5th Australasian Conference on Safety and Quality in Health Care

6 – 8 August 2007
Brisbane Convention & Exhibition Centre

The Power of Us

Handbook

Co-Hosts

Australasian Association for Quality in Health Care

The Australian Council on Healthcare Standards ACHS

Key Partners

Queensland Government
Queensland Health

Australian Commission on Safety and Quality in Healthcare

The Power of Us

Sponsors

The Organising Committee of the 5th Australasian Conference on Safety and Quality in Health Care would like to sincerely thank the following sponsors and exhibitors for their generous support.

Co-Hosts

Australasian Association for Quality in Health Care

The Australian Council on Healthcare Standards (ACHS)

Key partners

Queensland Government
Queensland Health

Australian Commission on Safety and Quality in Healthcare

Major Sponsors

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Conference Dinner Sponsor

HESTA SUPER FUND
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Health Insitu

Breakfast with the Experts

riskman
Practical Innovative Risk Management

Best Poster Prize Sponsor -

change champions

Exhibitors

- Australasian Association for Quality in Health Care (AAQHC)
- Australian Commission on Safety and Quality in Healthcare
- The Australian Council on Healthcare Standards (ACHS)
- Baxter Healthcare
- Clinical Excellence Commission
- Cognitive Institute
- Compact Business Systems
- Hatrix
- HealthSolve Pty Ltd
- HESTA Super Fund
- Howard Wright Ltd
- Medibank Private
- Patient Safety International
- Press Ganey/rL solutions
- QPS Benchmarking
- Queensland Health
- RiskMan International Pty Ltd
- The University of Queensland Health Insitu
- Victorian Quality Council

Conference - co hosts

Welcome

It is with great pleasure that we welcome all delegates to Brisbane for the 5th Australasian Conference on Safety and Quality in Health Care, The Power of Us!

We were overwhelmed by the enthusiasm and feedback from the 2006 conference in Melbourne and are confident the same quality of program will be delivered this year.

The conference aims to provide an up-to-the minute overview of safety and quality in health services; prompting each of us to develop new ways to improve the quality of services that we deliver. The conference is also an important opportunity to make contact with our peers, share ideas and reflect on where progress has been achieved.

Our two organisations, The Australasian Association for Quality in Healthcare and The Australian Council on Healthcare Standards, are convening the Conference in association with the Australian Commission for Safety and Quality in Health Care and Queensland Health, together with our loyal and generous sponsors.

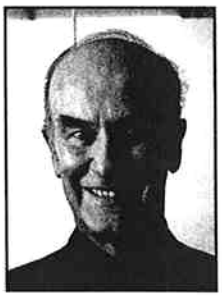
This partnership has enabled us to put together a truly comprehensive program. Consumers, senior managers, clinicians and policy makers will all contribute to what promises to be a significant three days.

A special welcome to our international keynote speakers, Professor Dianne Parker, Chair in Applied Social Psychology, University of Manchester, who has expertise in human error and safety and Dr Sean Clarke, Associate Director of the University of Pennsylvania's widely regarded Center for Health Outcomes and Policy Research and Senior Fellow of the Leonard Davis Institute of Health Economics. Dr Simon Eccles, National Clinical Lead for Hospitals for NHS Connecting for Health, UK was incredibly well received at the 2006 conference and has agreed to return to deliver a keynote address on Electronic Care Pathways. We are honoured to have these guests with us and are sure they will make an exciting and memorable contribution to the Conference. As well as being involved throughout the program, these speakers will be part of a panel discussion for our Breakfast with the Experts.

For the first time, in addition to workshops, plenary sessions and concurrent sessions we will also be holding tutorials as well as an off-site visit to the Skills Development Centre in Brisbane.

Again, welcome to the conference and we hope you enjoy your stay in Brisbane!

Kathleen Ryan
Australasian Association for Quality in Health



Michael Hodgson AM
The Australian Council on Care Healthcare Standards

Conference - co hosts info

Australasian Association for Quality in Health Care

AAQHC Profile

Established in 1989 the Australasian Association for Quality in Health Care (AAQHC) exists to serve its members by:

- providing support and encouragement to individuals and organisations seeking to improve health outcomes for consumers:
- providing a voice on safety and quality issues;
- facilitating opportunities for communication and cooperation, as well as exchange of ideas and experiences;
- facilitating and supporting ongoing education and development, recognising qualifications and experience to Associate Fellow and Fellow status through a credentialing program.

The AAQHC is uniquely placed to ensure the engagement of all stakeholders at the state, national and international levels, in representing and leading the safety and quality agenda. The organisation's website can be found at www.aaqhc.org.au

ACHS Profile

The Australian Council on Healthcare Standards (ACHS) is an independent, not-for-profit organisation, dedicated to improving the quality of health care in Australia through continual review of performance, assessment and accreditation.

Established in 1974, after many years of pioneering work from a range of health care professionals including members of the Australian Medical Association, medical colleges and the Australian Hospital (now Healthcare) Association, the ACHS has maintained its position as the principal independent authority on the measurement and implementation of quality improvement systems for Australian health care organisations.

Over 800 member health care organisations, representing more than 1,000 individual organisations, are members of ACHS quality improvement programs.

The ACHS is regularly consulted by other countries in relation to standards development, accreditation systems and clinical indicators and hosts international delegations.

For more information, visit www.achs.org.au

Contents

Secretariat

SAPMEA Conventions,
200 Greenhill Road, Eastwood, 5063 Australia
Tel: +61 8 8274 6050
Fax: +61 8 8274 6000
Sqhc2007@sapmea.asn.au www.sapmea.asn.au/sqhc2007

Registration Desk

Sunday 5 August	15.00-18.00
Monday 6 August	07.00-17.30
Tuesday 7 August	07.30-17.30
Wednesday 8 August	07.30-15.30

The Power of Us

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Brisbane Convention & Exhibition Centre 6 – 8 August 2007

Continuing Professional Development

The *5th Australasian Conference on Safety and Quality in Health Care* is endorsed by the following Colleges and Associations for credit towards continuing professional development.

***The onus of proof of applicability and attendance rests with the delegate.**
Please keep your registration letter and session tickets.
(Retain also for inclusion towards your Health Professions Registration portfolio)

Australasian Association for Quality in Health Care	**AAQHC**	This conference is the official annual education event for AAQHC. The conference attracts 10 points per 8 hours (one day of attendance). Further information: www.aaqhc.org.au/pdac_docs/CPD_diary.pdf (page 9) or registrar@aaqhc.org.au
Australian College of Health Service Executives	**ACHSE**	The College is pleased to allocate CDP points for this 'non-college activity' and contributes towards the CPD program. Further information www.achse.org.au/frameset.html
New Zealand Institute of Health Management	**NZIHM**	The Institute is pleased to endorse this conference. Further information: www.nzihm.org.nz (a branch of ACHSE).
Royal Australasian College of Surgeons	**RACS**	This educational activity has been approved in the College's CPD Program. Fellows who participate can claim one point per hour (maximum 20 points) in Category 7 : Other Professional Development towards 2007 CPD totals. Further information: www.surgeons.org
Royal Australasian College of Medical Administrators	**RACMA**	"The Annual Conference program has been approved as an RACMA approved Scientific Meeting and eligible Fellows and Members of this College will earn CEP hours for attendance as follows: 6 August: 8 hours per full day attendance; 7 August: 8 hours per full day attendance; 8 August: 8 hours per full day attendance. In addition for those who have learning contracts, this is an authorised CEP activity." Further information: www.racma.edu.au
Australian College of Rural and Remote Medicine	**ACRRM**	This event is approved for 25.5 (6*) PDP. Further information: www.rrmeo.com/rrmeo/dls_rrmeo.pl?a=eduinv_activity_view&acttype=event&id=atotp_AAQH
Royal Australasian College of Emergency Medicine	**RACEM**	This conference has been approved as an accredited meeting at 0.5 pts/hr on an ongoing basis. Further information: MOPS program, www.acem.org.au
College of Nurses, Aotearoa (New Zealand) Inc.	**CNA (NZ)**	This conference attracts professional development recognition, contributing to 25 professional development hours. Further information: www.nurse.org.nz/cna_home.htm
Australian and New Zealand College of Anaesthetists	**ANZCA**	This conference is credited towards points for CME/QA points under ANZCA Continuing Education, MOPS program. Further information: www.anzca.edu.au/cega/cpd/index.htm
Royal College of Nursing Australia	**RCNA**	"This conference has been endorsed by Royal College of Nursing, Australia, according to approved criteria". A total of 6 Continuing Nurse Education (CNE) points has been allocated to day one of the conference, 6 CNE points to day two and 4.5 CNE points to day three of the conference. Further information: www.rcna.org.au/pages/cpd.php

Conference Steering Committee

Ms Kathleen Ryan, Conference Co-Chair, President, Australasian Association for Quality in Healthcare
Mr Brian Johnston, Conference Co-Chair, Chief Executive, The Australian Council on Healthcare Standards
Ms Christine Dennis, Past President, Australasian Association for Quality in Healthcare
Dr George Downward, NZ Councillor, Australasian Association for Quality in Healthcare
Ms Darlene Hennessy, Executive Manager – Development, The Australian Council on Healthcare Standards
Ms Sue Kerr, Communications Manager, Australian Commission on Safety and Quality in Health Care
Ms Margaret Marshall, Clinical Practice Improvement Centre, Queensland Health
Ms Heather McDonald, Executive Manager Customer Services, The Australian Council on Healthcare Standards
Ms Donna Patterson, Executive Manager, Australasian Association for Quality in Healthcare
Ms Megan Taylor, Manager, Communications, The Australian Council on Healthcare Standards.
Dr John Wakefield, Patient Safety Centre, Queensland Health

General Information

Accommodation

Carlton Crest Hotel Brisbane	07 3222 1104
Chifley at Lennons	07 3222 3222
Holiday Inn Brisbane	07 3238 2201
Hotel George Williams	07 3308 0700
Marque Hotel Brisbane	07 3221 6044
Riverside Hotel Southbank	07 3846 0577
Rydges South Bank	07 3364 0808
Sapphire Resort	07 3217 0288
Saville South Bank	07 3305 2500
Westend Central Apartment Hotel	07 3011 8333

Brisbane Airport Transfers

Brisbane Airport is located 15 kilometres from Brisbane City. Transfers are available by taxi [approx $33], Airtrain [cost is $12 one way] or by bus [$11 one way]. Visit http://www.bne.com.au/content/standard.asp?name=PublicTransport for further information.

Car-parking

There is undercover parking available below the Convention Centre. Parking is available for $12 per day. This price is valid till 30 June 07 and is subject to change.

Climate

The average temperature ranges from a minimum of 10C to 22C during August.

Facilities for people with disabilities

If you require assistance please speak to a person at the registration desk.

Liability Disclaimer

In the event of industrial dispute or other unforeseen circumstances, the Conference Organisers accept no responsibility for loss of monies incurred by delegates.

Credentialing

Refer to satchel insert for credentialing information.

Evaluation Form

The evaluation form is available online at www.sapmea.asn.au/sqhc07/evaluation/

No Smoking Policy

Delegates should be aware that smoking is banned in public building and many hotels and restaurants throughout Australia, including the Brisbane Convention and Exhibition Centre.

On-site registration

On-site delegates are not guaranteed to receive a conference satchel

Privacy

Personal information, as defined under the national privacy legislation, The Privacy Amendment (Private Sector) Act 2001, will be treated in accordance with the National Privacy Principles and only shared with related or third parties in accordance with those principles

Social Program

Welcome Reception

Date: Monday 6 August 2007
Time: 17.15-18.45
Venue: Brisbane Convention and Exhibition Centre, Great Halls 3 and 4
Cost: Inclusive
Guest ticket: $50.00
Dress Code: Smart Casual
An invitation is extended to all delegates to attend the Welcome Reception. This informal function will be a great opportunity to network with old friends and new acquaintances. The evening includes light refreshments and musical entertainment.

Riskman International Breakfast with the Experts

Date: Tuesday 7 August 2007
Time: 07.30-08.30
Venue: Brisbane Convention and Exhibition Centre, Plaza Room 1 and 2
Tickets: $35.00
Please note: Limited places are available so please ensure you book for this popular event

HESTA Super Fund Conference Dinner

Date: Tuesday 7 August 2007
Time: 19.00-23.00
Venue: Brisbane Convention and Exhibition Centre, Plaza Terrace Room
Tickets: $99.00
Dress Code: Smart Casual and there is a Beach theme if you wish to dress up.
An invitation is extended to all delegates to attend the Conference Dinner. The dinner will be a Beach theme with local band the Beach Boyz providing the evening entertainment. So come along, get dressed up and put your dancing shoes on. Please note that the Surf Lifesaving Club will be attending the dinner so please bring along a gold coin donation.

AAQHC Council Breakfast & AGM

(AAQHC members only)
Date: Wednesday 8 August 2007
Venue: Brisbane Convention and Exhibition Centre, Plaza Room 1 and 2
Tickets: No charge
Please note: Limited places are available to this breakfast. Register by including your AAQHC member ID on the registration form in the appropriate place.

Australasian Association for Quality in Health Care

Making a difference in health care

What is AAQHC?

AAQHC is an independent, not-for-profit, membership organisation for the promotion of quality and safety in health care. It exists to serve its members by:

- Providing support and encouragement to individuals and organisations seeking to provide optimal health care and service to consumers.
- Providing an authoritative voice on quality improvement issues in health care.
- Facilitating opportunities for communication and cooperation, as well as exchange of ideas and experiences.
- Facilitating and supporting ongoing education and development through scholarship and sponsorship.
- Recognising qualifications and experience through credentialling.

AAQHC membership is a great investment for individuals and organisations from all sectors of the health care industry. Whether for networking or advice, AAQHC has affiliated groups throughout Australia and New Zealand ready to assist you.

AAQHC has a variety of membership options designed to meet the needs of individuals and organisations.

AAQHC has a secretariat and website (www.aaqhc.org.au), which are points of contact for:

- Membership applications
- Renewals
- Australian and New Zealand network contacts
- Conference details
- Credentialling applications.

Services to members

AAQHC provides members with opportunities to make new contacts, stay up-to-date with issues affecting quality in health care and build networking relationships.

Annual AAQHC conference

This key health industry event aims to bring together the most up to date international, regional and local trends in safety and quality. It offers opportunities for members to network, share experience, gain updates on practical solutions, and obtain information on safety and quality issues.

Local networks

Each network coordinates local meetings and seminars, providing members with opportunities for networking, learning and building collegiate relationships.

Consultant advertising

Consultants are able to advertise in the journal. With such a broad range of members from all sectors this can be a useful source of contacts for specialist areas or projects.

Website

The AAQHC website provides current information on safety and quality health care issues and upcoming local and international events. Links are provided to other health-related sites. It is regularly updated to ensure members have access to current, relevant information. The website also provides access to papers from seminars and annual conferences and the ISQua Journal.

AAQHC Journal

The AAQHC journal (JAAQHC) provides case studies and articles relating to safety and quality.

ISQua Journal

Full-text access to the journal of The International Society for Quality in Health Care via the AAQHC website.

Newsletter

The *Inside Quality* (IQ) newsletter is a forum for members to share news, assist networking, help to publicise and organise events such as conferences and seminars, and market AAQHC to potential new members.

Local networks

The constitution provides for affiliated groups to be either a local network of AAQHC members or an incorporated body affiliated with AAQHC. Council is formed from nominations from affiliated networks and the membership.

To further you career in quality and safety and to join with others to have a say about the future of health care join AAQHC. For more information or to join AAQHC please talk go to booth 5 at this conference or visit **www.aaqhc.org.au**

AAQHC • Australasian Association for Quality in Health Care • www.aaqhc.org.au

International Keynote Speakers

Simon Eccles

Simon Eccles qualified from the London Hospital Medical College in 1994. In August 2005 he was appointed as a consultant in Emergency Medicine at the Homerton Hospital in Hackney, North East London. This is a parttime appointment for two days a week. For the other three days he is the National Clinical Lead for Hospitals for NHS Connecting for Health, formally the National Program for IT. Working with his colleague; Mr Ian Scott, he has responsibility for the clinical engagement of doctors throughout NHS secondary care in all aspects of Connecting for Health.

Simon was the immediate past chairman of the Junior Doctors Committee of the BMA, leading work with the Department of Health on the introduction of the Modernising Medical Careers proposals as well as the continuing challenges arising from the European Working Time Directive.

In 2003/4, he took a year out of clinical work to allow him to work on the 'Hospital at Night' project as the medical advisor to the Department of Health. In April 2005 he was appointed as the Clinical Advisor to the Health Insight Unit, part of the Strategy Unit at the Department of Health.

Simon Eccles is co-author of the Oxford Handbook of the Foundation Program and joint editor of the best selling careers guide 'So you want to be a brain surgeon'. He lives in East London, collects contemporary British art and maintains a select fleet of classic cars.

Sean Clarke

Dr. Sean Clarke is Associate Director of the Center for Health Outcomes and Policy Research at the University of Pennsylvania, where he is also the Class of 1965 25th Reunion Term Assistant Professor of Nursing and is a Senior Fellow of the Leonard Davis Institute of Health Economics there. His research deals with nurse workforce issues and organisational factors related to safety in hospital practice. He has been lead investigator and collaborator on research projects in the U.S. and internationally, has published and spoken widely on a variety of safety-related topics, and serves as a consultant to health care facilities, professional organisations and policymakers on workforce management and patient outcomes.

Dianne Parker

Dianne Parker took a first class honours degree in psychology in 1987 and was awarded a psychology PhD in 1992. A member of faculty in the University of Manchester's Department of Psychology since 1994, she was awarded a personal Chair in Applied Social Psychology in 2004. Much of her research has been carried out in the domain of human error and safety, with two particular areas of emphasis: the psychology of rule-related behaviour in a range of settings from driving to medicine, and the application of theoretical models of attitudes and behaviour to the understanding and improvement of safety behaviour.

Experience working with a range of high-risk industries on behavioural safety has guided her approach to patient safety. Recent healthcare projects have considered the attitudes of healthcare professionals to clinical guidelines and Integrated Care Pathways as ways of describing best practice, and facilitating standardisation of care delivery; a multi-method study of error in community pharmacy; and an investigation of the safety implications of electronic prescribing. Together with colleagues in the University of Manchester's National Primary Care Research and Development Centre she developed the Manchester Patient Safety Framework, a qualitative tool that allows selfassessment of safety culture in healthcare organisations. The National Patient Safety Agency endorses MaPSaF and recommends its use in all healthcare organisations in England. A version of the tool for international use is currently in development, funded by the World Health Organisation. In April 2004 she took up a 12-month secondment to the UK Department of Health to work with the Deputy Chief Medical Officer on developing a strategy

The Power of Us

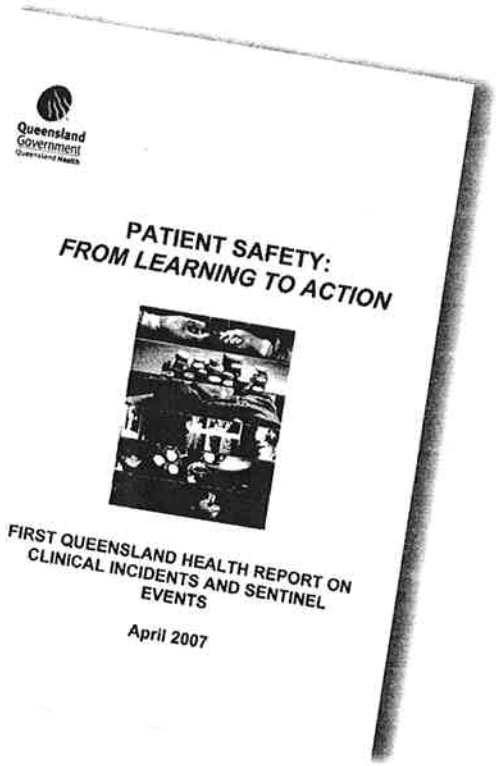
Queensland Health: leaders in reform

improving safety and quality through action at individual, team and system levels.

- Clinical Practice Improvement Centre
- Patient Safety Centre
- Workplace Culture and Leadership Centre
- Skills Development Centre
- Safe Medication Practice Unit
- Centre for Health Related Infection Surveillance Programs
- Clinical and Statewide Services
- Recruitment Assessment Placement Training and Support
- Data Reporting and Analysis Centre
- Workforce Planning and Analysis Unit

Queensland Government
Queensland Health

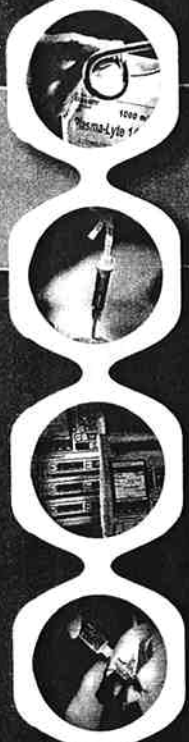
Demonstrating
- learning
- transparency
- accountability
- action



health • care • people

For more information log onto www.health.qld.gov.au

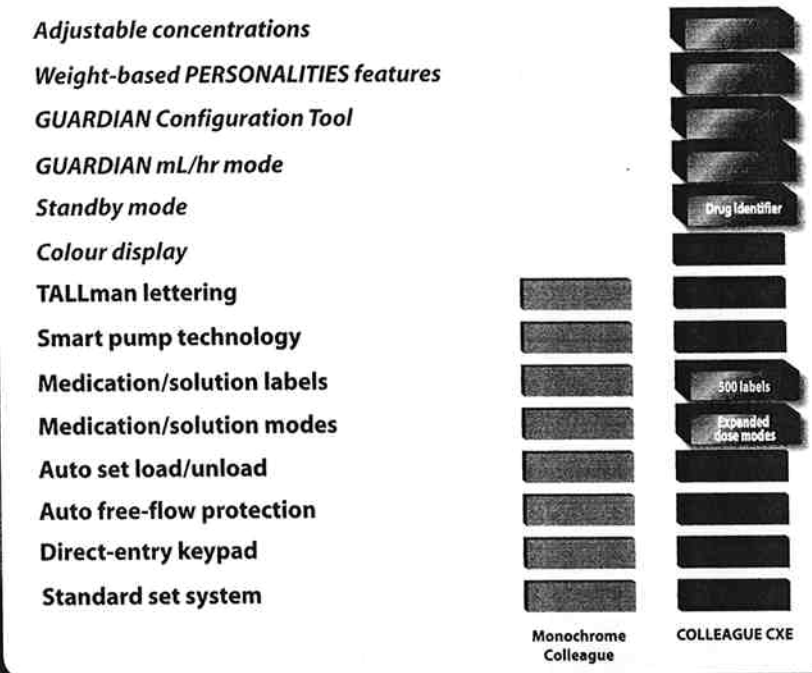
Colleague CXE



REDUCE THE POTENTIAL FOR MEDICATION ERRORS

An evolution in patient safety and simplicity

COLLEAGUE CXE pump expanded capabilities



Volumetric infusion pump with COLLEAGUE GUARDIAN software

For further information and assistance please contact:

Australia
Baxter Healthcare Pty Limited, 1 Baxter Drive, Toongabbie NSW 2146.
Postal Address: PO Box 88
Toongabbie NSW 2146.
Customer Service: 1300 789 646
www.baxterhealthcare.com.au

New Zealand
Baxter Healthcare Ltd, 33 Vestey Drive, Mt Wellington,
Auckland New Zealand
Tel: 800 229 837
Fax: 0800 229 329
www.baxter.co.nz

Baxter

Medibank Private is committed to supporting our healthcare partners as they continue to improve the quality and safety standards of Australian private hospitals. By rewarding healthcare innovation in these areas, Medibank Private is working with our partners to improve the health of all Australians.

Over the last two years we've:

- ✔ Provided $1.9 million to support innovation and improvement in hospitals through the Medibank Private Safety and Clinical Improvement Incentive Pool
- ✔ Supported quality and safety initiatives in areas like falls prevention, medication management, discharge planning and infection control
- ✔ Funded 73 quality and safety initiatives in 60 Australian hospitals

For more information on Medibank Private Quality and Safety initiatives email quality.safety@medibank.com.au or visit medibank.com.au

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AUSTRALIANCOMMISSIONON
SAFETYANDQUALITYINHEALTHCARE

The Australian Commission on Safety and Quality in Health Care

is very pleased to be a key partner in the

5th Australasian Conference on Safety and Quality in Health Care

6 – 8 August 2007

Brisbane Convention & Exhibition Centre

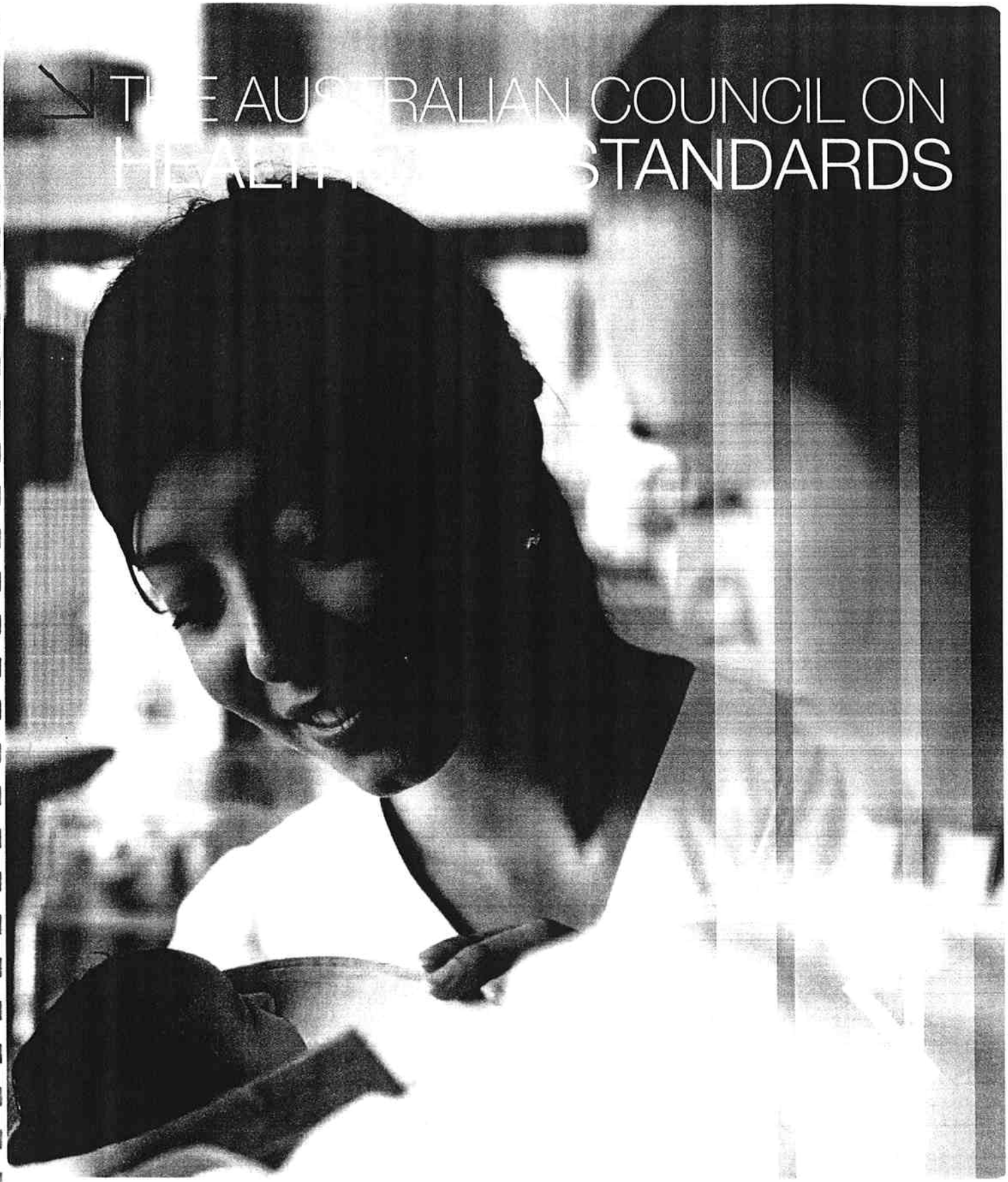
The Commission's role is to ensure comprehensive action is undertaken in a nationally coordinated way by leaders, decision makers and public and private providers operating at different levels in the health system.

Over its life, the Commission will:

- lead and coordinate improvements in safety and quality in health care in Australia by identifying issues and policy directions, and recommending priorities for action
- disseminate knowledge and advocate for safety and quality
- report publicly on the state of safety and quality including performance against national standards
- recommend national data sets for safety and quality, working within current multilateral governmental arrangements for data development, standards, collection and reporting
- provide strategic advice to Health Ministers on best practice thinking to drive quality improvement, including implementation of strategies and
- recommend nationally agreed standards for safety and quality improvement

For further information on the Australian Commission on Safety and Quality in Health Care, please contact us at:

Level 7, 1 Oxford Street, Darlinghurst NSW 2010
GPO Box 5480, Sydney NSW 2001
Phone: (02) 9263 3633 (international +61 2 9263 3633)
Fax: (02) 9263 3613 (international +61 2 9263 3613)
email: mail@safetyandquality.gov.au



THE AUSTRALIAN COUNCIL ON HEALTHCARE STANDARDS

ACHS

AUSTRALIAN COUNCIL ON HEALTHCARE STANDARDS INTERNATIONAL

ACHSI

SAFETY • QUALITY • PERFORMANCE

We're an independent, not-for-profit organisation dedicated to improving the quality and safety of health care

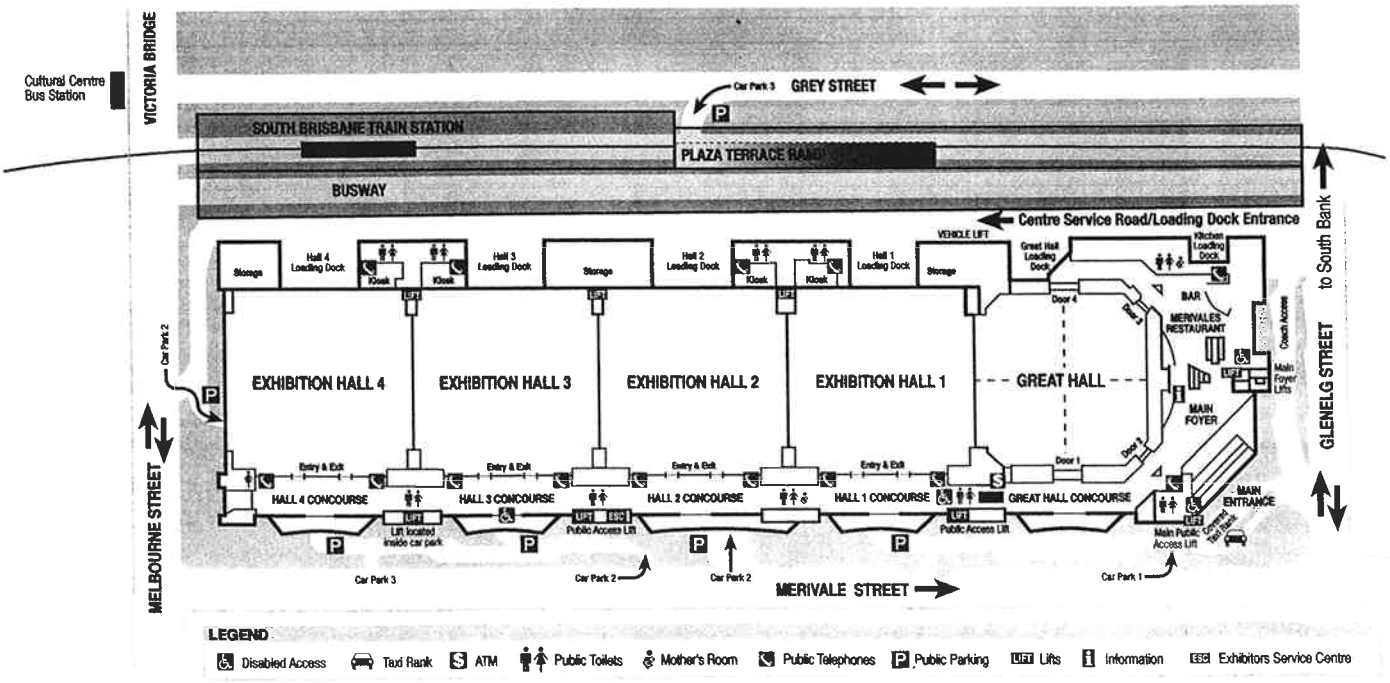
We deliver quality improvement programs and develop standards with the industry, peak health bodies and consumers

For more information contact us on:

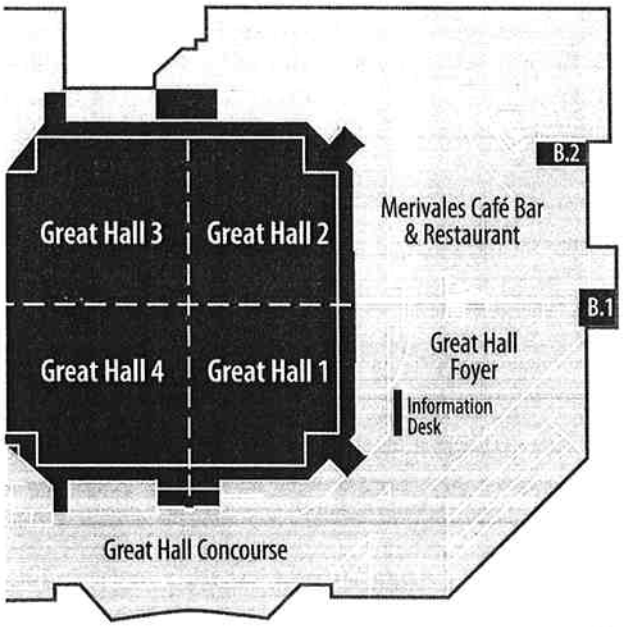
Tel: +61 2 9281 9955
Fax: +61 2 9211 9633
Email: achs@achs.org.au
Website: www.achs.org.au

ACCREDITED ISQua ORGANIZATION

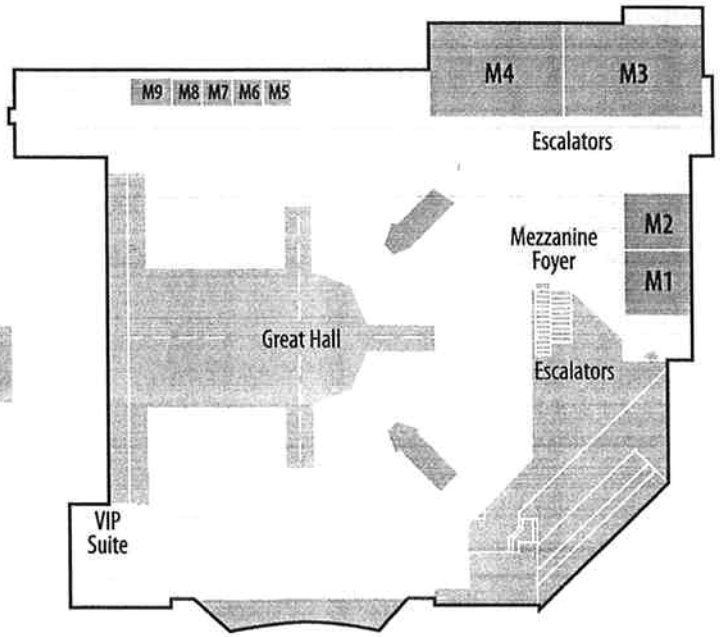
Floorplans



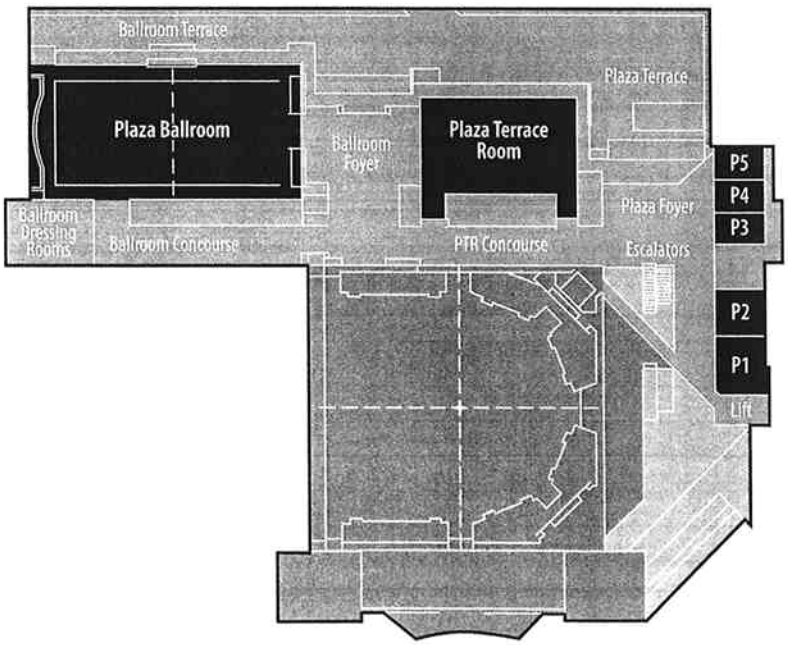
Floorplans



Foyer Level



Mezzanine Level



Plaza Level


Notes

AAQHC-ACHS CONFERENCE PROGRAM 2007 Updated 16th July 2007

	SUNDAY 5 AUGUST
1500 - 1800	Registration

DAY ONE Monday 6th AUGUST

0700 – 0845	Registration

[redacted]	Plenary 1 CONFERENCE OPENING	*Great Halls 1 & 2*
0830 - 0840	MC: Mr Jim Birch	
0840 - 0850	Welcome Dr Michael Hodgson, ACHS President and Ms Kathleen Ryan, AAQHC President	
0850 - 0905	Indigenous Welcome	
0905 - 0925	Formal Opening Mr Stephen Robertson- Queensland Minister for Health	
0925-0945	Vintage Swiss Cheese	
0945 - 1030	PATIENT SAFETY:PUTTING IT ALL TOGETHER KEYNOTE SPEAKER: PROFESSOR DIANNE PARKER Co-Chairs :Dr Michael Hodgson and Ms Kathleen Ryan	
1030-1100	MORNING TEA	*Great Halls 3 & 4*
1100-1700	AAQHC Fellowship Exams	*VIP Suites*

	THEME 1 *P3-5*	THEME 2 *Great Hall 1 & 2*	THEME 3 *M4*	THEME 4 *M1*	THEME 5 *M2*	THEME 6 *M3*
	USING DATA TO IMPROVE CLINICAL OUTCOMES **Chair: Prof Mike Ward**	QUEENSLAND: BEYOND BUNDABERG *CONSUMER, CLINICIAN AND CORPORATE PERSPECTIVES* **Chair: Mr Brian Johnston**	CLINICAL QUALITY **Chair: Dr Christine Jorm**	CARE ACROSS THE CONTINUUM **Chair: Ms Jenny Rance**	HUMAN RESOURCES **Chair: Ms Jenny Tuffin**	PATIENT SAFETY AND QUALITY **Chair: Dr Annette Pantle**
1100 - 1120	Engaging Non Procedural Medical Staff in Quality Improvement Activities: Results of the General Medical Indicator Project (GMIP) **Dr Caroline Brand**	Reform or rhetoric: Perspectives on changes in QH since the Bundaberg Hospital Commission of Inquiry." **Dr Stephen Duckett** **Mr Keith McNeil** **Mrs Cheryl Herbert** **Ms Barbara Kent**	Using audit data to develop a predictive model of success for endovascular repair of abdominal aortic aneurysms **Mrs Maggie Boult**	Board of Management reporting on clinical governance in community health **Ms Vicky Mason**	Comprehensive Evaluation Of A Simulation Based Undergraduate Medical Course In Patient Safety **Prof Brendan Flanagan**	Every Patient Every Time – Improving Hand Hygiene **Mrs Eveline Soon**

1120 - 1140	Chronic Disease Management in the Australian Community Setting: Approaches to evaluation using cross-jurisdictional linkage **Dr David Preen**		Self Assessment of quality indicators in prescribing and use of medicines across settings **Ms Judith Mackson**	Coordinated, integrated health care and its implementation vacuum **Ms Ann Revell**	Consumers A Driving Force **Mrs Shirleen Wickham**	Credentialing And Clinical Privileging – Protecting Patient Safety **Dr Shane McGuire**
1140 - 1200	Variable life adjusted display - a new methodology highlighting variation to improve quality of hospital care **Miss Kirstine Sketcher-Baker and Mr Chris Hall**		Developing a national audit of surgically related deaths with a web based system for data entry linkage **Mrs Astrid Cuncins-Hearn**	Developing A Quality Framework For A Community Health Setting - A Quality Initiative for Beginners **Ms Linda McCrorey**	Consumers make a difference to health professional education and accreditation of training courses **Mr Antonio Russo**	Safer System Saving Lives – What did we find and lessons learnt **Ms Alison McMillan**
1200 -1230	**Q&A with SPEAKER PANEL**	**Q&A with SPEAKER PANEL**	**Q&A with SPEAKER PANEL**	**Q&A with SPEAKER PANEL**	**Q&A with SPEAKER PANEL**	**Q&A with SPEAKER PANEL**

1230-1330	**LUNCH** *P3 & 5* **LUNCHBOX SESSION: *Measuring Patient Safety: Stories or Statistics.*** **QLD HEALTH: Dr John Wakefield** In this interactive session, Dr Wakefield will explore patient safety measurement, both from the clinician and consumer perspective. Participants will be encouraged to reflect on the 'use' and 'misuse' of current patient safety metrics, in addition to exploring new approaches to patient safety measurement.	**CONSUMERS LUNCH BOX SESSION** *M3* **CONSUMERS: IT'S ALL ABOUT COMMUNCATION** **Mr Mitch Messer, Chair, Consumers' Health Forum of Australia**

1300-1330 **Poster Discussion Session – Theme 1: Measuring performance to improve patient care** *Great Halls 3 & 4*

Poster 2 - Factors Related To Content Of Antenatal Care In Three Rural Provinces Of Vietnam **Dr L Trinh**	**Poster 3** - Antenatal Hospitalisations In New South Wales, Australia 2001-04 **Dr L Trinh**	**Poster 5** - Malaria Knowledge And Practice Among Women In An Endemic Area Of Vietnam **Dr L Trinh**	**Poster 10** - The Communication Complexity Score- measuring the performance of health care services in communicating with complex non-English-speaking patients **Ms P Garrett**
Poster 17 - Mining the goldmine – using "administrative" databases to monitor quality and improve care **Ms M Walker**	**Poster 20** - Pressure Ulcer Point Prevalence Surveys – a call for standardising processes across jurisdictions **Mrs B McErlean**	**Poster 37** - Preliminary Insights into the Quality of Data Collected in NSW Intensive Care Units **Ms K Hewson**	**Poster 50** - Quality Improvement Through The Introduction Of Routine Audit **Ms J Brumby**
Poster 51 - Consumer Feedback Survey in a Paediatric Physiotherapy Department	**Poster 52** - Improving Efficiency In Patient Care And Discharge	**Poster 54** - Indicators For Quality Use Of Medicines In Australian Hospitals	**Poster 56** - Linking Multiple Information Systems to Collect State Wide Data on Cancer Patient

			Treatment and Outcome
Ms F Moran	Dr K Tan	Dr J Lowinger	Mr J Harrington
Poster 61 - Pilot Project To Evaluate The Effectiveness Of A Falls Minimisation Toolkit Ms P McGarrity	**Poster 65** - An Evaluation on DOTS Implementation in Indonesian Hospitals Through Clinical Audit: Is The Australian Clinical Governance Model Can Make Improvement? Mr H Djasri	**Poster 75** - Overcoming Data Coding Issues To More Effectively Detect Quality of Care Ms K Sketcher-Baker	**Poster 77** - DVT prophylaxis for gastrointestinal surgery/medicine - harder than it looks!! Ms B Draper
Poster 84 - Innovations in Orthopaedic Care - Fast Track Joint Replacement Program Ms K Ekberg	**Poster 97** - Optimising Procedures to Improve Quality of radiation therapy summary letters and billing - Utilising an oncology information system & Crystal Reports Ms N Kadaan	**Poster 100** - Developing An Integrated Performance Management System Using Standard IT Software Mrs H Howard	**Poster 103** - Improving Clinical Governance in a multi-site Health Service – Implementation of Performance Indicators for Monitoring Patient Safety and Improving care Ms K Morrissy
Poster 105 - The Power of a Simple Strategy to reduce MRO infections in hospitals – Hand Hygiene Ms A Pantle	**Poster 117** - Electronic bar-code scanning to reduce medication errors associated with dispensing Mr M Dooley	**Poster 128** - Laparoscopy in Gynaecology and Surgery: Practice Review Using Audit of Errors for Improving Safety in Rural Australia Ms V Jenkins	**Poster 130** - Serious Transfusion Incident Reporting: A Pilot Study Ms L Stevenson
Poster 134 - Linked Hospital Morbidity Data to Evaluate Patterns of Surgery for Ventilation Tube Insertion (Grommets) in WA Children 1981-2004 Dr K Spilsbury	**Poster 136** - 'When things go wrong in hospital': the what, why and how of investigating and researching adverse events Dr T Jackson	**Poster 141** - Long Term Survival of Stroke Patients Following an Inpatient Rehabilitation Admission Dr J Estell	**Poster 143** - An Evaluation of the Survival Period of Cancer Rehabilitation Patients Following an Inpatient Rehabilitation Admission Dr J Estell
Poster 144 - An Evaluation of the Survival Period of Patients Following an Inpatient Rehabilitation Admission Dr J Estell	**Poster 148** - From Death We Learn Ms A May	**Poster 165** - Digital pen technology use in measuring pathway variances in Queensland Ms K McConochie	**Poster 166** - Evaluating Massage Therapy In Palliative Care: Simple Systems, Strong Outcomes Ms N Tyndall
Poster 168 - Development of National Guideline for Clinical Indicators and Reporting System to Support Patient Safety in Hospitals Mr H Djasri	**Poster 175** - Interprofessional Communication and the Quality of Care for Patients with Upper Gastrointestinal Bleeding Dr D Hewett	**Poster 200** - Mental Health Clinical Collaborative - Making Data Meaningful Ms S Plever	**Poster 209** - Smart Tools for Improving Patient Outcomes in Oncology Mr J Harrington
Poster 210 - Working Towards Engaging and Supporting Clinicians in Healthcare Delivery, Quality Improvement and Organisational Activities through Standardised and Automated Data Reporting Dr S Shea	**Poster 211** - Multi-disciplinary Team (MDT) Review of Cancer Patients in Hospitals: Do They Make a Difference? Mr J Harrington	**Poster 213** - Documentation of Cancer Stage in Public Hospitals: Is There Enough Information to Assess Outcomes and Effectiveness of Treatment? Mr J Harrington	**Poster 215** - Patient Journey in Public Hospitals: How Long Do Cancer Patients Wait for Specialist Review, Diagnosis and Treatment? Mr J Harrington
Poster 222 - Comparing voluntary sentinel event reporting with routinely-coded hospital-acquired diagnoses in Victoria, 2005/06 Dr T Jackson	**Poster 223** - Benchmarking as a Quality Improvement Tool in a local Mental Health Service from participation in a National Project. Ms M Hyland	**Poster 224** - Efficacy of unit appointed infection control nurses in an Australian intensive care unit with an Acinetobacter outbreak Ms L Redl	**Poster 229** - Evidence-based multidisciplinary approach to improve patient care: CO2 Retaining Patients Working Group Dr A Dwyer

Poster 246 - Quality Improvement in Renal Dialysis: Achievements and Challenges of the Renal Collaborative **Ms J Marshall**	**Poster 251** - Capability of ambulatory monitoring system in community rehabilitation to quantify physical activity levels in patients Dr M Karunanithi	**Poster 264** - Counting excess lives saved or lost in the care of acute myocardial infarction: Patient selection is more important than method of risk prediction Prof I Scott

1330-15.00	**Plenary 2 - The Power of 'E'** **Proudly Supported by the Australian Commission on Safety & Quality in Health Care** **Chair: MR JIM BIRCH**	***Great Halls 1 & 2***
	Presentation : Mr Bill Lawrence- Australian Commission on Safety and Quality in Health Care	
1330 - 1410	TOPIC- ELECTRONIC CARE PATHWAYS **Speaker: DR SIMON ECCLES**	#3
14.10-14.45	TOPIC - IMPLEMENTATION OF E- HEALTH IN AUSTRALIA **Speaker: DR IAN REINECKE**	#4
14.40-15.00	TOPIC – A CONSUMER VIEW OF QUALITY AND SAFETY THROUGH ELECTRONIC HEALTH RECORDS **Speaker: MS CORAL RIZZALI**	#5
15.00-15.15	**Question and Answers**	

1515-1545	AFTERNOON TEA	***Great Halls 3 & 4***

1545 - 1715	CONCURRENT SESSION TWO					
	THEME 1 *GH 1&2* REDESIGNING CARE	THEME 2 *M3* MEASUREING PERFORMANCE: ***The private sector perspective*** ***Sponsored by Medibank Private*** **Chair: Ms Jenny Rance**	THEME 3 *M1* EDUCATION, SKILLS AND WORKPLACE CULTURE **Chair: Dr George Downward**	THEME 4 *M2* SYSTEMS CHANGE **Chair: Ms Annette Ferris**	THEME 5 *P3-5* HUMAN RESOURCES **Chair: Ms Valmae Joyce**	THEME 6 *M4* OPEN DISCLOSURE **Chair: Ms Jannine James**
1545 - 1605	**SA: Ms Margaret Martin** **QLD: Prof Mike Ward** **NSW- Dr Tony O'Connell** **WA: Ms Tanya Gawthorne** **VIC: Ms Belinda Rickard** Panel Session Facilitated **by Dr Simon Eccles**	Private Hospital speaker – how the funds measure performance outcomes. **Ms Christine Gee**	Use of simulation labs to improve clinical skills **Dr Marcus Watson**	Strategic Planning and Change Management #8 **Ms Christine Dennis**	Supporting Consumer Participation within a large health service. **Ms Jenny Ashby**	**Learning from the National Open Disclosure Standard Pilot** **Dr John Wakefield**, Chair National Open Disclosure Steering Committee, Senior Director, Patient Safety Centre, Queensland Health. **Cherie Ryan**, National and Queensland State Program Manager, Open Disclosure, PhD
1605 - 1625		The role of health insurance funds in improving quality and safety in health care	Improving Patient Safety and Outcomes by Changing the Healthcare Culture Using Crisis Resource Management (CRM) Principles. #9	Building Skills for redesign	Helping Doctors Help Themselves: Organisational Strategies to support poorly performing and 'at risk' junior medical	

		Ms Julie Andrews	**Dr Pauline Lyon**	**Ms Denise Curran**	staff **Dr Alison Dwyer**	student, University of Queensland, School of Psychology
1625 - 1645		Measuring Performance - A Private Hospital Perspective. **Sue McKean**	"Better Workplaces" Staff Opinion Survey – Workplace Culture Improvement #10 **Ms Jan Phillips**	Demonstrating the power of us– the development of the Anaesthetic Crisis Management Manual **Mr Peter Hibbert**	Safe Doctors – Fair Systems; supporting clinicians to give safe quality care **Dr Craig Margetts**	**Dr Luis Prado**, Director Medical Services, Wesley Hospital, Brisbane **Professor Rick Iedema**, Professor of Organizational Communication Associate Dean (Research) Faculty of Humanities and Social Science University of Technology Sydney
1645 - 1715	Q&A with SPEAKER PANEL	Q&A with SPEAKER PANEL	Q&A with SPEAKER PANEL	Q&A with SPEAKER PANEL	Q&A with SPEAKER PANEL	Q&A with SPEAKER PANEL

1715-1845	Welcome Reception	*Great Halls 3 & 4*

Notes

Patient safety: putting it all together

D. Parker,
Head of Division of Psychology, University of Manchester

There are commonalities in the way in which approaches to risk management and safety have developed over time in many high-risk industries. In this presentation I will outline several such approaches and consider their application to quality and safety in healthcare, drawing on my experience working with the oil and gas industry. The main focus of the presentation will be on a methodical approach to tackling safety issues through a safety management system (SMS). Put simply, an SMS reflects an integrated approach to the identification and management of hazards. The basic components of an SMS will be outlined and its contribution to a well-developed patient safety culture discussed, together with the potential benefits of this approach to us, whether we are clinicians, managers, members of the public, policy makers, or service users.

Engaging non procedural general medical staff in quality improvement activities: results of the general medical indicator project (GMIP)

Caroline Brand[1], Simon Lam[2], David Smallwood[2], Carol Roberts[1], Alexandra Gorelik[1], David Russell[2]
[1]Royal Melbourne Hospital, Clinical Epidemiology & Health Service Evaluation Unit, Melbourne, Victoria, Australia, [2]Royal Melbourne Hospital, Division of Medicine, Melbourne, Victoria, Australia

Background: Major gaps in patient safety for hospitalised patients and suboptimal integration of evidence into practice has resulted in an interest in measuring clinical performance within a systems approach to improving quality of care. Process quality indicator sets provide a tool that has intuitive attraction to the 'point of care' clinician and can be applied as an integral part of education on the wards for junior medical staff. However, these are not routinely used by non-procedural general medical clinicians.

Aim: This paper describes the development, implementation and evaluation of a set of quality of care indicators for use by non procedural general medical clinicians.

Methods: *Indicator development:* The set of process indicators was developed using a 'bottom up' approach based on consultant physician perceived gaps in best practice, literature evidence for an association between the process of care and patient health outcomes. Where possible, existing validated indicators were used with adaptation of numerator and denominator to allow for contextual issues and define eligible/excluded patients. The chosen indicators were relevant to inpatient care.

Implementation: Implementation was targeted at consultant (SMS), Registrar (R) and Junior medical Staff (JMS). Strategies were evidence based or tailored to overcome known barriers.

Evaluation: A 'before and after' design was used to measure adherence to indicator recommendations, with three pre-time points (2003-5, 2004, 2005) one (2006) post-implementation. A structured medical record (paper based system) audit of a random sample of November discharges was used to document adherence to recommendations for care each year. A general medical staff survey in December 2006 was performed to assess awareness of the project, implementation activities and resources (JMS orientation, registrar packs, peer review and grand rounds meetings, posters and reminders) as well as perceived utility and burden of the program.

Results: The indicators included use of low molecular weight heparin (LMWH), Chronic Heart Failure (CHF) use of ACE inhibitors, B Blockers, rehabilitation referral, Chronic Obstructive Pulmonary Disease (COPD) rehabilitation referral, diabetes assessed for foot and eye complications, cognitive assessment on admission, assessment and treatment of low trauma fracture (LTF), and provision of written care plans for management of warfarin. There was variation in documentation of adherence to indicators between years and trends in improvement over time for most indicators. The survey response rate was 39% (57% SMS, 62.5% R, 26% JMS). Project awareness was; 92% SMS, 73% R, 53% JMS. The indicators were considered useful by 83% SMS, 53%R, 58%JMS. The program changed practice for 50%SMS, 53%R, 50% JMS. 75% SMS, 73% R and 74% JMS would recommend the program to others. A small number, 6.5% respondents, found the program of significant burden.

Conclusion: Non-procedural general medical process-of-care indicators were adopted with general approval by general medical clinicians. The indicators have now been taken up by a wider group of hospitals. In response to ongoing barriers to documentation, a 'discharge indicator checklist' has been developed to ensure better documentary compliance. The barriers and solutions to engaging clinicians in performance measurement will be discussed.

Chronic disease management in the Australian community setting: Approaches to evaluation using cross-jurisdictional record linkage

David Preen[1], D'Arcy Holman[1], Jon Emery[2]

[1]School of Population Health, The University of Western Australia, Perth WA, Australia, [2]School of Primary, Aboriginal and Rural Health Care, The University of Western Australia, Perth WA, Australia

In Australia, chronic diseases account for ~70% of the total disease burden and are a national priority area, with many initiatives endeavouring to improve outcomes. There is also growing evidence that timely provision of ambulatory medical care maintains population health and avoids unnecessary hospital use. While continuity-of-care is a hallmark of successful ambulatory care, the evidence in support of its importance for chronic disease is mixed.

One method of evaluating chronic disease management, on a whole-population scale, is that of medical record linkage. Commonwealth and state policy-makers and health planners have increasingly recognised the benefits of data linkage. Its application to the development and evaluation of health services delivery, health outcomes and health policy is now a top priority in the National Health Information Development Plan and is included as a key priority capability area in the strategic roadmap of the National Collaborative Research Infrastructure Strategy.

The WA Data Linkage System, established in 1995, is unique in Australia and constitutes a powerful source for conducting health services and outcomes research on an entire population within an Australian setting. It combines seven core WA health datasets linkable to >30 external research databases. Formal links have also been established with Commonwealth Medicare, Pharmaceutical Benefits Scheme (PBS) and aged care data.

Recently work within our school has commenced on applying cross-jurisdictional record linkage to study primary care management of various chronic diseases. One major four-year project aims to: i) determine the effects of intensity and periodicity of general practitioner visits on a range of ambulatory care sensitive chronic diseases (ACSCDs); ii) measure the effects of Medicare's Enhanced Primary Care (EPC) program on disease outcomes in seniors with ACSCDs; and iii) ascertain the effects of continuity of primary medical care on chronic disease outcomes in seniors with ACSCDs. This project also strives to demonstrate a model of best practice in community participation in research.

Specifically, the project harnesses the unique cross-jurisdictional linkage facility of the WA Data Linkage System in order to link Commonwealth Medicare and PBS data to WA inpatient, death and other records in all people aged ?65 years in WA from 1990-2004 (~150 million records, ~0.5 million seniors). The study measures the effects of intensity and periodicity of ambulatory care on disease progression in seniors with seven ACSCDs: diabetes, seizure disorders, hypertension, angina, heart failure, COPD/asthma and dyspeptic diseases. Study features include: multiple cohort designs with wash-out periods to reduce reverse causation bias; a new periodicity score for GP service use; adjustments for socio-demographic factors, comorbidity, initial illness severity and contact with specialists; assessment of modification of effects of GP visits in seniors living in households, hostels and nursing homes; and validation of ACSCD ascertainment and severity methods.

Work is ongoing and preliminary results are expected by mid-2007. This presentation will outline the work performed to date and resulting findings in addition to future plans to investigate chronic disease areas of public health significance.

Variable life adjusted display – a new methodology highlighting variation to improve quality of hospital care

K Sketcher-Baker and Chris Hall

Background: Identifying and acting on variations from good practice is one of the critical tasks of clinical governance. A new initiative Queensland Health has adopted to assist in achieving this task it the use of Variable Life-Adjusted Displays (VLADs) which are based on administrative data to monitor outcomes of care in Queensland hospitals.

Methodology: To monitor 31 clinical indicators over time, Queensland Health uses the Variable Life Adjusted Display (VLAD) tool developed by Sherlaw-Johnson[1]. The VLAD is a quality monitoring tool which provides an easily understandable graphical overview of clinical outcomes over the course of a selected period based on data from the Queensland Hospital Admitted Patients Data Collection (QHAPDC). When used with mortality as the indicator, it displays estimated statistical lives gained by plotting the cumulative difference between expected and actual outcomes over a series of patients, ordered by discharge date, within a hospital. It also has a flagging mechanism which indicates when to further investigate the indicator. This methodology allows hospitals to review performance more timely and on a more frequent basis as opposed to the old methodology which reported variances of individual hospital versus peer and state annual outcome rates.

The occurrence of a flag should not be immediately interpreted as indicating good or bad performance as there are many possible explanations as to why the VLAD will flag, one reason being simply chance. Where investigation is initiated, it has been suggested to hospitals that the pyramid model of investigation be adopted. In summary, the pyramid model of investigation suggests a hierarchical approach to identify causation. Under this model, factors at the base of the pyramid (data, case-mix, structure of resource) are more likely to be causes than factors at the apex (process of care, professional).

VLADs for the 31 clinical indicators were released in March and will be updated and disseminated to public and private hospitals on a monthly basis. Hospitals are required to report on investigations and action plans of flagged VLADs post 1 July 2006 within 30 days to their respective Clinical Governance Units.

Results: Whilst it is early days for Queensland Health in the release of VLADs, investigations of both positive and negative flags reported to-date reveal variations due to data, case-mix, structure of the resource, process of care and professional issues. Investigations received includes management plans to be implemented to correct unfavourable results revealed through investigation. For those indicators where investigations were positively flagged as a result of process of care issues, results are to be provided to clinical networks with the aim of improving hospital services state-wide.

Discussion: The VLAD approach, as implemented in Queensland has led to more frequent investigations by hospitals and clinicians. VLADs do not provide definitive answers about the quality care. They more closely resemble techniques from the area of statistics known as exploratory data analysis and, within that framework, should be used to develop theories about why variations in reported outcomes occur and suggest possible solutions, be they ways of improving data quality, improving casemix adjustment, or implementing system changes to improve quality of care. What is most important about the approach is not just that there is monitoring but that the monitoring is tied in with systems that ensure that investigation, learning and action occurs as a result of a flag.

[2] C. Sherlaw-Johnson, A method for Detecting Runs of Good and Bad clinical Outcomes on Variable Life-Adjusted Display (VLAD) Charts, Health Care Management Science 8 (2005) 61-65.

Queensland: Beyond Bundaberg – Consumer, clinician and corporate perspectives

S Duckett, K McNeil, C Herbert, B Kent

Speakers: Dr Stephen Duckett - Executive Director Reform and Development Division- Queensland Health

Dr Keith Mc Neill – Senior Staff Specialist TPCH and Chair Director Generals Clinical Advisory Group

Ms Cheryl Herbert – Chief Executive Officer Queensland Healthcare Quality and Complaints Commission

Ms Barbara Kent – Lawyer and consumer member of Queensland Health Patient Safety & Quality Board

When a letter from Toni Hoffman, an intensive care unit nurse, and colleagues was read in parliament in March 2005, few could have predicted the events that would follow. It became clear that an incompetent surgeon had been allowed to continue to practise major surgery in Bundaberg, despite multiple complaints from staff. When it was revealed by a simple Google search that he had been de-registered in the United States, the now infamous Dr Patel, or *Dr Death*, as he was later known, promptly returned to the United States.

The resulting Davies Commission of Inquiry found that Dr Patel caused the death of 13 patients at the Bundaberg Base Hospital. This inquiry and the Forster Administrative Review of Queensland Health, found major systemic problems in the Queensland public health system which went well beyond Bundaberg and ultimately led to a complete shake-up of the Department with the minister, director-general and his deputy, being dismissed.

The response from Government was swift and unprecedented, with a $6.367 billion package in just over 5 years to 2010-11. The focus of the new money was on staff, services and better systems to ensure safety and quality of care.

This session provides an opportunity for delegates to hear what has changed in Queensland Health since the Davies Report was released in November 2005. There will be perspectives from the corporate reform leader, senior clinician, consumer representative and chief executive officer of the Healthcare Quality and Complaints Commission, itself a product of the reforms. The panel discussion will provide delegates with the opportunity to participate in what should be a fascinating and session.

Using audit data to develop a predictive model of success for endovascular repair of abdominal aortic aneurysms

Maggi Boult[1], Rob Fitridge[2], Mary Barnes[3], Guy Maddern[2]

[1]Royal Australasian College of Surgeons, Stepney, Australia, [2]University of Adelaide, the Queen Elizabeth Hospital, Woodville, Australia, [3]CSIRO, Glen Osmond, Australia

Purpose: To describe a predictive model of success developed for patients who are considering endovascular repair of abdominal aortic aneurysms (EVAR).

Methodology: Vascular surgeons in Australia contributed to an audit of EVAR conducted by the Royal Australasian College of Surgeons (RACS) on behalf of the Australian Government Department of Health and Ageing. Pre-operative and operative information was received for 961 patients who underwent the procedure between 1 November 1999 and 16 May 2001. This cohort of patients has been followed since their original procedure with a view to examining the mid- to long-term safety and effectiveness of the procedure. Data-linkage with the National Death Index was used to provide accurate mortality information.

A statistician applied generalised linear models (logistic regressions) on the audit data to predict measures of success. Stepwise forward logistic regressions were used to select which of the preoperative patient variables were included in each success measure model. From this information, an interactive Microsoft Excel program was designed to enable surgeons to evaluate the predicted likelihood of success.

Results: The model uses eight predictor variables to assess relationships with various measures of success. Success measure were technical success, likelihood of re-interventions, graft complications, migration, conversion to open repair, rupture, endoleak, mortality and survival. Copies of the model (Excel spreadsheet) were circulated to members of the audit reference group and other specialist vascular surgeons for comment. Clinical feedback was used to further refine the model and improve its utility.

Conclusions: The predictive model is available to vascular surgeons through the audit office and on the RACS website. It was developed as an aid for surgeons and patients to help the EVAR decision-making process. Surgeons and patients can discuss the patient's likely outcomes (e.g. complications and survival likelihood) to better inform the EVAR decision.

Self-assessment of quality indicators in prescribing and use of medicines across settings

Judith Mackson, Sheena O'Riordan, Angela Wai, Holly Parsons, Kim Barry

National Prescribing Service, Surry Hills, Australia

Introduction: NPS is an independent organisation supporting quality use of medicines by providing information, educational activities and opportunities for quality improvement activities. Quality indicators are used in general practice, pharmacy practice, residential aged care facilities and hospitals for quality improvement in prescribing and use of medicines.

Methods: A range of indicators and implementation cycles have been developed. The indicators span the domains in quality use of medicine: judicious use (e.g. rate of use of antibiotics in respiratory tract infection), appropriateness of use (e.g. use of PPI in GORD > 8 weeks, use of ACE inhibitor in diabetes with proteinuria) safe and efficacious use (e.g. washout period between antidepressants, achievement of target blood pressure with multiple antihypertensive agents). In acute postoperative pain indicators measure drug use, pain control and communication. In aged care facilities the long-term use of hypnotics is examined.

Results: In general practice improvements have been seen in management of hypertension. Achievement of target BP increased 58% to 70% (from 2003 to 2004), proportion of thiazides used at high-dose decreased from 33% to 11% (2000 to 2004) and concomitant use of drugs which exacerbate hypertension decreased from 24% to 17% (2001 to 2004). In separate audits of drug use on type 2 diabetes from 2001 to 2005 improvement occurred in achievement of $HbA_{1C} \leq 7\%$ which increased from 44% to 49%, monitoring of renal function in patients using metformin increased from 62% to 76%, use of more than one anti-diabetic agent increased (43 to 46%), and proportion treated for hypertension increased from 67% to 77% and use of lipid-modifying agent increased from 46% to 57%. An audit of GP antibiotic prescribing for urinary tract infections examining the dosing interval and duration of antibiotic therapy showed improvement on re-audit. In emergency departments a QI activity significantly increased guideline concordant antibiotic therapy in community acquired pneumonia from 18% to 29% and reduced use of third generation cephalosporins in low-grade severity.

Discussion: Key features of this model are that: (1) the clinical rationale for the indicators is clearly communicated to health professionals during the quality improvement cycle, and reinforced as key messages of educational strategies appropriate to the setting; (2) individualised feedback is given wherever possible and relevant; and (3) the health care professional or change agents in each setting drive the data collection and reflection on findings for improvement. All indicator toolkits are supported by a feedback cycle. New approaches include provision of a suite of toolkits for measurement of indicators in various settings and exploring how best to support aged care facility staff through the feedback cycle. Among the longer term strategies will be inclusion of indicators in health professional standards of practice and accreditation systems.

Developing a national audit of surgically-related deaths with a web-based system for data entry and linkage

Astrid Cuncins-Hearn, Uma Bhattacharyya, Wendy Babidge, Guy Maddern

Royal Australasian College of Surgeons, Adelaide, Australia

Introduction: The Australia and New Zealand Audit of Surgical Mortality (ANZASM) program has been created as a national network of regionally-based audits whose primary aim will be to review surgically-related deaths. Participating regions must agree to the collection of a common data set as well as adherence to a standardised peer review assessment process and regional reporting. This abstract outlines the staged implementation plan, regional governance structures and qualified privilege arrangements required to create a national framework for this auditing activity with particular emphasis on providing insight into the potential obstacles and advantages for creating a web-based system to facilitate both data entry and linkage.

Methods: From the beginning of 2005 we have had acceptance from health departments in all states and territories in Australia as well as the Ministry of Health in New Zealand to be part of a national data collection. The agreement sought adherence to the collection of a common data set and a standardised peer review assessment protocol. A regional governance structure was proposed that promoted regional autonomy whilst maintaining a viable national framework. A complex national governance framework was also created, managed to support the regional audits led by a committee including officials from the national organising group, regional audit representatives and consumer representation. Regional management committees with representation from a variety of surgical specialties and consumer representation were also created. Once a region agreed to participate, a regional audit action plan was launched including the finalisation of contractual negotiations with the departments of health, recruitment of audit staff and initiation of regional audit activity. To facilitate data entry across regions, a web-based data entry system was created to maximise data security and optimise regional and national reporting of audit findings.

Results: As of February 2007, three regions are collecting audit data with three other regions initiating audit activity within the next year. Two other regions have agreed to consider participation. A first version of the web-based national audit data entry system has been created which addresses the need for regional autonomy whilst allowing for the future creation of a national data set. This will also satisfy requirements related to data security and Commonwealth qualified privilege protection.

Discussion: The Australia and New Zealand Audit of Surgical Mortality has been successful in creating a viable national framework. Its early success has been due to the financial commitment by participating state departments of health and participating regional groups who have supported the standardisation of a common data set and peer review assessment protocols across their participating regions. Web-based systems are ideal in Australia and New Zealand by providing an excellent solution for collecting surgical audit data in a readily accessible but secure environment with potential for system improvement as surgical audit and information technology evolve.

Board of management reporting on clinical governance in community health

Vicky Mason

Darebin Community Health

In 2005 the Victorian Healthcare Association community health members recognised the need to improve systems for clinical governance in the sector. The Clinical Governance in Community Health project began with the objectives of:

- Developing a model and accompanying tools applicable to Victorian Community Health Services (CHSs);
- Supporting sector-wide education strategies;
- Promoting current and future work undertaken by CHSs around clinical governance;
- Developing an advocacy role to share resources and networking.

This presentation will focus on one of the outcomes of the project, the development of Clinical Governance Board of Management (BOM) Reporting Guidelines and Checklists.

Board members had expressed concerns about their ability to fulfil their clinical governance role. Through a process of consultation with current board-members and managers from the sector, the project developed a set of guidelines and checklists that outlined common reports in current use in the sector that could be modified for use as indicators for reporting to the BOM on the quality and safety of services.

The checklist outlines the indicators of quality and safety that could be considered by the BOM in the areas of governance, human resources, client services, information management and client health and safety. The checklist allows community health services to structure the content and format of their report to the BOM to suit their individual organisation reporting and committee structure. The guidelines provide the background to clinical governance and outlines board of management responsibilities.

The checklist provides a valuable resource for assisting Victorian community health services in addressing the quality and safety of clinical services at a governance level. The checklist also functions as an audit tool for the BOM to evaluate their performance. The associated guidelines can be used in orientating new board members and for reviewing the clinical governance arrangement at an agency.

Coordinated, integrated health care and its implementation vacuum

Ann Revell

Developing a quality framework for a community health setting: A quality initiative for beginners

Linda McCrorey, Leonie Coleman

Monash University, Gippsland, Australia

Developing a quality framework for a large rural community health service with multiple sites required an innovative and inclusive process. A small working group was developed and a series of questions were posed to the staff: "What does quality mean to them? What quality activities are staff currently undertaking? And what can they do better?" This information was collected and provided to the working group. All information was transcribed into spreadsheets and each question was analysed by the working group and themes were identified. These themes became the key dimensions and principles of quality. The dimensions – leadership, learning, organisation, accountability and community needs – are vital to the growth of the organisation and underpin the framework. A common definition for quality was developed by the working group – Quality is a shared responsibility and is a means by which the organisation knows our community is receiving the best available service. It assists the Board to be confident the organisation is meeting legislative and statutory requirements. The draft information was provided to the staff and they approved the work completed. The quality framework was further developed. The framework illustrates the key dimensions of quality: the organisational standards, (a combination of the numerous program standards and guidelines, cross-referenced with the organisations standards) and the twelve quality principles.

The framework encompasses all the organisational planning documents including strategic, business, directorate and program plans, risk management, OH&S, CALD, health promotion and the quality work plan. This quality framework details activities both external and internal and provides the Board and Executive with a concise statement of goals, performance indicators, time-lines and delegated responsibility, and is therefore an integral tool for clinical governance. Reflecting on the belief "quality is a shared responsibility" the organisational structure has been developed to actively involve all staff in continuous improvement activities. All staff have roles and accountabilities as part of the framework.

The quality framework is a visual interactive tool which contains all the information for the framework and provides the front for the quality framework and the document with all the content and background information sits behind it. The framework is currently being viewed and it is anticipated the framework will improve and support recently developed clinical governance tools and will revisit the organisations vision, mission and values.

The quality framework wheel is interactive and each part of the circle provides further information.

Comprehensive evaluation of a simulation-based undergraduate medical course in patient safety

Brendan Flanagan, Julia Harrison, Stuart Marshall

Southern Health Simulation and Skills Centre, Melbourne, Victoria, Australia

Introduction: This presentation will describe the development, delivery and evaluation of a comprehensive, integrated patient safety course for final year medical students.

At the 2006 SQHC conference initial work was presented regarding development and delivery of a course integrating patient safety themes such as communication, teamwork and why errors occur into the final year of an undergraduate medical curriculum. The subject has been allocated 144 hours by (name of university withheld for blind review purposes), including 5 contact days at the (name of institution withheld) Simulation Centre. A simulation-based "blended learning" approach using online discussion groups, interactive lectures, workshops and simulated clinical scenarios present structured learning modules around each topic. We will present the results of the delivery and evaluation of this program and its innovative educational techniques.

Method: The course was evaluated by a multimodal approach to gauge the effects of the learning on knowledge, skills, attitudes and behaviours of students on topics related to the safety of patients. Evaluation forms completed after each contact day and at completion of the subject were designed to assess the course's effect on change in practice as well as the perceived strengths and weaknesses of each of the modules and their delivery. Evaluation forms included open questions as well as Likert category responses allowing both qualitative and quantitative data capture. Attitudes to safety have also been evaluated using a patient safety attitude survey developed especially for the medical student group from other tools in healthcare. OSCEs (Objective Structured Clinical Examinations) have been used to assess knowledge and skills of the students on the final contact day.

Results: Overwhelmingly positive responses have been received for this course from both students and university faculty members, and the course has won an institutional award for innovative teaching methods. All of the 175 students completed the course requirements and assessment components. The majority of the students gave examples of ways that the course had helped them think and react to the workplace differently. The results of a full, independent evaluation of the course will also be available at the time of presentation.

Discussion: A five-day course in patient safety achieved its aims of improving knowledge, skills attitudes and behaviours regarding patient safety in doctors about to start work in the clinical environment. The current research has focused on educational methods employed and generated encouraging data on change in practice and attitudes to safety. Interest in the subject has spread to the postgraduate domains, and elements have been developed for a state-wide training program. Integration with the training of other health care professionals is being developed. Randomised controlled trials of aspects of the course are underway, including research into team performance, information sharing, and communication skills.

Consumers: A driving force

Shirleen Wickham

Royal Hobart Hospital, Hobart

All hospitals are fortunate enough to have market research information to hand free of cost on a daily basis through complaint and commendation processes. What we do with the information that is provided is the challenge – do we give it the value that it deserves? How can we capture the information and work on it to improve both the quality and the safety of the services that we all provide? All too often this information can be lost and with it is the lost opportunity to further develop the relationships that we have with consumers and the chance of utilising an untapped wealth of knowledge and experience.

One of the challenges that we all face is that much of our work is reactive – we react to a problem or often to crisis, it is difficult to change an organisations culture to become more proactive. Utilisation of consumers can help us to achieve this. To do so involves trust, respect and value of the assistance that is provided. To get the most out of consumer involvement it is imperative that we provide consumers with challenges and tasks that are meaningful and have significance to the organisation.

To capture this resource we have developed a new structure and model to both foster and promote consumer involvement creating opportunity to utilise consumers in obtaining feedback on system issues and utilising the information gained to drive change within the organisation.

Information is gathered from a variety of sources including complaints and commendations, focus groups, interviews of consumers and telephone polling – with consumers being utilised in all aspects of the processes used to gain the information.

The quantitative and qualitative data is analysed with recommendations made. Consumers are then utilised in assisting with the development and implementation of new policy, procedures and services.

Achievements to date have seen a 400% increase in commendations, a growth of 300% of consumer involvement through both consumer representation and volunteer service, 90% decrease in complaints relating to waiting times at clinics, introduction of new services aimed at increasing patient comfort including a visiting service, guide service and refreshment service, development and implementation of a project – "know your rights".

The program whilst in its infancy is proving to be of benefit, giving greater insight into the complexities of care as seen through the patient/consumer eyes. It is raising potential opportunities to increase safety in care through providing better understanding of issues surrounding informed consent processes, discharge planning and communication challenges.

Importantly it allows consumers and staff to work in partnership to identify issues, develop strategies and implement changes which makes the system work better for all.

Consumers make a difference to health professional education and accreditation of training courses

Antonio Russo

Governing Committee Member, Consumer's Health Forum

Time and again consumer consultations show that communications between health professionals and consumers need to improve for safety and quality in health care to improve. Consumers say they need information they can understand to help them achieve safe, good quality health care. They need health care providers to listen to their experiences as consumers as well as explain treatments, choices, costs, what might go wrong, who else could help, what might help at home. Many times these communications need to happen when consumers are not well and there is so much to remember that saying it once or twice or handing out an information sheet is not enough.

Several years ago the Consumers' Health Forum of Australia (CHF) proactively started to seek places for consumer representatives on a range of committees and panels involved with developing undergraduate medical courses, health professional education or accreditation of medical training courses. The involvement of these consumer representatives has extended committee discussions in a constructive way. Collectively, committee members have started to raise different ways of thinking about communications issues. There are benefits for health professionals as well as consumers and confidence among health professional groups in having these conversations with consumers is on the rise.

Every patient every time – Improving hand hygiene, patient identification and personal protective equipment practices in the emergency department of a large metropolitan hospital

Eveline Soon

Melbourne Health - Royal Melbourne Hospital, Victoria, Australia

Introduction: The *Every Patient Every Time* (EPET) Project, a novel strategy implemented in a tertiary emergency department (ED), facilitated significant improvements in staff compliance with key practices in emergency healthcare. Several significant factors contributed to its success.

Method: ED Quality & Safety Committee (QSC) defined the initiative's objectives and expectations for all staff at the outset. This was communicated to all staff via the ED Executive, stipulating 100% commitment to cultural change and introducing new standards for hand hygiene (HH), patient identification and personal protective equipment (PPE).

Evidence indicates that current compliance with respective policies in these areas is poor. The project's stipulations were: HH will be observed before and between all clinical procedures; all patients in the ED waiting room will have identification label (no procedure, drug administration or patient movement will occur without label check); and protective eyewear and gloves will be used for all high infection-risk procedures. Staff members were encouraged to respectfully say "Every Patient Every Time" to any colleague(s) seen to be breaching policies.

The project was driven by senior clinical staff; reminders were given at every handover and by posters. A five-week reinforcement strategy was undertaken: reminders were implemented the initial two weeks, then removed the following two weeks, before a re-introduction in the final week. Project drivers worked rotating monitor shifts, wearing printed t-shirts (as pictured) bearing the "Every Patient Every Time" motto. Their tasks were to encourage and monitor compliance. A two-day spot audit was conducted at the project's completion to measure staff compliance with policies

Results (% of staff or cases compliant)

Pre EPET:	• HH – 36% (organisation wide) • Anecdotal data (i.e. staff feedback and observations) indicate low number of patients in waiting room are provided wristbands; this applies to a lesser extent for patients in ED • 4 splash incidents due to protective eyewear non-compliance
Post EPET:	• HH – 98% (n = 30 nursing; 21 medical) • Patient identification – 91% of patients in the ED; 54% of patients in the waiting room • 1 splash incident due to protective eyewear non-compliance • PPE – 98% (gloves); 60% (glasses); 58% (glasses and gloves) (n = 37 nursing; 20 medical)

Discussion: The results demonstrated marked improvement across all three areas. Donning protective eyewear and labelling patients in the waiting room are areas for improvement. The project's success was principally due to leadership; persistent commitment from senior clinicians facilitated changes by role-modelling, and education re benefits for staff and patients. Traditional barriers separating professional discipline, status/position, age and gender were dismantled. All staff were empowered to enforce policies or remind their colleagues with a firm but non-confrontational approach. The catchphrase *"Every Patient Every Time"* was an effective reminder "tool". Staff could use it in a respectful, non-aggressive manner; it was not resource-intensive, yet catchy. Monitor (with t-shirt) shifts will continue on a monthly basis. This initiative may be rolled out on an organisational scale in recognition of its effectiveness and sustainability.

Credentialing and clinical privileging – Protecting patient safety

Shane McGuire

University of Melbourne, Melbourne, Australia

Credentialling and clinical privileging procedures for dental practitioners are in place with the objective of improving the safety and quality of the care provided by the organisation. In addition, effective credentialling and clinical privileging processes protect dental practitioners by ensuring that services are only provided in environments that support safe service provision. The organisation has attempted to employ a considerable degree of rigour with which the process is conducted and documented. The process was introduced in February 2004 and reviewed on two occasions since. Using the Australian Council for Safety and Quality in Health Care seven principles for credentialling and clinical privileging (from Draft Credentialing and Clinical Privileging Standard September 2003) and the National Standard for Credentialing and Scope of Clinical Practice (2004), the process has been applied across a state-wide dental service, including a teaching dental hospital, for all clinicians providing dental services to public dental patients including:

- Dental practitioners
- Radiographers
- Registered nurses
- Anaesthetists
- University faculty involved in clinical teaching
- Dental specialists in training

It is recognised that the organisation has a legal responsibility to ensure that services are provided in circumstances where safety and quality of care have been properly addressed and patient safety protected. The development of the process has resulted in the creation of a committee charged with the responsibility of:

- Overseeing approvals and appeals
- Developing and regularly updating policy, procedure and relevant documentation and processes
- Commissioning the development of a database with alerts for expired credentialing and privileges
- Providing regular reports to the organisation's Board Quality Committee
- Developing links to the HR information system which identifies resignations, new employee commencements and
- Annual checks on clinician's registration with the appropriate regulatory body.
- This ensures all clinical staff are accounted for.

This presentation will provide an outline of the practical approach taken by the organisation to enlist the cooperation of the clinicians, managers and the teaching faculty to ensure the success of a difficult process. It will also include examples of reports provided to the Board's Quality Committee.

Safer Systems Saving Lives – What did we find and lessons learned?

Alison McMillan

DHS Vic, Melbourne, Australia

Introduction: Safer Systems – Saving Lives (SSSL) was a national collaborative that engaged both public and private hospitals throughout Australia in improving patient care and preventing avoidable deaths through the implementation and measurement of six proven interventions. The SSSL project was adapted from the Institute for Healthcare Improvement's (IHI) 100K Lives project.

Method: The basis of the project was using a 'care bundle' approach. That is, a group of evidence-based practices that when implemented together for all patients receiving the targeted care result in better patient outcomes; where the science supporting each bundle component is sufficiently established to be considered the standard of care. A 'care bundle' is a way of measuring the process of clinical care by selecting a small number of best practice care components which aims to reducing variability in care administration leading to improving quality and equity of patient care by providing continual, timely feedback to clinical professionals.

The interventions were:

- Preventing ventilator-associated complications
- Preventing surgical site infections
- Preventing central venous catheter related bloodstream infections
- Implementing rapid response systems
- Preventing of adverse drug events
- Improved care for acute myocardial infarction

Both process and outcome measures where developed for each of the six care bundle and hospitals were required to submit sample data monthly in to a web-enabled 'e-form'.

The IHI collaborative model was used in this project because it brings together evidential, experiential and improvement knowledge.

Findings: In the preventing ventilator-associated complications over half of all sites could demonstrate a 50% compliance with the bundle. A quarter of all sites showed 100% compliance with the central venous catheter (CVC) bundle, and some had a consistent zero bacteraemia rate associated with CVCs. (Data on all care bundles will provided at presentation).

Lessons learned: The methodology of care bundles using both process and outcomes measures is sound. However, a great deal more work is required on finding effective and easily measurable patient outcomes is required in the future.

Electronic care pathways

Dr Simon Eccles

National Clinical Lead for Hospital Doctors

Imagine if all you patients recieved the best treatments and only the most appropriate investigations no matter which member of the multidisiplinary team was seeing them. Imagine if all care delivery was recorded in one easy to find place and with minimal duplication of effort. This is the effect of introducing excellent electronic care pathways (ECPs).

The appropriate adoption of good electronic pathways of care has the potential to save more lives than the advent of antibiotics. All clinicians wish to offer their patients the best care they can but relatively few do so. One recent study showed less than 30% of US patients with Atrial Fibrillation recieved optimum care. ECPs can make it much easier for clinicians to do the right thing.

ECPs also allow those managing healthcare to measure the delivery of care - to measure how we follow the process of care as well as the outcomes. This in turn allows us to improve the pathways and then remeasure - a virtuous circle of improvement.

Dr Simon Eccles, Clinical Director of England's NHS Connecting for Health programme, will explain different approaches to achieving this goal of universal structured coded ECPs and the effects they may have on both quality and safety of healthcare.

Implementation of e-health in Australia

Dr Ian Reinecke

Chief Executive, National E-Health Transition Authority

Dr Ian Reinecke is head of Australia's National E-Health Transition Authority (NEHTA). NEHTA'S mission is to set the standard, specification and infrastructure requirements to achieve secure, interoperable electronic health information (e-health) systems. Dr Reinecke will address Australian e-health reform, its ultimate benefits for the healthcare sector and NEHTA's contribution to this. He will examine the need for a national e-health framework and the current and future e-health priorities for a safer, more effective healthcare system.

A consumer view of quality and safety through electronic health records

Coral Rizzali

Discusses the proven benefits of the HealthConnect trial in Townsville and its extension into "Health e-N.Q." at the Townsville Hospital.

Redesigning care

Margaret Martin, Mike Ward, Tony O'Connell, Tanya Gawthorne, Belinda Rickard

Outpatient Reform at Austin Health

Belinda Rickard[1], Melinda Cosgriff[1], Rhyl Gould[2]

Austin Health, Heidelberg 3084 Outpatient Department (1) and Cancer, Spinal & Outpatient Services Clinical Service Unit (2)

Background: A key Austin Health objective in Outpatient Reform is to reduce waiting times for specialist care. Broadly speaking there are two strategic approaches to achieving this objective. The first is to increase hospital capacity and so achieve faster throughput of patients. The second is to reduce demand for specialist care by finding alternatives to outpatient treatment.

Methods: The principles and methodologies of Lean Thinking and Six Sigma have been used in combination to achieve gains in patient flow through the Outpatient Department at Austin Health.

Six areas were identified as priority:

1. Improving Access
2. Policy and governance development
3. Environmental improvements and creating capacity
4. The patient medical journey and related processes
5. Promoting discharges
6. Workforce role enhancement: Allied Health, Clerical Staff and Nurses

Results: A four-week reduction in average waiting time to receive specialist care, a percent gain in the number of new patients receiving treatment and two-fold improvement in the number of patients returned to their Primary Care Provider

Discussion: Lean Thinking and Six Sigma do have a place in Health Reform and when used conjointly significant reform can be accomplished.

Private hospital speaker – How the funds measure performance outcome

Measuring performance: the private sector perspective

Christine A Gee

National President, Australian Private Hospitals Association

The large-scale changes in the Australian health care system that have occurred over the past couple of decades have seen the private hospital sector evolve from a small cottage industry into a sophisticated and diverse industry sector. The owners and operators of private hospitals have invested in ongoing improvements in the safety and quality of their services, including measuring the performance of those services, in a variety of ways. This presentation will provide the perspective of the private hospital sector on measuring performance. It will describe the avenues by which the views of a diverse range of facilities contribute to and inform performance measurement in the private hospital sector and will also canvass possible future initiatives such as industry-wide benchmarking of performance. The presentation will highlight the ever-increasing burden of compliance on private hospitals, imposed through state and territory licensing regimes; state-based safety and quality bodies; accreditation agencies and private health insurance fund contracting arrangements. The presentation will argue strongly that this wasteful and counter-productive regime of overlapping and duplicative requirements presents the most critical obstacle to further progress in the efficient and effective measurement of performance in the private hospital sector.

The role of health insurance funds in improving quality and safety in health care

Julie Andrews

Group Manager, Health Services, Medibank Private

Measuring performance – A private hospital perspective

Sue McKean

Use of simulation labs to improve clinical skills

Marcus Watson

Associate Profess of Medical Education, The Skills Development Centre, Queensland

The traditional apprenticeship model used to develop and maintain skills in healthcare is increasingly being questioned by many people both within and outside the healthcare profession. In addition, the number of clinical placements available to healthcare students is dwindling as the health system moves to more efficient hospitals that manage higher acuity patients and staff working fewer hours. At the same time the public is becoming more aware of the haphazard nature of healthcare training and are demanding changes that will increase safety in line with other high risk industries such as commercial aviation.

Healthcare is following other industries by implementing simulations-based training for new staff and for the continuing training needs of the healthcare workforce. The use of simulations allows people to focus on a range of tasks from procedural through to high pressures team-based training. Unlike clinical placements, the use of simulations can guarantee that all students experience rare clinical events. One of the main benefits of continuing training simulation labs is the availability of a safe learning environment where clinicians can explore and develop team work.

In commercial aviation and nuclear power simulations labs are also used to credential professional before they are allowed to practice. Healthcare needs to follow suit to achieve higher levels of safety already well established in these industries. Similarly in commercial aviation and nuclear power new procedures are often validated on simulations before they can be implemented in the real world. In healthcare we require our pharmaceutical products to under go stringent testing. However, as yet we are unable to accommodate the same level of critical evaluation and validation for hospital procedures.

Healthcare must look to simulation to ensure that our clinicians gain the attitudinal confidence and clinical exposure in order to deliver safe and effective health care.

Improving patient safety and outcomes by changing the healthcare culture using Crisis Resource Management (CRM) principles

Pauline Lyon[1], Patricia Régo[2], Susan Hampton[3]

[1]Queensland Health, Brisbane, Australia, [2]University of Queensland, Brisbane, Australia, [3]Queensland Health, Brisbane, Australia

Background: Culture is a socially-constructed phenomenon which is generated through values, beliefs and assumptions, and expressed through structures and behaviours[3]. Organisational culture underpins team performance, and impressive clinical and operational improvements are associated with good teamwork and leadership[4].

Crisis Resource Management (CRM) programs were developed in response to evidence that 43% of adverse events in hospitals are non-technical and result largely from communication failure and lack of teamwork[5]. Healthcare professionals work together but they train separately and only work as a team at the point of care[6]. The culture in healthcare is such that it is difficult for staff to speak up if they perceive a problem with patient care; advice-seeking is welcomed but questioning performance is taboo[7]. Before significant improvements in the way healthcare workers interact with each other can occur, a fundamental change in this culture has to occur. Crisis Resource Management programs provide clinicians with a structured non-threatening protocol for managing, reviewing and analysing critical incidents.

Aim: The aim of this presentation is to describe the way that the use of CRM principles (role clarity, communication, use of resources, global awareness, personnel support) can empower clinicians (midwives, doctors) to implement cultural change at the coalface and improve patient outcomes. Another important element discussed is the identification by clinicians of systemic problems and their consequent contribution to the development of risk management strategies. The application of transferable CRM principles will be illustrated using the Maternal Crisis Resource Management course.

In particular, the implications for change management and patient safety will be explored in a discussion of the "hidden curriculum" of CRM training (e.g. identification of personal limitations, the value of teamwork, growth in interdisciplinary respect).

Methods: The Maternal Crisis Resource Management (MaCRM) course was developed in response to the findings of a major review[8] which reported the cogent need for 'highly developed communication skills' in doctors and midwives and for them to receive dedicated education and training so they may find 'a common ground for care provision'. MaCRM is two-day educational program which provides the opportunity for participants to upgrade their knowledge and skills. It uses scenario-based learning and structured debriefing in order to facilitate participants' review of their performance in the management of real-world clinical situations.

Results: Clinicians have not only identified significant increases in their expertise and confidence in the management of maternity emergencies, but also their increased interdisciplinary understanding which has improved communication and teamwork. Clinicians also report the use of the CRM principles to reflect upon and to analyse long-standing systemic problems collaboratively and their enhanced ability to contribute to the process of reviewing and updating risk management policies and practices within local clinical environments.

Summary: The most important outcome of the Maternal Crisis Resource Management course (and the use of CRM principles), however, has been the evidence of its potential to effect cultural change and thus enhance patient outcomes.

"Better Workplaces" staff opinion survey – Workplace culture improvement

Jan Phillips, Shaney Olsen
Queensland Health, Brisbane, Australia

Introduction: Workplace culture improvement is a major strategy driving reform within Queensland Health. The Better Workplaces Staff Opinion Survey and action planning process (the process) aims to achieve improvements in workplace culture through targeted district and divisional strategies. Research shows that workplace culture, and in particular organisational climate, has a strong association with organisational performance. NHS studies demonstrate a strong association between advanced human resource practices, including staff appraisal, teamwork and training and development with lower patient mortality (West, Borrill, Dawson, Scully, Carter & Anelay, et al 2002). Improving workplace culture through targeted action planning enables clinical and administrative staff to have input into changes in their work areas. The survey tool was designed specifically for Queensland Health. It comprises modules from the Queensland Public Agency Staff Survey (QPASS) and includes questions relating to trust in leadership, organisational management practices and working in a clinical environment (including clinical communication, multidisciplinary team approaches to patient care and clinical management practices). The survey also offers respondents the opportunity to provide free text comments.

Method: The survey is conducted by the University of Southern Queensland (USQ). By the end of 2007 all Queensland Health employees will have had the opportunity to complete the survey and attend presentations of results. To date 50% of the organisation has been surveyed. Both paper and on-line versions of the survey are available to staff. Participation in the survey is voluntary and confidentiality is maintained at all times. At the end of the three-week survey period the data is analysed by USQ who compile both an overall report and additional reports specific to districts and divisions. The districts and divisions then prepare action plans outlining improvement strategies based on the findings of the staff survey data. Funding is provided to implement cultural improvement initiatives. Districts and divisions are required to submit progress reports including an evaluation of the success of the initiatives.

Results: To date:

- Half of the Queensland Health workforce has had the opportunity to participate in the Better Workplaces Staff Opinion Survey, with a response rate of approximately 33%
- Participants from the first round of surveys are developing action plans based on the results of their surveys
- Participants who completed the second round of surveys are attending presentations run by USQ and staff members from Queensland Health
- Resources to improve workplace culture have been developed, including a website and a suite of tip sheets.

Discussion: The Process encourages Queensland Health leaders and change agents to be focused, responsive and innovative. It provides relevant and usable information to leaders and change agents directly from staff upon which improvements can be made; it encourages staff participation in all phases of the change agenda. Staff who feel consulted and included generally experience increased satisfaction in the workplace. Evidence suggests that increased satisfaction can lead directly to improved patient satisfaction and better health outcomes.

Strategic planning and change management

Christine Dennis
Director, Operational Strategy Department of Health, South Australia

Strategic thinking and planning is presented to managers as a rigorous and systematic process that forces clarification of purpose and unites all staff to channel their efforts to achieve positive organisational outcomes (Boyne and Gould-Williams, 2003). Strategic Planning is an example of one of the many tools that the health sector has adopted from the business sector in an attempt to manage an extremely complex and financially constrained system that often exists in conflict with political and professional pressures.

Unfortunately there is little evidence that the planning process and the production of a documented plan in any way impacts on the achievement of objectives (Swinehart & Zimmerer, 1995; Begun and Kaissi, 2005).

It has been suggested that despite significant effort and considerable resource in developing plans, most are destined to the 'shelf of dreams'.

The presentation will provide an overview of the strategic planning process and discuss the problems associated with strategic planning in a complex public health environment.

Building skills for redesign

Jackie Nankervis, Denise Curran

Clinical Practice Improvement Centre - Queensland Health, Brisbane, Queensland, Australia

A state-wide clinical process redesign program that has been underway for approximately 12 months across 15 sites is described. The effectiveness of this process redesign strategy to initiate and sustain system change to improve the patient journey will be discussed. With support from a program team member, 15 sites across the state have established process redesign initiatives to implement clinical improvements. Individual health districts approach the program with identified redesign opportunities to streamline patient flow within their own settings. Proposals are assessed and supported by the program if they meet the program's aim. The program's team train and support staff to apply process redesign methodologies, provide assistance to facilitate implementing the redesign initiative as well as assist with performance indicators and data analysis. Information sharing, including details of the initiatives undertaken, lessons learned and a discussion forum are accessible via a common webpage to encourage a state-wide network of districts involved in process redesign.

The success of the program to implement and sustain system change using a process redesign methodology on the state-wide level is currently being analysed. Common themes that sites have focused on have been identified including streamlining patient journeys through the ED, improving discharge processes and dispensing discharge medications. Examples of positive outcomes include a reduction in outliers, decreased levels of access block and implementation of initiatives to improve discharge processes. Key state-wide outcome indicators have also been developed to assist districts evaluate the results of their process redesign initiatives.

Key features of the program include using a consistent methodology for implementing process redesign initiatives across sites, transferring skills to district staff to encourage ownership and sustainability of process redesign and providing data analysis and evaluation tools. As a result this program demonstrates a model for implementing and sustaining process redesign initiatives on a state-wide basis.

Demonstrating the power of us – the development of the Anaesthetic Crisis Management Manual

John Williamson, Bill Runciman, Peter Hibbert, Klee Benveniste

Australian Patient Safety Foundation, Adelaide, Australia

Introduction: Crisis management is part and parcel of anaesthesia practice as every anaesthetist is required to handle rapidly evolving, life-threatening crises at a moment's notice. Cognitive science research and common sense tell us that no one thinks clearly in a crisis. The aim of this project was to produce a cognitive aid for anaesthetists during the most frequently occurring crises.

Methods and results: Taking example from other high stress occupations the anaesthesia Crisis Management Manual is based on data from 4,000 anaesthesia incidents reported anonymously by practising anaesthetists in Australia and New Zealand.

It was recognised that an algorithm response to any anaesthetic crisis first required the use of a generic "Phase 1" or "core-algorithm". This core algorithm would be one to revert to immediately when one becomes aware that something is wrong without yet knowing what it is. The 'core' algorithm with the mnemonic COVER ABCD A SWIFT CHECK was developed accordingly.

Following inter-rater reliability testing between reviewers, the first 2,000 AIMS Anaesthesia incident reports associated with general anaesthesia were analysed to determine whether the algorithm COVER ABCD A SWIFT CHECK would have performed better for the patient than the reporting anaesthetists.

It was found that the core algorithm would provide a functional diagnosis in over 99% of cases and would correct just over 60% of the problems in 40-60 seconds. It was recognised that the remaining 40% would then require the application of a more specific "sub-algorithm" for correction of the safety problem.

Volunteer anaesthetists were given sets of incident reports from the first 4,000 AIMS Anaesthesia incident reports, each set dealing with a specific clinical problem. Each sub-algorithm was then developed by the team reviewing that particular set.

A total of 24 sub-algorithms thus resulted (for example desaturation, laryngospasm, vomiting/aspiration, anaphylaxis, vascular access problems). Each set of reports was then subjected to full algorithm analysis, using the structured approach described above: namely COVER ABCD – A SWIFT CHECK, followed by its specific, respective sub-algorithm.

It was judged from these analyses that with the correct use of the core algorithm and then of the correct sub-algorithm(s) (if required), the resolution of the problem would have been better and/or faster in 1 in 8 of all the incidents. It was further judged that this approach would have been unlikely to have caused any patient harm in the other incidents.

Discussion: The development of the Crisis Management Manual demonstrates that the powerful solutions for specific clinical problems often lie with clinicians. The engagement of clinicians during the analysis and tool development phases was critical to the project's success and may be replicated when developing other tools. It also illustrates the utility of Level IV evidence and numerator-based data to characterise incidents and their prevention strategies.

Further testing, including using simulators, is recommended.

Supporting consumer participation within a large health service

Jennifer Ashby
Austin Health, Melbourne, Australia

Our staff have a commitment to seeking consumer, carer and community input to improve the safety and quality of services. To enable this to happen, we have a Consumer Participation Support Program.
Now in its third year, the Consumer Participation Support Program is a practical approach based on systems thinking. The aim is to increase organisational capacity through skill development and sharing of knowledge.

The program consists of:

- Creation of a Consumer Participation Support Officer (CPSO) position at the health service
- The CPSO provides one-to-one mentoring, advice and support for staff undertaking consumer participation activities in their departments and wards
- Staff training through workshops, e.g. involving consumers on committees
- Development of in-house consumer participation tools for staff to access on the intranet, e.g. reporting template for consumer evaluation of patient information material
- Consumer Participation Audits (annual) to track progress with audit findings reported in Patient Safety Week
- Production of one-page consumer participation information sheets emailed to staff and placed on intranet
- Peer support through sharing the experience of departments who undertake consumer participation activities
- Development of a 3-year Community Participation Plan that guides staff and commits the organisation to action
- Involvement in the Quality Co-ordinators Network. Consumer Participation is a standing agenda item each month
- Building on earlier "train the trainer" approaches that provided staff training and resources, e.g. Consumer Participation Resource and Training Kit.

Has it made a difference? We know from the Consumer Participation Audits that an increasing number of departments are involved in consumer participation with more methods of consumer participation being applied. We know that planning for consumer participation has increased due to the requirement for reporting through the quality business plans. We know through the training workshops that there is an increased confidence in undertaking consumer participation.

Plans for the future: The Health Service's Community Participation Plan 2006 to 2008 has the following objective: *Evidence of consumer, carer and community participation in strategic and service planning, quality & safety, and evaluation.* We are travelling together on this journey, learning along the way and are determined to support staff to enable positive interactions where consumers, carers and the community can participate in health.

Helping doctors help themselves: Organisational strategies to support poorly performing and 'at risk' junior medical staff

Alison Dwyer
Monash University, Melbourne, Victoria, Australia

Through reviewing current literature, undertaking collaborative work with the state-wide Doctors Health Program, lessons from cross-disciplinary peer support and from practical experience with managing poorly performing and 'at risk' junior medical staff, the organisation has developed a comprehensive identification and support program for junior medical staff who are poorly performing in their roles, or who may be displaying 'at risk' behaviour.

Prevention

(1) Specific strategies for supporting junior medical staff:

- *Development of a Medical Workforce Unit* to provide day-to-day rostering (based on 'safe hours' principles) and human resources support. This is includes a migration agent for support of international medical graduates.
- *Directors of Training:* in all specialty training programs, a senior medical staff is allocated the responsibility of overseeing and supporting the trainees within the specialty
- *Medical Workforce Advisors:* surgical and medical
- *Medical Education Unit:* provide structures orientation and training programs throughout the year for interns, including skills training for all junior staff
- *Mentor Program: coordinated through the medical education programs*

(2) Organisational strategies for supporting all staff:

- *Committee structures* to facilitate communication between junior staff and management: HMO Committee, Junior Medical Staff Establishment Committee, Medical Advisory Committee
- *Peer support:* organisation-wide 24-hour peer support program with peers trained in counselling
- *'Good to Great' organisational cultural review:* define core values of the organisation and improve culture for a supportive environment for all staff

Identification

(1) *Supervisors and Directors of Training:* responsibility for overseeing day-to-day competence and emotional well-being of junior staff

(2) *Performance Management Processes:* formal performance appraisals with supervisors at every rotation, feedback to Medical Workforce Unit

Management

Tailored support program based on whether the issues are training/competence issues, or 'at risk' issues, or a combination. This may include:

- Referral/assessment by Doctors Health Program, who can provide ongoing advice/management
- Tailored supervised education programs to develop competences/skills. This may be in a supernumery capacity, or even in a clinical but non-patient role (such as in the quality improvement area within the organisation.

The above strategies can be illustrated in 2 de-identified case studies, with positive outcomes.

Discussion of the above strategies includes the major barriers to implementation (including medical culture of silence, perceived detriment to training opportunities), implications for resources/services, balanced by individual and organisational benefits.

Safe doctors – Fair system: Supporting clinicians to give safe quality care

Craig Margetts

Queensland Health, Queensland, Australia

Introduction: Following the call from last year's conference by Dr Lucian Leape that our current system for the management of underperforming doctors is a "non-system" which is "implicit, personal and punitive"; one state has risen to the challenge and has developed the "Safe Doctors – Fair System" framework.
This answers Dr Leape's call for a framework which is: explicit, predictable, transparent and early – one which focuses on gaps in knowledge, skills, abilities and behaviours – and is supportive and respectful with an emphasis on supporting continuous quality improvement at the individual and clinical unit level, and one which provides for remediation rather than discipline where issues persist.

Methods: Through a broad literature search, as well as more in-depth study of the National Clinical Assessment Service methodology, an Australian framework has been developed in broad consultation with key industry groups such as the AMA and industrial bodies such as ASMOFQ and QPSU (FTMSAQ) as well as college and medical board stakeholders. The project is currently in formal consultation phase. Although the main focus of the paper will be the framework and its development, feedback from consultation will also be presented, as well as the current implementation plans.

Results: Formal results from other jurisdictions internationally will be presented, as well as extrapolations to the state.

Discussion: The Safe Doctors – Fair System methodology represents a paradigm shift in thinking regarding the management of underperforming doctors and, therefore, contributes significantly to several aspects of relevance to the conference: "Credentialing and performance management" as well as "Supporting clinicians to give safe quality care". Further, the project would be a beneficiary of systems which can assist with "Performance Measurement, Indicators and Data Benchmarking", and provides a framework to link these disparate concepts.

Learning from the National Open Disclosure Standard pilot

John Wakefield, Cherie Ryan, Luis Prado, Rick Iedema

The National Open Disclosure Standard pilot was endorsed by Australian Health Ministers has been underway in various guises since 2004. The Australian Commission on Safety and Quality in Health Care is now overseeing the pilot and has commissioned an independent external evaluation. There are many myths around open disclosure which have had significant impact, including delaying the national pilot. This session on open disclosure will identify and outline the pilot's progression, provide a case study of practical implementation in private health care, and include two research presentations. The discussion will allow an opportunity for the audience to consider implications of the pilot process and the presented research for further implementation.

- John Wakefield will discuss the issues of piloting in the complex area of ethical healthcare communication. National and state governance and policy perspectives will be included as well as some crucial "myth busting".
- Cherie Ryan will present research that invokes social identity theory and communication accommodation theory to understand how clinicians manage interactions with patients who have experienced adverse events. One communication strategy of particular interest is the use of management of affect (emotional expression) by both patients and clinicians.
- Luis Prado will present a case study on the experience of implementation in the private health care setting and the complexities of an environment with independently employed visiting medical officers.
- Rick Iedema will provide an overview of the draft independent external evaluation report of the national program. Evaluation domains include:
  - Affected patients and their family or carers
  - Affected clinicians
  - Clinicians trained as experts in Open Disclosure communications
  - The healthcare organisation.

[1] Harris, LC & Ogbonna, E. 2002. The unintended consequences of culture interventions: a study of unexpected outcomes. *British Journal of Management*. Vol. 13: 31-49.

[2] Sexton, J & Holzmueller, *et al.* 2006. Variation in caregiver perceptions of teamwork climate in labor and delivery units. *Journal of Perinatology*. Vol. 26: 463.470.

[3] Yule, S, Flin, R, Paterson-Brown, S, Maran, N. 2006. Non-technical skills for surgeons in the operating room: A review of the literature. *Surgery*. Vol. 139 (2): 140-149.

[4] Flanagan, B, Nestel, D, Josheph, M. 2004. Making patient safety the focus: Crisis Resource Management in the undergraduate curriculum. *Medical Education*. Vol. 38: 56-66.

[5] Sexton, J & Holzmueller, *et al.* 2006. Variation in caregiver perceptions of teamwork climate in labor and delivery units. *Journal of Perinatology*. Vol. 26: 463.470.

[6] Hirst, C. 2005. *Re-Birthing: Report of the Review of Maternity Services in Queensland*. Queensland Health, Brisbane.

Posters: Measuring Performance to improve patient care

Poster 2

Factors Related To Content Of Antenatal Care In Three Rural Areas Of Vietnam

Lieu Trinh[1], Michael Dibley[2], Julie Byles[2]

[1]University of Sydney and Sydney West Area Health Service, Sydney, Australia, [2]University of Newcastle, Sydney, Australia

Introduction: Antenatal care (ANC) is care for women during pregnancy to improve pregnancy outcomes. For ANC to be effective, procedures and information provided to women during ANC visits (ANC content) must meet certain standards. The World Health Organisation (WHO) recommends that ANC content should include three basic components: 1) assessment based on medical history, physical examination and laboratory tests; 2) health promotion; and 3) care provision. The aims of this study were to assess ANC content provided to women during ANC visits in the three rural provinces of Vietnam: Long an, Ben tre and Quang ngai, and to identify factors associated.

Method: Cross sectional surveys were conducted in the three provinces by the Vietnam Australia Primary Health Care Project in 1999. There were 1335 women who gave birth in the previous three years. Among them, 877 women had some ANC and their information about ANC content was available for analyses. The women were asked if they received 13 items of ANC procedures and information. These were seven items on biomedical assessments (measurement of blood pressure, body weight, fundal height, monitoring of foetal heart rate, vaginal examination, urine test and ultrasound), two on health promotion (resting and nutrition), and four on care provision (tetanus vaccination, iron/folate supplement, malaria prevention and safe delivery). ANC content was classified into fair (10-13 items or>75%) and poor (0-9 items or<75%). The modified Donabedian Quality of Health Model was used as a theoretical framework to select and analyse related factors.

Results: The majority of the women (650 women or 76%) reported poor ANC content. Only 207 women (24%) reported fair ANC content. Eighty six women (10%) reported all items. The most commonly reported items were measurements of fundal height (80%), measurement of blood pressure (72%), monitoring of foetal heart rate (77%), vaginal examination (71%) and tetanus vaccination (73%). The least reported items were urine testing (20%) and supplementation and/or advice of Iron/folate (23%). The mean number of items reported was 5.5.

Factors related to less ANC content were living in Quang ngai (OR=0.3 compared to living in Long an), having ANC delivered at private facilities (OR=0.4 compared to public facilities) or by nurses or assistance doctors (OR=0.6 compared to doctors or midwives), and having no intention to be pregnant (OR=0.5 compared to intended pregnancy).

Factors related to better ANC content were more use of ANC services (OR=2.1 having three or more ANC visits and OR=3.8 for having four or more visits compared to one or two visits), being satisfied with ANC services (OR=1.8 vs. not satisfied), consumption of iron/folate tablets (OR=4.2 vs.not) and being housewives (OR=1.7 vs. being employed).

Characteristics of providers and women contributed most to the variation in ANC content.

Conclusion: ANC content reported by women in the three provinces was poor. The most effective interventions are to improve quality of health facilities and of ANC providers, to educate women to make sufficient number of ANC visits. Efforts should be targeted at less advantaged provinces and at identified high risk groups of women.

Poster 3

Antenatal Hospitalisations In New South Wales, Australia 2001-04

Lieu Trinh, George Rubin

University of Sydney and Sydney West Area Health Service, Sydney, Australia

Introduction: Most women experience normal pregnancies. However, pregnancy complications do occur. When these complications are severe enough to be treated in hospital, antenatal hospitalisation is an indicator of maternal morbidity. The recommendation is less than 15 antenatal hospitalisations per 100 deliveries. In 1995-96, there were 30 antenatal hospitalisations per 100 deliveries in New South Wales. The aim of this study was to determine if the situation has changed over time.

Methods: We used data from the Inpatient Statistic Collection database which includes information about all hospitalisation episodes and the Midwife Data Collection which includes information about all women who gave birth in New South Wales between July 2001 and June 2004.

Results: There were 26,245 antenatal hospitalisations amongst 86,356 deliveries annually, or 30 hospitalisations per 100 deliveries.

Top five reasons for hospitalisations were threatened labour before 37 weeks of gestation (11%), hypertension (11%), threatened labour at or after 37 weeks of gestation (8%), antepartum haemorrhage (5%) and excessive vomiting (5%).

The majority of admissions (68%) had a length of stay of one day, 24% had a length of stay of two or three days. A small proportion (8%) had a length of stay of four days or more. The mean length of stay was 1.8 days. The top five conditions accounted for 40% of all antenatal admissions but incurred 53% of hospital days.

There were some changes in the conditions accounted for hospitalisations. For example, hypertension was responsible for 18% of admissions in 1995-96 but only 12% in 2001 and 9% in 2004. The proportion of premature rupture of membranes increased from 1.8% in 2001 to 2.7% in 2004.

Discussion: The prevalence of antenatal hospitalisations in New South Wales was twice as much of the recommendation and remained unchanged over the years. Further research should be done to gain an understanding of the changing pattern of the conditions accounted for hospitalisations before any attempt to reduce the prevalence of antenatal hospitalisation is made.

Poster 5
Malaria Knowledge And Practice Among Women In An Endemic Area Of Vietnam

Lieu Trinh
University of Sydney and Sydney West Area Health Service, Sydney, Australia

Introduction: Pregnant women (PW) and post partum women (PPW) are most vulnerable to malaria. The prevalence of malaria in the Central Highland is highest in the country and is about 2%. Early diagnosis and treatment; and using insecticide treated bed nets are important measures to control malaria. For these measures to be effective, women should be aware of clinical signs of malaria in order to seek diagnosis and treatment promptly and bed nets should be available. The aims of this study were to assess knowledge about clinical signs and side effects of malaria during pregnancy, diagnosis and treatment seeking behaviour, and the availability of bed nets among PW, PPW and non pregnant women (NPW) at reproductive age in Lak district, Daklak province.

Methods: A cross-sectional survey was conducted in eight out of nine communes (the capital commune was excluded). All PW, PPW within six month after delivery and a randomly selected number of NPW equivalents to the number of PW in each commune were selected. The women were interviewed using a standardised questionnaire. HCG urine dipstick method was used to determine pregnancy status. The number of bed net spaces was calculated as one bed net space for a single bed net and 2.5 bed net spaces for a double bed net.

Results: There were 1026 women participated (333 PW, 377 PPW and 316 NPW). The response rate was 97%. Fever was the most common sign recognised by women (64%), followed by chill (60%), headache (56%), nausea (46%) and sweat (44%). Seventy three percent of the women knew at least one clinical sign and 38% knew all five clinical signs.

Knowledge of adverse effects of malaria during pregnancy was lower. Severe malaria was the most common adverse effect recognised (25%), followed by maternal death (24%), low birth weight (22%), miscarriage (21%), still birth (18%), congenital malaria (16%) and preterm delivery (14%). Only 31% of the women knew at least one adverse effect and 11% knew all seven adverse effects.

One hundred and seventy nine women (17%) reported having fever during the prior fortnight. Fifty two women (29%) had a blood smear taken. Treatment was given to 61 women (34%): four women with malaria parasites, 43 with negative blood smear results and 14 women who did not have a blood smear taken.

There were 2150 bed nets or 5311 bet net spaces for 5433 people in the women's households. This made an average of one bed net space per person. However, about half of the households (48%) had an average of less than one bed net space per person and 7% had an average of less than 0.5 bed net space per person.

Factors related to poorer knowledge were younger age, lower education, doing farming job, being PW or PPW and being Kinh ethnic. Economic was related to bed net availability. Knowledge of malaria increased the chance that a blood smear was taken.

Conclusions: To increase early diagnosis and treatment of malaria, women's knowledge of clinical signs and side effects should be improved. The efforts should be focused on identified groups. Bed nets subsidy should be considered for poor households. Health care workers should be retrained to treat malaria appropriately.

Poster 10
The Communication Complexity Score - measuring the performance of health care services in communicating with complex non-English-speaking patients

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

Introduction: The study aimed to investigate the relationship between the use of professional interpreters, and the non-English-speaking (NES) patient's level of healthcare complexity. Communication has repeatedly been linked with patient safety, and language concordance is essential for effective communication.

Methods: The study used a cross sectional telephone survey matched with medical records reviews. The sample comprised patients from non-English speaking background from nine language groups admitted to hospital or using the Emergency Department between June and November 2004. Study data was linked with NSW Inpatient and Emergency Department data.

A summative rating scale, the Communication Complexity Score (CCS) was constructed to estimate healthcare complexity of the study non-English-speaking patients. The scale comprised eight items related to medication usage, procedures (invasive/not), diagnostic acuity, ICU/HDU admission, medical emergency, admission status, urgency at admission, and ED triage category.

Cronbach's alpha was used to assess the reliability of the CCS scale. Exploratory Factor Analysis was also used to describe the number of common factors associated with complexity. Multiple Linear Regression was used for modelling the relationship between the CCS and interpreter facilitation after controlling for other variables.

Results: A sample of 258 (58% Emergency Department (ED) patients and 42% general ward patients), were surveyed by telephone to assess their modes of language facilitation. There was a positive association between CCS and number of

interpreters used. The mean CCS score was normally distributed for patients admitted versus patients who attended ED. The linear regression model found that CCS was strongly associated with interpreter use after adjusting for known confounders.

Conclusions: Patients who had high CCS scores were more likely to have used interpreter services, although the usage for complex patients was low. This scale has good psychometric properties. The findings have important implications for the safety of patients with complex conditions who have limited English proficiency.

The study found that the Triage Category Score and the Urgency on Admission Score were particularly important variables within the Communication Complexity Scale. We propose that high scores on these items should be used to identify a need for a professional interpreter for patients with limited English.

Clinicians and interpreter services need to engage in a serious debate about approaches to setting priorities for specialised health care interpreters so that patient safety is not compromised by poor communication.

Poster 17
Mining the goldmine – using "administrative" databases to monitor quality and improve care

Margaret Walker

Flinders Medical Centre, South Australia, Australia

Discharge records can be used to identify adverse events and to monitor the impact of risk reduction or clinical practice improvement activities. Using administrative databases in this way has been described previously[1, 2] but these have usually been limited to single lines of inquiry or to large scale epidemiological investigations.

This Division has developed a range of clinical indicators for use by individual clinical units that can be monitored via a number of datasets. These include the administrative data set of the inpatient separation information system (ISIS), the Emergency Department system, the lab results system and the operating theatre system (HASS). When this activity first started the division encountered many difficulties including incompatible data between systems and variable data quality. Gradually these difficulties have been overcome and the utility of the data has become increasingly recognised. Each clinical unit now receives a suite of clinical indicators each month that enable them to monitor key aspects of their performance. These include readmissions, deaths, length of stay, complications, etc. These are reviewed at monthly audit meetings. If a problem is identified then more information can be extracted to enable the issue to be investigated and addressed.

In addition there are many routine and ad hoc queries that look at specific aspects of performance.

Examples: Access queries have been written to identify patients who develop a DVT or PE following a previous hospital admission. One query creates a table of all admissions during the review period and another creates a table of all patients who were identified as having a DVT or PE anywhere in the 25 diagnoses recorded in their ISIS database. A third query identifies the patients common to both tables who develop the DVT or PE either during their first admission or at subsequent admissions up to a total of 60 days post-discharge. This query has been used by several surgical units to review the efficacy of their existing DVT prophylaxis. It has also been used by the orthopaedic unit to progress debate about how long routine prophylaxis should continue post-operatively and post-discharge.

A similar query allows the identification of perforation following an endoscopic procedure. Previously the Endoscopy unit might not identify such an adverse event if the patient was discharged following their day procedure then readmitted with a perforation under another unit. Using this query any perforation that occurs can be identified and investigated.

Another query is used to identify patients who are admitted for an elective cholecystectomy who stay longer than one night. This measure monitors the percentage of such patients. The unit only investigates specific instances if the overall measure increases outside the previously established control limits.

In each case the queries need to be "reality checked" with the clinical unit to ensure that they are extracting the data they are designed to extract.

This paper seeks to explain the practical aspects and benefits of setting up such a monitoring system and to demystify this useful activity.

Selected references: 1 Surgical site infections following orthopaedic surgery: Statewide surveillance using linked administrative databases Riley TV, Thomas T and Cadwallader H. Symposium on health data linkage. www.publichealth.gov.au March 2002

2 Detecting and reducing hospital adverse events: outcomes of the Wimmera clinical risk management program: Wolff AM, Bourke J, Campbell IA, Leembruggen DW. *MJA* 2001; 174: 621-625

Poster 20
Pressure Ulcer Point Prevalence Surveys – a call for standardising processes across jurisdictions

Beth McErlean, Peter Stewart, Christy Pirone
South Australian Department of Health, Adelaide, South Australia, Bahrain

Pressure ulcer development remains a state and national health care priority yet within one health jurisdiction few organisations had a systematic & standardised monitoring system in place.
A pressure ulcer point prevalence survey was conducted within one State which included not only public health organisations but also private health organisations, private residential care facilities as well as clients cared for in the community. Whilst the survey process was based on that developed by Jenny Prentice and the Victorian Quality Council comparison of outcomes across jurisdictions remained limited. Differences included the following:

Inclusion criteria:

- the need to monitor outcomes of practice across care settings and identify the vulnerabilities of practice across the entire system requires jurisdictions to support all organisations to monitor practice using a systematic and standardised methodology, therefore, not only public health organisation were included in the sample but also private health organisations, private residential care facilities and also community care settings; and
- whilst mental health individuals have been excluded from previous state-wide prevalence studies a proportion of this group is vulnerable to the risk of pressure ulcer development and therefore was included within the sample;

Consent process:

- to ensure informed consent of vulnerable individuals number of additional processes were required which was different to previous state-wide surveys:
- individuals who could not speak English as their primary language were required to be provided information describing the survey process in their primary language,
- verbal consent was required to be provided by the next of kin for those individuals who were unable to provide their own consent; and
- written consent from parent/next of kin was required for individuals below 16 years of age.

Organisational comparative groupings: The development of a national peer hospital classification system in 2001-02 which grouped public hospitals across Australia into broadly similar groups in terms of their range of admitted patient activity and their geographical location provides opportunity to compare organisational outcomes not only within jurisdictions but across jurisdictions. However, analysis of outcomes using this classification system is limited to one state only. It is recommended that all jurisdictions adopt this hospital classification system to allow opportunity to benchmark across jurisdictions.

Staging classification system: Pressure ulcers are classified by the depth of tissue damage (stage 1 – 4). However, accurate staging of the pressure ulcer is not possible until necrotic tissue has sloughed or the wound has been debrided. Previous state-wide prevalence studies have categorised the "unstageable ulcer" into one of the four stages, however this determination is not consistent across jurisdictions and is not consistent with international practice.

This presentation will discuss these differences in detail and its implications for benchmarking across jurisdictions as well as describing preliminary findings from the study.

Poster 37
Preliminary Insights into the Quality of Data Collected in NSW Intensive Care Units

Karena Hewson, Anthony Burrell
Intensive Care Co-ordination & Monitoring Unit, Penrith, NSW, Australia

Measuring and evaluating critical care outcomes data as methods of indicating the quality of healthcare delivered to critically ill patients has received considerable attention in the contemporary literature. Indeed, various amounts of time, money and effort are directed towards collecting clinical data for the purpose of evaluating performance, particularly via outcomes reporting and review. One important factor that has not yet received much attention however is the quality of data collected. Data inaccuracies and inconsistencies seriously impact on outcome predictions that are made based on this data.
The aim of this study was to investigate the structure and process of collecting data for submission to the ANZICS Adult Patient Database (APD) in New South Wales (NSW). Early in 2006, a survey containing 16 questions related to data collection and data quality was distributed to all 42 NSW ICUs. The survey was completed by the Nurse Unit Manager (NUM) or Acting NUM of the ICU either by return email or over the phone.
Thirty-eight NSW ICUs responded to the survey and of these, 31 (81%) collected data for the ANZICS APD (10 tertiary, 7 metropolitan and 14 rural). Medical staff (ranging from Resident through to Director) were mostly responsible for collecting data at both metropolitan (83%) and tertiary (70%) ICUs, whereas the majority of data collectors at rural ICUs were Clinical Nurses (64%). Administrative Officers (57%) were predominantly responsible for data entry across all levels of ICU. The amount of time dedicated to data collection and data entry varied greatly and depended on available resources that were often reported as insufficient. Rural ICUs appeared the most under-resourced.

At least 55% of ICUs, including those with Data Managers, experienced delays in entering data into a database. While the majority of respondents (65%) reported conducting some form of quality checks on their data, 30% could not report the actual frequency of these checks and another 30% indicated the checks did not lead to further enquiries that sought to improve data quality.

For those ICUs with a Data Manager, there was no single model for this role with their responsibilities varying from one ICU to the next. Comments from respondents highlighted that the entire data collection process was time intensive and that a dedicated, fully funded Data Manager was required to perform this function.

The results of this survey appear to indicate that overall, NSW ICUs are not resourced nor organised adequately for collecting data. Unstructured, adhoc and inconsistent data collection processes along with inadequate staffing could impact significantly on the quality of data that is submitted to the ANZICS APD. Delays in entering and a lack of quality checks on data indicate a less than desirable system that may be fraught with error and inconsistencies. Further investigation into the quality of data collected in NSW ICUs is warranted and a follow-up survey of ICU Directors is planned. Until the issue of data quality is adequately addressed, performance measurement based on this data must be treated with caution.

Poster 50
Quality Improvement Through The Introduction Of Routine Audit

Joy Brumby, Lynn Cheetham
Peter MacCallum Cancer Centre, Melbourne, Victoria, Australia

Introduction: In November 2005, it was resolved to implement a Quality Management System (QMS). The QMS encompasses web-based documentation of all policies, protocols and work instructions. Routine audit of the QMS and associated processes is a mandatory requirement of the system. The audit results provide useful evidence for Australian Council of Healthcare Standards (ACHS) accreditation.

Methods: The introduction of routine audit has been approached from several directions. Initial advice was sought from external consultants, who advised on scoping the project and provided training for the first group of auditors. Auditor training was based on ISO9001:2000 Quality Management System requirements. The internal auditors then met to prioritise the audit schedule and develop an internal audit procedure to suit local requirements. Concurrently, education sessions were organised for all staff to introduce and demystify the audit process. The audit schedule was finalised and in-house training was prepared and scheduled for a second group of auditors.

Results: The implementation of routine audit has led to improved quality assurance in our workplace. Audits have helped improve staff awareness of current processes and how to effectively communicate quality improvement initiatives. Department managers are now better informed about what is happening in the workplace and have an improved ability to provide evidence of continuous improvement activities, resulting in improved patient care.

Discussion: Introduction of the QMS and routine user audit has been a challenging time. In addition to requiring clear and effective documentation of the audit process, good channels of communication are essential elements of effective implementation. Education and ongoing user feedback to staff are important aspects of sustaining any new audit process.

Poster 51
Consumer Feedback Survey in a Paediatric Physiotherapy Department

Fiona Moran, Kerry Britt
Royal Children's Hospital, Melbourne, Victoria, Australia

Introduction: To ascertain the level of consumer satisfaction with the service provided by the physiotherapy department we undertook the task of performing a consumer feedback survey. Much of the emphasis in this initial survey was around designing an appropriate survey, as well as gauging the level of consumer satisfaction with the physiotherapy department and the service provided.

Methods: The survey was developed in a multi-stage process.

- 30 current patients (and/or parents) were questioned regarding 5 key areas that they thought should be addressed in a consumer feedback survey for the physiotherapy department.
- The key areas suggested were analysed and grouped into general "themes".
- The 7 main themes identified (Overall satisfaction; Explanations and feedback provided by therapist; Making and changing appointments; Inter-professional communication; Facilities and appearance of the department; Equipment available; Inclusion of patient/family in planning) were turned into questions and a draft survey developed.
- The draft survey and a covering letter was reviewed by the hospital consumer engagement consultant and physiotherapists in the department, asking for suggestions and comments.
- The final survey and covering letter was written.

The survey was distributed in two ways.

- Using a computer generated list of patients who had received physiotherapy services in the previous 12 months, 90 patients were randomly selected (30 each from cardiothoracic, neurological and musculoskeletal streams). Patients were excluded if they were non-English speaking, international patients or deceased. The letters were addressed to the child's parents and a self-addressed return enveloped was included.
- 30 surveys were given to 15 random physiotherapists (2 each) to distribute to current patients.

Results: Ninety surveys were mailed, 38 returned (42%). Four of the returned surveys were not included in the analysis resulting in a final response rate of 34 out of 86 (39%). Of the 30 surveys distributed by physiotherapists, 13 were returned (48%). The overall response rate was therefore 47 out of 116 (40%). Consumers reported that they were very satisfied with the service provided by the physiotherapy department with the response of *Very Good* or *Excellent* given over 80% of the time for all questions except for 'Facilties and appearance', in which 70% of scores were *Very Good* or *Excellent*.

Discussion: The lack of negative responses indicates that there is no need to alter the service provided. Negative feedback referring to the facilities and appearance of the department is related to the age of the hospital and facilities. The aim of this study was to develop an appropriate survey which would give useful information about the service provided by the physiotherapy department. The importance of involving consumers in the process of developing the survey is a critical factor as it ensures feedback will be based around issues relevant to the consumers. The survey will be repeated annually with a greater number of surveys posted out. In future surveys attention will be directed towards improving the response rate of consumers.

Poster 52
Improving Efficiency In Patient Care And Discharge

Kian Giap Martin Tan, Kylie Bosley, Bev Draper
Flinders Medical Centre, Bedford Park, Adelaide, South Australia, Australia

Introduction: Once a patient has been assessed as medically ready for discharge, delays to this discharge can decrease ward efficiency. In our busy gastroenterology and hepatology ward within a tertiary referral hospital, there were anecdotal reports of such delays. We therefore designed a Clinical Practice Improvement (CPI) program which aimed to reduce discharge delays to 0% within six months.

Methods: A team consisting of nursing and medical staff, facilitated by the divisions' CPI officer, was developed. Baseline data on percentage of medically-ready patients with discharge delays, and data on specific causes of delay were collected. This identified that the two main causes for delayed discharge were lack of discharge medications and lack of arrangement of transport for the discharged patient. After group analysis and multi-voting, we constructed a Pareto chart which identified inconsistent communication between members of the ward team (medical, nursing and allied health) as the most important cause of discharge delays. Another cause was found to be an overburdened senior gastroenterology registrar with multiple ward, consult and endoscopic responsibilities. The following interventions were performed

- Implementing a daily 11 am meeting between the nursing shift coordinator and the gastroenterology registrar or resident, where all inpatients and their expected discharge dates were discussed and noted.
- Introduction of a standard medical-nursing handover form where the nursing coordinator notes key issues such as patients with expected discharge dates within 48 hours and identifies the items needed to facilitate their discharge, including medications, transport, additional tests, etc.

Results: The percentage of patients with discharge delays fell from 31.4% to 22.6% following the interventions (45% reduction). Median patient length of stay also shortened from 5 days to 3 days (20% reduction) over 6 months.

Discussion: This project demonstrated that improved communication between medical and nursing staff can shorten patient length of stay and expedite their discharge process. Communication was improved and sustained by establishing and enforcing a daily medical-nursing handover meeting, and providing tools (handover forms) to improve the quality of information transfer during this meeting. This approach can easily be adopted in other health units with adjustments to their unique needs. This is an ongoing project where the effect of a third intervention of employing a second gastroenterology registrar in Feb 2007, will be studied and a fourth intervention of enlisting a social worker to the handover meeting is being planned.

Poster 54
Indicators For Quality Use Of Medicines In Australian Hospitals

Jocelyn Lowinger, Helen Stark, Maria Kelly, Karen Kaye
NSW Therapeutic Advisory Group, Sydney, NSW, Australia

Introduction: To produce an up-to-date Manual of Indicators for Quality Use of Medicines in Australian hospitals that is clinically relevant to health practitioners (doctors, nurses, pharmacists and managers) in Australian hospitals.

Method: Indicator selection: Hospital experience with an existing set of performance indicators for drug use in Australian hospitals prompted the development of a revised indicator set. An extensive literature review was undertaken and identified a large number of indicators (>500) related to quality use of medicines (QUM) either developed, in current use, or previously used in Australia and internationally. These were matched with documented evidence-practice gaps in medicines management and additional indicators were developed where appropriate. Consultation with a range of senior doctors and pharmacists regarding suitability of proposed indicators was conducted iteratively. A decision algorithm was developed using literature-based criteria for "good" indicators and was used to select 52 candidate indicators covering all categories of the medication management pathway.

Indicator testing: Candidate indicators were tested by multi-disciplinary teams in 31 hospitals across Australia, including public and private, metropolitan and rural, teaching and non-teaching and specialty hospitals. Hospital teams were asked to assess content validity for each candidate indicator in the indicator set using the decision algorithm. Each hospital was also asked to test 10 of the 52 indicators in terms of clarity, usefulness and measurability.

Additional stakeholder consultation: A parallel consultation process is underway with other interested groups and individuals, to gain further feedback regarding content validity of the proposed indicators.

Indicator finalisation: A workshop of key stakeholders is planned in May 2007 to resolve outstanding issues following indicator feedback analysis. The updated manual of indicators will be finalised by July 2007.

Results: Indicator testing has been a valuable experience for hospitals. Feedback to date has been very positive with hospitals expressing strong support for the indicator set. Preliminary analysis of the data available shows the majority of indicators have content validity – that is there has been broad agreement from hospitals that the concept behind each of the indicators is important, worthwhile measuring and likely to stimulate improvements. In depth indicator testing has also been a beneficial and positive experience for hospitals. Many of the hospitals have reported that using the indicators as part of the field test has uncovered gaps in the processes required for provision of safe and quality use of medicines – even with very small sample sizes. As a result some hospitals have already introduced changes to medication processes. Feedback from stakeholders to date has also been very supportive of the indicators in terms of usefulness in promoting QUM in hospitals.

Discussion: The manual of indicators is a multidisciplinary tool that will be an important resource for Australian hospitals and practitioners to use in monitoring and improving their processes with regard to the safety and quality of medicines management.

Poster 56
Linking Multiple Information Systems to Collect State Wide Data on Cancer Patient Treatment and Outcome

John HARRINGTON
Queensland Health, Queensland, Australia

Introduction: In the absence of a state wide clinical information system, conventional approaches to measuring and reporting cancer patient treatment and outcome rely heavily on short term projects that fund the manual extraction of data from medical records and/or locally managed databases with limited patient coverage. As a result, state wide data on cancer patient treatment and outcome is currently not readily available for use by clinicians. Can this gap in the data available to clinicians be filled by linking multiple clinical and administrative information systems?

Methods: Two key projects have been undertaken.

1. A patterns of care study, where data from the medical records of more than 1,500 public hospital patients diagnosed with breast, head and neck, colon, rectal, or prostate cancer between June 2003 and December 2004 was collected and analysed. Where available, data from all medical records for patients admitted to multiple facilities (both public and private) was collected.
2. The creation of a data repository, where multiple clinical and administrative information systems (which contain diagnostic, treatment, or death data) have been linked to create a single record for all state residents diagnosed with breast, head and neck, or lung cancer between 1 January 2000 and 31 December 2006.

Data on the breast cancer records in the repository has been compared to that collected via the patterns of care study, to assess whether accurate and meaningful state wide data can be collected on cancer patients by linking multiple clinical and administrative information systems.

Results: Initial results are promising, with treatment rates for surgery, radiotherapy, and chemotherapy proving to be comparable. Further analysis is to be undertaken on treatment waiting times and survival.

Discussion: While it is possible to link multiple clinical and administrative information systems, issues such as access to certain information systems, the accuracy and completeness of the data in the information systems linked, and the technologies and resources available to undertake the linkage process will impact on the timeliness and accuracy of the data collected.

Poster 61
Pilot Project To Evaluate The Effectiveness Of A Falls Minimisation Toolkit

Wendy Hubbard, Maree Cuddihy, Ian Patrick, Patricia Mc Garrity, Mari Botti, Kerry Bradley
Ballarat Health Service, Victoria,

A falls toolkit, 'the guidelines', was developed to assist in the implementation of falls prevention strategies within health services. The guidelines covered acute, subacute and residential settings, and established a process model for falls prevention. Two health services were funded to implement the guidelines and evaluate their effectiveness. The content of the guidelines, methodology and results of the 12-month pilot project will be discussed, as well as plans for future work. The process model for a falls minimisation strategy was implemented on four wards in two metropolitan health services. Participating health services were selected through an expression of interest process and a requirement was that they did not have a comprehensive falls prevention program in place. Funding provided was used by both health services for a 0.4EFT project officer.

Methodology involved collection of baseline data; number of falls per 100 beddays, fall-related injuries, documentation of falls risk screening and risk assessment, documentation of strategies and processes following a fall. Patient safety culture surveys, environmental surveys and focus groups were also conducted. The pilot project had three stages, planning, implementation and maintenance, with data collected in each stage.

Analysis of data indicated that there were gains made over the 12-month period, with a reduction in falls per 1000 beddays in the majority of the areas involved. Compliance with completion of falls risk screening and risk assessment increased dramatically, noting though that baseline levels of compliance were particularly low. A spot environmental audit tool was developed for the project, based on environmental factors that falls research associates with the occurrence of falls. These factors include position of call bell, gait aide and brakes, access to personal items and use of restraints. The project officers found this a useful tool as it was quick and provided feedback to staff about local factors within their control. The results of the spot audit highlighted the need for staff to do an environmental scan when leaving a patient area. The patient safety culture audit was conducted at the start and end of the project. Key findings include the fact that only 63% of staff believed that many falls are preventable. Concern by staff about availability of resources for falls prevention was also expressed.

A number of results indicated that whilst staff conduct a falls risk assessment they do not link the strategies implemented to the risk factors identified. Following the completion of this pilot project a number of falls coordinators in health services were surveyed to ascertain the areas they consider are a concern in falls prevention. Generally falls coordinators believe that staff are completing risk assessment procedures but that there is a need for some impetus to be created for staff to take the next step of implementing specific strategies and assessing their effectiveness. As a result, work is currently underway to develop an online falls education package that will be based on patient scenarios.

Poster 65
An Evaluation on DOTS Implementation in Indonesian Hospitals Through Clinical Audit: Is The Australian Clinical Governance Model Can Make Improvement?

Hanevi Djasri, Adi Utarini
Gadjah Mada University, Jogjakarta, Indonesia

Introduction: Tuberculosis control through the implementation of DOTS (*Directly Observed Treatment, Short course chemotherapy*) strategies in all public and private health services in Indonesia has been initiated since year 2000; however, the evaluation of DOTS implementation in hospitals using clinical audit has not been done yet. This study objective is for evaluation on whether or not, the tuberculosis patient management in hospitals has complied the DOTS standards.

Methods: Case study in 8 (eight) hospitals in Java island, including government-owned hospitals, military hospitals, for-profit private hospitals, not-for-profit private hospitals, teaching hospitals, special hospitals for lungs, and clinics for lung diseases. Audit guideline was developed by experts using the main reference from national guideline for tuberculosis control program and from International Standards of Tuberculosis Care (ISTC). Audit was conducted through a retrospective review from the total of 300 (three hundred) medical records done by general medical doctors who have been trained. Deviation was identified when patient management stated in the medical record was not complying with the audit guideline. Analysis and result presentation were done descriptively. Follow-ups were then established through workshops involving each hospital.

Result: All hospitals conducted various deviation from the TB management, the most deviation occurred in: Standard for diagnosis especially on the number of sputum specimen examinations and HIV risk factor identification; Standard for medication especially on the monitoring of medication result which then influenced the patient's final status; Standard for education especially in determining the treatment supporter as a direct observation of medication ingestion and explaining the public health obligation. Deviation occurred because DOTS program was not integrated with the clinical quality management program in hospitals.

Discussion: Australian clinical governance model have 4 (four) pillars: consumer value, clinical performance & evaluation, clinical risk, professional development & management. All of 8 (eight) hospitals agree that the second pillar (clinical performance & evaluation) has not implemented properly and it is the main cause for deviation of TB management. Therefore they agree that DOTS implementation in hospitals requires periodic monitoring through clinical performance & evaluation activity such as clinical audit.

Poster 75

Overcoming Data Coding Issues To More Effectively Detect Quality of Care Variances

Kirstine Sketcher-Baker, Michael Coory, Stephen Duckett
Queensland Health, Brisbane, Qld, Australia

Background: Queensland Health (QH) uses hospital administrative data and birth data to derive clinical indicators. The aim is to assess variation in these indicators across hospitals; but such variation should not necessarily be labelled as indicating variation in quality of care. Instead, it should be considered as a signal to investigate possible causes. QH has adopted the pyramid model of investigation[1], where factors at the base of the pyramid (data quality and case-mix) should be considered, as well as quality of care. The aim of this study is to describe the data quality issues identified when local investigations were undertaken for hospitals that were flagged as having higher than expected mortality rates for patients admitted for acute myocardial infarction.

Methodology: To monitor clinical indicators over time, Queensland Health uses the Variable Life Adjusted Display (VLAD) tool developed by Sherlaw-Johnson[2]. The monitoring in this study was based on data from the Queensland Hospital Admitted Patients Data Collection (QHAPDC) for the period 1 July 2003 to 30 April 2006 QHAPDC is an administrative database; collection is required under the terms of the Health Care Agreement between Queensland and the Commonwealth. QHAPDC is similar to administrative databases in the other states and territories. The VLAD is a quality monitoring tool which provides an easily understandable graphical overview of clinical outcomes over the course of a selected period. When used with mortality as the indicator, it displays estimated statistical lives gained by plotting the cumulative difference between expected and actual outcomes over a series of patients, ordered by discharge date, within a hospital. It also has a flagging mechanism which indicates when to further investigate the indicator as per the pyramid model.

Results: Five hospitals were flagged as having mortality rates that were 75% higher than the expected rate at some stage within the past two and a half years. After more detailed local investigation by hospitals, at least one data issue was identified for all hospitals. These included coder non-compliance with Australian Coding Standards (eg missing additional diagnosis, incorrect principal diagnosis classification), unclear or incomplete chart notes provided by clinicians, and conflicting documentation between charts and discharge summary documentation. Another hospital that flagged at the 50% level had a different admission policy to the other hospitals, specifically; patients who died in the emergency department were counted as in-patients.

Discussion: The identification of variation in the quality of administrative data does not rule out across variations in quality of care; it just makes them more difficult to identify. It is therefore critical that clinicians, health information managers, quality co-ordinators, and coders from all hospitals monitor data quality and explore possible solutions such as stronger liaison between coders and clinicians, frequent auditing of cases, physical relocation of coders to hospital wards, use of computerised coding tools to assist in detection of coding errors or further coder education.

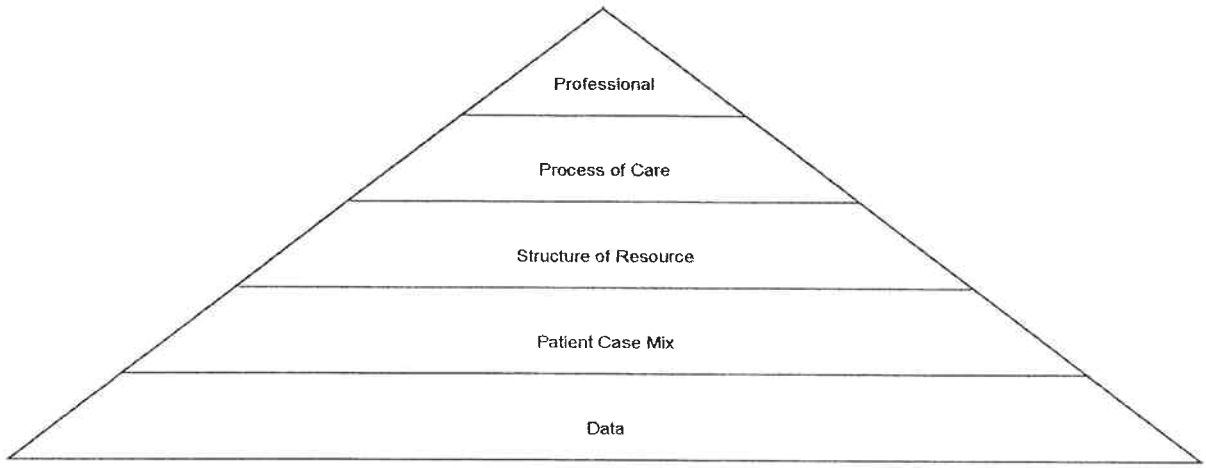


Figure 1 : Pyramid Model of Investigation

Mohammed MA, Rathbone A, Myers P, Patel D, Onions H, Stevens A. An investigation into general practitioners associated with high patient mortality flagged up through the Shipman inquiry: retrospective analysis of routine data. BMJ 2004; 328: 1474-7.

C. Sherlaw-Johnson, A method for Detecting Runs of Good and Bad clinical Outcomes on Variable Life-Adjusted Display (VLAD) Charts, Health Care Management Science 8 (2005) 61-65.

Poster 77
DVT Prophylaxis for GastroIntestinal Surgery/Medicine – Harder than it looks!!

David Wattchow, Alex Gallus, Robert Padbury, Jayne Sandford, Margaret Walker
Flinders Medical Centre, SA, Australia

Introduction: There is strong evidence to suggest routine DVT prophylaxis should be provided for many hospitalised patients to reduce the risk of pulmonary embolism and longer term post phlebitic syndromes. An audit was undertaken within our Gastrointestinal (GI) Services units (colorectal surgery, upper GI and hepatobiliary surgery) that identified inconsistencies in the provision of DVT prophylaxis. The aim of the project was to improve DVT prophylaxis administration for patients admitted to GI Services including 1) ordering and 2) timing of first dose.

Methods: The Clinical Practice Improvement methodology was used to plan and implement change. The first step was to form a team that included colorectal and upper gastrointestinal and hepatobiliary surgeons, haematologists and nursing staff at a range of levels who were involved in caring for patients admitted to GI Services. The problems were diagnosed and identified as lack of knowledge/awareness, unclear responsibility (medical/nursing, senior/junior) and an unclear protocol with multiple options available for prophylaxis. The first PDSA cycle saw the guideline simplified into a one page protocol based on best available evidence; this was agreed to, endorsed and actively promoted by all involved clinical units and included in orientation to rotating junior medical staff. Copies were made available on the hospital intranet and on the wards. The weekly audit meeting checked adherence to the protocol for all patients discharged during the week, and reasons for non adherence were discussed. The second PDSA cycle following wide dissemination and discussion of results included; further simplification of the protocol including risk stratification based on the premise all patients need DVT prophylaxis unless low risk. The third PDSA cycle interventions are being planned and include developing operating templates for reporting surgery that include prompts for post procedure care including DVT prophylaxis. Prospective auditing (30 consecutive patients) was conducted 3 monthly from case note review.

Results:

1. Ordering of enoxaparin as per protocol – a 33% improvement from baseline (60% to 80%) following PDSA cycle 2. Breakdown by patient length of stay highlighted over 100% improvement in short stay patients (1-2 days) now receiving DVT prophylaxis (38% to 73%) and patients with length of stay over 2 days maintaining around the 90% target since baseline (92% to 89%).
2. Timing of first dose as per protocol – a 25% improvement (67% to 83.5%) following PDSA cycle 2

Discussion: Improvements have been made in ordering DVT prophylaxis in GI Services. However ensuring short stay patients receive appropriate DVT prophylaxis continues to pose a challenge as clinicians grapple with weighing up the benefits of DVT prophylaxis versus risk in this patient group. This work has highlighted that putting a protocol in place is only the first step in the change process, education, variance monitoring, auditing, feedback and protocol review are all vital in the journey to achieve sustained change in clinical practice.

Poster 84
Innovations in Orthopaedic Care – Fast Track Joint Replacement Program

Marg Crowhurst, Karren Ekberg
Epworth Hospital, Victoria, Australia

The aim of the innovative Fast Track Joint Replacement Program is to effectively manage the care of this patient group commencing at pre-admission and extending through the care continuum. Patients assessed by their orthopaedic consultant as eligible to participate in the program are involved as follows:

- Compulsory attendance at the multidisciplinary Pre-Admission Program
- Day of surgery admission
- Early mobilisation 6-12 hours post operatively
- Twice daily physiotherapy treatments during the inpatient stay
- Discharge planning assessment day 3 post operatively for either
    - (a) Inpatient rehabilitation transfer day 5
    - (b) Discharge home day 5 with
        1. Discharge information session (group session)
        2. Home based physiotherapy (hospital funded)
        3. Home based community registered nurse visits (hospital funded)
        4. Home based Occupational Therapy intervention as assessed at Pre-Admission Program

Patients are assessed by their orthopaedic consultant as eligible to participate in the program at their peri-operative visit. The Pre-Admission program has the multimedia computer animated education module embedded.

- The education module was developed in collaboration with orthopaedic surgeons and consumers and
- Provides information about the impending surgery, possible complications, alternative treatments and recovery goals.
- The hip and knee consent module is interactive and allows the patient to work through it at their own pace.
- Patient understanding of the informed consent is augmented in this process.

Patient outcomes thus far have been very positive, with the reduction to length of stay, improved functional and independence goal achievement and high levels of customer satisfaction with impressive feedback.

The collaborative team during the development of the Fast Track Joint Replacement Program has included orthopaedic surgeons, anaesthetists, physicians, nursing staff, allied health and administrative staff. All involved have been motivated and focused on our goal of providing excellence in Orthopaedics for our patients.

Poster 97

Optimising Procedures to Improve Quality of radiation therapy summary letters and billing - Utilising an oncology information system & Crystal Reports

Nasreen Kaadan

Sydney South West Area Health Service, Liverpool, NSW, Australia

Purpose: Liverpool and Macarthur Cancer Therapy Centres (CTCs) identified the need to streamline the Radiation Therapy (RT) billing process and treatment summary letter generation to reduce the time taken to complete the processes and reduce the number of errors made in data entry.

Scope: To identify a process within the Oncology Information System (Lantis) used in SSWAHS CTCs that streamlines the two processes. Reduce the time taken in preparing and entering the required data for billing purpose. Reducing the time between patient completing radiation therapy and mailing out of an electronically generated treatment summary letter to relevant specialists involved in the patients' cancer management.

Method: Audit quality of radiation therapy services charge capture in Lantis.
Audit delay between patient completing a course of radiation therapy and mail out of treatment summary letter.

- Draft and pilot new procedure utilising Lantis and Crystal reports.
- Repeat quality audit of charge capture and delays in summary letter generation.
- Review procedure and fine-tune.
- Provide training and support.
- Implement new procedure across both departments.
- Repeat quality audit 6 months after implementation.

Results: Time between patients finishing radiation therapy and treatment summary letter mail out was reduced. Time taken for radiation therapy billing to be completed was reduced. Regular audit of radiation therapy services charge captures in Lantis improved compliance.

Conclusion: Utilising the various features in Lantis enabled our cancer service to improve the accuracy of radiation therapy charge capture in Lantis. This enabled us to use a Crystal report to automatically generate all billable items per patient in a single report to streamline the current billing procedure. The utilisation of Lantis and Crystal reports also enabled us to reduce the time taken to generate and mail out a treatment summary letter and hence improve the quality of patient cancer management.

Poster 100

Developing An Integrated Performance Management System Using Standard IT Software

Heather Howard

St Andrew's Hospital Inc, Adelaide, South Australia, Australia

It is imperative that healthcare organisations have a Performance Management System to ensure sound clinical governance. As a 200+ bed private hospital comprising of mixed acute medical, surgical, Emergency and ICU Departments we concur with this philosophy and had sought to purchase an appropriate 'off-the-shelf' system for this purpose for some considerable time.

The Hospitals' Risk / Quality Management Committee was charged with researching a suitable system. Their findings were that the systems available at the time were very costly and did not provide the specific functionality required. It was these findings that led to the development of the Integrated Performance Management System (IPMS).

Extensive data was being collected by individuals but was not centrally collated, located or distributed. The Clinical Audit Co-ordinator designed the system we currently use to make the underlying performance trends visible, relevant and managed within an improvement framework. The continuous monitoring of performance measures, utilising the basic applications of the Microsoft Office Suite, and sharing a centralised repository, facilitates unlimited potential for improving patient care.

The flexibility of this in-house system enables 'system tailoring' and allows data to be presented in its numerous dimensions e.g. Quality, Risk Mitigation (Top 10 Organisational Risks), ACHS indicators etc. A fundamental component of the system is that data collected is part of normal work patterns and ownership of the data remains with the staff at the point of collection, ensuring the continual involvement and support of staff and integrity and currency of the data collected.

The extensive use of hyperlinks allows easy navigation throughout the system. Graphs are colour coded using the traffic light system and reporting is done by exception. This process has been replicated 20 times and currently displays 125 graphs including Clinical Indicators, Falls Rates, Infection Control and Drug Errors etc.

Our IPMS was recently reviewed as part of ACHS accreditation and was identified as a risk management system that is outstanding and at the leading edge of this type of work.

This simple but highly effective system informs the organisation about patient care and safety processes and provides the ability to review their performance measures and respond with quality initiatives, activities and outcomes.

Poster 103
Improving Clinical Governance in a multi-site Health Service – Implementation of Performance Indicators for Monitoring Patient Safety and Improving care

Kate Morrissy
Southern Health, Victoria, Australia

Introduction: As part of a wide ranging review of clinical governance within a multi-site health service, an affiliated research institute was commissioned to review the current international literature and practice in relation to the use of hospital wide clinical indicators as a measure of patient safety. (*The review itself is the subject of another abstract submission)*
Recommendations from the review identified the most effective indicators for measuring patient safety and which could be easily adapted to the Australian context. It also recommended that the organisation implement a Process Control Reporting Tool and develop stop and review rules. This presentation will detail our organisation's journey from these initial recommendations to the implementation of a comprehensive clinical indicator program across a complex health care environment.

Methodology: Following agreement on the set of indicators to collect, the clinical coding department were asked to identify the appropriate complication codes for capturing each of the indicators. Expertise from the organisation's Clinical Information Management Team was then utilised to access the mainstream patient administrative databases and develop reporting formats. Different cuts of the data were made available including organisational, hospital, clinical program, unit and ward perspectives. Initial testing of the definitions led to considerable amendments to the complication codes used and this refinement process is expected to continue. The indicators list itself has changed slightly and additional indicators are expected to be incorporated over time.

Results: 14 performance indicators drawn from 3 separate patient information databases are now in place across the organisation. Each month the data is automatically refreshed and presented at the relevant clinical governance committee. Results are presented in Control Charts and colour coding is used to highlight unexpected variances. Where results fall outside the control limits an investigation and review process is triggered. A summary of the actual cases including the UR number is then sent to the relevant area for detailed review. The retrieval of the case summary data is automated.

Discussion: While Indicators based on administrative data sets cannot provide definitive measures of health care quality, they can serve as a starting point for further investigation. While this program is in its infancy, it represents a significant step forward in clinical governance for our organisation. There remains further work in enhancing the accuracy and meaningfulness of the data and to ensure that clinicians respect results and engage in the quality improvement initiatives which they bring. In time, we hope to better understand the potential for improving complication rates and in so doing reinforce the organisation's commitment to achieving better outcomes for our patients.

Poster 105

The Power of a Simple Strategy to reduce MRO infections in hospitals – Hand Hygiene

Annette Pantle, Kimberley Fitzpatrick
Clinical Excellence Commission, NSW, Australia

Introduction: Improving hand hygiene goes back to the basics of patient care. For over 150 years, hand decontamination has been shown to prevent the spread of infectious agents in clinical settings. Multi-Resistant Organisms (MROs) cause serious illness and avoidable deaths in hospital patients in Australia, many of which are preventable. All health professionals play a part in improving hand hygiene compliance.
Based on the UK's "clean**your**hands", the Clean Hands Save Lives Campaign was designed to improve hand hygiene compliance of health service staff through the implementation of evidence based strategies in a statewide campaign.
The campaign had three key objectives:

1. Improving staff compliance with hand hygiene
2. Improving usage of alcohol-based hand rubs in patient care areas
3. Reduction of MRO infections

Methods: The campaign methodology was multimodal:

1. Project officers were appointed in each Area Health Service (AHS) to coordinate the campaign locally,
2. Development and distribution of a variety of campaign collateral linked to key messages of the campaign and based on the WHO talking walls strategy
3. Monitoring adherence with hand hygiene and providing staff with feedback on their performance
4. Measuring alcohol based hand rub product usage and distribution through the facilities.

A hand hygiene observation tool was designed to assist staff in observing hand hygiene behaviour and facilitate meaningful feedback to staff on the wards. The tool allowed data collectors to record over a 20-minute overt observation period whether healthcare workers who touched patients had adequately decontaminated their hands before and after patient care and note whether the opportunity was high, medium or low risk.

Results: Hand hygiene compliance improved overall during the campaign period. Baseline data revealed of 8057 opportunities to hand hygiene, 3795 were identified as adequately decontaminating their hands before and after patient contact (47.1%). In August 2006, 7229 opportunities and 3520 adequate hand hygiene observations (48.7%) were identified. The third data collection period in November 2006 revealed that of 6813 opportunities, 4206 were observed to have adequately conducted hand hygiene (61.7%). Statewide data regarding MRO infection is currently being collated however data from 1 AHS showed approximately 50% reduction in MRO infection during the campaign.

Discussion: The Clean Hands Save Lives Campaign has identified through the implementation of multimodal strategies across all health professional groups, hand hygiene compliance can be improved. Ongoing hand hygiene compliance observations are required to maximise the progress the Clean Hands Save Lives Campaign has made for patient safety.

Poster 117

Electronic bar-code scanning to reduce medication errors associated with dispensing

Michael Dooley[1], Susan Poole[1], Melita Van De Vreede[1], Michael Tsui[1], Angela Given[1], Ines Tam[2]
[1]Bayside Health, Melbourne, Victoria, Australia, [2]Victorian College of Pharmacy, Monash University, Melbourne, Victoria, Australia

Introduction: Approximately 200 million prescriptions are dispensed in Australia annually. The international literature suggests that approximately 1% will contain an error. Undetected errors may have major negative consequences for patients. Electronic bar-code scanning technology has been implemented to reduce the rate of dispensing errors, however the uptake and impact has not been studied in the Australian setting.
The aim of this study was to assess the accuracy of medication dispensing in an Australian public hospital and to evaluate the impact and uptake of electronic bar-code scanning technology in the dispensing process.

Method: This study was conducted in a major metropolitan hospital. Bar-code scanning was implemented in June 2006. This three-part study was conducted after bar-code scanning was embedded as standard practice:

1. A prospective observation study of dispensing accuracy. A dispensing error was defined as a deviation from the written prescription order. An independent observer assessed the accuracy of a convenience sample of completed prescription items for errors in content and the label.
2. A time-in-motion study assessed the impact of bar-code scanning on time taken to dispense. The study was conducted as a matched cross over study with teams of three practitioners.
3. The uptake of bar-code scanning was determined over time using soft-ware reporting functions.

Results:

1: During the three week study period (December 2006) 6675 items were dispensed, 2198 items (33%) were checked by the observer. Thirteen errors (0.59%; 95% CI 0.26- 0.92%) were detected. Nine errors were incorrect content quantity, two errors were incorrect label quantity and two errors were incorrect patient name on the label. Seventy

six percent (76%) of items were scanned during the study period. An additional 14 errors (0.21%) were detected as near-miss errors (i.e. detected and corrected during checking process, before reaching the patient)

2: One hundred matched prescription items were dispensed in each of the two arms of the study. The average time taken to dispense a prescription of six items in the control arm (without bar-code scanning) and the test arm (bar-code scanning in the checking procedure) was 13.2 minutes (range 9-23mins) and 13.3 minutes (range 8-20mins), respectively. The difference between methods was not statistically significant (p = 0.97).

3: During the 8 months since implementation bar-code scanning uptake has increased from 42% in month 2, to 72% in month 4, to 74% in month 6, to 83% in month 8.

Discussion: The successful implementation of bar-code scanning has resulted in the elimination of 'wrong drug', 'wrong strength' and dosage form errors, the most serious and commonest reported errors in the literature. Despite this, there were 1 in 170 prescription items contained an error, primarily in label and content quantity. This equates to 2.6 undetected errors each day.

Uptake has been satisfactory, with 80% of items being scanned. The impact of scanning on work-flow and time to complete the dispensing process is negligible.

Bar-code scanning technology can improve the accuracy of dispensing medications, and effectively removes the highest error risk of incorrect product selection, without negatively impacting on workflow.

Poster 128

Laparoscopy in Gynaecology and Surgery: Practice Review Using Audit of Errors for Improving Safety in Rural Australia

Ian Pettigrew[1], Philip Hall[1], Glenn Guest[2], Arthur Anderson[3], Hilary Peterson[1]

[1]Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Victoria, Australia, [2]Royal Australasian College of Surgeons, Victoria, Australia, [3]Australian and New Zealand College of Anaesthetists, Victoria, Australia

Introduction: In 2005 a joint study by RANZCOG and United Medical Protection identified laparoscopic surgery as a key contributor to medical indemnity claims made between 1991 and 2001.

The Support Scheme for Rural Specialists (SSRS), an initiative of the Australian Government Department of Health and Ageing, funded the development and implementation of a 12 month quality framework for laparoscopic audit to:

- Profile laparoscopy practice, anaesthesia and adverse events in rural Australia.
- Identify potential opportunities to improve practice related to patient safety.
- Provide rural specialists with a supported, multidisciplinary CPD activity.

This project has been protected by Australian Government Qualified Privilege.

Method: Rural Australian gynaecologists, general surgeons and anaesthetists were invited to participate in the audit with an initial uptake expected from 50 specialists. Additional funding was granted to meet overwhelming interest from over 250 specialists. Following introductory risk management videoconferences, participants were provided with an audit tool to collect data on their laparoscopy over a two month period. Approximately 1800 cases were received and will be analysed (underway at time of submission.)

Participants will receive individualised feedback to encourage self reflection and critical engagement with their practice. Follow-up videoconferences during February 2007 will discuss the data and implications for practice and patient safety. Participants will receive support resources including best practice guidelines and College Statements to encourage action planning and ongoing audit at their local level. This project has been administered by the three specialist medical Colleges, and participation in the audit has contributed to individuals' continuing professional development requirements.

Results: Preliminary analysis indicates the audit tool was effective in profiling laparoscopy and its anaesthesia in rural Australia. Analysis has also identified adverse events which may not be captured by other reporting systems but which may impact on patient safety. The short project time frame has limited the quality and quantity of data collected and follow-up of implementation into practice. Thematic rather than statistically significant results will be presented.

Discussion: Significant lessons have been learned in relation to engaging specialists in audit. Specialists from all three disciplines collaborated throughout the data collection process, illustrating a strong commitment to reporting and quality improvement. The audit tool has responded to the challenges of collecting short and longer term multidisciplinary data in multiple rural settings. Ideally the momentum and motivation for audit encouraged by this activity will continue, particularly if additional funding becomes available for a longer study. There is great potential for future audit to build on the profile of laparoscopy captured during this quality activity.

Poster 130
Serious Transfusion Incident Reporting: A Pilot Study

Lisa Stevenson[1], David Beilby[2], Karen Botting[1], Julie Domanski[3], Chris Hogan[4], Geoff Magrin[5], Ellen Maxwell[6], Richard Rogers[7], Carole Smith[8], Neil Waters[9], Deane Wilks[1], Erica Wood[9], Larry McNicol[8]

[1]Department of Human Services, Melbourne, Victoria, Australia, [2]Box Hill Hospital, Melbourne, Victoria, Australia, [3]Southern Health, Melbourne, Victoria, Australia, [4]Melbourne Health, Melbourne, Victoria, Australia, [5]Bayside Health, Melbourne, Victoria, Australia, [6]Melbourne Pathology, Melbourne, Victoria, Australia, [7]Cabrini Health, Melbourne, Victoria, Australia, [8]Austin Health, Melbourne, Victoria, Australia, [9]Australian Red Cross Blood Service, Melbourne, Victoria, Australia

Introduction: The Serious Transfusion Incident Reporting (STIR) system was designed by a working group of the statewide Better Safer Transfusion (BeST) program and piloted during 2006 to capture serious hospital transfusion incidents, including near misses, relating to fresh blood components, namely red cells, platelets, fresh frozen plasma (FFP) and cryoprecipitate and including pre-transfusion sample incidents. The data were collated and reported with recommendations for improvements in transfusion practice and forms one part of the BeST program of work to improve the safety of transfusion practice. Design of this system has been based on international haemovigilance programs since, at the time of this study, no national Australian system for collection of haemovigilance data existed.

Methods: Nine metropolitan and regional health services (14 hospitals), participated in the pilot of the reporting system. Reports were accepted from incidents occurring between 1 January to 31 October 2006 utilising an electronic notification form (eform) and paper based follow up form. There were ten defined categories of serious transfusion incidents including near miss incidents where there is potential for serious harm.

An expert clinical group reviewed the reports, verified diagnoses where possible, and excluded reports not meeting agreed STIR criteria.

Recommendations were made at time of review. A total of 44 reports were received, 39 of these were complete at conclusion of the pilot and reviewed. The only patient identifiers requested were either male (n=18) or female (n=24) and age, with a median age 59.5 years (16-95 range).

Results: It was estimated that 40,342 units of red blood cells were transfused during this period with an incident rate of 0.07 per cent (n=29), 4751 Platelet units were transfused, incident rate 0.12 per cent (n=6) and 6843 FFP units were transfused, incdent rate 0.05 per cent (n=4). Types of reports are outlined in the following table.

Near miss events, including wrong blood in labelled pre-transfusion sample	18 (43)%
Acute and delayed reactions	18 (43%)
Possibly transfusion-related acute lung injury	2 (5%)
Suspected bacterial contaminations	2 (5%)
Incorrect blood component transfused	2 (5%)

Discussion: Significantly, 43 per cent of reports were due to procedural problems that have the potential to cause serious harm. Even in this short reporting interval, it indicates that a majority of our blood adverse events are a 'tip of the iceberg' issue in transfusion management in this State. As a result of the data collection and subsequent hospital-based review process, sites within the pilot have already made recommendations to improve existing transfusion practices. The summary report with recommendations from the pilot have been disseminated, so that lessons are available to a wider audience and with plans in place for integration into a statewide reporting system. In addition, aggregated statewide data can highlight the most important areas for a transfusion improvement focus, thereby making best use of limited resources.

The STIR expert group would like to acknowledge the hospitals that participated in the pilot of the STIR system and the STIR working group members for their innovation and design of the system.

Poster 134

Linked Hospital Morbidity Data to Evaluate Patterns of Surgery for Ventilation Tube Insertion (Grommets) in WA Children 1981-2004

Katrina Spilsbury[1], Abdul Latif Kadhim[2], James Semmens[1], Francis Lannigan[2]

[1]*Curtin University of Technology, Perth, WA, Australia,* [2]*Princess Margaret Hospital for Children, Perth, WA, Australia*

Introduction: Otitis media with effusion (OME) is a significant cause of childhood morbidity and developmental delay. The prevalence of middle ear effusion in Australian children at any one time is high with reports of effusion in 37% of ear examinations at day care centres and middle ear fluid found in 30% of babies aged six to eight weeks. There is enormous controversy regarding the efficacy of surgical treatment of OME with ventilation tubes (grommets) with or without adenoid removal because the condition often resolves spontaneously with time.

Aim: The aim of this study was to investigate the incidence and outcomes of ventilation tube insertion (VTI) or grommet surgery in Western Australian children from 1981-2004 and how this varied by temporal, social and demographic factors. Linked hospital morbidity data was also used to evaluate how many children went on to have subsequent VTI procedures.

Methods: All hospital morbidity information was obtained for children who underwent a first VTI procedure while less than 15 years of age in any Western Australian hospital from 1981-2004. Further VTI procedures and any other additional pharyngeal surgery were subsequently identified for each child.

Results: The rate of VTI in children less than 15 years of age peaked in 1997 at 6.7 per 1000 person-years and decreased to 5.6 per 1000 person-years by 2004. Based on 2004 rates, 8.4% of WA children will have at least one VTI procedure before reaching15 years of age. The rate of VTI was 37% lower in Aboriginal and/or Torres Strait Islander children and the procedures performed at an older age compared to non-Indigenous children. Higher rates of VTI were associated with areas of higher economic resources, lower education /occupation status and living in metropolitan areas.

Adenoid surgery at time of MVTI was associated with reduced odds of subsequent VTI procedures in children with or without adenoid / tonsil disease. In more recent calendar periods, no differences in the length of hospital stay between MVTI alone and with adenoidectomy was observed, while procedures involving tonsils required an additional bed day per procedure and were associated with more episodes of operative and post-operative haemorrhage.

Discussion: The rate of VTI in Western Australia is showing evidence of a decline with more recent calendar periods, even amongst children less than five years of age. There remains an issue regarding equity of access to care for Aboriginal and/or Torres Strait Islander children. Increasing parental economic resources may be associated with higher rates of VTI independent of educational status. Having adenoidectomy or adenotonsillectomy surgery at time of first or subsequent VTI was associated with reduced risk of further VTI surgery. The low complication rates for adenoidectomy and short hospital stays make adjunctive adenoidectomy a potentially cost-effective first line management option for OME.

Poster 136

'When things go wrong in hospital': the what, why and how of investigating and researching adverse events

Terri Jackson[1], Stephen Duckett[2]

[1]*University of Queensland, Herston, Qld, Australia,* [2]*Queensland Health, Brisbane, Qld, Australia*

Research on patient safety is bedeviled by misunderstandings about **what** events or outcomes are the legitimate focus of investigation and research; **why** (and for whom) research or investigation should be done; and **how** research data is most validly and reliably collected. This paper proposes a 'spectrum of culpability' as a way to make sense of these confusions and to allow better communication amongst stakeholders. It then suggests that the purpose in collecting particular information (the *why,* including the degree of culpability to be assigned in its use) should be a guide to *how* such information is to be collected. In particular, the risks to individual clinicians, hospitals, and entire health care systems of both false positive and false negative findings from such data need to be considered. Literature on the strengths and weaknesses of conventional approaches to identifying 'when things have gone wrong' are reviewed for use across the culpability spectrum, and in terms of 'research rigour'.

Poster 141

Long Term Survival of Stroke Patients Following an Inpatient Rehabilitation Admission

John Estell[1], Friedbert Kohler[1], Roger Renton[2], Carol Connolly[1]
[1]*Braeside Hospital, Wetherill Park, Australia,* [2]*Liverpool Hospital, Liverpool, Australia*

Objective: Patients admitted for stroke rehabilitation generally have numerous comorbidities and a significantly increased mortality rate compared to the rest of the population. The pioneers of rehabilitation medicine demonstrated that rehabilitation improved quality of life and minimised dependency. Limited research has however been done to determine the survival period of patients after inpatient rehabilitation for stroke. The aim of this study is to determine the survival period of stroke patients following an episode of rehabilitation in our unit.

Method: All patients admitted to the Braeside Rehabilitation Unit (NSW Australia) for stroke rehabilitation in the two years from 1 January 1997 to 31 December 1998 were identified. The hospital databases were checked to determine; the last date of patient contact with a health service, or any indication that the patient had died, and if so, the date of death. If there was no recent contact or confirmed date of death a search was performed on the National Death Register kept by the Australian Institute of Health and Welfare to establish if death had occurred

Results: 253 patients were admitted for stroke rehabilitation during the reference period. There were151 males and 102 females with an average age of 69 years 8 months (range 20-93 years). Of these 7 patients died within 28 days of discharge, 27 patients died within one year and 81 within five years of discharge. By the end of eight years 121 patients had died.

Discussion: The study shows that 68% of patients who were discharged following inpatient stroke rehabilitation remained alive five years later. More than 50% of stroke patients were still alive eight years after their rehabilitation admission. Given the age of this population and presence of multiple comorbidities this survival rate is high and underlines the importance of maximising patient function and outcomes for this patient group. Further investigation regarding the survival periods in different stroke subtypes is warranted.

Poster 143

An Evaluation of the Survival Period of Cancer Rehabilitation Patients Following an Inpatient Rehabilitation Admission

John Estell[1], Friedbert Kohler[1], Andrew Cole[1], Carol Connolly[1], Roger Renton[2]
[1]*Braeside Hospital, Wetherill Park, Australia,* [2]*Liverpool Hospital, Liverpool, Australia*

Background: Cancer Rehabilitation is a developing field with the proponents suggesting that cancer will be the next chronic disease model for rehabilitation to deal with. Many of the underlying oncological conditions have significantly reduced mortality rate with new treatment regimes. Little research has however been done to determine the survival period of patients who have undergone inpatient rehabilitation for oncology related conditions.

Aim: The aim of this study is to determine the survival period of patients following an inpatient episode of rehabilitation in our unit who had a primary haematological or oncological cause for their referral to rehabilitation.

Method: All Cancer Rehabilitation patients admitted to the Braeside Rehabilitation Unit in the 10 years from 1st January 1997 to 31st October 2006 were identified. The method of identification was by checking the admission and discharge lists as well as a computerised database containing the patient FIM data. Referrals from Haematologists, Oncologists and Surgeons who treat cancers were identified. Having identified the patients, we then initally checked the Patient Administration System data base to determine, the last date of patient contact with a health service, or any indication within the database that the patient had deceased, and if so, the date of death. For those patients who did not have any record of attendance beyond two years Palliative Care admissions and discharges were corelated. All patients without a date of death were identified and checked with the National Death Index held by the AIHW (Australian Institute for Health and Welfare).

Results: We identified a total of 175 patients who were admitted during the reference period. Of these 96 patients died within the year of admission. Fifty-six (56) patients were still alive twelve months or more following their rehabilitation admission. Sub-group analyses for 'Solid' and "Haematological" cancers will be presented.

Discussion: Our comprehensive model for long-term monitoring of patients has resulted in accurate survival curves for cancer rehabilitation patients. No improvement in patient survival over the 10 year time period of the study has demonstrated.

Poster 144
An Evaluation of the Survival Period of Patients Following an Inpatient Rehabilitation Admission

John Estell[1], Friedbert Kohler[1], Carol Connolly[1], Roger Renton[2]
[1]*Braeside Hospital, Wetherill Park, Australia,* [2]*Liverpool Hospital, Liverpool, Australia*

Background: Many of the underlying conditions which require an admission to the rehabilitation unit for an episode of inpatient rehabilitation care have a significantly increased mortality rate compared to the rest of the population. The pioneers of Rehabilitation medicine demonstrated that rehabilitation results in increased the quality of life and minimised dependency. Little research has however been done to determine the survival period of patients who have undergone inpatient rehabilitation. Following initial analysis and presentation at the AFRM ASM in Cairns we analysed a further 12 month time period and correlated our data with the National Death Index of the AIHW (Australian Institute of Health and Welfare) to improve the accuracy and completeness of the dates of death following rehabilitation admissions.

Aim: The aim of this study is to determine the survival period of patients following an inpatient episode of rehabilitation in our unit.

Method: All patients admitted to the Braeside Rehabilitation Unit in the two years from 1st January 1997 to 31st December 1998 were identified. The method of identification was by checking the admission and discharge lists as well as a computerised database containing the patient FIM data. Patients who were admitted for rehabilitation with a diagnosis of cancer were excluded from the study as it was felt that they would skew the sample. Having identified the patients, we then checked initally checked the Patient Administration System data base to determine, the last date of patient contact with a health service, or any indication within the database that the patient had deceased, and if so, the date of death. For those patients who did not have any record of attendance beyond two years following their inpatient admission the Aged Care database was also checked. All patients without a date of death were identified and checked with the National Death Index held by the AIHW (Australian Institute for Health and Welfare).

Results: We identified a total of 669 patients who were admitted during the reference period. Of these 76 patients died within one year of admission. By the end of eight years 336 patients were known to have died. 310 patients had further contact with the health service 5 or more years after their inpatient admission. Only 14 patients had no further contact with the health service after their discharge.

Discussion: Our comprehensive model for long-term monitoring of patients has resulted in accurate survival curves being available. Analysis reveals that 87% of rehabilitation inpatients survive more than twelve months following discharge and at least 40% survive five years or more.

Poster 148
From Death We Learn

Anabelle May, Thomas Hitchcock
Office of Safety & Quality, Department of Health, Western Australia, Australia

Clinician commonly criticise coronial reporting and investigations for doing little to improve safety in health care settings. The traditional role of coroner's investigation is not well matched to the prevention of adverse events occurring in hospitals or as part of medical treatment. While the coroner is identified as having a role in public health, the coronial system has recognised that this misalignment of goals could result in reduced effectiveness in this area. Further this recognition has led to the development of Coronial Liaison Units in a number of jurisdictions or the employment of clinical specialist medical staff within coroner's offices with the aim of

- Improving communication between coroners health departments and health professionals
- Integrating concepts for improving safety in health care into coronial investigations
- Enhancing the relevance and value of coronial data for the health care sector.

The WA Department Coronial Liaison Service has established a method for using information from coronial investigations to improve the safety and quality of the health system. This presentation will provide examples of such work including the use of a variety data sources (surgical audit, death review, sentinel events data) to promote lessons learned from preventable deaths with the ultimate view to systems improvement.

Poster 165
Digital pen technology use in measuring pathway variances in Queensland

Karen McConochie, Denise Curran, Andrew Bryett, Patrick Derhy, Craig Kennedy
Queensland Health, Brisbane, Qld, Australia

Introduction: Even with the advent of electronic patient record systems, most clinical pathways are still recorded on paper. New technologies for capturing data that are user friendly and provide meaningful data to the clinician are continually being trialled. The ideal solution is difficult to find.

Method: The hip and knee arthroplasty clinical pathways were selected as a suitable choice. A review of the previous audit data showed that there was a large percentage of code recorded for "patient condition". Reporting this information did little to change clinical practice as it was considered too generic to inform change. Key clinicians identified the variances that would impact on the clinical outcomes of patients requiring Total Knee and Total Hip replacements. A paper form with six groupings of potential variances was completed for around 300 patients for each of the pathways using a digital pen. The groups included pre-operative cancellations, risk factors, medical co-morbidities, post operative complications, and discharge delays. The paper document was introduced and audited to assist in identifying key educational requirements. After this settling in period the digital pen was introduced to capture the data from the variance form. The use of the digital pen was assessed through a questionnaire for the accuracy of the data verified, technology reliability, and usability from a clinical perspective.

Results: The application of digital pen technology was trialled in a clinical setting, identified as an early adoptee of the pathway concept. The study was completed in December 2006 and continues as a variance management system. User acceptance was measured post trial and this feedback will inform further enhancements. Data integrity was measured by determining the error rate in a chart audit. Cost benefit will be included as a determinant for expanding its usage and measured against the cost of manual clinical audit processes. The data has been subjected to statistical process control methodology and several key areas for potential improvements have been identified. Future iterations of this process will be used to measure the effectiveness where clinical change has occurred.

Discussion: This test identified an innovative best fit solution without significantly changing the way that clinicians work.

Poster 166
Evaluating Massage Therapy In Palliative Care: Simple Systems, Strong Outcomes

Natalie Tyndall
Eastern Palliative Care, Melbourne, Victoria, Australia

Australia's largest community-based palliative care organisation is one of few such organisations that operate an ongoing massage therapy program. "Massage is the most widely accepted form of complementary therapy"[3]. The increasing recognition of massage therapy in the treatment of people with cancer and other terminal illnesses has led our massage therapy team to introduce a simple yet effective model of performance measurement, based on similar international programs and studies.

The model involves symptom assessment against a scale similar to the Edmonton Symptom Assessment System (ESAS). Massage therapy clients are asked to rate symptom severity immediately prior to and post massage, on a scale of 0 to 10 (0 being absence of symptom and 10 being worst possible symptom severity).

Initial results indicate that the massage therapy service is having a significant effect in decreasing the severity of several palliative care related symptoms, particularly physical discomfort. The benefits that stem from this method of performance measurement also include:

- The data supports therapist anecdotal evidence of the benefits of massage to palliative care clients;
- The data provides a foundation for future development of the massage therapy program;
- The system is simple, and uses a scale that palliative care clients may already be familiar with; and
- Staff are building formal evaluation into everyday work practices, which not only results in focusing on individual client needs, but also promotes the value of quality and continuous improvement in the workplace

[4] Oyston E. Medical Massage and Oncology. Massage Australia, Issue 55: 23-29