Implementing a monitoring program for patients on direct oral anticoagulants

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Service

- Backus Hospital Medication Management Clinic located in Norwich, CT provides a newly implemented Direct Oral Anticoagulant (DOAC) management service.
- Patient population: patients with non-valvular atrial fibrillation or venous thromboembolism
- Role of clinical pharmacist:
  - Initiation of DOAC therapy
  - Monitors for the efficacy and safety of DOAC therapy
  - Provides education on the benefits and risks of DOAC therapy
- Pharmacist Evaluation:
  - Lifestyle (diet and exercise)
  - Renal function
  - Drug-drug interactions and other medications use
- Clinical pharmacist communicates to the referring physicians on any significant concerns or recommendations with DOAC therapy.
- The referred patients will be discharged from the clinic when they have been on DOAC for an extended duration (typically >6 months).
- Prior to discharge, the patients will be assessed to ensure that they are well-educated on signs and symptoms of adverse events to DOAC agents and what actions to take if these events were to arise.

Adaptability

- DOAC management service can be implemented in pharmacist-driven anticoagulation clinics.
- Many anticoagulation clinics are already staffed with healthcare professionals, who are well trained at evaluating and educating patients for the signs and symptoms of thrombosis and bleeding.
- The same concept along with renal function monitoring is applied in this DOAC management program.

Significance

- The role of a clinical pharmacist is expanding rapidly in the healthcare world in which the pharmacist is gaining more responsibilities as a valuable member of a healthcare team. Since the use of DOACs is on the rise, DOAC management program driven by pharmacist will enhance patient care and safety along with expanding the pharmacist’s role in anticoagulation care.

Referral System

1. Diagnosis
   a. Non-valvular atrial fibrillation (NVAF)
   b. Venous thromboembolism (VTE)

2. Direct Oral Anticoagulant of Choice

<table>
<thead>
<tr>
<th>Class</th>
<th>Pradaxa® (dabigatran)</th>
<th>Kardefpl® (nomlubaran)</th>
<th>Eliquis® (apixaban)</th>
<th>Savaysa® (edoxaban)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dosing</td>
<td>Direct thrombin (IIa) inhibitor</td>
<td>Direct Factor Xa inhibitor</td>
<td>Direct Factor Xa inhibitor</td>
<td>Direct Factor Xa inhibitor</td>
</tr>
<tr>
<td>NVAF: 150 mg BID</td>
<td>DVT/PE: 150 mg BID after 5 to 10 days of parenteral anticoagulation</td>
<td>DVT/PE: 15 mg BID x 21 days, then 20 mg daily</td>
<td>DVT/PE: 15 mg BID x 7 days, then 5 mg BID</td>
<td>DVT/PE: 60 mg daily after 5 to 10 days of parenteral anticoagulation</td>
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<td></td>
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</tbody>
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3. Duration of Anticoagulation Therapy
   a. Indefinite, 3 months, 6 months, or 1 year

4. Other Anticoagulation Status
   a. Current use of oral anticoagulant or LMWH

5. Relevant Past Medical History

Justification

- Many providers choose a DOAC for anticoagulation because of the ease of administration and fewer drug and food interactions.
- A number of providers, however, forego any follow-up with patients on DOAC agents believing it is unwarranted.
- On the contrary, a growing body of evidence and expert opinion supports the importance of follow-up monitoring for these patients.
- Pharmacist interventions:
  - Patients’ adherence
  - Monitoring for adverse events
  - Improve health outcomes

DOAC Monitoring Checklists

The "ABCDEF" of direct oral anticoagulant management

1. Diagnosis
2. Direct Oral Anticoagulant of Choice
3. Duration of Anticoagulation Therapy
4. Other Anticoagulation Status
5. Relevant Past Medical History

Disclosure: Authors have NO affiliations with or involvement in any organization or entity with any financial interest, nor financial interest in the subject matter or materials discussed in this manuscript.