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"Sterile Cockpit": How Utilizing Aviation Regulations Can Reduce Errors in ECMO Procedures

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"STERILE COCKPIT": HOW UTILIZING AVIATION REGULATIONS CAN REDUCE ERRORS IN ECMO PROCEDURES

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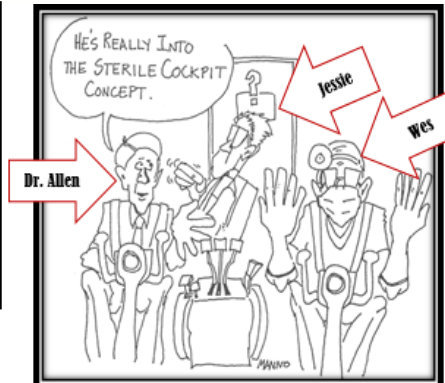
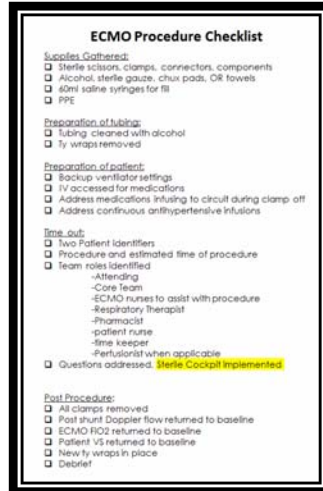
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INTRODUCTION

- Goal to decrease incidents related to distractions and interruptions during ECMO core team (primer) led procedures
- The "Sterile Cockpit Rule", developed in 1981 as an aviation regulation, was adapted by the core team to promote a distraction-free environment during critical ECMO procedures

METHODS

- Sterile Cockpit laminated signs were placed on ECMO pumps to be displayed during procedures and pump priming
- An explanation of Sterile Cockpit was incorporated into an ECMO procedure checklist
- Practiced during multidisciplinary ECMO simulation learning events
- Interruptions were tracked during ECMO procedures



RESULTS

1. Decreased ECMO procedure interruptions from an average of 25 to <10
2. Zero incidents related to core team led ECMO circuit or component changes since implementation
3. ECMO Specialist survey concluded 90% found Sterile Cockpit to be valuable

CONCLUSIONS

Upon review of the data including tracking of interruptions, errors, and staff experience, it is evident that the concept of Sterile Cockpit has streamlined procedure efficiency, as well as safety. For our next PDSA cycle, we plan to implement Sterile Cockpit education for non-ECMO staff.