

REVITALIZING THE MOCK CODE: ROVING SIMULATIONS TO IMPROVE LIFE SAVING SKILLS

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Background/Problem

- ❖ Over 200k patients undergo cardiopulmonary resuscitation (CPR) in the US annually with an in-hospital cardiac arrest (IHCA) survival rate of approximately 18–30% (Mallikethi-Reddy et al., 2017)
- ❖ Survival rate variability implies preventable and modifiable factors
- ❖ Emergency life skills (ELS) directly impact the chain of survival
- ❖ Historically, within the selected facility, staff participation in traditional mock code blue simulation has been low

Objective

Improve lifesaving emergency response competencies and ELS in direct patient care staff across various units in a 99-bed oncology center **by incorporating:**

1. “Revive in 5” Education Sessions
2. Roving Code Blue simulation stations (Fig. 1)

PICOT Question

In **patient-facing emergency response teams (population)**, how does implementing **interactive roving simulation training (intervention)**, compared to **no simulation training (comparison)**, affect levels of **confidence and competence in patient emergencies (outcome)** over **three months (time)**?

Methods/Approach

- ❖ Participants included:
 - ❖ Nurses, patient care technicians, transport, physicians, nursing management and supervisors, advanced practice providers, and pharmacy
- ❖ **May 2025 - October 2025:** Data surveillance period pre and post intervention to evaluate facility code blue data relative to mock code blue data
- ❖ **July 2025 - August 2025:** Staff participated in brief education sessions called “Revive in 5” prior to the simulations, focusing on:
 - ❖ Code blue skills, required documentation, and the purpose of mock codes and debriefing
- ❖ **August 2025 – September 2025:** Staff participated hands-on during roving code blue simulations offered twice weekly across day and night shifts
 - ❖ Roving station included: a code blue cart (see Figure 1), a manikin, a functional defibrillator, and a heart rhythm simulator
- ❖ Staff were given role queue cards to practice situation monitoring and leadership in accordance with TeamSTEPPS (Team Strategies and Tools to Enhance Performance and Patient Safety)
- ❖ ELS staff completed a 12-question survey after participating in a hands-on mock code simulation, (Fig. 2)

It has been difficult to encourage staff to participate in a traditional mock code at this healthcare facility. Roving mock code simulations poise a new methodology to encourage participation.



Figure 1. Facility code blue training cart with defibrillator

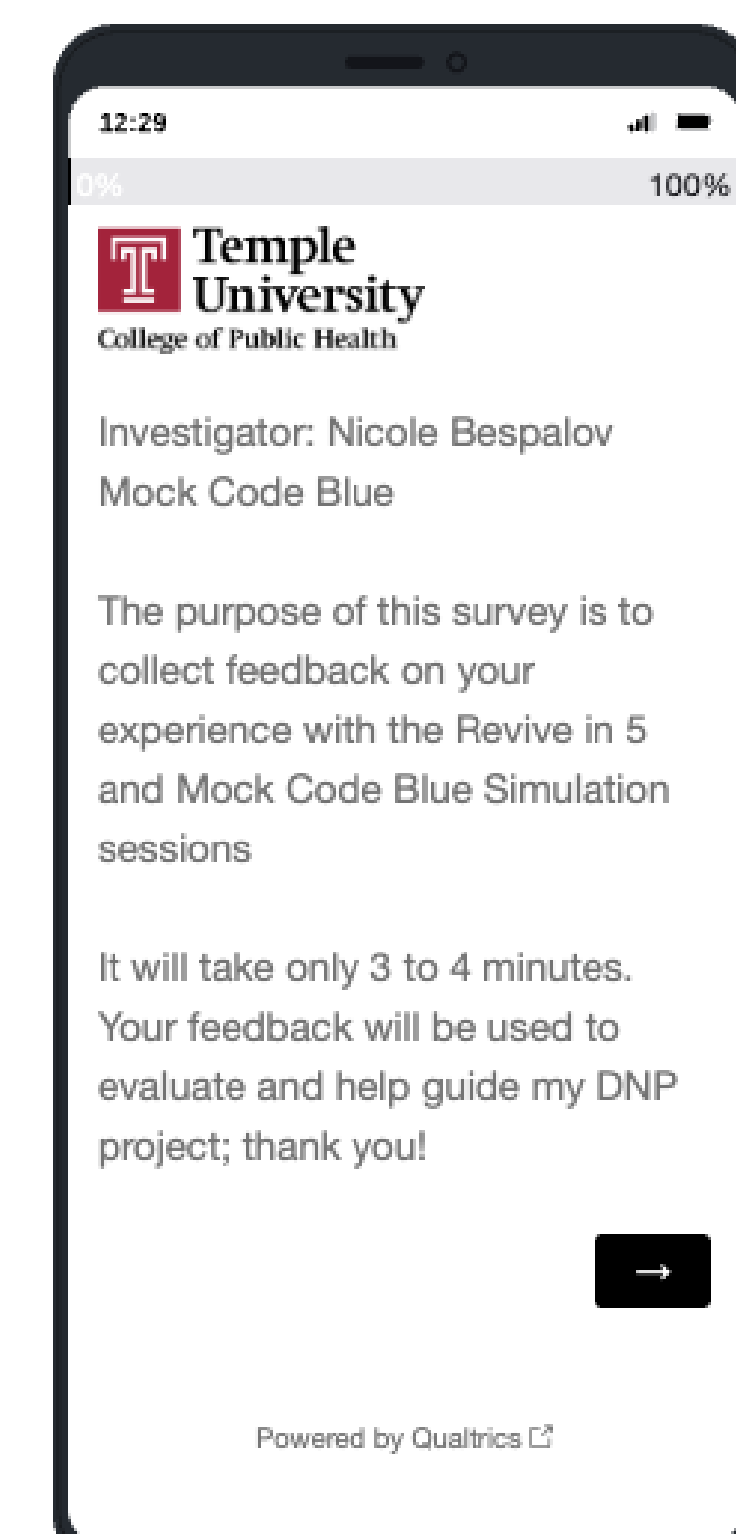


Figure 2. Qualtrics Survey opening screen

Results/Outcomes

Mock Code Results (see Table 1)

- ❖ Total mock (n=8), 5/8 met all metrics, 2/8 missed three metrics
- ❖ 8/8 started CPR within one minute
- ❖ Total actual facility code blue data (n=9), no ROSC achieved
- ❖ Majority of metrics met except compression rate and depth, compression fraction was met consistently

Survey Results (Fig. 3)

- ❖ Participants (n=62)
 - ❖ Majority (n=31) were registered nurses
- ❖ 96% reported they (n=52) believed the mock code improved their understanding of an actual code blue
- ❖ Providers had elevated confidence rating baseline
 - ❖ Nursing ELS group reported the most improvement from baseline
- ❖ 94% reported time commitment was appropriate
- ❖ 91% would participate again
- ❖ Pearson correlation found a weak negative correlation between years of experience worked and if the mock code improved their understanding ($r=-0.154$)
- ❖ Two-tailed p-value test indicated significant correlations among positive responses (agree and strongly agree), confidence, and years worked: ($r=0.355$) and ($p=0.013$)

Item	Mock Code 1	Mock Code 2	Mock Code 3	Mock Code 4	Mock Code 5	Mock Code 6	Mock Code 7	Mock Code 8
CPR initiation within 1 minute of cardiac arrest	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time to shock less than 2 minutes	Yes	Yes	No	No	Yes	Yes	Yes	Yes
Epinephrine within 5 minutes	No	Yes	No	No	Yes	Yes	Yes	Yes
CPR Backward	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bag-valve ventilation within 1 minute of cardiac arrest	No	Yes	No	Yes	Yes	Yes	Yes	Yes
DNP Investigator Additional Comments	No provider attended. Respiratory therapy unable to stay duration, code not specified if outpatient or inpatient.	None	Confusion noted from staff on who is responsible for getting the code cart or medications.	Significant delay in Zoll pad placement and administration of shock.	None	None	No provider attended	None

Table 1. Mock Code Blue checklist results

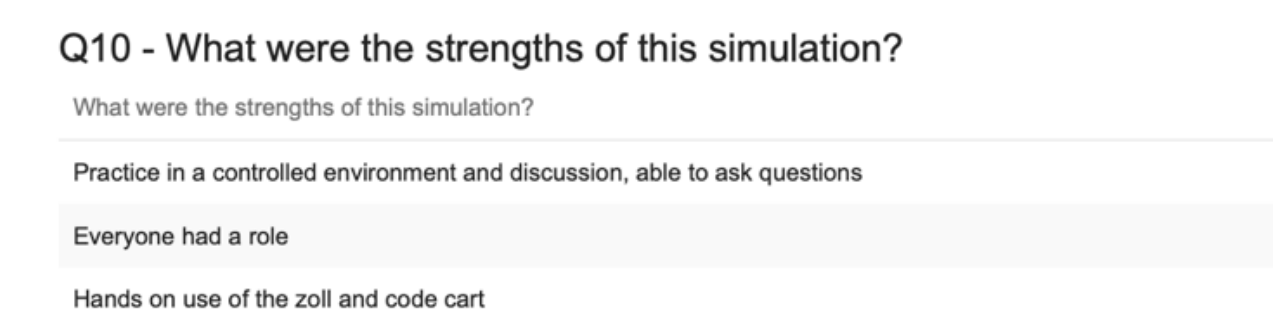
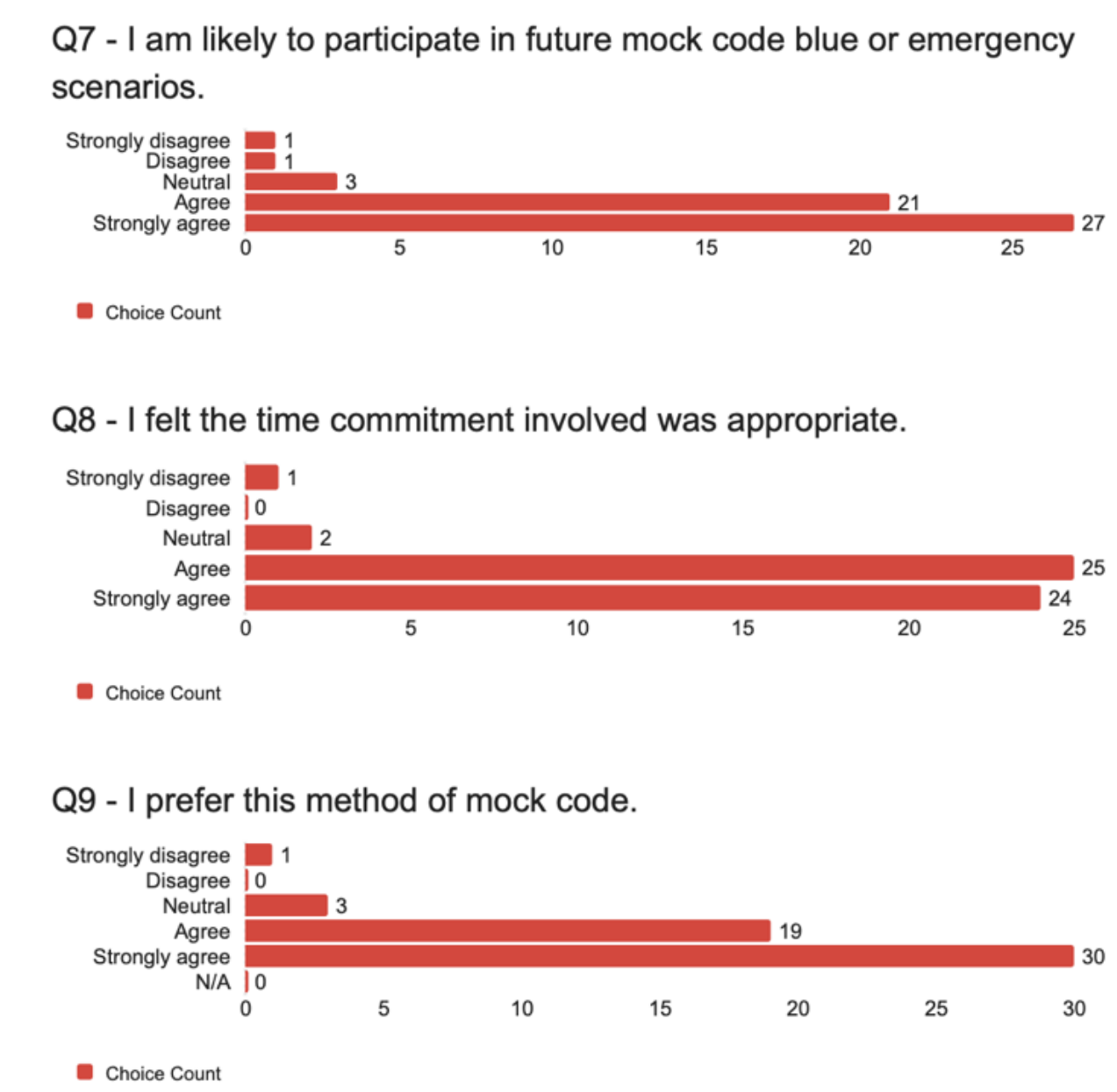


Figure 3. Survey questions 7 through 10

Conclusions/Implications

Local Implications

- ❖ Need for tailored educations for staff of all certification and skill levels
- ❖ May tailor to basic or advanced life support certifications (BLS, ACLS)
- ❖ Sustainable reinforcement of knowledge increases competence and confidence
- ❖ Staff prefer to participate in fast paced, time efficient sessions

General Implications

- ❖ Good clinical practice and quality initiative further drive the need for evidence-based practice (EBP) driven care
- ❖ Importance of continued participation and contribution in the American Heart Association (AHA) Get with the Guidelines program
- ❖ Potential for improved return of spontaneous circulation (ROSC) metrics among community