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### Focused Anticoagulation Service in Family Medicine Residencies

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## Focused Anticoagulation Service in Family Medicine Residencies

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# Focused Anticoagulation Service in Family Medicine Residencies

ETSU Family Medicine Associates  
Johnson City, Tennessee

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**Contributors:** Emily K. Flores, PharmD, L. Brian Cross, PharmD,  
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# Disclosures

It is the policy of the AAFP that all individuals in a position to control content disclose any relationships with commercial interests upon nomination/ invitation of participation. Disclosure documents are reviewed for potential conflicts of interest and if identified, they are resolved prior to confirmation of participation. Only these participants who have no conflict of interest or who agree to an identified resolution process prior to their participation were involved in this CME activity.

All individuals in a position to control content for this activity have indicated they have no relevant financial relationships to disclose.

# 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

# Background

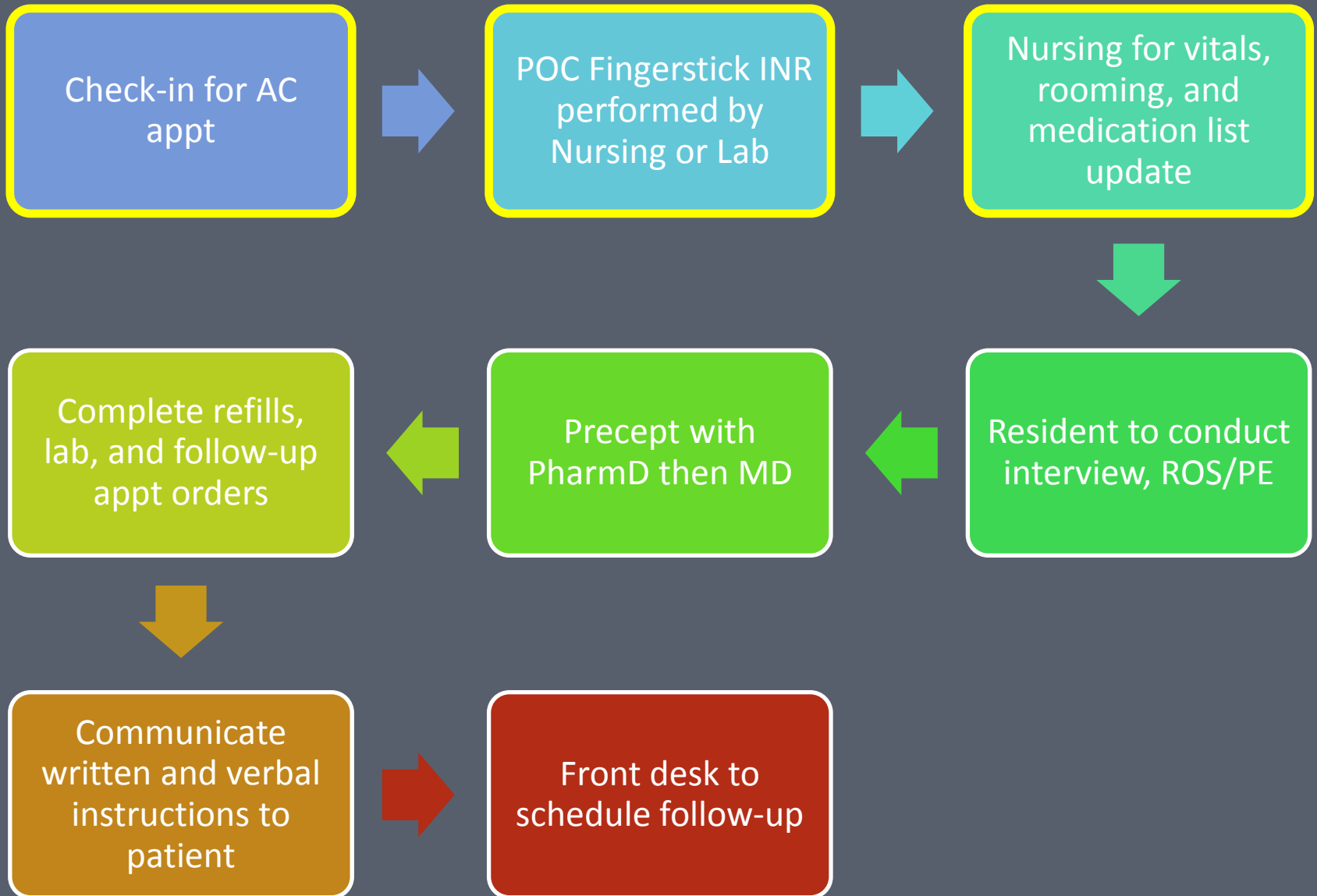
- ETSU Family Medicine Residency Programs
  - Bristol, Johnson City, Kingsport
  - Approximately 6 residents per class at each site
  - Rural-based practice
  - Hospital-based service at 3 different teaching institutions for each site
- Collaborative relationship
  - With ETSU Bill Gatton College of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



## *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

Problem Notes Labs Procedures Imaging Chart

All Notes by Specialty None

72 of 252 Chart Items (4 Invalid and 114 Audit Items) - Filters Applied

**Family Medicine**

- 27Nov2012 - Appointment
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 06Nov2012 - Appointment
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 02Nov2012 - Appointment
  - Established (Established) - Koscinski, Erin; Enc: Kosci
- 22Oct2012 - Appointment
  - sParent Folder - Blackwelder, Reid; Enc: Blackwelder,
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 02Oct2012 - Appointment
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 18Sep2012 - Appointment
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 29Aug2012 - Appointment
  - Established (Established) - Blackwelder, Reid; Enc: BI
- 25Jun2012 - Appointment
  - KFM Anticoagulation Note (KFM Anticoagulation Note)
- 19Jun2012 - Image Encounter
  - sOphthalmology - Blackwelder, Reid; Enc: Blackwede
- 21May2012 - Appointment
  - Established (Established) - Blackwelder, Reid; Enc: BI
- 30Apr2012 - Appointment

Patient Worklist Meds Allergies Orders Appt

Current Medications None Alpha Rec: 18Oct2012

- \* Alphagan P 0.1 % Ophthalmic Solution; INSTILL ONE DROP RIGHT EYE TWICE (2) A DAY; Therapy: 19Mar2012 to (Last Rx:19Apr2012) Requested for: 19Apr2012; Status: ACTIVE
- Aspirin EC 81 MG Oral Tablet Delayed Release; Take 1 tablet daily; Therapy: 05Mar2012 to; Status: ACTIVE
- Doxycycline Monohydrate 50 MG Oral Capsule; TAKE 1 CAPSULE EVERY 12 HOURS DAILY; Therapy: 21Aug2012 to (Evaluate:18Sep2012) Requested for: 21Aug2012; Last Rx:21Aug2012; Status: ACTIVE
- Enoxaparin Sodium 100 MG/ML Subcutaneous Solution; INJECT 100 MG Every twelve hours; Therapy: 22Oct2012 to

View New Edit Order D/C Reprint Rx/Resend Rx Continue Completed Today Completed On Personalize

Vital Signs Immunizations Flowsheets Growth Chart

FlowSheets KFM Anticoagulati Family Medicine

Data Includes: All		27 Nov 2012	06 Nov 2012	02 Nov 2012	22 Oct 2012
Item Name	Graph	10:13 AM	9:53 AM (2)	9:53 AM (1)	10:26 AM
Goal INR	<input type="checkbox"/>		2-3		
Reason for anticoagulation	<input type="checkbox"/>		DVT/PE		
Duration of Treatment	<input type="checkbox"/>		25 years		
Prior Daily Dose	<input type="checkbox"/>		6mg dialy		
New Daily Dose	<input type="checkbox"/>				
Prior Weekly Dose	<input type="checkbox"/>				
New Weekly Dose	<input type="checkbox"/>				
Easy bleeding	<input type="checkbox"/>		No		

View New Edit Print New Column Enter Result

# 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/Hemoptysis
- 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



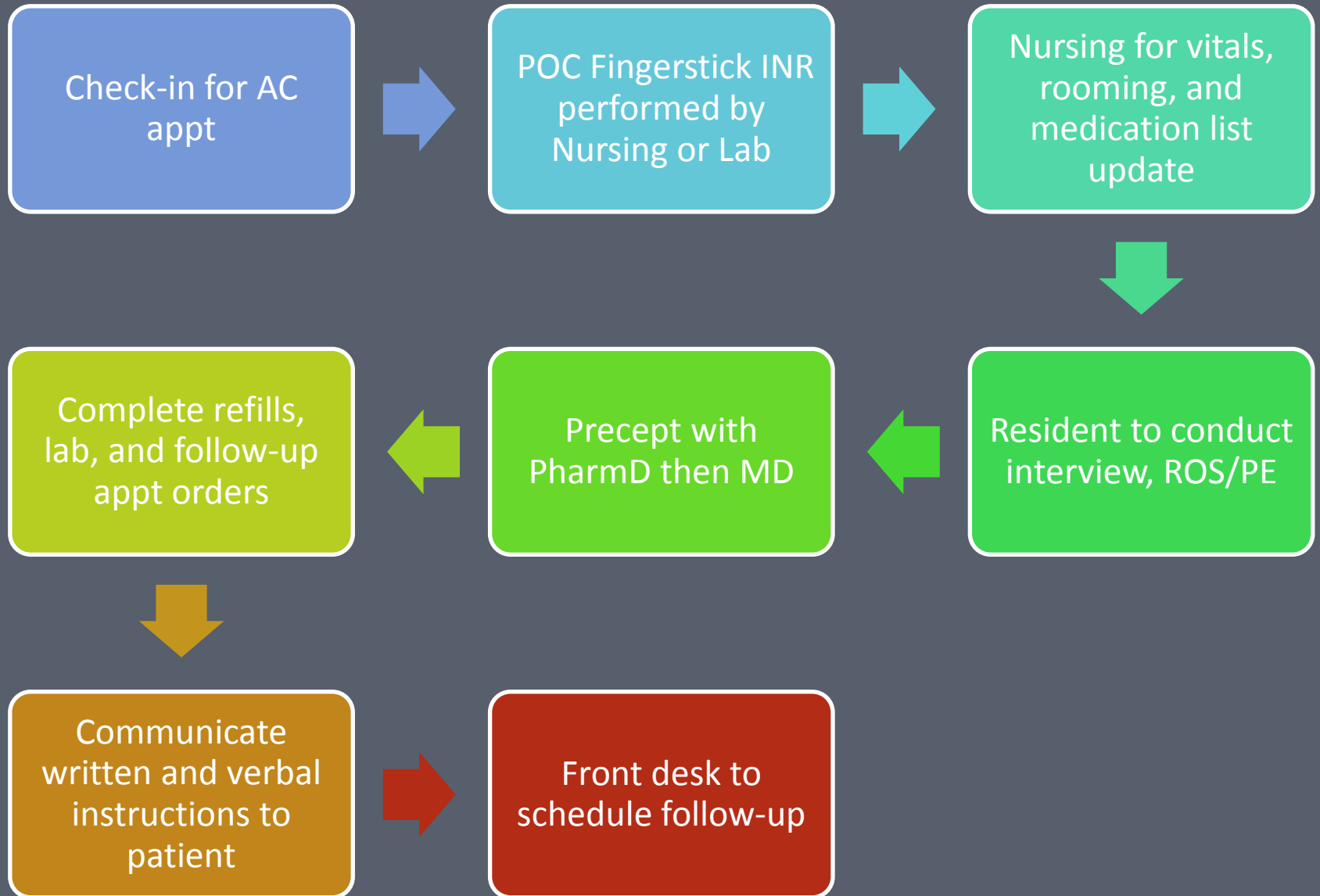
# *Communicate written and verbal instructions to patient*

- 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



# 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<sup>nd</sup> year: Diet and medication interactions, complicated patient cases
  - 3<sup>rd</sup> 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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