Complex decision making in the paediatric catheterisation laboratory

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Optimal outcomes are as much influenced by critical decision making pathways as by the technical skill of the operator. The complexity and potential cognitive traps underlying critical decision making has long been recognised in the aviation and business communities, however remains a largely subconscious, unexamined discipline amongst congenital cardiac interventionalists. Challenges to making good decisions in the catheterization laboratory include heuristics, biases and cognitive traps. In this paper we discuss some of the more common decision challenges encountered and we address potential solutions to such decision making with particular focus towards standardization. We use the example of balloon aortic valvuloplasty to demonstrate potential pitfalls in our current decision making processes and ways in which these could be improved upon by standardization.