

KHC Hospital Improvement Innovation Network
**Mini-Sprint
for Anticoagulation Safety**

Webinar with Steve Tremain, MD
10:00 to 11:00 a.m.
February 4, 2020



Introductions and Agenda

Special Guest



Steve Tremain, MD
Physician Improvement Advisor
Cynosure Health
stremain@cynosurehealth.org

Agenda

- Welcome and introductions
- About the Mini-Sprint
- Overview of Mini-Sprint kick-off and anticoagulation safety best practices
- Reflections of using the Process Improvement Discovery Tool
- Hospital sharing
- Discussion and next steps
- Resources



Timeline Overview

KHC HIIN Mini-Sprint



Adverse Drug Events

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Anticoagulation Safety

*Kick-off webinar held
Dec. 18, 2019*

*PI. Discovery Tool Due
Jan. 22, 2020*

*Mini-Sprint webinar held
Feb. 4, 2020*

*Coaching calls conducted
Feb. 11 & 13, 2020*



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Introductions

Hospitals participating in Mini-Sprint

- **Ashland Health Center**, Ashland
- **Clara Barton Hospital**, Hoisington
- **Greenwood County Hospital**, Eureka
- **Kansas Medical Center**, Andover
- **LMH Health**, Lawrence
- **Mitchell County Hospital Health Systems**, Beloit
- **Norton County Hospital**, Norton
- **Ottawa County Health Center**, Minneapolis
- **Phillips County Hospital**, Phillipsburg
- **Republic County Hospital**, Belleville
- **Satanta District Hospital**, Satanta
- **Sumner County Hospital District No. 1**, Caldwell
- **Wilson Medical Center**, Neodesha




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Hoped-for Benefits

Hoped-for Benefits of Mini-Sprint Participants

implementing hope INR change patients better process

- Standardization of care.
- Improve anticoagulation procedures and patient safety.
- Learn new or better improvement in monitoring the INR.
- Help us track and trend INR and coumadin dosages for better patient control and compliance.
- Attempting to help providers and pharmacy begin a process to obtain a more controlled INR.
- Gain insight on how to keep our patients safe.




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Hoped-for Benefits (cont'd)

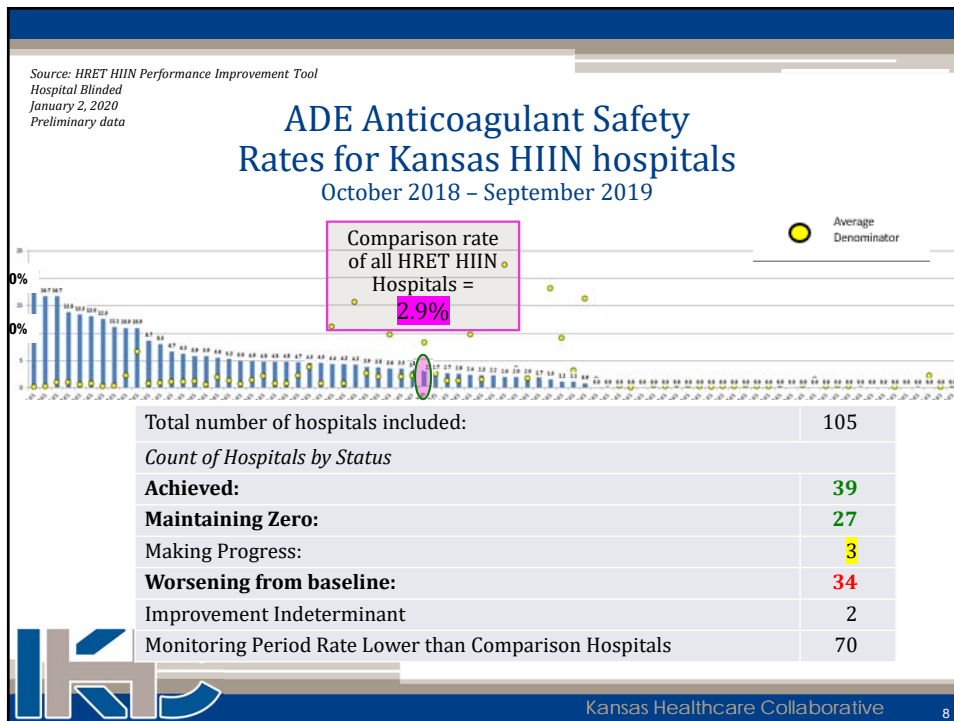
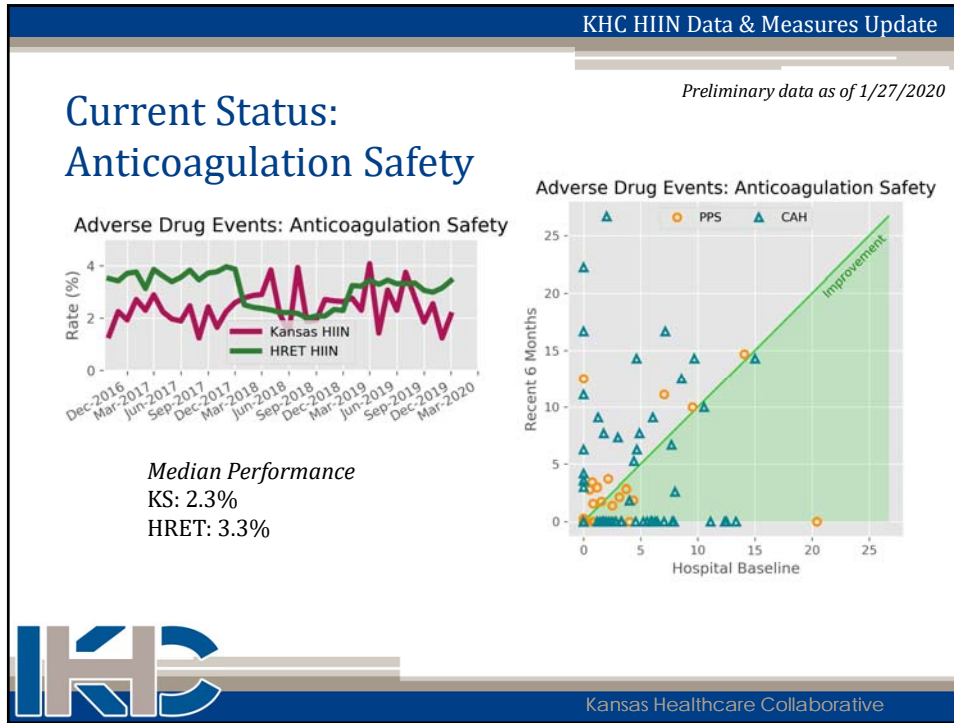
Hoped-for Benefits of Mini-Sprint Participants

implementing hope INR change patients better process

- Review of processes and adoption of best practices in regards to anticoagulation
- Help us provide safe and effective anticoagulation management and education to our inpatients and outpatients.
- Need to assess current status of process improvements recently implemented on the timing of drawing INRs.
- Bring education to our providers on how better to manage coumadin dosing in the acute patient. We do not have an involved pharmacist to assist with this.
- This mini-sprint may assist my case to administration that we are in need of a change in our pharmacy situation.



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Kick-off webinar review

Recap: Mini-Sprint Kick-Off Webinar

Polling Question #1

What INR threshold do you report?

INR >4	0%
INR >5	19%
INR >6	77%
Other	3%

N=31 poll respondents
 KHC HIIN Webinar 12/18/2019

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Kick-off webinar review

Recap: Mini-Sprint Kick-Off Webinar

Polling Question #2

How is your pharmacy involved in warfarin management?

N=34 poll respondents
 KHC HIIN Webinar 12/18/2019

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Kick-off webinar review

Warfarin Safety: What Works?

- An admission INR is obtained on all patients before 1st inpatient warfarin dose, even if on warfarin as an outpatient
- Daily INRs are checked on all patients
- Daily INRs tracked and trended and used for predictive modeling



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Kick-off webinar review

Warfarin Safety: What Works?

- The pharmacy manages the dosing with standard algorithms
 - 2nd best: pharmacy assists prescriber in dosing orders
 - Generally worst: “usual care”
- All dosing is based upon the daily INR results



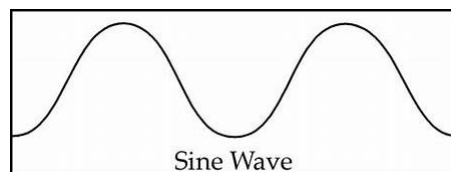
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Warfarin Safety: What Works?

- Dosing adjustments are anticipatory, not reactive
- All known Drug-Drug and Drug-Food Interactions are considered
- All doses timely
- Consider exclusion of patients known to have labile INRs (many reasons)



Avoid the Sine Wave



Summary: *Preliminary aggregate 84 charts reviewed* Mini-Sprint chart review with PI Discovery Tool

Best Practice Process	Percent "X"
1. The prescriber was managing the warfarin with pharmacy assistance	49%
2. An INR was obtained and results before the first inpatient dose ordered	80%
3. Daily INRs were obtained	74%
4. Dosage adjustments were made based on the last daily INR result	60%
5. Dosage adjustments were ANTICIPATORY, not REACTIVE	36%
6. Warfarin dosage adjustments were made based upon known drug-drug interactions	35%
7. Warfarin dosage adjustments were made upon known food-drug interactions	33%
8. Patient's history of prior INR control predicted that patient is a good candidate for warfarin management	56%
9. No inpatient warfarin doses were missed or refused	71%
10. No medication errors of any kind occurred that would affect the INR.	71%
11. Other factors led to the high INR	20%

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Homework Completed: PI Discovery Tool

Reflections on Using the Discovery Tool

- How did you do it?
- How long did it take?
- What did you discover?
- Share your "ah-ha's"!



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KHC HIIN Mini-Sprint:
Anticoagulation Safety

Hospital Name: Clara Barton Hospital

Please complete Discovery Tool and return a copy to KHC by **Wednesday, January 22, 2020**.
Email to: mclark@khconline.org or fax to: 785-861-7482
Questions? Contact Michele Clark or Chuck Duffield at Kansas Healthcare Collaborative at (785) 235-0763

High Inpatient INR Process Improvement Discovery Tool (Minimum 10 charts/Maximum 20 charts)

Note: Do NOT spend more than 20-30 minutes per chart!

Instructions: (1) Mark an X in the box if the best practice process occurred as stated. You may check multiple boxes per chart.
(2) The processes with many blanks could be a priority focus.

BEST PRACTICE PROCESS	Chart # 1	Chart # 2	Chart # 3	Chart # 4	Chart # 5	Chart # 6	Chart # 7	Chart # 8	Chart # 9	Chart # 10
The prescriber was managing the warfarin with pharmacy assistance.	X	X	X	X	X	X	X	X	X	X
An INR was obtained and resulted before the first inpatient dose was ordered.	No	X	X	X	No	No	X	X	No	No
Daily INRs were obtained.	*X	X	X	X	X	X	X	X	X	No
Dosage adjustments were made based on the last daily INR result.	X	No	No	X	No	X	X	X	X	No
Dosage adjustments were ANTICIPATORY not REACTIVE ("It's going up fast, time to decrease the dose.")	No					No	No		No	
Warfarin dosage adjustments were made based upon known drug-drug interactions.	No					No	No		No	
Warfarin dosage adjustments were made based upon known food-drug interactions.	No									
Patient's history of prior INR control predicted that this patient is a good candidate for warfarin management. (Enter N/A if no prior history.)				X	X			X	X	X
No inpatient warfarin doses were missed or refused.	X	1 miss	X	X	X	X	X	X	X	X
No medication errors of any kind (e.g. wrong med, wrong dose, missed dose) occurred that would affect the INR. Consider antibiotics and other meds that bind albumin.										
Other factors led to the high INR (specify).	*					*	*		*	*

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KHC HIIN Mini-Sprint:
Anticoagulation Safety

Hospital Name: Greenwood County Hospital

Please complete Discovery Tool and return a copy to KHC by **Wednesday, January 22, 2020**.
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Questions? Contact Michele Clark or Chuck Duffield at Kansas Healthcare Collaborative at (785) 235-0763

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BEST PRACTICE PROCESS	Chart # 1	Chart # 2	Chart # 3	Chart # 4	Chart # 5	Chart # 6	Chart # 7	Chart # 8	Chart # 9	Chart # 10
The prescriber was managing the warfarin with pharmacy assistance.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
An INR was obtained and resulted before the first inpatient dose was ordered.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Daily INRs were obtained.	N/A	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dosage adjustments were made based on the last daily INR result.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Dosage adjustments were ANTICIPATORY not REACTIVE ("It's going up fast, time to decrease the dose.")	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Warfarin dosage adjustments were made based upon known drug-drug interactions.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Warfarin dosage adjustments were made based upon known food-drug interactions.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Patient's history of prior INR control predicted that this patient is a good candidate for warfarin management. (Enter N/A if no prior history.)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
No inpatient warfarin doses were missed or refused.	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
No medication errors of any kind (e.g. wrong med, wrong dose, missed dose) occurred that would affect the INR. Consider antibiotics and other meds that bind albumin.	N	Y	Y	N	N	N	N	N	N	N
Other factors led to the high INR (specify).	N	ATG	ATG	N	N	N	N	N	N	N

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Discussion and Next Steps

Reserve your team coaching call with Dr. Tremain.
25 dedicated minutes!

February 11 or 13

9:30 to 11:00 a.m.

or

1:30 to 3:00 p.m.

Sign up here:

<https://www.signupgenius.com/go/30e0849a8a72ba5fe3-adverse>



Adverse Drug Events HRET HIIN Resources

- **Change Package**

<http://www.hret-hiin.org/Resources/ade/18/adverse-drug-events-ade-change-package.pdf>

- **Webinar Recordings**

<http://www.hret-hiin.org/resources?category=webinar&topic=adverse-drug-event-ade>

Learning events include:

- ADE Hypoglycemia Relay (2019)
- ADE Hypoglycemia Sprint (2018)
- Opioid Fishbowl Series (2017)
- What if... We Reduced Harm from ADEs? (2016)



Past KHC HIIN Educational Events featuring Dr. Steve Tremain, Cynosure Health

- **KHC HIIN Education Archive**

<https://www.khconline.org/initiatives/hiin/education/khc-hiin-past-educational-events>

- 12-18-2019: KHC HIIN Mini-Sprint Kick-off
- 5-22-2019: Hypoglycemic Management
- 5-23-2018: Bringing the Board to Quality

- **KHC/KDHE Antibiotic Stewardship Workshop**

Held April 2018 in Manhattan, Kansas

Video recordings and handouts available at

<https://www.khconline.org/antibiotics-videos>



Thank you!



HIIN Contacts



Your HIIN Contacts



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For more information:
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