Status **Active** PolicyStat ID **15228892**

Origination	12/2021
Last Approved	02/2024
Effective	02/2024
Last Revised	02/2024
Next Review	11/2025

Owner	Wendy Eckhart: Manager Clinical Pharmacy
Policy Area	Medication Management
Applicability	OR - Oregon Region
References	PHRMH, PMG, PMH + 5 more

Oregon Anticoagulation Services Policy and Procedure

Anticoagulation Clinic Operation Policies and Procedures

Effective Date: 11/20/95
Reviewed Date: 11/2021
Revision Date: 8/2003, 9/2004, 5/2006, 4/2007, 11/2007, 10/2011, 9/2012, 5/2014, 6/2016, 11/2018, 7/2019, 11/2021, 11/2023

Purpose of the Anticoagulation Clinic:

The Providence Anticoagulation Clinics (ACCs) provide comprehensive anticoagulation management services for referring providers. Its goal is to coordinate and optimize the delivery of anticoagulant therapy, improve patients' clinical outcomes, reduce complications of anticoagulation therapy, ensure safe transitions of care, and reduce hospitalizations.

The Providence Anticoagulation Clinics may select and monitor anticoagulation therapy including warfarin, direct oral anticoagulants (DOACs), and low molecular weight heparins (LMWHs). The clinics use point of care testing to monitor and measure INRs for warfarin-treated patients. The anticoagulation care providers are pharmacists with advanced training in anticoagulation management.

Services Provided:

- Select the appropriate anticoagulant based on patient specific factors

- Order appropriate lab tests as defined in this policy
- Collect appropriate clinical data as defined in this policy
- Provide clinical assessments (signs and symptoms of bleeding and thromboembolic events)
- Establish therapeutic plans for the management and monitoring of anticoagulants
- Document decision making and anticoagulation plans in Epic
- Provide prescriptions and refills of anticoagulation medications
- Evaluate and provide drug interaction assessments
- Assure telephonic follow up as needed for select patients
- Assess and implement periprocedural plans
- Provide transitions of care follow up and plans
- Provide after hours on call coverage (select clinics)
- Provide patient self-testing (PST) in select patients meeting criteria

A. Clinic Operations:

1. Clinic Referrals

Anticoagulation services are initiated through the Anticoagulation referral which is signed by the referring provider. This serves as authorization for comprehensive anticoagulation management including warfarin and DOAC monitoring, LMWH dosing, lab ordering, prescriptions, etc. Referral forms should be completed and sent through Epic electronic medical record or faxed to each clinic. The paper referral form for non-Providence providers requests additional patient information such as history of present illness, current medical problem list, medication list, and relevant labs. The patient will be managed for the duration of the anticoagulation treatment. Referrals will be renewed at least yearly.

The referral requires the following information:

- Indication for anticoagulation therapy
- INR goal range for patients receiving warfarin
- Estimated duration of therapy
- Other information relating to anticoagulation therapy such as bleeding and thromboembolic risks
- Approval for ACC to order relevant medications and labs

Please note that the referring provider will be responsible for monitoring until the patient is seen in the clinic at their first appointment.

2. Clinical Practice Agreement

Patients may be referred to PH&S Anticoagulation Services under clinical practice agreement (CPA) between Providence Health & Services or individual providers. This CPA authorizes the anticoagulation services to accept patients directly from a Providence hospital facility and ED for outpatient anticoagulation management. Patients will then be required to have established with a primary care provider or specialist providers who will provide ongoing authorization for continued outpatient anticoagulation services. The Anticoagulation clinic will seek this authorization immediately and must receive it within 30 days after the first clinic visit.

3. Oregon Anticoagulation Clinics:

Providence Portland Medical Center	ph: 503-215-2284	fax: 503-215-0466
Providence St. Vincent Medical Cente	ph: 503-216-3299	fax: 503-216-6447
Providence Milwaukie Hospital	ph: 503-513-8343	fax: 503-513-8069
Providence Newberg Medical Center	ph: 503-537-5872	fax: 503-537-5890
Providence Willamette Falls Med Ctr	ph: 503-742-6940	fax: 503-742-6945
PSA/YSA Centralized Referral Intake	ph: 503-216-6044	fax: 971-712-2141
Providence Seaside Hospital	ph: 503-717-7351	fax: 503-717-7361
Columbia Gorge Clinics	ph: 541-387-1334	fax: 541-387-6393
Providence Medford Medical Center	ph: 541-732-3271	fax: 541-732-3412
Providence Medical Group Telephonic	ph: 503-513-8043	fax: 503-513-8351
Providence Medical Group Gresham	ph: 503-215-2284	fax: 503-215-0466

4. Patient Eligibility

- Patients must have the ability and agree to come to the clinic unless otherwise specified.
- Patients or guardians must have the capacity to understand the purpose and importance of anticoagulation therapy and follow instructions.

- Patients must have a documented need for anticoagulation.
- Patients must have annual visits with their referring provider.
- Patients or care providers must communicate as requested and adhere to ACC appointments and recommendations.

5. Hours

The clinic will schedule routine appointments during office hours from Monday through Friday. For Portland and Yamhill Service areas, clinical pharmacists and clinical pharmacist specialists are available on call for selected hours as an after-hours resource.

6. First Appointments

Patients will be contacted by the administrative support personnel to discuss the anticoagulation services and make an appointment. They will also receive directions and check-in procedures for their location. Appointment length will vary based on visit type. The appointment length may range from 15 minutes for a follow up visit to one hour for an educational visit.

7. Scheduled Visit Frequency

The clinical pharmacy specialists may use their professional judgment depending on the individual needs of the patient. For patients being discharged from a hospital, the initial contact with the patient will occur within 1-3 business days after discharge. The clinic process and schedule will be explained on the first visit. Follow up appointment frequency will be based on individual patient needs (e.g., drug-drug interactions, health changes) and adjusted accordingly. For very stable warfarin treated patients, the maximum recommended follow up may be up to 6-8 weeks at the clinicians' discretion once the patient has exhibited therapeutic INR stability for 3-4 consecutive months. Patients are responsible for communicating with ACC regarding their health changes within that time period.

8. Patient Selection and Discharge from Anticoagulation Services

The appropriateness of anticoagulation is the decision of the referring physician. If the Anticoagulation Clinic has concerns regarding the safety of therapy, the service may decline the management of the patient under consideration. Some patients lack the resources to comply safely with their prescribed anticoagulation therapy, as identified by multiple missed appointments or disregard of clinic instructions. Every attempt will be made to assist the patient to improve adherence. However, after discussion with the referring physician, the Anticoagulation Clinic may discharge a patient from service. The physician will be notified in writing. The patient will be notified by certified letter.

9. Missed Appointments

Patients will receive automated appointment reminders based on patient Epic preferences or by

ACC caregivers. Patients missing appointments will be contacted for rescheduling. The clinic will assist in arranging transportation for patients with transportation difficulties. Patients not responding to phone messages for three consecutive weeks will be notified by letter. New or unstable patients may be addressed sooner based on the ACC discretion. The physician will then be contacted. If no response is received from the patient, the clinic may discharge them from clinic. Patients refusing instructions, refusing to reschedule or communicate with the clinic, or those who exhibit behaviors that do not allow the pharmacists to monitor anticoagulation safely may be discharged from clinic.

10. Billing

Face to face appointments will be billed as an Anticoagulation Clinic Visit.
The Point of care INR test will be charged separately.
Any contracts set up with specific insurers will be honored and billed according to services provided.

11. INR Collection

ACC will follow the POCT INR Roche Coagucheck XS Plus Procedure.
See lab policy: POCT INR Roche CoaguChek XS Plus Procedure (policystat.com)

12. Pharmacist Authorization to Prescribe Anticoagulants and Relevant Labs

- Order prescriptions for warfarin, direct oral anticoagulants, low molecular weight heparin, fondaparinux, unfractionated heparin, and vitamin k.
- Teach and administer low molecular weight heparin injections
- Order the following labs when indicated. PT/INR, aPTT, CBC (yearly and PRN), Serum Creatinine, BUN, Hemogram, Platelet Count, Hepatic Function Panel, FOBT, Stool Guiac, Anti-XA Level, Chromogenic Factor Xa.

13. Clinical Documentation Requirements

All patient data and communications will be documented in an Epic Encounter.

Visit documentation will be in a standard SOAP format and dosing flowsheet.

14. Anticoagulation Communication

The referring provider will have access to the Anticoagulation Progress Notes in Epic or by fax. The referring provider may also request anticoagulation note information by contacting the Anticoagulation Clinic.

The referring provider will be notified promptly by the Anticoagulation Clinic Pharmacist of any situation requiring medical attention or physician evaluation. (i.e., suspected bleeding or

thromboembolic complications, or any unusual changes in the patients' condition).

The provider will also be notified:

- If a patient is refusing ACC recommendations (e.g., INR is 5 and patient states he will not return for 2 weeks, self doses, or is consistently non-compliant with appointments).
- Regarding significant health concerns (e.g., unusual bleeding, signs and symptoms of acute CHF, thromboembolism, or infection).
- When a patient is noncompliant with prescribed medications and ACC appointments
- Regarding clinic recommendation during a period of disruption of anticoagulation (surgery or invasive procedures).
- Regarding any post-surgical warfarin patient (within 2 weeks of surgery) with an INR >4. The pharmacist must make a telephone call to the surgeon and non-PMG referring provider to notify them of the patient's status, INR, and plan and document this in Epic. Refer to ACC communications policy.
- When INR is elevated and the patient is at high risk of bleed; or vitamin K is recommended. (See Supratherapeutic INR and Warfarin Reversal in Oral Anticoagulation Guidelines)
- When INR is > 5 or < 1.5. the pharmacist will route/fax progress note to referring physician (if non urgent).
- When it is determined that a change in DOAC dose is needed based on acute changes in health status or other medications.
- When a change in anticoagulant is recommended.

15. Anticoagulation Pharmacist Educational Requirements and Competencies

Pharmacists trained in the management of anticoagulation therapy will staff the clinic. The training program will include:

- Review of pathophysiology and anticoagulation principles relating to the use of injectable and oral anticoagulants.
- Completion of yearly anticoagulation specific competencies.
- Yearly completion of the Coaguchek XS Plus Certification Program
- On-site training with an experienced Anticoagulation Clinic Pharmacist
- Supervisor signature that all policies are read and completed (Communications, Lab, Operational policies)

16. Quality Assurance

- All cases of patients experiencing moderate to severe bleeding complications or new thromboembolic complications while managed by the Anticoagulation Clinic will be reviewed and reported quarterly as they are identified.
- Rates of major hemorrhagic adverse event rates in established patients will be measured.

- Rates of thromboembolic adverse event rates in established patients will be measured.
- The approved clinical pharmacists working at the Anticoagulation Clinic will participate in continuing education on anticoagulation and related topics on a yearly basis.

17. Medical Review Board

The Pharmacy and Therapeutics Committee will serve as the Medical Review Board for the clinic and will oversee the operation. The Medical Review Board will review and approve policies and procedures for the clinic. A designated Medical Director of Anticoagulation Services will provide support for medical issues requiring immediate but non-emergent physician intervention.

B. Patient Visit Process

1. First Visit

In the patient's first visit, a comprehensive assessment will be completed, and the referral will be reviewed. The pharmacist will review and update as needed:

- Patient demographics
- History of present illness
- Medical problem list
- Medication list
- Pertinent laboratory data
- Indication for anticoagulation
- Target INR for warfarin patients
- Projected length of therapy

2. Every visit

At each clinic visit, the clinical pharmacist will complete a comprehensive patient interview and complete a SOAP note. For warfarin patients, populate the warfarin doses taken, add INR to the flowsheet.

3. Pharmacist Interview

- Interview the patient regarding medical and social history.
- Verify and update medication history, medication allergies, and problem list as needed.
- Review signs and symptoms of excessive bleeding or bruising
- Review signs and symptoms of thromboembolism
- Determine recent alteration in diet, alcohol intake, and tobacco use
- Assess changes in lifestyle, health status (e.g., illness, level of activity, etc.)
- Determine compliance with anticoagulant regimen

- Ask if there are future surgeries or procedures scheduled
- Follow up on an ongoing acute medical problem. For example, patient referred to the Clinic for follow-up treatment of pulmonary embolism will be questioned regarding pleuritic chest pain, shortness of breath, hemoptysis, tachypnea, etc.

4. Patient Assessment and Dosage Adjustment

- Address patient concerns
- Assess lab values in the context to patient's presentation and complete anticoagulation history.
- Determine an anticoagulation plan (change doses as needed)
- Schedule the patient's next appointment
- Review the written instructions and print an After Visit Summary for the patient.
- Assess and supplement patient's current knowledge of anticoagulation (See education section)
- Educate the patient with verbal and written drug information (including side effect monitoring)
- Complete an Anticoagulation Clinic Progress Note

5. Patient Education

Teaching will be individualized based on the patient's ability to comprehend the subject. Patient education will be documented on a checklist.

6. INR Test

For warfarin patients, trained Anticoagulation Clinic caregivers will perform point of care INR test according to POCT INR Roche CoaguChek XS Plus Procedure and assure other labs are ordered as needed.

7. Patient Instructions

Written patient instructions will be supplied at the end of each clinic visit with an After Visit Summary (AVS). The written instructions will include the following:

- Patient name and date of clinic visit
- Changes in anticoagulant dose
- Date and time of next clinic appointment
- Any other information deemed necessary

C. Clinical Guidelines

1. Please refer to the following guidelines used by the

Anticoagulation Clinics

- Oral Anticoagulation Guidelines
- Low Molecular Weight Heparin Guidelines
- Periprocedural Bridging Guidelines
- POCT INR Roche CoaguChek XS Plus Procedure

References:

- American College of Chest Physicians evidence-based clinical practice guidelines. Chest. 2012;1412 suppl: e.
- Lip GY, Banerjee A, Boriani G, et al. Antithrombotic Therapy for Atrial Fibrillation. Chest 2018 Nov;154(5):1121-1201.
- Kearon C, Akl EK, Ornelas J. et al. Antithrombotic Therapy for VTE Disease: CHEST Guideline and Expert Panel Report. Chest 2016;149:315-352.
- Garcia DA, Witt DM, Hylek E, et al. Delivery of Optimized Anticoagulant Therapy: Consensus Statement from the Anticoagulation Forum. Ann Pharmacother 2008;42(7):979-88.
- Ansell JE, Oertel JB, Wittkowsky AK (2009). Managing Oral Anticoagulation Therapy: Clinical and Operational Guidelines. Third Edition. St Louis: Facts & Comparisons.

Approval Signatures

Step Description	Approver	Date
Regional Pharmacy	Wesley Wells: Executive Director Pharmacy	02/2024

Applicability

OR - Credena Health, OR - Providence Ctr for Medically Fragile Children, OR - Providence Health Oregon Labs, OR - Providence Hood River Memorial Hospital, OR - Providence Medford MC, OR - Providence Medical Group, OR - Providence Milwaukie Hospital, OR - Providence Newberg MC, OR - Providence Portland MC, OR - Providence Seaside Hospital, OR - Providence St. Vincent MC, OR - Providence Willamette Falls MC

References

PHRMH, PMG, PMH, PMMC, PNMC, PPMC, PSVMC, PWFMC

Standards

No standards are associated with this document