Background

- Warfarin is one of the most common drugs associated with adverse drug events nation-wide

- July 2012 Serious safety events:
  - 2 deaths related to sub-therapeutic INR
  - Other adverse events and near misses associated with anticoagulation therapy

- Processes not standardized
Performance Improvement

• October 2012 SMG assigned to standardize anticoagulation therapy management

• Non-acute care settings

• Conducted current state analysis:
  ➢ extreme variances in practices
  ➢ lack of discreet data

• Goal: design an innovative, centralized, and standardized RN/PharmD model
Guiding Principles

• Safe

• Patient-Centered/Access

• Integrated, Standardized Processes

• Evidence-Based, Data-Driven Decision-Making

• RNs and PharmDs Practice within Scope of Licensure

• Cost Avoidance/Risk Mitigation
**Anticoagulation Task Force**

*Safety Focused, Patient-Centered, Evidence-Based Best Practices, Collaborative*

- April 12, 2013: Kick-off Meeting
- Q2 2013: Launch of AC Therapy Management PLMS training modules for RN
- May 1, 2013: DAC supplemental software, document in eCARE only
- June 28, 2013: AC Task Force presented at LTC Council
- July, 2013: Patient Education material completed
- July, 2013: Task Force featured in CEO update
- Q3 2013: Approval of 8 evidence-based protocols, including novel agents
- Q4 2013: December, 2013 Recommendations presented for SLC & SE
- Q1 2014: March 31, 2014 eCARE referral including CPA SAS Go-Live Services available to over 400 providers
- Q2 2014: July 1, 2014 Begin SLC Implementation
- Q3 2014: December, 2014 Anticoagulation Team recognized with CEO Award

**Reduction in variance & increased consistency**
Reduces the risk of error and ultimately potential for adverse event

**Engage patient & family**
Comprehensive patient/caregiver education material and consistent interaction with a registered nurse

**Evidence-based Best Practice**
Well aligned with Sentara’s strategic goals; canceling for defined populations & improving health & safety

**Optimization of Clinical Resources**
RN/PharmD model provides the opportunity to reduce workload for the provider so they can focus on other important aspects of patient care

**Reduction of Waste**
Evidence-based protocols require less frequent INR testing
Highlights

• RN-Driven Anticoagulation Clinics (SASC)

• Evidenced-based protocols (warfarin dosing, INR testing)

• PharmD virtual support

• PharmD-driven bridging and dosing protocols for directed oral anticoagulants (DOACs) through collaborative practice agreement

• Highly standardized visit processes and documentation
Highlights

• Provider “in-basket” messaging by RN and PharmD
• PharmD virtual consultation and tracking of interventions
• Standardized, ongoing patient/caregiver education
• RN/PharmD model implementation in Life Care and Home Health (future)
• 2014 Sentara CEO Award
• Improved reporting of ADEs
• 100% SMG provider referral
Referral Documentation Process
RN Anticoagulation Visit Documentation

<table>
<thead>
<tr>
<th>Theodore Battleship</th>
<th>12/2/2016</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PLAN:</strong></td>
<td></td>
</tr>
<tr>
<td>Patient reports that he is taking his prescribed anticoagulant medication.</td>
<td></td>
</tr>
<tr>
<td>Patient was advised to continue taking the medication as prescribed.</td>
<td></td>
</tr>
<tr>
<td>INR was performed at the last visit.</td>
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</tbody>
</table>

**FINDINGS AT TODAY'S ANTICOAGULATION VISIT:**

<table>
<thead>
<tr>
<th>Medication Changes:</th>
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<tbody>
<tr>
<td>Anticoag Med Changes: 28696</td>
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<table>
<thead>
<tr>
<th>Diet Changes:</th>
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<tbody>
<tr>
<td>Anticoag Diet Changes: 27963</td>
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</table>

<table>
<thead>
<tr>
<th>Alcohol or Tobacco Use:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoag Alcohol Consumption: 28020</td>
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</table>

<table>
<thead>
<tr>
<th>Health Changes:</th>
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</thead>
<tbody>
<tr>
<td>Anticoag Health Status Changes: 27968</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Recent Hospitalizations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoag Recent Hospitalization: 28467</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Procedures/Surgeries:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anticoag deres reports procedure: 28961</td>
</tr>
</tbody>
</table>

**Bleeding Issues:**

**Clotting Issues:**

This information was reported by [Anticoag data collected by: 20064]

[AMB ANTIMOG Last 7 Dose: 26988]
[AMB Last INR Results: 20669]
Patient education reinforced [Anticoag education topics: 28631]. Patient verbalized understanding.

Nancy Aslie, RN
SOUTH HAMPTON ROADS FAMILY PRACTICE
120 Corporate Blvd
Norfolk, VA 23502
RN Anticoagulation Visit Documentation

The patient is taking **33600 mg** of anticoagulant as prescribed. The INR was advised to **AMC Anticoag Continue Med:28926** and repeat INR in **NUMBERS 1-12:19633** (days weeks:21915) **ANTICOAGPROTOCOL:28992**.

**NGS AT TODAY’S ANTICOAGULATION VISIT:**

**CATION CHANGES:**
- Include new medication, changes in dose or continued medications.

**CHANGES:**
- Include any FAD or special diets.

**HOLD OR TOBACCO USE:**
- Include since patient’s last visit.

**PH CHANGES:**
- Include health status changes.

Denies changes REPORTS these changes **Anticoag Change include 28896**.
Sharing Success: SMG Nursing

2014-2015 SMG SASC data:

- 31 RNs across 17 sites
- ~9,000 patients
- 117,044 clinic visits; 28,416 virtual visits
- TTR 66% (benchmark 55%-65%)
- 100% RN education/training (initial and annually)
- 8 SASC RNs Ambulatory Nursing Board Certified in 2015
- Nursing IRB approved research study on protocol vs. non-protocol TTR
- No Serious Safety Events
Sharing Success: SMG Nursing

State and National Presentations:
- HPI Annual Safety Summit, podium presentation, October 2013
- Virginia Patient Safety Summit, poster presentation, January 2014, 2015, 2016 (JAN - Podium)
- American Academy of Ambulatory Care Nurses poster presentation, April 2014 and 2015
- Virginia Nurses Association Education Day, poster presentation, September 2014, 2015 (NOV)
- National Conference of the Anticoagulation Forum, poster presentation, April 2015
- American Nurse Association, Podium Presentation, 2016 (MAR)

Anticoagulation Documentation:
- Time in Therapeutic Range (TTR) by site/SMG - “TTR on the Fly”
- Robust SASC referral (SMG and non-SMG providers)
To err is human, to cover up is unforgivable and to fail to learn is inexcusable.

Sir Liam Donaldson
Q&A

You have Questions
We have Answers