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Research Article

COMPLIANCE WITH THE CHECKLIST OF SAFE SURGERY IN THE NURSING STAFF OF THE OPERATING ROOM SERVICE OF THE GENERAL HOSPITAL, ACAPULCO

L.E. Caritina Gatica Pinzón[1], Maribel Sepulveda Covarrubias[2], M.A.I.S. Crisantema Leyva Alvarado[3], M.C.Dora Lina Bahena Acevedo[4], Lucio Diaz González[5], Cecilia González Calixto[6], Norma Angelica Bernal Pérez[7], Ma. De los Ángeles García Vázquez[8], Gregoria Juárez Flores[9] and Pedro Nava Pastrana[10]

[1]Faculty of Nursing No.2 of the UAGRO, active member of the Mexican Association of Professionals in Sterilization and the Mexican College of Professionals in Sterilization A.C
[2]School of Nursing No.1, PRODEP Profile, Member of the State System of Researchers, Coordinator of UAGRO-CA-162
[3]Nursing, PRODEP Profile, Coordinator of the Educational Program Medical Surgical Nursing Specialty
[4]Nursing, Deputy Administrative Director, and School Control of the Faculty of Nursing No.2
[5]Faculty of Mathematics, PRODEP Profile, Member of the State System of Researchers, Collaborator of the UAGRO-CA-162
[6]Nursing, PRODEP Profile, Research Coordinator of the Faculty of Nursing No.2
[7]Nursing, PRODEP Profile, Coordinator of the Educational Program Specialty of Nursing in Intensive care of the Faculty of Nursing No.2
[8]Nursing of the Faculty of Nursing No.2
[9]Nursing, PRODEP Profile, Coordinator of the Educational Program Specialty of Nursing in Management and teaching of the Faculty of Nursing No.2
[10]Biochemical Engineer. Technological Institute of Celaya ID: 1600439 Master in Bioengineering: CINVESTAV. ID: 3721398 Master of Science in Higher Education. UAGro. ID: 11739278 Doctorate in Didactics and Historical Consciousness. IPECAL ID: 12355771

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A B S T R A C T

Introduction: The application of the surgical safety checklist is of vital importance to improve the quality of surgical care, and likewise safeguard the safety of patients, minimizing the various most common avoidable adverse events that can endanger the life and well-being of patients, during surgery. ***Objective:*** To determine compliance with the safe surgery checklist in the nursing staff of the operating room service of the General Hospital. ***Methodology***: Quantitative, cross-sectional, descriptive and observational study. Where the study population was the nursing staff working in the operating room service, through the use of the observation guide and application of a questionnaire. ***Results***: A total of 18 nursing staff were taken into account. Compliance with the LVCS in the general hospital by the nursing professional was 5.6% excellently and 33.3% did not comply. Thelevel of knowledge ofthe nursing staff was found to be that only 16.7% have high knowledge and 5.6% have low knowledge. According to the three phases of the safe surgery checklist: at the entrance it was fulfilled at least with 27.8% and did not comply with 27.8%; in the pause it was fulfilled at least with 66.7% and in the exit it is significantly met with 38.9%. The relationship between knowledge and compliance with the safe surgery checklist by nursing staff at Hospital General de Acapulco was not statistically significant. ***Conclusion***: Most nursing staff in the operating room service of Acapulco General Hospital do not comply with the safe surgery checklist. Knowledge about the safe surgery checklist among nursing staff in the Operating Rooms of the General Hospital was at a medium level.

INTRODUCTION

Patient safety is a topic that greatly involves nurses who providepatient care directly and interdisciplinarily during the surgical treatment process. Patient safety is a serious public health issue worldwide. Surgery represents one of the basic pillars of medical treatmentin developed countries. One in every 300 patients suffer harm from medical care, according to the World Health Organization (WHO, 2008). It is estimated that 421 million people are hospitalized each year and that, during their stay in the hospital, these patients suffer 42.7 million adverse events, of which 50% of them could be prevent. (WHO, 2008; Rivas, 2015). The management of all aspects of adverse events accounts for 15% of health expenditure, and it is estimated that the damage caused to patients in OECD countries alone amounts to billions of dollars each year. Annually in the world, 234 million major surgery interventions are performed, which is equivalent to

Corresponding author:* **L.E. Caritina Gatica Pinzón
Faculty of Nursing No.2 of the UAGRO, active member of the Mexican Association of Professionals in Sterilization and the Mexican College of Professionals in Sterilization A.C

approximately one operation for every 25 people. (Lima, 2018; WHO, 2008)

For all the above, the safety of surgery becomes alarming due to the number of surgeries performed and the risks involved, daily there is a risk of adverse event, in mission to contribute to avoid or reduce this problem, in 2008, the WHO in conjunction with the Pan American Health Organization (PAHO) considered the campaign "Safe Surgery Saves Lives" as the second global challenge to face the problem, determining that the checklist is used in all surgeries internationally. (WHO, 2009)

The application of the surgical safety checklist is of vital importance to improve the quality of surgical care, and safeguard the safety of patients, minimizing the various most common avoidable adverse events that can endanger the life and well-being of patients, during surgery. (Albino, Briceño and Moquillaza, 2017)

METHODOLOGY

It was a quantitative, descriptive, and observational study where compliance with the safe surgery checklist by nursing staff was verified and knowledge about the safe surgery checklist was determined, it is a cross-sectional study of a non-experimental type because the practice of nursing was observed at a certain time. After the research, training proposals were created for nursing staff on the proper fulfillment of the checklist of the safe surgery list. The hypothetical-deductive method was used when making assumptions through observational experience (Parra, 2018). The universe was constituted by nursing staff that works in the General Hospital El Quemado, Acapulco, Guerrero, the sampling that participated were 18 nurses who fulfill the role of circulator in the operating room of the morning shift, evening, and accumulated day of the General Hospital El Quemado, the sampling went to convention, for having a small population.

Two instruments were applied, the first was the observation guide that allowed to verify compliance with each of the items of the phases of the safe surgery checklist, corresponding: Before induction of anesthesia (Entry), Before surgical incision (Pause), Before departure of the patient from the operating room (Exit); through the shadow study of the circulating nursing staff working in the operating room area. This instrument consists of a total of 20 indicators, for the dichotomous answers it was assigned to If it meets: 1 point, and does not meet: 0, obtaining a total of 20 points. To determine the level of compliance was based on the scale of the ACOFAEN (Colombian Association of Faculties of Nursing) (2012) using in the research the following ranges: Excellent: 19-20 points, Significant: 17-18 points, Partial: 15-16 points, Minimum: 13-14 points, Non-compliance: ≤ 13 points.

The second instrument was the questionnaire designed and validated by Moreta D (2015), also cited by Albino and collaborators (2017); which consists of 12 questions, attaching a question by the researcher, giving a total of 13 questions to determine the knowledge we have about the safe surgery checklist, each question was given a value of 1 point, resulting in a total of 13 points (Annex 2). The level of knowledge was obtained according to the following score: high of 10 – 13 points, medium: 6 – 9 points, Low: 0 – 5 points.

Once the data were collected, they were tabulated in the SPSS version 23 statistical package program, univariate and bivariate analysis was performed, Pearson's Chi-square was used to measure the statistical significance between the independent and dependent variable. The results were presented in the form of tables.

For the processing of the information, it was necessary to carry out the coding of the responses. The measurement of the compliance variable was classified as: Excellent, significant, partial, minimum and Non-compliance. The knowledge variable: High, medium, and low.

RESULTS

Table N°1 Safe Surgery Checklist Compliance

When verifying compliance with the safe surgery checklist, it was found that only 5.6% of the nursing professionals who participated, complied excellently and 33.3% did not comply.

Table N°1 Safe Surgery Checklist Compliance

ACOFAEM Scale	Frequency	%
Excellent	1	5.6%
Significant	2	11.1%
Partial	3	16.7%
Minimal	6	27.8%
Does not comply	6	38.9%
Total	18	100%

Source: LVCS Observation Guide to Nursing Staff, December 2019.

Table N°2. Phases of the Safe Surgery Checklist

According to the three phases of the safe surgery checklist: at the entrance it was fulfilled at least with 27.8% and did not comply with 27.8%; in the pause it was fulfilled at least with 66.7% and in the exit it is significantly met with 38.9%.

Table N°2 Phases of the Safe Surgery Checklist

	ENTRY		PAUSE		EXIT	
	Frequency	%	Frequency	%	Frequency	%
Excellent	2	11.1%	1	5.6%	5	27.8%
Significant	2	11.1%	0	0.0%	7	38.9%
Partial	4	22.2%	2	11.1%	4	22.2%
Minimal	5	27.8%	12	66.7%	1	5.6%
Does not comply	5	27.8%	3	16.7%	1	5.6%
Total	18	100.0%	18	100.0%	18	100.0%

Source: LVCS Observation Guide to Nursing Staff, December 2019.

Table N° 2.1 Surgical Entry Phase

The indicators of the entry phase (before the induction of anesthesia), observing that: patient confirms his identity, surgical site, procedure, and his consent is fulfilled in 72.2%; and the indicator is confirmed if there is a risk of thromboembolic disease is not met 88.9 %.

Table N° 2.1 Surgical Entry Phase

INDICATOR	It is fulfilled		Not met		Not applicable	
	Fr	%	Fr	%	Fr	%
1. Patient confirms his identity, surgical site, procedure, and consent.	13	72.2	5	27.8	0	0
2. Surgical site marking.	3	16.7	5	27.8	10	55.6
3. The check of the anesthesia devices and the anesthetic medication is completed.	17	94.4	1	5.6	0	0
4. The pulse oximeter is placed on the patient and its operation is verified.	18	100	0	0	0	0
5. It is confirmed if the patient has known allergies.	17	94.4	1	5.6	0	0
6. It is confirmed if the patient has difficult airway / risk of aspiration.	8	44.4	10	.6	0	0

7. It is confirmed if the patient is at risk of bleeding ≥ 500 ml (7 ml/kg in children).	10	55.6	8	44.45 5	0	0
8. It is confirmed if there is a risk of thromboembolic disease	2	11.1	16	88.9	0	0

Source: LVCS Observation Guide to Nursing Staff, December 2019.

Table N° 2.2 Surgical Pause Phase

The indicators of the surgical pause phase, it was identified that: Verifies if the nurseconfirms sterility and if there are doubts or problems with the instruments and equipment, it is 100% fulfilled; and confirm that all team members have presented themselves by name and function, is not fulfilled by 94.4%.

Table N° 2.2 Surgical Pause Phase

INDICATOR	It is fulfilled		Not met		Not applicable	
	Fr	%	Fr	%	Fr	%
1. Confirm that all team members have applied by name and role.	1	5.6	17	94.4	0	0
2. Confirm the identity of the patient, surgical site and procedure.	3	16.7	15	83.3	0	0
3. Check if antibiotic prophylaxis has been administered in the last 60 minutes.	15	83.3	3	16.7	0	0
4. The critical steps, duration of the operation and what the expected blood loss is checked with the surgeon.	4	22.2	14	77.8	0	0
5. Check with the anesthesiologist if the patient has any specific problems.	15	83.3	3	16.7	0	0
6. Check if the nurse confirms the sterility and if there are doubts or problems with the instruments and equipment.	18	100	0	0	0	0
7. Check if essential diagnostic images can be viewed	11	61.1	0	0	7	38.9

Source: LVCS Observation Guide to Nursing Staff, December 2019.

Table N° 2.3 Surgical Exit Phase

In the surgical exit phase, it was found that the indicators: The count of instruments, gauze and needles is reaffirmed, it is fulfilled by 100%; and the name of the procedure is verbally confirmed, it is not met by 72.2%, followed by indicator 5 with 33.3%.

Table 2.3 Surgical Exit Phase

INDICATOR	Fulfilled		Not fulfilled		Not applicable	
	Fr	%	Fr	%	Fr	%
1. The name of the procedure is confirmed orally.	6	33.3	12	66.7	-	-
2. The count of instruments, gauze and needles is reaffirmed.	18	100	0	0	-	-
3. The labelling of the samples is confirmed (read aloud of the label).	6	33.3	3	16.7	9	50
4. It is corroborated if there are problems related to the usual equipment in the operating rooms.	17	94.4	1	5.6	-	-
5. The main aspects of patient recovery and treatment are reviewed by the surgeon, anesthesiologist, and nurse	12	66.7	6	33.3	-	-

Source: LVCS Observation Guide to Nursing Staff, December 2019.

Table N°3 Level of knowledge

When identifying the level of knowledge of the participating nursing staff, it is observed that only 16.7% present high knowledge and 5.6% low knowledge.

Table N°3 Level of knowledge of the participants

Knowledge Scale	Frequency	Percentage
Low knowledge	1	5.6
Average knowledge	14	77.8
High knowledge	3	16.7
Total	18	100

Source: LVCS observation guide and questionnaire to nursing staff, December 2019.

Table N° 4 Type of surgery

Regarding the type of surgery according to the degree of urgency that were performed during the observation of compliance with the safe surgery checklist, the one with the highest percentage was urgent with 61.1%. According to the classification by its extension of the surgical intervention that were performed during the observation of compliance with the checklist of safe surgery, the major surgical intervention predominates with 88.9%.

Table N° 4 Type of surgery

		Frequency	%
Degree of urgency	Scheduled	7	38.9
	Urgent	11	61.1
	Total	18	100.0
By its extension	Elder	16	88.9
	Minor	2	11.1
	Total	18	100.0

Source: LVCS observation guide and questionnaire to nursing staff, December 2019.

Table N°5 main drawback of the application of the LVCS in the institution

When analyzing the last question about the inconvenience of the application of the health surgery checklist, 44.4% of the nursing staff indicated that it is due to the lack of knowledge of its importance, followed by the lack of unity of the surgical team with 27.8%

Table N°5 What do you consider to be the main drawback of the application of the LVCS in the institution?

	Frequency	Percentage
Lack of knowledge of its importance	8	44.4
Lack of time to do it	3	16.7
Lack of surgical team unity	5	27.8
Lack of material to do it	2	11.1
Total	18	100.0

Source: LVCS Cuestionario al personal de enfermería, December 2019.

Table N°6 Relationship between the variable compliance with knowledge

There is no significant relationship at a significance level of 5% (GIS>.05) between the level of knowledge and compliance with the safe surgery checklist by nursing staffat Hospital General de Guerrero, 2019.

Table N°6 Relationship between the variable compliance with knowledge Chi-square tests

	Value	Gl	Asymptotic (bilateral) significance
Pearson's Chi-square	6,757a	8	.563
N of valid cases	18	-	-

a. 14 boxes (93.3%) have expected a count less than 5. The minimum expected count is .06.

CONCLUSIONS

Nursing staff in operating room service at Acapulco General Hospital do not comply with the safe surgery checklist. Compliance with the safe surgery checklist according to the three phases of the safe surgery checklist: at entry it was minimal, at surgical pause it was minimal; and at the start it was significant. Knowledge about the safe surgery checklist among nursing staff in the Operating Rooms of the General Hospital was at a medium level. Compliance with the safe surgery checklist and the knowledge that the nursing staff presents about it was not statistically related.

These results allow us to know a local reality that must be faced, look for solutions to improve and change our safety

culture for the benefit of one as a health area staff but above all for the patient.

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