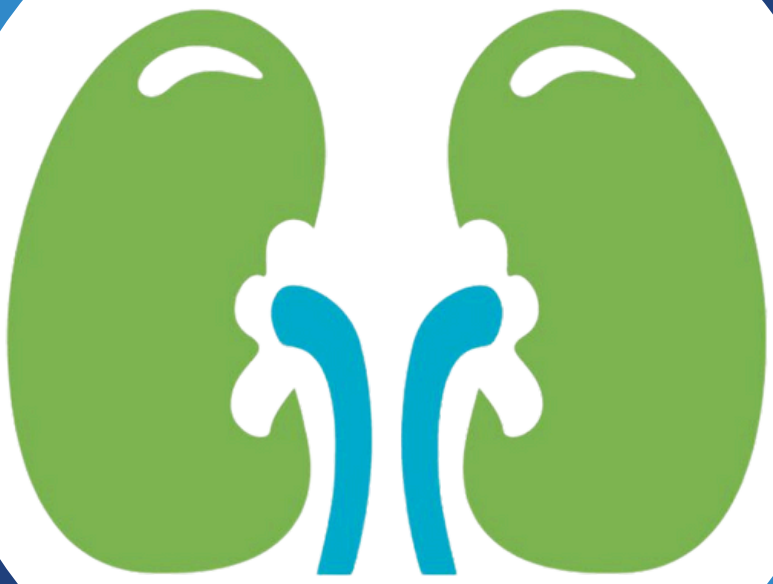
How-to Guide

Online Priming for Haemodialysis



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UKKA
UK Kidney Association

How-to Guide: Online Priming for Haemodialysis

Project: Sustainable Kidney Care – Implementing Best Practice

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Although this guide has been developed by experts in sustainability and sustainable kidney care, local teams should use their discretion in its implementation according to local context and requirements

Introduction

Online priming uses the dialysate to prepare the haemodialysis machine for the patient, and to wash back the system after dialysis, saving bags of saline solution and giving sets. Annual savings from online priming are estimated at 10 tCO2e and £57,000 for a main kidney centre and 4.3 tCO2e and £25,000 for a satellite unit.

Purpose

This guide aims to ensure safe, efficient and sustainable preparation of haemodialysis machines using online priming. It is applicable to multiple haemodialysis machines including B. Braun, Fresenius, Gambro, Nikkiso, Nipro and Vantive models. These systems all offer functionality to perform saline-free online priming, contributing to more sustainable dialysis practice. Online priming procedures should follow the instructions provided in the original equipment manufacturers (OEM) operator manual and be aligned with local staff training.

Online priming should not be used with portable RO systems.

Prerequisites

Equipment

- Dialysis monitor connected to a central Reverse Osmosis (RO) water system which provides water of the appropriate quality for HDF treatments
- Compatible bloodline sets
- Dialyser and concentrates (acid and bicarbonate) as per prescription

Staff Competency

Only trained staff should perform this procedure

Disinfection

Ensure heat disinfection has been completed in accordance with local guidelines.

Note

Online priming should not be used with portable RO systems

Procedure

Online priming procedures should follow the instructions provided in the original equipment manufacturers (OEM) operator manual and be aligned with local staff training

1. Preparation

a. Perform hand hygiene
b. Turn on the machine
c. Confirm disinfection status and operating mode (Standard vs. Paediatric)

2. Connect Concentrates

a. Connect bi-bag® bicarbonate and acid concentrate
b. Verify and document lot numbers and expiry dates

3. Start T1 Test

a. Touch "Treatment" to begin automated T1 test

4. Set Up Bloodlines and Dialyzer

a. Load arterial and venous lines into clamps
b. Connect bloodlines to the dialyzer
c. Attach dialysate lines to the dialyzer

5. Online Priming (No Saline)

a. Open saline port clamp but **do not use saline**
b. Prime the circuit using online-produced ultrapure dialysate
c. Adjust chamber levels using machine controls

6. Recirculation

a. Connect patient ends of bloodlines using sterile recirculation connector
b. Start blood pump and rotate dialyzer to remove air
c.Wait for "Auto Prime Complete" message, then press Confirm

7. Document

All concentrate and machine setup details