Connecticut Valley Hospital Nursing Policy and Procedure	**SECTION F: MEDICATION POLICIES AND PROCEDURES** **CHAPTER 23: MEDICATION MANAGEMENT** **POLICY AND PROCEDURE 23..7 Insulin Verification and Administration**
Authorization: Nursing Executive Committee	Date Effective: May 1, 2018 Scope: Registered Nurses and Licensed Practical Nurses

Standard of Practice:

The Nurse will ensure prior to administering each dose of insulin that a second nurse verifies that both the correct type and dose of insulin and number of units ordered are checked against the physician orders, the insulin vial and syringe before the patient receives the medication.

Standard of Care:

The patient who has been prescribed insulin can expect that the medication be administered in the correct form and dosage, at the correct time, with the correct injection technique with concurrent observation of benefit and potential side effects or drug interactions.

Policy:

Patients who are prescribed Insulin receive the medication by injection only after one nurse prepares the insulin and a second nurse checks the type of insulin and units drawn in the syringe so as to reduce potential errors in the administration of insulin.

Procedure:

1. The nurse prior to preparing to administer a coverage or regular dose of insulin, checks the physician order sheet and MAR to see if a glucometer test is required. If it is, perform the test and document the result on the MAR.
2. Identify the patient for whom the dose is prepared, and assess for and document any report of physical symptoms. Also assess meal compliance.
3. Arrange for a second nurse to come to the unit either directly or with the assistance of the Nursing Supervisor in order to assist with the verification of insulin administration as a safety check.
4. Assemble the needed supplies, including the correct insulin per physician's order.
5. Review the information specific to that type of insulin (onset, peak, duration and potential hypoglycemic time). See reference that follows.
6. Wash your hands.
7. Once the second nurse arrives on the unit, the nurse prepares the insulin.

8. Examine the insulin vial for signs of discoloration, deterioration, the manufacturer's expiration date, as well as the "use by "date. (Vials can only be used for 30 days from when they are first opened).
9. Slowly rotate the vial between the palms of both hands to ensure even drug particle distribution. Do not shake the vial because this can cause foam or bubbles to develop in the syringe, as well as damage the protein molecules.
10. Cleanse the vial's rubber stopper, insert the needle and withdraw the ordered dose. Be sure to understand the value of the lines on the syringe, and be accurate in drawing up the desired number of insulin units.
11. The second nurse witnesses/observes the type of insulin drawn and number of units against the MAR, vial and syringe prior to administration.
12. Assess the patient for a good injection site: (look for and avoid areas of tissue breakdown or loss of skin integrity).
13. Clean site with alcohol wipe.
14. Administer, using proper subcutaneous technique. Do not aspirate.
15. If appropriate, allow the patient to self-administer the insulin dose while observing their techniques and providing any teaching indicated.
16. Dispose of syringe and any sharps used (lancet) in a sharps disposal container. Wash hands.
17. Return insulin vial to the medication refrigerator, and clean up any related supplies or materials.
18. Document administration of insulin, including site, properly in the medication administration record, as follows:

    Use a full medication block to record Accu-check and results.

    In the first "hour" block, the nurse who prepares and administers the insulin records his/her initials.

    The **2nd** nurse who verifies that the correct type and dose of insulin was drawn, records the word initials in the second hour box, then records their initials in the corresponding day of the month.

    Record the word site in the third hour box. Record the site insulin administered in next designated box. Site designations are as follows: Left Upper Extremity (LUE); Right Upper Extremity (RUE); Left Lower Extremity (LLE); Right Lower Extremity (RLE); Abdomen (ABD); or Left Abdomen (LABD) and Right Abdomen (RABD).

    Record the word "unit(s)" **(no abbreviations)** in the fourth hour box if a sliding dosage of insulin is administered. Record only the number of units given in the adjacent box (i.e. 4) under the day of the month.

19. Patient Self-Administration of Medication
    a). The nurse checks the physician's order sheet and MAR and checks the insulin vial label before giving it to the patient for self-administration.
    b). The patient checks the medication label (refer to Nursing Policy and Procedure #23.16, Patient Self-Administration of Medication).

c). The nurse documents as per the Patient Self-Administration of Medication Policy by placing his/her initials in the first hour box of the MAR, signifying the patient received the appropriate medication at the appropriate time. She/he also records her/his initials in the second hour box, verifying the correct type, dose and units administered.

EXAMPLES

Accu-checks at 6 a.m. and 4 p.m. Daily

Original Date Ordered	Renewal Date	DRUGS * DOSE * MODE * INTERVAL	EXPIR DATE	HR	1	2	3	4	5	6	7	8
1/4/xx	*NS* / *MF*	Accu-check at 6 a.m and 4 p.m. daily, before breakfast and dinner.	1/30/xx	6a.m.	→			NS	JP	JP	KK	PD
				Results	→			88	104	109	115	111
				4p.m.	→			MF	LW	MF	MF	BF
				Results	→			104	112	100	115	130

Standing Coverage Example

Lantus Insulin 40 units SC daily x 2 weeks

OriginalDate Ordered	Renewal Date	DRUGS * DOSE * MODE * INTERVAL	EXPIR DATE	HR	1	2	3	4	5	6	7	8
1/4/xx	*CO* / *LW*	Lantus Insulin 40 Units daily at 9 p.m. SC x 2 weeks	1/18/xx	9 p.m.	→			CO	JP	BK	MF	CO
				2nd Initials	→			LW	LW	LW	LW	LW
				Site	→			LABD	RABD	LLE	RLE	LUE

Accu-Chek Example

Do Accu-Chek every day at 6AM, 11AM for three days.

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OriginalDate Ordered	Renewal Date	DRUGS * DOSE * MODE * INTERVAL	EXPIR DATE	HR	1	2	3	4	5	6	7	8
1/4/xx	CV / LW	Do Accu-check Q6a – 11a – 4p X 3 days		6am	→	→	→	JP	JP	BF	←	←
				Results	→	→	→	230	210	220	←	←
				11am	→	→	→	BF	JP	BF	←	←
				Results	→	→	→	190	185	190	←	←

Slide Scale Coverage Example

Give regular insulin SC to cover as follows:

Below 180mg/dl. No insulin;
180-200mg/dl, give 2Units;
201-250mg/dl, give 4Units;
251-300mg/dl, give 6Units.

Original Date Ordered	Renewal Date	DRUGS * DOSE * MODE * INTERVAL	EXPIR DATE	HR	1	2	3	4	5	6	7	8
1/4/xx	JP / LM	Do Accu-check Q6A-11A-4p for 3 days With regular insulin coverage as follows Below 180mg/dl, give no insulin 180-200mg.dl give 2Units 201-250mg/dl give 4Units 251-300mg/dl give 6Units	1/18/xx	6am	→	→	→	JP	JP	BF	←	←
				2nd Initials	→	→	→	LM	NS	PD	←	←
				Site	→	→	→	RUE	RABD	LUE	←	←
				Units	→	→	→	4	4	4	←	←

INSULINS

Rapid Acting Insulin	**Onset**	**Peak**	**Duration**	**Potential Low Sugar At…..**	**Monitor Sugar At….**
Lispro (Humalog)	15 minutes	30-90 min.	3-5 hours	1.5-2 hours	2 hours
Short Acting Insulin					
Regular (Humulin R, Novolin R)	30 minutes	2-4 hours	6-8 hours	2-4 hours	Before next meal
Intermediate Acting Insulins					
Isophane Insulin-NPH (Humulin N, Novolin, N) Insulin Zine Suspension-Lente (Humulin L, Novolin L)	1-3 hours	6-12 hours	18-26 hours	6-8 hours	Before Breakfast and Bedtime
Long Acting Insulins					
Extended Zinc Insulinl-Ultralente (Humulin U) Insulin Glargine (Lantus)	4 hours 4 hours	10-12 hours none	18-20 hours 24 hours	12-20 hours	Before Breakfast and Bedtime
Pre-Mixed Insulin Combinations					

Humulin 50/50	30-60 minutes	2-4 hours & 6-8 hours	12-20 hours	2-12 hours	Before meals and bedtime
Humalog Mix 75/75	15-60 minutes	30-90 min. & 6-8 hours	18-24 hours	1.5 hours & 6-8 hours	Before meals and bedtime
Humulin 7/30 Novolin 70/30	30-60 minutes	2-4 hours & 6-8 hours	12-24 hours	3-12 hours	Before meals and bedtime