

Dialyzing Wisely – Care Pathway Resource



CONTINUOUS RENAL REPLACEMENT THERAPY (CRRT) ALARM MANAGEMENT

September 2023

Purpose

This resource is for clinicians in intensive care units. It expands on the optimize acute dialysis section of the pathways available at the QR code and link below.

Troubleshoot alarms to minimize downtime and optimize delivered (effluent) dose.

Recommendations

- Check the patient
- Review and address the alarm on the screen prior to clearing
Alarm off, disable, and override buttons decrease alarm sensitivity
- Blood pump stops with High Priority alarms (flashing red)

2a. For access/ return alarms, check:

- the patient for coughing, suctioning, moving
- if the line is clamped or kinked
- the dialysis catheter: reposition, flush & aspirate*
- the blood flow: adjust the rate
If the alarm does not resolve: consider reversing lines

2b. For flow alarms, check:

- if the line is clamped or kinked
- if bags are touching other object altering weights, leaking, wrong scale

3. If alarms cannot be managed:

- Call Baxter (Toll Free) 1-855-631-5800, as needed
- Return blood when possible and end treatment*
- Document reason for stopping treatment
- Notify MD: may need to rewire or insert new line

*According to local practice guidelines

Use the link or scan on the QR code on page one for the Dialyzing Wisely References & Resources file, which includes KDIGO Clinical Practice Guideline for Acute Kidney Injury, *Kidney Int*, 2 (2012).

[References
& Resources](#)





RENAL REPLACEMENT THERAPY (RRT) ALARM MANAGEMENT

Alarm troubleshooting tips

The following tips were adapted from the *PrisMax CRRT Common Alarms 2022 Calgary Zone*

Access disconnection

- Access catheter disconnected; line is clamped below the access pressure pod- check connections and clamps.
- Blood flow rate too low - increase rate.
- Access pressure pod is not installed or debris behind pod- adjust pod, clear debris.

Access extremely negative

- Patient coughing, moving, or suctioning
- Dry intravascular compartment – physician may consider fluid gift
- Line could be clamped or kinked (may self-clear)
- Access pod out of position – adjust pod and press continue
- Adjust/turn down blood flow
- Catheter position- adjust position of catheter, reverse lines

Access extremely negative

- Blood flow rate is too low - increase blood flow

Return disconnection

- Return Catheter disconnected – check line
- Blood flow rate too slow to be detected – increase blood flow rate

Return extremely positive

- Patient coughing, moving, suctioning
- Line could be clamped or kinked (may self-clear)
- Catheter position- adjust position of catheter, flush, reverse lines, rewire / new line

Air in blood

- Follow on screen instructions for air removal process
- Use hemostat to clamp TherMax line to avoid air from being sucked into heater. Ensure clamp is removed prior to re-starting therapy.
- Disconnected line/leaking connection- fix cause, press up arrow until return pressure is Negative, then release clamp
- Air/foam in tubing- look for bubbles in air bubble detector and in tubing and adjust level or deaeration chamber
- Foam Detected – disable liquid level sensor until foam resolves

Change bags

- If changing a bag prior to alarm: Simply press on the bag you want to change. Therapy pumps stop, Blood Pump Continues. Change bag and restart run.
- Change only one bag at a time and close the scale after each bag change “make sure to hear a click on open and close”.
- Reminder: cosigning the bag is a confirmation that the bag is also on the correct pump, not only the correct back

Incorrect weight (ICW) alarm

- Caused by scale detecting incorrect weight/volume.
- Open the affected scale and inspect all aspect of the bag and disconnect the line from the bag to make sure of clear flow of fluid from the bag.
- Check for bags that are not on all hooks.
- Can be caused by bags being changed without pressing change bags button.
- May be caused by a bag not being attached correctly.



RENAL REPLACEMENT THERAPY (RRT) ALARM MANAGEMENT

Alarm troubleshooting tips continued

The following tips were adapted from the *PrisMax CRRT Common Alarms 2022 Calgary Zone*

Bag volume incorrect

- Wrong bag / no bag / foreign object on scale / bag is only partially supported
- Connections to other bags could be wrong or kinked- check connections

Blood leak detected (BLD)

- Air bubble in effluent line – clear bubble.
- Blood could be crossing the filter if the ‘straws’ are broken.
- Send effluent sample to the lab and enter order for Fluid cell count- RBC. If result is $<500,000 \times 10^6/L$ normalize blood via System Tools. If positive for RBC, return blood, keep filter lot number, length of run time and flow rates for report to Baxter. If you have this information, filter can be discarded.
- Light reflecting off BLD – Protect from light source.

Filter clotted

- Clots in filter – take down
- Clamped lines – unclamp
- Pressure measurement failure- perform a self-test

Filter extremely positive

- Clamped lines – unclamp
- High speed pumps and clotting has begun – lowering blood flow may help temporarily, check catheter.

Communication errors /

Strange alarm errors

- Check message on alarm screen
- Strange alarms call: Baxter (Toll Free) 1-855-631-5800

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