KHC Hospital Improvement Innovation Network
December 18, 2019
10 to 11 a.m. CT

HIIN Goal:
By March 2020, hospitals in the KHC HIIN will achieve 20% reduction in all-cause harm and 12% reduction in readmissions.

Introductions

Special Guests

Steve Tremain, MD
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Allen Graber, MS, R.Ph.
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Kansas Healthcare Collaborative

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Eric Cook-Wiens, MPH, CPPS
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Agenda

- Welcome, Announcements and Updates
- HIIN Data and Measures Update
- Featured Topic: Anti-coagulation Safety
  *Avoiding High INRs: What's the Secret?*
- KHC HIIN Mini-Sprint Kick-off: ADE – Anticoagulation Safety
- HIIN Resources and Upcoming Events

Announcements and Updates

KHC Announcements and Updates

- New KHC HIIN Mini-Sprint: Adverse Drug Events – Anticoagulation Safety
- HIIN Milestones
- CMS Quality Improvement Programs

Michele Clark
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Program Director
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Announcing New KHC HIIN Mini-Sprint

Adverse Drug Events
• Anticoagulation Safety

Kicking off today!
• Short ‘n Sweet
• Impactful
• Multi-disciplinary

KHC HIIN Milestones

<table>
<thead>
<tr>
<th>Milestone</th>
<th>DUE DATES</th>
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<tbody>
<tr>
<td>Milestone 14</td>
<td>October 15 (August 2018 to July 2019)</td>
</tr>
<tr>
<td>Milestone 15</td>
<td>December 18 (through September 2019)</td>
</tr>
<tr>
<td>Milestone 16</td>
<td>March 16 (through December 2019)</td>
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</tbody>
</table>

Milestones consider:
✓ Data completeness for recent 12-month period
✓ Progress toward HIIN “20/12” Goals
✓ Implementation status of 5 Patient and Family Engagement (PFE) Metrics
✓ Implementation status of 7 Health Equity Metrics
Patient and Family Engagement Metrics
Preliminary as of November 25, 2019

Percent of hospitals meeting PFE Metrics
National, HRET HIIN, and KHC HIIN

CMS Quality Improvement Networks

New Kansas QIN-QIO: Health Quality Innovators (aka HQIN)Announced Nov. 2019; previously KFMC

Current Kansas PTN: Kansas Healthcare Collaborative
COMPASS Practice Transformation NetworkFuture: CQIC to be announced soon (Hopefully, to be led statewide by KHC)

Current Kansas HIIN: Kansas Healthcare Collaborative predominantlyFuture: CMS not yet soliciting proposals (Hopefully, to be led statewide by KHC)
CMS Task Order Schedule*

Service providers for CMS quality programs are selected from competitive bids by eligible contractors. CMS Task Order competition drives performance, innovation, outcomes and cost.

<table>
<thead>
<tr>
<th>CMS Task Order</th>
<th>CMS Call for Proposals Released</th>
<th>Estimated CMS Announcement Date</th>
<th>Actual CMS Announcement Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 – QIN-QIO</td>
<td>December 2018</td>
<td>July 2019</td>
<td>November 8, 2019</td>
</tr>
<tr>
<td>#2 – Clinician</td>
<td>June 2019</td>
<td>September 2019</td>
<td>Pending</td>
</tr>
<tr>
<td>#3 – Hospital Improvement</td>
<td>Not yet released</td>
<td>Unknown</td>
<td>Unknown</td>
</tr>
</tbody>
</table>


Let’s Finish HIIN Strong!

What is your hospital’s next success story?
KHC HIIN Measures and Data Update

- December data reports
- Current status
- Data submission schedule

KHC HIIN Data & Measures Update

Data Reports

- Preliminary Reports distributed yesterday (12/17/2019)
  - New component: Outliers identified by HRET are highlighted in the data table in red.

Please review outliers marked in red and update data if appropriate.

- Final Reports will be distributed FRIDAY (12/20/2019) to HIIN contacts, CEOs and CNOs
  - Outliers will not be highlighted in red.
Preliminary data as of 12/16/2019

Improvement on selected KHC HIIN measures

Source: HRET Improvement Calculator v7.2
Current Status: Opioid Safety and Glycemic Management

Median Performance
KS: 0.39%
HRET: 0.43%

Current Status: Anticoagulation Safety

Median Performance
KS: 2.4%
HRET: 3.3%
### Kansas HIIN – Monthly Data Submission Schedule

<table>
<thead>
<tr>
<th>Outcome &amp; Process Measures for HACs occurring in</th>
<th>Readmissions for index discharges in, and SSIs for procedures performed in</th>
<th>Data Submission Due</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2019</td>
<td>March 2019</td>
<td>May 31</td>
</tr>
<tr>
<td>May 2019</td>
<td>April 2019</td>
<td>June 30</td>
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<tr>
<td>June 2019</td>
<td>May 2019</td>
<td>July 31</td>
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<td>July 2019</td>
<td>June 2019</td>
<td>August 31</td>
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<td>August 2019</td>
<td>July 2019</td>
<td>September 30</td>
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<td>September 2019</td>
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<td>October 31</td>
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<td>November 2019</td>
<td>October 2019</td>
<td>December 31</td>
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<tr>
<td>December 2019</td>
<td>November 2019</td>
<td>January 31</td>
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<tr>
<td>January 2020</td>
<td>December 2019</td>
<td>February 28</td>
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<tr>
<td>February 2020</td>
<td>January 2020</td>
<td>March 31</td>
</tr>
<tr>
<td>March 2020</td>
<td>February 2020</td>
<td>April 30</td>
</tr>
</tbody>
</table>

### Avoiding High INRs: What is the Secret?

**Steve Tremain, M.D.**  
Physician Advisor  
Cynosure Health  
stremain@cynosurehealth.org

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**Adverse Drug Events – Anticoagulation Safety**

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Kansas Healthcare Collaborative
Today’s Discussion

- The importance of structure and process for attaining and hardwiring improvement
- Getting past “data perfection”
- Warfarin safety: What works
- What’s Your Next Step???

Avedis Donabedian
• Structure + Process = Outcome

<table>
<thead>
<tr>
<th>Bad Outcome</th>
<th>Good Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad process</td>
<td>Expected</td>
</tr>
<tr>
<td>Good process</td>
<td>Refine Process</td>
</tr>
<tr>
<td>Dumb Luck</td>
<td></td>
</tr>
</tbody>
</table>

Polling Question #1

What INR threshold do you report?

- >4
- >5
- >6
- Other  (Type in the chat box)
Simplify the Data Collection

**Warfarin:**
- How often do you see an INR >5 in a patient NOT on warfarin?
- Count all patients who had an INR >5 (numerator)
  - Assume on warfarin
- Count all patients who received warfarin (denominator)
- CLOSE ENOUGH

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**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
Polling Question #2

How is your pharmacy involved in warfarin management?

- It orders and manages all facets of warfarin through standardized policy and procedures approved by the medical staff.
- The physicians order the warfarin and then the pharmacy takes it from there.
- The pharmacists oversee the care, but it is all physician driven.
- The pharmacy is minimally involved in warfarin management.
- We don’t have pharmacy involvement.

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
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
Hospital Story

Adverse Drug Events – Anticoagulant Safety

Allen Graber, MS, R.Ph.
Director of Pharmacy
Newton Medical Center Pharmacy
Newton, Kansas

allen.graber@newtonmed.com

Hospital Story – Newton Kansas

Pharmacy Department:
• 7am – 7pm
• 6 pharmacists on staff
• Pharmacokinetic dosing
• Antibiotic Stewardship

Newton Medical Center

• 103-bed community hospital
• 16 miles north of Wichita
• 9 Clinics
• Home Health
• Cardiac Rehab
• Outpatient Surgery
• Infusion Center, Wound Center
• Orthopedics
• Women’s Center
**Warfarin Dosing Protocol**

- Reviewed literature
- Included contraindications
- Approved by P&T

**Logistics**

- Pharmacy consult is ordered
- See patient
- Labs
- Dosing
- Progress note
- Pharmacokinetics
  - t-1/2
  - Std dosing time
  - Rate of change
Management of Elevated INR in Non-Surgical Patients Receiving Oral Warfarin Therapy

DEPARTMENT OF PHARMACY PROTOCOL

Adjustments are designed to bring INR levels back down to within therapeutic range, not baseline levels.

<table>
<thead>
<tr>
<th>INR &gt; therapeutic range to 4.5</th>
<th>Hold dose, repeat INR in am. Consider dose reduction depending on rate of change. May not need dose reduction if only slightly above therapeutic range.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR 4.5 – 6</td>
<td>Hold dose, repeat INR in am. Consider Phytonadione 0.5-1mg po x 1 dose based on rate of change of INR. (1) Consider dose reduction when restarting warfarin therapy.</td>
</tr>
<tr>
<td>INR 6 – 10</td>
<td>Hold dose, repeat INR in am. Consider Phytonadione 1-2.5mg po x 1 dose based on rate of change of INR and evidence of bleeding. (2) Dose reduction when restarting warfarin therapy.</td>
</tr>
<tr>
<td>INR &gt; 10</td>
<td>Hold dose, Phytonadione 5mg po x 1 dose. (2) Repeat INR in 8-12 hours.</td>
</tr>
</tbody>
</table>

Notes:
(1) If rate of change of INR has significant increase, consider Phytonadione to prevent INR from exceeding 6.
(2) If significant bleeding give Phytonadione 5-15mg IV in 50ml diluent over 20-30 minutes. (IV Phytonadione works faster than oral therapy, but is associated with anaphylactic reaction in 3/10,000 patients.) SQ route is not recommended.
May also consider PCC (Prothrombin Complex Concentrate). PCC is preferred over FFP as FFP has slower onset, greater risk of allergic reaction, greater risk of viral transmission, longer preparation time, and higher volume of administration. Consult with provider.

References:
- Kansas Hospital Engagement Network, Quality Health Indicators, KS HEN 2.0, 12/2015

NMC Results

% of Inpts with Excessive Anticoagulation on Warfarin

NMC rate —— Target Rate
Recommendations

- Ask pharmacy to manage
- Create a standard dosing time
- Watch rate of change
- Intervene sooner

Where Are You Now?

- What are you working on?
  - Is it making difference?

- What are you NOT working on?

- Ready to try something new that will jumpstart your INR improvement work???
# Introducing.... KHC HIIN Mini-Sprint

## Adverse Drug Events

### Anticoagulation Safety

Please join us!

Through Feb. 2020


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### Adverse Drug Events – Anticoagulation Safety

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

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 boxes could be a priority focus.

**BEST PRACTICE PROCESS**

<table>
<thead>
<tr>
<th>Chart #</th>
<th>Chart #</th>
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<th>Chart #</th>
<th>Chart #</th>
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</thead>
<tbody>
<tr>
<td>The prescriber was managing the warfarin with pharmacy assistance.</td>
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<tr>
<td>INR was obtained and reviewed before the first inpatient dose was ordered.</td>
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<tr>
<td>INR: on schedule</td>
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<td>INR: low</td>
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<td>INR: high</td>
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<td>Daily INRs were obtained.</td>
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<tr>
<td>INR control: variability</td>
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<tr>
<td>Dosage adjustments were made based on the last daily INR result.</td>
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<tr>
<td>Dosage adjustments were ANTICIPATORY (not reactive)</td>
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<tr>
<td>&quot;It's going up fast, time to decrease the dose.&quot;</td>
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<tr>
<td>Warfarin dosage adjustments were made based upon known drug-drug interactions.</td>
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</tr>
<tr>
<td>Warfarin dosage adjustments were made based upon known food-drug interactions.</td>
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<tr>
<td>Patient's history of prior INR control predicted that this patient is a good candidate for warfarin management.</td>
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<tr>
<td>Patient has no prior history.</td>
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<tr>
<td>No inpatient warfarin doses were missed or refused.</td>
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<tr>
<td>No medication errors of any kind (e.g., wrong med, wrong dose, missed dose) occurred that would affect the INR.</td>
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<tr>
<td>Other factors led to the high INR (specify).</td>
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</table>
Adverse Drug Events – Anticoagulation Safety

ADE Change Package


Testimonial

Another state’s experience using the ADE Process Improvement Discovery Tool

Dan Lanari, MBA, DPT, CPHQ, CPPS
Director of Quality and Patient Safety
New Mexico Hospital Association
dlanari@nmhsc.com

New Mexico Hospital Association
Always There, Ready to Care.
KHC HIIN Mini-Sprint Anticoagulation Safety

1. **Sign up for the mini-sprint**
   

2. **Download and complete P.I. Discovery Tool**
   Review 5 - 10 charts, depending on hospital size

3. **Return completed tool to KHC by Jan. 22**

4. **Register for follow-up Mini-Sprint webinar**
   *10 a.m. Tuesday, Feb. 4* with Dr. Steve Tremain. Registration link will be provided in confirmation email.

5. **Prepare to share and participate in Feb. 4 webinar**

   Note: This Mini-Sprint includes a limited number of individualized coaching calls with Dr. Tremain, Feb. 11 or 13. Invitations will be prioritized by KHC among those completing Discovery Tool and based on need.

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**Next Steps**

1. Identify your process failures
2. Select 1-2 strategies for improvement or sustainability
3. Conduct PDSAs to implement and refine
4. Track your experience, modifications, successes.....
5. Utilize the expertise at KHC for assistance
6. Carry on to improvement!
Steven Tremain, MD
Improvement Advisor
stremain@cynosurehealth.org

Adverse Drug Events – Anticoagulation Safety

Resources and Upcoming Events

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(785) 235-0763 x1327
Upcoming KHC HIIN Webinars

Next KHC HIIN Webinar
Jan 22, 2019 | 10:00 to 11:00 am
Register Here: https://khconline.adobeconnect.com/khc-hiin-01-22-20/event/registration.html

KHC HIIN ADE-Anticoagulation Safety Mini-Sprint
Feb 4, 2020 | 10:00 – 11:00 a.m.
KHC will email registration link upon enrollment in Mini-Sprint.

KHC Hand Hygiene Collaborative
Final Quarterly Session for Cohort 2
Feb 7, 2020 | 11:00 a.m. – 12:00 p.m.
Contact Chuck Duffield (cduffield@khconline.org) for webinar registration link.

Upcoming Events and Webinars

- January 7, 2019 | 12 to 1:00 p.m.
  - HRET HIIN : What Matters to You? Session 4 of 4: Register here

- January 13, 2019 | 11 a.m. to 12:00 p.m.
  - HRET HIIN : Performance Improvement Collaborative – Session #3
  - Kansas participants, contact Michele Clark for registration links if not already registered.
Kansas Healthcare Collaborative

Previous HRET & KHC HIIN Webinars

In case you missed any of the KHC HIIN or HRET HIIN events, here are the links to access the archives:

- [KHC HIIN education archive](#) (chronological order)
- [HRET HIIN education archive](#) (organized by topics)

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Sticks and Stones and Getting Along: Controlling Conflict with Communication
This presentation focuses on defining common conflicts between caregivers, patients and their families due to the unique nature of health care. To view webinar, click here: [https://www.surveymonkey.com/r/De-escalation-Session-1](https://www.surveymonkey.com/r/De-escalation-Session-1) (90 minutes)

“All Patients are Unique (Just Some More Than Others)” - De-escalation Techniques in Atypical Health Care Settings
This presentation follows up to the initial controlling conflict webinar addresses the common causes for verbal and physical aggression from patients, clients and family members in the health care environment. To view webinar, click here: [https://www.surveymonkey.com/r/De-escalation-Session-2](https://www.surveymonkey.com/r/De-escalation-Session-2) (90 Minutes)

“SECURITY: Who Is Responsible?” (Hint: It’s Someone You Know)
This presentation examines how every staff member can influence and improve the security culture of their organization through situational awareness, crime prevention techniques and by fostering partnerships with other agencies to prepare for security-related events. To view webinar, click here: [https://www.surveymonkey.com/r/De-escalation-Session-3](https://www.surveymonkey.com/r/De-escalation-Session-3) (90 Minutes)
Resources

- Kansas Healthcare Collaborative
  www.khconline.org
- AHA/HRET Hospital Improvement Innovation Network
  www.hret-hiin.org
- CMS Partnership for Patients
  https://partnershipforpatients.cms.gov/
- Partnership for Patients Healthcare Communities
  https://www.healthcarecommunities.org/CommunityHighlights/PartnershipforPatients
The KHC Office will be closed for the Christmas Holidays and New Years Day

KHC wishes you and yours a special Christmas holiday and a Happy New Year.

The KHC offices will be closed Dec. 24-25, 2019 and Jan. 1, 2020.

Please provide feedback to this webinar. Let us know your next steps.

- https://www.surveymonkey.com/r/HIIN-Webinar-12182019

We welcome your ideas for future topics!!
Your HIIN Contacts

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For more information:
→ KHConline.org/staff