Warfarin Maintenance Dosing and INR Recall Algorithms

These algorithms are intended to be used after the patient has gone through the initiation period and a chronic maintenance dose has been established.

**Target INR 2.5 (Range 2.0-3.0)**

<table>
<thead>
<tr>
<th>INR</th>
<th>≤ 1.5</th>
<th>1.51-1.99</th>
<th>2.00-3.00</th>
<th>3.01-4.00</th>
<th>4.01-4.99</th>
<th>5.00-10.00</th>
<th>&gt;10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose Change</strong></td>
<td>Increase 15%</td>
<td>Increase 10%</td>
<td>No change</td>
<td>Decrease 10%</td>
<td>Hold for one day then decrease 10%</td>
<td>Hold until INR therapeutic and then decrease by 15%*</td>
<td>Hold until INR therapeutic and then decrease by 25%**</td>
</tr>
<tr>
<td><strong>Next INR</strong></td>
<td>4-8 days</td>
<td>7-14 days</td>
<td>See follow-up algorithm below</td>
<td>7-14 days</td>
<td>4-8 days</td>
<td>2-3 days</td>
<td>Daily until INR is within target range</td>
</tr>
</tbody>
</table>

**Target INR 3.0 (Range 2.5-3.5)**

<table>
<thead>
<tr>
<th>INR</th>
<th>≤ 2.00</th>
<th>2.01-2.49</th>
<th>2.50-3.50</th>
<th>3.51-4.50</th>
<th>4.51-5.49</th>
<th>5.50-10.00</th>
<th>&gt;10.00</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dose Change</strong></td>
<td>Increase 15%</td>
<td>Increase 10%</td>
<td>No change</td>
<td>Decrease 10%</td>
<td>Hold for one day then decrease 10%</td>
<td>Hold until INR therapeutic and then decrease by 15%*</td>
<td>Hold until INR therapeutic and then decrease by 25%**</td>
</tr>
<tr>
<td><strong>Next INR</strong></td>
<td>4-8 days</td>
<td>7-14 days</td>
<td>See follow-up algorithm below</td>
<td>7-14 days</td>
<td>4-8 days</td>
<td>2-3 days</td>
<td>Daily until INR is within target range</td>
</tr>
</tbody>
</table>

Providers should consider other clinical factors before determining dose changes, including:

- recent trend in INR values
- dietary changes
- changes in health status
- changes in concomitant medications
- alcohol intake
- missed doses
- other possible explanations for out of range INRs

In some cases, a dose change may not be necessary if a probable cause for out of range INR is identified

* Additional measures: Attempt to identify reasons for high INR (e.g. drug interactions, change in diet, acute illness), assess for signs/symptoms of bleeding, counsel patient to avoid excessive physical activity and to report signs/symptoms of bleeding, and consider recommending additional servings of foods high in Vitamin K such as green, leafy vegetables.

** Measures in addition to the above: Administer oral vitamin K (2.5-5mg) if patient has no signs of bleeding. If patient has signs or symptoms of bleeding, send patient to ED immediately as more aggressive treatments may be required (i.e. IV vitamin K, fresh-frozen plasma, or prothrombin complex concentrate). Rapid reversal with four-factor prothrombin complex concentrate is suggested over plasma.2
<table>
<thead>
<tr>
<th># of consecutive in-range INRs</th>
<th>Repeat INR in</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5-10 days</td>
</tr>
<tr>
<td>2</td>
<td>2 weeks</td>
</tr>
<tr>
<td>3</td>
<td>3 weeks</td>
</tr>
<tr>
<td>4</td>
<td>4 weeks</td>
</tr>
</tbody>
</table>

Algorithm may be accelerated for a previously stable patient with a single out-of-range INR.

**If the patient has had multiple stable INRs and a consistent weekly warfarin dose for the past 12 week period, it is reasonable to begin waiting up to 12 weeks for the next INR.**

MAQI² recommends reserving the full 12 week recall interval for the most stable patients with low bleeding risk until more extended INR recall data is available. Patients should be reminded of the importance of notifying the clinic of changes in medications, diet, alcohol use, or general health as well as any signs/symptoms of bleeding that would warrant an earlier INR.

---


## Warfarin Management around Minor Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Recommendation</th>
</tr>
</thead>
</table>
| Minor dental (e.g. tooth extractions, root canals) | • For patients undergoing dental procedures who are not to be considered high risk, anticoagulation with warfarin does NOT need to be discontinued.¹ ²  
  • All patients undergoing elective dental procedures should have an INR performed within 1-3 days before the procedure  
    o If a patient’s INR is high, delay the procedure in consultation with the managing dentist.  
  • If the planned procedure requires a posterior-superior alveolar block, then anticoagulant therapy must be interrupted since this anesthetic procedure can be complicated by bleeding that cannot be controlled adequately by local measures.  
  • For patients undergoing dental procedures while on warfarin, a prohemostatic agent such as tranexamic can be administered to control bleeding.¹ |
| Minor dermatologic procedures           | Continue warfarin around the time of procedure and optimize local hemostasis instead of other strategies (Grade 2C)¹                                                                                                                                 |
| Cataract surgery                         | Continue warfarin around the time of surgery instead of other procedures (Grade 2C)¹                                                                                                                                 |


# Perioperative Bridging Guidelines for Warfarin

<table>
<thead>
<tr>
<th>Who should be bridged?</th>
<th>Recommendation</th>
<th>Grade of recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patients with mechanical heart valves, atrial fibrillation, or VTE at HIGH risk for thromboembolism.</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Patients with mechanical heart valves, atrial fibrillation, or VTE at HIGH risk for thromboembolism.&lt;sup&gt;1&lt;/sup&gt; Patients with a MEDIUM risk for thromboembolism may need bridging based on assessment of patient factors and type of surgery.&lt;sup&gt;1&lt;/sup&gt; See table, <em>Suggested Risk Stratification for Perioperative Thromboembolism</em> (below) to identify patients at High or Medium risk. See table, <em>Bleeding Risk Stratification for Common Procedures</em> (below) to identify surgeries/procedures with increased bleeding risk.</td>
<td>2C</td>
</tr>
<tr>
<td><strong>Patients with a MEDIUM risk for thromboembolism may need bridging based on assessment of patient factors and type of surgery.</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td><strong>Patients with mechanical heart valves, atrial fibrillation, or VTE at LOW risk for thromboembolism</strong>&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2C</td>
</tr>
<tr>
<td><strong>When to stop warfarin before procedure?</strong></td>
<td>Approximately 5 days prior to procedure&lt;sup&gt;1&lt;/sup&gt;</td>
<td>1C</td>
</tr>
<tr>
<td><strong>When to start LMWH before procedure?</strong></td>
<td>Start therapeutic dose when INR falls below therapeutic range&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>When to stop LMWH before procedure?</strong></td>
<td>Give last dose 24 hours prior to procedure&lt;sup&gt;1,2*&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>When to restart warfarin after the procedure?</strong></td>
<td>Approximately 12-24 h after surgery (evening of or next morning) and when there is adequate hemostasis&lt;sup&gt;1&lt;/sup&gt;</td>
<td>2C</td>
</tr>
<tr>
<td><strong>When to restart LMWH after the procedure?</strong></td>
<td>24 hours after low/moderate bleeding risk surgeries&lt;sup&gt;1&lt;/sup&gt; 48-72 hours after high-bleeding risk surgeries&lt;sup&gt;1&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>When to stop LMWH after the procedure?</strong></td>
<td>When INR is in therapeutic range&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

*May need to be adjusted based on renal function  
** Restart LMWH 72 hours endoscopic sphincterotomy<sup>2</sup>*

<sup>1</sup>Perioperative Management of Antithrombotic Therapy. Antithrombotic Therapy and Prevention of Thrombosis, 9<sup>th</sup> ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. doi:10.1378/chest.11-2298


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**Return to Table of Contents**

Copyright 2014, MAQI<sup>2</sup>  
For questions or permissions, please email info@maqi2.org. Version 1.2, reviewed/updated on 2/1/15  
Page 32
<table>
<thead>
<tr>
<th>Risk Stratum</th>
<th>Mechanical Heart Valve</th>
<th>Atrial Fibrillation</th>
<th>VTE</th>
</tr>
</thead>
</table>
| **High**     | • Any mitral valve prosthesis | • CHADS<sub>2</sub> score of 5 or 6  
• Any caged-ball or tilting disc aortic valve prosthesis  
• Recent (within 6 mo) stroke or TIA (transient ischemic attack) | • Recent (within 3 mo) VTE  
• Severe thrombophilia (eg, deficiency of protein C, protein S, or antithrombin; antiphospholipid antibodies; multiple abnormalities) |
| **Moderate** | Bileaflet aortic valve prosthesis and one or more of the of following risk factors:  
• atrial fibrillation  
• prior stroke or TIA  
• hypertension,  
• diabetes,  
• congestive heart failure,  
• age > 75 yo | • CHADS<sub>2</sub> score of 3 or 4 | • VTE within the past 3-12 mo  
• Nonsevere thrombophilia (eg, heterozygous factor V Leiden or prothrombin gene mutation)  
• Recurrent VTE  
• Active cancer (treated within 6 mo or palliative) |
| **Low**      | • Bileaflet aortic valve prosthesis without atrial fibrillation and no other risk factors for stroke | • CHADS<sub>2</sub> score of 0 to 2 (assuming no prior stroke or transient ischemic attack) | • VTE > 12 mo previous and no other risk factors |

CHADS<sub>2</sub> = congestive heart failure, hypertension, age ≥ 75 years, diabetes mellitus, and stroke or transient ischemic attack; VKA = vitamin K antagonist; TIA = transient ischemic attack; VTE = venous thromboembolism

<sup>a</sup>High-risk patients may also include those with a prior stroke or transient ischemic attack occurring > 3 mo before the planned surgery and a CHADS<sub>2</sub> score < 5, those with prior thromboembolism during temporary interruption of VKAs, or those undergoing certain types of surgery associated with an increased risk for stroke or other thromboembolism (eg, cardiac valve replacement, carotid endarterectomy, major vascular surgery).

<sup>1</sup>Perioperative Management of Antithrombotic Therapy. Antithrombotic Therapy and Prevention of Thrombosis, 9<sup>th</sup> ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. doi:10.1378/chest.11-2298
### Bleeding Risk Stratification for Common Procedures

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Low Risk Bleeding (&lt;1.5 %)</th>
<th>High Risk Bleeding (&gt;1.5%, or in vulnerable areas)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Anesthesiology</strong></td>
<td>Endotracheal intubation</td>
<td>Spinal and epidural anesthesia</td>
</tr>
<tr>
<td><strong>Cardiac surgery</strong></td>
<td>None</td>
<td>All</td>
</tr>
<tr>
<td><strong>Cardiovascular</strong></td>
<td>Diagnostic coronary angiography (controversial)</td>
<td>Pacemaker or defibrillator placement (3.5% on warfarin therapy, 16% with bridging anticoagulation)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dental</strong></td>
<td>Tooth extraction</td>
<td>Reconstructive procedures</td>
</tr>
<tr>
<td></td>
<td>Endodontic procedures (root canal)</td>
<td></td>
</tr>
<tr>
<td><strong>Dermatology</strong></td>
<td>Minor skin procedures (excision of basal and squamous cell cancers, nevi, actinic keratoses,</td>
<td>Major procedures (wide excision of melanoma)</td>
</tr>
<tr>
<td>Procedure</td>
<td>Low Risk Bleeding (&lt;1.5 %)</td>
<td>High Risk Bleeding (&gt;1.5%, or in vulnerable areas)</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Gastroenterology</strong></td>
<td>Passage of endoscope for diagnostic purposes (including balloon enteroscopy) with or without mucosal biopsy</td>
<td>Large polypectomy (&gt;1 cm)</td>
</tr>
<tr>
<td></td>
<td>Endoscopic retrograde cholangiopancreatography without sphincterotomy</td>
<td>Endoscopic mucosal and submucosal dissection Biliary or pancreatic sphincterotomy</td>
</tr>
<tr>
<td></td>
<td>Endoscopic ultrasound without fine-needle aspiration</td>
<td>Percutaneous endoscopic gastrostomy</td>
</tr>
<tr>
<td></td>
<td>Nonthermal (cold) snare removal of small polyps</td>
<td>Endoscopic ultrasound with fine-needle aspiration or needle biopsy</td>
</tr>
<tr>
<td></td>
<td>Lumenal self-expanding metal stent placement (controversial)</td>
<td>Coagulation or ablation of tumors, vascular lesions</td>
</tr>
<tr>
<td><strong>General surgery</strong></td>
<td>Suture of superficial wounds</td>
<td>Percutaneous liver biopsy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Variceal band ligation (controversial)</td>
</tr>
<tr>
<td><strong>Gynecologic surgery</strong></td>
<td>Diagnostic colposcopy, hysteroscopy Dilation and curettage, endometrial biopsy Insertion of intrauterine device</td>
<td>Laparoscopic surgery Bilateral tubal ligation Hysterectomy</td>
</tr>
<tr>
<td>Procedure</td>
<td>Low Risk Bleeding (&lt;1.5 %)</td>
<td>High Risk Bleeding (&gt;1.5%, or in vulnerable areas)</td>
</tr>
<tr>
<td>----------------------------</td>
<td>-------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interventional radiology</td>
<td>Simple catheter exchange in well-formed, nonvascular tracts (e.g., gastrostomy, nephrostomy, cholecystostomy tubes)</td>
<td>Percutaneous transhepatic cholangiography or nephrostomy</td>
</tr>
<tr>
<td></td>
<td>Thoracentesis</td>
<td>Percutaneous drainage of liver abscess or gallbladder</td>
</tr>
<tr>
<td></td>
<td>Paracentesis</td>
<td>Chest tube placement</td>
</tr>
<tr>
<td></td>
<td>Aspiration of abdominal or pelvic abscesses, placement of small-caliber drains</td>
<td>Aggressive manipulation of drains or dilation of tracts</td>
</tr>
<tr>
<td></td>
<td>Peripheral catheter placement, nontunneled catheter (peripherally inserted central catheter) placement</td>
<td>Biopsy of organs</td>
</tr>
<tr>
<td></td>
<td>Inferior vena cava filter placement</td>
<td>Hickman and tunneled dialysis catheter placement</td>
</tr>
<tr>
<td></td>
<td>Temporary dialysis catheter placement</td>
<td></td>
</tr>
<tr>
<td>Intravascular procedures</td>
<td>Venous access</td>
<td>Arterial puncture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Transvenous ablation</td>
</tr>
<tr>
<td>Neurology</td>
<td>None</td>
<td>Lumbar puncture</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Myelography</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Needle electromyography (controversial)</td>
</tr>
<tr>
<td>Neurosurgery</td>
<td>None</td>
<td>Intracranial, spinal surgery</td>
</tr>
<tr>
<td>Procedure</td>
<td>Low Risk Bleeding (&lt;1.5 %)</td>
<td>High Risk Bleeding (&gt;1.5%, or in vulnerable areas)</td>
</tr>
<tr>
<td>------------------------</td>
<td>--------------------------------------------</td>
<td>---------------------------------------------------</td>
</tr>
<tr>
<td>Ophthalmology</td>
<td>Cataract surgery</td>
<td>Periorbital surgery</td>
</tr>
<tr>
<td></td>
<td>Intraocular injections</td>
<td>Vitreoretinal surgery</td>
</tr>
<tr>
<td></td>
<td><em>(Avoid retrobulbar anesthesia - controversial)</em></td>
<td></td>
</tr>
<tr>
<td>Orthopedic surgery</td>
<td>Arthrocentesis</td>
<td>Joint replacement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Arthroscopy</td>
</tr>
<tr>
<td>Otolaryngologic surgery</td>
<td>Diagnostic fiberoptic laryngoscopy or nasopharyngoscopy, sinus endoscopy</td>
<td>Any sinus surgery</td>
</tr>
<tr>
<td></td>
<td>Fine-needle aspiration</td>
<td>Biopsy or removal of nasal polyps</td>
</tr>
<tr>
<td></td>
<td>Vocal cord injection</td>
<td>Thyroidectomy Parotidectomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Septoplasty</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Turbinate cautery</td>
</tr>
<tr>
<td>Plastic surgery</td>
<td>Injection therapy</td>
<td>Reconstruction</td>
</tr>
</tbody>
</table>

*Note: The information is sourced from MAQI² and is subject to change. For the most current information, please refer to the latest edition.*
<table>
<thead>
<tr>
<th>Procedure</th>
<th>Low Risk Bleeding (&lt;1.5 %)</th>
<th>High Risk Bleeding (&gt;1.5%, or in vulnerable areas)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulmonary</td>
<td>Diagnostic bronchoscopy with or without bronchioalveolar lavage</td>
<td>Tumor ablation (laser)</td>
</tr>
<tr>
<td></td>
<td>Endobronchial fine-needle aspirate (controversial)</td>
<td>Transbronchial biopsy</td>
</tr>
<tr>
<td></td>
<td>Airway stent placement (controversial)</td>
<td>Stricture dilation</td>
</tr>
<tr>
<td>Rheumatology</td>
<td>Arthrocentesis</td>
<td>None</td>
</tr>
<tr>
<td>Urology</td>
<td>Circumcision</td>
<td>Extracorporeal shock-wave lithotripsy</td>
</tr>
<tr>
<td></td>
<td>Cystoscopy without biopsy</td>
<td>Transurethral prostatectomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bladder resection Tumor ablation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Kidney biopsy</td>
</tr>
<tr>
<td>Vascular surgery</td>
<td>None</td>
<td>Carotid endarterectomy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Open or endovascular aneurysm repair</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Vascular bypass grafting</td>
</tr>
</tbody>
</table>

Management of Patients Undergoing Elective Cardioversion

<table>
<thead>
<tr>
<th></th>
<th>AF for Greater than 48 hours</th>
<th>AF for 48 hour or Less</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Starting anticoagulation</strong></td>
<td>Therapeutic anticoagulation (warfarin with target INR 2-3, LMWH at treatment doses, or dabigatran) for at least three weeks prior to the scheduled procedure. (1B recommendation)¹</td>
<td>Suggest starting anticoagulation at presentation (LMWH or unfractionated heparin at full treatment doses) and proceeding to CV rather than delaying CV for 3 weeks of therapeutic anticoagulation or a TEE guided approach. (2C recommendation)¹</td>
</tr>
<tr>
<td></td>
<td>• Reasonable to use rivaroxaban or apixaban for 3 weeks prior</td>
<td></td>
</tr>
<tr>
<td><strong>Stopping anticoagulation after successful cardioversion</strong></td>
<td>After at least 4 weeks of therapeutic anticoagulation (1B recommendation)¹</td>
<td>Suggest therapeutic anticoagulation for at least 4 weeks rather than no anticoagulation, regardless of baseline stroke risk. (2C recommendation)¹</td>
</tr>
</tbody>
</table>


LMWH=low Molecular Weight Heparin
TEE=trans esophageal echo
CV=cardioversion

Return to Table of Contents
### Managing Patients on Medications that Interact with Warfarin

<table>
<thead>
<tr>
<th>Recommendation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>When should my patient have their INR drawn?</strong></td>
<td></td>
</tr>
<tr>
<td>If taking a medication known to affect the INR, the patient should have a</td>
<td></td>
</tr>
<tr>
<td>repeat INR within 3-5 days from the start date of the medication.</td>
<td></td>
</tr>
<tr>
<td><strong>What if my patient has a history of warfarin medication interaction or will begin taking a medication known to be “high-risk”?</strong></td>
<td></td>
</tr>
<tr>
<td>Patients with a history of warfarin medication interaction, those at significant increase risk of bleeding complications, or who will be taking a medication known to be “high-risk” GIVE a preemptive dose adjustment (i.e. reduce the warfarin on the day that the ACS is notified that the medication has been started). In that scenario, repeat the INR within 3-5 days.</td>
<td></td>
</tr>
<tr>
<td>See <a href="#">High-Risk table</a> below for specific suggested preemptive dose adjustments</td>
<td></td>
</tr>
</tbody>
</table>

| **What are the most common medications that can significantly increase the INRs?** |   |
| Acetaminophen | Clarithromycin | Fluvastatin | Omeprazole |
| Allopurinol | Clopidogrel | Gemcitabine | Propafenone |
| Amiodarone | Cotrimoxazole | Gemfibrozil | Propanolol |
| Amoxicillin | Diltiazem | Levofloxacin | Simvastatin |
| Aspirin | Entacapone | Lovastatin | SSRI’s |
| Azithromycin | Erythromycin | Metronidazole | Tamoxifen |
| Bactrim | Fenofibrate | Miconazole (Suppository and Gel) | Tetracycline |
| Cimetadine | Fish Oil |  | Tramadol |
| Ciprofloxacin | Fluconazole |  |  |
| Citalopram |  |  |  |

| **What are the most common medications that can significantly reduce the INR?** |   |
| Barbiturates | Clarithromycin | Fluvastatin | Multivitamin Supplement |
| Bosentan | Clopidogrel | Gemcitabine | Nafcillin |
| Carbamazepine | Cotrimoxazole | Gemfibrozil | Phenobarbital |
| Cigarette Smoking | Diltiazem | Levofloxacin | Ribavirin |
| Chlordiazepoxide | Entacapone | Lovastatin | Rifampin |
| Ginseng | Erythromycin | Metronidazole | Secobarbital |
| Griseofulvin | Fenofibrate | Miconazole (Suppository and Gel) | St. John's wort |
| Mercaptopurine | Fish Oil |  | Phenytoin |

Adapted from University of Michigan Anticoagulation Service Guidelines

*For complete list of medications that increase, decrease, or have no effect on INRs, see: Holbrook AM, et al. Systematic Overview of warfarin and its drug and food interactions. Arch Intern Med. 2005 May 23;165(10):1095-106*
<table>
<thead>
<tr>
<th>Medication</th>
<th>Generic Name</th>
<th>Suggested Dose Change/Recheck*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pacerone,</td>
<td>Amiodarone</td>
<td>Decrease 30%, recheck in 7-10 days from start date</td>
</tr>
<tr>
<td>Cordarone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Routine Follow-up Questions for Warfarin Patients

These questions should be asked at each PT/INR follow-up.

<table>
<thead>
<tr>
<th>Assessment questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the patient taking warfarin as prescribed? (correct pill strength and schedule)</td>
</tr>
<tr>
<td>Does patient have any changes in general health status?</td>
</tr>
<tr>
<td>Any changes in diet, especially intake of vitamin K?</td>
</tr>
<tr>
<td>Has the patient started or stopped any prescription medications since last PT/INR?</td>
</tr>
<tr>
<td>Does the patient have any unusual bruising or bleeding?</td>
</tr>
<tr>
<td>Does the patient have any signs of clotting?</td>
</tr>
<tr>
<td>Has the patient had any ED visits or hospitalizations since the last PT/INR?</td>
</tr>
<tr>
<td>Has patients started or stopped any OTC vitamins, herbal supplements, dietary supplements, or pain relievers?</td>
</tr>
<tr>
<td>Does the patient have any procedures scheduled in the near future?</td>
</tr>
<tr>
<td>Does the patient have any travel plans that will interfere with monitoring?</td>
</tr>
</tbody>
</table>

Home Treatment for Dry Nose or Epistaxis

<table>
<thead>
<tr>
<th>Dry Nose Treatment and Epistaxis Prevention¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Make sure that patient’s room or house is well humidified.¹</td>
</tr>
<tr>
<td>2. Use saline nasal spray 6-10 times/day (2 sprays in each nostril).¹</td>
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<tr>
<td>3. For additional moisturization¹</td>
</tr>
<tr>
<td>• For short term (less than 4-5 days) use a small amount of Vaseline Petroleum Jelly or A &amp; D ointment or saline gel just inside the nose twice a day.</td>
</tr>
<tr>
<td>• For longer use, obtain an over-the-counter water-based lotion (Eucerin, Neutragena, or equivalent of cosmetic product) two times a day by placing a small amount into the front of the nose and sniffing.</td>
</tr>
<tr>
<td>• For intense short-term moisturization (such as to treat problematic crusting/frequent bleeding) get a cotton ball greased with petroleum jelly or saline gel and insert into affected nostril at bedtime. Remove in the morning</td>
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</tbody>
</table>

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<tr>
<th>Epistaxis Treatment</th>
</tr>
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<tbody>
<tr>
<td>1. Sit or stand upright and lean slightly forward. This will prevent blood from going down the back of your throat.²</td>
</tr>
<tr>
<td>2. Apply pressure for 5 to 10 minutes.²</td>
</tr>
<tr>
<td>3. If a nosebleed lasts greater than 10 minutes, spray 2 sprays of Afrin in the nostril that is bleeding and pinch both nostrils tightly for 10 minutes head upright.¹</td>
</tr>
<tr>
<td>4. Do not blow your nose for 12 hours after the bleeding stops. This will allow a strong blood clot to form.¹</td>
</tr>
<tr>
<td>5. Avoid alcohol, hot liquids and hot or spicy foods for two days after the nosebleed. Alcohol and hot liquids in your mouth can dilate blood vessels in your nose and cause the bleeding to start again.¹</td>
</tr>
<tr>
<td>6. If bleeding persists or if there is concern about the amount of bleeding, go to the nearest ER for further evaluation.¹</td>
</tr>
</tbody>
</table>

¹University of Michigan Anticoagulation Services’ Dry Nose or Epistaxis Protocol  
²University of Washington Anticoagulation Clinic  
http://depts.washington.edu/anticoag/home/sites/default/files/Preventing_Treating_Nosebleeds_1_10.pdf