Striving for Excellence
One Anticoagulation Clinic’s Journey

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Why We Started

• Pharmacist Run Anticoagulation Clinic
  – Physician interest – vascular
  – 1998 – PRO (QIO) query
  – Pharmacist on staff with anticoagulation experience
  – Survey to all providers to determine referral base
How We Started

– Design model – how would the process work?
– Fingerstick INR (requires validation and QA)
– Medical Supervision – who will oversee?
– Advantages of pharmacist involvement
– Pitch to Administration – work hours needed
– BOP approval – is it within scope?
– Started 2 half-days per week; one site
Benefits of the Clinic Beyond Anticoagulation Management

- Triage Patients to Provider Practices, Emergency Room, Urgent Care
- Medication History
- Medication Reconciliation
- Medication Teaching
- Personal Medication Cards
- Disease State Management Teaching
- Patient Advocacy
Necessary Components

- Dosing Guidelines – CHEST
- Medical Acceptance
- Certification of Pharmacists
- Referral Process
- Contract Signage
- Diagnosis/INR Range determined by MD
- Annual Renewal
How We Progressed

• Added a Medical Director – chart review
• Growth to the Franklin area – 5/2007
• Growth to the Meredith area – 11/2010
• Web-based software
• Pharmacy Students: NE, URI, MCPHS, U Conn
• Expanded our quality monitors
• National Certification
What We Learned

- Face to face is a necessity
- Dedicated staff a must
- Clerical support is key
- Reminders to patients constant
- Patient expectations must be set
- Physician as partner
- Contracts may be effective
- Some patients are not candidates
Connecting Hospital to Outpatient

- Inpatient Dosing Guideline
- Pharmacists Facilitate Referral Process
- Explain Clinic Procedures
- Warfarin Discharge Teaching
Where We Are Now

– 3 sites – LRGH, FRH, Belknap Family Health, Meredith
– 8.5 days/650 patients
– 1.6 Pharmacist FTE; 0.3 FTE Clerical Staff
– Protocol for Vitamin K administration
– Bridging protocol
– Self-Monitoring therapy
– Newer Agents
– Striving for Excellence
<table>
<thead>
<tr>
<th>Year</th>
<th># Patients</th>
<th>INR % Range</th>
<th>TTR</th>
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<tbody>
<tr>
<td>2003</td>
<td>305</td>
<td>60%</td>
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<tr>
<td>2009</td>
<td>412</td>
<td>71%</td>
<td>63%</td>
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<tr>
<td>2012</td>
<td>526</td>
<td>77%</td>
<td>72%</td>
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<tr>
<td>2013</td>
<td>650</td>
<td>75%</td>
<td>78%</td>
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Resources to Evaluate Quality Management Practices

- **Garcia et al:** Delivery Of Optimized Anticoagulant Therapy: Consensus Statement from the Anticoagulation Forum
- **Rose et al:** Organizational Characteristics of High-and Low-Performing Anticoagulation Clinics in the Veterans Health Administration
- **Katherine W. Philips and Jack Ansell:** Outpatient Management of Oral vitamin K Antagonist Therapy: Defining and Measuring High Quality Management
- **Anticoagulation Forum:** Centers of Excellence: [www.excellence.acforum.org](http://www.excellence.acforum.org)
Quality Monitors

• # Patients per FTE – 400:1
• ADE (from readmissions, ER visits, pt histories)
  – Hemorrhagic events 1-2% per patient year
  – Thromboembolic events 1-2% per patient year
• TTR 60-70%
Anticoagulation Forum
Centers of Excellence

• Ultimate Goal: Improved outcomes
• Assessment tool
• Benchmarks to help determine where clinics need to be to provide excellent patient care
• Review practices and identify areas in need of improvement
• From quality clinic to anticoagulation service
What Does the Future Hold For Anticoagulation Clinics

• Exciting Times
• The established gold standard we have had for 50 years has a lot of new competition.
• NOAC
• Future Roles for Outpatient Anticoagulation Clinics
• Will warfarin go away?
• Keep in the mind set of continually assessing your process, the clinic and the service you provide to your patients.