

2020 Heat Exchanger

Permission to print:	Yes
Incident type	Good Catch Near Miss
Category	Heater exchanger
Type of incident:	Equipment
Duration of incident:	minutes
Description:	Priming Medos 2400LT Hilite paediatric ECMO in an unfamiliar environment as back up to paediatric perfusionist, priming solution started to leak out of the water line connections. I saw the leak near the end of priming almost as soon as plasmalyte entered the oxygenator, it was very obvious. The A new circuit was primed without a problem. I forgot to pressure test [the heat exchanger of] the oxygenator as I would normally do when setting up before priming. A pressure test was done prior to returning the device to the manufacturer and demonstrated a leak.
GOOD CATCH - what went well	Noticed the fluid where it shouldn't have been, and quickly set up a new ECMO
What could we do better	The pressure test of the heat exchanger would have most likely picked up the heat exchanger leak before priming.
Preventive actions	The device has been returned to the manufacturer for investigation. Discussed the remote possibility of this fault with the team. Always pressure test the heat exchanger.
Hospital incident filed:	No
Ext Authority Advised	No
Discussed with team:	Yes
Manufacturer advised:	Yes
Commentary	This is the first report of a heat exchanger leak received by the PIRS and is rarely reported in the literature. A UK survey n 2013 of this problem reported "an association of a greater HE leak detection rate using the pressure test technique compared to using water testing in isolation ($p = 0.034$)". Carlton M, Campbell J. A survey of membrane oxygenator heat-exchanger integrity testing at cardiac surgery centres in Great Britain and Ireland. Int J Artif Organs. 2013;36(11):758-61.