

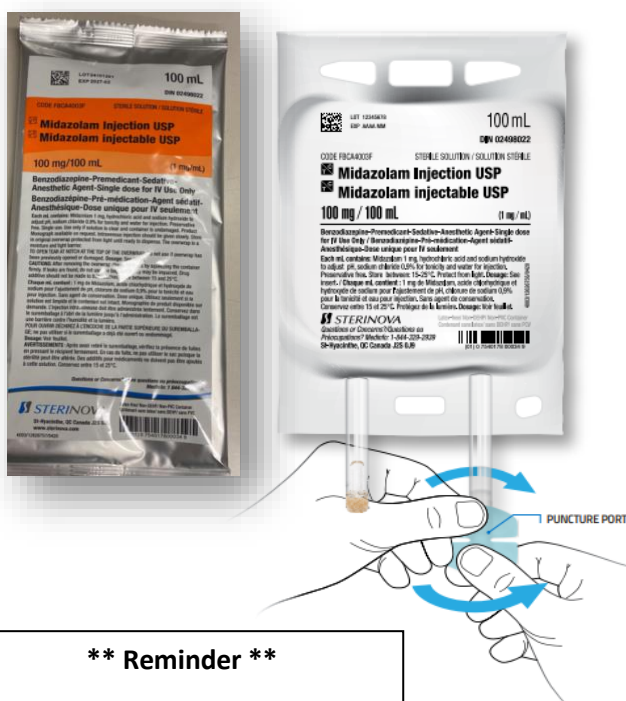
HOSPITAL INFORMATION SYSTEM (HIS) CONTINUOUS MIDAZOLAM INFUSION with BOLUS via INFUSION PUMP

NOTE: midazolam (100 mg/100 mL) manufactured infusion bags are now available in the Critical Care (ICU/ED) Automated Dispensing Cabinet (ADC) at each site. The premix bag is to be used for all intravenous midazolam continuous infusions rather than a nurse prepared bag.

Ready-to-use Solution of Midazolam Injection USP 1 mg / mL*

INSTRUCTIONS FOR USE:

To be administered by slow intravenous injection by healthcare professional ONLY.



- 1 Perform appropriate hand hygiene when preparing any medication.
- 2 Check the order and confirm the right solution and the right patient.
- 3 Remove the aluminum overwrap.
- 4 Firmly squeeze the bag and check for leaks; if leaks found, do not use the bag as sterility may be impaired.
- 5 Perform visual inspection to check for particles; only use clear solution.
- 6 Open the puncture port of the bag by twisting the two flaps in opposite directions to break the first flap (see illustration). **NOTE:** The puncture port septum remains closed and sterile right after removal of the tip.
- 7 Follow the infusion set instructions to properly connect to the puncture port.
- 8 Follow the infusion pump instructions to properly connect to infusion set.
- 9 Program the infusion pump as per the order.
- 10 Verify the infusion pump programming and make sure you follow your institution core rights for safe medication administration before starting the infusion.

** Reminder **

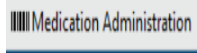
An orange medication label must be completed with (at minimum) patient name, date and time of medication start. Affix the label to the bag without covering the manufacturer medication details or barcodes required for scanning.

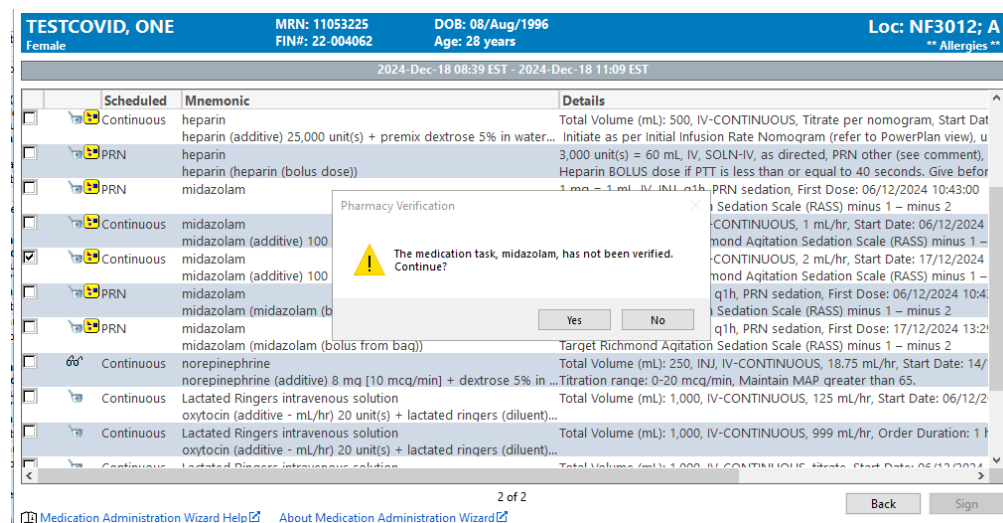
MEDICATION ADDED	
PATIENT	IRM
DRUG	
AMOUNT	
ADDED BY	
DATE	TIME
START TIME DATE	FLOW RATE
EXP. DATE	
THIS LABEL MUST BE AFFIXED TO ALL INFUSION FLUIDS CONTAINING ADDITIONAL MEDICATION.	

Patients must be monitored for early signs of hypoventilation or apnea which can lead to hypoxia/cardiac arrest unless effective countermeasures are taken. Vital signs should continue to be monitored during the recovery period. Opioid agonists and other sedatives add to the respiratory depression produced by midazolam.

*Midazolam Injection USP is for single use only. Discard any unused portion as per your hospital protocol.

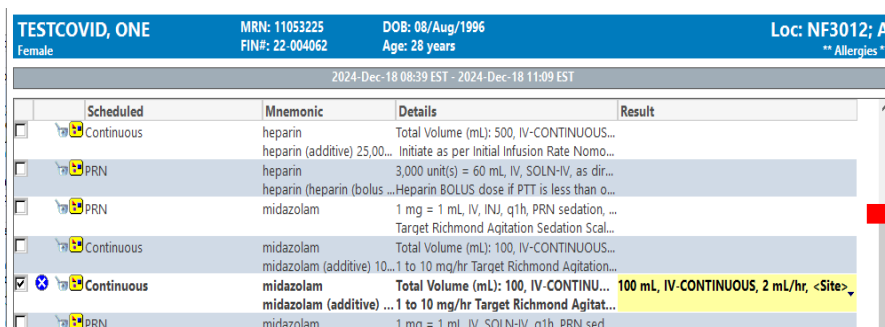
DOCUMENTING the INITIATION of a CONTINUOUS MIDAZOLAM INFUSION

1. Verify that a Prescriber powerplan/subphase/order has been entered in the HIS.
2. Once in the patient profile, navigate to the Medication Administration Wizard (MAW) icon 
3. Once the MAW opens, a prompt will appear to scan the patient ID band.
4. Once the patient's ID band is scanned and two patient identifiers are verified, scan the barcode on the manufactured infusion bag (not the overwrap).
 - a. If the medication order has not been verified by pharmacy, a prompt will appear (as below). Select yes to continue to document the medication administration.

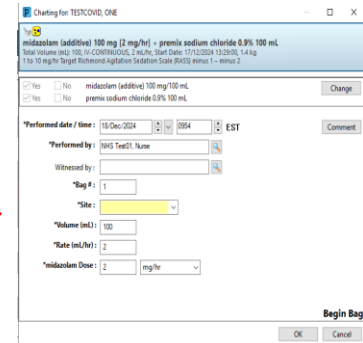


The screenshot shows the MAW interface for patient TESTCOVID, ONE. A 'Pharmacy Verification' dialog box is open, asking 'The medication task, midazolam, has not been verified. Continue?' with 'Yes' and 'No' buttons. The medication list includes various orders for heparin and midazolam. A yellow box highlights a midazolam order in the 'Result' column.

5. Once the pharmacy verification prompt has been acknowledged, the medication order that matches the scanned medication will be selected in the medication list.
 - a. The yellow box in the 'Result' column indicates mandatory fields that need to be completed before you can sign for the infusion and document it as initiated on the MAR. Double click to open the charting details window and complete any required fields, then press ok.



This screenshot shows the MAW interface with a red arrow pointing to a specific medication order in the list. The order is highlighted with a yellow box in the 'Result' column, indicating that mandatory fields need to be completed.



The 'Charting for TESTCOVID, ONE' dialog box is shown, allowing for the entry of medication details. Fields include 'Performed date / time', 'Witnessed by', 'Site', 'Volume (mL)', 'Rate (mL/hr)', and 'Midazolam Dose'. The 'Midazolam Dose' is set to 2 mg/hr.

- Once all required fields are completed, the yellow will disappear from the 'Results' field and a blue checkmark ✓ appears on the left. The midazolam infusion can now be signed by pressing 'Sign'. This will begin the infusion on the patient MAR.

TESTCOVID, ONE Female	MRN: 11053225 FIN#: 22-004062	DOB: 08/Aug/1996 Age: 28 years	Loc: NF3012; A ** Allergies **
2024-Dec-18 08:39 EST - 2024-Dec-18 11:09 EST			
Scheduled	Mnemonic	Details	Result
<input type="checkbox"/> Continuous	midazolam	Total Volume (mL): 100, IV-CONTINUOUS...	
<input checked="" type="checkbox"/> Continuous	midazolam (additive) 10... 1 to 10 mg/hr Target Richmond Agitation...	Total Volume (mL): 100, IV-CONTINUOUS, 2 mL/hr, CVAD: Purp	
<input type="checkbox"/> PRN	midazolam	1 mg = 1 mL, IV, SOLN-IV, q1h, PRN sed...	
	midazolam (midazolam ...Target Richmond Agitation Sedation Scal...		

2 of 2 Back Sign

- Once the medication is signed, a 'Begin Bag' notation will appear on the MAR with the continuous infusion dose populated in mg/hr.

midazolam (additive) 100 mg [2 mg/hr] premix sodium chloride 0.9% 100 mL Total Volume (mL): 100, IV-CONTINUOUS, 2 mL/hr, Start Date: 17/12/2024 13:29:00, 1.4 kg 1 to 10 mg/hr Target Richmond Agitation Sedation Sca... Administration Information midazolam premix sodium chloride 0.9%	Pending Last bag started: 2024-Dec-18 10:07 EST <hr/> Begin Bag 100 m 2 mg/hr Auth (V
--	--

DOCUMENTING A DOSE CHANGE from the MAR

- If a midazolam dose change is required based on the ordered titration parameters, the following steps will be completed when documenting from the MAR.

- Double click on the MAR task (circled)

midazolam (additive) 100 mg [2 mg/hr] premix sodium chloride 0.9% 100 mL Total Volume (mL): 100, IV-CONTINUOUS, 2 mL/hr, Start Date: 17/12/2024 13:29:00, 1.4 kg 1 to 10 mg/hr Target Richmond Agitation Sedation Sca... Administration Information midazolam premix sodium chloride 0.9%	Pending Last bag started: 2024-Dec-18 10:07 EST <hr/> Begin Bag 100 m 2 mg/hr Auth (V
--	--

- A pop up window will appear (see right).
- Select the 'Rate Change' option
- Enter the new dose in the 'midazolam Dose' field, and select mg/hr in the units drop down menu. Once the accurate dose is entered, a new rate (mL/hr) will calculate. Press 'Apply' to confirm the change.

Charting for: TESTCOVID, ONE

midazolam (additive) 100 mg [2 mg/hr] + premix sodium chloride 0.9% 100 mL Change Order Version

Total Volume (mL): 100, IV-CONTINUOUS, 2 mL/hr, Start Date: 31/12/2024 11:15:00, 1.4 kg
 1 to 10 mg/hr Target Richmond Agitation Sedation Scale (RASS) minus 1 - minus 2

2024-Dec-30 23:43 EST - 2024-Dec-31 23:43 EST

Begin Bag	Bag # 1
Site Change	CVAD: Purple Lumen
Infuse	
Bolus	
Rate Change	2 mL/hr
midazolam	2 mg/hr

Yes No midazolam (additive) 100 mg/100 mL Change
 Yes No premix sodium chloride 0.9% 100 mL

*Performed date / time : 31/Dec/2024 11:43 EST Comment

*Performed by : Bowen, Kimberley Clear


Witnessed by : Apply

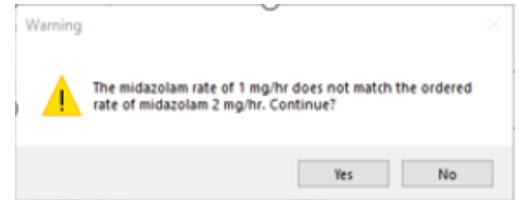
*Bag # : 1

*Rate (mL/hr) : 2

*midazolam Dose : 2 mg/hr Rate Change

In Progress

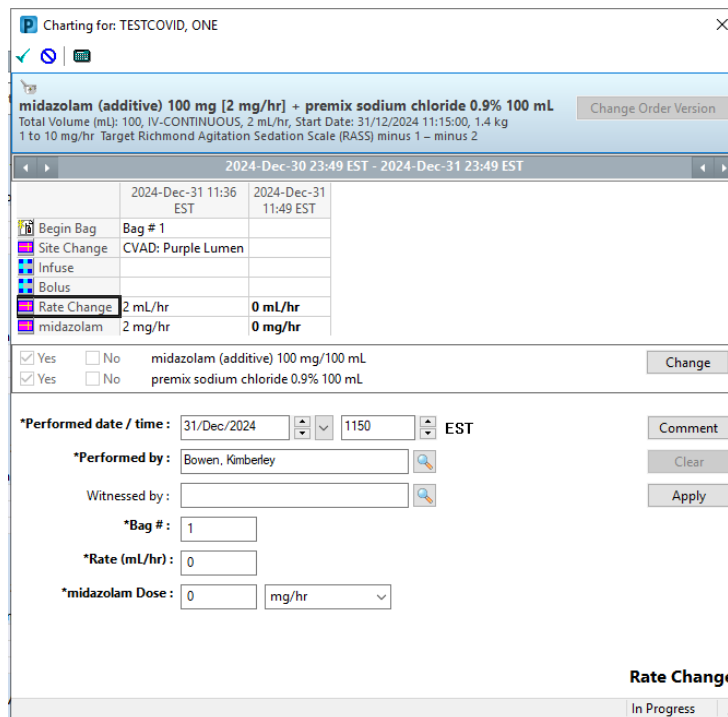
- e. If documenting a dose change within the MAR, an alert will populate that the new dose does not match the ordered (initial) rate.
- f. Verify that the dose change aligns with the ordered titration parameters. Press 'Yes' to continue.
- g. Once the alert is confirmed, Press the  to sign for the dose change.



DOCUMENTING A HOLD INFUSION

9. If a midazolam infusion is required to be stopped or 'on hold' for a period of time based on Prescriber order/parameters, complete the steps for Documenting a Dose Change from the MAR. Enter a dose of 0 mg/hr to document that the infusion has been stopped/on hold.

MAR Charting Window



Charting for: TESTCOVID, ONE

midazolam (additive) 100 mg [2 mg/hr] + premix sodium chloride 0.9% 100 mL Change Order Version

Total Volume (mL): 100, IV-CONTINUOUS, 2 mL/hr, Start Date: 31/12/2024 11:15:00, 1.4 kg
1 to 10 mg/hr Target Richmond Agitation Sedation Scale (RASS) minus 1 – minus 2

	2024-Dec-30 23:49 EST - 2024-Dec-31 11:49 EST	2024-Dec-31 11:49 EST - 2024-Dec-31 23:49 EST
Begin Bag	Bag # 1	
Site Change	CVAD: Purple Lumen	
Infuse		
Bolus		
Rate Change	2 mL/hr	0 mL/hr
midazolam	2 mg/hr	0 mg/hr

Yes No midazolam (additive) 100 mg/100 mL Change
 Yes No premix sodium chloride 0.9% 100 mL

*Performed date / time: 31/Dec/2024 1150 EST Comment
 *Performed by: Bowen, Kimberley Clear
 Witnessed by: Apply
 *Bag #: 1
 *Rate (mL/hr): 0
 *midazolam Dose: 0 mg/hr


Rate Change
In Progress

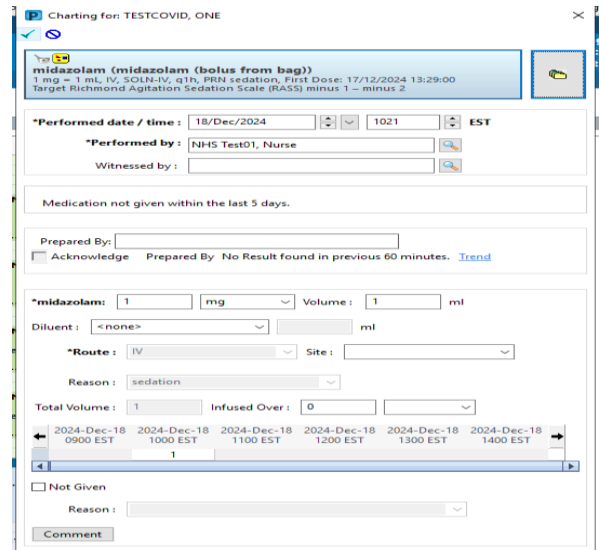
DOCUMENTING A MIDAZOLAM BOLUS via PUMP

10. If a midazolam bolus dose is required based on the ordered parameters, the following steps will be completed.

- a. Double click on the MAR task circled below in the PRN midazolam (bolus from bag) order on the MAR

PRN		1 mg
midazolam (midazolam (bolus from bag))		Not given within 5 days.
1 mg = 1 mL, IV, SOLN-IV, q1h, PRN sedation, First Dose: 06/12/2024 10:43:00		
Target Richmond Agitation Sedation Scale (RASS) minus 1 – minus 2		
midazolam		
Prepared By		

- b. The administration charting window will appear (see right). Confirm the ordered bolus dose (mg) has populated correctly.
- c. Press the  to sign for the bolus dose administration.



- d. Once signed, the dose administered will appear on the MAR.

PRN		1 mg
midazolam (midazolam (bolus from bag))		Last given: 2024-Dec-18 10:21 EST
1 mg = 1 mL, IV, SOLN-IV, q1h, PRN sedation, First Dose: 17/12/2024 13:29:00		
Target Richmond Agitation Sedation Scale (RASS) minu...		
midazolam		
Prepared By		
		* 1 mg Auth (Ver)