



Clinical Safety & Effectiveness Cohort #13

Improving the INR/Coumadin Clinic at
the MARC



CENTER FOR PATIENT SAFETY & HEALTH POLICY

UT HEALTH SCIENCE CENTER™

SAN ANTONIO

Educating for Quality Improvement & Patient Safety

TEAM

- ❖ **Ildiko, Agoston, MD**, Associate Professor, Medical Director of Cardiology Clinic at MARC, Division of Cardiology
- ❖ **Myra Joseph, RN**, Executive and Women's Comprehensive Health Program Manager



Extended Team:

- ❖ **Mysti Schott, MD, EPIC** - UT Medicine
- ❖ **Jeanette Hernandez, EPIC** - UT Medicine
- ❖ **Wanda Patrick, EPIC** - UT Medicine
- ❖ **Crystal Anderson, RN**, Clinic Manager of Cardiology
- ❖ **Sandra Garcia, LVN** - UT Medicine
- ❖ **Juanita Vasquez, LVN** - UT Medicine
- ❖ **Iba Aburizik**, Facilitator
- ❖ **Steven R. Bailey, MD** - UT Medicine

Aim Statement

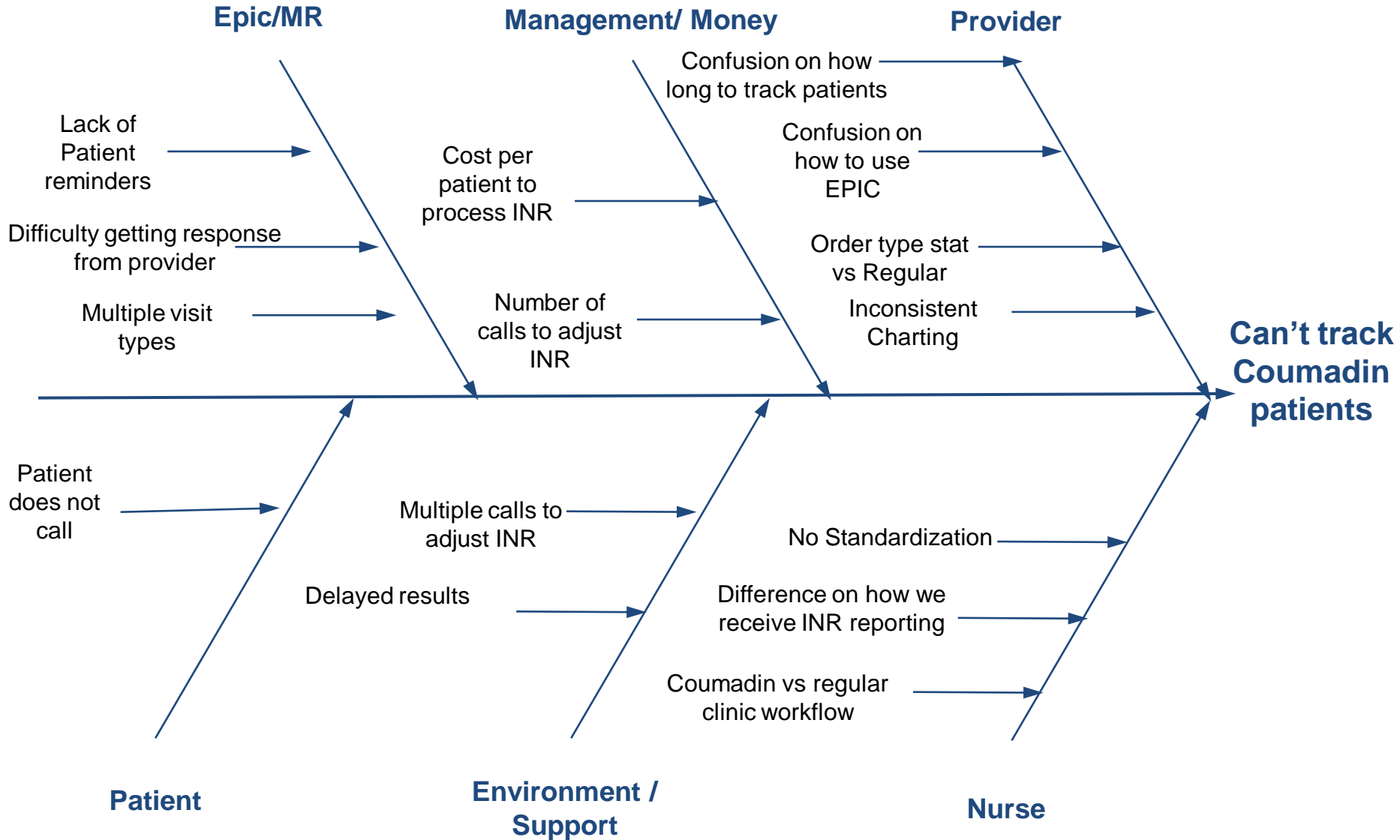


Increase Coumadin Anticoagulation tracking system flow in clinic by 100% utilization at the MARC by 1/1/14 for Cardiology patients with arrhythmias and valve disease

Fish Bone Process

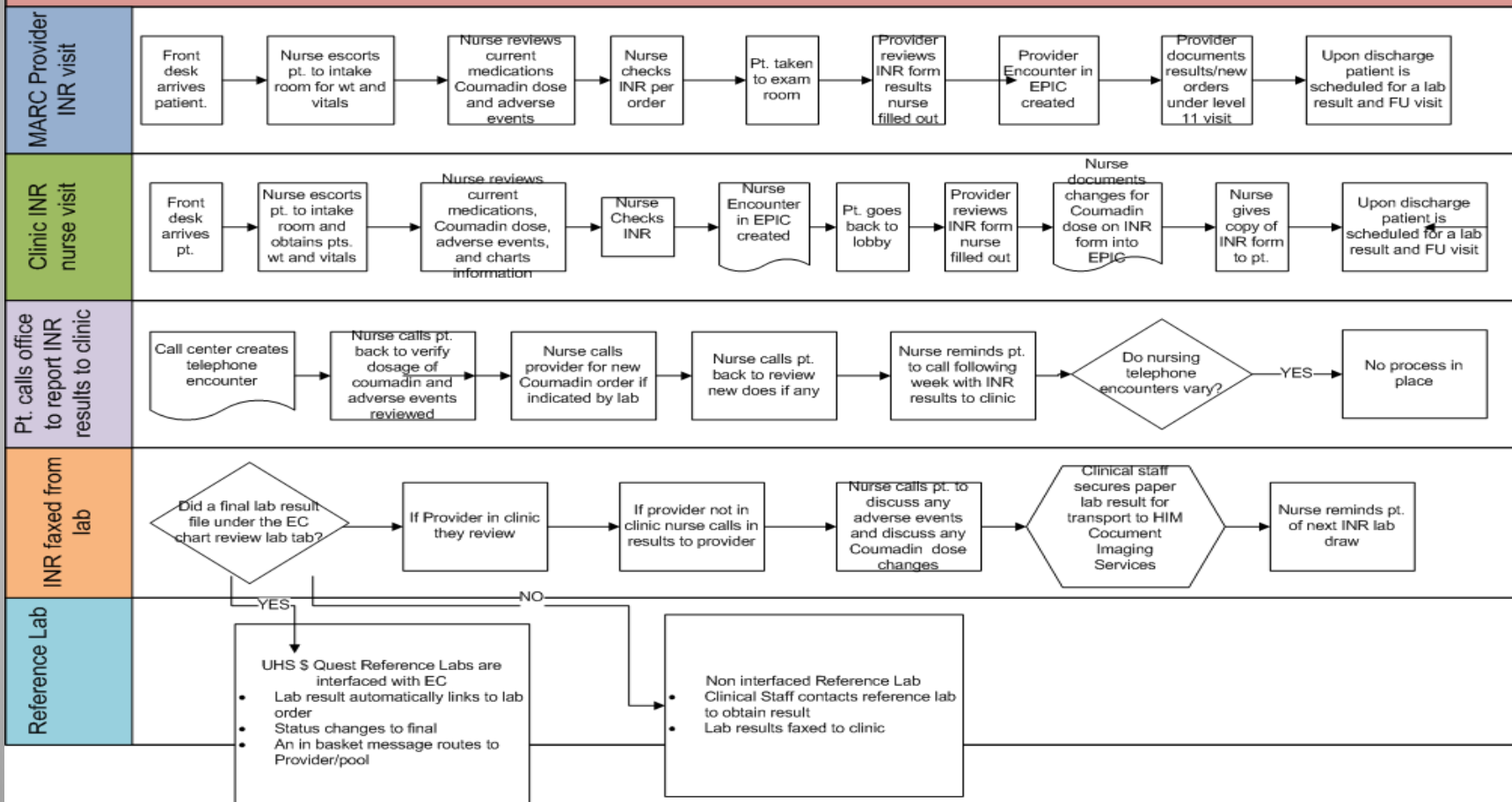


CAUSES OF Inability To Track Coumadin Patients



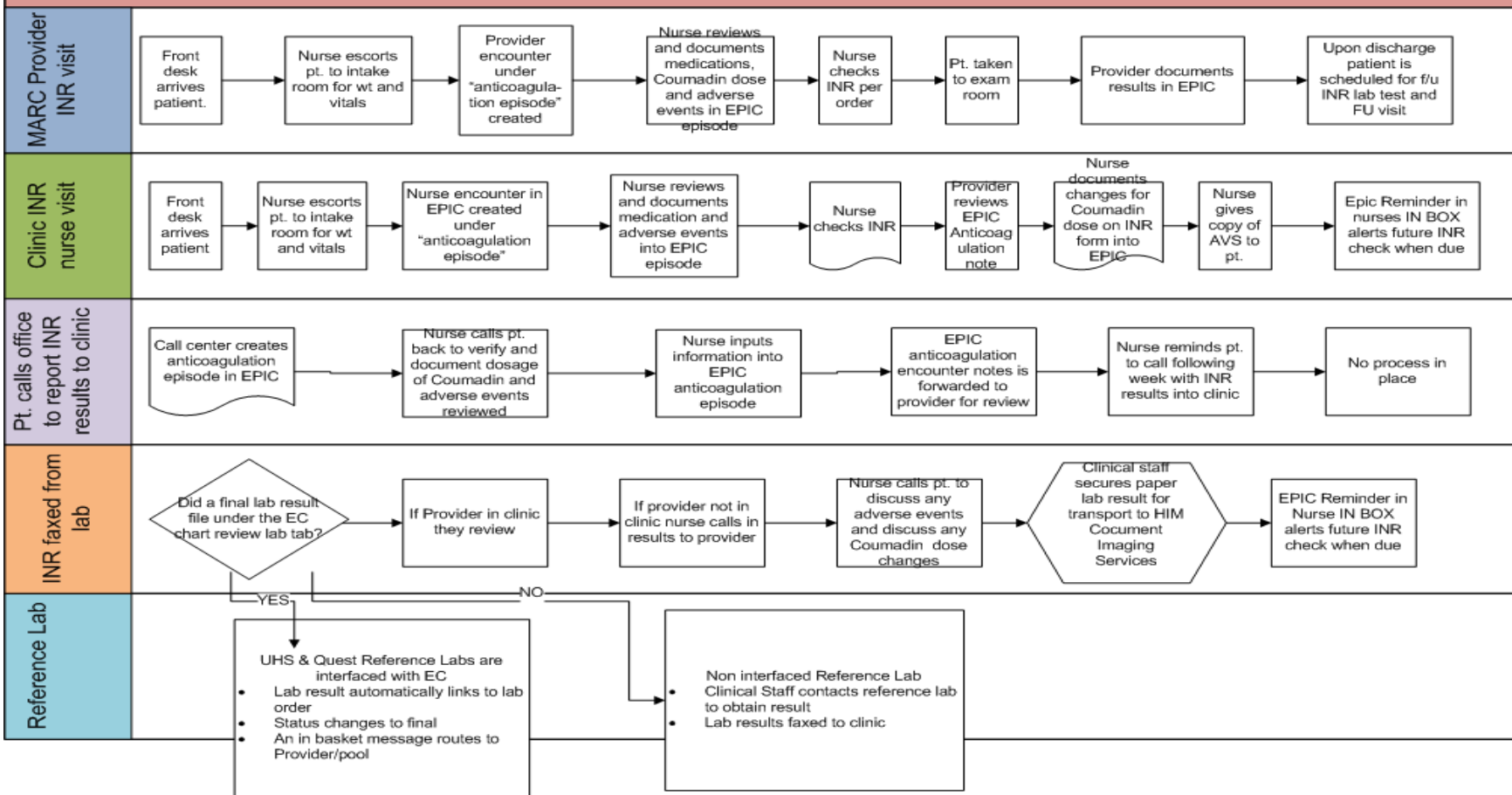
Current Workflow

Current UT Medicine MARC Cardiology - Coumadin Workflow



New Workflow

NEW UT Medicine MARC Cardiology - Coumadin Workflow



• DATA ANALYSIS

Total INR Patients = 100 patients/month for Cardiology

Average Salary (MA vs. RN) \$18.70/hour

Process in old workflow takes 20 min. (phone, in clinic, fax)

\$6.20 / 100 pts = \$ 1,178 Monthly

\$14,136 Yearly

\$1020 room charge monthly (\$32.23/hour) - \$10.74/20 min room charge

Per patient/per visit cost = \$16.94 (\$6.20+\$10.74)

190 visits/mo x 20 min = 3800 min/mo divided by 60 min = 60.3hour /mo

190 patient visits/month x \$16.94 visit cost = \$3218.6/ month

Old workflow \$38,623.2 Total Expense per year (supplies, ink not included)

New workflow – Total time spent with patient 10 min

Current projected yearly expense \$19,311.60

ROI - \$19,311.60 50% saving

PDSA Timeline

- **PLAN: First Team Meeting 9/6/13**
 - AIM statement 1
 - Cause/Effect (Fish) diagram
 - Scope Decision: Current process vs. New process
- **Second Team meeting 9/13/13**
 - Narrow workflow
 - Discuss current INR process
 - Discuss current process in EPIC
 - Assign duties
- **DO: Third Team Meeting 10/11/13**
 - Review of progress (fishbone/workflow)
 - Epic Training – Overview and missing items
 - Implementation of the new workflow (10/14/13)
- **STUDY: Fourth Team Meeting 11/1/13**
 - Data Analysis / Research
 - Baseline Data Collection:11/13
- **ACT**: Intervention A – institutionalize process changes, train staff and providers:10/9/13
- Finalize Control Charts for Presentation:1/6/14
- Deliverables & Project Presentation – TODAY!



New EPIC INR Monitoring Workflow for Marc Cardiology

- Anticoagulation Tracking System flow
- New Patient Visit

Anticoagulation monitoring plays a crucial role in many cardiac patients' treatment. During an **office visit** with the patient, the cardiologist orders a referral to anticoagulation monitoring. When he places the order, he's prompted to answer an INR Goal question.

After visit Procedures (1 Order)

REFERRAL TO ANTICOAGULATION MONITORING (TRANSFER OF CARE) Accept Cancel

UTM Referral, Referral By - RIVERA, OSCAR, Cardiology, MARC FAMILY MEDICINE, Family Medicine , Referral/Visit, Specialty Services Req

Status:

Provider Specialty:

Department:

Dept Specialty:

RefType: **Referral/Visit**

Referral Reason: **Transfer of Care** **Specialty Services Required** Continuity of Care

Referral Priority: **Routine** Urgent Elective

Class: **UTM Referral** Non-UTM Referral PCS

Referral: Location/POS: From: To:

of Visits: Expiration Date: Override restrictions

Comments (F6): [Click to add text](#)

Questions:

Prompt	Answer
1. INR Goal	<input type="text" value="1.5-2.5"/>
Single response	

▶ [Additional Order Details](#)

Accept Cancel

In Basket

New Msg Patient Msg Refresh Edit Pools Settings Search Attach Out Properties Forward

Results (15)
Rx Request (5)
Orders (9146)
Patient Call Messages (10)
Pt Reminder (1)
My Open Charts (134)
My Open Encounters (1)
Overdue Results (1586)
 Chart Cosign
 Staff Message
 CC'd Charts
INR Reminder (7)
 MyChart Advice Request
 MyChart Rx Request (2)
 MyChart Schedule Request
 Refill Errors (1)

INR Reminder 7 unread, 12 total Sort AutoAdvance

Take Put Back Chart Enc Dial Flowsheet

Update your In Basket settings to choose column preferences.

Dismiss Edit Columns Hide Wrapped Columns Reset to Default

Status	INR Due Date	Patient	Phone	Provider	INR (Date)
<i>INR Goal: 2.0-3.0</i>					
Read	07/01/2013	Quijano Jr, Jesus	956-722-0084	Brune, Sonja D	3.1 (6/17/2013)
<i>INR Goal: 2.0-3.0</i>					
		Sent By: Fowiks, Alesandra			Date Sent: 06/18/2013
New	09/26/2013	Bautista, Encarnacion B	210-432-6568	Brune, Sonja D	3.5 (9/26/2013)
<i>INR Goal: 2.0-3.0</i>					
		Sent By: Anderson, Crystal L			Date Sent: 09/26/2013

Sort: Advanced Sort Default Sort

- High Priority
- Low Priority
- Carbon Copy
- Work Assigned To You
- Work Taken By You
- Work Assigned To Your Pool
- Work Taken By Others
- Critical
- Abnormal
- Previous Abnormal

Overdue messages are red and italicized.




My In Basket







Attached In Baskets

The cardiologist documents the INR goal (1.5-2.0), along with the responsible group (Cardiology nurses), date of first INR, weekly max dose, and a target end date. After answering the questions, he signs the order. The system;





1. Enrolls patient in anticoagulation therapy and sends an enrollment message to the pool specified by the Cardiologist.
2. Prepares an INR reminder message to send to the pool on the day of the new INR.
3. Adds a Health Maintenance modifier to the chart for anticoagulation.
4. Creates an anticoagulation episode for the patient and links the diagnosis associated with the order to the episode.




When the nurse in the cardiology clinic checks her In Basket, she sees an anticoagulation enrollment message. She is a member of the anticoagulation In Basket pool specified by the cardiologist when he placed the referral order.

INR Reminder 6 unread, 12 total Sort AutoAdvance   

Take  Put Back  Chart  Enc  Dial  Flowsheet 

Update your In Basket settings to choose column preferences.

Dismiss  Edit Columns  Hide Wrapped Columns  Reset to Default 

Status	INR Due Date	Patient	Phone	Provider	INR (Date)
	INR Goal: 2.0-3.0	<i>Sent By: Brune, Sonja D</i>		<i>Date Sent: 06/12/2013</i>	
	Read 07/01/2013 INR Goal: 2.0-3.0	Quijano Jr, Jesus	956-722-0084	Brune, Sonja D	3.1 (6/17/2013)
		<i>Sent By: Fowlks, Aiesandra</i>		<i>Date Sent: 06/18/2013</i>	
	Read 09/26/2013 INR Goal: 2.0-3.0	Bautista, Encarnacion B	210-432-6568	Brune, Sonja D	3.5 (9/26/2013)
		<i>Sent By: Anderson, Crystal L</i>		<i>Date Sent: 09/26/2013</i>	

Bautista, Encarnacion B - INR Due 9/26/13 [More Detail >>](#)

Message

Bautista, Encarnacion B is due for an INR test on 9/26/13.

INR as of 9/26/2013 and Previous Dosing Information

INR Dt	INR	Goal	Wkly Tot	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		2.0-3.0	17.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg

Anticoagulation Dose Instructions as of 9/26/2013

	Total	Sun	Mon	Tue	Wed	Thu	Fri	Sat
New Dose	17.5 mg	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)	2.5 mg (5 mg x 0.5)

[Anticoagulation Summary as of 9/26/2013](#)

The report defined for this message type includes a summary of the anticoagulation therapy referral order placed by the cardiologist. The enrollment notification remains in the nurse's In Basket until the nurse clicks Done for this message. On the date of the first INR (specified by the cardiologist in the referral), an INR Reminder message appears in the nurse's In Basket.

Anticoagulation Visit-Nurse

Note: Anticoagulation nurses are able to place the referral order the same as providers.

INR Reminder 6 unread, 12 total

Sort AutoAdvance



Take Put Back Chart **Enc** Dial Flowsheet

Update your In Basket settings (Enc) Choose column preferences.

Dismiss Edit Columns Hide Wrapped Columns Reset to Default

Status	INR Due Date	Patient	Phone	Provider	INR (Date)
<i>INR Goal: 2.0-3.0</i>					
<i>Read</i>	<i>07/01/2013</i>	<i>Quijano Jr, Jesus</i>	<i>956-722-0084</i>	<i>Brune, Sonja D</i>	<i>3.1 (6/17/2013)</i>
<i>INR Goal: 2.0-3.0</i>					
<i>Sent By: Brune, Sonja D</i>					<i>Date Sent: 06/12/2013</i>
<i>Sent By: Fowlks, Alesandra</i>					<i>Date Sent: 06/18/2013</i>
Read	09/26/2013	Bautista, Encarnacion B	210-432-6568	Brune, Sonja D	3.5 (9/26/2013)
INR Goal: 2.0-3.0			Sent By: Anderson, Crystal L		Date Sent: 09/26/2013

Bautista, Encarnacion B - INR Due 9/26/13

[More Detail >>](#)

Message

Bautista, Encarnacion B is due for an INR test on 9/26/13.

INR as of 9/26/2013 and Previous Dosing Information

INR Dt	INR	Goal	Wkly Tot	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		2.0-3.0	17.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg

Anticoagulation Dose Instructions as of 9/26/2013

New Dose	Total	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	17.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg	2.5 mg
		(5 mg x 0.5)	(5 mg x 0.5)	(5 mg x 0.5)	(5 mg x 0.5)	(5 mg x 0.5)	(5 mg x 0.5)	(5 mg x 0.5)

The INR Reminder message also includes a summary of the cardiologist's anticoagulation therapy order. This message remains in the nurse's In Basket until she creates an anticoagulation encounter and either a follow-up or cancellation date is applied to it. The nurse creates an anticoagulation encounter from this message by clicking **Enc button** while the message is selected.

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Care Teams PrintAVS More

The patient's anticoagulation episode is not linked to the encounter.
[Link the anticoagulation episode](#) A linked anticoagulation episode is required to document an anticoagulation encounter.

Anti-Coag Tracking

- BestPractice
- Contacts
- Episodes
- Allergies
- Meds & Orders
- Problem List
- Results Console

Charting

- Anticoag Track
- Progress Notes
- Order Entry

Discharge

- Routing
- Close Encounter

BestPractice Advisories [click to open](#)
 Refresh Last refreshed on 9/26/2013 at 10:18 PM

Contacts [click to open](#)
 Incoming Call Outgoing Call Other Show: Permanent Comments My Quick Buttons
 No contacts

Episodes [click to open](#)

Linked	Type	Noted
<input checked="" type="checkbox"/> INR	ANTICOAGULATION MONITORING	06/08/2009

[Episodes of Care](#)

Allergies/Contraindications [click to open](#)
 Show: Deleted Expired
 No Known Allergies Last Updated by Alvarado, Virginia on 4/25/2013 10:38 AM [\(History\)](#)
 No Known Allergies
 Mark as Reviewed Unable to Assess Last Reviewed by Montes de Oca, Marisol on 6/11/2013 at 10:23 AM [\(History\)](#)

Medications & Orders [click to open](#)
 Create Medication List Comments
 Search for new order Options

After the Nurse clicks **Enc**, the **Encounter Selection window** opens and the nurse creates an anticoagulation encounter for this order. If the nurse does not complete these actions in In Basket, support staff can also schedule anticoagulation visits in the same way they schedule office visits. After the nurse creates the encounter, she is presented with the anticoagulation navigator template.

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Care Teams Print AYS More

The patient's anticoagulation episode is not linked to the encounter.
[Link the anticoagulation episode](#) A linked anticoagulation episode is required to document an anticoagulation encounter.

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BestPractice Advisories [click to open](#)

Last refreshed on 9/26/2013 at 10:18 PM

Contacts [click to open](#)

Show: Permanent Comments

No contacts

Episodes [click to open](#)

Linked	Type	Noted
<input checked="" type="checkbox"/> INR	ANTICOAGULATION MONITORING	06/08/2009

[Episodes of Care](#)

Allergies/Contraindications [click to open](#)

Show: Deleted Expired

No Known Allergies Last Updated by Alvarado, Virginia on 4/25/2013 10:38 AM [\(History\)](#)

No Known Allergies

Mark as Reviewed Last Reviewed by Montes de Oca, Marisol on 6/11/2013 at 10:23 AM [\(History\)](#)

Medications & Orders [click to open](#)

Search for new order

The anticoagulation episode created automatically when the cardiologist placed the anticoagulation referral order appears in the Episodes section. To link the episode to the encounter, the nurse can either click **Link the anticoagulation episode** at the top of the navigator or open the Episodes section and select the Linked check box. By linking each anticoagulation visit to a single episode, the nurse provides a way to follow progress across encounters and to document the resolution of this course of treatment. Episodes also allow clinicians to review flowsheet data across multiple visits.

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Care Teams Print AYS More

INR goal 2.0-3.0 Start date 6/8/2009 Target end date Providers Brune, Sonja D Indications Comments [Edit Episode Information](#)

Anti-Coag Tracking

BestPractice Contacts Episodes Allergies Meds & Orders Problem List **Results Console**

Charting Pt Findings Anticoag Track Progress Notes Order Entry Discharge Routing Close Encounter

Results Console

Defaults: Result Date: Result Time: Provider: Show: Ref. Ranges

Lab:

Protime-INR [Order All](#)

INR 3.5 ↑ 9/26/13 [+ Order](#)

[Enter/Edit Results](#) [Results Review](#) [Order Entry](#)

Restore Close F9 Previous F7 Next F8

Patient Findings [click to open](#)

Anticoagulation Tracking [click to open](#)

Anticoagulation Summary as of 9/26/2013

INR goal	2.0-3.0
Selected INR	
Weekly max dose	65 mg
Next INR check	
Target end date	

Progress Notes [click to open](#)

[+ Create Note in NoteWriter](#) [+ Create Note](#) [Refresh](#)

No notes filed.

Diagnoses and Orders

When the nurse links the encounter to the episode, the nurse has the option of adding the problem linked to the episode to the list of encounter diagnoses, which she chooses. In the Results Console section, the nurse documents the INR levels. The nurse can also use this section to place an historic Coumadin order for documenting purposes.

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Care Teams Print AYS More

INR goal 2.0-3.0 Providers Brune, Sonja D
 Start date 6/8/2009 Indications
 Target end date Comments [Edit Episode Information](#)

Anti-Coag Tracking

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 Results Console

Charting

Pt Findings

Anticoag Track
 Progress Notes
 Order Entry

Discharge

Routing
 Close Encounter

Patient Findings

Missed Doses Antibiotic Use Dental/Other Procedures
 Extra Doses OTC/Herbal Medications Hospitalization
 Medication Changes Diet Changes
 Bleeding Gums Blood in Urine Any Bruising
 Nose Bleeds Blood in Stool Other Complaints

Comments:

Patient complained of vomiting and diarrhea. Patient also does not eat vegetables or anything green.

F9 F7 F8

Anticoagulation Tracking [click to open](#)

Anticoagulation Summary as of 9/26/2013

INR goal	2.0-3.0
Selected INR	
Weekly max dose	65 mg
Next INR check	
Target end date	

Next, the nurse uses the Patient Findings section to document the answers to a standard set of anticoagulation questions posed to the customer. A series of positive and negative buttons is performed by clicking the mouse plus or minus. Should the patient present other findings not readily available to the screen, you may enter them in the comments section. This section is free form.

Epic Schedule In Basket Chart Telephone Call Refill Enc Patient Station Remind Me Print Secure Log Out

Cardiology, Carl F

Cardiology, Carl F
Male, 71 y.o., 08/31/1939

PCP: FAMILY ... Allergies Penicillins BestPractice Advisory: Be... Primary Ins.: None MRN: 201301

1/13/2011 visit with Nurse Cardiology, RN for Anti-coag visit

Images References Questionnaires Admin Benefits Inquiry SmartSets Open Orders Care Teams Preview AVS More

INR Goal 1.5-2.0 Start date 1/13/2011 Target end date 4/6/2011

Essential Hypertension, Atrial Fibrillation

Providers Physician Cardiology, MD

Anticoag Check

Contacts

Episodes

Vital Signs

Results Console

Problem List

Pt Findings

Anticoag Track

Implants

Progress Notes

Pt. Instructions

LOS & Follow-up

Close Encounter

Patient Findings [click to open](#)

Positives **Missed Doses, Diet Changes**

Negatives Extra Doses, Medication Changes, Antibiotic Use, OTC/Herbal Medications, Dental/Other Procedures, Hospitalization, Bleeding Gums, Nose Bleeds, Blood in Urine, Blood in Stool, Any Bruising, Other Complaints

Anticoagulation Tracking [click to open](#)

Anticoagulation Summary as of 1/13/2011

INR goal	1.5-2.0	Next INR check	
Selected INR		Target end date	4/6/2011
Weekly max dose (mg)	20		
Indications	Essential Hypertension, Atrial Fibrillation		

Implants [click to open](#)

Explanted Deleted

No active implants

Progress Notes [click to open](#)

No notes filed.

Patient Instructions [click to open](#)

No notes filed.

Level of Service & Follow-up [click to open](#)

No LOS code selected

No follow-up instructions entered

Close Encounter [click to open](#)

Enter/Edit Results

Forms

Patient Education

Order Entry

Visit Navigator

More Activities

When the Patient Findings section is closed, the nurse's documentation appears in a compact report for easy review.

INR goal 2.0-3.0 Providers Brune, Sonja D
 Start date 6/8/2009 Indications
 Target end date Comments

[Edit Episode Information](#)

Anti-Coag Tracking
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Anticoagulation Tracking



Selected INR and Previous Dose

[Anticoagulation Flowsheet](#)

Date	INR	Lo	Hi	Description	Wkly	Sun	Mon	Tue	Wed	Thu	Fri	Sat
9/26/2013	3.5!	2	3		17.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Quick select INR: More INRs: Patient deviated from dose

(Previous dose info in mg)

Proposed Order

Pill sizes & Allow half pills Weekly maximum dose: 65

Single week Single week additional tablets per day Alternating week (14-day rotation)

Pill size:	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Weekly dose:
<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="5 mg"/>	<input type="text" value="17.5 mg"/>
# of Pills	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="0.5"/>	<input type="text" value="17.5 mg"/>

Dose instructions:

Responsibility:

Return date:

F9

F7

F8

Next, the nurse proceeds to the Anticoag Track section. This patient's most recent INR result appears at the top of this section.

Flow Sheet Report - Selected Encounters (INR) ? Close X								
<small>76 y.o., 05/09/1937, Add My Sticky Note</small>								
Anticoag	Latest Ref Rng	3/5/2013	4/10/2013	4/29/2013	5/6/2013	6/11/2013	9/26/2013	9/26/2013
Last INR		1.9	1.6	3.1	2.8	1.9		3.5
INR Date		3/5/2013	4/10/2013	4/29/2013	5/6/2013	6/11/2013		9/26/2013
INR Goal		2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
Pt. Dev		No	No	No	No	No	No	No
Current Wk Dose		17.5	17.5	22.5	17.5	17.5	17.5	17.5
Proposed WK Dose		65	65	65	65	65	65	65
PROTHROMBIN TIME								
INTERNATIONAL NORMALIZED RATIO (INR)	1.5 - 2.0	1.9 (A)	1.6 (A)	3.1 (A)	2.8	1.9 (A)		3.5 (A)

Also, because the anticoagulation review Flow sheet is attached to the episode, the Anticoagulation Flow sheet button appears in the upper right corner of the section. The nurse can click this button to view all INR values from the episode. Also, From this activity, the nurse can later highlight all of the INR values documented in the episode and click Graph Region to graph them.

Flowsheet Report - Selected Encounters (INR)

? Close x

, 76 y.o., 05/09/1937, Add My Sticky Note

Anticoag	Latest Ref Rng	3/5/2013	4/10/2013	4/29/2013	5/6/2013	6/11/2013	9/26/2013	9/26/2013
Last INR		1.9	1.6	3.1	2.8	1.9		3.5
INR Date		3/5/2013	4/10/2013	4/29/2013	5/6/2013	6/11/2013		9/26/2013
INR Goal		2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0	2.0-3.0
Pt. Dev		No	No	No	No	No	No	No
Current Wk Dose		17.5	17.5	22.5	17.5	17.5	17.5	17.5
Proposed WK Dose		65	65	65	65	65	65	65
PROTHROMBIN TIME								
INTERNATIONAL NORMALIZED RATIO (INR)	1.5 - 2.0	1.9 (A)	1.6 (A)	3.1 (A)	2.8	1.9 (A)		3.5 (A)

From this activity, the nurse can later highlight all of the INR values documented in the episode and click Graph Region to graph them.

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

Images Questionnaires Admin Benefits Inquiry References SmartSets Open Orders Care Teams Print A/S More

INR goal 2.0-3.0 Providers Brune, Sonja D Edit Episode Information
 Start date 6/8/2009 Indications
 Target end date Comments

Anti-Coag Tracking

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Discharge
 Routing
 Close Encounter

Anticoagulation Tracking

Selected INR and Previous Dose

Date	INR	Lo	Hi	Description	Wkly	Sun	Mon	Tue	Wed	Thu	Fri	Sat
9/26/2013	3.5!	2	3		17.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Quick select INR: 3.5 (9/26/2013) More INRs: Patient deviated from dose (Previous dose info in mg)

Proposed Order

Pill sizes 5 mg & Allow half pills Weekly maximum dose: 65

Single week Single week additional tablets per day Alternating week (14-day rotation)

Pill size: Sun 5 mg Mon 5 mg Tue 5 mg Wed 5 mg Thu 5 mg Fri 5 mg Sat 5 mg Weekly dose: 17.5 mg

of Pills Sun 0.5 Mon 0.5 Tue 0.5 Wed 0.5 Thu 0.5 Fri 0.5 Sat 0.5 Reset

Dose instructions:

Responsibility: SNW1 CARDIOLOGY NURSE Return date: 9/26/2013 Discontinue Therapy

Restore Close F9 Previous F7 Next F8

Progress Notes click to open

Create Note in NoteWriter Create Note Refresh

After reviewing the INR results, the nurse returns to the Anticoag Track section in the navigator, where she can also review past Coumadin dosages and propose new ones. Prior to leaving this screen, the Return Date MUST be entered or you will NOT be able to close the encounter. You may enter t+ the number of days of the return or use the calendar to select the date. Note: T+30 will give you today's date plus thirty days from today.

INR goal 2.0-3.0 Providers Brune, Sonja D
 Start date 6/8/2009 Indications
 Target end date Comments

[Edit Episode Information](#)

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Anticoagulation Tracking

Selected INR and Previous Dose

Date	INR	Lo	Hi	Description	Wkly	Sun	Mon	Tue	Wed	Thu	Fri	Sat
9/26/2013	3.5!	2	3		17.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Quick select INR: 3.5 (9/26/2013) More INRs: Patient deviated from dose (Previous dose info in mg)

Proposed Order

Pill sizes 5 mg & Allow half pills Weekly maximum dose: 65

Single week Single week additional tablets per day Alternating week (14-day rotation)

Pill size:	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Weekly dose:
5 mg	5 mg	5 mg	5 mg	5 mg	5 mg	5 mg	5 mg	17.5 mg
# of Pills	0.5	0.5	0.5	0.5	0.5	0.5	0.5	

Dose instructions:

Responsibility: SNW1 CARDIOLOGY NURSE Return date: 9/26/2013 Discontinue Therapy

Restore Close F9 Previous F7 Next F8

Progress Notes [click to open](#)

Create Note in NoteWriter Create Note Refresh

A Health Maintenance modifier for anticoagulation remains can also be attached to the chart until the cardiology nurse manually satisfies it. This ensures that the modifier is removed only after treatment is complete. The Model System also supports anticoagulation population studies. Using Clarity tables, users can report on encounter and episode information taken during anticoagulation visits, such as INR goals, INR results, and dose information for large numbers of patients.

Demonstration, INR B

Male, 76 y.o., 05/09/1937,

BMI: 21.80 kg/m² Allergies
No Known Allergies

Health Maintenance

Coverage: ADVANTAGE BY SUPERIOR HEALTH/AD... MyCh
MRN: 06142532 UHS

9/26/2013 visit with Agoston, Ildiko for Anti-Coag Tracking Only

? Resize

Snapshot

More

Chart Review

INR goal 2.0-3.0 Providers Brune, Sonja D [Edit Episode Information](#)

Start date 6/8/2009 Indications
Target end date Comments

Flowsheets

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Order Entry

Order Entry

Discharge

Routing

MAR

Close Encounter

Visit Navigator

Anticoagulation Tracking

Selected INR and Previous Dose

Anticoagulation Flowsheet

Date	INR	Lo	Hi	Description	Wkly	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		2	3		17.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5

Quick select INR: More INRs: Patient deviated from dose (Previous dose info in mg)

Proposed Order

Pill sizes & Allow half pills Weekly maximum dose: 65

Single week Single week additional tablets per day Alternating week (14-day rotation)

Pill size: Weekly dose: mg

of Pills:

Dose instructions:

Responsibility: Return date:

F9

F7 F8

To discontinue therapy, select the **discontinue therapy** button located on the bottom right hand corner of the screen. The next slide, will show you what the Edit Episode Information hyperlink is used for.

Anticoagulation Episode Information

Anticoagulation Information as of 9/26/2013

INR goal: [edit](#) Indications:

Weekly max dose (mg):

Target end date:

Indefinite

Anticoagulation Episode Information

INR check location: [edit](#) Preferred lab: [edit](#)

Send INR reminders to: [edit](#)

Comments:

Search for a provider

Provider	Role	Specialty	Phone Number	
Brune, Sonja D		Nurse Practitioner	210-450-4888	<input type="button" value="X"/>

The edit Link information hyperlink allows clinicians the opportunity to modify the INR goal and other pertinent information related to managing where the INR reminders will route to, modify INR goals, weekly max dose and allows you to add any indications as needed.



UT Medicine Teams:

- EpicCare: "Revised Anticoagulation Charting"
- Cardiology Clinic: Implemented new INR reporting through EPIC that saves time and money

Leadership:

- Continue support of QI efforts in MARC Cardiology Clinic (like this CS&E project)

Future Cohort(s):

- Establish Project Team to continue data collection and analysis of other cardiology medication processes for continuous improvement (future team for CS&E class Dr. Sandeep Sagar and Crystal Anderson, RN)

Thank you!



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