Implementing a Cardiac Arrest Model and Code Simulation in Interventional Radiology: A New Standard for Emergency Preparedness

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Background

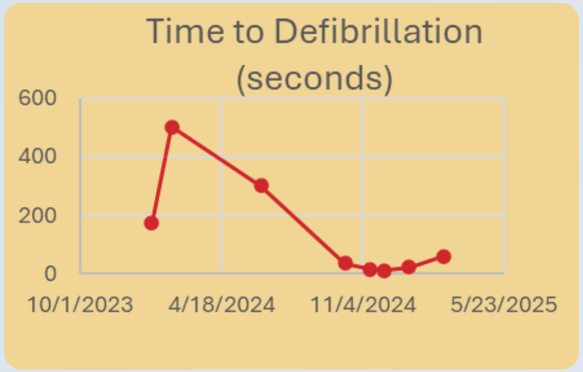
- **Over 200,000 in hospital cardiac arrests occur annually in the US**[1]. Interventional Radiology teams often act as first responders during arrests in the procedural suite, providing care in the critical minutes before the code team arrives
- **Standardizing code response models** can help to reduce time to CPR and time to defibrillation, two of the biggest contributors to patients' survival at discharge.[2,3,4]
- **High-fidelity simulation** can be used to introduce code response models to staff, building team confidence and improving response times.[5]

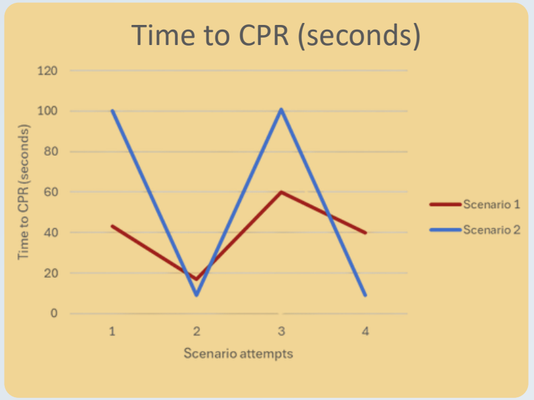
Methods

- **Introduced code response model** to staff. Pre defined roles for code intervention with only essential staff members in the room
- **Baseline 16 question survey** on 5-point Likert scale modeled from Tufts. Et. Al[6]
- **Started monthly code simulation**s in IR suite
- Tracked time to CPR, time to defibrillation
- Repeated survey post simulation

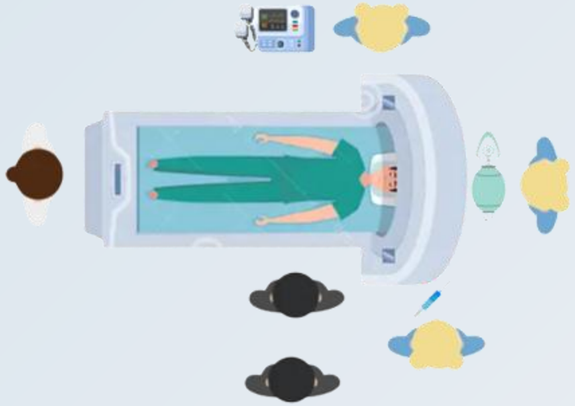
Results

- **Strong agreement: simulations improved preparedness**
- **Significant improvement in role confidence (p=0.0076)**
- Trends toward improved ACLS knowledge & improved confidence with ability to call code blue
- Trend towards decreased time to defibrillation





Scan to view all data



Code response model: 3 nurses (airway, medications, defibrillator / documentation), 2 radiology technicians (CPR), one provider running the code

Conclusion

- **Staff finds code simulations beneficial in preparation for codes**
- Overall downtrend of time to defibrillation
- **Ongoing Opportunities for Growth**
  - Use data to identify gaps and guide targeted code intervention training
  - Promote non-punitive debriefing and education through simulation
  - Expand simulations to include trauma and cardiac ICU teams

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