2026 Air in Ciruit (ECMO)

Permission to print:	Yes
Category	Air in circuit
Category 2	ECMO
Severity	Good Catch Near Miss
Type of incident:	Equipment
Description:	A Cardiohelp circuit (BE-HLS 7050) was primed in the usual manner, exactly as per the manufacturer's Instructions for Use (IFU). At the completion of the de-airing process, a significant amount of residual air remained within the Quadrox oxygenator. This air was removed using a 60 mL syringe via the oxygenator pigtail lines. The volume of air removed was considerable. Initially, this was thought to be an isolated occurrence. However, the same issue of residual air following completion of the standard de-airing process was observed during the next three Cardiohelp circuit primes. I also observed a colleague experiencing the same issue while priming a subsequent Cardiohelp circuit. After discussing my experience with them, we raised the issue with the wider team and identified that at least four other colleagues had encountered the same problem. All staff involved followed the established step-by-step priming protocol and are experienced ECMO perfusionists. Historically, we have not experienced difficulties de-airing Cardiohelp circuits, and the standard priming and de-airing process has consistently resulted in adequately de-aired circuits. I contacted the product account manager, who advised that this was the first time the issue had been reported to him. Although the de-airing issue has been occurring fairly consistently over recent months, it has not been considered a critical or catastrophic problem because experienced perfusionists have been able to manually remove the residual air from the circuit. As a result, the issue may have been underreported. We believe other centres may have had similar experiences but may not have reported them to the manufacturer because the issue can be resolved during routine circuit preparation. Nevertheless, this feedback is important for the manufacturer to be aware of, as it may indicate a change in product performance or manufacturing consistency. Getinge has subsequently raised an internal incident report, to which our team will contribute further details. We also encountered another circuit with residual air requiring manual removal this week. In the attached photo [which was] so hard to photograph, there were bubbles all over the upper half of the oxy membrane. Also there was so much air- way more than the few bubbles you can see from the oxy membrane. It’s like it was trapped within the oxy, like 3-4 x 60ml syringes from both the pre oxy and post oxy pigtails.
GOOD CATCH - what went well	No patients were impacted by this issue, as the circuits were not used until all residual air had been completely removed through additional de-airing. While individual perfusionists were able to identify and manage the problem safely, it was not until the issue was discussed collectively within the team that the extent and frequency of the problem became apparent. Open team communication enabled multiple staff members to share similar experiences, even for something incidental like extra de-airing, leading to recognition of a broader trend and the identification of the issue as a valuable "good catch." This collaborative discussion facilitated escalation to the manufacturer and supported further investigation.

What could we do better

In hindsight, I could have raised the issue with my colleagues earlier rather than assuming it was an isolated incident or related to my own practice. Earlier discussion within the team may have identified the pattern sooner and enabled earlier escalation to the manufacturer.

Preventive actions

Continue to discuss and share any occurrences of this issue within the ECMO team so that patterns can be identified early. Work closely with Getinge to investigate the cause of the residual air seen during priming. Any future incidents should be documented and reported to he lp identify the cause and support any necessary improvements.

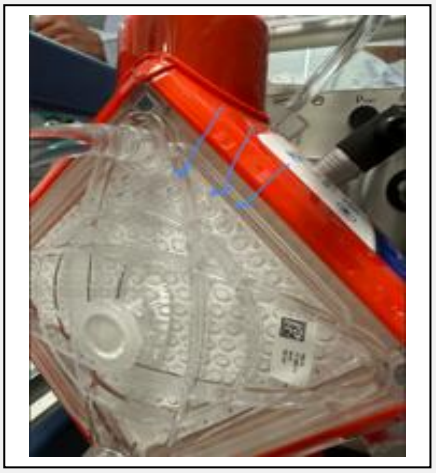
Manufacturer advised Yes

Discussed with team: Yes

Hospital incident filed No

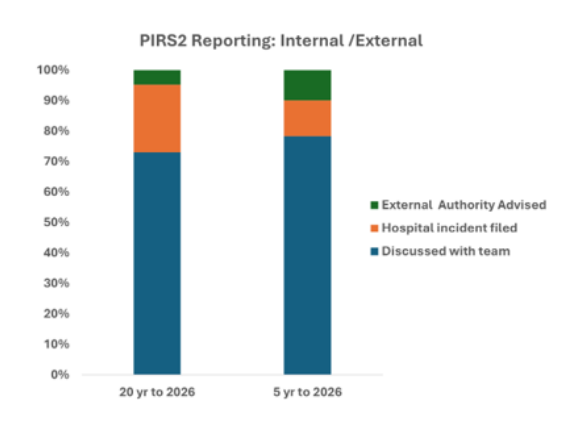
Ext Authority Advised No

Patient outcome variance Nil



Commentary

This report is a good example of how clusters of near miss incidents may go underreported both within teams and to the wider perfusion community. The classic fix and forget phenomenon can mask a widespread issue. As we very recently highlighted in the ASCVP Annual Scientific Meeting PIRS2 update, PIRS 2 data 5 year data to date shows about 25% of reports are not shared internally with the team. Raising an issue with the team does not want to be met with the comment “that happened to me last week”.
Standard agenda items on regular team meetings to include any incident/variance/near miss is a prudent consideration. PIRS2 Editors



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