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ENDOTRACHEAL ASPIRATION: INTENSIVIST PROFESSIONAL KNOWLEDGE

ASPIRAÇÃO ENDOTRAQUEAL: CONHECIMENTO DE PROFISSIONAIS INTENSIVISTAS

ASPIRACIÓN ENDOTRAQUEAL: CONOCIMIENTO DE PROFESIONALES INTENSIVISTAS

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ABSTRACT

Objective: to analyze the professional knowledge of the Intensive Care Unit. **Methodology:** transversal quantitative study with 26 health professionals about the endotracheal aspiration with a questionnaire application in their workplace in a Municipality Hospital of Jataí City/GO. The Committee of Ethics in Research approved the study Project by no. 398.080. **Results:** 57,7% are technicians; 5,4% have specialization; 61,5% confirm to use all the PPEs: glove, mask, cap and goggles; and 100% wash their hands before and after the procedure. **Conclusion:** the professional improvement is the main factor that influences in the technic performance, where not all the professionals get a training about the aspiration. This is something to reflect about the need of continuing education. **Descriptors:** Respiratory System; Knowledge; Intensive Care Unit; Endotracheal Intubation; Mechanic Ventilation.

RESUMO

Objetivo: analisar o conhecimento dos profissionais da equipe da Unidade de Terapia Intensiva. **Metodologia:** estudo quantitativo transversal, realizado com 26 profissionais da saúde, quanto ao procedimento de aspiração endotraqueal, em um Hospital Municipal, na cidade de Jataí/GO, abordados no próprio local de trabalho, com aplicação de questionário. O estudo teve o projeto aprovado pelo Comitê de Ética em Pesquisa, Parecer de n. 398.080. **Resultados:** 57,7% são profissionais de nível médio; 5,4% possuem especialização; 61,5% afirmam utilizar todos os EPIs: luva, máscara, gorro e óculos; e 100% realizam a lavagem das mãos antes e após o procedimento. **Conclusão:** o principal fator que influencia no modo como a técnica é realizada é o aperfeiçoamento profissional, no qual nem todos os profissionais receberam treinamento sobre a aspiração, o que leva a refletir sobre a necessidade de implementação de educação continuada. **Descritores:** Aspiração Respiratória; Conhecimento; Unidade de Terapia Intensiva; Intubação Endotraqueal; Ventilação Mecânica.

RESUMEN

Objetivo: analizar el conocimiento de los profesionales del equipo de la Unidad de Terapia Intensiva. **Metodología:** estudio cuantitativo transversal, realizado con 26 profesionales de salud, acerca del procedimiento de aspiración endotraqueal, en un Hospital Municipal, en la ciudad de Jataí/GO abordados en el propio local de trabajo, con aplicación de un cuestionario. El estudio tuvo el proyecto aprobado por el Comité de Ética en Investigación, parecer n. 398.080. **Resultados:** 57,7% son profesionales de nivel medio; 5,4% poseen especialización; 61,5% afirman utilizar todos los EPIs: guantes, máscara, gorro y gafas y 100% realizan el lavado de las manos antes y después del procedimiento. **Conclusión:** el principal factor que influye en el modo de cómo la técnica es realizada es el perfeccionamiento profesional, en el cual ni todos los profesionales reciben entrenamiento sobre la aspiración, lo que lleva a reflexionar sobre la necesidad de implementación de educación continuada. **Descriptor:** Aspiración Respiratoria; Conocimiento; Unidad de Terapia Intensiva; Entubación Endotraqueal; Ventilación Mecánica.

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INTRODUCTION

The intensive care units (ICU) as complex units to attend serious condition patients that, most of them, have a risk of respiratory failure needing mechanic ventilation to stay alive. In this sense, the endotracheal aspiration becomes a routine procedure in the units.¹

The endotracheal aspiration is the technic where placing a probe in the respiratory tract to remove the excessive secretion in the airways. It provides the effective gas exchange reflecting in the arterial oxygenation and pulmonary function improvement.²⁻⁴

We will considered as the main suggestion for aspiration, the procedures given by the *Association for Respiratory Care (AARC)*.⁵ The association recommend that the catheter diameter used for the aspiration cannot exceed half the interior diameter of the artificial airway. The recommended technic by the AARC is:

1. Hyper-oxygenize 100% the patient during 30-60 seconds before the aspiration through the micro-processor of the mechanic ventilator;
2. During the procedure, the pulse oximetry and the PEEP must be verified, giving the necessary oxygenation to the patient;
3. Each passage of the suction catheter in the airway is an aspiration, so the greatest aspiration pressure must be between 80-100 mmHg in newborns and less than 150 mmHg in adults. Besides, each aspiration cannot be longer of 15 seconds.
4. Hyper-oxygenation must happened after the procedure for at least one minute using the same technic used in the pre-oxygenation.

When considering important this procedure necessary for the critical patient's care, it is very important the theory and practice based, avoiding patient's complications. The possible complications with the endotracheal aspiration are: contamination by infectious agents (pneumonias), anxiety, cyanosis, laryngospasms, bronchoconstriction, hypoxemia, hypercapnia, cardiac arrhythmias, hypertension, bradycardias, cardiac arrest, intracranial pressure increase, intra-thoracic, atelectasis and even death. The endotracheal aspiration is the main cause of bacterias in the lower respiratory tract independent of the chosen system.^{4,6}

This study is justified because the aspiration is a procedure often performed by

critical care professionals and presents a considerable range of complications. From this, we wondered if the knowledge of health professionals working in the Intensive Care Unit on endotracheal aspiration has been effective for the prevention of complications. In this sense, the objective is:

- To analyze the knowledge of professionals from the ICU on the endotracheal aspiration procedure.

METHOD

Article elaborated from conclusion course work << *Identification of knowledge about performing endotracheal aspiration* >> presented to the nursing department of the Nursing Course, Campus Jataí of the Federal University of Goiás-Jataí / GO, 2014.

This is a study of quantitative, transversal nature, whose theoretical basis was through bibliographic consultations in the Federal University of Goiás/UFGO library and scientific articles related to endotracheal aspiration technique. The authors searched for articles in the following BVS databases: SciELOvirtual library and CAPES Portal, using keywords such as "respiratory aspiration", "knowledge", "intensive care unit", "endotracheal intubation" and "mechanical ventilation".

The research was in the ICU of a hospital in Jataí, Goiás, city located in the Southwest of the state, with a population of 88,006 inhabitants.⁷ The research institution is a public hospital with emergency care, surgical hospitalization, medicine and pediatrics clinic, maternity, ICU, outpatient referral care, surgical centers, supply and sterilization center, clinical and microbiological analysis laboratory, diagnostic imaging center, Counseling and Testing Center (CTC) and blood bank.

The Intensive Care Unit is a small unit consisting of six beds, with patients sent to this sector that are coming from the hospital, surgical center, emergency and other hospitals in the municipality.

The study population was professionals working in the ICU of the hospital, totaling 39 professionals, ten intensive care physicians, seven nurses, 16 nursing technicians, six physiotherapists and two psychologists.

ICU employees who work for at least six months performing the procedure and agreed to participate by signing the Consent Term (TCLE) were used as criteria for selecting the sample. Based on these inclusion criteria, the sample consisted of 26 professionals: 15

nursing technicians, 5 physiotherapists and 6 nurses.

The approach of the subjects to the questionnaire was in October 2013, in the workplace, at the beginning of the shift, where professionals were instructed to fill out the questionnaire and informed about the objectives of the research with the informed consent term given in two ways. The researchers waited for the completed questionnaires.

For analysis, the data were organized into double in Excel and analyzed using SPSS version 17.0. Initially, descriptive statistics, frequency and percentage for categorical or categorized variables, measures of central tendency and dispersion for numerical variables were presented. Variables were classified dichotomously as follows:

♦Characteristics of health professionals: sex, age (up to 40 years old, more than 40 years old), class (higher education or technicians), shift (day and night) and training time (up to two years and more than two years);

♦Knowledge of the professionals: dichotomized answers of the questions.

For the interpretation of statistical significance, the association of the variables of the characteristics of professional and variables related to knowledge through statistical test χ^2 (chi-square Person) were analyzed and adopted a confidence interval of 95%. Considering the significance level of 5%, the data were statistically significant at $p < 0.05\%$.⁸

The research was conducted according to the rules of Resolution no. 466/2012 of the

National Council of health⁹ contemplating the ethical aspects of the research with human subjects and obtaining approval of the research project by the Federal University of Goiás (UFG) Research Ethics Committee, with the Opinion paragraph. 398,080.

RESULTS

When considering the class of professionals who perform endotracheal aspiration, there is greater number of technical level professionals to higher education professionals. In relation to gender, there is a predominance of females (80.8%) compared to males in the ICU.

Most professionals have 40 years old or less. The average age of the respondents was 33.77 years old, with a mean of 33.50 and standard deviation of 7.38. As the time working in the ICU, 65.4% of the study population works in the ICU for less than two years, with a mean of 2.38 years, median 02 years and standard deviation of 2.09.

Most professional participants of the research work in the day shift (53.8%). Considering the specialization in the worker, 65.4% had specialization and for the technical level, the improvement to work in an intensive care was considered a kind of specialization.

Table 1 shows the profile of the research participants, divided into absolute and relative frequencies, considering the variables: gender, age, occupational class, shift, specialization and time of performance. Table 2 shows the descriptive statistics of age and time in the ICU, with mean, median and standard deviation.

Table 1. Distribution of professionals who perform endotracheal aspiration according to gender, age, occupational class, shift, specialization and time in the ICU. Jataí-GO, Brazil, 2013 (n = 26).

Variable	n	%
Gender		
Male	5	19,2
Female	21	80,8
Age Group (yearsold)		
Untill 40 yearsold	22	84,6
> 40	4	15,4
OccupationalClass		
Nurse	6	23,1
Phisiotherapist	5	19,2
Nurse Thecnician	15	57,7
Shift		
Day	14	53,8
Night	12	46,2
Specialization/Improvement		
Yes	17	65,39
Time in ICU		
Untill 02 years	17	65,4
> 02 years	9	34,6

Table 2. Descriptive variables statistics of age and time in the ICU of the Professionals. Jataí-GO. 2013.

Descriptivestatistic	Variables	
	Age	Tim in the ICU
Mean	33,77	2,38
Median	33,50	02
Standard deviation	7,38	2,09
Minimum	23	0,5
Maximum	52	12

In the washing of hands, there was unanimity in the responses: all professional said washing hands before and after aspiration.

To identify the need for aspiration, professionals gave more thanone alternative proposal, with the majority of responses involving auscultation, however, 26.9% of professionals indicated that the presence of visible secretions and respiratory distress are the main factors for determining whether or not the aspiration is performed.

It is of utmost importance to use PPE for the technique of tracheobronchial aspiration due to contamination risks of offering to patients and staff. When asked about the type of gloves used during the procedure, the majority of participants (80.8%) answered that they use sterile gloves. As for the other PPE used during aspiration, 16 professionals questioned (61.5%) said they use them in their entirety, as follows: glove, mask, cap and goggles. Others use one of the three PPEs to perform aspiration, i.e., using mask, goggles and cap (3.8%); mask, goggles and gloves (11.5%); gloves and mask (11.5%); gloves and goggles (3.8%).

As regards the help of other professional to carry out the aspiration, 42.3% said do not always perform with other professional. Only 15.4% of respondents answered that the aspiration is performed along with other professional.

The saline infusion was the prevalent behavior in the answers of respondents (84.6%) in the presence of thick secretions, followed by instillation of distilled water (11.5%) and saline infusion associated with humidification of inspired gases (3.8%).

Before aspiration, 12 (45.6%) participants stated that adjust the FiO₂ to 100%, 11 (41.8%) responded that they do not make that adjustment. The remaining participants (11.4%) had never heard of such action. After the procedure, 02 participants indicated that they have forgotten to return to FiO₂ according to the value prescribed before the procedure.

During aspiration, 46.2% of participants responded that introduce the probe in a circular way. The withdrawal is made by the

majority of professionals (65.4%), also through circular movements.

The probe used to aspirate the patient is used once by 25 (96.2%) of the participants, another participant stated that the same probe is used up to three times to realize the aspiration in the same patient.

As to receiving specific training, 92.3% of professionals were trained on performing aspiration and 58.3% attended training at work, where, according to the local nurse, it was offered to all, however, many refused to participate. Other professionals were trained in educational institution and/or during specialization.

As to professional satisfaction, it was asked about the work in ICU, the choice of the profession and the realization of aspiration. Referring to work in ICU, 100% of participants said they were satisfied working in the area. On the occupation choice, 19.2% of participants reported being dissatisfied by the choice of their profession, with 04 participants justifying this dissatisfaction due to lack of recognition, union and ethics. In the aspiration, 76.9% of participants reported having satisfaction in performing the procedure, because it enables the patient's condition improves. The others justified the lack of satisfaction in the aspiration considering that the procedure is only a physiotherapist activity, which causes nausea and that there is not always available equipment.

In the tables below there are the distributions of variables to characterize the study population according to questionnaire responses, in absolute and relative frequency, and the value of acquired significance according to χ^2 test.

Table 3. Distribution of professionals who perform endotracheal aspiration answering the questions regarding handwashing (before and after), need for aspiration (presence of secretion and others) and behavior in the presence of thick secretions (using distilled water and other behaviors). Jataí-GO, Brazil. 2013.

Vaables	Handwashing			Need for aspiration					Thicksecretions				
	BeforeandAfter			Secretions		Other			AD		Outra		
	n	%	p	n	%	n	%	P	n	%	n	%	p
Gender													
Female	21	80,8	*	18	69,1	03	11,5	0,029	20	76,8	01	3,8	0,619
Male	05	19,2		02	7,7	03	11,5		05	19,2	00	-	
Age													
Untill 40 yearsold	22	84,6	*	19	73	03	11,5	0,007	21	80,6	01	3,8	0,664
>40 yearsold	04	15,4		01	3,8	03	11,5		04	15,3	00	-	
Class													
Highereducation	11	42,3	*	10	38,4	01	3,8	0,147	11	42,2	00	-	0,382
Technician	15	57,7		10	38,4	05	19,2		14	53,7	01	3,8	
Shift													
Day	14	53,8	*	11	42,2	03	11,5	0,829	14	53,7	00	-	0,271
Night	12	46,2		09	34,5	03	11,5		11	42,2	01	3,8	
Specialization													
Yes	17	65,4	*	14	53,7	03	11,5	0,366	17	65,3	00	-	0,161
No	19	34,6		06	23	03	11,5		08	30,7	01	3,8	
Time in ICU													
Untill 02 years	17	65,4	*	13	49,9	04	15,3	0,940	16	61,4	01	3,8	0,458
>02 years	09	34,6		07	26,9	02	7,7		09	34,5	00	-	

AD: use distilled water * association without calculating significance.

Table 4. Distribution of professionals who perform endotracheal aspiration answering of the questions relating to the prior increase of FiO₂ (yes or no), forgetting to return to prescribed FiO₂ (yes or no), insert the probe mode (linear and circular), taking probe (linear and circular). Jataí-GO, Brazil. 2013.

Variables	Increaseof FiO ₂					Insertingtheprobe				
	Yes		No		p	Linear		Circular		p
	N	%	n	%		n	%	n	%	
Gender										
Female	11	42,2	10	38,4	0,192	11	42,2	10	38,4	0,033
Male	01	3,8	04	15,3		00	-	05	19,2	
Age										
Untill 40 yearsold	10	38,4	12	46	0,867	10	38,4	12	46	0,446
>40 years	02	7,7	02	7,7		01	3,8	03	11,5	
Class										
Higherlevel	09	34,5	02	7,7	0,002	07	26,9	04	15,3	0,059
Technician	03	11,5	12	46		04	15,3	11	42,2	
Shift										
Day	08	30,7	06	23	0,225	05	19,2	09	34,5	0,462
Night	04	15,3	08	30,7		06	23	09	34,5	
Specialization										
Yes	11	42,2	06	23	0,009	07	26,9	10	38,4	0,873
No	01	3,8	08	30,7		04	15,3	05	19,2	
Time in the ICU										
Untill 02 years	05	19,2	12	46	0,019	06	23	11	42,2	0,320
>02 years	07	26,9	02	7,7		05	19,2	04	15,3	

Table 5. Distribution of professionals who perform endotracheal aspiration answering to questions concerning the use of the probe (once to three times), training on aspiration (at School or at work), use of PPEs (recommended and not all the recommended). Jataí-GO, Brazil. 2013.

Use of probe					Treining on aspiration					Personal protective equipment					
Variáveis	Once		Three times		At school			At work		Recommended		Not all of them			
	n	%	n	%	P	n	%	n	%	p	n	%	n	%	p
Gender															
Female	21	80,6	00	-	0,037	16	61,4	05	17,2	0,463	17	65,3	04	15,3	0,318
Male	04	15,3	01	3,8		03	11,5	02	7,7		03	11,5	02	11,5	
Age															
Untill 40 years old	21	80,6	01	3,8	0,664	16	61,4	06	23	0,925	17	65,3	05	19,2	0,921
>40 years	04	15,3	00	-		03	11,5	01	3,8		03	11,5	01	3,8	
Class															
Higher level	10	38,4	01	3,8	0,234	07	26,9	04	15,3	0,353	11	42,4	00	-	0,017
Technician	15	57,6	00	-		12	46	03	11,5		09	34,5	06	23	
Shift															
Day	14	53,8	00	-	0,271	12	46	02	7,7	0,117	12	46	00	-	0,250
Night	11	42,2	01	3,8		07	26,9	05	19,2		08	30,7	06	23	
Specialization															
Yes	16	61,4	01	3,8	0,458	13	49,9	04	15,3	0,592	16	61,4	01	3,8	0,004
No	09	34,5	00	-		06	23	03	11,5		04	15,3	05	19,2	
Time in the ICU															
Untill 02 years	16	61,4	01	3,8	0,458	13	49,9	04		0,592	13	49,9	04	15,3	0,940
>02 years	09	34,5	00	-		06	23	03	11,5		07	26,9	02	7,7	

*association without calculation of significance

To identify the need for aspiration, a statistically significant association between the presence of secretion in tracheal tube and females ($p = 0.029$) and the first variable, and age 40 years old ($p = 0.007$). Besides this association of females, the variable was significant at p value associated with the introduction of the probe in linear mode ($p = 0.033$) and use of the probe once ($p = 0.037$).

The variable 'specialization' showed considerable level of significance when associated to the help of another professional ($p = 0.046$), increased FiO_2 before the procedure ($p = 0.009$) and use of personal protective equipment (PPE) recommended ($p = 0.004$).

The use of PPE recommended also showed statistically significant association when related to higher education professionals ($p = 0.033$).

Regarding the increase of FiO_2 before the procedure, there was considerable level of significance when variables associated with 'up to 02 years of training time' ($p = 0.019$) and 'technician professional' ($p = 0.002$) related to not prior hyper-oxygenation of the patient.

There was no significance when calculating the variables associated with the characterization and frequency of handwashing and satisfaction in working in the

ICU area, as the washing of hands before and after aspiration and satisfaction of professionals is a constant in the responses.

DISCUSSION

Endotracheal aspiration is one of those responsible for the high rate of complications of ICU patients, and is a challenge for those who do intensivism prevent and control their disorders. To assess the knowledge of health professionals in the ICU on this technique is not easy because of the many variables that are involved in understanding and teaching process. However, the constant pursuit of knowledge for a higher-quality care is important.

It was observed in this study, the predominance of females in the performance of activities of care, both the technician level as the higher level. This finding is supported by studies that have identified a predominance of females in the nursing performance in ICU.¹⁰⁻¹¹ This is because of the strong association of women naturally for care, established since the emergence of the profession.

The significance level of the variable 'female' with some behaviors related to endotracheal aspiration (identifying the need for the presence of aspiration of secretions, insert the probe straight and fast and use the

probe once) had relevance. This can be justified due to the prevalence of females in the care of critically ill patients found in the unit of study, in which most of the procedures for the technique is done by these professionals.

With regard to the introduction of the linear probe and quickly by most professional women, contradicts some studies in which the authors explain that the introduction and withdrawal of the probe should be done in a spiral shape to bring greater possibility of removing the secretions adhered on the tube wall.¹²

When the level of training was associated with responses to the questionnaire, the higher level professionals were significant for established practice, since the average level has not complied with some important for the realization of the technical background as increasing FiO₂. This shows significance, in this research, who having higher level best follows the recommendations, have a greater knowledge and greater adherence to standards, concluding that the technician level should have oversight and massive participation in training and continuing education programs targeting given to improving and greater adherence to recommendations for the implementation of aspiration assistance.

In a study aimed to know the criteria for identifying the need for aspiration used by nursing staff, it was observed that most of the procedures were performed by technicians, corroborating the present study.³ In addition to this, another study also found higher number of technical professionals performing the procedure.¹³

The nursing staff in the ICU consists mostly for technician professional.¹⁰⁻¹¹ Moreover, the fact that these professionals perform aspiration is justified due to the performance of many activities by nurses, mainly administrative, with some procedures that should be performed by him given to the technical team. Another important point to be noted is that COFEN Resolution No. 293/2004 states that 52-56% of the nursing staff for intensive care should be comprised of nurses, which is not really the research environment.¹⁴ However, the RDC 26 of May 11th 2012 provides that, as a requirement for operation of the Intensive Care Units, there shall be at least one clinical nurse for every ten beds or fraction at every shift, and at least one nursing technician for every two beds at every shift, including a nursing technician for ICU for welfare support services

at every shift, then the researched unit will be within the current rules.¹⁵

In the analysis of the study, the fact that the professional has specialization showed significance when associated with conduct established by AARC5, as increasing FiO₂, use of recommended PPE and the help of another professional when performed the procedure. A study of nurses,¹² it was observed that 85.5% of the techniques used were incomplete and that 14.3% were disabled, which may be influenced by factors such as lack of specific training on the subject, lack of scheduled training and motivation for auto-preparation needed throughout the profession. Several authors also agree that during the aspiration technique, it has to be always with two professionals reducing the risk of accidents and infections.^{12,16} This fact shows that the qualification influences the quality of care.

The association of professionals with up to forty years and identifying the need for the presence of aspiration of secretions statistically significant relevance. This significance can be explained by the age profile of the study population, which has an average of 33.77 years old. Another study showed the profile of the ICU team as young adults and middle age, confirming this research.¹¹ This finding suggests that the experience in care is a fact that enhances the quality of care, reducing the predisposition of patients to infections and respiratory failure to properly identify the need for aspiration.

Another association that is statistically significant between the time in the ICU less than two years and no increasing of FiO₂. Although professionals to present adequate scientific knowledge to the procedure, they had no practical competence to perform it, showing that the short time in intensive care influences the execution of the procedure correctly, that the practice produces better results than theoretical knowledge.¹² Another study indicates disagreement with the idea and makes it clear that the achievement of a specific technique such as this one, must be done by a professional prepared and qualified, irrespective of length of training.¹³

There was no significance when the variables were associated of characterization and the fact of having received professional training on aspiration, since only some professionals said they had received training in the workplace (26.9%). However, a study that examined the contributions of nursing for the prevention of ventilator associated pneumonia found that continuing health education is an important strategy that allows

the consequent professional autonomy to reflect the reality of work.¹⁷ It is observed through national studies dealing with health education in hospital infection control in the ICU, which, through continuing education, quality of care is guaranteed.¹⁸

Hand washing showed unanimous answer in the questionnaire: all professionals reported to do it before and after aspiration, but it was not observed if the technique used for hand washing was within the recommended by ANVISA.¹⁹ This fact is proven by the study, which also applied questionnaire to ICU professionals and found that handwashing was performed as recommended by the *Center for Disease Control and Prevention* (CDC), i.e. where invasive procedures.^{13,20} The study also showed that hand washing was generally performed.¹⁶ However, the study contradicts what had been found in the research that 59% of professionals did not perform handwashing before aspiration.⁹

Professional satisfaction in working in intensive care was also another variable that had the unanimous answer: all professionals said they are pleased to be working in the area. This finding match with a study that examined the perceptions of work in the ICU by nursing staff and found that professionals working in the area are identified with it, once the patient shows improvement in clinical symptoms after providing appropriate care. The association of found data support the conclusion that the result of the interventions provided to the critically ill patient is a motivational factor that provides job satisfaction to intensive caregiver.¹³

CONCLUSION

The results allow us to conclude that the main factor that influences the way the technique is performed is professional development. Thus, in the presented study, not all professionals have received training on aspiration. Therefore, the need is found performing actions for continuing education, whether in the form of training, seminars, or training with these critical care professionals, to reduce erroneous practices techniques related to aspiration, avoiding further damage to the assisted patients and providing them better recovery regarding the correct technique, free of health risks, to promoting the adequacy of procedures for airway aspiration.

Among the limitations to the study, it is highlighted the data were collected and there was not direct or indirect observation, allowing the existence of false response bias

by the participating professionals. Although the research has covered all workers who performed the procedure and were within the inclusion criteria, it was small, a fact explained by the small size of the research institution, in which the number of ICU beds is lower.

It is suggested, in a second stage, the development of educational approach that guides the actions of health professionals in the ICU and including necessary for the prevention of complications resulting from incorrect practice of endotracheal aspiration strategies.

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