

## Instructor Guide

### Scenario: Water Heater Failure

#### Initial Set-Up

Action: **Turn off heater. Unplug.**

History: **(Read)** 2 month old former premature infant with RSV pneumonia.

You are getting back from a break and no events occurred while you were gone.

ECMO Mode: VA or VV

Patient:

Temp	35.9	34
HR	120	81
BP	71/42 (52)	75/46 (56)
CVP	5	
Saturation	94%	

CDI 7.43 / 39 / 309 / 23 / BE 2

H/H 39% / 13

SvO2 68%

**Fake circuit pressures with simulator cables (see suggested pressures below)**

Available data **(If participant asks this data is available)**

Physical Exam:

Quiet. Pale. BS equal. Heart sounds normal. Abdomen soft. Peripheral refill delayed. Extremities cool

Blood gas - ordered. Results pending.

Pressures	Venous	0
	Pre-memb	149
	Post-memb	145

Color blood in circuit tubing – color differentiation seen

CXR: Ordered, but tech is busy in the ER with a code

Chem: Morning lab sample sent to lab. Results pending.

Heme: Morning lab results. CBC normal.

PT slightly elevated to 22. PTT increased from 82 to 101

ACT: Increased from 179 to 193 sec

### Student Assessment and Key Concepts: Heater Failure

Time to accomplish: 180 seconds

#### Desired Responses

##### Technical

- Check heater switch
- Check water bath/heater
- Circuit check
- Check heater temperature set point
- Check heater hose valves
- Check heater plug

##### Cognitive

- Recognize hypothermia
- Recognize hypothermia induced bradycardia
- Utilizes other methods to maintain normothermia
  - Blankets or warmer blanket or thermo-gel blankets
  - Turns overbed warmer

##### Communication

- Call for help/communicate change to team
- Check heater temperature set point
- Check heater hose valves

##### Stop Point

- Turns heater back on

##### Discouraged interventions

- Come off ECMO

### **COMMENTS**