

2024 Electrical-Electronic (Cardioplegia delivery#2)

Permission to print:	Yes
Category	Electrical / electronic
Severity	Good Catch No Harm Incident
Description:	<p>Using LivaNova Essenz pump with CPL dose control turned OFF. There was a software glitch that rendered the delivered volume & duration of delivery unreliable. This erroneous data was also transferred to the patients record. The intended induction dose of cardioplegia was 400ml (320 ml blood, 80ml Crystalloid in a 4:1 mix). Delivery rate was approximately 120ml/min (14kg child). After delivering ~350 ml over ~3.5min, the counter on the Essenz cockpit jumped to read a measurement of 1588ml and 24 seconds. This is obviously erroneous. As we had achieved a good cardiac arrest, the dose was ceased due to uncertainty over total volume delivered and risk of overdosing on crystalloid cardioplegia. Appears to be software glitch within cockpit. We have had the same issue once previously and it has been reported at other centres.</p>
GOOD CATCH - what went well	Perfusionists were watching the counter and identified the glitch promptly.
What could we do better	Nil, software glitches are beyond control of the perfusionist.
Preventive actions	<p>As a measure to protect future patients whilst this software issue is being investigated. This is being done in house. There was no workaround offered by LivaNova. LivaNova are today updating the software on our cockpit and hopefully this will fix the error. Error logs have been accessed and it is believed the error is arising from a module performing an untimely safety reset during the cardioplegia delivery. Ccrystalloid will be delivered via a burette. This is to be sure of the crystalloid amount delivered- particularly pertinent in neonatal patients where the crystalloid volume can be as little as 20ml. We set the level of the crystalloid to 100 (easy maths!) after flushing the line to the patient, therefore we can quickly ascertain when the correct dose has been delivered if the pump was to have a glitch mid-delivery.</p>
Type of incident:	Equipment
Manufacturer advise	Yes
Duration of incident:	seconds
Hospital incident filed	Yes
Ext Authority Advised	Yes
Discussed with team:	Yes
Patient outcome variance	Nil