IREDELL HEALTH SYSTEM

U-500 Humulin Regular Insulin Policy	
Approved by: Melissa McKinney, Diabetes Program Coordinator Laura Rollings, PharmD, BCPS, BCGP	Last Revised/Reviewed Date: 1/2023
P&T Committee	Date: 02/2023

Purpose: To provide larger doses of insulin in a reasonable volume to patients with marked insulin resistance.

Patient Outcome: The patient will receive U-500 insulin in correct manner to maintain appropriate control of blood glucose during hospitalization.

General Information:

- Humulin R U-500 is regular insulin at **5 times** the concentration of regular U-100 insulin. This insulin must never be given intravenously.
- U-500 insulin onsets in about 30 minutes, peaks in 1.75-4 hours, and lasts about 6.5-10 hours. U-500 insulin is given 30 minutes before a meal to match onset with food intake.
- U-500 insulin is most often administered in three set doses, one before each meal, although some patients may receive a small dose as well at bedtime. Some patients also may receive correction doses in addition to their set doses. U-500 insulin in pumps may also be prescribed when patients require very large doses.
- U-500 insulin should not be used in combination with other insulin to prevent hypoglycemia.
- U-500 insulin shall never be used as sliding scale insulin.

Policy:

- No dose of U-500 insulin may be administered until the dose has been verified by a pharmacist and/or diabetes educator.
- Doses less than 100 units of U-500 insulin will be converted to U-100 insulin.
- All doses of U-500 insulin will be prepared by using a U-500 insulin syringe.
- U-500 insulin may NOT be started inpatient, if patient not previously taking before admission.

Procedures:

1. All U-500 insulin orders must be verified as follows:
    a. The insulin dose administered at home should be verified and confirmed with the patient by a pharmacist. The Diabetes Educator may also participate in this process.
    b. The pharmacist and/or Diabetes Educator should utilize all resources during the verification process by completing a one-on-one interview. (i.e. patient/family members, insulin syringe size usage, etc.) The verification process shall be documented within the patient's electronic medical record (EMR).
    c. In the event only one pharmacist is on duty, the verification process shall be put on hold until another pharmacist is available.
2. All U-500 insulin orders are to be double-checked independently by another pharmacist or by a RN, if a second pharmacist is not available.
3. All doses of U-500 insulin are to be prepared by pharmacy. Nursing shall complete a "Med Request" within the patient's EMR when a dose is needed. If patient is also on a sliding scale of U-500 insulin, the required dose based off the sliding scale should be included in the "Med Request."

4. The prepared doses must be double-checked by two pharmacists or a pharmacist and RN.
5. Pharmacy shall keep a documentation log of each prepared U-500 insulin doses per patient. The log will document dosing information for each syringe dispensed as well as the personnel verifying the dose, including the registered nurse who checks and picks up the prepared syringe.
6. Prior to administration, all nursing procedures for insulin administration shall take place, according to *Medication Administration Standards* policy.
7. For patient receiving U-500 insulin via insulin pump shall follow procedures as outlined in *Patient-Owned Glucose and/or Insulin Pump Device Management* policy.

INITIAL EFFECTIVE DATE: 10/2015
DATES REVISIONS EFFECTIVE: 02/2017, 02/2020, 02/2023
DATES REVIEWED (no changes):