



KNOWLEDGE REGARDING CODE BLUE PROCESS AND ITS ACTIVATION AMONG NURSES WORKING IN AVMC&H, PUDUCHERRY.

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ABSTRACT

Background: When emergency resuscitation and stabilisation of medical emergency circumstances occur in the hospital, code blue team can be employed as a quick response method. The medical crises necessitate rapid action. The code blue quick response system provides prompt resuscitation and stabilisation to established medical situations. **Aim:** The aim of the present study was to assess the knowledge regarding code blue process and its activation among nurses. **Methodology:** This study used a descriptive design. A convenience sampling technique was used to select 84 samples. Data was gathered using a self-administered knowledge questionnaire. **Results:** The study result shows that about 60.2% of nurses had moderately adequate knowledge, 36.1% had inadequate knowledge and 3.6% had adequate knowledge. There is a significant association with the level of knowledge regarding code blue process and its activation with demographic variables of gender ($p=0.277$), residence ($p=0.179$), religion ($p=0.226$). **Conclusion:** The author concluded that nurses should improve their knowledge on code process and activation recommended to do interventional study to improve the nurse's knowledge regarding code blue process.

KEYWORDS : Code blue, Nurses, Resuscitation.

INTRODUCTION

Code Blue is a unique international code used to summon a code team for patients in hospital who are deteriorating or experiencing cardiac arrest.¹

Members of the resuscitation team should be trained in basic and/or advanced life support, and ideally, there should be a doctor, an anaesthesia technician, or a nurse on the team; nevertheless, because of legal requirements, a paramedic staff and a security guard should also be present.²

The knowledge of the healthcare professionals and hospital staff about CB and emergency situations should be basically adequate, if not, it has to be improved by trainings.³

When emergency resuscitation and stabilisation of medical emergency circumstances occur in the hospital, code blue can be employed as a quick response method. These medical crises necessitate rapid action.⁴

When a person is discovered to be in cardiac or respiratory arrest (unresponsive, pulse less, or not breathing), code blue can be initiated immediately.⁵

The code blue quick response system provides prompt resuscitation and stabilisation to established medical situations. The response system is divided into two stages. (i) The initial reaction should be hospital workers providing basic life support (BLS). (ii) The second reaction will be a specialised and well-trained team.^{6,7}

All hospital personnel must be trained in BLS abilities in order to initiate essential BLS. To facilitate fast response, BLS equipment should be installed in all important areas across the hospital grounds where the equipment is portable or mobile. When a code blue is issued, a team of physicians and paramedics (medical assistants and staff nurses), frequently a designated code team, race to the patient and perform life-saving procedures.^{8,9}

METHODOLOGY

A quantitative research approach and descriptive design was adopted for this present study. Study variables are dependent variable was knowledge and the independent variables were nurses working in AVMC&H. The study setting was AVMC&H, Puducherry. The target population of this study was nurses working in AVMC&H. Sample for the present study were nurses working in AVMC&H who fulfilled the inclusion criteria during the time of data collection. A Convenience sampling technique was adopted for the study. Sample size was 84 calculated by the following formula

Formula

$$n = \frac{(Z_{1-\alpha/2})^2 p(1-p)}{d^2}$$

$$Z_{1-\alpha/2} = 1.96 \text{ at } 95\% \text{ of confidential with } \alpha = 0.05$$

$$p = 68.33\% = 0.6833$$

$$d = 10\% = 0.10$$

Sampling Criteria

Inclusion criteria are nurses who are willing to participate, and exclusion criteria are nurses on leave and mentally challenged patients.

Description Of The Tool

Part I - Demographic variables and Part II - Structured knowledge questionnaire

Data Collection Procedure

A formal written permission obtained from the Dean, AVMCH, Puducherry. A total of 84 samples who fulfill the inclusion criteria were selected by using a convenience sampling technique. Written informed consent obtained from each sample. Knowledge regarding code blue process and its activation assessed using a structured knowledge questionnaire.

Data Analysis

1. Descriptive statistics like frequency, percentage, mean and standard deviation will be used to assess the demographic variables.
2. Chi-square test used to find out the association between the knowledge regarding code blue process and its activation with their demographic variables.

RESULTS

Table 1: Frequency And Percentage Distribution Of Demographic Variables

Demographic variables	Frequency (n)	Percentage (%)
Age in years	21-30 years	50
	31-40 years	29
	41-50 years	5
Gender	Male	12
	Female	72
Residence	Urban	32
	Rural	52
Education	DGNM	45
	B.Sc	33
	P.B.B.Sc	4
	M.Sc	2
Religion	Hindu	74
	Christian	10
	Muslim	0
Marital status	Married	48
	Unmarried	36
Area of work	OPD	14

Critical care unit	27	32.3
Medical ward	20	24.1
Surgical ward	9	10.8
Ortho ward	6	7.2
Gynecology ward	8	9.6



Fig 1: Bar Chart On Frequency And Percentage Distribution Of Work Experience

Table 2: Level Of Knowledge Regarding Code Blue Process And Its Activation Among Nurses Working AVMC&H

S.N	Knowledge Questions	Correct response		Wrong response	
		n	%	n	%
1	A code blue is defined as any patient with an unexpected cardiac arrest requiring resuscitation and activation of a hospital-wide alert	62	74.7	22	25.3
2	Code blue number in AVMCH is 123	22	26.5	62	73.5
3	Code blue team is also called resuscitation team	14	16.9	70	83.1
4	Rapid response team and code blue team is same	47	56.6	37	43.4
5	There are 6 members in code blue team	22	26.5	62	73.5
6	Circulation is the first one in secondary survey of resuscitation	36	43.4	48	56.6
7	Code blue must activate for epileptic seizure	24	28.9	60	71.1
8	The best site to check pulse for adult is carotid	31	37.3	53	62.7
9	First responder role is to arrange crash cart and other emergency equipment on victim side	41	49.4	43	50.6
10	Scene safety is the first step of BLS	24	28.9	60	71.1
11	Head tilt and Chin lift maneuver is used for suspected cervical spine injury	37	44.6	47	55.4
12	Chest compression depth for adult is 4 cm	38	45.8	48	54.2
13	Start compression within 10 seconds of recognizing the cardiac arrest	26	31.3	59	68.7
14	Defibrillator is used for all type of shock	50	60.2	34	39.8
15	Heimlich Maneuver is used for CPR	33	39.8	51	60.2
16	Rescue breathing in CPR for adults is 10-12 breaths per minute	38	45.8	46	54.2
17	Two person CPR ratio for child and infant is 15:2	29	34.9	55	65.1
18	Pulseless electrical activity (PEA) is non shockable rhythm	23	27.7	61	72.3
19	CAB in CPR indicates Compression Airway Breathing	27	32.5	57	67.5

20	On a biphasic defibrillator usually 120 to 200 Joules and Monophasic is 360 Joules will deliver	29	34.9	55	65.1
21	Stop CPR when victim is started gasping	51	61.4	33	38.6
22	ROSC means Return of Spontaneous Consciousness	45	54.2	39	45.8
23	Capnography is used to monitor the quality of CPR	34	41.0	50	59.0
24	Recovery position after CPR is left side	37	44.6	47	55.4
25	Hemothorax is a common complication of CPR	56	67.5	28	32.5

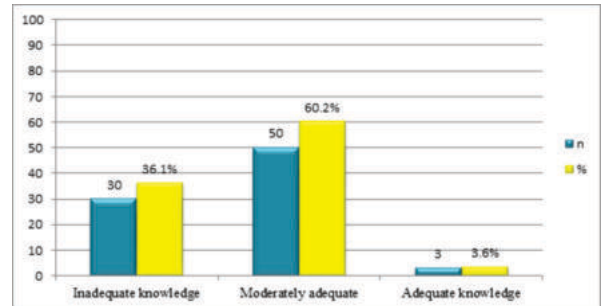


Figure 2: Bar Chart On Level Of Knowledge Regarding Code Blue Process And Its Activation Among Nurses

Association

Demographic variables such as gender ($p=0.277$), residence ($p=0.179$), and religion ($p=0.226$) was associated with the level of knowledge regarding code blue process and its activation.

DISCUSSION

About 60.2% of nurses had moderately adequate knowledge, 36.1% had inadequate knowledge and 3.6% had adequate knowledge regarding code blue process and its activation among nurses working in AVMC&H, Puducherry. This result was supported by the following study, Sagun et al.,¹⁰ conducted a survey to determine the knowledge levels of physicians and nurses about the code blue and cardiopulmonary resuscitation in 6 centers among 415 participants. The study results showed that among the total sample 45.8% were nurses, 24.8% residents, 23.3% faculty members, 5.4% specialist doctors and 0.7% general practitioners. About 86.6% of the participants knew the Code Blue number, 92.7% of the participants gave the correct answer to the question what is the code blue, 25.9% of the participants answered yes to the question do you hesitate to intervene when you encounter a patient requiring emergency intervention, 41% answered no to the question, is there a form about Code Blue in your clinic. Author concluded that healthcare workers have insufficient knowledge about Code Blue.

Gender ($p=0.277$), residence ($p=0.179$) and religion ($p=0.226$) shows significant association with the level of knowledge regarding code blue process and its activation. These study findings were supported by Nanthini, D., Nivetha, G., Rajeswari, S.¹¹, conducted a comparative study to assess the knowledge on code blue protocol between general ward and critical unit staff nurses at Mahatma Gandhi Medical College and Research Institute Puducherry. Sixty nurses (30 general ward nurses and 30 critical care unit nurses) selected using purposive sampling technique. The findings show that there was a significant association between the levels of knowledge of staff nurse with less than two years of experience at $p < 0.038$.

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