmental issues, was valuable.

- **Planning and support** — An allocated person with steering committee support and a structured program enabled efficient use of limited time.

**What could be done differently?**

- **Broader scope** — A broader project could be conducted to consider closely linked practice issues (eg use of restraint devices).

- **Wider collaboration** — A larger project could be conducted as a collaborative effort between health facilities.

- ** Longer timeframe** — A more flexible timeframe may have improved opportunities to consult with the wider staff working party and participant groups.

**Lessons learned for others**

- **Consider adapting the project locally** — The environmental assessment tool developed during this project could be applied to other health settings to identify and reduce risk factors for falls. The tool has been tailored to issues identified as specific to this organisation. While most issues are generic, the assessment may reflect the greater
prominence or frequency of occurrence at this hospital. Other users may encounter issues that have not been included.

• **Take a multilevel approach** — This strategy is best considered as one part of a multifaceted falls prevention program conducted by a multidisciplinary working group.

• **Broaden the focus** — Closely related issues highlighted by this work (ie clinical practice issues) should be pursued to complete the clinical assessment process of falls in the acute setting and allow strategic implementation of a comprehensive falls minimisation program.

<table>
<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
</tr>
</thead>
</table>
| **Environmental Falls Risk Assessment Tool** | **Dr Leslye Long**  
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**Medication safety**

**Minimising medication error by developing the right tools**

Medication safety is likely to be enhanced when there are several layers of intervention involved. This project developed an innovative system of equipment for epidural and intrathecal use. Testing of the equipment through clinical simulations showed that a combination of systems to deter misuse (eg labelling and colour coding) is more likely to prevent error.

**Development of a non-interchangeable coupling system for drug delivery — Women's and Children's Hospital, North Adelaide, SA**

In response to a patient incident within the Hospital, this project was designed to explore means of improving patient safety in the delivery of epidural and intrathecal drugs. The specific event involved the administration of a drug that was intended for intravenous (IV) use being injected epidurally. This occurred through a simple syringe swap when a staff member approached the patient with two identical syringes, one intended for IV use and the other an epidural drug. Preliminary review of the literature suggested that this form of drug error is not uncommon and, when expanded to include intrathecal drugs, is associated with severe patient morbidity and mortality. The project therefore aimed to review the literature and survey clinicians, develop an alternative coupling design and demonstrate the effectiveness of the alternative design.

A comprehensive analysis of the extent and nature of these type of adverse events including a literature review and a survey of a relevant professional body of clinicians with lead responsibility in this area (Fellows of the Australian and New Zealand College of Anaesthetists [ANZCA]) was carried out.

The literature review identified:

• 37 cases of inadvertent epidural administration of non-epidural drugs and generic patterns of drug errors (ie 98 per cent were potentially preventable through use of a non-interchangeable coupling); and

• specific strategies for avoiding such errors (eg distinctive colour-coding and labelling of epidural equipment and syringes).
Through the Survey, Fellows of ANZCA were asked to participate in an anonymous email-based survey and 263 responses indicated that:

- 15 per cent had direct first-hand experience of a drug error in which intravenous drugs had been administered epidurally or intrathecally and 10 per cent had experienced the converse;
- 42 per cent had indirect knowledge of such errors in their practice in the preceding 10 years;
- a range of possible safety initiatives were identified from the case reports and other adverse event literature. Responses indicate that specialist anaesthetists in Australia and New Zealand believe that safety can be improved principally through the use of Luer-incompatible equipment, with a significant role for staff education and also distinctive labelling and colour-coding of equipment.

The project developed a system of equipment for epidural and intrathecal use based around, but not limited to, the principle of a unique connector which would render it physically impossible to cross-over between the IV and regional routes. It was apparent that no such system currently exists. Prototypes were developed using CAD designs. It was intended to retain the ergonomic characteristics of the familiar Luer system but achieve sufficient incompatibility.

Clinical simulations of everyday clinical tasks of epidural and spinal drug administration were then presented to a number of midwives and anaesthetists in a tertiary teaching hospital. These demonstrated that:

- the prototype syringe would not engage a standard IV Luer activated valve and drug injection was impossible;
- a standard Luer syringe could not engage any of the prototype couplings and drug injection was impossible without modifications — all subjects commented that the incompatibility of the two systems was immediately obvious; and
- the distinctive yellow plunger on the prototype syringe acted as an alerting signal.

Importantly, investigators and some subjects noted that drug errors were still possible with the prototype system if the wrong drug was drawn up into the respective syringes. This emphasised the importance of a multi-layered approach to safety (ie the distinctive colour and bonded labelling).

**What worked best?**

- *Specific application of theoretical principles in a real clinical setting* — Clinicians were able to conceive strategies for overcoming in-built equipment safety that the developers did not think of, however ridiculous they may appear (eg taking the plunger out of the prototype syringe and squirting drugs into it from a standard syringe).
- *Combining approaches* — Drug error safety is enhanced by a multi-layered approach (ie physical incompatibility of couplings alone does not eliminate all errors). Colour-coding and specific labels, such as ‘Not for IV Use’ are also needed.
- *Project approach* — The development of a physical ‘hands-on’ product was very effective at presenting the case for the viability of an alternative.

**What could be done differently?**

- *Other options* — Further exploration of options specifically to eliminate ‘wrong drug’ errors at the drawing up stage. Two options for exploration include have drug ampoules with a prototype coupling which is only accessible to the prototype syringe; and a flexible drawing-up cannula for prototype syringes.
• **Changes to the prototype** — The prototype syringe design should include a retaining flange that makes it impossible to withdraw the plunger.

• **Availability of materials** — The quality of material available at low cost from non-specialist medical product manufacturers created some difficulty in directly duplicating the real world. Prototypes of alternative syringes and couplings should be made in medical grade plastic.

**Lessons learned for others**

• **Provide for audit** — Have effective audit systems for identifying and dealing with this specific type of drug error at a local level.

• **Review labelling** — Implement distinctive labelling of syringes and lines for epidural use, including that no drugs shall be given into an epidural that does not have an appropriate label on the syringe.

• **Provide staff training** — Conduct regular staff education, both midwifery/nursing and medical, about the frequency and potential seriousness of these type of drug errors and the need for safety measures.

• **Achieve wider acceptance** — The project established the principle of an alternative system for epidural and spinal drug administration incorporating a Luer-incompatible coupling. This project may be used as part of a body of evidence to achieve wider scale acceptance, which necessarily will involve regulatory bodies and medical product manufacturers and drug suppliers.

**Tools and resources**

- Prototypes

**Further information**

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**Safer use of opioids for cancer patients in acute care**

**Multidisciplinary error minimisation strategy for prescribing, dispensing and administering opioids in the acute care setting** — Peter MacCallum Cancer Institute, Victoria

Multidisciplinary teams focussing on an identified problem such as adverse drug events can provide valuable experience and leadership. This project aimed to reduce the incidence of adverse drug events and medication errors from opioids, through a multidisciplinary education and near-miss strategy. The program provided an opportunity for nursing and pharmacy staff to obtain a better understanding of issues relevant to each discipline.

Opiate analgesics are an important drug group in the treatment of cancer patients — approximately 45 per cent of patients at Peter MacCallum Cancer Institute receive opiate medication. In addition, over recent years there has been a virtual ‘explosion’ in the number of opiates available, increasing from 27 products in 1998 to over 60 today. Approximately one third of reported incidents relate to opiate medications. Administration errors (the most common cause of errors relating to opioids) often result from incomplete knowledge about the differences between medication dose forms, especially among junior and agency nursing staff.
The project aimed to reduce the incidence of adverse drug events and medication errors through:

- formation of a multidisciplinary adverse event team;
- development of an education program focusing on problems associated with opiate medication; and
- implementation of a “near-miss” identification strategy for opioids based on a current program for dispensing accuracy developed and running within the Institute.

**What worked best?**

- **Collaborative and multidisciplinary approach** — Under the auspices of quality committees within the Institute, a multidisciplinary team was formed to develop the education program and support its dissemination throughout the Institute. A multidisciplinary subcommittee was also formed to review the incident monitoring system throughout the Institute, and to consider the implementation of the AIMS system.

- **Focus on clinical issue of interest** — The selection of a relevant topic was critical to the success of the project.

- **Education program** — The educational program and tools provided summary material comparing opioid agents. The program was received extremely well, providing an excellent opportunity for nursing and pharmacy staff to obtain a better understanding of issues relevant to each discipline.

- **Supportive organisational culture** — The identification of ‘near-miss’ event reporting for opiates was supported as part of the incident monitoring program of the hospital. Discussions during the education program reinforced the benefit of reporting and discussing ‘near-miss’ event reporting for opiates, with a specific aim of reducing the ‘blame’ mentality of reporting. This will be further improved when an anonymous reporting system is implemented.

- **Experience of the team** — The multidisciplinary team members involved in the project provided a depth of experience and leadership in the field of pain management and opiate drug therapy. Team members included a pharmacist with significant experience in palliative care, the Institute’s Clinical Risk Manager, a palliative care specialist and nursing representatives from the Nursing Education department and practicing nurses from wards, including nurse unit managers. This ensured the program received a level of legitimacy and recognition throughout the Institute.

**What could be done differently?**

- **Longer timeframe** — The limited timeframe for project implementation (approximately three months) made it difficult to ensure complete rollout to all areas of the hospital. Coverage of ward and other patient treatment areas (taking into account that nursing staff work rotating shifts) requires significant co-ordination to allow maximum coverage. It is also difficult to measure outcomes of the project in such a short time. Benefits are expected in terms of increased identification of near-miss incidents, and fewer actual errors reaching patients as the understanding of this difficult drug group improves.

- **Greater number of staff available** — The short timeframe also meant that a suitably experienced pharmacist or nurse could not be employed to conduct the project. As a result it was not possible for one person to be dedicated to this project, limiting what could be achieved. This constraint meant that the broad focus for the initial project was narrowed to
cover key nursing issues, which were highlighted as the most significant problem area and also the area where goals were most readily achievable.

- **More opportunities for consumer participation** — Opportunities for involving patients and carers were limited, also largely due to time constraints.

### Lessons learned for others

- **Consider adapting the project locally** — The generic nature of multidisciplinary teams focusing on an identified problem area can be transferred to any setting. Opiates were identified as a drug group worthy of development. In other settings, practical solutions to common problems can be developed through the multidisciplinary focused approach of “near-miss” identification and educational tool development. A key strategy for the success of systems improvement processes is the support of executive level groups such as institutional quality and therapeutics advisory committees.

### Tools and resources

- PowerPoint presentation (education program)
- PowerPoint slides used to develop a product identification table for displaying in the wards

### Further information

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**Investigating admission-related prescribing errors**

**Improving admission-related medication safety — Epworth Hospital, Victoria**

Collaboration with stakeholders and consumers can inform the development of actions to enhance safety. This project used a multidisciplinary workshop and a consumer focus group to identify specific actions that would increase medication safety related to patient admission. This approach supports the organisation and consumers in their shared commitment to promoting medication safety.

Epworth Cardiac Unit is a busy 38 bed acute care unit. A 2001 internal hospital report on medication errors (or near misses) identified that this unit accounts for a high proportion of prescriptions per patient and a correspondingly higher incidence of prescribing error. Epworth’s internal report also demonstrated a similar pattern of medication errors to those described in the literature. It was believed that many of these errors were admission-related.

Methods used to increase medication safety related to patient admission included:

- a pre-intervention pharmacy audit, where a pharmacist counted and categorised medication errors and assessed whether the admission medication chart had contributed to them;
- a multidisciplinary workshop, to identify actions that participants believed would increase admission-related medication safety in the acute cardiac unit;
- a consumer focus group of 17 past cardiac patients, which confirmed previously identified consumer concerns about medication safety and explored consumer ideas about how to increase safety in this area; and
- a post-intervention pharmacy audit to identify significant change (conducted in June 2002).

An estimated total of 222 prescriptions and 48 patient records were screened during the pre-intervention pharmacy audit. It was found that medication error per prescription was 12 per cent, medication admission form-related error per prescription was 3 per cent, and prescribing error per prescription was 9 per cent. Workshop participants agreed that most errors were
related to prescribing practices, with 25 per cent of these probably being related to the medication admission form.

Improvement actions identified were:

- to provide drug information (ie a MIMS) at each nurse station where doctors prescribed and to label the MIMS with a summary of the pharmacy support services that may be used;
- to revise the admission medication form, using consumer input, and encourage patients to complete the form before their admission;
- to develop a process audit tool to better understand the impact of admission processes on admission related prescribing practices; and
- to run a quiz, asking nurses to suggest ways to increase medication safety.

The Consumer Focus Group discussed their concerns about medication safety and made suggestions to revise the admission form so that consumers would be able to complete it themselves. The post-intervention audit results will be available in mid-2002.

The pre-intervention audit data communicated effectively to both consumer and stakeholder groups and facilitated collaboration by all parties in developing actions to enhance safety. Unfortunately the post intervention audit data was not available at the time of the report to evaluate the outcomes of the actions implemented.

What worked best?

- **Broad commitment** — There was a high degree of commitment of both consumers and stakeholders.
- **Use of existing strategies** — The stakeholders in the workshop found it easy to use the suggested safety strategies listed in the excerpt from *To Err is Human: Building a Safer Health System*, to evaluate the safety of Epworth’s medication practices. This was a lever in identifying actions for improvement.
- **Support of a champion** — The project benefited from the support of the medical champion.

What could be done differently?

- **Wider use of champions** — Use a medical champion as well as a doctor in a position of formal authority from the start.
- **Earlier clarification of the best statistical method with all stakeholders** — Changes made during the first audit resulted in an extension of the pre-test period.
- **Broader clinician involvement** — Find an effective strategy to broaden involvement of clinicians in identifying actions for improvement. The project’s quiz was disappointing.

Lessons learned for others

- **Adapt the project locally** — This project could be readily implemented in other acute care settings. The tools used to evaluate medication safety are simple and easily reproducible. The forms lend themselves to data management using a spreadsheet program (eg Excel).

<table>
<thead>
<tr>
<th><strong>Tools and resources</strong></th>
<th><strong>Further information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Pharmacy Interventions form</td>
<td>Ms Margo Sheahan</td>
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<tr>
<td>Medication process audit tool</td>
<td>Care Evaluation Coordinator</td>
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<td>Letter from the Epworth Forms Committee</td>
<td>Epworth Hospital</td>
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Storing medicines safely

A set of quality standards for medication storage in clinical areas in Australian hospitals — Westmead Hospital, Sydney

Procedures for storing drugs in hospital can play a major role in whether or not adverse drug events occur and should be comprehensively assessed. This project developed a set of criteria which can provide a measurable estimate of how error proof systems are for medication storage in clinical areas within a hospital. The criteria are not meant to be comparative measures, but to provide a means of self-assessment.

There are many opportunities for error in the process of selecting the correct drug, dose form, specific dose and route of administration. If the drug dose needs to be changed in some way (eg diluted) additional factors come into play. It is then a responsibility to ensure that each dose is given at the correct time to the correct patient. The complexity of drug therapy has increased as well, and each week new drugs are presented and new routes of administration emerge. Additionally, there is a changing population of hospital staff.

Criteria for assessing the safety of drug storage were developed in a workshop setting with participants from nursing, medicine and pharmacy. In very basic form, the criteria were taken to a range of hospitals in four Australian states where at least two clinical areas were visited and measurements taken. After each visit, the criteria were refined and modified. It is hoped that the final set becomes a tool which may be used to achieve some level of standardisation of practice throughout Australian hospitals.

Each criterion bears a numeric score assigning a weighting which provides a reflection of the criterion’s importance in terms of error prevention. It is suggested that criteria of no relevance to the institution are omitted (eg automated distribution, if not employed) and a percentage of the total applied to gain a realistic view of system performance.

More information about the criteria, as well as the spreadsheet and scoring system, can be obtained from Westmead Hospital.

What worked best?

- **Redesigning for safety** — This project has redesigned and simplified a system which has an impact on patient care in terms of efficiency and safety.

- **Measuring improvements** — It provides a means of demonstrating practical, realistic and achievable outcomes in which improvements can be measured.

- **Multidisciplinary approach** — It will encourage a multidisciplinary, team-based approach.

Lessons learned for others

- **Consider adapting the project locally** — The resultant kit will have broad applicability outside the hospitals surveyed.

### Tools and resources

- Set of quality standards for medication storage

### Further information

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Making sense of medication ordering in a big city hospital

Review of medication charts: an initiative of the Medication Safety Committee 2002 — Royal Children’s Hospital, Victoria

Standardised medication ordering systems in hospitals can increase efficiency and reduce the potential for patients to be given double doses of medications or for doses to be missed altogether. This project reviewed the existing medication ordering system and designed and trialed a new medication chart with the aim of maintaining patient safety and ensuring proper documentation.

A review of incidents reported to the Medication Safety Committee identified over 50 different forms for ordering and recording the administration of medications in different parts of the hospital. In response to this, the Committee reviewed all relevant charts used within the hospital and redesigned the medication ordering system to allow accurate and safe documentation of medications administered to patients — during an outpatient appointment, short stay or overnight admission. It is a further aim of the project to assist in the design and implementation of electronic prescribing and drug administration in the future.

The project involved:

- contact with stakeholders to identify specific needs within each area of the hospital
- contact with paediatric centres across Australia to inform them about the project, and request copies of charts for ordering medications and recording administration.
- a literature review to identify published information about safe prescribing and legal requirements for prescribing and recording administration.
- assessment of all charts used within the organisation according to safety and legal requirements
- review of a cross-section of patient histories for incidents involving use of multiple medication charts.

A new main medication chart was designed to include features identified in the literature to be important in maintaining good documentation and patient safety. These include a pharmaceutical management plan, an indication for prescribing, and a summary of the top five rules for prescribing.

The new chart was trialed on three wards and minor design changes made to improve ease of use. Implementation of the chart will be carried out over the next three months. Other action is being taken to tackle all areas of prescribing within the hospital.

What worked best?

- **Inclusion of guidelines on toxic drugs** — Complicated prescribing and administration regimens and guidelines on the administration of some toxic drugs have been developed as attachments to the form, enabling this information to be available in the context of the patient’s entire medication regimen. Feedback on the use of attachments has been very positive.

- **Standardisation of forms** — The forms used in the hospital to order medication and record administration have been reduced to a reasonable number.

- **Safer use of medication charts** — New features on the main medication chart enhance the safety of medication charts used within the hospital, and encourage safe prescribing and complete and accurate documentation of medication. This upholds the mandate of the Medication Safety Committee to reduce medication errors within the hospital.
What could be done differently?

- **Longer timeframe** — The three months allocated to the project were not adequate to complete all aspects, only allowing development of recommendations and development of a main medication chart for future implementation.

- **More education** — Staff education about the new charts and changes to the prescribing system will require the support of teaching physicians and authoritative figures within the hospital. Much more intensive and thorough education will be required that that given through the trial period.

- **Stronger leadership** — Although those involved in the project were very supportive, it is difficult to make widespread changes within a large organisation without an authoritative figure to influence senior staff and departments. Limited time was available for Medication Safety Committee members to provide this extra support. Time and energy needs to be allocated to tackle these issues.

Lessons learned for others

- **The issue of multiple forms is widespread** — Through contact made during the project, it became apparent that many paediatric centres across Australia use multiple medication charts. Many were unable to forward copies of their charts because they could not identify all the forms being used within their hospital.

- **Identify stakeholders and existing tools** – For this level of system redesign, it is essential to identify all possible forms in use and all the stakeholders to be consulted. It is important to dedicate time and funding to cover the costs of replacing old charts already printed, to run trial of the new charts and to provide education to all hospital staff.

### Tools and resources

- Evidence-based legal and safety requirements for medication ordering and administration
- Medication chart review
- New main medication chart

### Further information

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**Getting medication administration right through standardisation**

**Development of standard nomenclature for use on medication charts in Victorian Hospitals — Austin and Repatriation Medical Centre, Melbourne**

Standardisation of the language and definitions used on medication charts helps to reduce duplicate administration of a medication to a patient. This project aimed to develop standards for the nomenclature to be used on medication charts. It is anticipated that a final list will be published in the latter part of this year.

A frequent medication error is the duplicate and inadvertent administration of medication to a patient. A frequent cause of this duplication is confusion about nomenclature used on medication charts. For example, the order ‘gentamicin, 240 mg daily’ may result in administration of 240 mg of gentamicin at 10:00. However, if the dose is changed, a new order is likely to be written, e.g. ‘gentamicin 180 mg daily’. Confusion about the meaning of *daily* can then allow the second dose to be given on that same day.

Surveys were designed in which Victorian public hospitals were asked to provide copies of medication charts and complete a questionnaire regarding recommended or commonly used language within their institution. Data were collated with the intention of a multi-hospital
committee consisting of clinical pharmacologists, pharmacists and nurses, developing a consensus language. Before publication of the recommended language, feedback was also to be sought from the responding hospitals.

Medication charts from 107 Victorian hospitals were examined. Although 97 charts contained instructions for use, only 17 defined the nomenclature to be used in prescribing. These hospitals used an almost identical set of abbreviations. The times that the abbreviations referred to were specified on all 17 of these charts however there was little consensus between charts. The survey of language used for prescribing (as opposed to listed on the medication chart) revealed that most hospitals did not have a recommended list, that there were relatively few variations for the most commonly used instructions and that most hospitals were unable to identify abbreviations for some of the less frequently used instructions.

The survey results are now being communicated to the multidisciplinary committee for comment and it is anticipated that the final list will be published in the latter part of this year.

**What worked best?**

- **Building on existing resources** — Having already completed some of the groundwork by previously surveying respondents, rapport had been built up, and this helped in promoting responses to this request.
- **Developing networks** — Requesting information directly from pharmacists has allowed the establishment of an electronic network of clinicians interested in quality use of medicines.
- **Use of information technology** — Using the internet and electronic files to collect data facilitated data analysis

**What could be done differently?**

- **Longer timeframe** — A longer period of time for the project would allow longer for development of questionnaires, collation and analysis of data and seeking input from multiple clinicians, which takes weeks to months.
- **Less information sought from respondents** — The potential number of instructions that can be used on a medication chart is very large, however only a relatively small number are commonly used. Reducing the data requested may have increased the response rate.
- **More funding** — Like most research projects, the bulk of the costs associated with this project were for staff. Because of the small sum of money allocated for the project, the staff involved in this project had to fit it in around their regular work. This inevitably meant that the timeline for completion of this project slipped.

**Lessons learned for others**

- **Consider adapting the project locally** — This is an easy way to enhance safety and reduce cost. This project could be applied to more areas of drug therapy (eg medication chart formatting, procedures for drug administration, labelling of intravenous fluids etc). Once standards are agreed upon, they should be incorporated into undergraduate training programs for nursing, medical and pharmacy staff.

**Tools and resources**

- Email for questionnaire.

**Further information**

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Identifying prescribers to reduce medication error

Improving prescriber identification by redesigning prescribing process — The Royal Victorian Eye and Ear Hospital, Melbourne

Patient risk can be reduced by improving the accuracy and accountability of prescribing. This project aimed to develop and implement a prescribing identification number to be incorporated within the prescribing process. Anticipated benefits of the project include simplification of processes for pharmacists, improved patient safety and facilitated multidisciplinary communication and more accurate audit of prescribing patterns.

A recent pharmacy audit of prescribing at the Royal Victorian Eye and Ear Hospital (RVEEH) identified a high rate (64 per cent) of prescriptions with an unidentifiable prescriber. This poses risks to patient safety, shows poor accountability of prescribing, creates inefficiency and danger in dispensing, and prevents auditing of prescribing practices. Being able to reliably identify prescribers facilitates the safeguard mechanisms that the pharmacy uses to ensure safe dispensing.

At present there are multiple identification numbers used throughout the hospital to identify prescribers. These include the medical records, pharmacy, and finance areas.

The methodology used in this project included:

- modifying and amending the hospital finance database of contracted medical practitioners to also include Patient Information Management System (PIMS) number and employment status (this is the most reliable database of medical practitioners);
- linking the updated finance database to the pharmacy dispensing database, and to the health information database which is used for clinical coding;
- linking identification details for medical practitioners to the pharmacy dispensing system;
- archiving the old database in the pharmacy system to facilitate use of the new database of prescribers;
- redesigning and printing prescription forms to include space for a unique prescriber number;
- developing and implementing an education strategy and material to facilitate implementation of the redesigned prescribing process; and
- repeating a one-month audit of prescriptions for prescriber identification, and efficiency of the dispensing process.

The benefits of redesigning the prescribing process will be:

- simplifying the checking procedures that pharmacists employ when there are concerns about a prescription — questions about prescriptions can be readily checked with the prescriber rather than relying on the patient;
- increasing the proportion of prescriptions with an identifiable prescriber;
- facilitating multidisciplinary communication between pharmacists, medical practitioners, nurses, and patients;
- providing reliable and safe dispensing to patients;
- providing accurate and legal records, plus efficiency in following up queries, to the pharmacy;
• providing an improved checking mechanism for possible prescribing errors to medical staff; and
• improving the audit of prescribing patterns (eg antibiotic use in the context of emerging resistance) by accurately identifying prescribers.

What worked best?
• Integration of new systems with old — Integration of the Patient Information Management System number with the pharmacy database, enabling archiving of the previous database.
• Promoting accurate prescribing — Education of prescribers about the importance of accurate prescribing as a safety issue and quality/audit issue as well as education regarding the benefits of using a prescriber number on all prescriptions.
• Collaborative approach — Collaboration between the IT and pharmacy areas enabled daily automated upgrading of the pharmacy database, which resulted in the database being accurate and current.

What could be done differently?
• Improved records — Beginning the project with an accurate record of current hospital doctors.
• Need for additional codes — The Health Insurance Commission prescriber number is not available to overseas doctors working within the RVEEH. This resulted in having to develop a second code. As well, the Health Insurance Commission prescriber number is not suitable as the unique identifying code in the new RVEEH Patient Information Management software system requiring a second unique code to be created.

Lessons learned for others
• Consider adapting the project locally — The project could be implemented in other organisations, as changes to software could be utilised in the other hospitals using the Pharmacy Merlin software.

Tools and resources
• Prescription forms and labels including space to record unique prescriber number.

Further information
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Keeping individual medications by the patient’s bedside

Patient's individual medication project — Gympie District Health Service, Queensland

Systems redesign to improve an organisation’s medication safety needs to include consideration of all stages of the system of drug dispensing. This project aimed to reduce the volume of patient medication errors and to heighten patient’s awareness of and responsibility for their own medication safety through the implementation of a patient-centred medication dispensing model. Implementation of the model has involved changes to systems from admission through to discharge.

The existing system of routine drug dispensing from a medication trolley, stocked from a central ward supply, has well-recognised safety and efficiency problems including:
• diversion and distraction while doing medication rounds;
• large stock holding on the ward (medication cupboard and trolley) leading to wastage, limited security/control/accountability, and risk of medication selection error; and

• drug cupboards and trolleys can become overcrowded, making it difficult to select stock and monitor stock and expiry dates.

In addition, the medication error reporting system was inadequate in collecting data on the underlying causes of error, and there was limited opportunity to include patients or their carers in education about medication. A new approach to medication dispensing was developed by a multidisciplinary team, in consultation with key stakeholders reviewing the current system. Environmental changes included:

• the introduction of bedside storage for patients’ medications
• a review of the amount of stock holding of drugs on the wards;
• introduction of a medication action form that identifies the specifics of the error and allows for clearly defined areas for quality improvements; and
• reinvestment of saved time in education of patients about their medications.

As part of the project, changes have been made to the system at admission, during admission and on discharge.

• **On admission:** A patient assessment history form, developed for inclusion into clinical pathways, is completed. The form collects information about the patient’s medication history and their use of medication at home, which can be used to inform education and other assistance. Individual packs are transferred from the ward stock cupboard to the bedside medication cupboard by the nursing staff. Medications brought in by the patient are stored in the bedside cupboard.

• **During admission:** Medications are administered to patients from bedside lockers, providing the opportunity for informal education about medications. New items ordered are transferred from the stock cupboard to the bedside cupboard. An extensive medication history is gathered, so that patient education requirements can be determined. Future development of educational tools will include clearly defined outcomes.

• **On discharge:** The patient’s existing medications are used at discharge where appropriate. Further discharge medications are obtained from the pharmacy. Medications not required are returned to the stock cupboard on the ward. Patients’ discharge medications are well documented and explained to them by either the pharmacist or nursing staff.

What worked best?

• **Data collection** — The enhanced medication error reporting system has improved qualitative and quantitative data collection.

• **Improved efficiency** — Less time is taken by nursing staff to administer medication (highlighted by the nursing staff satisfaction survey). Use of bedside lockers rather than trolleys for medication storage was more efficient and allowed reinvestment of time to patient education.

• **Cost-effectiveness** — Expensive medication is flagged by the pharmacist with a “blue dot”, which alerts staff to ensure optimal use and/or return time to avoid wastage (this could not be evaluated in the three-month trial period)
What could be done differently?

- **Use of an imprest system on wards** — An imprest system for medication on wards, maintained by the pharmacist, and the ability to supply oral medications in smaller packs (5–10 days supply) for transfer to bedside lockers.

- **Increased staff hours available** — An increase in pharmacist’s hours (recognising that there is a national shortage of pharmacists).

- **Longer timeframe** — This would allow time to be spent on developing further tools for cognitive and psychological assessment for self-medication in the rehabilitation ward; encouraging patient self-sufficiency with medication practices; and formalising current practices for patient-injectable medications.

Lessons learned for others

- **Communication is vital for any project’s success** — Keeping the stakeholders (both direct and indirect) informed is made easier through regular communication. Newsletters and short discussions at change of shift for nurses have worked well.

- **Gain support from champions** — Enlist two supporters in each unit/ward to be key communicators and assist with implementation of the system.

- **The by products from any project are as valuable as the project itself** — Areas identified for future review and consultation are: current pharmacy ordering times and practices; earlier discharge notification by Medical Officer to ensure minimal impact on patients and Queensland Ambulance Service; and review of ward stock and rotation of medications.

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<tr>
<th>Tools and resources</th>
<th>Further information</th>
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</thead>
<tbody>
<tr>
<td>Patient Assessment History Form</td>
<td>Sally Carkeet, Project Officer</td>
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<td>Medication Action Form for reporting medication error</td>
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<td>Email: <a href="mailto:Sally_Carkeet@health.qld.gov.au">Sally_Carkeet@health.qld.gov.au</a></td>
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5 Improving data and information

The Council is taking forward national work on better use of data and information to support safer care. This will help health care professionals to improve systems at a clinical level, so that when adverse events and ‘close calls’ occur the information can be reported, analysed and learned from to address the problems.

A number of projects took up the challenge to examine existing data to support and educate staff or to improve patients’ outcomes in specific areas. Projects examined incident reporting and management systems to improve identification of adverse events, or explored existing data collections in order to learn from data and identify better practice.

A range of approaches to incident reporting is in evidence — for instance, in projects on incident reporting in a rural hospital in Victoria and on a system-wide approach involving pharmacists which is being adopted in the Northern Territory.

Different approaches to the same high risk areas are also evident. Data analysis in a Tasmanian hospital has yielded information on falls risk that will be used to develop interventions. Elsewhere in this compendium, systems redesign and risk management approaches are used to tackle the issue of preventing falls in the elderly.

Projects were distinguished by their willingness to go behind the surface data, to explore the anecdotal evidence as well as the statistics. Listening to and valuing patient and staff input occurred in several projects. This included exploring the gap between reported and actual incidence of aggression in one Western Australia health service, in order to develop the most useful and sensitive educational tools to assist health workers. Preparedness to critique and address the adequacy of existing approaches to data collection is reflected in a project conducted by the Royal North Shore Hospital, which sought post-discharge feedback from patients on complications following surgery.

Lessons for safety innovation

Data collection and incident reporting systems

- Patient feedback about complications is increasingly important — with shorter hospital stays, many post-operative complications occur after patients are discharged and may be missed by current data collection techniques.
- Review and improvement of incident reporting and feedback systems can be used to increase rates of reporting and assist good communication and risk management.
- For reporting of medication-related incidents and near misses, it is valuable to involve staff closest to the problem (eg pharmacists) in developing a method of reporting that is acceptable to them, yet consistent with the elements of the data collection system.
- Hospital morbidity data have the advantage of being routinely collected and appear to be useful in monitoring the incidence of adverse events causing patient harm.

Learning from data collection

- Performance indicators can be a useful tool for managers and clinicians to determine the efficiency, effectiveness and safety of the services being delivered.
- Retrospective review of medical records using a control group for comparison can provide insight into potential risks to the safety of patients.
- Monitoring processes to identify incidence rates and system issues can inform measures to reduce the incidence of adverse events and improve patient safety.
- Incident reports may not always represent actual events and additional methods (eg surveys) may be necessary to assess problems and evaluate local needs.
Data collection and incident reporting systems

Encouraging patient feedback about complications

Development of a system of patient self-reporting of post-operative complications following day only or overnight surgery — Division of Surgery, Royal North Shore Hospital, Sydney

Patient feedback about complications is increasingly important — with shorter hospital stays, many post-operative complications occur after patients are discharged and may be missed by current data collection techniques. This project developed a system for patient self-reporting of complications following discharge. Information collected was more accurate than that collected previously and patients were satisfied with the opportunity to provide feedback.

Over the last few years, there has been a shift towards shortened length of hospital stay, with most surgical patients treated as a day only or overnight stay. However, many hospital-associated complications (e.g., wound infections) do not occur until several days after the operation and are managed by the patient’s local doctor. The true incidence of these complications may well be missed with current data collection techniques.

This project developed a system for patient self-reporting of such incidents. One week after thyroid or parathyroid surgery, patients were sent a one page form and a reply-paid envelope. The form listed specific potential post-operative events (e.g., prolonged nausea, loss of appetite or vomiting, pain not relieved by analgesics, evidence of wound infection, restricted mobility or ability to return to normal activities).

To date, forms have been sent on a randomised basis to 58 consecutive patients and results compared with a further 58 patients who did not receive a form and could supply information about complications during the clinical follow-up at two weeks. More post-operative events have been identified in the group receiving the self-reporting form. The project will be continued until 100 patients are included in each group.

What worked best?

- **Good response rate** — The response rate for forms sent out to patients was pleasing (76 per cent).

- **Improved data collection** — An increased level of information in relation to complications was received.

- **Consumer involvement** — The comments received from patients expressed appreciation at being able to give direct feedback in a setting other than a follow-up consultation.

What could be done differently?

- **Widen the scope of the project** — Future projects could include all post-operative patients, not just day only and overnight patients.

- **Gather more information** — A wider range of post-operative issues could be included in the self-reporting form. Space could be provided on the form for patients to include feedback about the process.

Lessons learned for others

- **Consider wider applicability** — This process would be easy to implement across an organisation. Eventually, all post-operative patients in the Division of Surgery will be included.
• Encouraging patient feedback — There are significant advantages, not only in terms of increasing the accuracy of information collected in relation to the incidence of post-operative complications, but also in giving patients the opportunity to provide direct feedback about their post-operative course. The degree of satisfaction about the process, as expressed by patients, suggests that the ability to provide direct feedback may well reduce the incidence of complaints (and possibly eventual litigation) in relation to adverse outcomes.

**Tools and resources**

- Patient self-reporting form for post-operative complications

**Further information**

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**Improving medication incident reporting in a rural hospital**

_A review of medication incident/error reporting systems — Mansfield District Hospital, Victoria_

Review and improvement of incident reporting and feedback systems can be used to increase rates of reporting and assist good communication and risk management. This project reviewed existing medication-related incident and error reporting systems. A new incident report form was developed and results of an audit conducted after introduction of the form showed a 50 per cent increase in reporting of medication-related incidents/errors. Qualitative data from a survey highlighted areas for further improvement.

Low numbers of documented medication incidents prompted the organisation’s quality assurance committee to investigate the medication incident/error reporting systems at Mansfield District Hospital. The aim of the project was to determine the adequacy of existing systems and address any issues which had an impact on effective reporting procedures. A working group was established, consisting of the Director of Nursing, a Visiting Medical Officer, two Division 1 Registered Nurses, the Aged Care Manager and the Pharmacist.

The working group determined the methodology to be used in the project and decided on two main methods of investigation:

- a quantitative audit of medication-related incidents during the periods January–April 2001 and January–April 2002; and

- an anonymous survey of visiting medical officers (VMOs), nursing staff and PCAs (patient care assistants) to determine factors influencing reporting and actual levels of reporting.

The working group developed a new anonymous incident/error form which was implemented at the beginning of the 2002 audit period. Results of the audit demonstrated a 50 per cent increase in the reporting of medication incidents/errors compared with the same period in 2001. Initially, the working group felt that anonymous reporting might be a factor in the increased number of incidents/errors reported. The quantitative data support this hypothesis, but the results of the survey suggest this is not the case. The survey indicated that people are generally not afraid to report incidents, and that lack of reporting is often due to time constraints or forgetfulness.

Qualitative data from the survey also highlighted areas for improvement, particularly in relation to feedback to staff, clarity of orders, and the need to develop more appropriate mechanisms to correct serious problems as they occur. The new data will provide a useful
baseline for future monitoring of medication-related incidents/errors, with the aim of reducing
the number of occurrences through improved systems and work practices.

The following recommendations were made:

• distribute the report to VMOs with a memorandum about improved information on PRN
  (given as needed) medications;
• streamline the mechanism for processing incident/error forms to improve the feedback
  loop;
• discuss the report with relevant staff at departmental meetings, especially the lack of
  documentation of incidents/errors in the medical record;
• forward a copy of the report to the Board of Management for information; and
• monitor, analyse and evaluate medication-related incidents/errors on a quarterly basis and
  forward report to the Quality Assurance Committee as part of the organisation’s risk
  management program.

What worked best?
• Gathering baseline data — Baseline measurement has now been established for ongoing
  evaluation.
• Facilitating reporting — An improved reporting form for medication incidents/errors has
  been developed.
• Quality improvement — Areas for further improvement have been identified.

What could be done differently?
• Longer timeframe — More time could be allowed to collate, analyse and evaluate results.
• Better evaluation — A pre and post survey of staff would have been useful.
• More staff involvement — More involvement and input from staff into the project before it
  began would also have been beneficial.

Lessons learned for others
• Consider wider applicability — Although simple in nature, other organisations may find
  the tools used in this project useful when reviewing their own medication incident/error
  reporting systems.

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<tr>
<th>Tools and resources</th>
<th>Further information</th>
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<tr>
<td>Medication incident/error questionnaire</td>
<td>John J Eisner, Janene A Ridley</td>
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<td>New incident/error reporting form</td>
<td>Mansfield District Hospital</td>
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A Territory-wide system for involving clinical pharmacists in incident reporting

Medication incident recording in Northern Territory public hospitals — Department of Health and Community Services, NT

For reporting of medication-related incidents and near misses, it is valuable to involve staff closest to the problem (e.g., pharmacists) in developing a method of reporting that is acceptable to them, yet consistent with the elements of the data collection system. This project aimed to support pharmacists in the Northern Territory in collecting data on medication-related incidents consistent with the Australian Incident Monitoring System. Recommendations were made about a system designed to identify and modify factors that contribute to adverse drug events in hospitals.

Medication errors are a significant cause of adverse events in hospitals in the Northern Territory. However, it has been observed that most reports of medication error come from clinical staff other than pharmacists. The role of clinical pharmacists is to contribute to optimum drug treatment of hospital patients, through regular chart review and consultation with staff. It is therefore likely that many medication-related errors, especially those not resulting in harm to the patient, are going unreported, primarily because of the perceived complexity of the reporting process.

This project sought to develop a process where information recorded by pharmacists in their daily work could be captured within the incident reporting process (the Australian Incident Monitoring System; AIMS) and used to develop strategies to improve safety in Northern Territory hospitals. A form was developed for easy collection of data by pharmacists. The form was developed to reflect the data fields of the AIMS system as well as provide a quick and easy, one page, “tick the box” form that was relevant to pharmacists. The form was tested by pharmacists in hospitals in Darwin and Alice Springs and was considered useful for regular quality audits.

A further outcome of the project was a review of the most effective way to report and act on medication incident data. The report makes ten recommendations for a system designed to identify and modify factors that contribute to adverse drug events in hospitals in the Northern Territory. These include the need for education on the consistent coding of incidents, so that the data can be used to compare trends over time and with other hospitals in other states through the AIMS system, and the need to support a “no blame” system with anonymous reporting if necessary.

The trial collected an unexpectedly large volume of data, which would overwhelm coders and quality managers were it to be collected on a daily basis. Most of the incidents reported were “near misses” that did not result in harm to the patient. However, the factors contributing to near misses deserve as much attention as those contributing to actual adverse events, so that harm to patients can be prevented. A system of data collection was recommended on a regular structured basis (e.g., for two weeks every three months). This would allow for analysis of data, investigation of contributing factors and implementation of changes before the next “snapshot” of data is taken.

A perfect system of reporting medication incidents is of no use unless there are systems in place to act on the data collected. The project report recommended that a multidisciplinary quality committee (including pharmacist representation) be responsible for the regular consideration of medication error reports, the development of remedial strategies and for monitoring the effects of strategies. A range of strategies was proposed in the report.
What worked best?

- *Involvement of pharmacists* — The input of pharmacists into the project was extremely valuable and demonstrated a commitment to improving medication management in public hospitals in the Northern Territory.

- *Collaboration between jurisdictions* — The collaboration between states/territories involved in the measurement and analysis of quality data was commendable. This allowed for sharing of ideas and problems encountered, allowing the project to build on what others had done and to propose solutions that would be acceptable to all parties.

- *Territory-wide commitment to quality improvement* — A review of hospital quality processes and an acknowledgement that quality is important occurred at the same time as the project. This meant that a range of medication management issues could be brought to the attention of quality teams.

What could be done differently?

- *Longer timeframe* — The short timeframe of the project was the biggest constraint, as it limited the development of appropriate avenues for reporting the trends obtained in the trial of the draft form. This process is continuing, in the context of developing hospital administrative structures. The initial proposal included a consideration of how methodology for easier reporting could be transferred to other departments of the hospital such as Radiology and Pathology. It was not possible to extend the project to these areas within the timeframe.

- *Processing of data* — The data collected in the trial of the draft form provided important information on trends that can be used immediately to begin the process of improving systems to prevent medication errors. However, the data will need to be ‘cleaned’ by an experienced AIMS coder before it can be used. Data could have been used more efficiently if pharmacists had been given more extensive training before the trial began.

Lessons learned for others

- *Consider wider applicability* — This process could be implemented in other areas of Northern Territory hospitals such as Radiology, Pathology and Dietetics, as well as in hospitals in other states. The form that has been developed has already been made available to other states using the AIMS system. The methodology involved staff closest to the problem developing a method of reporting that is acceptable to them, yet consistent with the elements of the data collection system (eg AIMS).

- *Use of existing resources* — A range of strategies for assessing data, implementing change and reviewing the effects of change are basic to the methodology.

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<th>Tools and resources</th>
<th>Further information</th>
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| - Form developed for pharmacists to report medication errors. | Craig Cross  
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Using routinely collected data to monitor adverse events

Reporting of adverse events routinely collected in the Alfred Hospital’s morbidity data collection — The Alfred Hospital, Victoria

Hospital morbidity data have the advantage of being routinely collected and appear to be useful in monitoring the incidence of adverse events causing patient harm. This project makes recommendations with the aim of improving consistency in the application of ICD-10-AM codes specific to adverse events and improving the robustness of analysis of the coded data.

This project was undertaken to assess the usefulness of routinely collected ICD-coded morbidity data, compiled for all hospitalised patients at The Alfred Hospital, in monitoring adverse events causing patient harm.

Data on adverse events were retrospectively analysed from the routinely compiled data in the hospital’s patient information management system, for the period 1 July 2000 to 30 June 2001 (50,712 separations). The main outcome measures were the numbers and proportions of separations with an adverse event recorded as a diagnosis, or an external cause of injury or poisoning, or a place of occurrence code of Health Service area.

An adverse event was recorded as an external cause of an injury or adverse drug effect 4,740 times (9.35 per cent). These results were compared with those reported in the analysis of 1997–98 data in the Australian Institute of Health and Welfare (AIHW) National Hospital Morbidity Database in relation to external causes reported as a percentage of separations. Results were: misadventures 2.76 per cent (AIHW 2.0 per cent); complications 67.39 per cent (AIHW 77.7 per cent); and adverse drug events 29.3 per cent (AIHW 21.7 per cent). The variations appear to reflect changes that would be expected as a result of more specificity in Australian coding standards in regard to procedural complications (a slight increase in misadventures, a significant decrease in complications and an increase in adverse drug effects) due to more specific codes for drug-induced conditions in ICD-10-AM compared with ICD-9-CM.

Further work will include a comparison of ICD-10-AM adverse events data with data held on the AIMS database, international comparisons and medical record audit.

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A new data collection tool to minimise accidents

Incident/accident analysis: computerised database — North West Regional Hospital, Tasmania (progress report)

The aim of the project is to develop an access database with a number of automated queries to facilitate the management of incidents and accidents within the organisation. The new database incorporates previous data (to allow historical trending) and a revised input tool clearly identifying near misses, with appropriate coding parameters.

Progress to date
As part of this process the current suite of reports has been examined to ensure that the information being supplied is still required by the organisation. Following this process
automated queries are being written to simplify data extraction and reduce the potential for individual variation. This process of automation will allow for historical trending of indicators.

At the time of reporting, the process of programming and beta-testing of the database — to confirm the output data against historical data — was underway.

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Learning from data collection

Using performance indicators to assess quality and safety
Development of an activity and quality indicator report — Division of Medicine, Newcastle Mater Misericordiae Hospital, NSW

Performance indicators can be a useful tool for managers and clinicians to determine the efficiency, effectiveness and safety of the services being delivered. This project reported on a set of performance indicators covering budget, activity, staff management and clinical practice. Results will guide management and clinicians in where best to concentrate efforts and resources to make the most gain in terms of patient care and safety.

This project aimed to bring together in one report a systematic, comprehensive range of activity, budget, staff and clinical indicators for senior clinicians and managers. Indicators had previously been collected in some units and used as a basis for clinical review, but this was not the case in all units. The reporting system developed needed to be sustainable after the seed funding, based on existing limited resources.

A comprehensive literature review was undertaken, to determine performance indicators suitable for the Division of Medicine. A range of performance indicators was selected, based on availability and validity of data sources. These included:

- **budget performance** — goods and services, pathology, drugs;
- **activity data** — inpatient separations, toxicology admissions, average bed utilisation, delays due to no beds;
- **staff management** — staff turnover, manual handling injuries, registration, inservice attendances; and
- **clinical indicators** — CT scan within 48 hours of presentation with stroke, thrombolysis therapy within one hour of presentation with myocardial infarction, medication errors, unplanned transfers, pressure area formation.

The report has provided an effective springboard for further clinical indicator development. A review of indicators for which it is expected improvements can be made has begun — for example a clinical audit of the issues resulting in delay in commencing thrombolysis therapy in the emergency department has been presented and system improvement strategies identified. Continued monitoring of the indicator will determine whether these have been effective in reducing delays.
Individual review of complaints and sentinel events that have an impact on patient safety continues, using a multidisciplinary case review model. Medical registrars will be actively involved in benchmarking, by becoming responsible for reviewing and reporting against one or two clinical indicators. This involvement should encourage the next generation of senior clinicians to be active participants in reviewing the quality and safety of patient care.

What worked best?

- **Divisional management commitment** — Agreement was reached across the organisation on a means of establishing a common tool to discuss activity and performance.
- **Commitment and leadership** — Senior clinicians demonstrated high levels of willingness to assist with the project.
- **Involvement in benchmarking** — This was achieved through the involvement of the senior registrar in clinical audit.

What could be done differently?

- **Improve consistency of reporting** — Before the project begins, a common format across units supplying information should be established so that the final report has a professional presentation.
- **Improve data quality** — Ensure that the quality and validity of data have been established.
- **Acknowledge the timeframe** — Be realistic about the scope of work within the given timeframe — it is better to start small and add another indicator each month.

Lessons learned for others

- **An indicator report is valuable** — Although time consuming to establish, continuing maintenance of an activity and quality indicator report is extremely useful for monitoring a comprehensive range of performance indicators. Developed collaboratively with clinicians, it provides a basis to determine whether further review may provide opportunities for system improvement.

### Tools and resources

<table>
<thead>
<tr>
<th>Further information</th>
</tr>
</thead>
<tbody>
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### Retrospective data and a control study yield data on patients at risk of falls

**Contribution of medications to falls risk in the elderly — Royal Hobart Hospital, Tasmania**

Retrospective review of medical records using a control group for comparison can provide insight into potential risks to the safety of patients. This project aimed to assess any association between medications and falls in older patients over a four-month period. Results showed no apparent association between the number of medications taken and the risk of falls.

Falls in older people are a health and financial burden, with up to 9 per cent of falls in people aged over 65 years resulting in significant injury. Falls and fear of falling also cause loss of confidence and increased dependence on other people. Medications can contribute to falls in several ways (eg sedation, hypotension, hypoglycaemia, blurred vision and confusion). Medication groups commonly associated with falls include psychotropic drugs.
(antidepressants, sedatives), cardiac drugs, hypoglycaemics and analgesics. Debate continues about which medications pose the greatest risk of falls.

This study aimed to determine the number of older patients (aged 60 years and over) who sustained a fall at the Royal Hobart Hospital, and any association of the fall with medication use. A retrospective review of medical records was carried out for older patients admitted to the hospital over a four-month-period (September to December 2001) who had sustained a fall. Patients were selected using ICD-10-AM codes for falls. A control group of patients was randomly selected from the same period and matched for age and sex.

For all subject and control patients, a medication history was recorded. For patients who sustained a fall before admission, and for all control patients, medications on admission were recorded. For patients who had a fall as an inpatient, all medications administered within the 24 hours before the fall were recorded. Medications were grouped into therapeutic classes (such as cardiovascular, psychotropic). Parametric and non-parametric statistics were used where appropriate to determine any associations or correlations between medications and falls. A total of 181 medical records were examined (91 patients sustaining a fall and 90 patients in the control group).

Statistical comparison showed an apparent trend towards a greater number of falls in patients taking respiratory medications. A statistical difference in the number of falls in patients taking ear, nose and throat medications, was observed, compared with the control group. Examination of this group of drugs revealed that they consisted principally of respiratory medications. This result may be due to the underlying disease rather than the drugs administered.

No trend was observed between cardiovascular medications and the risk of falls. However, it was noted that there were a greater number of cardiac patients in the control group, which may have influenced the results. There was also no trend observed between psychotropic medications and the risk of falls. Surprisingly, there was no statistical difference, or even an indication of a trend, between the number of medications taken and the likelihood of a fall.

This study noted that patients who sustained a fall had a statistically increased length of stay, consistent with other studies.

While a past history of falls was not recorded for control patients, as it was for falls patients, it was noted that patients with a past history of falls appeared to be much more likely to sustain a fall than patients without a previous history of a fall. Further examination of this observation may reveal a fall history to be a major indicator for risk of further falls.

What worked best?

- Project design — The scientific study design and methodology of the project were submitted to the Royal Hobart Hospital Research Advisory Committee for approval, reducing the likelihood of obtaining biased results.
- Data collection — Creation of a specific database increased efficiency and accuracy of data collection and analysis.
- Staff involvement — Qualified and experienced staff improved the analysis and accuracy of the results.

What could be done differently?

- Incomplete data — Use of medical records as the data source meant that some details required for the study were not always available.
• **Understanding of research procedures** — Some preliminary research into the procedure for research projects within the hospital would have reduced the time required to obtain approval from the Research Advisory Committee.

• **Improved control data** — Insufficient data collected for control patients prevented analysis of certain information (eg a past history of falls was not recorded for control patients, so it was not possible to determine if this constituted a risk factor for falls).

**Lessons learned for others**

• **Consider wider applicability** — This project is relevant to any setting with access to a clinical pharmacy service but is particularly relevant to situations where falls are more frequent (eg nursing homes). Many nursing homes have access to a clinical pharmacist through the nursing home medication review program, so a falls-specific review could be incorporated into this process.

• **Additional, non-medication measures** — This study did not show medications to be a major risk factor for falls, although many published studies have. Additional measures such as ensuring a safe environment and exercise programs to improve gait and balance may be of greater benefit.

**Tools and resources**

<table>
<thead>
<tr>
<th>Summary data tables and reference list</th>
<th>Further information</th>
</tr>
</thead>
<tbody>
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**Collecting data to support action on pressure ulcers**

**Pressure injury prevention project — The Alfred Hospital, Melbourne**

Monitoring processes to identify incidence rates and system issues can inform measures to reduce the incidence of adverse events and improve patient safety. This project used the existing monthly reporting process to determine the incidence of pressure ulcers and case studies to identify areas for review. A root cause analysis tool and protocols were also developed.

A review of patients at The Alfred Hospital showed an unacceptable incidence of pressure ulcers. This project aimed to identify incidence rates of pressure ulcers and relevant systems issues and to work with clinicians to change clinical protocols and practices.

To date, the following have been achieved:

• literature review of effective strategies for reducing the incidence of pressure ulcers in health care settings;

• proposal for undertaking biannual audits detailing audit and feedback processes and responsibilities;

• monthly electronic reports from Health Information Services on pressure injuries sustained at The Alfred, differentiating ulcers sustained before and after admission and providing other relevant details (eg admitting and discharging ward and unit, age, sex, intensive care admission and transfer to other hospitals);

• several detailed case studies which identified issues for review, presented to the Pressure Injury Prevention group for discussion and follow-up with the departments involved;
• pressure ulcer case study framework and root cause analysis tool for use by clinicians; and
• protocol for the timely radiological clearance of cervical spine films.

What worked best?
• Detailed case review — These were valuable in identifying system issues for review. In most cases, patients were admitted to multiple wards during an admission. The review allowed presentation of a complete profile of the admission.
• Root cause analysis tool — The root cause analysis tool was developed after the first case study and provided a simple means to summarise and analyse the issues arising from case reviews. The tools include an action plan chart and provide a simple format for ward staff to analyse cases and identify systems issues within their department in the future.
• Cervical Spine Clearance Protocol — This protocol has reduced the time to clearance of the cervical spine of patients with a potential cervical injury from 5 days to 24 hours. This allows the removal of the cervical collar after 24 hours if no injury is detected and thereby decreases the risk of occipital pressure sore injury formation.

What could be done differently?
• ‘Real-time’ reporting — Health Information Services electronic reports could only be generated after all the medical records had been coded for that month and consequently, the report listed patients that had been discharged several months earlier. ‘Real time’ reporting of the incidence of pressure ulcers may prove more useful. The Alfred is reviewing this option at present.
• More timely reporting for case reviews — The case reviews, while proving useful, were often limited to documentation in the medical record, due to the time delay between patient discharge and the electronic report. A more timely reporting process or another method of case identification would provide opportunity for discussion of cases with clinicians involved in the patient’s care.
• Process for clinical audit — A process could be established to ensure that a point prevalence audit is completed within the agreed timeframe of the project.

Lessons learned for others
• Research the most effective mechanism for data collection — This project began with the establishment of electronic reports of pressure ulcers to identify incidence rates and case studies for review. Establishing departmental reporting of pressure ulcers at stage two or greater would provide the same data but in ‘real time’ rather than prospectively. This could be achieved through a simple database which each department could access. This process is likely to promote greater ownership of the information by departments as well as facilitate concurrent review and tracking of cases.
• Involve all relevant departments — Departments could also undertake case reviews of ulcers occurring in their area and analyse these to identify departmental and organisational issues for review and action. This could be done with support from the Quality or Clinical Risk departments within the organisation.

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<thead>
<tr>
<th>Tools and resources</th>
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<tbody>
<tr>
<td>• Pressure ulcer case study framework and root cause analysis tool.</td>
<td>Collette McGinley, Quality Coordinator</td>
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<tr>
<td>• Protocol for the timely radiological clearance of cervical spine films.</td>
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<td>Email: <a href="mailto:c.mcginley@alfred.org.au">c.mcginley@alfred.org.au</a></td>
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Bridging the gap between actual and reported aggression

Patient aggression management system — Kimberley Health Service, WA

Incident reports may not always represent actual events and additional methods (eg surveys) may be necessary to assess problems and evaluate local needs. In this project, a survey was carried out to assess the difference between actual and reported incidents of aggression to determine the focus for a policy, procedures and initial and ongoing education on managing aggression.

The aim of this project was to develop an aggression management system applicable to all 10 sections of the Kimberley Health Service (KHS). This included the development of policy and procedures, initial and ongoing education, and a process for evaluating the outcomes.

Data relating to aggressive incidents is routinely collected through the Health Service’s incident reporting system. However the number of incidents reported was not consistent with verbal reports of incidents and staff voiced dissatisfaction with the perceived lack of action in regard to aggression. Investigation found that many aggressive incidents were not reported because staff felt they had no time to complete the reports, nothing happened with the reports, and/or aggressive incidents, particularly verbal abuse and threats, were so frequent that they were accepted as normal.

To overcome the limitations of the existing system, a survey was developed to collect baseline data (eg the numbers, type and severity of incidents that occurred during a two-week sample period). Information was also collected on how staff felt about the events. During the survey period 193 events were reported. Of these events, verbal abuse (witnessed or received) accounted for the greatest number of incidents. This compared to 21 events recorded in incident reports during the same period: 15 verbal abuse and 6 physical abuse incidents. However, most respondents also noted that the survey period was particularly quiet. The survey will be repeated following the first training sessions.

Following the survey, a locally available education program, which has been used successful in similar settings, was selected. A policy and procedure on aggression management were developed.

Due to the time restraints faced by clinicians and others in attending formal education sessions, ongoing education will be the responsibility of the Workforce Development Unit and Risk Manager. Participants in the “train the trainer” program will reinforce procedures in the workplace.

What worked best?

- **Aggression Survey Tool** — Survey information was used to determine the focus for the policy, procedure and education.

- **Aggression Management Policy** — This is based on the WorkSafe West Australia Code of Practice — Workplace Violence 1999, which has ensured that the policy is consistent with legislation in this area.

- **Aggression Management Procedure** — This draws on expertise from the initial education and train the trainer programs, which ensures that the procedures and education are consistent and designed to meet local needs.

- **Initial and ongoing education** — Programs have been planned for Broome, Kununurra and Derby, consisting of a 3.5 hour program on aggression management followed by a 3–4 hour “train the trainer” session, designed for the Kimberley Health Service. Attendees have been selected from high-risk areas: frontline reception, nursing and orderly staff in all KHS units.
What could be done differently?

- **Involve other organisations** — The Police Liaison Officer should have been involved in the process so that the police have a better understanding of the issues faced by health service staff.

- **Better evaluation** — Re-assessment following education may identify other factors for improvement.

Lessons learned for others

- **Consider wider applicability** — The Aggression Survey Tool could be used by any health service experiencing a lack of consistency between documented and anecdotally reported incidents. The education, policy and procedures are relevant for any health service using a similar program.

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<thead>
<tr>
<th>Tools and resources</th>
<th>Further information</th>
</tr>
</thead>
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<tr>
<td>A draft KHS Policy and Procedure document</td>
<td>Ruth A Crawford</td>
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<tr>
<td>The KHS Aggression Management Policy</td>
<td>Workforce Development Coordinator</td>
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</tbody>
</table>
## Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIHW</td>
<td>Australian Institute of Health and Welfare</td>
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<td>AIMS</td>
<td>Australian Incident Monitoring System</td>
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<td>ALS</td>
<td>action learning set</td>
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<td>ANZCA</td>
<td>Australian and New Zealand College of Anaesthetists</td>
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<td>ASA</td>
<td>American Society of Anaesthesiologists</td>
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<tr>
<td>CNS</td>
<td>Central nervous system</td>
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<tr>
<td>CSI</td>
<td>COX 2 inhibitor</td>
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<td>CT</td>
<td>computed tomography</td>
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<td>ED</td>
<td>emergency department</td>
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<td>EDIS</td>
<td>Emergency Department Information System</td>
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<td>EN</td>
<td>enrolled nurse</td>
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<td>FMC</td>
<td>Flinders Medical Centre</td>
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<td>GP</td>
<td>general practitioner</td>
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<tr>
<td>HPS</td>
<td>human patient simulator</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
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<td>ICD-10-AM</td>
<td>International Classification of Diseases (10th edition) Australian Modification</td>
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<td>IT</td>
<td>information technology</td>
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<td>KHS</td>
<td>Kimberly Health Service</td>
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<tr>
<td>NSAIDs</td>
<td>non-steroidal anti-inflammatory drugs</td>
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<td>PDSA</td>
<td>Plan, Do, Study, Act</td>
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<tr>
<td>PICC</td>
<td>peripherally inserted central catheters</td>
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<td>PIMS</td>
<td>Patient Information Management System</td>
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<td>PRN</td>
<td>as needed</td>
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<td>RVEEH</td>
<td>Royal Victorian Eye and Ear Hospital</td>
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<td>SIIP</td>
<td>Safety Innovations In Practice</td>
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<td>SSRI</td>
<td>serotonin specific receptor inhibitors</td>
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<td>VMO</td>
<td>visiting medical officer</td>
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<td>WSAHS</td>
<td>Western Sydney Area Health Service</td>
</tr>
<tr>
<td>YDHS</td>
<td>Yarram and District Health Service</td>
</tr>
</tbody>
</table>
Index of participating organisations

Albury Wodonga Anaesthetic Group, NSW, 29
Alfred Hospital, Vic, 109, 113
Austin and Repatriation Medical Centre, Vic, 97
Bankstown-Lidcombe Hospital, NSW, 31
Bayside Health, Vic, 13, 54
Bunbury Regional Hospital, WA, 68
Calvary Health Care, ACT, 59
Calvary Hospital, ACT, 13, 27
Canberra Hospital, ACT, 13, 70
Caulfield General Medical Centre, Vic, 51
Dept of Health and Community Services, NT, 15, 27, 107
Epworth Hospital, Vic, 93
Flinders Medical Centre, SA, 14, 21
Gladstone Health Service, Qld, 58
Gympie District Health Service, Qld, 100
Illawarra Area Health Service, NSW, 73
Innisfail Health Service District, Qld, 72
Kimberley Health Service, NT, 16
Kimberley Health Service, WA, 115
Macarthur Health Service, NSW, 42
Mansfield District Hospital, Vic, 105
Mater Misericordiae Hospital, Qld, 35
Miles Health Service, Qld, 77
Modbury Public Hospital, SA, 23
Mount Alexander Hospital, Vic, 83
Newcastle Mater Misericordiae Hospital, NSW, 110
North Sydney Health, NSW, 14, 25
North West Regional Hospital, Tas, 34, 109
Peter MacCallum Cancer Institute, Vic, 91
Port Kembla Hospital, NSW, 15, 56
Princess Alexandra Hospital, Qld, 15, 79
Queen Elizabeth Hospital, SA, 15, 63
Royal Adelaide Hospital, SA, 88
Royal Children’s Hospital and Health Service District, Qld, 62
Royal Children’s Hospital, Vic, 14, 96
Royal Hobart Hospital, Tas, 15, 16, 46, 48, 86, 111
Royal North Shore Hospital, NSW, 16, 52, 74, 104
Royal Victorian Eye and Ear Hospital, Vic, 99
Sir Charles Gairdner Hospital, WA, 14, 32, 65, 84
South West Health, Bunbury Network, WA, 14, 44
St John of God Hospital, WA, 81
St Vincent’s Hospital, Vic, 38, 40
Werribee Mercy Hospital, Vic, 36
Western Sydney Area Health Service, NSW, 49
Westmead Hospital, NSW, 95
Women’s and Children’s Hospital, SA, 89
Yarram and District Health Service, Vic, 14, 60
Australian Council for Safety and Quality in Health Care

Australian Health Ministers established the Australian Council for Safety and Quality in Health Care in January 2000 to lead national efforts to promote systemic improvements in the safety and quality of health care in Australia.

Priority action areas for the Council are:

- supporting those who work in the health system to deliver safer patient care;
- improving data and information for safer health care;
- involving consumers in improving health care safety;
- redesigning systems of health care to facilitate a culture of safety; and
- building awareness and understanding of health care safety.

The Council has 24 members with a wide range of skills and experience who are all committed to making a difference to the safety and quality of health care. All Council members are appointed for the full term of the Council. The full Council meets up to five times a year and reports annually to Health Ministers at the Australian Health Ministers’ Conference. It also reports regularly to the Health Ministers’ Advisory Council.

A six-member Council Executive ensures timely and transparent decision-making on behalf of the Council. The Executive meets approximately every six weeks and reports to Council after each meeting. The Council also has a number of Working Groups to coordinate and develop work plans and projects in priority areas. The Council’s Management Group, located within the Commonwealth Department of Health and Ageing, provides operational and policy support for the Council, the Council Executive and the Working Groups.

Members

Professor Bruce Barraclough (Chair)  
Immediate past President,  
Royal Australasian College of Surgeons  
Professor and Director of Cancer Services for the Northern Sydney Area Health Service  
Dr Michael Walsh (Deputy Chair)  
Chief Executive Officer,  
Bayside Health, Victoria  
Professor Lesley Barclay  
Director, Centre for Family Health and Midwifery, University of Technology, Sydney  
Dr Shirley Bowen (resigned December 2001)  
Dr Heather Buchan  
Chief Executive Officer,  
National Institute of Clinical Studies  
Associate Professor Kaye Challinger  
Chief Executive Officer,  
Royal Adelaide Hospital  
Ms Marie Colwell  
Director, Asoka Systems Pty Ltd  
Professor John Horvath AO  
Area Director, State-wide Renal Services,  
Royal Prince Alfred Hospital  
Professor Clifford Hughes AO  
Head, Cardio-Thoracic Surgical Unit,  
Royal Prince Alfred Hospital, Camperdown  
Ms Betty Johnson AO  
National Secretary,  
Older Women’s Network Australia  
Professor Brendon Kearney  
Executive Director, Statewide Services,  
South Australian Department of Human Services  
Dr Len Notaras  
Director, Clinical and Medical Services,  
Royal Darwin Hospital  
Ms Jane Phelan  
Consumer, with an extensive background in journalism  
Professor Paddy Phillips  
Department of Medicine,  
Flinders Medical Centre, Adelaide
Professor Bill Runciman
Head, Department of Anaesthesia and Intensive Care, Royal Adelaide Hospital

Professor Nick Saunders (resigned May 2002)

Professor Richard Smallwood AO
Chief Medical Office, Commonwealth Department of Health and Ageing

Professor Bryant Stokes AM
Department of Neurosurgery, Saint John of God Hospital

Dr Heather Wellington
Coordinator Health Practice, Corrs Chambers Westgarth, Lawyers

Dr Ross Wilson
Director, Quality Assurance, Royal North Shore Hospital

Dr John Youngman
General Manager, Health Services, Queensland Health

Co-opted Members:
Dr Jenny Bartlett
Director, Quality and Care Continuity Branch, Metropolitan Health and Aged Care Services, Victorian Department of Human Services

Dr David Brand
Consultant, Client Solutions

Dr Paul Dugdale
Chief Health Officer, ACT Department of Health and Community Services

Ms Pat J. Martin
Chief Executive Officer, Royal Hobart Hospital

Dr Vin McLoughlin
Assistant Secretary, Priorities and Quality Branch, Commonwealth Department of Health and Ageing

Professor Chris Silagy AO (1960–2001)