

Resident Cohort, Goal Directed Simulation

Shaun Carpenter DO, MS, PGY 3



Background

- Current resuscitation training for residents has moved to computer learning with skill verification that focuses on individual CPR performance. This is used to efficiently cover the knowledge base, but does little to prepare a resident to function as a high value member of a clinical resuscitation team.
- Johns Hopkins simulation center has developed a Rapid Cycle Deliberate Practice model to improve team performance https://www.hopkinsmedicine.org/simulation_center/rcdp/
- Better timekeeping and team communication leads to better adherence to rhythm checks and epinephrine administration for in hospital cardiac arrest (Crowley, et al. 2020)

Objective

- Small group exposure to hospital specific equipment
- Demonstrate skill proficiency with critical resuscitation skills and equipment
- Improve self confidence in ability to participate in resuscitation

Methods

Small group instruction with during didactics (August 2020)

Group 1	Group 2	Group 3
<ul style="list-style-type: none"> • ACLS simulation • Code cart breakdown • Manual Defibrillator use 	<ul style="list-style-type: none"> • Airway manikin • Ultrasound line placement • EZ IO practice 	<ul style="list-style-type: none"> Invasive hemodynamic monitoring with Edwards EV1000
Taught by: Edwards Representative		

- Pre and Post survey of participant confidence
- EZ-IO Pre and Post knowledge assessment

4+1 Y week group simulation and instruction (Sept/Oct 2020)

- Structured high fidelity simulation at Salem VA Medical Center
- EZ-IO skill demonstration

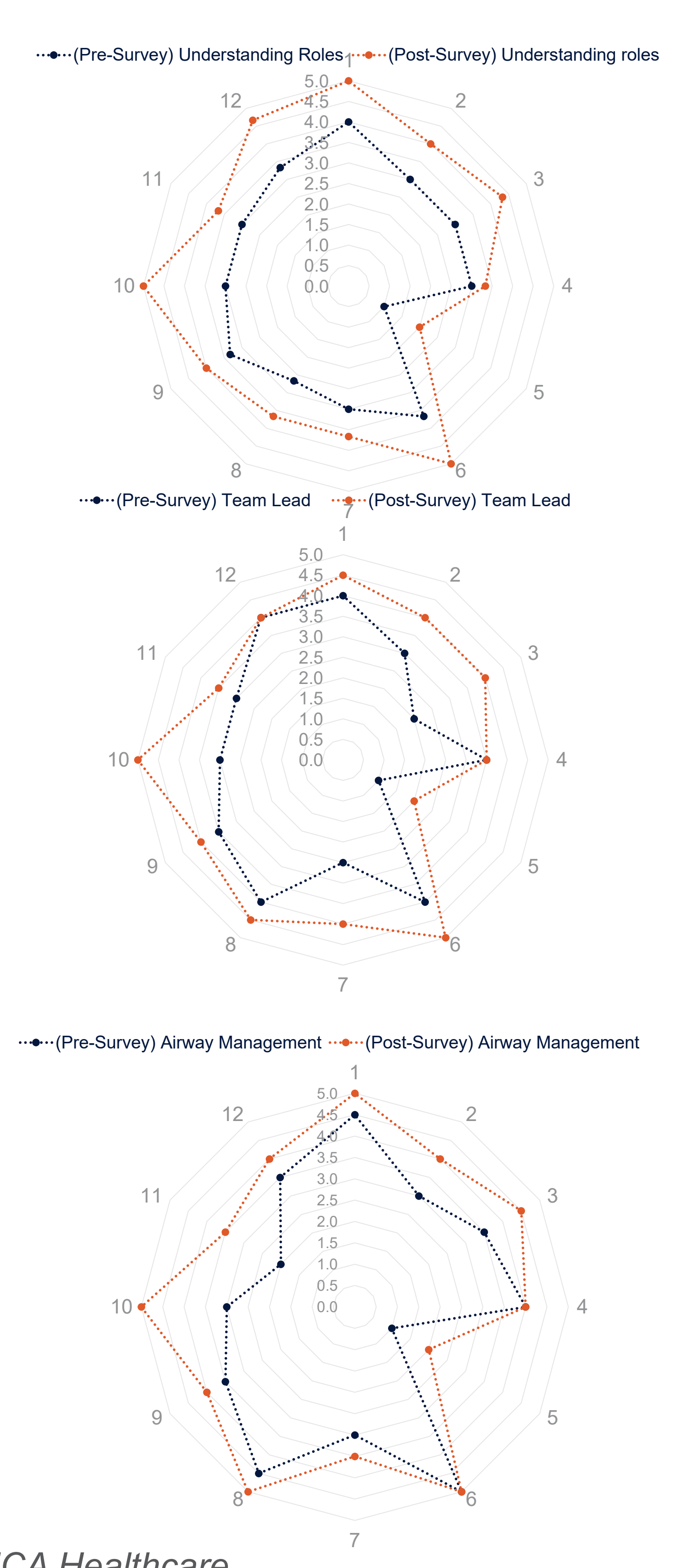
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Results

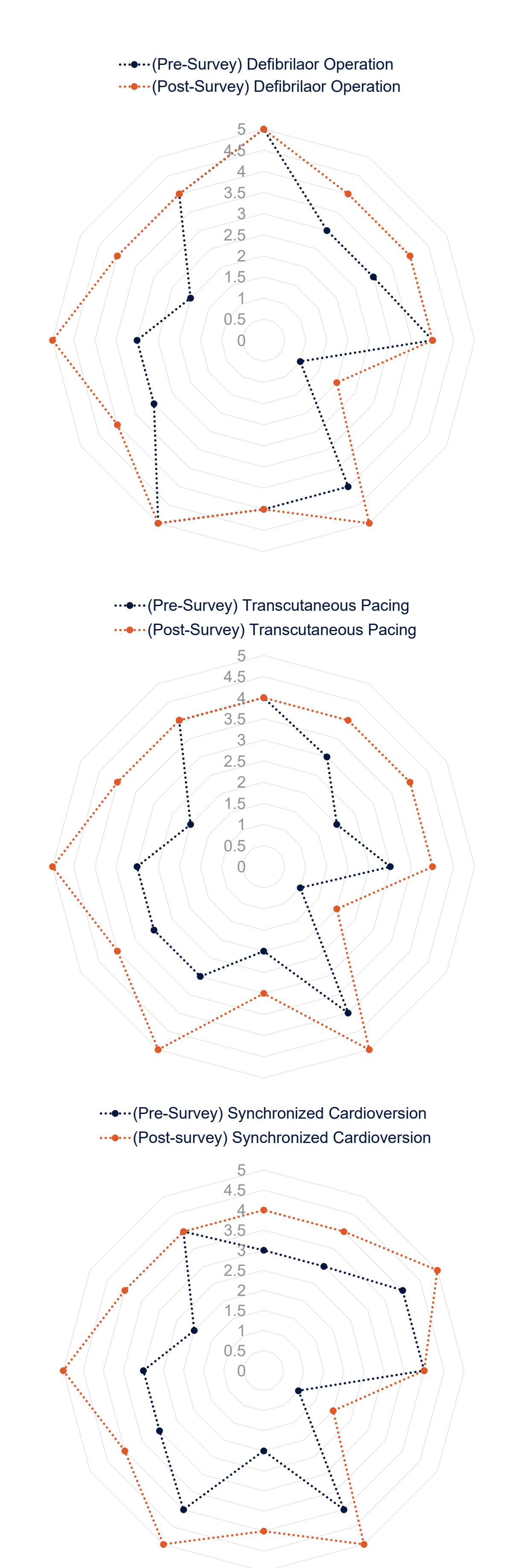
Aggregate Domain Results



Intern Domain Confidence



Intern Electrical Therapy Confidence



Discussion

- A scale 4/5 or "agree" is the measure of confidence attributed to an intern/resident effectively performing in the role.
- Both Interns and Residents reached an aggregate level of effective confidence in all domains
- Interns had significant gains (> 0.5) across all aggregate domains and achieved a 4/5 measurement of self confidence. Interns had the largest gains in understanding team roles, electrical therapy and team leadership.
- Residents were already confident with airway management and team leader domains before the sessions. Residents were less confident with understanding team roles and electrical therapy before the sessions, but reached a 4/5 level of self confidence post simulation

Conclusion

- Small group instruction is an engaging method to reinforce participants core knowledge. Simulation allows residents the opportunity to make decisions and receive feedback in real time.
- We can use clinical experts to provide learners with valuable hands on experience with complex equipment or challenging clinical decision making.
- The best benefit may be earlier in the academic year to allow new physicians to apply their knowledge with institution specific protocols and resources

References

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