

From the Office of Clinical Informatics Cerner Millennium Bedside Medical Device Interface (BMDI)

June 20, 2023

Bedside Medical Device Interface (BMDI) allows vital signs and ventilator data to be pulled into the electronic health record (EHR). To ensure vital signs, ventilator data, and dialysis information are captured and recorded for the correct patient, it is imperative that Monitor Association is performed at the time of admission and verified at the beginning of each shift. Monitors must also be disassociated at patient transfer/ discharge. Ventilators must be dissociated when no longer being used. Refer to hospital or unit policies for site specific expectations.

<u>NOTE</u>: BMDI cannot be used on Loaner or Transport devices. If new monitors or ventilators are acquired, they need to be set up by IS before BMDI will work on them.

Connectivity Check

- Ensure the CCE (Cerner Connectivity Engine) has the correct date and time.
 - Click the **Home** button to view the date and time on the top center of the screen.
 - Ensure there is a green checkmark on the device in the top left of the screen.
- <u>NOTE</u>: If the time does not match the PC time, reboot the CCE to resync it. If the device icon does not have a green checkmark, the reboot may also fix this.

Reboot Instructions

- **<u>STEP 1</u>**: Look for where the power cord plugs into the bottom right of the device.
- **<u>STEP 2</u>**: Search for the power button, press and hold the button until the screen goes dark.
- **<u>STEP 3</u>**: Wait a few seconds, then press the power button again to turn the device back on.

Associating the Monitor or Ventilator

- **<u>STEP 1</u>**: Open the patient's electronic health record in Millennium (PowerChart or FirstNet).
- **<u>STEP 2</u>**: Go to **Interactive View and I&O**.
- **STEP 3:** Click the **Associate Monitor** button ¹⁰ in the toolbar in the upper left corner of the display window.
 - The Associate Monitor window opens. If blank, place a checkmark in the box next to Show all Locations/Monitors.





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- **<u>STEP 4</u>**: Highlight the correct room and bed in the **Associate Monitor** window.
- <u>STEP 5</u>: Match the monitor to the patient's bedside and/or match the patient to the vent number matching the ventilator in the room.
- **<u>STEP 6</u>**: Click the **Association** button.
- **STEP 7:** A **Warning** will pop-up to remind you to confirm prior to making the association. Click **Yes.**

	Warn	ing	×
Do you want t] is not associated to associate monit at 14:16 EDT?		159] to
	Yes	No	

	3 The current person i	s not associated	to any monitor.			
De	evice List:					
N	Monitor-ID	Nurse-Unit	Room	Bed	Person Name	Date/Tin
	EMMC-ICUC-156	1ICUC	1156	01		
	EMMC-ICUC-157	1ICUC	1157	01		
	EMMC-ICUC-158	1ICUC	1158	01		
1000	EMMC-ICUC-159	1ICUC	1159	01		
	EMMC-ICUC-160	1ICUC	1160	01		
8	EMMC-VENT-01	OVENT	EVENTO	01 01		
	EMMC-VENT-02	OVENT	EVENTO			
	EMMC-VENT-03	OVENT	EVENTO	3 01		
	EMMC-VENT-04	OVENT	EVENTO	4 01		
	EMMC-VENT-05	OVENT	EVENTO	5 01		
	EMMC-VENT-06	OVENT	EVENTO	6 01		
	EMMC-VENT-07	OVENT	EVENTO			
	EMMC-VENT-08	OVENT	EVENTO			
	EMMC-VENT-09	OVENT	EVENTO	9 01		
1000	EMMC-VENT-10	OVENT	EVENT1			
<						>
	Show all Locations/M	1onitors		View Acquir	red Data Disassociate	Associate C
•	A	ssociate Mor	itor - TESTING,	PROD22, U	nit [ALL]	- 🗆 🗙
he curr	ent person is associat	ed to the followi	ng devices:			
Monitor-ID	Nurse	Unit	Room	Bed D	ate/Time	
MMC-VEN	IT-02 OVENT		EVENT02	01 0	9/14/2022 14:15 EDT	
	C-159 1ICUC				9/14/2022 14:16 EDT	

<u>NOTE</u>: To associate a patient with a monitor and/or vent, the patient's name in the chart and the one on the monitor screen must be the same. Review current patients associated to the devices. A patient can be associated to multiple devices (Monitor, Ventilator, and Dialysis) or multiple monitors. If the patient is associated to multiple monitors, disassociate any monitor(s) they should not be associated with.

Changing the Association Time

The time of the association can be changed if the monitor and or ventilator were placed on the patient prior to associating the devices to the patient.

- **<u>STEP 1</u>**: Select the device the patient is to be associated with.
- **<u>STEP 2:</u>** Click **View Acquired Data** and change the **Association Date/Time** to the time the patient was placed on the monitor or ventilator.

View Acquired Data	Disassociate	Associate	Close
Select	Association Date/	Time:	
09/15	/2022	♥ 0906	EDT

<u>STEP 3</u>: Click **Associate**. The association time is updated.

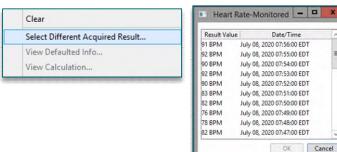
Pulling Vital Signs and Ventilator Data into the Chart

<u>STEP 1</u>: To **add vitals** or **ventilator data** from the bedside device, place the cursor over the dark blue band in the appropriate time column, and double-click. Multiple columns may be checked to improve efficiency. It is important to only open one section at a time to view all data.

₩ ₩	09/15/2022 9:11 EDT
⊿ Vital Signs	
ŭ u .	
™ ≦	9:00 - 9:59 EDT
⊿ Invasive Ventilation	

- **<u>STEP 2</u>**: **Preview** the results before signing.
 - If there are incorrect results, e.g., heart rate equal to zero (0), be sure to correct or clear the values prior to signing.
 - **Correcting a result**: Right-click the result and select **Different Acquired Result**. A window opens, displaying other available results for the selected measure. Click to highlight the appropriate result and then click **OK** to close the pop-up window. The result replaces the preliminary result.
 - Clearing a result: Right-click the result and select Clear.
- **STEP 3:** The information from the device is displayed in purple font. Once the data is validated, the information is saved to the patient's chart by clicking the **green checkmark** \checkmark .
- NOTE: To see other recently captured results from the monitor and/or ventilator, right click the purple text and Select Different Acquired Result. A window with recent values will open to select from.

Ventilator Data to be Charted Manually



Certain parameters need to be documented manually if the ventilator is being used in specific modes or for noninvasive ventilation.

- Servo I (All Modes)
 - Ventilator Settings to be documented manually:
 - Flow Trigger Sensitivity
 - Ventilator Alarm Settings to be documented manually:
 - High PEEP Alarm
- Servo I (APRV Mode)
 - Ventilator Settings to be documented manually:
 - Flow Trigger Sensitivity
 - APRV Pressure Low

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- Servo U (APRV Mode)
 - Ventilator Settings to be documented manually:
 - APRV Pressure Low
 - APRV Pressure High
- Servo U (Volume Support Mode)
 - Clear Vent Tidal Volume when it pulls in via BMDI and document those numbers manually in Volume Support.
- Drager Vent (PC/AC-VG Mode)
 - Measurements/Assessments to be documented manually:
 - Vent Minute Volume
- Phillips V-60 NIV
 - All data for this ventilator needs to be documented manually.

Disassociating the Monitor or Ventilator

Patients must be disassociated from the monitor and/or ventilator when transferred to another room and/or when discharged. This ensures vital signs, ventilator, or dialysis information is not collected on a new patient and attributed to the first patient in error, resulting in a potential patient safety concern. A new patient cannot be associated to the monitor/device until this occurs.

- **<u>STEP 1</u>**: Open the patient's electronic health record.
- **<u>STEP 2</u>**: Go to **Interactive View and I&O**.
- **<u>STEP 3</u>**: Click the **Associate Monitor** button ¹⁹⁹ in the toolbar in the upper left corner of the display window. The window opens.
- **<u>STEP 4</u>**: Click to highlight the device to disassociate in the top section that lists the patients associated devices.
- <u>NOTE</u>: This action also highlights the room and patient in the Device List below.

Monitor-ID	Nurse-Unit	Room	Bed	Date/Time	
MCH-VENT-01	OMCFET	FLMC11		05/22/2023 11:47 EDT	
MCH-ICU-08	ICU	ICU8	01	05/22/2023 11:46 EDT	
Device List:					
Monitor-ID	Nurse-Unit	Room	Bed	Person Name	Date/Tin /
MCH-PACU-05	MC OR PACU	05	A		
MCH-PACU-09	MC OR PACU	09	A		
MCH-PACU-10	MC OR PACU	10	A		
MCH-PACU-11	MC OR PACU	11	A		
MCH-PRE-01	MC OR PreOp	01	A		
MCH-PRE-04	MC OR PreOp	04	A		
MCH DDE OS	MC OR BraDa	05	٨		
MCH-VENT-01	OMCFET	FLMC11	01	TESTING, PALLIATIVE	05/22/20
<	ALCOPT				>

- **<u>STEP 5</u>**: Click the **Disassociate** button.
- **<u>STEP 6</u>**: Discharge patient from the monitor per organization protocol.

For questions regarding process and/or policies, please contact your unit's Clinical Educator or Clinical Informaticist. For any other questions please contact the Customer Support Center at: 207-973-7728 or 1-888-827-7728.