Program

2013 Medication Safety Symposium

Medication Safety, Sharing the Experience

24 September 2013

Bruce Hunt Lecture Theatre
Royal Perth Hospital
Perth, Western Australia
Welcome

Welcome to the Western Australian Medication Safety Group’s 2013 Symposium, ‘Medication Safety, Sharing the Experience’. The symposium will explore strategies, experiences and solutions to address medication safety in accordance with the National Safety and Quality Health Service Standards.

We hope the symposium will provide opportunities for you to share ideas, promote innovative thinking and foster networks with others interested in practical improvements in medication safety.

I wish you an enjoyable and stimulating day!

With best wishes

[Signature]

Neil Keen  
Chief Pharmacist  
Chairman  
Western Australian Medication Safety Group  
24th September 2013
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<td>8:00</td>
<td>Registration</td>
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<td>8:30</td>
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<td>Neil Keen, Chief Pharmacist, Public and Clinical Services, Department of Health, Western</td>
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<td>Australia and WAMSG Chairman</td>
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<td>8:45</td>
<td>Getting Ahead with Medication Safety</td>
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<td>Helen Dowling, CEO, The Society of Hospital Pharmacists of Australia</td>
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<td>Medication Safety - WA Style</td>
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<td>Kerry Fitzsimons, Medical Safety Pharmacist, Fremantle Hospital &amp; Pharmacy Advisor, Office</td>
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<td>of Safety and Quality, Department of Health, Western Australia</td>
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<td>Antimicrobial Stewardship In Hospitals – Meeting Standard 3.14</td>
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<td>Matt Rawlins, Infectious Diseases Pharmacist, Royal Perth Hospital</td>
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<td>10:00</td>
<td>Morning tea</td>
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<td>A Survey of Prescribing for Frail Elderly With Respect to the STOPP Criteria</td>
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<td>Emma Johnston, Geriatrician, Fremantle Hospital</td>
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<td>Walking the Talk on Medication Safety and Consumer Engagement</td>
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<td>Nancy Pierce &amp; Brian Stafford, Consumer representatives</td>
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<td>11:00</td>
<td>Trends in Medication Related Complaints to the Health and Disability Services</td>
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<td>Complaints Office (HaDSCO): 2009-2013</td>
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<td>Dr Eric Khong, Medical Officer &amp; Anne Donaldson, Director of Health and Disability</td>
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<td>Adverse Drug Reporting in a Private Hospital - Is It Making a Difference?</td>
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<td>David McKnight, Deputy Chief Pharmacist and Clinical Pharmacy Coordinator, St John of</td>
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<td>Thinking Country in the City - Challenging the Status Quo in Medication Management</td>
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<td>Deirdre Criddle, Pharmacist, Goldfields-Midwest Medicare Local &amp; Sir Charles Gairdner</td>
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<td>Hospital</td>
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<td>11:45</td>
<td>Lessons Learnt from Medication Reconciliation Activities Using Event Analysis to Improve</td>
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<td>Medication Safety</td>
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<td>Evonne Fong, Clinical Pharmacist, Armadale Health Service</td>
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<td>12:00</td>
<td>Cleaning Up the Use of Alteplase for Unblocking Occluded Central Venous Catheters in the</td>
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<td>Renal Dialysis Unit</td>
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<td>Dr Stephen Lim, Chief Pharmacist, Armadale Health Service</td>
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<td>12:15</td>
<td>Medical engagement and medication safety</td>
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<td>Dr James Williamson, Consultant, General Medicine, Sir Charles Gardiner Hospital</td>
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<td>12:45</td>
<td>Lunch</td>
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<td>Professor Dorothy Jones, Executive Director, Performance, Activity &amp; Quality Division;</td>
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<td>Professor, Clinical Safety &amp; Quality, Curtin University of Technology, Western Australia</td>
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<td>2:15</td>
<td>Development and Review of a Standardised Clozapine Initiation Chart in a Hospital Setting</td>
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<td>Sue Bascombe, Area Chief Pharmacist for Mental Health in the NMHS, Western Australia</td>
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<td>2:30</td>
<td>Minimising Medication Errors- A New Direction in Learning</td>
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<td>Nick May, Staff Development Educator, Royal Perth Hospital</td>
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<td>2:45</td>
<td>Using Patient’s Own Medication in Hospital: Is it a Safer Approach to Medication</td>
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<td>Administration?</td>
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<td>Brock Delfante, Pharmacist, Sir Charles Gairdner Hospital</td>
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<td>3:00</td>
<td>Cold Chain Audit in Compliance to NSQHS Standard 4.10.3:</td>
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<td>Yang Liu, Clinical Pharmacist, Armadale Health Service</td>
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<td>3:15</td>
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Western Australian Medication Safety Group

Neil Keen (Chairman)
Chief Pharmacist
Public Health and Clinical Services
Department of Health, Western Australia.

David McKnight
Deputy Chief Pharmacist
St John of God Subiaco Hospital.

Katherine Birkett
Clinical Nurse Manager
Royal Perth Hospital.

Dr Barbara King
Consultant, Emergency Department
Princess Margaret Hospital.

Kerry Fitzsimons
Medication Safety Pharmacist,
Fremantle Hospital;
Pharmacy Advisor,
Performance Activity & Quality
Division.

Dr David Bruce
School of Medicine and Pharmacy
Fremantle Hospital.

Marion Bamblett
A/ Clinical Nurse Consultant
Fremantle Hospital.

Dr Stephen Lim
Chief Pharmacist
Armadale Health Service.

Mark Newman
Clinical Director
Safety and Quality Unit
Sir Charles Gardiner Hospital.

Graham Stannard
Chief Pharmacist
Rockingham General Hospital.

Nancy Pierce
Health Consumer.

Helen Lovitt
Senior Pharmacist
Fremantle Hospital.

Susannah Brew
Pharmacist
Princess Margaret Hospital.

Joanne Clarke
Program Lead Clinical Governance
Safety Quality and Risk
South Metropolitan Health Service.

Wendy McIntosh
Program Manager, Clinical Quality
WA Country Health Service.

David Lyon
Executive Officer
Western Australian Therapeutics Advisory Group

Kathy Irwin
Project Coordinator
Western Australian Medication Safety Group
Invited speakers

**Helen Dowling**  
BPharm, DipHospPharmAdmin, GDipQIHCare, FSHP, AICD  
*Chief Executive Officer – The Society of Hospital Pharmacists of Australia*

Helen Dowling graduated from the University of Sydney in 1976 and has well over 30 years experience in hospital practice. Prior to her commencement as CEO of SHPA in July 2012, Helen held positions including District Director of Pharmacy for the Hunter New England LHD, and beforehand the Director of Pharmacy at the John Hunter Hospital in Newcastle. In 2005, career achievements were recognised when awarded the GlaxoSmithKline Medal of Merit. Motivated by a strong commitment to patient safety, quality use of medicines and quality improvement in health care, Helen’s involvement in pharmacy and healthcare-related organisations is extensive. Helen is currently President of the Pharmacy Council of NSW; a member of the Pharmacy Board of Australia Registration and Examinations Committee; a member of the Governance Board of Allied Health Professions Australia (AHPA); represents AHPA on the Australian Council of Health Care Standards (ACHS); a member of the board of ACHS; held the position of chair of the ACHS Standards Committee (2007 to 2012); and is an ACHS surveyor.

There are many other health and pharmacy initiatives, causes and organisations to which Helen has contributed her drive and vision. For example, from 2009 to 2011, Helen was a member of the Independent Panel to monitor progress on NSW’s reform of the State’s public hospital system.

Current SHPA committee representation includes the ACS&QHC’s Health Services Medication Safety Expert Advisory Group, as well as the Clinical Care Standards Advisory Group.

**Dr James Williamson**  
*Consultant, General Medicine, Sir Charles Gardiner Hospital*

Dr Williamson completed his specialist and research training in Edinburgh, London and Melbourne. He established the Acute Assessment Unit at Sir Charles Gairdner Hospital and is now the Director of the Division of Medicine. Additional roles have included Clinical Lead of the WA Musculoskeletal Health Network, acting Medical Director of Osborne Park Hospital and Clinical Lead of the WA eHealth Program. He served on the Western Australian Therapeutics Advisory Group (WATAG) and established the Western Australian Drug Evaluation Panel (WADEP), serving as its inaugural Chair.

**Professor Dorothy A Jones**  
*Executive Director, Performance, Activity & Quality Division-Department of Health, Western Australia; Professor, Clinical Safety & Quality, Curtin University, Western Australia*

Dorothy is a senior medical executive with extensive health sector experience and is the Foundation Professor of Clinical Safety and Quality at Curtin University. She was the foundation director of WA Health’s Office of Safety & Quality and is a demonstrated national leader of clinical improvement & clinical governance systems. In her current role she has carriage of key national reforms around Activity Based Funding and Management and how to ensure safe high quality services are delivered.

Above all else, Dorothy is most interested in making Australian public health services safe, effective and a high quality experience for patients and their families. She has a particular interest in leadership development and how to enable all those who work in the complex adaptive system of health care to survive, thrive and deliver great care.
Matthew Rawlins

*Infectious Diseases Pharmacist, Royal Perth Hospital*

After graduating from Curtin University, Matt completed his training at Royal Perth Hospital, before heading to the United Kingdom for most of the 1990’s. He worked in both the NHS and Private sectors in the UK including as Antibiotic Pharmacist at St Mary’s Hospital London from 1999 to 2000 before returning to Perth. Matt has been Infectious Diseases pharmacist at RPH since 2004 and co-founded the hospital’s Antimicrobial Stewardship Programme at that time. He lectures in Infectious Diseases pharmacy at several Australian Universities and has presented on Antimicrobial Stewardship at meetings around Australia. Matt is the WA representative on the Executive Committee of the Infectious Diseases Committee of Special Practice of the Society of Hospital Pharmacists of Australia and is a member of the Australian Society for Antimicrobials.

Kerry Fitzsimons

*Medication Safety Pharmacist, Fremantle Hospital and Health Service & Pharmacy Advisor at the Office of Safety and Quality, Department of Health, Western Australia*

Kerry Fitzsimons is a Curtin University Masters graduate and has worked in hospital pharmacy for the past 20 years; including Royal Perth, Fremantle and Graylands Hospitals. Kerry has worked as a Medication Safety, Drug Bulletin and Project Pharmacist for over ten years at Fremantle Hospital and Health Service focusing on quality and safe use of medications within the hospital setting. Kerry coordinated the Fremantle Hospital and Health Service Pre-Admission Clinic Pharmacist Project which was awarded the “Improving the Patient’s Journey” WA Health Award in 2011.

For the past three years she has also been employed by WA Department of Health as the Pharmacy Advisor at the Office of Safety and Quality to manage the Medication Safety Portfolio. In this role she oversees the development of policy frameworks to improve accountability for delivery of safe and high quality use of medicines, including evaluation of medication safety strategies and standards across the WA health system.

Kerry is a member of the WA Medication Safety Group (since 2008), chairperson of the WA Medication Safety Network and WA jurisdictional representative on the Health Service Medication Safety Executive Advisory Group governed by the Australian Commission for Safety and Quality in Healthcare.
08:45 Getting Ahead with Medication Safety
Presenter Helen Dowling, CEO, The Society of Hospital Pharmacists of Australia

9:15 Medication Safety - WA Style
Presenter Kerry Fitzsimons, Medication Safety Pharmacist, Fremantle Hospital & Pharmacy Advisor, Office of Safety and Quality, Department of Health, WA

9.35 Antimicrobial Stewardship In Hospitals – Meeting Standard 3.14
Presenter Matt Rawlins, Infectious Diseases Pharmacist, Royal Perth Hospital
A Survey of Prescribing for the Frail Elderly with respect to the STOPP Criteria

Authors
Johnston, E., Ryan, J., & Clarnette, R.

Presenter
Dr Emma Johnston

Poor medication compliance amongst frail elderly individuals is a major issue for health care professionals. Ensuring appropriate prescribing for this patient group is also a challenge for doctors. This study examined the accuracy of medication records received in referrals to DCGM at Fremantle Hospital. We also analysed STOPP criteria to determine the frequency of inappropriate drug use.

The aims of the study were to 1. identify the medications taken by a cohort of patients assessed at home by a group of ACAT clinicians and 2. determine the concordance with the provided list and 3. determine if the medications could potentially lead to adverse events.

192 consecutive patients were assessed during 2012. Medications were recorded by examination of blister packs and medication containers in the home. Concordance with the list contained in the referral letter was recorded and STOPP criteria were identified. Patients were assessed for sedation, falls, dizziness, GI symptoms and lying/standing BP recorded.

Of 192 patients, 128 were external referrals and these cases were analysed. Of these 92/128 had medication lists on the referral. Of 99 referrals from GPs, 10 did not contain a list of medications. Of the 92 lists, only 34 (37%) were accurate (27% of 128 referrals examined). Compliance was difficult to assess but the majority were not taking all their medications according to standard prescribing.

Using the STOPP criteria, 116 instances of inappropriate prescribing were identified. The five commonest criteria were long acting benzodiazepines, use of vasodilators in the presence of postural hypotension, duplicate drug from a single class, long term use of opioid analgesia and long term use of antipsychotics in the absence of psychosis.

We conclude that frail elderly patients do not present with accurate medication lists and that the majority of patients take potentially harmful medications. These findings have implications for prescribing, monitoring and how the components of the health care system communicate.
Walking the Talk on Medication Safety and Consumer Engagement
Looking to the Future - Views on the National Safety and Quality Health Service Standards New Standards 2 "Partnering with Consumers" and Standard 4 "Medication Safety"

Authors
Pierce, N., Brian Stafford B.

Presenters
Nancy Pierce & Brian Stafford

The purpose of this presentation is to take a retrospective journey from the viewpoint of the consumer, from the 1980’s to present day. In this context the new medication standards from the National Safety and Quality Health Service Standards (NSQHSS) are considered.

The inappropriate use of medication has been on the radar in Western Australia, for some time. It first presented as an issue for people living in residential aged care in the mid to late eighties and the early nineties. However, the tagline 'health consumer' as a key participant in medication safety did not surface until the mid-nineties.

The new NSQHS Standards will not only support what has already been achieved, but will encourage others to cooperate and take advantage of new developing relationships within their local communities. The new relationships will encourage dialogue between groups, to achieve safer medication use across health sectors.

The West Australian Medication Safety Group has been a leader in the area of consumer involvement in medication safety for ten years and we look forward to continuing to do our job and raise awareness of medication issues presenting themselves in the future.

Biography
Brian Stafford is a health consumer with a lived experience of iatrogenic harm. In 2013 he spoke at a conference ‘Communicating Medical Error’. He is a World Health Organisation, Patient Safety Champion.

Nancy Pierce’s interests are across the spectrum of health, with particular focus on medication management and chronic condition self-management. She sits on national, state and local committees, always with a view to improving service delivery for patients, whether in primary, tertiary or aged care sectors.
11:00  

Trends In Medication Related Complaints to the Health and Disability Services Complaints Office (HaDSCO): 2009-2013

Authors  
Khong, E., Donaldson, L.A., D’Andrea, S., Choong, A., & Sim, M.

Presenters  
Linley Anne Donaldson & Dr Eric Khong

The Health and Disability Services Complaints Office (HaDSCO) is an independent statutory authority providing an impartial resolution service for complaints relating to health or disability services provided in the State of Western Australia. This service is free and available to all users and providers of health or disability services. Acting impartially and in confidence, HaDSCO reviews and reports on the causes of complaints, undertakes investigations, suggests service improvements and advises service providers about effectively resolving complaints.

Objective: To examine data and trends regarding medication related complaints received by HaDSCO from 2009 to 2013.

Methodology: Medication related complaints received by HaDSCO are categorised into four subcategories: Administering; Dispensing; Prescribing and the Supply, Security and Storage of medication. Statistical data for each category was analysed for trends. Selected case studies will be used to illustrate the findings.

Results: 9,219 complaints were received from 2009-2013. There were 542 (5.8%) medication related complaints. These complaints were subcategorised into Administering (22%), Dispensing (14%), Prescribing (49%) and Supply/Security/Storage (15%). Analysis of cases in each category discovered recurrent themes relevant to each complaint - communication and information issues and professional conduct.

Conclusions: Medication related complaints are one of the main areas of consumer complaints to HaDSCO, constituting 542 complaints (5.8%) between 2009-2013. Understanding the nature of these complaints and the trends could help health care providers and policy makers to formulate strategies to reduce the prevalence of these complaints.

Biography  
Linley Anne Donaldson (BAppSc, MHlthMgmt) is the Director for the Health and Disability Services Complaints Office.

Dr Eric Khong (MBBS, GradDipPrimHlthCare, GradCertHlthEcons, FRACGP) is a Senior Lecturer, School of Medical Sciences, ECU; a Clinical Senior Lecturer, UWA; a GP in Duncraig.

Sarah D’Andrea (BHlthSc, BCom) is the Research and Policy Officer at HaDSCO.

A/Prof Moira Sim (MBBS, FRACGP, FACHAM, PGDipAlcDrugAbStud) is the Head, School of Medical Sciences, ECU. Moira is the lead clinician for the team of Medical Officers, providing advice to HaDSCO.

Dr Ann Choong (MBBS, LLB(Hons), CertHealthEcons, GradDipMathsStats) is a medical practitioner and lawyer.
Adverse Drug Reaction Reporting in a Private Hospital – Is it Making a Difference?

Authors

Presenter
David McKnight

Background: In 2001 a “Red Card” Suspected Adverse Drug Reaction (ADR) Notification Scheme was approved for use in a Private Hospital. Following investigation by a clinical pharmacist and verification with a medical practitioner, each reaction was categorised according to World Health Organisation (WHO) classifications and reports sent to Adverse Drug Reaction Advisory Committee (ADRAC) or Advisory Committee on the Safety of Medicine (ACSOM) as appropriate. Medical practitioners, nursing and pharmacy staff were encouraged to complete the card and return to Pharmacy if an ADR was suspected.

Aim: To highlight examples of the ADR scheme improving patient safety and to determine the classes of drugs most implicated in ADRs at the hospital and to characterise them according to frequencies, seriousness and who was most likely to report them.

Method: In 2012 an approach was made by a University School of Pharmacy to allow Graduate Entry Masters students participate in some collaborative research within the hospital. Two students were granted permission to review all available ADR Cards within the Pharmacy Department and collate data as per an agreed audit tool. This task was part of their assignment for their Research Design and Practice units.

Results: The students reviewed over 800 cards and identified that a higher proportion of serious ADRs occurred in males (p<0.05) although the majority reported were of moderate severity (69%). Whilst pharmacists (59.6%) reported more ADRs than nurses and medical practitioners, the latter were more likely to report serious events.

Three examples of clusters of ADRs were identified within the hospital that were not reported elsewhere at that time. These included parecoxib, tramadol and more recently rocuronium.

Conclusion: The introduction of the “Red Card” Suspected ADR scheme has been a medication safety success story at our hospital allowing early identification and investigation of ADR events. It also promoted reporting by a multi-professional team including pharmacists, nurses and medical practitioners.

Biography
David McKnight is Deputy Chief Pharmacist and Clinical Pharmacy Coordinator at St John of God Subiaco Hospital, with a long time interest in medication safety. He is a member of the WAMSG, the St John of God National Medication Reference Group as well as his hospitals Medication Safety and Drug and Therapeutics Committee. In 2011 he completed a Masters by Research on medication safety in private hospital practice and has spoken on the topic nationally and internationally.
Thinking Country in the City – Challenging the Status Quo in Medication Management Post Discharge

Authors
Criddle, D., Jayasuriya, P., Clifford, R., Benzie, J., Crouchley, K & Lack, J.

Presenter
Deirdre T Criddle

Despite calls for a nationally coordinated effort to apply the evidence for a systems approach to improve medication safety across the continuum of care, progress in this area has been slow. International research shows half of the patients discharged from hospital experience a medical error, most commonly an adverse drug event.

Aim: To determine the barriers and enablers in implementing a pharmacist led medication review post discharge, for rural patients identified at high risk of medication misadventure. This paper will explore the unique challenges facing country patients admitted to a city hospital and the coordination of medication management services for this vulnerable group.

Methods: Medical inpatients attending Sir Charles Gairdner Hospital from the Goldfields-Midwest region from 29th November 2012 to 29th March, 2013 were screened for medication misadventure using a validated tool. Inpatients considered at high risk of medication misadventure were referred to this pathway to access this post discharge service. Where eligible, patients were consented into the study. This involved coordination of timely medication management review by a local community pharmacist within 10 days of discharge, wherever possible.

Results: 60 patients from the Goldfields-Midwest region were screened over this 4 month period. 22 patients were considered eligible, and 18 consented. 16 were referred for a Home Medicines Review (HMR), and 2 for a Medscheck – an in pharmacy medicines review.

Conclusions: In a healthcare system frequently described as fragmented this project provided a unique opportunity to describe the journey and address the issues challenging good medication management post discharge. Numerous studies have identified that adverse medication events are at the very core of readmissions, with an abundance of literature supporting the success of hospital-led pharmacist liaison programs. This paper will discuss the barriers and enablers seen during implementation and provide recommendations for better collaboration and communication across transitions of care.

Biography
Deirdre Criddle has worked as a National Prescribing Service (NPS) Visiting Pharmacist and Hospital Liaison Pharmacist/Researcher for Goldfields-Midwest Medicare Local, a consultant pharmacist conducting medication reviews Executive Officer for Sir Charles Gardiner Hospital (SCGH) Drug and Therapeutics Committee and a Case Coordinator for CoNeCT (Complex Needs Coordination Team, NMAHS). Deirdre lectures and tutors part-time at UWA. Deirdre is the 2012 Eric Kirk Award winner, 2012 Pharmaceutical Society of Australia Pharmacist of the Year, and 2013 Australian Consultant Pharmacist of the Year.
Lessons Learnt from Medication Reconciliation (MR) Activities using Event Analysis (EA) to improve Medication Safety

Authors
Fong, E., Mitchell, D & Lim, S.

Presenter
Evonne Fong

Objective: Medication Reconciliation (MR) is a core activity of pharmacists at Armadale Health Service. The pharmacist reviews a patient’s admission medication orders against a “Best Possible Medication History” (BPMH) they obtain, and reconciles any discrepancies with the prescriber. This is in compliance with NSQHS Medication Safety Standard 4.8.

Pharmacists document interventions from MR and use these as learning tools to improve medication safety. Event Analysis (EA) is used as a fact finding tool, to identify applicable contributing factors to adverse drug events (ADEs) and any specific system and process changes that may prevent medication errors and improve patient safety.

Aim: To analyse and evaluate MR intervention data and present an example of an EA.

Method:
2. Identify EA case due to no (or untimely) MR resulting in harm to patient or increase Length Of Stay (LOS) in hospital.

Results and recommendations:
1. MR intervention data (monthly averages) showed wrong drug prescribed (4.1%), wrong dose (26.7%), commission errors (5.3%), ADR non documentation (3.3%) and medication omissions (60.4%).
2. There were 17.2 medication errors per 100 medications charted and 58.4 drug errors per 100 high risks patients.
3. 48.2% of high risk patients had MR completed within 24 hours of admission.
4. 9 EAs were conducted in 2012. One of these was for a patient with worsening of Parkinsonian symptoms and increased LOS due to medication omissions. The EA recommended more timely MR, clinician education on Dose Administration Aids (for accurate BPMH) and clinical pharmacy services in all ward areas.

Conclusion: EA allows us to understand what has happened, why it happened and what can be done to reduce the likelihood of recurrence. It identifies changes needed to improve MR Standardised Operating Protocols to prevent future ADEs, in compliance to NSQHS Standard 4.8.1

Biography
Evonne Fong is a clinical pharmacist at Armadale Health Service. She is currently working in the Intensive Care Unit and Emergency Department.
Cleaning Up the Use of Alteplase for Unblocking Occluded Central Venous Catheters in the Renal Dialysis Unit

Author
Lim, S.

Presenter
Dr Stephen Lim

Objective: alteplase a thrombolytic agent, is a recombinant tissue plasminogen activator (rt-PA). In the renal dialysis unit it is used to unblock Central Venous Catheter (CVC) lines. It can cause bleeding and haematoma if used incorrectly.

To comply with the National Safety and Quality Health Service (NSQHS) Standard 4, audits were performed to quantify the usage/misuse of alteplase.

Method:
1. Two audits were conducted (baseline audit March 2012 and follow-up audit May 2013).
3. Data was collected using standard tools to judge compliance to guidelines.

Results and recommendations:
1. Baseline audit (2011/2012):
   - 29% of alteplase was used without a valid prescription (Nurse-Initiated Medication or NIM); 100% of orders were written in the National Inpatient Medication Chart (NIMC) PRN section; average usage of 3.3 doses/episode; 45.2% had no documentation and 45.2% used as alteplase lock.
   - Renal physician must initiate alteplase for only 2 doses/episode and it should be written in the NIMC Once Only Section (PRN section allows up to 14 times use without medical review).
   - Alteplase should only be used for unblocking CVC line.
   - Cost of alteplase: $4,288 for this 12 month period.

2. Follow-up audit (2012/2013):
   - All alteplase used were valid orders, written in the NIMC Once Only section, averaging 1.2 doses/episode and fully documented.
   - No alteplase was used for locking CVC line or as a NIM.
   - Cost of alteplase: $995 for this 12 months period.

Conclusion: The audits demonstrate a quality improvement activity and have assessed and identified risks to patient safety. This has resulted in the implementation of governance to prevent the misuse of alteplase with the subsequent cost saving of $3300/annum. It authorises the renal physician to prescribe and the nurse to use alteplase. These audits resulted in a full compliance to NSQHS Medication Safety Standard 4.

Biography
Stephen Lim is a member of WAMSG. He is active in the promotion of medication safety and has widely participated as well as presented in medication safety forums. He is also active in post doctorate research into medication stability and formulation especially the intranasal and sublingual absorption of drugs.
12:15  Medical engagement and medication safety
Presenter  Dr James Williamson, Consultant, General Medicine, Sir Charles Gardiner Hospital

Presenter  Professor Dorothy Jones, Executive Director, Performance, Activity & Quality Division; Professor, Clinical Safety & Quality, Curtin University of Technology, WA
Development and Review of a Standardised Clozapine Initiation Chart in a Hospital Setting

Authors
Bascombe, S., Yee, S. & England, M.

Presenter
Sue Bascombe

Aim: To develop and review the impact of a standardised clozapine initiation chart on adherence to safe prescribing and administration practices for clozapine.

Method: A clozapine initiation chart was developed based on current clozapine manufacturer, TGA and hospital guidelines. The chart is designed to manage the pre-treatment screening; monitoring; prescribing and administration of clozapine titration. The chart also contains support material to assist in the safe prescribing and administration of clozapine and decision support for managing side effects.

A retrospective review on the adherence to treatment guidelines when initiating clozapine was conducted on patient records before and after introducing a standardised clozapine initiation chart in a hospital setting. The data was collected using a standardised data collection tool designed by the Office of the Chief Psychiatrist.

Results: The results of the review showed improvements across most parameters with the introduction of the chart. There was a large improvement in compliance with the requirements for pre-treatment screening, monitoring of vital signs and the administration of clozapine.

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<th>Parameter</th>
<th>% compliance before chart</th>
<th>% compliance after chart</th>
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<tr>
<td>Physical examination conducted</td>
<td>37%</td>
<td>76%</td>
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<td>Vital sign monitoring (first 24 hours)</td>
<td>16%</td>
<td>87%</td>
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<td>Metabolic monitoring: Fasting Blood Glucose</td>
<td>42%</td>
<td>100%</td>
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<td></td>
<td>Total Cholesterol</td>
<td>26%</td>
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<td>Administration initialled correctly</td>
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<td>100%</td>
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The majority of the patient's initial dosage before and after the introduction of the chart did not follow the titration schedule as outlined by the manufacture. Before introducing the chart, a faster titration of clozapine was observed. A slower titration of clozapine was observed after introducing the chart.

The review also identified areas of the chart that needed to be improved and a final version has been agreed. A staff satisfaction survey is under way, anecdotally the chart has been well accepted and medical and nursing staff believe it improves safety.

Conclusion: This review showed the introduction of the clozapine initiation chart resulted in overall improvements in adherence to guidelines for safe administration of clozapine.

Biography
Sue Bascombe is the Area Chief Pharmacist for Mental Health in NMHS. Her role is the leadership and management of an Area-wide pharmacy service based at Graylands Hospital and providing clinical pharmacy services and policy development and support across the Adult and Older Adult Mental Health inpatient and outpatient services in North Metropolitan Health Services.

Margaret England is a pharmacist working at Graylands Hospital with an interest in medication safety. She has worked in hospital and community clinics and was responsible for implementation of Medication Reconciliation in North Metro Mental Health Services.

Sue Yee is the Medication Safety & Audit Pharmacist for North Metro Mental Health Services, a role she has developed from its inception. She is a member of the Medication Safety Network and shared responsibility for implementation of Medication Reconciliation in North Metro Mental Health Services.
Minimising Medication Errors - a New Direction in Learning

Author

May, N.

Presenter

Nick May

A recent review of existing medication administration Self Directed Learning Packages (SDLP) created an opportunity to re-assess priorities in light of the new National Standards.

During the review process, concerns emerged that over time, we might have lost sight of our goal, and literally been guilty of teaching the wrong material when it came to medication safety. Previously, these SDLP focused heavily on factual pharmacology knowledge and not the root cause of medication errors. But “Knowledge prevents errors.” Or does it?

Research revealed that only 9% of medication errors are directly related to a knowledge deficit. Over 53% are caused by a breakdown in process, caused by a multitude of operational factors.

The learning package was re-designed incorporating a strong emphasis on critical thinking, risk assessment and situational management as a result of increased self-awareness and targeted behavioural change. The partnership of clinicians with the clinical pharmacist is strongly encouraged. Teamwork, collaboration to achieve consistent standards of assertiveness and reflective practice exercises are integrated into the SDLP, together with the excellent National Prescribing Service E-learning promoted by the federal government.

The “6 Rights” of medication management are explored with critical thinking questions developed to challenge the understanding of the reader to much more than rote recall of the concept headings. Risk management and harm minimization strategies and challenges are aligned to 5 key areas – The 5 ‘P’s – The Prescription, The Process, The People, The Place and The Patient.

In short, instead of a learning package to assess the ability to recall abstract facts, we now have a defensive driving course for clinicians. Whilst directed primarily at nurses, this resource is applicable to all professions.

The resource was launched in late May 2013 and has been well received by nursing colleagues. To view the learning package online Click Here

Biography

Nick May is a Staff Development Educator in the Professional Development portfolio at RPH. In 35 years of nursing he has worked in a wide variety of clinical settings including Cardiology ICU, Emergency, Midwifery, RFDS to name but a few. For 10 years he was the Staff Development Nurse in ED at RPH prior to expanding his role into the Education Centre team and tackling hospital wide education projects. He is never happier than when he is inflicting his enthusiasm for teaching on anyone willing to listen and some that don’t as well.
Using Patient’s Own Medication in Hospital: Is it a Safer Approach to Medication Administration?

Author
Delfante, B.

Presenter
Brock Delfante

Introduction: At Sir Charles Gairdner Hospital (SCG H), medications are currently supplied to inpatients through an imprest system with non-imprest medications distributed from pharmacy to the ward as required. Medications are stored in bedside drawers for future administration. These processes are inefficient and may delay medication administration. Systems utilising patient’s own medications (POM) have been successfully introduced in hospitals to provide efficiency in medication supply and administration. The aim of this study was to determine the potential safety benefits of implementing a POM scheme at SCGH.

Methodology: Data was obtained by auditing patient’s bedside drawers and their National Inpatient Medication Chart (NIMC). A total of 48 patients were divided into either the POM group (n=30) or non-POM group (n=18), depending on whether the patient was using their own medications.

Results: The average number of medications charted on the NIMC (8.5) and found to be present in the patient’s bedside drawer (9.4) was not statistically different. There were a number of significant differences between groups, including; the number of medications missing from a patient’s bedside drawer (p=0.0169, unpaired t-test), the number of medications incorrectly present in the patient’s bedside drawer (p=0.0343, unpaired t-test) and the number of missed doses of medication (p=0.0008, unpaired t-test).

Discussion: Patients who used POMs during their admission were found to be significantly less likely to miss at least one dose of medication due to unavailability at the time of administration. These patient’s bedside drawers were also found to be more accurate in their contents. Factors such as limited pharmacy operating hours and pharmacy and nursing staff workload may impact the timely supply and administration of the correct medication. Using POMs has the potential to reduce the number of missed doses patients are likely to receive and improve medication administration safety in both inpatient and home care settings.

Biography
Brock Delfante is a Pharmacist at Sir Charles Gairdner Hospital. He is a graduate from the University of Western Australia with a Master in Pharmacy and a background in biochemistry and business management. Brock has experience in both hospital and community pharmacy and has an interest in researching hospital medication management systems.
3.00 Cold Chain Audit in Compliance to NSQHS Std 4.10.3: The monitoring of refrigerators for the storage of temperature-sensitive medicines to ensure potency of the medications

Authors
Liu, Y. & Lim, S.

Presenter
Yang Liu

Objective: National Safety and Quality Health Services (NSQHS) Standard 4.10 stipulates that medicines are distributed and stored securely, safely and in accordance with the manufacturer’s direction. The storage of temperature-sensitive medicines should be monitored (Std 4.10.3) to ensure potency of the medications hence the audit of all refrigerators in all areas of Armadale Hospital.

Method: All refrigerators for storing temperature-sensitive medications including vaccines are audited using a standard audit tools (formulated to judge compliance to the Department of Health Vaccine Cold Chain Policy, OD0355/11). A spot-check was carried out by the pharmacy department (17th June to 28th June 2013).

Results and recommendations: All the fridges audited were used to keep vaccines and other temperature-sensitive medications. One fridge has food kept in it and was removed immediately.

- Temperature should be monitored daily (only 57.9% achievement) using a temperature chart (only 68.4%).
- 15.8% of the fridges were not “plugged” into the essential power and will be a problem during power failure.
- Only 10.5% have a signage showing the type of medicines kept in these fridges. Pharmacy will print a list of medicines to stick to the front of fridge’s door for ease of locating medicines kept in the fridge.
- 68.4% of the fridges audited were not cleaned at all. Fridges should be kept clean and tidy as often as possible.
- 31.6% of the fridges were not centrally monitored.
- 31.6% of the nurses have no knowledge of the Cold Chain policy. The clinical pharmacists should educate their nurses on Cold Chain Policy.

Conclusion: The audit showed no total compliance to the Cold Chain policy. All recommendations above were implemented immediately. A follow-up audit will be conducted in 2 months time to judge sustainability and compliance to this policy. This audit ensured the correct storage environment for temperature-sensitive medicines (Std 4.10.3) to maintain medicines potency.

Biography
Yang Liu has been working at Armadale Health Service since January 2012 as a clinical pharmacist and is currently based on the rehabilitation ward. She is also a committee member of the WA branch of the Society of Hospital Pharmacists of Australia (SHPA).