

# ICU - Documentation - ICU Cardiac Output Devices in iView



## This Quick Reference Guide will explain how to:

Document observations accurately in relation to invasive Cardiac Output Devices including Pulse Contour Cardiac Output (PiCCO) and Pulmonary Artery Catheters within EMR.

### Definitions:

**Cardiac output Devices** - Refers to pulmonary artery catheters or Pulse Contour Cardiac Output (PiCCOs).

**Device Association** - Refers to the bedside monitor being associated to the patient's chart to allow the observations to be pulled directly into interactive view and fluid balance (iView).

1. Associate the bedside monitor to the patient's chart

For more information, see **QRG: BMDI – Device Association, recording observations and Disassociation**

2. Go to the 'Adult ICU Cardiovascular' in Interactive View and Fluid balance

Interactive View and Fluid Balance

3. Go to 'Cardiac Output Device Measurements'

| Cardiac Output Device Measurements     |  | 14:00 |
|--|--|-------|
| Impella Heart Pump Settings/Measures   |  |       |
| Impella                                |  |       |
| Impella Anticoagulation                |  |       |
| ICU Impella Bedside ECHO               |  |       |
| Neurovascular Observations             |  |       |
| Intra-Aortic Balloon Pump Set/Measures |  |       |
| PACING                                 |  |       |

| Cardiac Output Device Measurements |                      | 14:00 |
|------------------------------------|----------------------|-------|
| Cardiac Output Device              |                      |       |
| Cardiac Output                     | L/min                |       |
| Cardiac Index                      | L/min/m <sup>2</sup> |       |
| Continuous Cardiac Output          | L/min                |       |
| Continuous Cardiac Index           | L/min/m <sup>2</sup> |       |

4. Depending on which Cardiac Output Device is selected, the observations and measurements specific to that device will appear

| Cardiac Output Device Measurements      |                          | 14:00 |
|---|--------------------------|-------|
| Cardiac Output Device                   | Pulmonary Artery Cat...  |       |
| Cardiac Output                          | L/min                    |       |
| Cardiac Index                           | L/min/m <sup>2</sup>     |       |
| Continuous Cardiac Output               | L/min                    |       |
| Continuous Cardiac Index                | L/min/m <sup>2</sup>     |       |
| Stroke Volume                           | mL/beat                  |       |
| Stroke Volume Index                     | mL/m <sup>2</sup> /beat  |       |
| Systemic Vascular Resistance            | dyne-sec/cm <sup>5</sup> |       |
| Systemic Vascular Resistance Index      | dyne-sec/cm <sup>5</sup> |       |
| Stroke Volume Variation                 | %                        |       |
| Cardiac Function Index                  |                          |       |
| Global Ejection Fraction                |                          |       |
| SvO <sub>2</sub>                        | %                        |       |
| SBP/DBP Invasive                        | mmHg                     |       |
| Mean Arterial Pressure, Invasive Calc   | mmHg                     |       |
| Pulse Pressure Difference               | mmHg                     |       |
| PASP/PADP                               | mmHg                     |       |
| Pulmonary Artery Mean Pressure          | mmHg                     |       |
| Right Atrial Pressure                   | mmHg                     |       |
| Pulmonary Artery Wedge Pressure         |                          |       |
| Pulmonary Vascular Resistance Index     | dyne-sec/cm <sup>5</sup> |       |
| Pulmonary Vascular Resistance           | dyne-sec/cm <sup>5</sup> |       |
| Left Ventricular Stroke Work            | g-m                      |       |
| Left Ventricular Stroke Work Index      | g-m/m <sup>2</sup>       |       |
| Right Ventricular Stroke Work           | g-m                      |       |
| Right Ventricular Stroke Work Index     | g-m/m <sup>2</sup>       |       |
| Left Cardiac Work                       | kg-m                     |       |
| Left Cardiac Work Index                 | kg-m/m <sup>2</sup>      |       |
| Right Cardiac Work                      | kg-m                     |       |
| Right Cardiac Work Index                | kg-m/m <sup>2</sup>      |       |
| Left Ventricular End Diastolic Pressure | mmHg                     |       |
| Right Ventricular Ejection Fraction     | %                        |       |

| Cardiac Output Device Measurements    |                          | 14:00 |
|---------------------------------------|--------------------------|-------|
| Cardiac Output Device                 | Pulse Contour (PiCCO)    |       |
| Cardiac Output                        | L/min                    |       |
| Cardiac Index                         | L/min/m <sup>2</sup>     |       |
| Continuous Cardiac Output             | L/min                    |       |
| Continuous Cardiac Index              | L/min/m <sup>2</sup>     |       |
| Stroke Volume                         | mL/beat                  |       |
| Stroke Volume Index                   | mL/m <sup>2</sup> /beat  |       |
| Systemic Vascular Resistance          | dyne-sec/cm <sup>5</sup> |       |
| Systemic Vascular Resistance Index    | dyne-sec/cm <sup>5</sup> |       |
| Stroke Volume Variation               | %                        |       |
| Cardiac Function Index                |                          |       |
| Global Ejection Fraction              |                          |       |
| SvO <sub>2</sub>                      | %                        |       |
| SBP/DBP Invasive                      | mmHg                     |       |
| Mean Arterial Pressure, Invasive Calc | mmHg                     |       |
| Pulse Pressure Difference             | mmHg                     |       |
| PASP/PADP                             | mmHg                     |       |
| Pulmonary Artery Mean Pressure        | mmHg                     |       |
| Extravascular Lung Water Index        | mL/kg                    |       |
| Extravascular Lung Water              | mL                       |       |
| Intrathoracic Blood Volume Index      | mL/m <sup>2</sup>        |       |
| Intrathoracic Blood Volume            | mL                       |       |
| Global End Diastolic Volume Index     | mL/m <sup>2</sup>        |       |
| Global End Diastolic Volume           | mL                       |       |
| Pulse Pressure Variation              |                          |       |
| dPmax                                 |                          |       |



5. If the device has been associated, double click on the blue header cell below the selected time. A tick box will appear prompting a selection for Cardiac Output Device. Re-select device.

|   | 14:00                               | 13:00 | 12:00 | 11:00 |
|---|-------------------------------------|-------|-------|-------|
| <b>Cardiac Output Device Measurements</b> | <input checked="" type="checkbox"/> |       |       |       |
| <b>Cardiac Output Device</b>              | Cardiac Output Device               |       |       |       |
| Cardiac Output                            | L/min                               |       |       |       |
| Cardiac Index                             | L/min/m <sup>2</sup>                |       |       |       |
| Continuous Cardiac Output                 | L/min                               |       |       |       |
| Continuous Cardiac Index                  | L/min/m <sup>2</sup>                |       |       |       |
| Stroke Volume                             | mL/beat                             |       |       |       |
| Stroke Volume Index                       | mL/m <sup>2</sup> /beat             |       |       |       |

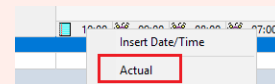
Observations from the monitor begin to auto populate the required fields accordingly within this section in purple.

NOTE: If the device has **not** been associated, double click into the relevant, individual cells and manually enter observations



### Handy Hint - Capturing Observations with Device Association when Hemodynamic Calculations have been generated

- iView is **hourly** view by default – Right click the date time header and select **Actual** to capture these results once calculated at the monitor
- There is a **5 minute lookback** period - This means that within 5 minutes of generating these results post “RUN” there can be a delay in bringing through new observations
- Refresh Powerchart to update Actual time and allow for 5 minute lookback period or consider manual entry



6. Review all data prior to finalising observations. All unverified observations in purple will save to the patient’s chart when finalised. Modify/ enter/ delete observations manually if required by double clicking into the cell.



### Important – Additional Device Association Information

- External Devices/monitors that are **not directly** connected to the bedside monitor will **NOT** be Associated to the patient chart and will not populate sections with observations  
Eg. HemoSphere, Impella Smart Assist device and Intra-aortic Balloon Pump Devices.
- These external devices will require manual entry of observations into the patient’s chart
- For more information, see QRG: ICU - Documentation - ICU Impella in iView**

7. Sign and finalise observations by clicking on the green tick



8. Add/ manage the Lines as per current policies within iView by creating a dynamic group. Complete observations for the relevant lines and devices in the ‘Adult ICU Lines – Devices’ tab of **iView**.

**For more information, see QRG: Clinical Care – ICU Lines & Devices, QRG: Clinical Care Lines and Devices**