**Abstract**

**Objective:** Investigate whether the Surgical Safety Checklist - LVCS, used by nurses in the Surgical Center is correlated with what is recommended by the World Health Organization.

**Method:** Descriptive exploratory study of quantitative-qualitative approach with 10 nurses, using questionnaire and form. CEP/HULW, CAAE: 55252216.0.0000.5183.

**Results:** LVCS meets patient needs, but is not being used properly due to difficulties during its application. It was highlighted the importance of training and training about this protocol.

**Discussion:** The LVCS is the responsibility of the team, requiring multiprofessional work during its application to avoid errors. Thus, continuing education is the tool for the implementation of training.

**Conclusion:** The LVCS is in line with what the WHO recommends, however, nurses record in the medical record the information of the actions that they develop, but affirm that the responsibility of the registry is of all the professionals and that the nursing, medical and anesthetic team, in spite of developing their actions, does not intend to contribute in the aspects related to the items contained in the LVCS that correspond to their activities, causing a loss in obtaining reliable data.
Introduction

Over the years, technological and scientific advances in the health area have increasingly provided a significant increase in the number of surgical interventions worldwide, which are often believed to be performed under precarious conditions, generating insecurity for the health team inserted in the Surgical Centers, interfering in the promotion and recovery of patients' health. In recent years, patient safety and quality of care have played an important role in this context, and this moment has been recognized as the Security Era [1].

According to the World Health Organization (WHO), in 2008, the number of surgical interventions was about 234 million, with an average of one surgery for every 25 people. Of this amount, it is estimated that there were seven million complications and two million deaths. However, 50% of these deaths and complications could be avoided within the institutions if life-saving measures were implemented that could overcome the lack of safety in the surgical procedures. In this sense, these measures could prevent harm to the patient, avoiding Disability and often death [2].

Also in 2008, WHO published an instrument entitled Surgical Safety Checklist, which was developed through the use of evidence-based practice reviews, where it was possible to identify the most frequent causes of harm to the patient in the perioperative period. It is observed from the checklist that the implantation procedures are restricted to the operating room, however, the relevance of the preoperative phase is highlighted so that the procedure is performed successfully, thus ensuring the safety of the patient [3].

In this context, studies and discussions about patient safety have expanded considerably in the scientific and care setting, considering that the occurrence of adverse events are especially implemented in hospital institutions, which represents a serious public health problem [1].

Based on the above, it is noted that in the hospital, several sectors require a scientific technical qualification on the part of the professionals, in order to assure the actions used during the procedures. In this context, we highlight the surgical center because it requires specific conducts that involve the safety inevitability of the patient who will undergo low, medium and high complexity surgeries, which can trigger surgical and anesthetic risk for the patient.

The safety of the patient in the surgical scope must be based on the practice of the medical professions composed of surgeons and anesthesiologists. The nursing team consists of nurses, technicians or nursing auxiliaries, these professionals work within the surgery rooms, requiring a good relationship and communication Adequate, as well as correct conducts, such as checking all the parameters of the techniques used for patient safety. Based on this assertion, the members of the surgical team must use the instrument provided by WHO and others adapted to each reality in order to achieve the desired goal [4].

The present academic research seeks to answer the following guiding question: The listing of the protocol used in the research scenario is similar to what the World Health Organization preconize?

In view of the approaches presented and the imminent need to seek instruments that can assure patients a safe surgical care, the present study aims to investigate whether the Surgical Safety Checklist used by nurses in the Surgical Center is correlated with what is recommended by the World Organization of health.

Method

It is an exploratory descriptive study with a quantitative-qualitative approach, the scenario of which was the Surgical Center of a Federal Public Hospital, located in the city of João Pessoa/PB, considered a reference center in the State of Paraíba. The option for the institution was to implement the Safe Surgery Checklist (LVCS).

The population was composed of 13 full-time nurses at the Surgical Center and the sample con-
sisted of 10, being performed in the month of July 2016 on weekdays in the morning and afternoon shifts.

The research met the criteria of inclusion: signing of the Term of Free and Informed Consent; To be on call at the surgical center, at the time of data collection and to have time in the sector for more than one year. The criteria, having time of service in the surgical center of less than one year and being on leave or vacations at the time of data collection were listed as exclusion.

Regarding the legal ethical aspects used in the research, it was taken into consideration Resolution 466/2012 of the National Health Council [5]. Data collection began after the approval of the project by the Scientific Committee of the Clinical Nursing Department (DENC) and the Ethics Committee of the Lauro Wanderley University Hospital. It was evaluated and approved through the protocol CEP/HULW - nº 1.581.769, Certificate For Ethical Appreciation (CAAE): 55252216.0.0000.5183.

For the collection of empirical data, a questionnaire was applied to nurses, containing variables related to their profile such as: gender, age group, marital status, academic qualification, weekly workload, employment and monthly income. A complementary form was used as a form, where it covered the data related to the use of LVCS in the surgical patient.

For the analysis of the qualitative data, it was less concerned with the numerical question and more with the deepening, the comprehensiveness and the diversity in the process of understanding [5]. As for the quantitative data, we chose simple statistics, with absolute and percentage numbers, organized and presented in table and table, besides being discussed in the light of the pertinent literature thematic [5]. To maintain the privacy of the interviewees, the coding was used: Nurse 1 (N1) to ... (N10).

Results
With data on the profile of nurses, it is evident that 100% belong to the female sex, being found in a higher incidence in the age group between 30 and 35 years, corresponding to 60%. As far as marital status is concerned, 60% are married and 40% are single.

Figure 1 presents the academic qualification of the nurses surveyed, where it is verified that 80% have Specialization, 10% have respectively Undergraduate and Master.

When questioned about the courses they had undergone in the area of surgical nursing, 40% answered they had a training course, 30.0% had a training course and 10% had a course of improvement. On the other hand, 20% state that they do not have any type of course in the aforementioned area.

When nurses questioned about the weekly workload, 70% responded to 36 hours and 30% of 30 weekly hours.

With regard to having another employment relationship, 40% of respondents stated that they are active in the Intensive Care Unit (ICU), Emergency Mobile Service (SAMU) and Material and Sterilization Center (CME).

In aspects related to monthly income, 100% answered that their source of income corresponds to 5 minimum wages.
Regarding the presentation of the qualitative findings used to evaluate the use of the Surgical Safety Checklist - nurses’ opinions were classified into two categories, 1 and 2.

**Category 1**

Difficulties to use LVCS related to human resources:

- Unfortunately the check-list of safe surgery is performed by the Nurse as if she alone was responsible, generally the doctors do not understand the importance of the application of this registry [...].
  
  N1.

- The medical team resists answering some questions.
  
  N2.

- Lack of team interaction. We stayed in more than one room, sometimes we missed the right time to register each step of the check-list [...].
  
  N3.

- [...] The number of nurses in the surgical suite is good, but unfortunately not enough for one per room, so we have difficulties applying the checklist in all surgeries [...].
  
  N4.

**Category 2**

In-service training as an instrument for the applicability of LVCS:

- I believe the checklist is a responsibility of the entire team so it should be of common interest, perhaps training and a charge for liability in the process could help [...].
  
  N5.

- [...] I feel that the checklist should be the concern of the entire team. Therefore, I believe that constant training, updates, as well as training on the checklist itself is necessary.
  
  N6.

**Discussion**

According to the analysis of the results, it can be seen that the predominant class in nursing is female. This result follows studies that report that the nursing profession is composed almost entirely by women and this occurs at all levels of health care. This fact, which is believed to happen as a result of having been raised by a woman according to the history of the profession. [7]. In this way, the predominance of female professionals who are part of the Surgical Center team is a reflection of the composition of the profession itself.

It was found that the most incident age group among those surveyed was between 30 and 35 years old, evidencing an eminently young population. Silva; Ferreira, 2011, mention that 24 nurses from a Cardio-Intensive Unit of a Federal Hospital of Rio de Janeiro had an age between 24 and 30. In this way, it is understood that, currently, the number of newly trained young professionals who take up their activities in the labor market.

Considering the academic qualification of nurses, the study revealed that most have specialization. These findings show the concern of the nurses with the updating of knowledge through post - graduation. On the other hand, the number of professionals with only graduation is worrisome due to the limitation that this option alone offers to better assist the surgical patient.

Nowadays, the labor market standard seeks the best professionals and one of the indicators for this is the academic qualification. It is necessary that the nurses of the health services are constantly treading scientific knowledge which serves as a subsidy for a qualified assistance to the patient [8].

From the nurses’ responses regarding the workload, it was evidenced that their professional action occurs weekly in 36 hours and that 40% of this total has another employment relationship, and may be considered work overload.

The overload of work in which the professionals are exposed causes a state of super stimulation in
the individual, since the requirements exceed the capacity of the worker to process his actions and often to fulfill them, making the best work performance impossible, besides being a preceptor of stress, leading to damage to your physical and mental health [9]. Nursing professionals always need other work links to meet their financial needs. This double journey in different environments and shifts unleashes an emotional overload, leaving them prone to illness [10].

With the objective of minimizing the overload of work in the development of the actions, in the present time with the scientific technical evolution the professionals realize the implementation, implantation and execution of several protocols to be used in the most varied situations, in the hospital scope, as well as in public health services. Aiming at the practicality, quickness in actions, which is believed to minimize the day-to-day burden of professionals and, in a way, guarantee safety during the professional actions carried out on the client, in this sense, surgical center professionals have been implementing several protocols aimed at maintaining this safety, not only from the physiological point of view, but rather since the protocol is an instrument considered legal and that determines the registration of professional actions in the medical record client.

In particular, health work is characterized as a form of “live-in-work”. In this sense, the human work carried out determines the production of the care and directs the decision making, through the interaction with instruments, norms, machines, besides diverse types of technology. The technologies used in the production of health work are classified as Hard, Light-Hard and Light. The Duras technologies are those that involve the use of instruments, while the Light-hard ones involve the use of technical knowledge, and the Light ones emerge from the relations between the subjects involved in the process [11].

According to the classification of the technologies used in the production of work in a surgical center, it can be seen that the professionals who are developing their actions use the three technologies and the Safe Surgery Saves Lives Program, the WHO, an instrument that can be characterized as technology.

WHO has developed a Surgical Safety Checklist (LVSC) as an instrument to improve the safety of surgical care in health services (Suplemental File I).

Even with the introduction of LVSC advocated by the WHO, whose follow-up of the surgical patient begins before anesthetic induction, surgical incision and before the patient leaves the operating room, we still find services outside this protocol which may cause risk to clients who need to undergo surgical procedures. Therefore, in order to implement an LVSC, it is necessary to have a wide surgical practice to be used in the health services, as well as the innumerable initiatives by health institutions to prevent and reduce errors due to client [12, 13].

In order to be precise in the health care of the client in a surgical center, specialists from the study hospital area set up a complementary LVSC adapted to the reality of the service (Suplemental File II). However, this health service also uses the framework recommended by the WHO. In this way, it is understood that the complementation promotes greater safety for the surgical client, considering the use of these two protocols simultaneously, which generates greater detail of their health status and the procedures that were performed.

According to scientific studies, the application of the checklist used in surgical procedures reduces postoperative complications, mortality rates, as well as the number of errors due to communications failures by the team inserted therein [14].

Thus, it is possible to observe that the Surgical Safety Check List used at the Federal Public Hospital is complete, since it includes two parts. The first one is a checklist set up by the nurses themselves, with the insertion of more specific items. The second part is the WHO Surgical Safety Checklist itself. Thus, it is clear that the two lists are in line with.

Regarding the difficulties pointed out by nurses when using LVSC, the findings corresponding to Ca-
category 1, denote the lack of interaction between the team, and the resistance by the medical team to contribute information to the filling. One of the main factors contributing to errors in surgery is the lack of communication of the team, leading to a lack of relevant information during the procedure. Note that most professionals do not realize that the check list brings them closer and encourages them to practice team communication, as well as confirming the items proposed in the instrument [13].

In the nurses' conception, LVSC is the responsibility of the team, so it is necessary to unite the professionals to avoid errors in the surgical process. This is achieved through their involvement and participation during the implementation of the instrument.

The union between a surgical team is the key to a good performance, before, during and after the surgical procedure. A team that works together puts knowledge and skills into practice to prevent errors, reduce risks and complications in the patient's life [4]. In this way, it is necessary to break the paradigm that only the nurse is responsible for checking the instrument. This is a function of the team as everyone should collaborate on patient safety [15].

In this category, another difficulty was defined as the work overload. As the Surgical Center is a sector of significant demand, consequently the number of nurses has to be equivalent to the work. As LVCS is applied by this professional, sometimes it is distributed in more than one operating room, and surgeries are happening simultaneously, the nurse can not apply it in all procedures.

The Surgical Center is among the most stressful sectors in the hospital because it demands more workload. It aims to prevent infections and, for this reason, is a closed sector that requires strict aseptic techniques that must be constantly observed. This characteristic leaves the restricted professional of the social sphere, causing a physical and mental exhaustion. For many years surgical nursing is responsible for maintaining the safe environment in order to offer comfort and cleanliness to the patient. With the passage of time and technological advances, there was a strong development of surgical and instrumental techniques, with the result that nurses seek scientific basis to deal with the new challenges [16].

The nurse of the Surgical Center, over the years has been gaining knowledge and activities differentiated by the technologies presented at the present time has awakened the payment of the technique, the management of the assistance, teaching and research, generating an overload of work for this professional due to the Number of professionals in this sector, coupled with the number of professionals that is not proportional to the demand for the service [17].

One of the most persistent health issues is the workload of surgical nursing and patient safety, which mobilize resources from the World Health Organization (WHO) and the world's nursing organizations. The discussion of the theme presents the aspects related to personnel sizing. It is known that nursing performs several functions in the Surgical Center, plays its role and coordinates its team. This ends up hampering it by generating a greater work load [18].

In category 2, suggestions were made to improve the use of LVCS, being nominated by nurses, training and training, since it is a work that requires the help of all the professionals involved in the surgical procedure, thus making it multiprofessional. In this way, it is possible to highlight the importance of Continuing Education as a way to rescue scientific knowledge and unite new knowledge about the subject, thus benefiting all those involved in this process.

It is essential to conduct training with all the professionals working in the operating room, as this tool ensures the effectiveness of the safe surgery program. During the training, it is important to highlight that the LVCS is not only about checking the items arranged in the instrument, but also, to understand its importance and the correct way
to use it. Thus, by awakening critical thinking in working together, the chances of intercurrence are abruptly reduced and the success achieved benefits everyone, especially the patient, who is the focus of nursing care [15].

According to risk managers, who are professionals aimed at analyzing these and reducing the occurrence of adverse events, continuing education is used as a strategy for dissemination of programs, including safe surgery. It is also worth noting that continuing education appears as the first tool of choice for actions that have the implementation of patient safety initiatives and through it other types of training are instituted [19].

Conclusion

With the results obtained, it is concluded that the Checklist for Safe Surgery used in the study hospital is in line with what is recommended by the World Health Organization, in addition to presenting items that fit the sectoral reality, Patient’s needs.

However, it can be seen that, regarding the operationalization in what refers to the recording of the information resulting from the actions performed, the nurses inserted in the Surgical Center develop their actions in a correct way, nevertheless it is verified that there is a need for a greater involvement, on the part Nursing, medical and anesthetic staff who, despite developing their actions, do not intend to contribute to the aspects related to the items contained in the LVCS that correspond to their activities, causing a loss in obtaining reliable data.

In this way, team communication is fundamental so that there is a minimum of intercurrence and that the surgical process is carried out within the safety parameters. It is noticed by the reports the existence of many professionals who do not give importance to LVCS or who do not contribute to its improvement.

It is worth recommending continuing education in service, so that everyone works in line with what the Ministry of Health advocates regarding the safety of the surgical patient, as well as offering training and / or training to the team in order to avoid any undesirable situation, which May contradict the Code of Ethics of Professionals who develop the actions in the Surgical Center, this fact, which ensures the promotion of recovery and well-being of the patient.

References


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