Incidence of potentially inappropriate direct oral anticoagulant prescribing during the transitions of care process

Veronika Latawiec, PharmD; Chirag Gosalia, PharmD; Jessica Yee, PharmD; Jillian Barrack, PharmD; Michelle Byram, RPh, CACP;

Background

- Direct oral anticoagulants (DOACs) are an alternative therapy to warfarin that provide fewer drug interactions and no routine monitoring
- Inappropriate prescribing can lead to adverse events such as bleeding or thrombosis

Purpose

- Evaluate appropriateness of DOAC prescriptions at discharge
- Assess occurrence of bleeding or thrombotic events
- Identify patterns of inappropriate prescribing as areas to target interventions

Methods

- Retrospective chart review, IRB-approved
- Patients discharged from January 1, 2019, to December 31, 2019
- Inclusion: new prescription for dabigatran, apixaban, rivaroxaban or edoxaban for any indication
- Exclusion: under the age of 18 or over the age of 89, or previously prescribed a DOAC
- Inappropriate prescription identified against pre-defined factors from FDA-approved prescribing information and current clinical guidelines
- Any prescription identified as inappropriate was classified by relative or absolute contraindication
- 740 patients identified and randomized with the first 150 patients meeting criteria selected for analysis

Outcomes

- **Primary Outcome**: percentage of patients with a potentially inappropriate DOAC prescription at hospital discharge
- **Secondary Outcomes**: incidence of hospital readmissions or emergency department visits during the 30-day discharge period for minor or major bleeding and thrombotic events

Results

- **Assessment of DOAC prescribing**
  - n=102 (68%)
  - n=48 (32%)

- **Assessment of Inappropriate DOAC Prescriptions**
  - n=28 (56.33%)
  - n=20 (41.87%)

- Relative Contraindication
- Absolute Contraindication

Conclusion/Application to Practice

- 13.3% of total prescriptions were absolutely contraindicated
- Orthopedics and cardiology had highest occurrence of inappropriate prescribing and were identified as areas for intervention
- Reviewed bleeding events and were not related to inappropriate use, thus unlikely preventable with pharmacist intervention
- Future directions:
  - Pharmacist education needed on appropriate dosing of DOACs based on indication
  - Unit based prescriber education

References


Disclosure

The authors of this project have nothing to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this project.