

A Collaborative Interprofessional Project Improving Patient Safety and Staff Knowledge of Antiplatelet and Anticoagulant Medications.

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Aim

- To demonstrate the benefit of interprofessional collaboration in educating staff and improving patient safety.

Background

- Medication prescribing and administration errors occur in the hospital setting. Such errors may be compounded in large teaching hospitals where many clinicians are inexperienced. Extra caution should be taken in critical care areas where high risk PINCH medications i.e. potassium, insulin, narcotics, chemotherapy and heparin are prescribed and administered. An increased rate of antiplatelet and anticoagulant medication errors was identified at a cardiothoracic surgery ward of a large tertiary hospital in Victoria. In response, a group of concerned cardiothoracic pharmacists, nurses and medical staff collaborated to develop an education program to help rectify this issue.

Intervention

Survey

- A 20 question survey assessed 47 nurses on medication knowledge at baseline and 3 months post intervention.
- Questions assessed understanding of medication adverse effects, dosing and perioperative recommendations.

Education Sessions

- In collaboration with nursing staff, specialised targeted education was delivered in the form of small group presentations and assessments to improve staff knowledge of antiplatelet and anticoagulant medications.

Reference Material

- Reference material was created that listed antiplatelet and anticoagulant dosing information with dosage adjustments for age, weight and renal impairment.
- Risk stratification tools; CHADsVASC and HASBLED scoring systems were included to optimise safety and efficacy of prescribing for patients.

Medication Awareness

- Inpatient medication charts were highlighted with customised yellow stickers labelled 'Caution: Bleeding Risk!' for patients prescribed more than one anticoagulant or antiplatelet agent to encourage clinicians to exercise caution when administering.

Results

- Medication knowledge **increased by 50%**.
- Significant total **decrease in reportable incidences** attributed to antiplatelet and anticoagulant medications.
- Significantly **increased awareness of thrombosis and bleeding risk stratification** in atrial fibrillation.
- Significantly **increased knowledge of perioperative recommendations and pharmacokinetics of new oral anticoagulants**.

Figure 1. Reference material.

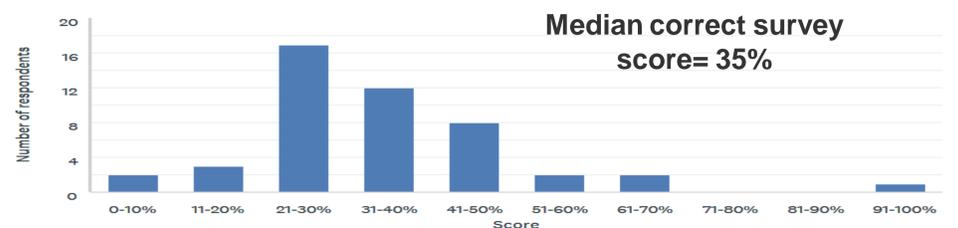


Figure 2. Baseline survey results.

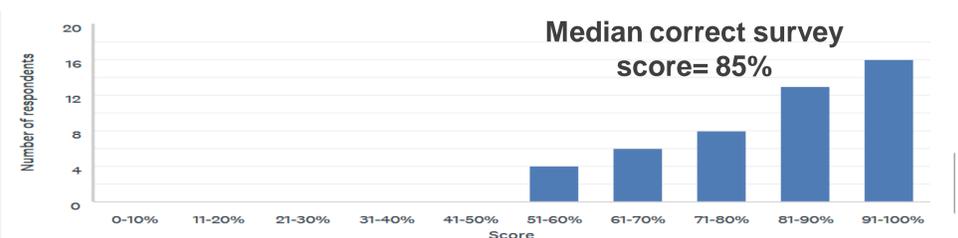


Figure 3. Post intervention survey results.

- Incident reporting data collated from Riskman[®], an incident reporting system reported an **overall decrease in related medication errors** in the 3 month period post intervention compared to baseline.

| | Pre- Intervention | Post- Intervention |
|-----------------------|-------------------|--------------------|
| Prescribing errors | 7 | 2 |
| Administration errors | 6 | 5 |
| Total incidents | 13 | 7 |

Table 1. Reportable incidents involving anticoagulant and antiplatelet medications.

Conclusion

- This project has demonstrated that a small-scale multidisciplinary approach is essential for positive change and can have a large impact on patient care. Our efforts have resulted in improved staff medication knowledge which has translated to improved patient care through reduced medication errors.