



Utilization of the Stanford Crisis Management Emergency Manual

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Background/Significance

- The operating room is a high-acuity environment within which crises can occur requiring rapid assessment, coordination, and treatment from the medical team to improve outcomes.
- Cognitive aids, like the Stanford Crisis Management Emergency Manual, exist to improve patient outcomes as well as improve the coordination of treatment in the perioperative area.
- The use of cognitive aids is not common practice in the perioperative area and further research is necessary to examine provider reluctance to using cognitive aids.

Purpose

The purpose of this study is to evaluate the knowledge, utilization, perception, and willingness to use the Stanford Crisis Management Emergency Manual (SCMEM) during a crisis in the perioperative period.

Methods

- Pre-experimental, one-group, pre-test post-test study design
- Convenience sample of perioperative staff
- Participants completed a pre-test survey, listened to an educational presentation on the resource, and completed a post-test survey
- Survey questions were completed through use of Qualtrics
- McNemar Test, Wilcoxon T-Test, and frequency analysis were used to analyze pre-test post-test data.

Participant Demographic Data			
Variable		N	%
Age (N = 73)			
20 – 29		7	9.6
30 – 39		27	37.0
40 – 49		22	30.1
50 – 59		10	13.7
60 – 89		7	9.6
Gender (N = 73)			
Male		11	15.1
Female		60	82.2
Prefer not to say		2	2.7
Position (N = 73)			
CRNA		9	12.3
RN		38	52.1
Surgical Assistant		11	15.1
Surgical Technician		10	13.7
Other		5	6.8
Years worked in perioperative area (N = 73)			
< 1 year		9	12.3
1 – 5 years		21	28.8
6 – 10 years		11	15.1
11 – 15 years		7	9.6
> 15 years		25	34.2

Results

RQ1: What is the perioperative staff’s familiarity with the Stanford Crisis Management Emergency Manual?

Test Statistics ^a		
	5. Are you aware of the Stanford Crisis Management Emergency Manual?	6. Do you know where to find the Stanford Crisis Management Emergency Manual?
N	64	64
Chi-Square ^b	49.020	50.019
Asymp. Sig.	<.001	<.001

RQ2: What is the frequency of the utilization of the SCMEM by the perioperative staff during crisis situations?

Variable	N	%
SQ1: How many times have you utilized an emergency manual in the perioperative period in the past year? (N = 12)		
None	0	0
1 – 2	12	100
3 – 4	0	0
> 5	0	0
SQ2: Which manual was used if utilized? (N = 7)		
Crisis Management	1	14.2
OB Emergency Manual	1	14.2
Stanford Crisis Manual	1	14.2
AHA ACLS/BLS/PALS	4	56.8
SQ3: If utilized, how was this emergency manual used? (N = 17)		
During a simulated perioperative event	6	35.2
During self-review or teaching	6	35.2
Before a crisis situation	1	5.8
During a crisis situation	2	11.7
After a crisis situation	2	11.7

RQ3: Is there a difference in perceived benefits with the use of the SCMEM during patient crisis amongst the perioperative staff prior to and following education of the manual resource?

Test Statistics ^a		
	4. What is your perception of emergency manual utilization for crises?	8. Would having an Emergency Manual available in the perioperative area improve patient outcomes during a crisis?
Z	-4.997 ^c	-5.391 ^c
Asymp. Sig. (2-tailed)	<.001	<.001

RQ4: Is there a difference in willingness of utilization of the SCMEM during patient crisis amongst the perioperative staff prior to and following education of the manual resource?

Test Statistics ^a		
	7. Would you use the Stanford Crisis Management Emergency Manual in the perioperative area?	11. Do you know where to find the treatments for LAST?
N	60	64
Chi-Square ^b		37.209
Asymp. Sig.		<.001
Exact Sig. (2-tailed)	<.001 ^c	

	9. How confident are you in treating a patient with a local anesthetic toxicity event (LAST)?	10. What are the four standard treatments for LAST?
Z	-5.856 ^c	-3.657 ^c
Asymp. Sig. (2-tailed)	<.001	<.001

Findings

Awareness of the SCMEM and location of the resource were analyzed via McNemar Test. For each, pretest posttest analysis showed statistical significance with a p-value < 0.001 in each.

Findings

Utilization of SCMEM was assessed via frequency analysis. Of participants, 12 utilized an emergency manual with one utilizing the SCMEM. The most common utilization was simulation and self-review.

Findings

Perception and if availability of the SCMEM were analyzed via Wilcoxon T-Test. For each, pre-test post-test analysis showed statistical significance with a p-value < 0.001.

Findings

Willingness & knowledge of treatment of LAST were assessed utilizing McNemar Test and Wilcoxon T-Test. For each, pre-test post-test analysis showed statistical significance with a p-value < 0.001 in each.

Conclusions

- A total of 73 participants took part in this study with most being between the age of 30 to 49, female, and registered nurses.
- Participants worked primarily for either one to five years and greater than 15 years in the perioperative area.
- Both awareness of the SCMEM and location of the resource were statistically significant from pre-test to post-test in this study.
- Frequency of utilization of the SCMEM by the perioperative staff after completion of this study showed only one participant utilized the resource.
- Statistical significance was found in participants perception of the resource and that having the resource available would improve outcomes for patients.
- Finally, statistical analysis showed significance for willingness of utilization, awareness of the location of the treatment for LAST, confidence in treating LAST, and assessment of knowledge of treatments for LAST post intervention.

Limitations

- Sample size was taken from convenience sample of who was present during hospitals monthly education, which was when this study was completed.
- Locations for the study were selected by geographical location. Both hospitals are in Virginia. Should this study be conducted in another location, results of the study may be different.
- The focus of this study was on the SCMEM. If another resource was introduced, participants may have had a preference for another resource.

Setting

- Sentara Obici Hospital, Suffolk, VA
- Sentara CarePlex Hospital, Hampton, VA

Acknowledgements

**Sentara Obici Hospital
Sentara CarePlex Hospital
Old Dominion University Nurse Anesthesia Department**

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