Improving anticoagulant safety

Northern Health, Melbourne

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Key Problem

- What are the real medication risks within the hospital?
- Can these be grouped into themes?
- What themes can be addressed via specific strategies to reduce risk?
- Clarity was needed to understand what medication classes were the most prevalent for incident reporting.
- By organising the medications into their classes (e.g. opiates), we could achieve better understanding of what the real problem was and put in actions to address according to the drug classes

Table 1: A review of 4 years of incident reports allowing classification into drug class

Medicine	4 year total	No. per month	% of total
Opiates	341	7.1	13%
Anticoagulants	312	6.5	12%
Antibiotics	183	3.8	7%
Paracetamol	138	2.9	5%
Insulin	76	1.6	3%
4 year Total (all incidents)	2654		

Aim of this innovation

- Many incidents are being reported for anticoagulants involving many different stages of the medicines management process (dispensing, administration, prescribing, monitoring). Inconsistent practice and confusion of role for the multidisciplinary team are resulting in a reduction in quality and safety, leading to avoidable harm to patients
- Anticoagulants impact many staff groups and stages of the patients journey. Clarity is needed for staff and
  - to inpatients when a medicine is first provided, especially if it is to be long term
  - to patients receiving high risk oral anticoagulants, oral chemotherapy and insulin
  - when a patient requests the information.
- All clinical staff that are involved in the various stages of the patient journey will be following written procedures and protocols to ensure consistent practice and reducing avoidable patient harm.
- Baseline incident prevalence should improve

Baseline Data

A project plan was devised, this involved setting up specific working groups. The outcomes of this project plan are as follows:

- A more informed and competent workforce that recognises the issues for anticoagulants
- Procedures and protocols are up to date and reflect safe practice
- Anticoagulant services will be audited and the results will drive improvements in practice
- Patients will receive verbal and written information
- Pharmacists and prescribers will check INR before dispensing oral anticoagulants
- A system will be in place to identify medicines interacting with oral anticoagulants
- Policies will be amended to standardise the range of anticoagulant products used
- A risk assessment will be undertaken on the use of Monitored Dosage Systems for oral anticoagulants

Key Changes Implemented

- Presentations to raise awareness of the top 5 medication risks with key messages:
  - All clinical staff were targeted first to train pharmacists, then by pharmacists at induction, at nurse handover, at grand rounds, one-to-one with prescribers, nurse meetings
- An anticoagulant working group was formed to improve procedures (e.g. consistency prior to and after surgery) and to perform root cause analysis on all anticoagulant incidents
- All anticoagulant incidents were classified separately and sent to specific key staff for immediate awareness when reported
- After 6 months a further analysis was performed to check the prevalence of the top 5 medication incidents
  - Further analysis of this 6-month data gives greater granularity to the incident types for improving awareness and altering policies/guidelines
- The management has moved the hospital from the lowest to highest quartile in HRT reporting

Outcomes so far

Medicine	4 year total	% of total 4 years	Last 6 month total	% of total	% change (c/f 4yr data)
Opiates	341	13%	82	17%	32
Anticoagulants	312	12%	48	10%	-16
Antibiotics	183	7%	72	15%	113
Paracetamol	138	5%	25	5%	5
Insulin	76	3%	25	5%	69
Total	2654		477 (+43%)		+ 41%

- **16% Reduction in anticoagulant reporting (others increased though…why?)**

Lessons Learnt

- Review all incidents over a significant timeframe (at least 3 years) to understand where the risk lies within your hospital
  - This will form a baseline to demonstrate improvements
- To aid management of the risk, categorise into specific drug class
- Set up working groups to improve engagement, leadership and implementation
- Place highest prevalent incidents on risk register
- Consistently raise awareness at the highest possible level and throughout the organisation
  - Increased awareness led to 43% increased incident reporting
- Develop a project plan with timeframes and present to Hospital Executive
  - Project plan reduced anticoagulant incidents by 10%
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