



RESEARCH ARTICLE

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PERCEPTION OF PRACTICES OF ORAL HYGIENE IN AN INTENSIVE THERAPY UNIT

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ABSTRACT

Objective: To identify and analyze the perceptions of the nursing team regarding the importance and knowledge about oral hygiene (OH) provided to patients in the Intensive Care Unit (ICU). **Design:** Field research of descriptive exploratory nature with qualitative methodological approach. **Method:** The sample consisted of 18 nursing professionals (nurses and nursing technicians) who worked in the General Adult ICU of the University Hospital of the Federal University of Maranhão (HUUFMA), located in the city of São Luís, in the period of August and September 2018. Interviews were carried out using a thematic script that addressed questions about the perception of the interviewees about the importance, benefits, difficulties, training, qualification and importance of dentistry in the ICU. The interviews were audio-taped, transcribed and the narratives analyzed according to the content analysis proposed by Bardin (2011). **Results:** In the view of the interviewees, oral hygiene is important and brings benefits to ICU patients; however, there are innumerable difficulties encountered by the nursing team in execute such care. The lack of specific training was mentioned by the professionals interviewed, as well as the need for qualification and effective presence of a surgeon dentist in the team. **Conclusion:** Although the nursing team reported an excellent perception regarding the importance of OH to ICU patients, difficulties for its execution were reported, thus compromising the care of these patients. This reality may be related to the lack of transfer of scientific knowledge, due to the absence of a dental professional integrating the multidisciplinary team in this hospital environment.

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INTRODUCTION

The Intensive Care Unit (ICU) is a hospital environment that is highly specialized in the care of critical patients, and consequently requires the continuous assistance of a multiprofessional team trained and able to meet a wide variety of complexities (Gonçalves *et al.*, 2012). Invasive procedures such as installation of venous and arterial catheters, long-standing bladder catheters, ventilatory prostheses are performed, besides the use of mechanical ventilation (MV),

which is directly related to high rates of pneumonia in the ICU (Grap *et al.*, 2012). Ventilator-Associated Pneumonia (VAP) is considered the most recurrent healthcare-associated infections (HAIs) in the ICU, significantly increasing the morbidity and mortality rates, affecting potential health damage to individuals, and reflecting a possible significant increase in the length of hospital stay and healthcare-related costs for the institutions. (Silveira *et al.*, 2010; Gonçalves *et al.*, 2012; Souza *et al.*, 2013; Javadinia *et al.*, 2014). Among the risk factors for the emergence of VAP are those related to the microbiota of the ICU itself and the four pathways associated

with the pathogenesis of VAP, namely: aspiration of oropharyngeal content; contamination of respiratory equipment; transmission from one person to another; and hematogenous dissemination. The attention of the nursing team with management of material until the implementation of care measures directly in the patients includes considerable risk factors. One of the strategies to prevent VAP is linked to the creation of protocols within ICUs, applied in a multidisciplinary way and audited by Hospital Infection Control Services (Meinberg *et al.*, 2012; Silva *et al.*, 2012). In order to contribute to the reduction of the rate of infection of the VAP type, the Institute For Healthcare Improvement (IHI) developed the Bundle, a set of measures for prevention of VAP, composed of several practices (O'Keefe-McCarthy *et al.*, 2008). However, for its effectiveness to be achieved, it is necessary to hold the team accountable for the conformity of the practices and their simultaneous realization (Silva *et al.*, 2012). The fifth component of the Bundle is oral hygiene (OH), bearing in mind that the microbiota of the oral cavity plays an important role in the development of VAP in critically ill patients; the OH protocol promotes biofilm disorganization (Silva *et al.*, 2012; Oliveira & Nunes, 2015; Belissimo-Rodrigues *et al.*, 2016).

Daily care of hygiene and comfort, including OH, is an assignment of auxiliary nursing services, at the level of simple execution under supervision. In this context, it is necessary that nurses have in-depth knowledge of this subject to prevent systemic complications such as pneumonia (Gomes & Silva, 2010). The presence of dental surgeons in the ICU routine implementing institutional oral care protocols, as well as training the team, leads to more positive and consistent attitudes of the nursing team regarding the patients' oral health (Blum *et al.*, 2017). Institutions that offer bedside dentistry service tend to be more organized in terms of training and protocols to provide oral health services (Blum *et al.*, 2018). Several studies have shown that the nursing team perceives OH as an important care for critical patients, with a shortage of evidence-based assessments or protocols (Orlandini & Lazzari, 2012; Özveren & Özden, 2015; Alotaibi *et al.*, 2016) and more efforts are still needed to improve scientific evidence-based oral care practices (Ganz *et al.*, 2013). Before the duty of nursing professionals to perform the OH of ICU patients and the importance of the knowledge about the OH practice based on scientific evidences, a need to analyze the knowledge of the nursing professionals who work in ICUs about OH to critical patients was detected. Thus, the objective of this article is to identify and analyze the perceptions of the nursing team about the OH care to critical patients with the purpose of improving the service provided in the prevention of complications during hospitalization in the ICU.

METHODS

Type of study: This is a field research of exploratory descriptive nature with a qualitative methodological approach.

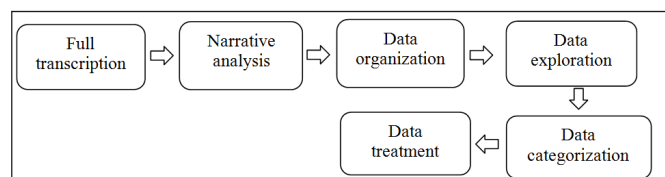
Study scenario: The research was carried out at the General Adult ICU of the University Hospital of the Federal University of Maranhão (HUUFMA) located in the city of São Luís-MA during the period of August and September of 2018. The target population comprised the professionals of the nursing team (nurses and nursing technicians) who worked at the abovementioned ICU. Eighteen professionals participated of the study, consisting in a convenience sample of nurses and

nursing technicians of both sexes and without age limit. The professionals that accepted participate were interviewed. The inclusion criteria were professionals who were part of the nursing staff of the general adult ICU of the HUUFMA. Exclusion criteria were professionals who were on vacation or leave during the period of data collection and those who did not agree to participate in the research.

Data collection tools and research steps: The study was approved by the Ethics Committee of the HUUFMA, with Opinion n° 2,729,368. The participants were advised and informed through the Informed Consent Form about the non-mandatory character of their participation, risks and benefits of the research. The interviews were audio-taped and guided by a thematic script that addressed questions about the interviewees' perceptions on the importance of OH, its benefits, difficulties, training, qualification and importance of a Surgeon Dentist (SD).

Data analysis

Figure 1. Flowchart of data analysis steps



Source: The authors (2019)

After full transcription, the narratives were analyzed according to the content analysis proposed by Bardin (2011). The collected data were organized in order to systematize them according to the initial ideas proposed. Then, the data were analyzed and allocated in the following thematic categories: Importance and benefits of OH; Difficulty in the execution of OH by the Nursing team; and Performance of the surgeon dentist in the multidisciplinary team. In the last step the results were treated from a contextualization of information in order to collaborate in the definition of an interpretation and critical analysis. The anonymity of the interviewees was ensured and they were identified by the letter of the profession, "N" Nurse, "NT" Nursing Technician, followed by interview numbers.

Box 1 - Thematic categories of the data obtained in the analysis

QUANTITY OF CATEGORIES	THEMATIC CATEGORIES
1 ST CATEGORY	Importance and benefits of OH
2 ND CATEGORY	Difficulty in the execution of OH by the Nursing team
3 ^{THD} CATEGORY	Performance of the surgeon dentist in the multidisciplinary team

Source: The authors (2019).

RESULTS AND DISCUSSION

We interviewed 18 professionals from the Adult ICU of the HUUFMA, among 6 nurses and 12 nursing technicians, all female, with an average age of 35 years, and mean time of work in the ICU of 6 years. The small number of participants is explained by the refusal by a large part of the ICU nursing team to participate in the interviews alleging lack of time, a motive also recorded by the participants in another study with ICU nurses (Ganz *et al.*, 2013). Following the recommendations of Bardin (2011), the results were

systematized according to the initial ideas proposed. The thematic categories were: Importance and benefits of oral hygiene; Difficulty in the execution of oral hygiene by the Nursing team; Performance of the surgeon dentist in the multidisciplinary team. The data found were then explored, allocated in each thematic category and treated based on a contextualization for interpretation and critical analysis.

Thematic Categories

1st category: Importance and Benefits of oral hygiene

In the view of the interviewees, OH is important and brings innumerable benefits to patients hospitalized in the ICU for comfort and prevention of VAP and other infections such as endocarditis and sepsis. They mention OH care as needed for reasons others than the possible complications in the oral cavity itself, as reported by the professionals below:

I think that oral hygiene is fundamental in the prevention of pulmonary infection and also in the quality of the stay of patients in the the ICU, it brings them comfort; we are able to evaluate the presence of other injuries to make an intervention. (N1)

The benefits that oral hygiene brings to patients are many, especially in relation to VAP and other infections. (N5)
We are aware of many diseases in the oral cavity that end up worsening with the state of health of the patient, such as in patients with heart disease. (NT 8)

In general, nurses perceive the importance of OH practices to ICU patients (Ganz *et al.*, 2013), as detected through the results of the present research. According to the American Association of Critical Care Nurses (AACC), OH administered by nursing is considered an important intervention in severely ill hospitalized patients who cannot carry out their own oral care because it promotes comfort to patients, reduces dental plaques and inflammation of the mucosa, and promote oral health (Alja'afreh *et al.*, 2018). In fact, nosocomial infection is a common complication among these patients and the colonization of pathogenic bacteria in the oropharynx resulting from bad OH is one of the main causes of this infection (Qu *et al.*, 2015), potentiating outbreaks of infections and increasing the hospitalization time (Saldanha *et al.*, 2015). Knowledge of VAP prevention measures is an important factor to reduce the incidence of this infection (Gomes & Silva, 2010). In a study, it was found that professionals working in Brazilian hospitals give little credibility to dental activities, such as OH (Miranda *et al.*, 2016). However, the present study detected a more favorable reality, since there were reports by the nursing team evidencing the perception of the importance of OH to ICU patients. Although the ICU nursing team considers oral care to patients to be of great importance, practices still need to be carried out with scientific evidence (Ganz *et al.*, 2009), requiring training and greater adherence to recommendations (Silvera *et al.*, 2010).

2nd category: Difficulty in the execution of OH by the Nursing team

According to the reports obtained, the Nursing team faces many difficulties for the implementation of OH care, as evidenced in the following declarations:

Each patient has to face difficulties that interfere with oral hygiene, such as bleeding, injury, agitation. (NT 14)
There are a lot of patients who have difficult opening their mouth because of traction, presence of lesions, traumas, and we stop hygiene because we do not know how to do it. (NT 9)
It is very difficult for them to implement the routine of oral hygiene ... because at the moment of difficulty we are not able to continue because of lack of experience. (N 6)

These results confirm that oral care performed at the ICU by bedside nurses remains fraught with challenges (Dale *et al.*, 2018). Thus, evidence-based preventive strategies should be adhered to and integrated into the care routine (Ganz *et al.*, 2009). ICU nurses need a standardized protocol with best practices to guide their work (Akin *et al.*, 2014). However, there may be variability in evidence-based guidelines due to differences in training (Ganz *et al.*, 2009). For this reason, it is important to transfer scientific knowledge to the practices performed (Ganz *et al.*, 2013) so as to impart confidence to nurses to make the right decisions, increasing the provision of optimal patient care by reducing the length of hospital stay (Al-Sayaghi, 2014). Lack of specific training was mentioned by the professionals interviewed as well as the need of training, information and updates to the team regarding OH practices in the ICU, as reported by the research participants:

I have no difficulty to perform hygiene because I received training. This training was given by the dentist who used to work here in the ICU, today there is no more such training. Many colleagues who entered after she went away had no opportunity to learn. (NT 10)

It has two years that we do not have training or information on how to do the oral hygiene of these patients because we do not have any dentist in the team. I think training and practice in oral hygiene is very necessary. (N 5)

It is paramount to emphasize that ICU nurses must have adequate education, accompanied by competent skills on OH to offer high quality care to their patients. Creating adequate perceptions and attitudes in oral care for patients susceptible to VAP in ICUs is not a guarantee of compliance and adherence in implementation and application in their daily practice. Thus, hospital training could improve the nursing team's perception and attitudes (Alja'afreh *et al.*, 2018). The presence of a dentist in the ICU is of extreme importance for the training and guidance of the nursing staff, especially in relation to the techniques, the care, and the materials to be adopted (Franco *et al.*, 2014). Practices based on scientific evidence are implemented more frequently, while other practices that are not supported are less frequently used by ICU nurses (Ganz *et al.*, 2013), reiterating the importance of transferring technical-scientific knowledge to these professionals.

3rd Category: Performance of the surgeon dentist in the multidisciplinary team

The interviewees revealed the need for the effective presence of a surgeon dentist in the team to act in cases where there is dental involvement, so as to solve the difficulties in handling oral practices that affect the general health of the individuals hospitalized in the ICU.

The dentist will improve the techniques used by the team and perform the hygiene in patients with greater degree of difficulty ensuring the effectiveness of care. (NT 9)

The dentist has the widest knowledge regarding oral care, and can provide training to the rest of the team. (NT 13)

The dentist acts in the prevention of injuries resulting from the invasive procedures to which our patients are exposed. (N 16)

The need of the dentist in multidisciplinary teams as complementation in the comprehensive care was also registered in another study that evaluated the insertion of Dentistry in the hospital environment (Souza *et al.*, 2013). It was also emphasized by the nurses when they reported that although the action of these professionals in interdisciplinary teams in hospitals is common, there is a gap with respect to one type of health professional, the surgeon dentist (Araújo *et al.*, 2009). Because of the importance of OH in intensive care patients, it is understood that the participation of a surgeon dentist is important to oral prophylaxis and oral health assessment (Araújo *et al.*, 2009). For example, dentistry is necessary in the evaluation of the presence of an oral biofilm, periodontal diseases, caries, oral lesions that are the precursors of viral and systemic fungal infections, traumatic lesions, and other oral alterations that represent risk or discomfort to hospitalized patients. For these reasons, the interaction between the medical-nursing-dentistry teams is fundamental (Rabelo *et al.*, 2010). As in the present study, other studies have shown that nurses considered OH care to ICU patients as a difficult and unpleasant procedure in which they did not have enough knowledge (Akin *et al.*, 2014; Jordan *et al.*, 2014; Alotaibi *et al.*, 2016; Hassan & Wahsheh, 2017). Thus, it is confirmed that surgeon dentists are necessary in the intensive care team because of their training and skills to carry out procedures required by critical patients during their stay in the ICU (Bellissimo-Rodrigues *et al.*, 2018). The present study presents as a strong point the use of a research instrument with qualitative criteria based on the literature, and despite the small sample was one of the limitations, the analysis revealed that there is a consensus portraying the relevance of the study and its scientific validity. The hospital environment implies many difficulties for the implementation of multidisciplinary interaction. Thus, the training of human resources and the renewal of interpersonal relationships among health professionals are necessary to ensure quality of care (Araújo *et al.*, 2009).

Conclusions

Although the nursing team reported an excellent perception regarding the importance of OH to ICU patients, difficulties were related to its execution, compromising the provision of care to these patients. Although OH contributes to the prevention of VAP, and other infections can impair the general health of these patients, lack of skills in the daily execution of oral care was reported by the nursing team. This reality may be related to the lack of transfer of scientific knowledge, due to the absence of a dental professional integrating the multidisciplinary team in this hospital environment.

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