PIRS 2016 - Cannulation

Permission to print:	Yes
Incident type	No Harm Incident
Type of incident:	Management
Catagory	cannulation
Description:	Got called in for a Paediatric VA ECMO at 0240hrs, the primed set-up had lots of air in it and the lead perfusionist was de-airing it. I walked in and helped to de-air the circuit and prime with blood. Once the circuit was de-aired it was wheeled to PICU where ECMO was going to take place.[the patient oxygen saturations were very low]. The [requested] range of Medtronic Bio-medicus arterial and venous cannulas were taken to PICU with the cannulas ranging from 10Fr to 14Fr Arterial and Venous and left on the nurse's trolley for them to open. The prime sample was sent and came back with electrolyte K of 9.5mmol. While I was helping lead perfusionist with priming the circuit with albumin and new blood (the situation was not timecritical), the surgeon decided on 10 Fr Arterial and 14 Fr Venous Cannulas and whole team confirmed the sizes. When it was time to place the cannulas on the operating field, nurses opened the cannulas from the range of cannulas on the desk (as far as I can remember) and made the necessary connections to add a tapped luer proximal to theb cannula. Once the insertion was completed, the patient flows were not satisfactory and question was asked if the cannulas were placed correctly. X-Ray was taken and it was found that wrong cannula [a venous cannula] was inserted at the arterial place. Patient was re-draped and the cannula was replaced with a 10 Fr Arterial Bio-medicus cannulas. There was not a significant change in the patient flows after insertion of 10 Fr arterial Cannulas. Both Arterial and venous cannulas are in same packets and look very similar and items were placed wrongly in the stock location and staff are unfamiliar with paediatric practice as evidenced by the subsequent finding that an emergency trolley exists with the necessary cannulas for neonatal and paediatric ECMO
Preventive actions	Non paediatric perfusion staff have been rostered on a specific 3 monthly on site update orientation of the paediatric ECMO consumables, their location and overview of procedures. Cannula weight range charts for neonatal/paediatric ECMO have been revised for clarity..
GOOD CATCH - what went	nothing
Protocol issue	Yes
Rule issue	Yes
Skill issue	Yes
Team Issue	Yes
Violation	No
Manufacturer advised:	No
Discussed with team:	Yes
Hospital incident filed:	No
Ext Authority Advised	No
Procedure acuity:	Emergent
Commentary	

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Description:	199cm, 148kg, 60 year old male, for urgent CABG (recent MI with 95% LMS). Patient also had moderate aortic root dilation (4.8 cm) and ascending aorta (4.5 cm), this was not being treated surgically due to a recent dose of ticagrelor, and associated risk of bleeding. The registrar had taken the LIMA and then proceeded to cannulate the aorta. The consultant was scrubbed on the other side of the table. Initially the line pressure matched the arterial pressure (~70mmHg), and there was pulsitility visible in the line. The arterial line was tested and approx 300ml was transfused as requested by anaesthesia, with minimal change in line pressure. A minute or two later, I noticed that the arterial line pressure had dropped to less than 20, and there was no longer pulsitility. The surgical team was notified. The consultant and registrar swapped back to usual sides. The anaesthetist put a TOE probe in to check for dissection. The surgeon opened the tap on the arterial cannula and confirmed that there was no flow back through the cannula, and disconnected the arterial line. The arterial cannula was re-inserted, and reconnected to heart-lung machine with normal line pressures and pulsitility. Bypass was then established with no harm to patient.
Preventive actions	n/a
GOOD CATCH - what went	Attention to checking line pressures and good communication
Protocol issue	No
Rule issue	No
Skill issue	No
Team Issue	Yes
Violation	No
Manufacturer advised:	No
Discussed with team:	Yes
Hospital incident filed:	No
Ext Authority Advised	No
Procedure acuity:	Elective
Commentary	