Appendix 1

RMS
Anticoagulation Clinic Protocol

GOALS

The Queen Alia Heart Institute (QAHI) Anticoagulation Clinic is designed to assist physicians in improving quality of care provided to their patients on anticoagulation therapy. Ultimately, our goal is to assure that these services improve patients' therapeutic outcomes, reduce complications of anticoagulation therapy, and reduce hospitalizations. Specific goals include:

Improving continuity of care for patients on anticoagulation therapy
Providing patient education on disease state and drug therapy
Reducing adverse effects of anticoagulation therapy
Maximizing the benefits of anticoagulation therapy

DESIGN

The Queen Alia Heart Institute (QAHI) Anticoagulation Clinic is an outpatient, ambulatory clinic that provides comprehensive care to individuals receiving Anticoagulation drug. The Clinic assesses the effectiveness of Anticoagulation therapy. Patients are assessed by anticoagulation care providers comprised of clinical pharmacists and nutritionists.

PROCEDURE

Referral

i. Individuals will fall under the care of the clinic after a physician involved in the care of the patient completes and forwards an "Anticoagulation Clinic Referral" form (form 1). Referrals are only accepted for ambulatory patients able and willing to visit the clinic in person.
ii. Once received, Referral Forms are immediately reviewed by the pharmacist for appropriateness and completeness and to determine the urgency of the patient's first visit. Missing information will be promptly obtained from patient medical file and the referring physician.
iii. Patients will be contacted as soon as able to schedule their initial visit.

Patient's initial visit

After reception of a referral form, the patient will be contacted to arrange for their initial visit to take place at the earliest opportunity. During the initial visit, the clinical pharmacist will review the referral and any additional pertinent medical information. This information will be recorded in the patient's profile.

Education Session

Patients will be scheduled for at least one educational visit to occur at the earliest opportunity. The new patient will be provided with information concerning dietary considerations, drug-drug and drug-disease interactions, self-monitoring parameters for symptoms of bleeding/bruising as well as thromboembolisms, compliance to medication via verbal instructions and RMS printed booklet (ATTACHED). The patient will be made aware of clinic hours and contact information.

Standard Visit

At each scheduled appointment, the patient will be interviewed and assessed by the pharmacist for the following current and potential information:

- Signs and symptoms of hemorrhagic or embolic complications
- Changes in dietary habits
- Recent changes in life style or health status
- Status of medical problem necessitating anticoagulation therapy
- Changes in medication regimen including OTC and herbal

preparations
- Compliance issues related to medication regimens
- Confirmation of current anticoagulant regimen

The pharmacist will perform an INR test. The result of the test will be compared to the therapeutic range that is prescribed for the patient. For all INR results greater or equal to 4.5, the patient physician must be directly consulted. Follow-up appointments will be scheduled before the end of the visit. Follow-up should occur no greater than 4 weeks later, but may occur as early as 24 hours.

At the conclusion of the visit, the patient will be given an appointment and the Clinic's phone number. The warfarin booklet will include the patient's INR result and dosage regimen for each visit.

Management of INR Values

i. Initiation of warfarin therapy
- Start therapy with 2.5-10mg daily taken in the evening. Lower initiation doses are recommended for elderly patients or patients with a potential increased INR response to Warfarin therapy FIGURE 1.
- Follow-up INR will be obtained 3-5 days after initiation of therapy.
- A minimum of a weekly INR will be done for the first 3-4 weeks of therapy to ensure proper dosing.
- Once stable anticoagulation is achieved, maintenance therapy will be managed per the following protocols.

SCHEDULING FOLLOW-UP PROTIMES

TARGET INR 2.0-3.0

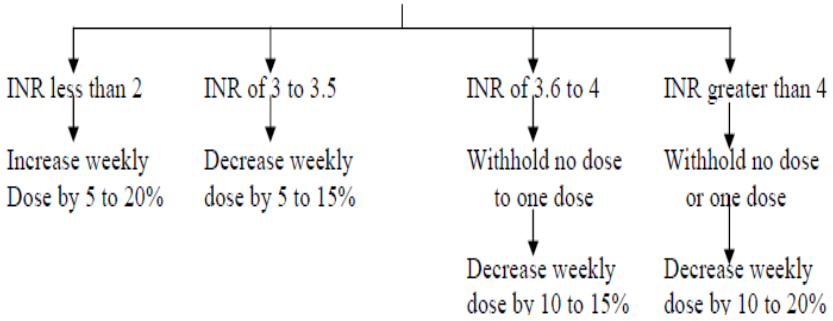
RANGE	ADJUSTMENT	FOLLOW-UP
<2.0	Per protocol	1-2 weeks
2.0-3.0	No change	4-6 weeks
3.1-4.0	Per protocol	1-2 weeks
4.1-6.0	Per protocol	3-7 days
>6.0	Notify M.D.	Per protocol

TARGET INR 2.5-3.5

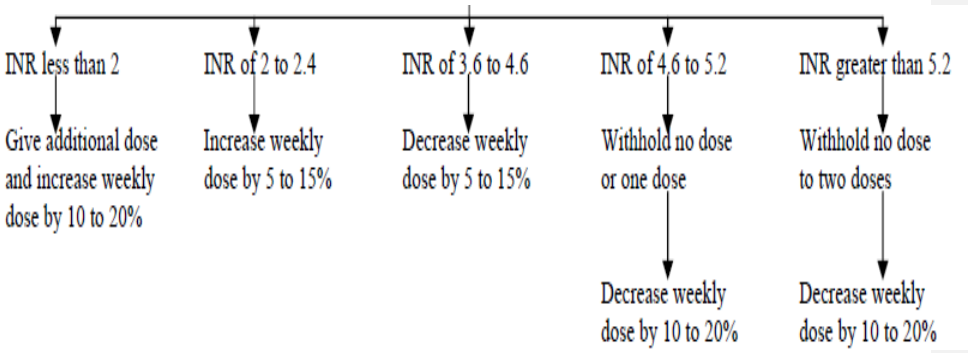
RANGE	ADJUSTMENT	FOLLOW-UP
<2.5	Per protocol	1-2 weeks
2.5-3.5	No change	4-6 weeks
3.6-4.5	Per protocol	1-2 weeks
4.6-6.0	Per protocol	3-7 days
>6.0	Notify M.D.	Per protocol

The protocol of altering warfarin dose to achieve target INR

Altering Coumadin/Warfarin Dosage to Achieve INR of 2 to 3



Altering Coumadin/Warfarin Dosage to Achieve INR of 2.5 to 3.5



Dosing adjustment using 5mg tab

SUN	MON	TUES	WED	THUR	FRI	SAT	Total Weekly	% change
1 tab	½ tab	1 tab	½ tab	1 tab	½ tab	1 tab	27.5mg	-20%
1 tab	½ tab	1 tab	1 tab	1 tab	½ tab	1 tab	30mg	-15%
1 tab	½ tab	1 tab	1 tab	1 tab	1 tab	1 tab	32.5mg	-5%
1 tab	1 tab	1 tab	1 tab	1 tab	1 tab	1 tab	35mg	0%
1 tab	1 ½ tab	1 tab	1 tab	1 tab	1 tab	1 tab	37.5mg	+5%
1 tab	1 ½ tab	1 tab	1 tab	1 tab	1 ½ tab	1 tab	40mg	+15%
1 tab	1 ½ tab	1 tab	1 ½ tab	1 tab	1 ½ tab	1 tab	42.5mg	+20%

Scheduling Perioperative Management

Patient's currently receiving anticoagulation therapy offer unique and difficult therapeutic challenges when needing a percutaneus medical procedure.

Patients should be interviewed at each visit for the possibility of planned percutaneous procedures.

When a medical procedure is pending, a thromboembolic and hemorrhagic risk assessment should be completed and resulting treatment strategies discussed with the patient (APPENDIX 1). When necessary, the patient's primary care provider, surgeon, dentist, gastroenterologist or other physicians as well as the clinic physician should be consulted for final approval of treatment strategies.

Documentation

Patient Profile

An electronic patient profile will be maintained in the anticoagulation clinic for all patients. Documentation will include

- Patient's information (including patient's name, national and medical numbers, insurance level, address and contact numbers)
- Indication for anticoagulation therapy
- Expected duration of anticoagulant treatment
- Target INR
- Current anticoagulant dose
- Last INR
- Referring physician
- Relevant clinical information obtained from the patient interview
- Instructions given to the patient
- Date of follow-up appointment
- Pharmacist notes

Prescriptions

Prescriptions for warfarin for clinic patients will originate from the clinic and given to patients to dispense from pharmacy.

Queen Alia Heart Institute

anticoagulation Clinic Referral Form

Patient information

Patient Name: _____ Date of Birth: _____

Address: _____ Phone #: _____

Anticoagulation History:

Diagnosis for anticoagulation: _____

Current Warfarin dose: _____

Date started on Warfarin: _____ Expected duration of anticoagulation: _____

Last INR result: _____ Date: _____

_____

Requested therapeutic range: (please check one)

□ **2.0 - 3.0 INR Standard intensity:**

Recommended for the treatment of:

□ **2.5-3.5 INR High Intensity**:

Recommended for the treatment of:

Venous Thrombosis
Mechanical Prosthetic Mitral Valves

Prevention of Systemic Embolism
Recurrent DVT

Acute MI (to prevent systemic embolism)
Recurrent PE

Atrial Fibrillation

Bileaflet Aortic Mechanical Valves

CVA/ TIA
□ **Other**: _____

INR

Hypercoagulable state

Medication Information:

Is the patient on antiplatelet drugs? □ aspirin □ clopidogrel □ other (please specify)? _____

Is this to continue during anticoagulation? YES/NO

Concurrent Drug Therapy:

_____

Past Medical History:

□ Heart Failure □ Liver disease □ Diabetes □ IVDA/Alcohol Abuse

□ Hypothyroid □ GI Bleeds or PUD □ Seizure Disorder □ Cognitive Impairment

□ Hypercoagulable state □ Hx of falls □ Cancer (type:) □ Hypertension (BP › 180/110 mmHg)

□ Cerebral Haemorrhage in the last 6 months □ Bleeding Disorder

Allergies: _____

Comments on Condition:

_____

Physician Information

As attending physician, I request the above patient be followed atQAHI, anticoagulation Clinic for monitoring, dose adjustment and education, per clinic policy. I will respond to critical lab values in a timely manner when contacted by the WC Clinic

_____ _____

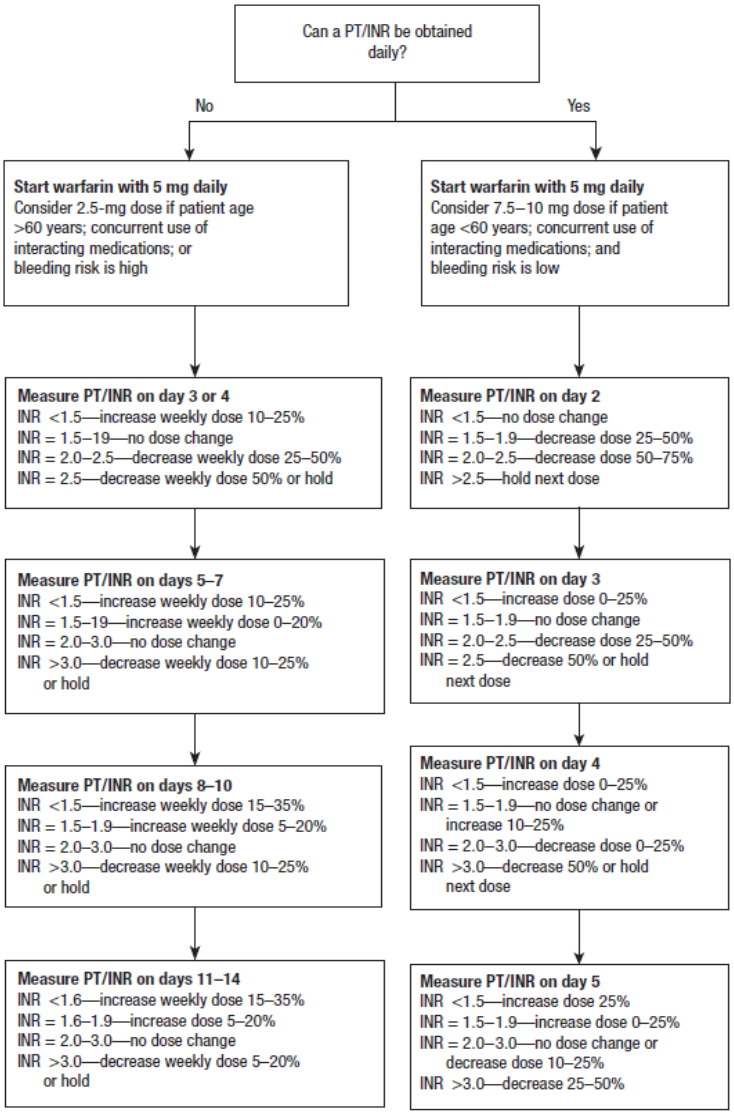
Physician signature Date

_____

_____

Phone Fax

Initiation of Warfarin



RMS Printed Booklet