

Quality improvement about team resources management and in-situ simulation on resuscitation training

Chih-Cheng Wu*^{1,2}, Cheng-Heng Liu³, Ming-Yuan Hsieh¹

¹ Center of Quality Management, National Taiwan University Hospital Hsin-Chu Branch, Hsin-Chu, Taiwan

² Department of Internal Medicine, National Taiwan University Hospital Hsin-Chu Branch, Hsin-Chu, Taiwan

³ Department of medical education and emergency medicine, National Taiwan University Hospital, Taipei, Taiwan

Introduction

According the patient safety reports of our hospital, the most common problems in resuscitation came from the lack of leadership and the failure of team communication.

The program aims to improve the ability of the **team work** of resuscitation team and enhance their **leadership skills**, which are crucial for successful resuscitation efforts.

Methods

- This program has been implemented in 5 wards of Biomedical Hospital since March 2022 and will continue until April 2023. Two lecturers, one physician, and one nursing instructor are responsible for teaching in each ward. The same group of students will undergo training in the **1st** , **6th** , **12th** months of the program. The training program was characterized by
- (1) **Standardized team resource management training**
 - (2) **The same environment/facility that resuscitation occurred**
 - (3) **The same team members that resuscitation occurred**
 - (4) **Repeated at 6 months interval for three times**

A total of **194 participants** have taken part in the program so far, including physicians, nursing specialists, head nurses, regular nurses, and other nursing students.



Conclusion

This study is using the **SAQ and TPQ questionnaires** as objective evaluation tools to assess the impact of this program. By utilizing these questionnaires, the study aims to determine whether the implementation of team resource management and in-situ simulation can improve the quality of resuscitation by enhancing **leadership and communication skills**.

The SAQ and TPQ provide **standardized measures** of safety attitudes and team perceptions, allowing for a scientific analysis of the program's effectiveness. The results from this study will help validate the effects of this program and contribute to the ongoing improvement of resuscitation training methods.

Result

The effectiveness of this program is being evaluated through the use of the **Safety Attitude Questionnaire (SAQ)** and the **Teamwork Perception Questionnaire (TPQ)**.

These questionnaires utilize a five-point Likert scale to measure participants' attitudes and perceptions. The scores obtained from these questionnaires will provide objective data for evaluating the impact of the program.

The initial findings from the evaluation of this program indicate that **overall participant satisfaction is above 90 points**, reflecting a high level of satisfaction with the training.

Regarding the SAQ scores, the highest positive proportion is observed in the **stress recognition** dimension (79.7%), while the lowest positive proportion is found in the **resilience** dimension (42.2%). The overall positive ratio score for SAQ is 73.1%, which is higher than the score of 65.1% for colleagues who did not participate in the program.

Dimension	1st	2nd	3rd	Nurses who did not participate	Overall hospital performance
Teamwork(6)	77.6	72.8	76.6	72.7	71.3
Safety climate(7)	76.5	69.1	72.8	71.9	70.3
Stress recognition (4)	76.3	77.4	79.7 ↑	71.0	69.0
Working condition(4)	77.6	75.3	68.8	61.0	62.5
Perception of management(4)	75.6	70.9	64.1	66.8	66.9
Job satisfaction(5)	73.4	67.6	72.5 ↑	61.9	64.7
Resilience(4)	33.8	38.6	42.2	42.4	44.8

In terms of the TPQ, the highest positive proportion is observed in the **Communication** dimension (83.1%), while the **Team function** dimension has the lowest positive proportion (73.1%). The overall positive ratio score for TPQ is 72.8%.

Dimension	1st	2nd	3rd
Team function (5)	76.1	70.5	73.1
Leadership (5)	76.8	70.7	81.8 ↑
Situation monitoring (6)	78.3	73.1	81.3 ↑
Mutual support (5)	77.1	74.3	81.3 ↑
Communication (5)	77.9	75	83.1 ↑

E-mail : chihchengwumd@gmail.com

G00921@hch.gov.tw

Key Word : Resuscitation, Team Resource Management

