INTEGRATION OF DAWN AC and EPIC
What we have learned

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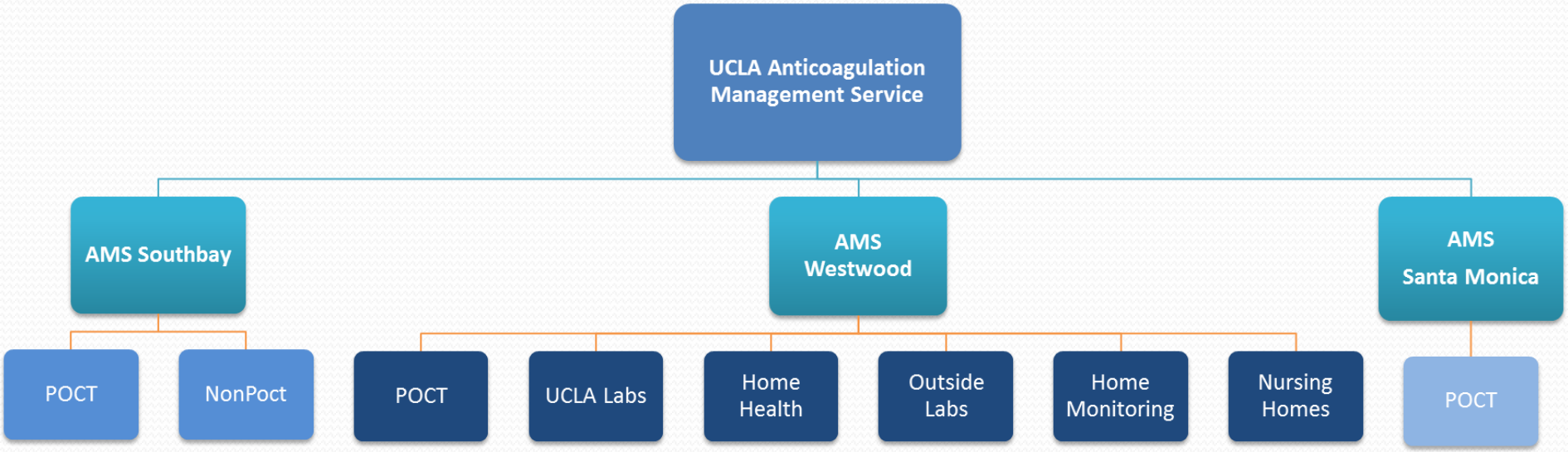
UCLA Health

DAWN AC North American Conference
November 20, 2015


UCLA Anticoagulation Management Service
AMS Southbay
AMS Westwood
AMS Santa Monica
POCT
NonPoct
POCT
UCLA Labs
Home Health
Outside Labs
Home Monitoring
Nursing Homes
POCT

UCLA AMS

Lead by Co-Directors

RN Supervisor

Westwood: 6 LVNs and AAIII

Santa Monica: Two MAs

South Bay: 1 LVN and 1 MA

Current Patient loads

Average between 1400-1500 patients

Open to all of the Department of Medicine (new change)

All patients are 18 years and older

Background Information

Care Connect

Complete electronic health record and practice management system for physician practices, including registration, scheduling and billing functions.

EPIC

The EHR program integrates functions of approximately 65 software applications into a single system accessible across the health system; An estimated 18,000 faculty and staff members use CareConnect, including physicians, pharmacists, nurses, advanced-practice nurses, other clinicians, trainees, students, and staff members working with scheduling, registration, billing, patient placement (ADT), and hospital information management (HIM).

Glazier, et al. 2013,
Integration with Dawn AC & Epic

Background Information

Parallel Systems

EHR

DAWN AC

Paper (paper enrollment, scanning dosing reports)

Considering Care Connect: Decision-Making

EPIC's functionality

DAWN's functionality

Collaboration: Two years

4S, UCLA IT, DOM IT, UCLA lab, Care Connect

Glazier, et al. 2013,
Integration with Dawn AC & Epic

Previous Anticoagulation Enrollment Form

UCLA Health System

ANTICOAGULATION MANAGEMENT SERVICE
PATIENT ENROLLMENT / DOCTOR'S ORDERS

Westwood: Telephone: 310-794-4054; Fax: 310-794-6565
Santa Monica: Telephone: 310-319-4377; Fax: 310-319-4425

MRN:
Patient Name:
(Patient Label)

AMS Location: (choose one)	Patient Phone Number:
POCT: ☐WW ☐SM (restricted to SM IM/Geri/Cards/Rheum)	Other Contact Person Name/Phone:
Non-POCT: ☐ Outside Lab ☐ SNF ☐ HH	
UCLA Lab: ☐ (approval by AMS Director required)	

Accepting MD Name and Pager:
Accepting MD Email:
Accepting MD Department: ☐ IM ☐ Geri ☐ Cards ☐ Rheum UCLA Lab: ☐ (approval by Dr. Fish required)
Does patient have a UCLA PCP? ☐ No ☐ Yes: Name_____ _____ (consider discussing with PCP for enrollment)

Primary Dx for Anticoagulation: Allergy to LMWH: ☐ Y ☐ N
Other Relevant Diagnoses: History of HIT: ☐ Y ☐ N

Is the patient on any other medications that could affect Warfarin (Aspirin, Enoxaparin, Clopidogrel, etc.)? ☐ Y ☐ N
Is Yes, please list:

Target INR Range: ☐ 1.5-2.5 ☐ 2-3 ☐ 2.5-3.5 ☐ 3-4 ☐ Other:

Start Date of Anticoagulation:
Duration of Anticoagulation: ☐ Long Term ☐ Short Term (Please list stop date):

Current Dose of Anticoagulation: Tablet Size
Dose:

Date of Last INR: INR: Date of Next INR:

Please Identify Thromboembolic and Bleeding Risks:

High Thromboembolic Risk (future bridging if subtherapeutic) ☐ Yes ☐ No
- ☐ MV Replacement
- ☐ AV Replacement (caged-ball)
- ☐ Recent Stroke/TIA (within 6 mos)
- ☐ Bileaflet AV Replacement and
  - ☐ A Fib
  - ☐ CHADS2 ≥ 1
- ☐ AFIB and
  - ☐ CHADS2 ≥ 3
  - ☐ Stroke/TIA (3 mos)
  - ☐ Rheumatic Heart
- ☐ VTE (within 12 mos)
- ☐ Thrombophilia
- ☐ Recurrent VTE
- ☐ Active Cancer (6 mos)

CHADS2= CHF (1pt), HTN (1pt), Age>75 (1pt), Diabetes (1pt), Stroke/TIA (2pts)

High Bleeding Risk: ☐ Yes ☐ No
- ☐ History of GI Bleeding
- ☐ Hypertension
- ☐ Cerebrovascular Disease
- ☐ Ischemic Stroke
- ☐ Congestive Heart Failure
- ☐ Renal Insufficiency
- ☐ Aspirin Use
- ☐ Age >75
- ☐ Recent Major Surgery

Enrollment Proxy: [ ] I have discussed this enrollment with the accepting physician, Dr. _____ ,
who verbally agreed to me to accept responsibility for management of this patient's anticoagulation needs upon discharge.

MD: Print Name _____ Signature: _____ Pager: _____ Date:_____ Time____
AMS Nurse Signature: _____ Date _____ Time: _____

UCLA Form #11219 Rev. (06/11)

Anticoagulation Enrollment Order in Care Connect

Referral to Anticoagulation Monitoring

P Normal

Class: Normal

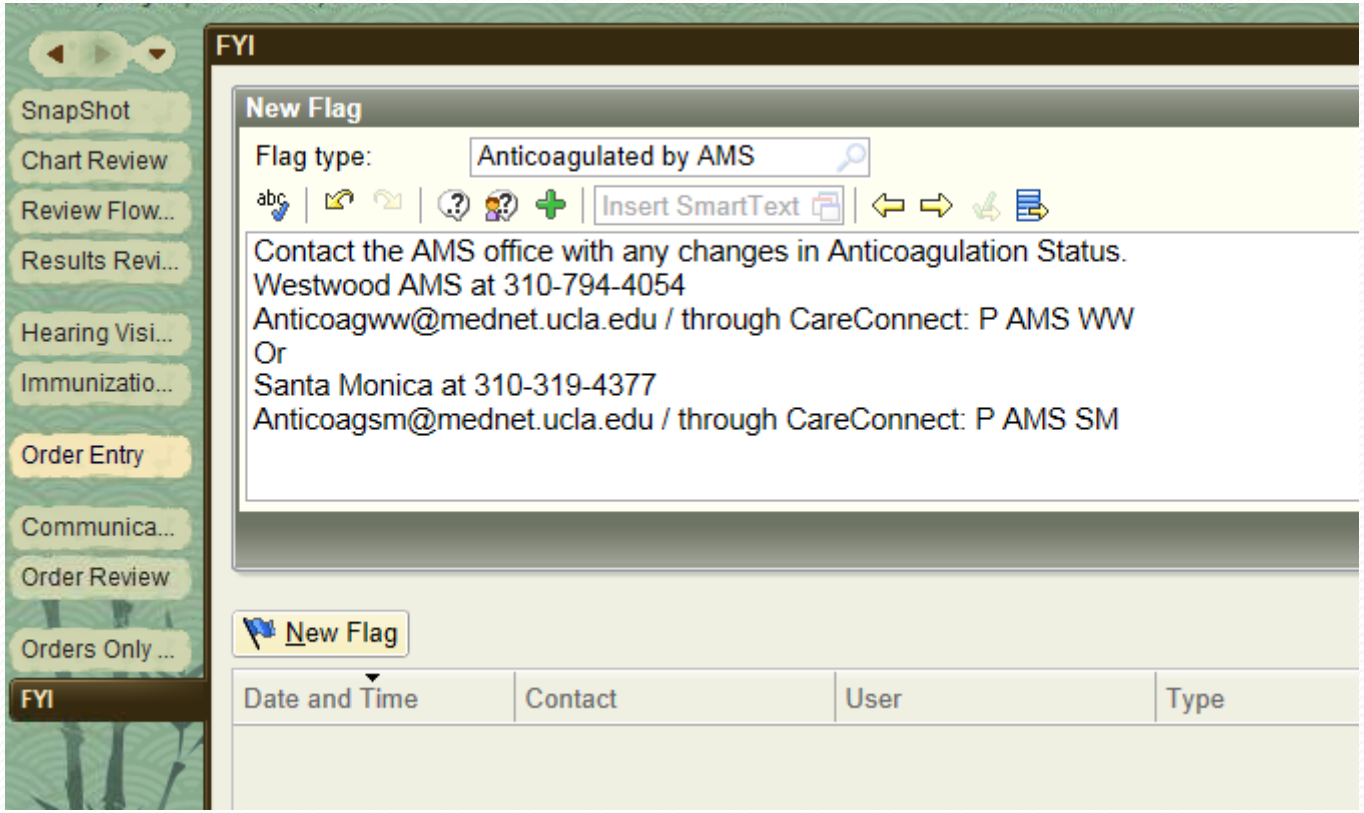
Referral: ☐ Override restrictions

Questions:

	Prompt	Answer
1.	INR Goal	
2.	Preferred location of AMS clinic	AMS WW / AMS SM
3.	Date of first INR	
4.	Point of care test patient?	Yes / No
5.	Is patient allergic to LMWH?	Yes / No
6.	History of HIT?	Yes / No
7.	Is patient on other medications that could affect Warfarin (Aspirin, Enoxaparin, Clopidogrel, etc?) If yes, list in comments.	Yes / No
8.	High Thromboembolic Risk? (Future bridging if subtherapeutic) *CHADS2VASC score below	
9.	Bridging required?	Yes / No
10.	High Bleeding Risk?	
11.	Current dose of warfarin? Separate days with slashes (Su/M/Tu/W/Th/F/Sa)	
12.	Warfarin start date	
13.	Current dose of Lovenox?	
14.	Accepting MD	
15.	Short-term or long-term use of anticoagulants? If short-term specify target end date	Short-term / Long-term
16.	Target End Date	
17.	Enrollment Proxy: I have discussed this enrollment with the accepting physician (specify)	

Single response

FYI flag


FYI
SnapShot
Chart Review
Review Flow...
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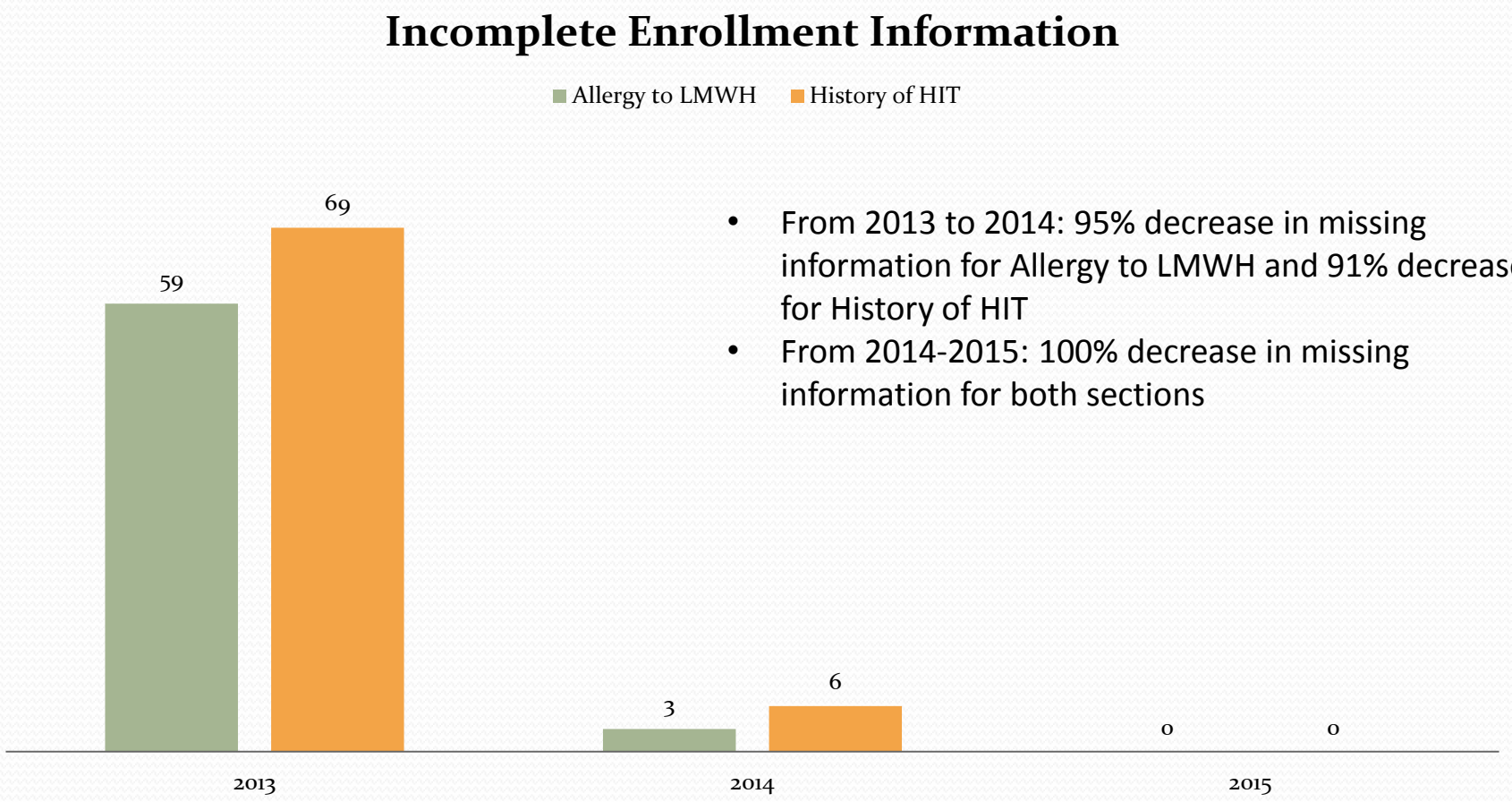
Order Entry
Communica...
Order Review
Orders Only ...
FYI
New Flag
Flag type:
Anticoagulated by AMS
Insert SmartText
Contact the AMS office with any changes in Anticoagulation Status.
Westwood AMS at 310-794-4054
Anticoagww@mednet.ucla.edu / through CareConnect: P AMS WW
Or
Santa Monica at 310-319-4377
Anticoagsm@mednet.ucla.edu / through CareConnect: P AMS SM
New Flag
Date and Time
Contact
User
Type

Workflow BCC & ACC

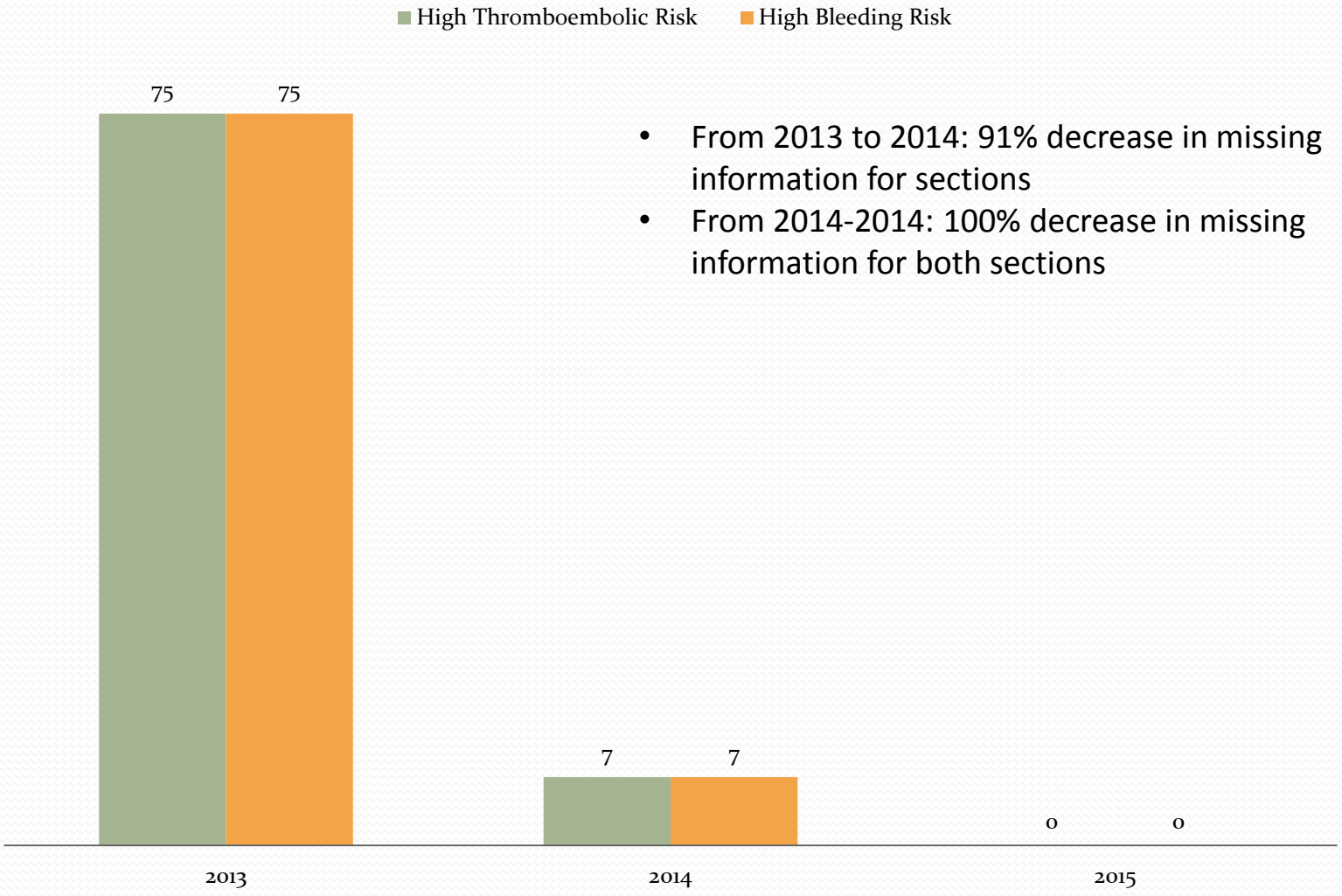
Paper enrollment	Electronic Enrollment
Manually enter all demographic information from MCCS to DAWN AC	Demographic data entered by interface when FYI Flag activated
Send enrollment to eHIMs office (Electronic-Health Information Management Services) Documents would get lost Needed to keep copy in office	Enrollment is already in CareConnect HER
Missing information Email Correspondence (back/forth) Attach form to email Page	Email doctor directly from Care Connect

Let's look at the data…



- From 2013 to 2014: 95% decrease in missing information for Allergy to LMWH and 91% decrease for History of HIT
- From 2014-2015: 100% decrease in missing information for both sections

Incomplete Enrollment Information



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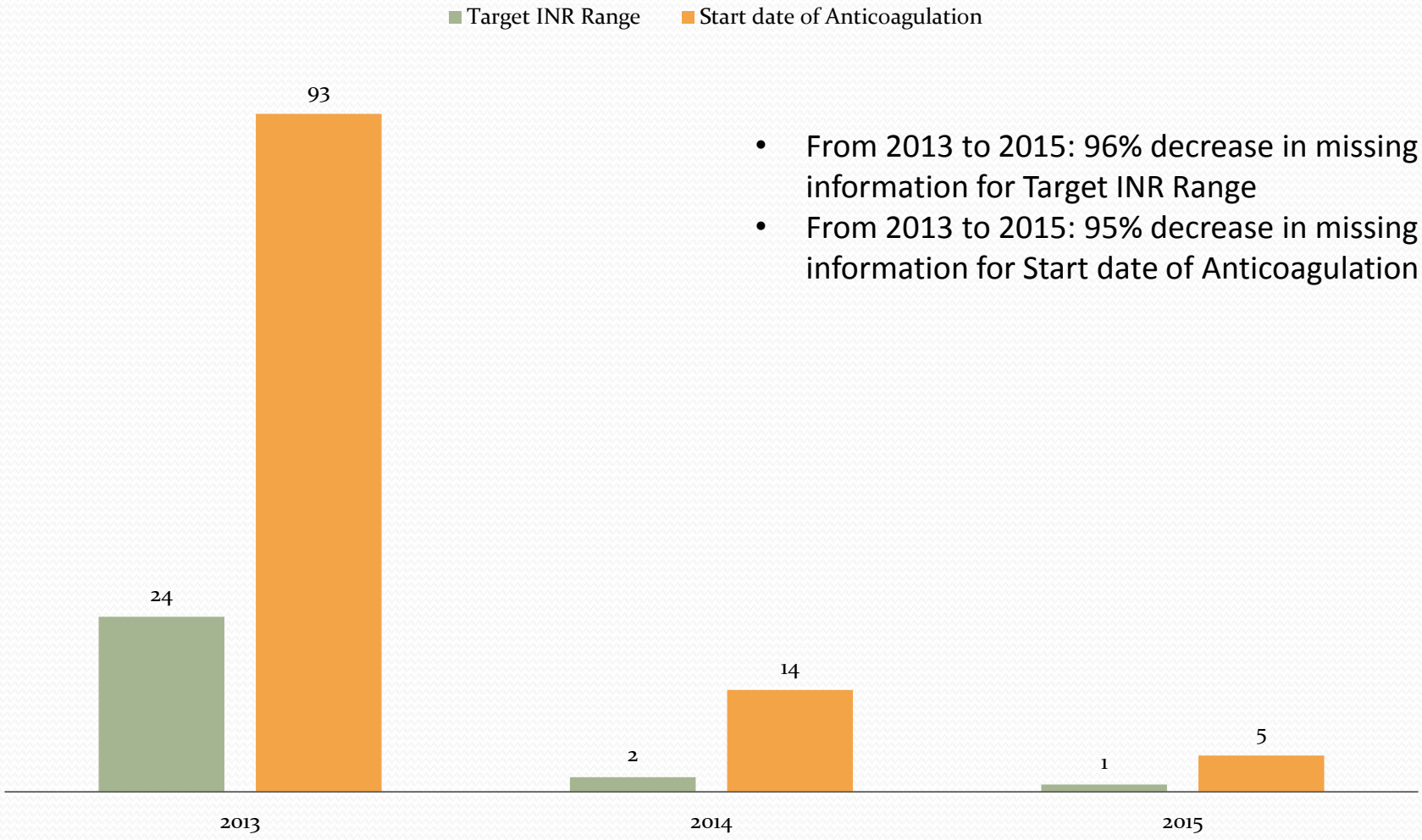
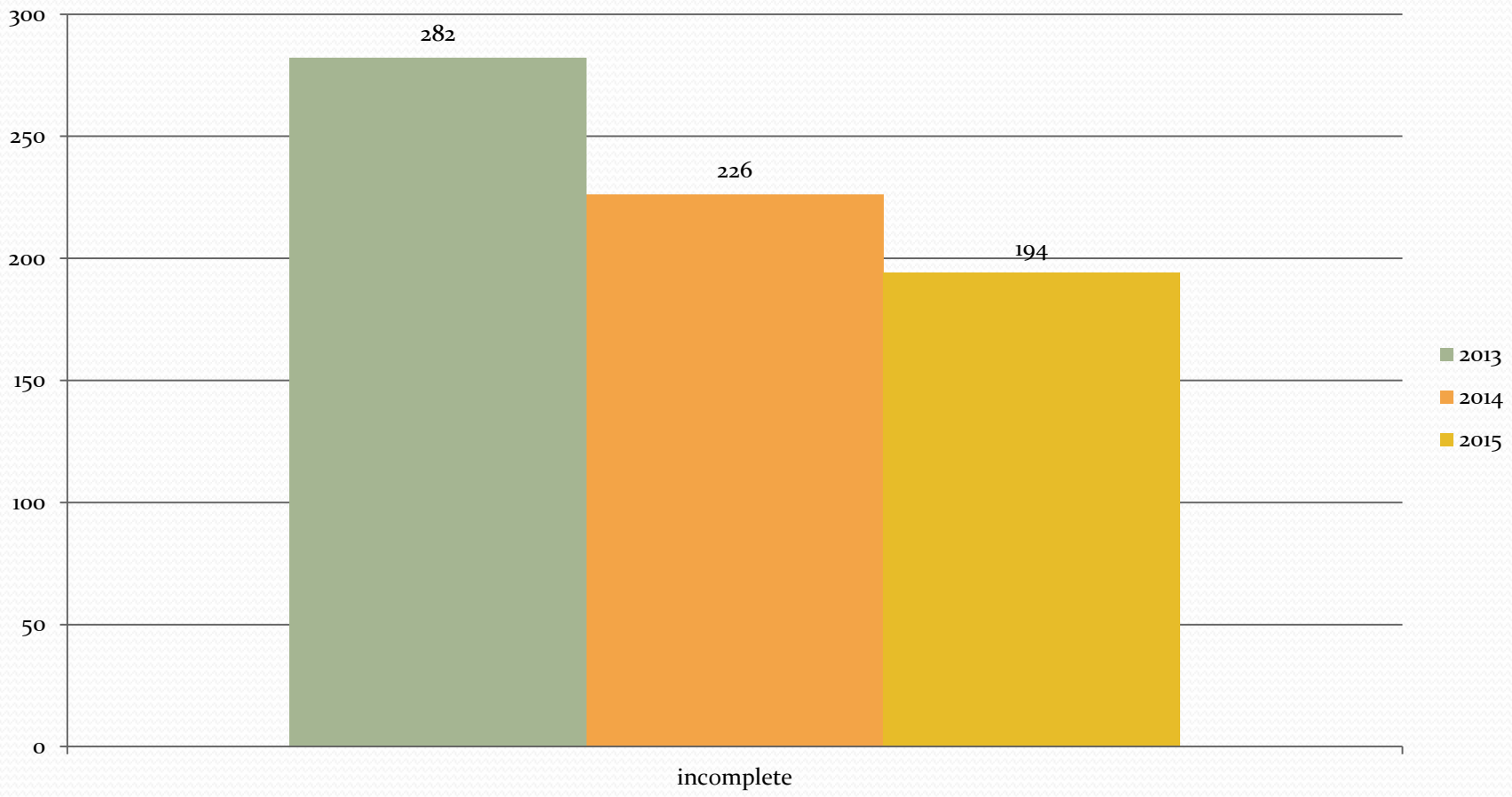
Incomplete Enrollment Information

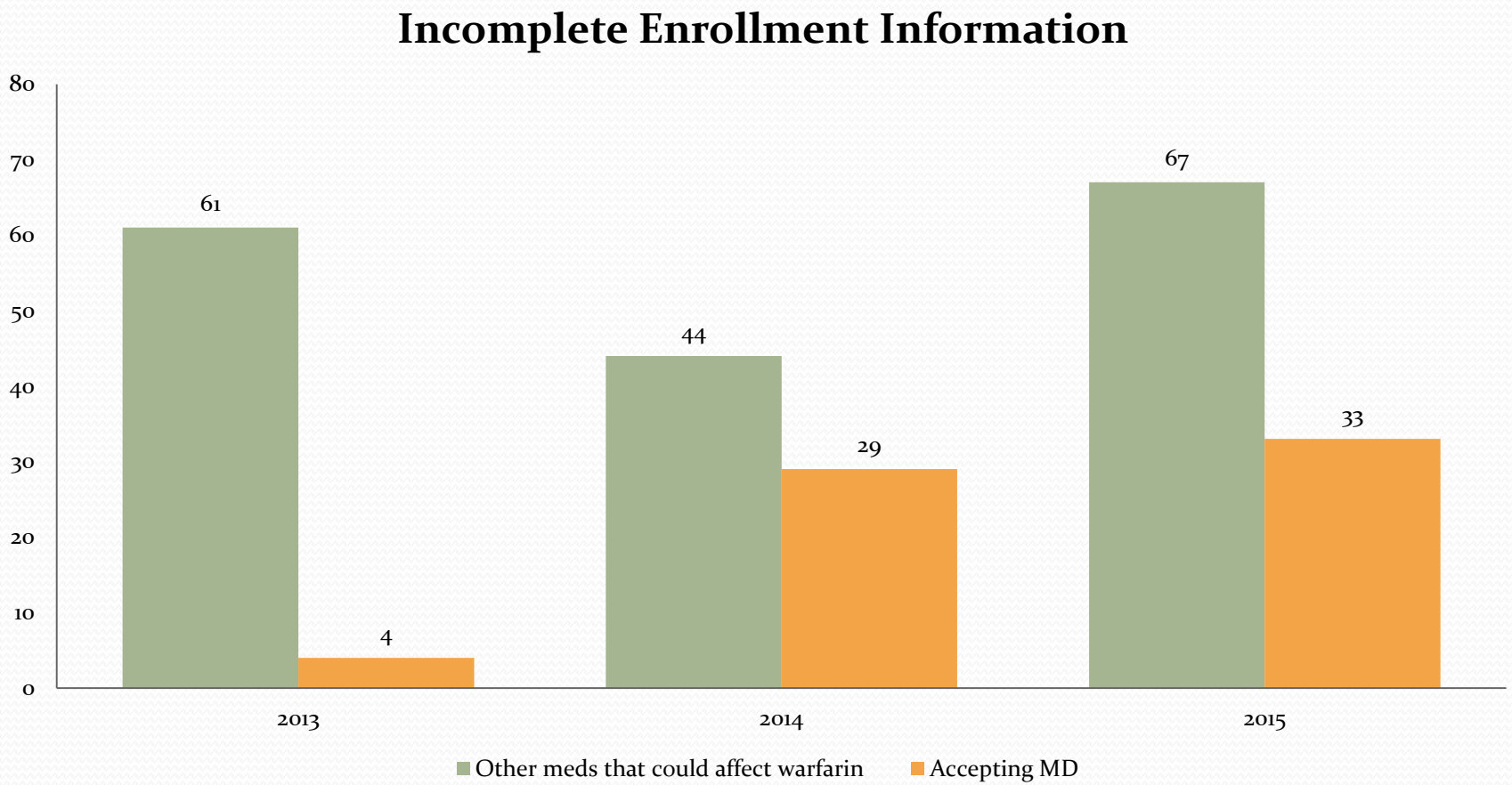


- From 2013 to 2015: 96% decrease in missing information for Target INR Range
- From 2013 to 2015: 95% decrease in missing information for Start date of Anticoagulation

Incomplete Enrollments



Room for improvement



Next Steps to Improve Accuracy and Patient Safety

- Update enrollment form wording in Care Connect
- Meet with Inpatient Team/UCLA satellite clinics regarding enrollment protocol
- Interface medication into DAWN AC
- Nurse-Physician Communication

Improved workflow with interface

- Admission/Discharge Notification
- ADT enrollment reduces time spent
- Dosing Reports uploads for immediate access in CareConnect
- Lab results pre-populate in Dawn reducing time spent entering results manually

Questions and/or Comments

Special thanks to all the UCLA Westwood Anticoagulation Management staff for their support!