Medication Error Reporting Programme: strengthening pharmacovigilance in NZ

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New Zealand Pharmacovigilance Centre

30 Oct – 3 Nov 2017
Medication Safety Regional Workshops
Overview

• Medication Error
  – important component of pharmacovigilance

• About the MERP
  – design features and operation
  – how the MERP helps to inform national medication safety initiatives

• The MERP vision for a sustainable future
  – next steps
Medication-related events

Modified from Bates et al, 1995
Medication Without Harm:
WHO’s 3rd Global Patient Safety Challenge

Launched March 2017

Medication errors
- leading cause of preventable harm across the world
- globally, estimated cost $42 billion USD annually
- can occur at different stages of the medication use process
- **AIM**: to reduce serious preventable medication-related harm by 50%, globally in the next 5 years
Monitoring in New Zealand

Source of reports
Healthcare professional, Consumer, Coroner, Pharmaceutical company, Organisations

Event
Medicine or vaccine
Natural health product

Suspected ADR (identifiable)

Actual/Potential Medication Error (anonymous)

Source of reports
Healthcare professional, Consumer, Coroner, Pharmaceutical company, Organisations

Event
Medicine or vaccine
Natural health product

NZ Pharmacovigilance Centre

Review
Analysis

Review
Analysis

Reactions due to medication error

Combined analysis as required

Safety communications
Prescriber Update
Datasheet changes
Recalls

Safety communications
Bulletins, Alerts
Error reduction strategies

Feedback to healthcare professionals and consumers
MERP within NZPhvC

- Integrated collaborative approach to managing medicine harms
  - One portal for ADR and Med Error reports
  - Wider (national) perspective of medicine harms
  - Expertise in review and analysis of medicine harms
  - Recognition of different underlying issues behind ADR and Med Error

- Synergy of CARM and MERP
  - Complementary programmes
  - Cross programme awareness

- National Centre for medication “vigilance”
  - National dataset
    - informing national policy
    - valuable resource for research, teaching
International direction for PV

June 2013

• European Union Directive 2010/84/EU

• Expanded role of pharmacovigilance

• Definition of ADR to include medication error

• Pharmacovigilance Centres and Regulators more involved in management of medication errors
  – Morocco, Denmark, Canada, UK
Medication Error Reporting Programme (MERP)

Purpose

• To coordinate the capture and analysis of medication errors in primary care. Vast majority of medications are prescribed in primary care, but little is known about the extent of errors / harm or their causes

• To identify weaknesses in medication use systems that can be targeted for improvement to reduce the risk of harm to patients

Core principles

• voluntary and anonymous
• confidential
• easy and quick to report (5 mins)
• focus on systems – what happened not who
• near misses and actual errors
• quality data collection
• meaningful and timely analysis
• visible action taken
• integral to a national patient safety programme
Advantages of the MERP

Quality reports, reliable data
• Able to capture medication near miss and actual errors in primary care
• core dataset critical to learning
• systems based causes of errors – possible contributing factors
• link to NZULM for medicine name
• Structured online report form, easy to use

Standard taxonomy
• consistent framework for across sector use
• based on international classifications (WHO Global Challenge)
• common format facilitates timely and meaningful analysis

Capacity to collate data from other organisations
• minimise duplicate reporting
• learning from events that may otherwise be held locally

Growing source of information on primary care events
MERP Milestones

- **2007**: Proposal for the MERP supported
- **2009 – 2011**: MERP development and successful pilot
- **Oct 2014 – Jun 2017**: MERP roll out in primary care
- **Jul 2017 – Jun 2018**: Secure sustainable funds

**Detecting Medication Errors in the New Zealand Pharmacovigilance Database**

A Retrospective Analysis

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**THE NEW ZEALAND MEDICAL JOURNAL**

Journal of the New Zealand Medical Association

A new web-based Medication Error Reporting Programme (MERP) to supplement pharmacovigilance in New Zealand—findings from a pilot study in primary care

Desireé L. Kunac, Michael V. Tatley, Mary E. Seddon
Reporting

Possible solutions

Analysis

Wider learning

Systems change

MERP

Medication Error Reporting Programme
Reporting

Wider learning
Systems change

Analysis

Possible solutions
Reporting to MERP - Individual healthcare professionals

https://nzphvc.otago.ac.nz/
MERP: source of reports

- Healthcare Professional
  - individual reports

- Organisation
  - batched reports

- On-line report
- Secure upload

- firewall

- Ambulance services
- Pharmacy Defence Assoc
- CARM, ACC
- HQSC Adverse Events Programme
Reporting

Analysis by NZPhvC
High priority reports, trends / patterns

Wider learning
Systems change
In collaboration

Possible solutions
HQSC multidisciplinary expert advisory group
Reporting

Analysis by NZPhvC
High priority reports, trends / patterns

Wider learning
Systems change
In collaboration

Possible solutions
HQSC Med Safety
Expert Advisory Group

Report: Quarterly Report
Medication Error Reporting Programme
Period: 2nd Quarter 2017
Compiled: as at 30 June 2017
Prepared for: HQSC Medication Safety Expert Advisory Group (MSEAG)
Reporting Analysis by NZPhvC
High priority reports, trends / patterns

Wider learning
Systems change
In collaboration

Possible solutions
HQSC multidisciplinary expert advisory group

MERP
Value to the Sector
MERP information sharing

- Medication Safety Email Network
  
  - connects medication safety specialists / champions from across primary and secondary care
  
  - timely exchange of safety issues, challenges, solutions

merpnz@otago.ac.nz
Value to the Sector
safer product packaging / presentation

• collaboration with Medsafe and Pharmaceutical Companies
Value to the Sector

• NZ Formulary

Biphasic insulins

Biphasic insulins are mixtures providing for both immediate and prolonged action. Ready mix preparations are available as biphasic isophane insulin (Penmix®, Humulin 30/70®, Mixtard®), biphasic insulin aspart (Novomix®), or biphasic insulin lispro (Humalog Mix®).

Prescribing, dispensing and administration errors

Errors have occurred involving confusion between short or intermediate-acting insulin preparations and similarly named biphasic insulin mix preparations. For example, short-acting neutral insulin (Humulin R®) may be mistaken for isophane insulin (Humulin NPH®) or the biphasic mixture (Humulin 30/70®). Errors have also occurred involving preparations that are packaged and presented in a similar way. For example, the rapid-acting prefilled pen device (Novorapid Flexpen®) may be mistaken for the biphasic prefilled pen (Novomix Flexpen®). Prescribers should specify the full brand name when prescribing insulin to avoid confusion. Care should be taken when preparing and administering insulin to ensure that the intended medicine is given. See also Prescriber Update Medication error—confusion over Humalog insulins, December 2010.
Value to the Sector
software enhancements

- collaboration with software vendors
Value to the Sector

topics of concern

• Safer compounded paediatric oral liquids
  – Multi-incident analysis of reports to the MERP provided evidence to initiate a national “Compounding Advisory Group”
  – chaired by David Woods
  – MERP “compounding adverse event” reports routinely shared with Group
MERP: current status

- Short term funding streams
  - Current funding ceases 30 June 2018

- National level
  - Low visibility of the MERP

- Limited resource to grow the system and add greater value

- Easy to report
- Useful data
- Informs national initiatives

- 0.5 FTE
- 550 reports / yr
MERP: vision for the future

- Proven effectiveness in small scale, need to actively expand to provide timely information on medication error and adverse drug events.

- Current focus is primary care – need to embed this, and get buy in from clinicians

- Allow organisations to access their own data for risk management and quality improvement

- Spread to other areas of the health sector – e.g. secondary care. (MERP interface is superior to current incident systems)

- Medication error integrated into NZ Pharmacovigilance – opportunity to address all harms (med error + ADRs)
Next steps

• Stakeholder meeting late November 2017
  – To explore a sustainable future for the MERP
    • Current value
    • Direction
      – enhancements
      – expansion
    • Funding / Governance models
      – partnership of multiple organisations

• Your feedback is important
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