GOOD PRACTICE- INNOVATION AND COLLABORATION

New Oral Anticoagulants –
Hospital Pharmacists Improving the Safety of Patients

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1 WHAT WAS DONE?

The following suite of activities were introduced in a drive to improve understanding, familiarity and awareness of NOAC therapy.

- Medication Safety Alert - A ready reference outlining the relevant background information, risks and safety tips for prescribing and administering NOACs (Figure 1).
- Quiz – A novel and fun method to ascertain the level of knowledge staff had on the NOACs by incentivizing participation.
- Prescribing Information Sheet –Developed to summarise all the pertinent prescribing information on NOACs to aid selection and detail the relevant clinical cautions and risks.
- A Point Prevalence Study (PPS) that captured data on all NOAC patients in the hospital to identify prescribing trends and appropriateness of prescribing.
- Staff Educational drive - The Drug Safety Facilitator has lead in a major roll-out of education sessions to medical and nursing staff in the hospital including presentation at medical / surgical grand rounds, nursing forum and inclusion in e-learning programmes (Figure 2).
- Clinical Checklist Algorithm – Identifies the key prescribing decisions and risks when admitting a patient on a NOAC (Figure 3).
- Patient Education - Pharmacists now educate all patients newly started on NOAC therapy.

MMUH MEDICATION SAFETY ALERT

New Oral Anticoagulants

Rivaroxaban, Dabigatran and Apixaban are new oral anticoagulants (NOACs) with similar indications to warfarin. Unlike warfarin, monitoring of anticoagulation is not routinely required but other parameters such as renal function should be monitored. During therapeutic use, bleeding or haemorrhage may occur.

As NOACs are not always recognised as anticoagulants, there have been errors with them locally and nationally.

Dabigatran | Apixaban | Rivaroxaban

Fig 1: New Oral Anticoagulants currently on the Irish market

COMMON ERRORS

Anticoagulant Duplication:

- On admission all hospital patients are risk-assessed for VTE and many are prescribed prophylactic anticoagulation (e.g. Enoxaparin 40mg sc once daily). When full therapeutic anticoagulation with a NOAC is indicated there is no longer a requirement for prophylactic anticoagulation.
  Dabigatran 150mg BD po commenced for new onset atrial fibrillation. However prophylactic Enoxaparin 40mg sc once daily not stopped. Patient received both drugs for five days.
- Patients may have multiple indications for anticoagulation, but only one agent is necessary to achieve this
  Patient on full dose therapeutic Tinzaparin (175 units/kg sc once daily) for suspected pulmonary embolism. Commenced on Dabigatran 150mg BD for atrial fibrillation. Received both drugs for three days.

Learning point: Always check for an existing anticoagulant before prescribing a NOAC.

Dosing Error:

- NOAC doses vary with different indications and must be adjusted to the individual patient characteristics.
  Dose reduction not made for patient with renal impairment. Patient's Creatinine clearance < 50ml/min however full dose Dabigatran prescribed and administered for three weeks.

Learning point: Dose NOACs based on therapeutic indication, patient age and renal function.

Missed Doses:

- Significant patient harm may occur if NOAC doses are missed as NOACs are anticoagulants prescribed for the prevention of stroke and systemic embolism.
  NOAC not identified as anticoagulant, patient inappropriately missed three doses of Rivaroxaban, first dose held due to drowsiness and next two doses missed.

Learning point: When not familiar with a prescribed drug always look it up.

This Bulletin has been prepared on behalf of the Drug Safety Committee, MMUH.
Every effort has been made to ensure this information is correct and is prepared from the best available resources at our disposal at the time of issue.

Figure 1: Medication Safety Alert

Figure 2: Educational Drive

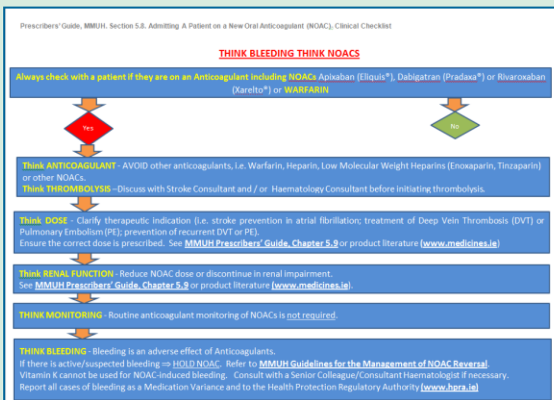

Figure 3: Clinical Checklist Algorithm

2 WHY WAS IT DONE?

Due to the high risk nature of the NOACs, the PD was, throughout 2014 and 2015, committed to a comprehensive NOAC risk minimisation strategy. The strategy targeted all points of care to address the various safety concerns with these medicines in response to their increasing use.

3 HOW WAS IT DONE?

Introduction of this comprehensive pharmacist-led suite of activities required:

- Collaboration and communication with our nursing and medical colleagues in the hospital.
- Data collection and analysis
- Evidence based analysis of NOAC use and recommendations.

4 WHAT HAS BEEN ACHIEVED

Knowledge and awareness of NOAC therapy has improved significantly among clinical staff and this has been reflected in reductions in NOAC medication variances.

The on-going safe use of this high risk group of medicines is of paramount importance in order to minimise patient risk with these agents and thus the work continues.

5 WHAT NEXT?

The appropriateness of NOAC prescribing will continue to be assessed through the medication variance reporting process and a follow-up PPS will be completed. Rationalisation of NOAC therapies will be considered through the formulary process and the education of staff and patients will remain a priority.

The NOAC safety innovations developed by the MMUH PD will be shared with the members of the Irish Medication Safety Network to promote shared learning and experience nationally.

eahp european association of hospital pharmacists — making the difference in medication

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REFERENCES:

1. EHRA Practical Guide on the Use of New Oral Anticoagulants in patients with non-valvular AF: executive summary. European Heart Journal 2013; Vol 34, issue 7
2. HSE Medicines Management Programme. Oral Anticoagulants for Stroke Prevention in non-valvular atrial fibrillation. June 2015

DISCLOSURE: None

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