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Focused Anticoagulation Service in Family Medicine Residencies

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Objectives

• Describe a method to improve care of patients on short-term or long-term anticoagulation

• Describe a method to provide high level anticoagulation management education for Family Medicine residents
Background

• Warfarin is defined as a high-risk medication, being one of the most common reasons for medication-related ER visits and hospitalizations

• Guidelines strongly encourage a focused approach to the care of anticoagulation patients

CHEST 2012;141:e44S-e88S.
Background

- ETSU Family Medicine Residency Programs
  - Bristol, Johnson City, Kingsport
  - Approximately 6 residents per class at each site
  - Rural-based practice
  - Hospital-based service at 3 different teaching institutions for each site

- Collaborative relationship
  - With ETSU Bill Gatton College of Pharmacy
  - 1 Clinical Pharmacy Faculty member at each site
Patient care design

- Interprofessional Anticoagulation Clinic
  - Resident-driven, PharmD/MD precepted
  - Laboratory, nursing, and staff involvement

- Two **partial** half-days each week at each site
Patient flow

- Check-in for AC appt
- POC Fingerstick INR performed by Nursing or Lab
- Nursing for vitals, rooming, and medication list update
- Complete refills, lab, and follow-up appt orders
- Precept with PharmD then MD
- Resident to conduct interview, ROS/PE
- Communicate written and verbal instructions to patient
- Front desk to schedule follow-up
Resident: Conduct interview, ROS/PE

- Prior to entering room
  - Review patient INR history, indication, duration
  - Review patient current INR
  - Open Anticoagulation flowsheet in EMR and enter INR result
  - Pre-visit review by med/pharm students
Anticoagulation Flowsheet

- Goal INR
- Indication
- Duration of treatment
- Current Warfarin Dose
- Prior Daily/Weekly Dose
- New Daily/Weekly Dose
- PT/INR today
- Missed/extra doses
- Easy bleeding
- Easy bruising
- Focal weakness
- Leg pain/swelling
- Dyspnea/chest pain
- Recent changes in meds/diet
- Nosebleed
- Hematemesis/Hemptysis
- Hematuria
- Blood in stool
- Antibiotic use
- ASA/NSAID use
Resident: Conduct interview, ROS/PE

• While in room
  – Complete Anticoagulation flowsheet in EMR
  – Complete interview
    • Current status of medications/diet
    • Patient questions/concerns
  – Complete targeted ROS and PE
    • Based on indication for anticoagulation
    • Symptoms of bleeding/bruising/clot/stroke
Resident: Conduct interview, ROS/PE

- Documentation
  - Anticoagulation flowsheet in EMR
  - Anticoagulation note in EMR
  - Billing for level of visit
PharmD: Precept resident

- PharmD to provide continuity in care for patients

- Resident discusses patient with PharmD
  - Determine course of action for that day
  - Determine education/follow-up needed
  - Resident and PharmD present to precepting MD

- Precepting PharmD and/or MD interview and/or physically examine patient as indicated
Complete refills, lab, and follow-up appt orders

• Resident completes any requested refills
  – Anticoagulant
  – Chronic medications as appropriate based on clinical picture and labs

• Resident orders laboratory and clinic follow-up based on anticoagulation plan
Communicate written and verbal instructions to patient

- Resident provides written instructions to patient
  - INR result
  - Anticoagulation dosing and follow-up plan
  - Clinic contact information

- Resident provides education related to the visit and answers all patient questions prior to discharge

- PharmD observes patient discharge education
Laboratory/front desk to schedule follow-up

- Patient goes to front desk to schedule follow-up AC visit

- When scheduling MD appt, front staff notes *date* and *level* (99213, 99212, etc.) of current AC visit in the comments field of the follow-up visit.
Patient flow

Check-in for AC appt

POC Fingerstick INR performed by Nursing or Lab

Nursing for vitals, rooming, and medication list update

Resident to conduct interview, ROS/PE

Precept with PharmD then MD

Complete refills, lab, and follow-up appt orders

Front desk to schedule follow-up

Communicate written and verbal instructions to patient
Transition Issues

• Thorough communication at all levels of the system to explain the new approach to care – scheduling, coordination with PCP visits, etc

• Significant education to patients up front to explain new system – co-pays/perceptions by patients
Potential Benefits

• Consistent, systematic approach
  – To the care for all patients receiving anticoagulation
  – To the education for Family Medicine residents managing patients on anticoagulation

• Improved time in therapeutic range and decreased bleeding events for patients on anticoagulation
Resident Education

• Didactic: Noon conferences or Inservices
  – Intern: Conduct and rationale for visit, CHEST guidelines, resources
  – 2\textsuperscript{nd} year: Diet and medication interactions, complicated patient cases
  – 3\textsuperscript{rd} year: Transitions in care, perioperative management
  – Inpatient team: Inpatient anticoagulation, new anticoagulants

• Experiential: Patient care visits
Potential Research

• Patient care
  – Satisfaction
  – Outcomes

• Resident
  – Confidence
  – Competency
Objectives

• Describe a method to improve care of patients on short-term or long-term anticoagulation

• Describe a method to provide high level anticoagulation management education for Family Medicine residents
Questions?

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