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| **Name of Policy:** | **Anticoagulation Management by Anticoagulation Clinic Staff** |
| **Policy Number:** | 3364-133-121 |
| **Department:** | Pharmacy |
| **Approving Officer:** | Chief Executive Officer |
| **Responsible Agent:** | Senior Hospital Administrator |
| **Scope:** | University of Toledo Medical Center |

THE UNIVERSITY OF TOLEDO MEDICAL CENTER

**Effective Date**: 7/31/2022
**Initial Date**: 9/1/2015

| | |
|---|---|
| _____ New policy proposal | _____ Minor/technical revision of existing policy |
| _____ Major revision of existing policy | **X** Reaffirmation of existing policy |

**(A) Policy Statement:**

This policy is to provide a pharmacist and nurse management model for the anticoagulation clinic.

**(B) Purpose of Policy:**

The goal of the UT Health Anticoagulation Clinic is to offer a standard approach to the assessment, interpretation, and monitoring of patients receiving warfarin or other anticoagulation agents in order to ensure optimal patient safety.

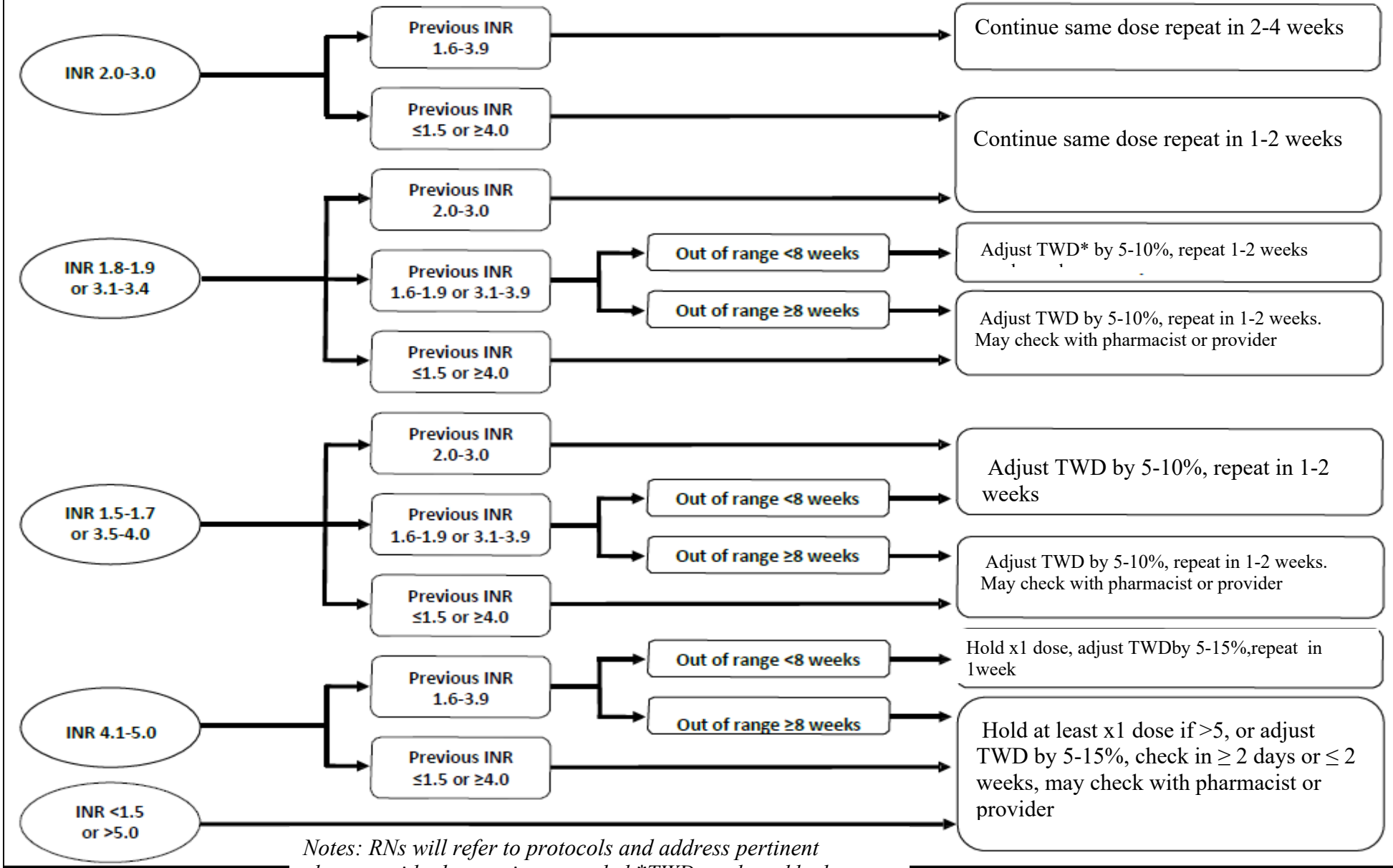
**(C) Procedure:**

1. Anticoagulation nurses will collaborate with the anticoagulation pharmacists in the management of stable patients referred to the clinic
2. An anticoagulation nurse will collaborate with the anticoagulation pharmacist and/or physicians in the management of patients who is considered unstable or new to therapy
3. The anticoagulation nurse AND staff will assess patients for adherence, medication and dietary changes, side effects, and thrombosis signs
4. Patient interview will be documented in patient's EMR, includes but not limited to lab results, plan, follow up, and any additional actions, so that it is readily available to the pharmacists and physicians
5. Anticoagulation nurse management algorithm will provide nurses guidance to determine appropriate action following an INR result, including dose adjustment, INR monitoring, or referral, as appropriate
6. During initial patient's visits and for follow up appointments in anticoagulation clinic, medication changes and reconciliations will be updated when applicable according to hospital policy *3364-100-70-15* outpatient process as described below:
   a. When a list of the patient medications is to be obtained. At minimum, the name of the medications should be listed
   b. When only short-term medications are prescribed at discharge, the patient / family will be given a list of only the short-term medications. Examples of short-term medications are antibiotics, analgesics and muscle relaxers for acute injuries, etc.
   c. If there are any concerns that the patient/family does not understand the full list of medications the patient should be taking, a full medication list should be provided for patient education purposes
   d. If changes are made in a patient's long-term medications, e.g. anti-hypertensives, anti-depressants, etc., including change in dosages, additions or deletions, a full medication list must be given to the patient

    e. In the outpatient setting, a complete, documented medication reconciliation process is used when:
        i. Any new long term medication is being prescribed.
        ii. There is a prescription change for any of the patient's current, known long term medications.
7. Staff will be asking standard assessment questions when interviewing patients for INR management, documentation entered in patient's EMR, information updated as necessary in patient's chart
8. The anticoagulation pharmacist may use dosing algorithms and may apply clinical judgment to when deemed appropriate consistent with consult agreement
9. The warfarin dosing table presents a simple approach to adjusting warfarin doses by 5-15% increments as indicated by the algorithm.
    f. To use the table, the anticoagulation nurse must determine the patient's current total weekly warfarin dose. If the warfarin dosage requires adjustment, the line above or below the current weekly dose may be a reference for decreasing or increasing the dose, respectively.
10. See attached for algorithms for nurse management for anticoagulation and warfarin dosing table

# Algorithm for Anticoagulation Nurse Management

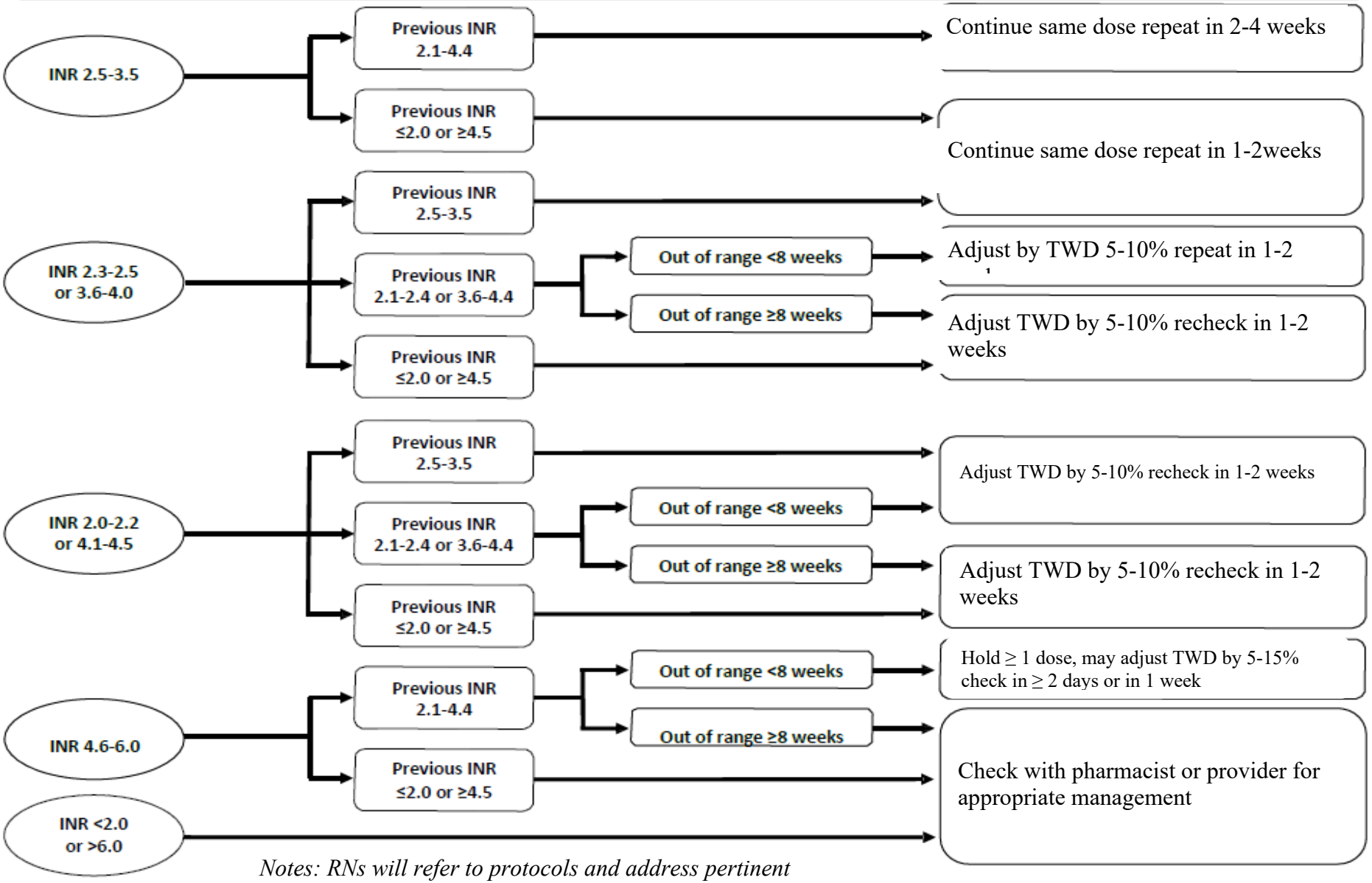
Target INR: 2.0-3.0




*Notes: RNs will refer to protocols and address pertinent changes with pharmacist as needed *TWD total weekly dose*

# Algorithm for Anticoagulation Nurse Management

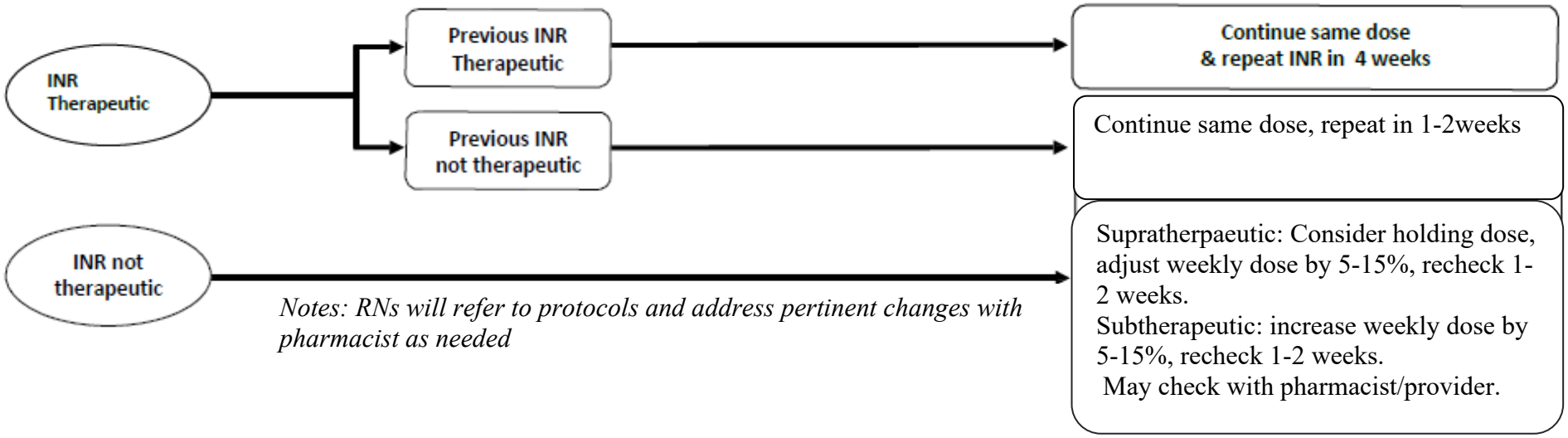
Target INR: 2.5-3.5




*Notes: RNs will refer to protocols and address pertinent changes with pharmacist as needed *TWD total weekly dose*

# Algorithm for Anticoagulation Nurse Management

Target INR: Non-standard goal




*Notes: RNs will refer to protocols and address pertinent changes with pharmacist as needed*

# Algorithm for Anticoagulation Nurse Management

**Extended Interval INR monitoring**


NOTE: Any patient with reported change in pertinent data should be referred for management by anticoagulation pharmacist or provider

*Dose changes on a single day for a deviating INR are permitted.

Can be used as a reference for dose adjustments based on 2mg and 5 mg tablets

# Warfarin Dosing Table

## Protocol for Nurse Management of Anticoagulation Therapy

Sanford USD Medical Center Anticoagulation Management Service

| | | | | | | | | Total Weekly Dose |
|---|---|---|---|---|---|---|---|---|
| 2 mg tablets | 1 mg | 1 mg | 1 mg | 1 mg | 1 mg | 1 mg | 1 mg | 7 mg |
| | 1 mg | 2 mg | 1 mg | 1 mg | 1 mg | 1 mg | 1 mg | 8 mg |
| | 1 mg | 2 mg | 1 mg | 1 mg | 1 mg | 2 mg | 1 mg | 9 mg |
| | 1 mg | 2 mg | 1 mg | 2 mg | 1 mg | 2 mg | 1 mg | 10 mg |
| | 2 mg | 1 mg | 2 mg | 1 mg | 2 mg | 1 mg | 2 mg | 11 mg |
| | 2 mg | 1 mg | 2 mg | 2 mg | 2 mg | 1 mg | 2 mg | 12 mg |
| | 2 mg | 1 mg | 2 mg | 2 mg | 2 mg | 2 mg | 2 mg | 13 mg |
| | 2 mg | 2 mg | 2 mg | 2 mg | 2 mg | 2 mg | 2 mg | 14 mg |
| | 2 mg | 3 mg | 2 mg | 2 mg | 2 mg | 2 mg | 2 mg | 15 mg |
| | 2 mg | 3 mg | 2 mg | 2 mg | 2 mg | 3 mg | 2 mg | 16 mg |
| 5 mg tablets | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 17.5 mg |
| | 2.5 mg | 5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 20 mg |
| | 2.5 mg | 5 mg | 2.5 mg | 2.5 mg | 2.5 mg | 5 mg | 2.5 mg | 22.5 mg |
| | 2.5 mg | 5 mg | 2.5 mg | 5 mg | 2.5 mg | 5 mg | 2.5 mg | 25 mg |
| | 5 mg | 2.5 mg | 5 mg | 2.5 mg | 5 mg | 2.5 mg | 5 mg | 27.5 mg |
| | 5 mg | 2.5 mg | 5 mg | 5 mg | 5 mg | 2.5 mg | 5 mg | 30 mg |
| | 5 mg | 2.5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 32.5 mg |
| | 5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 35 mg |
| | 5 mg | 7.5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 5 mg | 37.5 mg |
| | 5 mg | 7.5 mg | 5 mg | 5 mg | 5 mg | 7.5 mg | 5 mg | 40 mg |
| | 7.5 mg | 5 mg | 7.5 mg | 5 mg | 7.5 mg | 5 mg | 7.5 mg | 45 mg |
| | 7.5 mg | 5 mg | 7.5 mg | 7.5 mg | 7.5 mg | 7.5 mg | 7.5 mg | 50 mg |
| | 7.5 mg | 10 mg | 7.5 mg | 7.5 mg | 7.5 mg | 7.5 mg | 7.5 mg | 55 mg |
| | 7.5 mg | 10 mg | 7.5 mg | 10 mg | 7.5 mg | 10 mg | 7.5 mg | 60 mg |
| | 10 mg | 7.5 mg | 10 mg | 10 mg | 10 mg | 7.5 mg | 10 mg | 65 mg |
| | 10 mg | 10 mg | 10 mg | 10 mg | 10 mg | 10 mg | 10 mg | 70 mg |
| | 10 mg | 12.5 mg | 10 mg | 12.5 mg | 10 mg | 12.5 mg | 10 mg | 77.5 mg |
| | 12.5 mg | 10 mg | 12.5 mg | 12.5 mg | 12.5 mg | 12.5mg | 12.5 mg | 85 mg |
| | 12.5 mg | 15 mg | 12.5 mg | 15 mg | 12.5 mg | 15 mg | 12.5 mg | 95 mg |
| | 15 mg | 15 mg | 15 mg | 15 mg | 15 mg | 15 mg | 15 mg | 105 mg |
| | 17.5 mg | 15 mg | 17.5 mg | 15 mg | 17.5 mg | 15 mg | 17.5 mg | 115 mg |

| **Approved by:** | | **Review/Revision Date:** |
|---|---|---|
| | | 4/2018<br>7/2019<br>6/2022 |
| /s/<br>Russell Smith, PharmD, MBA, BCPS<br>Senior Hospital Administrator | 06/27/2022<br>Date | |
| /s/<br>Rick Swaine<br>Chief Executive Officer | 07/11/2022<br>Date | |
| /s/<br>Samer Khouri, MD, MBA<br>Medical Director, Anticoagulation Clinic | 08/03/2022<br>Date | |
| | | **Next Review Date**: 7/1/2025 |