Systematic Anticoagulation Management in the Rural Health Setting

Lisa Vaughn RN, CACP
Clinical Manager Anticoagulation Services
Confluence Health-Wenatchee Valley Hospital
Our Mission

- To provide our patients with the highest quality health care and service in a friendly and caring atmosphere

- Committed to assisting in the development of one of the nation’s best rural health care delivery systems
Confluence Health – Wenatchee Valley Hospital Clinics
Confluence Health-Wenatchee Valley Hospital

Serving more than 160,000 unique patients annually

Over 750,000 patient visits per year in an area that covers 12,000 square miles (31,079 square kilometres)

Clinics in 10 communities.

300 Physicians, Physician Assistants, and Nurse Practitioners

30 specialties
Confluence Health-Wenatchee Valley Hospital Anticoagulation Service
DAWN AC

- 7 ACC locations with 10 full time and 3 part time advance practice providers
- 16 support staff
- 2200 patients = 33,000 patient visits
- 5 separate DAWN Organizations
- Providers = DAWN clinic
- Providers with DAWN clinics at multiple organizations
- DAWN groups – Home Visits, Self Testing and APS
Common Scope of Service

- Face-to-face visits with APC
- Patient Self Testing
- Televideo appointments
- Home visits
- Extended care facility visits
- POC INR Testing
- EMR Patient access for lab results, RX renewal, scheduling, health care questions
- Patient Education – all anticoagulants
- My Chart access to medical records, scheduling and health advice
Shared Support Services

- Anticoag Clinic physician oversight
- Administrative support
- Staff and provider coverage for time off
- Pharmacy support
- Anticoagulation Steering Committee
- Clinical resources/medical library
Standardized Personnel

- Job descriptions/APC Practice Plan
- Staff and provider training and CME
- Staff Proficiency and Competency
- Performance Improvement Projects
- CACP Certification
- Monthly meetings
- Weekend and holiday service
Standardized Workflow

- Documentation in DAWN
- Policies and Procedures
- Patient education resources
- Peri-op/procedure program
- Lab Monitoring – POC INRs
Systematic Therapy Management

- Evidence Based Protocols:
  - Warfarin Induction
  - Risk Assessment
  - Managing Non Therapeutic INRs
  - Follow-up Intervals
  - Peri-procedure/operative Management
  - Elevated INRs
  - Anticoagulation Related Labs
  - Management of Patients with APS
  - TSOAC – patient education and follow up
DAWN Supports Systematic Management

- Documentation-Coded Comments
  - Medical/legal
  - Communication with other providers
  - Supports level of service

- List Views
  - “Minding the flock”

- Reports –Quality Measures
  - Between ACC locations and providers
  - DAWN Benchmarking program
DAWN AC – Continuum of Care Between Multiple Locations

- Treatment Plan
- INR and warfarin dosing history
- Scheduled follow up
- Patient tracking – List Views
- Patient Education – Letters
- Groups - Home visits, APS, PST
- Documentation – Coded Comments
List View – Annual Requirements
**List View - All Patients**

![List View Image](image-url)

<table>
<thead>
<tr>
<th>Name</th>
<th>History Number</th>
<th>Status</th>
<th>DoD</th>
<th>Start Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Norman PA-C</td>
<td>Cashmere Clinic</td>
<td>active</td>
<td>10/15/2011</td>
<td></td>
</tr>
<tr>
<td>Valerie Spindle ARNP</td>
<td>Cashmere (509)</td>
<td>active</td>
<td>09/11/2011</td>
<td></td>
</tr>
<tr>
<td>Kathy Davies, PA-C-E</td>
<td>Wenatchee (501)</td>
<td>active</td>
<td>10/16/2011</td>
<td></td>
</tr>
<tr>
<td>Robert Norman PA-C E</td>
<td>Wenatchee (501)</td>
<td>active</td>
<td>10/15/2011</td>
<td></td>
</tr>
<tr>
<td>Active 07/09/1999</td>
<td></td>
<td>active</td>
<td>01/17/2000</td>
<td></td>
</tr>
<tr>
<td>active 01/03/2011</td>
<td></td>
<td>active</td>
<td>01/17/2000</td>
<td></td>
</tr>
</tbody>
</table>
Peri-procedure/operative Management

- Procedures List View
List View – New Patients
List View - Worklist
DAWN – ADT Interface

- Demographic information updated in DAWN
- Appointment scheduling imported to DAWN
- Tracking and documenting non compliance in DAWN
- Access by all locations allows centralized scheduling service
Systematic Schedule Management

- **Transition of care inpatient-outpatient**
  - Suspended List View
  - EMR Admit-Discharge Report

- **New patient enrollment**
  - New Patients List View

- **Routine follow**
  - Worklist List View

- **Managing appointment cancellations**
  - Worklist – scheduled filter
Scheduling Interface → DAWN Dose Schedule

- Promotes accurate patient appointment information
- Facilitates accurate patient follow up
Management of Non-Attendance

- Cancellations thru patient email
- Or cancelled, but not rescheduled

DAWN List View- Worklist
DAWN – Lab Interface

Lab-all WVH lab locations export INR to DAWN

- Diminishes manual data entry errors
- No delay in time from reporting to appearance in DAWN List View Worklist
- Undosed INRs visible in List View at all ACC locations: allows coverage when providers are out of office
DAWN – Communication with Multiple Health Care Providers

- Exporting INR result and warfarin dosing to EMR
- Exporting DAWN Quick Note to EMR
- Hyperlink in EMR to DAWN records
- Immediate access to DAWN records through EMR. Open to access by outside care providers: Hospital/ER/Pharmacy/Home Health/Primary Care
EMR→DAWN

DAWN

EMR

Progress Notes
Valerie Spindle, ARNP at 5/6/2013 3:13 PM
Status: Signed

See Anticoagulation Clinic Summary in Chart Review - Other Orders Tab or via the hyperlink in the Anticoag visit encounter for INR result, warfarin dosing and Anticoagulation Treatment Plan.

Complete documentation available in DAWN anticoagulation record. See the most recent anticoagulation encounter (in Chart Re) to access a hyperlink to DAWN.

Electronically signed by Valerie Spindle, ARNP at 5/6/2013 3:13 PM

Other Orders

Anticoagulation Clinic Summary

Document Link
Dawn AC

Instructions
You were given the following printed information about your visit today:
- Current DAWN Dose Schedule and Patient Instructions

If you have misplaced this information or would like another copy, please call us at Dept: 509-663-8711.
EMR Access to DAWN

INR Range: 2.0 - 3.0  Duration: Indefinite
Status: Active  Case Manager: Wenatchee Home Visits
Diagnosis:
- 12/10/2010 - VTE Of Subclavian Vein, Chronic - 453.75
- 9/15/2009 - VTE Unspecified Deep Vein Lower Extremity, Chronic
- 9/15/2009 - Pulmonary Embolism, Chronic
Diag. Note: 12/10/2010 - Associated with PICC line

Current Dose Schedule

| Warfarin | Thu Fri Sat Sun |
| Pills (5 mg) | 2 1/4 2 1/4 |

Recent Notes:

9/4/2013
Visit Note: Pt DC'd from CWH off warfarin. Call to Val Spindle, ARNP CACP to inform her. Waiting for her review to see if we can send DC order to Dr. Clarke. Entered by Brenda Atkinson RN CACP

9/4/2013
Visit Note: 9/3/13 Patient discharged from CWH to Senior Delights AFH. Patient off Coumadin due to epidural hematoma formation. Entered by SPretts MA
DAWN Notes Exported to EMR

---

**Results: Anticoagulation Clinic Summary**

<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
<th>Range &amp; Units</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>INR</td>
<td>1.2</td>
<td>mg</td>
<td>Final</td>
</tr>
<tr>
<td>Dose</td>
<td>6.67</td>
<td>g</td>
<td>Final</td>
</tr>
<tr>
<td>Reason for Anticoagulant</td>
<td>VTE Distal Lower Extremity, Chronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>User</td>
<td>Sarah Pearson</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Target Range</td>
<td>2.0-3.0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticoagulant</td>
<td>Final</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment Duration</td>
<td>Duration: Long Term</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Final INDICATION:** Scheduled 4 day post-procedural follow up regarding anticoagulation for distal and proximal VTE of the LE (1999, 2004, 2008).

**SUBJECTIVE:** No new concerns today. No new medical data or events since last ACC visit.

**HPI:** History obtained from patient with EMR review. No new medical data or events since last ACC visit.

**CURRENT WARFARIN REGIMEN:** Resumed warfarin Saturday morning 9/24/13. Using 5mg tablets, has taken 2 tablets daily x 3 days.

**LOVENOX:** Resumed Lovenox on Saturday 8/51 at 3am. Has taken 150mg of Lovenox BID at 3am and 7am.

**CHANGES IN MEDICATIONS:** Warfarin has been taken as directed without missed or doubled doses. Denies change in tablet appearance or color. Denies any new medications or changes in dosing of current medications. No change in OTC meds, vitamins or herbal supplements.

**ANTI-PLATELET USE:** No aspirin or Flavix.
DAWN Assists With Safe Care

- Patient tracking in DAWN List views
- Communication among providers and other health care facilities
- Quality Measures – DAWN Reports
  - TTR
  - Elevated INRs
  - Time to Therapeutic
  - Clinical outcomes (Bleeding, TE, Fatalities)
- **Interfaces**: lab, demographics, EMR and scheduling
Looking Forward

Increase in patient population
+ Multiple locations for care
+ Addition of new anticoagulants

Continued need for expertise and standardization and systematic process for administrative and clinical management
Our Mission

- To provide our patients with the highest quality health care and service in a friendly and caring atmosphere

- Committed to assisting in the development of one of the nation’s best rural health care delivery systems
Reference

Delivery of Optimized Anticoagulant Therapy: Consensus Statement from the Anticoagulation Forum


The Annals of Pharmacotherapy 2008 July/August, Volume 42