

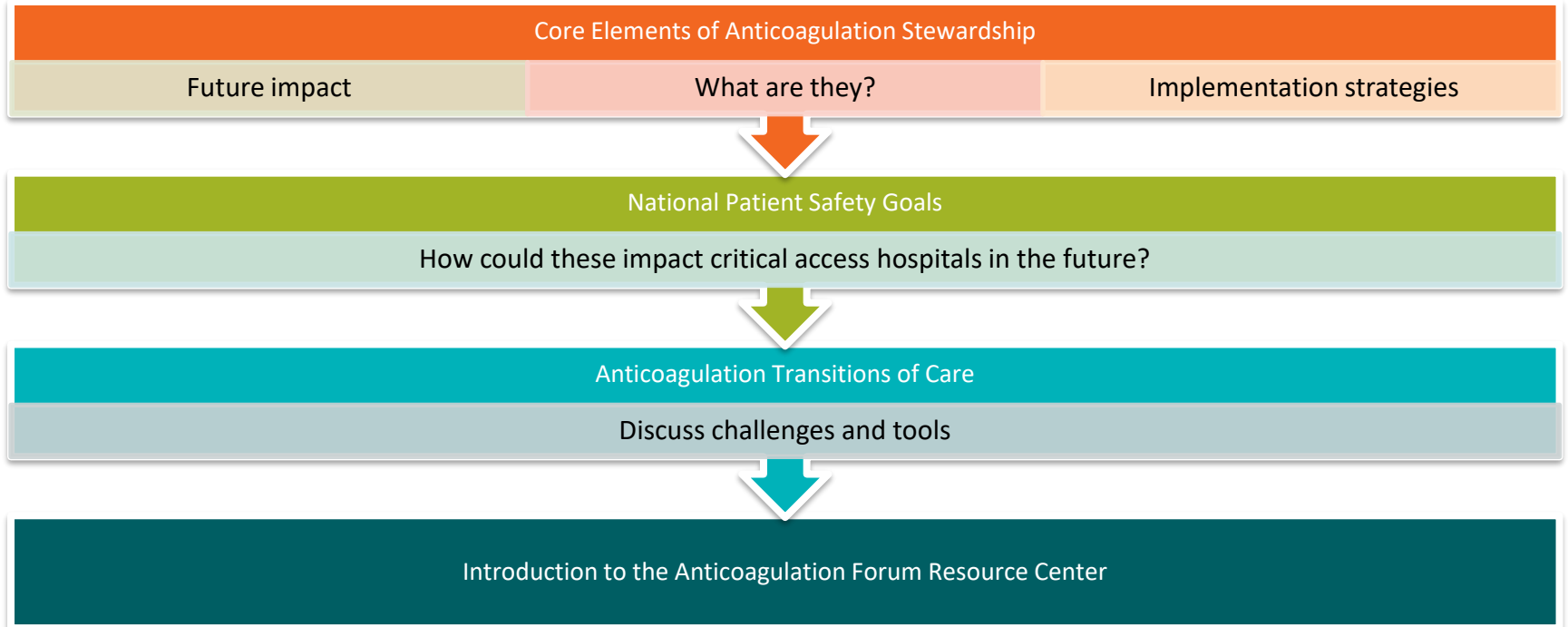
Anticoagulation Stewardship: The Why & The How

Nebraska Hospital Association
Tuesday June 6, 2023

Emilie Langenhan PharmD, BCPS, CACP
Pharmacist Program Coordinator: Anticoagulation Stewardship



Objectives



Core Elements of Anticoagulation Stewardship

Published by the Anticoagulation Forum & funded by the FDA

Closely mirrors the antimicrobial stewardship core elements document

Basis for future regulatory standards?

Describes 7 Core Elements with examples

Includes checklist for gap analysis



What are the Core Elements?

Review document here: [Core Elements](#)

Secure administrative leadership commitment



Establish professional accountability and expertise



Engage multidisciplinary support



Perform data collection, tracking, and analysis



Implement Systemic Care



Facilitate transitions of care



Advance education, comprehension, and competency



Core Elements: interpretation and implementation

Admin Commitment

- Financial
- Include in strategic priorities: metrics, goals
- Resources for staff training & patient education
- Promote system-wide multidisciplinary involvement in stewardship activities

Establish accountability & expertise

- Visible champion
- Physician, nurse, pharmacist
- CACP certification

Multidisciplinary support

- Anticoagulation stewardship is unique in its wide scope
- Possible perspectives: clinical providers, lab, educators, informatics, nursing, pharmacy, quality improvement, case management

Data collection, analysis

- Dashboards?
- Understand your population and then identify targets/metrics
- Examples: TTR, adherence, education rates, appropriateness of prescriptions



Core Elements: interpretation and implementation

Systemic Care

- Policies and procedures
- Protocols
- Order sets
- Decision support

Transitions of care

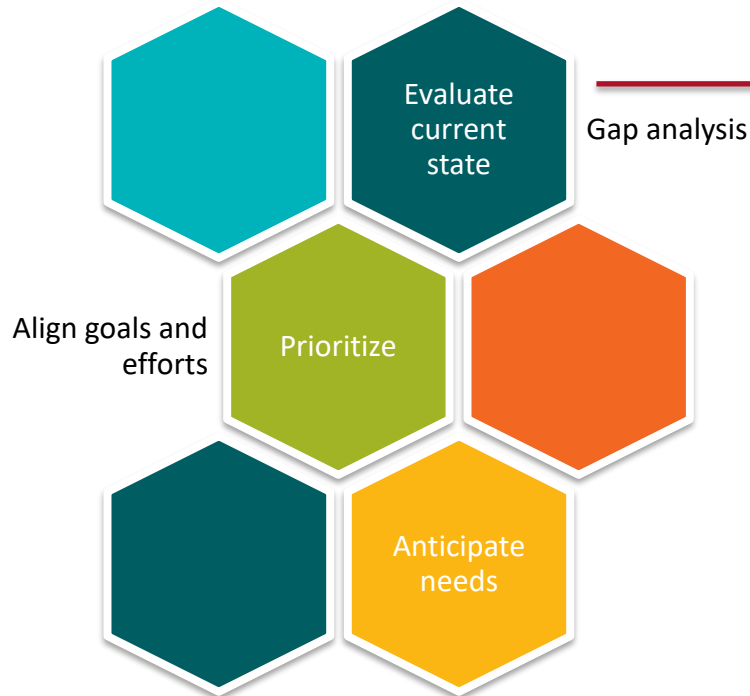
- Consistent communication and education
- Accurate medication reconciliation
- Anticipation of barriers

Education, comprehension, competency

- Patients
- Care staff



What next?



Checklist for Core Elements of Anticoagulation Stewardship Programs

The following checklist supports the *Core Elements of Anticoagulation Stewardship Programs*. This checklist should be used to systematically assess key elements and actions that are integral to successful anticoagulation stewardship efforts and high-quality patient care.

Healthcare organization administrators should work in tandem with healthcare staff knowledgeable in anticoagulation therapy, using this checklist as a guide to determine if essential support, resources, and initiatives are in place for optimal management of patients on anticoagulation medications.

As each healthcare setting is unique, it is recognized that no single anticoagulation stewardship program model will fit all facilities. As such, implementation of checklist elements may need to be customized, based on infrastructure and access to resources.

Scoring: Evaluate your organization's current state and provide a score for each item using the following scale.

- 0** = Not yet addressed
- 1** = Partially implemented
- 2** = Fully implemented
- NA** = Not applicable to organization



Joint Commission: National Patient Safety Goal

Why?

- Anticoagulation is a leading cause of adverse drug associated ER visits
- ~1/4 of DOAC dosing in atrial fibrillation is inappropriate
 - Studies have shown underdosing leads to worse outcomes WITHOUT reduction in bleeding

What?

- Elements of performance listed here: [LINK](#)

How does it impact Nebraska?

- Highlights the advocacy in the area
- Anticipate possible targets for CMS regulations
- These patients are high risk for complications & there is a need to improve care in this area for patient safety and minimize strain on healthcare resources

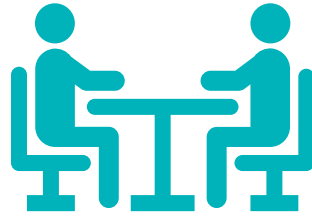


Anticoagulation & Transitions of Care



Education

- Patient and care teams!
- Support with workflows
- Multidisciplinary



Communication & Documentation

- Multidisciplinary
- Across care settings and hospital systems
- Consistent & reliable
- Automate processes



Anticipate

- Cost barriers
- Access to care barriers
- Know and use your resources!



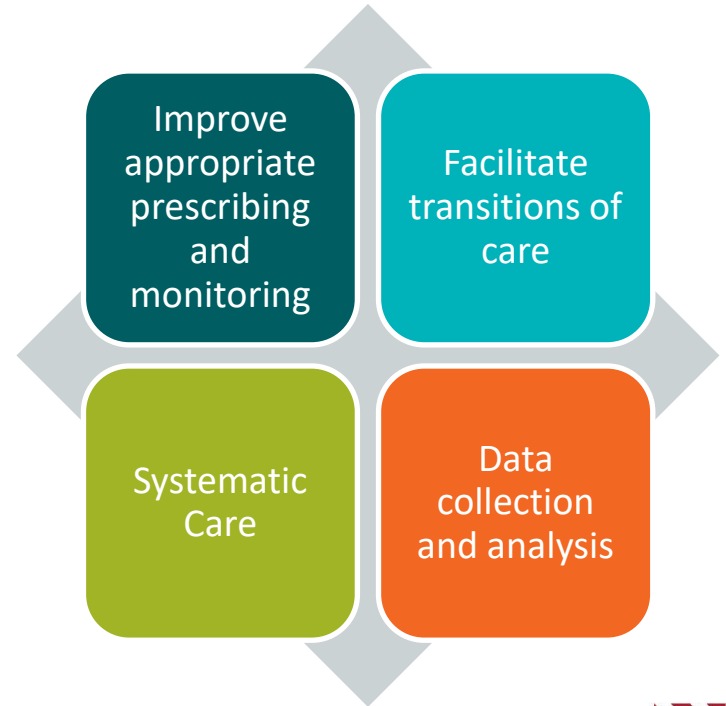
Establish Accountabilities

- Who does #1-3?
- Set expectations
- Efficiency



Anticoagulation Stewardship Example: *DOAC prescribing*

Category	Number	Percentage (%)
Number of patients reviewed	232	10% of Heart and Vascular Center patients that live in NE
Average age (yr)	70.4	
Inappropriate DOAC dose	54	23.3
Overdosed	12	22.2
Underdosed	42	77.8
Interacting medications	48	20.7
History of Anticoagulation-associated bleed	72	31.0



Anticoagulation Stewardship Example

Indication-based order panels for DOAC initiation

- Care area specific
- Patient-specific data incorporated
- Lab panel included

"One-off" orders removed

Required indications



Anticoagulation Stewardship Example

☰ Panels ⤴

	Name	User Version Name	Type
🏠 ⚡ 📄	DOAC Anticoagulation - Ambulatory Initiation (6 month supply + labs)		Order Panel
🏠 📄	DOAC Anticoagulation - ED and Discharge (1 month supply)		Order Panel

© 2022 Epic Systems Corporation

Ambulatory prescribing



DOAC Anticoagulation - Ambulatory Initiation (6 month supply + labs) ✔ Accept

- VTE Treatment (Apixaban, Edoxaban, Dabigatran, Rivaroxaban)
- Stroke Prevention in AFib (Apixaban, Dabigatran, Edoxaban, Rivaroxaban)
- Cancer-Associated VTE (Apixaban, Edoxaban, Rivaroxaban)
- VTE prevention following Orthopedic Surgery (Apixaban, Rivaroxaban, Dabigatran)
- Other Indications or Dosing (Apixaban, Rivaroxaban, Dabigatran, Edoxaban)

© 2022 Epic Systems Corporation

Guidance provided on medication approved for indication



Anticoagulation Stewardship Example

Indication guidance

DOAC Anticoagulation for AFib (Apixaban, Dabigatran, Edoxaban, Rivaroxaban) ✔ Accept

Stroke Prevention in Non-Valvular Atrial Fibrillation:
 CHA2DS2-VASc: 1 or more in males | 2 or more in females

- Apixaban (Eliquis) 2.5mg or 5mg BID
- Dabigatran (Pradaxa) 110mg or 150mg BID
- Edoxaban (Savaysa) 30mg or 60mg daily
- Rivaroxaban (Xarelto) 15mg or 20mg daily

© 2022 Epic Systems Corporation

Available dosing for specific indication

DOAC Anticoagulation for AFib (Apixaban, Dabigatran, Edoxaban, Rivaroxaban) ✔ Accept

Stroke Prevention in Non-Valvular Atrial Fibrillation:
 CHA2DS2-VASc: 1 or more in males | 2 or more in females

Apixaban (Eliquis) 2.5mg or 5mg BID

Apixaban: Decrease Dose to 2.5mg PO BID if patient meets 2 or more of below criteria	
Criteria	Patient Value
Age 80 years or older	32 y.o.
Weight of 60 kg or less	Encounter Weight:
	Weight: 63 kg
Serum Creatinine 1.5 mg/dL or higher	Creatinine Results from Past 3 Months
	Component Value Date
	Creatinine 1.7

© 2022 Epic Systems Corporation



Anticoagulation Stewardship Example

DOAC Anticoagulation for AFib (Apixaban, Dabigatran, Edoxaban, Rivaroxaban) ✓ Accept

Product: **APIXABAN 5 MG TABLET** [View Available Strengths](#)

Sig Method: [Specify Dose, Route, Frequency](#) [Use Free Text](#) [Taper/Ramp](#) [Combination Dosage](#)

Dose: mg mg

Prescribed Dose: 5 mg
Prescribed Amount: 1 tablet

Route: [Oral](#)

Frequency: [BID](#)

Duration: [Doses](#) [Days](#)

Starting: Ending:

Dispense: Days/Fill: [Full \(0 Days\)](#) [30 Days](#) [90 Days](#)

Quantity: tablet Refill:

Total Supply: 180 Days
 Do not send renewal requests to me
 Dispense As Written

Mark long-term: APIXABAN

Patient Sig: **Take 1 tablet (5 mg total) by mouth 2 (two) times a day.**
[+ Add additional information to the patient sig](#)

Class: [Normal](#) [Print](#) [Phone In](#) [No Print](#) [Sample](#)


ⓘ This medication will not be e-prescribed. Invalid items: [Provider](#) [Details...](#)

Note to Pharmacy: [+ Add Note to Pharmacy \(F6\)](#)

Indications:

atrial fibrillation Current Treatment Of VTE History Of Treatment For VTE

© 2022 Epic Systems Corporation



Data Analysis

DOAC Panel Utilization

- Initiation Orders Only
- Systemwide at 6 months

31.9%

Category	Number	Percentage (%)
Number of patients in Cardiology Departments with First Outpatient DOAC Prescription	22/38	
Appropriate DOAC Indication	21	95%
Inappropriate DOAC dose	2	9.1%
Overdosed	0	
Underdosed	1	4.5
No Labs prior to initiation	1	4.5
Average time (months) since last: BMP/CMP	2.1	Patients less than 1 month prior: 50%
CBC	2.5	40%



Anticoagulation Forum: *Comprehensive Anticoagulation Resource*



[WEBSITE HERE](#)

**Interesting in learning more
about becoming a Center of
Excellence? Free assessment
online!**



Take Away Message

Data shows opportunity to improve patient safety & healthcare resource utilization in our patients on anticoagulation

Anticoagulation
Stewardship

Consistent themes:
transitions of care,
education,
systematic
approach

Looks different
everywhere!

Regulatory
Requirements

The Joint
Commission
Standards live
since 2019

Framework for
additional
requirements set

Resources
plentiful

Don't recreate the
wheel!

Identify prioritizes
and streamline
efforts



References

1. Camm AJ, Cools F, Virdone S, et al. Mortality in Patients With Atrial Fibrillation Receiving Nonrecommended Doses of Direct Oral Anticoagulants. *J Am Coll Cardiol.* 2020;76(12):1425-1436.
2. Steinberg BA, Shrader P, Thomas L, et al. Off-Label Dosing of Non-Vitamin K Antagonist Oral Anticoagulants and Adverse Outcomes: The ORBIT-AF II Registry. *J Am Coll Cardiol.* Dec 20 2016;68(24):2597-2604. doi:10.1016/j.jacc.2016.09.966



Questions/Comments?

Contact information:
Emilie Langenhan
elangenhan@nebraskamed.com

