A Survey of Perfusionists' Communication During Critical Events

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Communication errors are the most common causes of adverse events in a hospital. The current standards and guidelines provided for perfusionists do not specify communication practices during emergency situations. Therefore, we wanted to establish a baseline for communication when experiencing specific critical events during cardiopulmonary bypass. We created an online survey that was completed by practicing perfusionists. For seven critical events on CPB, survey respondents were asked to rank communication in order of importance several critical perfusion situations. Participants were also asked to provide an example of how they would communicate, using their own words. Free-response answers were categorized as optimal or non-optimal. There was general agreement among perfusionists on the most important parameters to communicate during each of these critical events: aortic dissection (line pressure and arterial blood pressure), inadequate venous return (reservoir volume and blood flow rate) air embolism (visible air and pump off), hypotension (vasopressor dose and blood pressure), oxygenator failure (pO2 and oxygen saturation), heat-exchanger leak (reservoir level, hematuria and hematocrit), and arterial pump failure (pump flow). However, the participants did not identify one event as more important that the other since they are all critical emergencies. Of the free-from responses, 73.3% of the communications were identified as “optimal” based on three criteria. Based on these results, it is clear which parameters should be communicated during each of these critical events. There may be potential benefits for perfusionists to agree and standardize common parameters for perfusionists to communicate during these events to reduce errors and improve outcomes. This common language could be practiced in non-technical skills training using simulation scenarios that specifically focus on teamwork and communication.

Aortic Dissection	Rankings						
Parameters	1	2	3	4	5	6	7
Arterial Line Pressure Changes	22	5	2	0	0	0	0
Arterial Blood Pressure Changes	23	26	12	7	1	2	0
Cerebral Oximetry Changes	4	9	24	9	13	10	2
Pump Flow Changes	12	19	19	11	4	3	3
Venous Return	5	5	9	20	21	10	1
Venous Saturation	0	1	4	21	26	16	3
Other	5	6	0	1	1	6	8

Table 1. Aortic Dissection Responses