

GIVING
LIFE &
**Dialysis Circuit
and
Alarm Management**



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KNOW THE MACHINE
KNOW THE ALARMS

Why learn?

- Understand what causes the alarm
- Familiarise with trouble shooting
- Ensure uneventful treatment for the patient
- Mitigate staff and patient's anxiety or stress in the event of machine alarms



2005 - President George W. Bush signed into law the Patient Safety and Quality Improvement Act

The goal of this act is to:

improve patient safety by encouraging voluntary and confidential reporting of health care events that adversely affect patients. To implement the Patient Safety Act, the Department of Health and Human Services issued the Patient Safety and Quality Improvement Rule (Patient Safety Rule). The Patient Safety Act and the Patient Safety Rule authorize the creation of PSOs (Patient Safety Organizations) to improve quality and safety through the collection and analysis of aggregated, confidential data on patient safety events. This process enables PSOs to more quickly identify patterns of failures and develop strategies to eliminate patient safety risks and hazards.

CJASN, April 2015

Problems

- There is NO 'ideal' machine. It doesn't and will never exist
- No alarm is fail-safe
- Machine cannot 'prevent' adverse events can only 'detect and mitigate' the potential harm
- Errors in dialysis care can cause harm and death

We are treating **PATIENTS** and
NOT
the haemodialysis machines

Blood Circuit

Function of blood circuit:

- Circulate the blood outside the body
- Anticoagulate patient's blood
- Maintain blood in sterile state
- Monitor the extracorporeal blood circuit for
 - arterial, venous and transmembrane pressures
 - integrity of the circuit for the presence of air and blood leaks



Blood Alarms

The following will happen when blood alarms are activated:

Blood Alarms

- Arterial Pressure
- Venous Pressure
- TMP
- Air Detector
- Blood Leak

Dialysis Circuit

Function of dialysate circuit:

- Prepare dialysate solution for the safe exposure to the patient's blood
- Monitor the dialysate for conductivity and temperature
- Circulate the dialysate through the dialyser
- Regulate ultrafiltration by volumetric control of the dialysate
- Monitor the effluent dialysate for blood leaks

Dialysate Alarms

The following will happen when dialysate alarms are activated:

Dialysate Alarms

- Conductivity
- Temperature



Thank You