# CUIDADO DAMENTAL

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RESEARCH

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# Non-Pharmacological Management of Delirium From The Perspective of Nurses in an Adult Intensive Care Unit

O Manejo Não Farmacológico do Delirium Sob a Ótica de Enfermeiros de uma Unidade de Terapia Intensiva Adulto

El Manejo no Farmacológico del Delirium Bajo la Óptica de Enfermeros de una Unidad de Terapia Intensiva Adulta

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### **ABSTRACT**

**Objective:** The study's main purpose has been to identify non-pharmacological measures in the management of delirium described by nurses of an adult Intensive Care Unit (ICU). Methods: It is a descriptive exploratory study with a qualitative approach that was performed with nurses working at an ICU from a public hospital in Brazil. Data were collected through a semi-structured interview and analyzed by the Thematic Content Analysis. Results: Nurses have knowledge about delirium and bring several non-pharmacological measures used in prevention and management. They underline the importance of knowledge about the subject, to identify and prevent symptoms, and also the presence of their relatives. The difficulties cited to implement these measures are barriers of physical structure, material resources and lack of information on this topic. Conclusion: It is essential to carry out permanent education activities regarding the addressed matter, furthermore, it is recommended to adopt daily scales aiming to monitor delirium.

**Descriptors:** Delirium, Critical Care, Nursing Care.

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#### **RESUMO**

Objetivo: Identificar medidas não farmacológicas no manejo do delirium descritas por enfermeiros de uma UTI adulto. Método: Estudo descritivo exploratório de caráter qualitativo, realizado com enfermeiros de uma UTI de um hospital público do Brasil. Os dados foram coletados por meio de entrevista semiestruturada e analisados pela Análise de Conteúdo do Tipo Temática. Resultados: Os enfermeiros têm o conhecimento sobre delirium e trazem diversas medidas não farmacológicas utilizadas na prevenção e manejo. Ressaltam a importância do conhecimento sobre o tema, para se identificar e prevenir sintomas, e também a presença de familiares. As dificuldades citadas para implementação destas medidas são: barreiras de estrutura física, de recursos materiais e falta de informação sobre o tema. Conclusão: Destaca-se a importância da realização de atividades de educação permanente sobre o tema e recomenda-se a adoção da aplicação de escalas diárias para monitorar o delirium.

Descritores: Delirium, Cuidados Críticos, Cuidados de Enfermagem.

#### **RESUMEN**

Objetivo: Identificar medidas no farmacológicas en el manejo del delirium descritas por enfermeros de una UTI adulto. Método: estudio descriptivo exploratorio de carácter cualitativo, realizado con enfermeros de UTI en hospital público de Brasil. Los datos fueron recolectados por medio de entrevistas semiestructuradas y analizados por Análisis de Contenido del Tipo Temática. Resultados: Los enfermeros tienen conocimiento sobre delirium trayendo diversas medidas no farmacológicas utilizadas en la prevención y manejo. Resaltan la importancia del conocimiento del tema, para identificar y prevenir los síntomas, y también la presencia de familiares. Las dificultades citadas para la implementación de estas medidas son: barreras de estructura física, de recursos materiales y falta de información sobre el tema. Conclusión: Se destaca la importancia de la realización de actividades de educación permanente sobre el tema y se recomienda la adopción de la aplicación de escalas para monitorear el delirium.

Descriptores: Delirio, Cuidados Críticos, Atención de Enfermería.

# INTRODUCTION

Delirium is a disorder of consciousness and attention with alteration of cognition and fluctuating course, being a common condition in Intensive Care Units (ICU). This condition is associated with complications that prolong hospitalization and increase mortality and morbidity. The ICU environment can contribute to its development with the characteristics of isolation, deprivation of sunlight, noise, lack of orientation in time and space, among others.<sup>1</sup>

The prevention of delirium is recognized as the most effective way of reducing its incidence. In relation to the presence of risk factors, most of which are modifiable, it is important to outline measures aimed at minimizing them, such as: early mobilization, correction of hydroelectrolytic disorders, removal of invasive devices, reduction of mechanical ventilation time, improvement of sleep quality, use of glasses or other prosthesis if necessary, among others.<sup>2</sup>

Intensivist nurses have a fundamental role in the recognition of this pathology, since they have greater

contact with the patient and can observe the fluctuations of attention, level of consciousness and cognitive function. Early detection, monitoring, and symptom management are fundamental for the clinical course of delirium.

The main objective of this study is to identify non-pharmacological measures in the management of delirium described by nurses of an adult ICU. The specific objectives are to identify the facilitating and difficult aspects of the use of these measures.

Hence, the following research question guides this project: What non-pharmacological measures in the management of delirium are identified by the nurses working at an adult ICU?

# **METHODS**

This is an exploratory descriptive study with a qualitative approach, which allows the researcher to understand the data being collected, aiming to achieve the apprehension of the whole.<sup>4</sup> The research had as scenario an ICU of a public hospital in the *Rio Grande do Sul* State, which serves adult clinical and surgical patients and from various regions of the state.

The subjects were nurses of the ICU, being the inclusion criteria: nurses who have been directly involved in assistance for three months or more; and the exclusion criteria: nurses who were on vacation or on some kind of medical leave. We chose to use the theoretical data saturation criterion, therefore, no previous sample size was established.<sup>5</sup> The initial subjects were randomly selected, initially, 17 professionals, this draw was performed to order the interviews, which aided in the realization of the invitation to the subjects, but it is emphasized that the limitation of the sample was the number of participants necessary for the theoretical data saturation.<sup>5</sup>

Datacollectionwasperformed through a semi-structured interview composed of six open guiding questions with the following topics: the nurse's understanding of delirium, the non-pharmacological measures used in the management of delirium, which measures they use in their daily practice, and which facilitates and makes it difficult to use them. The interviews took place from April to July 2017. They had a maximum duration of 10 minutes, being performed in reserved environments with the aid of a digital recorder and then transcribed.

Data analysis was performed according to the Thematic Content Analysis proposed by Bardin.<sup>6</sup> Data were coded and categorized according to the methodology.

The project was forwarded to the Research Ethics Committee of the *Conceição* Hospital Group and approved by the Legal Opinion No. 1,942,880 and the *Certificado de Apresentação para Apreciação Ética (CAAE)* [Certificate of Presentation for Ethical Appreciation] No. 62957616.7.0000.5530. The subjects expressed their

agreement to participate in the study by signing the Free and Informed Consent Term, respecting the Resolution No. 466/2012 of the National Health Council.<sup>7</sup>

The recordings and other documents related to the research will be destroyed after five years of the interpretation of the information according to the Law No. 9.610/1998 that consolidates the legislation on copyright.8

# **RESULTS AND DISCUSSION**

Twelve nurses from all the work shifts participated in the study, of which seven nurses with experience in an adult ICU from seven to 14 years old and five nurses with experience from five months to four years.

Considering the data thematic analysis, the four categories appeared as follows: Meaning of delirium; Non-pharmacological measures in the management of delirium; Enabling aspects of the use of non-pharmacological measures in the management of delirium; and, Difficulties aspects of the use of non-pharmacological measures in the management of delirium.

In the first category *Meaning of delirium*, the nurses expressed what this condition is for them, demonstrating that some of the subjects have the perception that delirium is a pathology, which presents signs and symptoms, being related to the length of stay in the hospital and also cite the subtypes:

[...] there are signs and symptoms that the patient demonstrates for several reasons, one of which is the prolonged hospitalization time that favors them to show disorientation, disconnected speech, and finally, it can be a hypoactive, hyperactive delirium [...] (Subject 3)

[...] Delirium is a neurological disorder, plus an organic failure [...] which is affected by the patient: attention, thought organization and sensory fluctuation [...] (Subject 8)

Delirium is a change in the patient's sense of smell. Elderly patients have a greater propensity to develop it in the ICU [...] delirium is when the patient does not respond correctly, they think they are in another place, it may be hyperactive delirium or hypoactive delirium. In the hyperactive delirium, the patient may be agitated, aggressive, and the hypoactive delirium occurs when they have that lower sensorium and also do not respond when requested [...] (Subject 4)

A strong association between delirium and mental confusion emerged from the nurses' speeches, showing that for them these terms are practically equivalent and that this is the term that best defines delirium:

[...] I think it confuses a lot between delirium and confusion, I sometimes also have doubt, but I call delirium

when the patient has been here (in the ICU) for a while and they start to present confusion picture. (Subject 2)

It is the state in which the person cannot respond coherently to things, for example, a mental confusion, for now, that not always one hundred percent of the time they stay in delirium [...] (Subject 5)

Nurses demonstrate an adequate understanding of delirium, associating it with mental confusion, and even describing its subtypes. The early identification of this pathology is very important to intervene in its course and also to program its prevention. Knowing the meaning of delirium is the first step for non-pharmacological management to be implemented and valued by the professional.

These statements resemble the definition of delirium, which is an acute cerebral dysfunction characterized by a transient and fluctuating state of consciousness changes, along with cognitive compromise, which often occurs in the ICU, affecting up to 80% of patients.<sup>2</sup> Delirium is characterized by a disturbance of consciousness added to the lack of attention accompanied by acute change of cognition, without considering preexisting conditions of dementia, being developed in a short period of time, with fluctuation along it and there is evidence, from history, physical examination or laboratory findings, that the disturbance is due to direct physiological causes of a general medical condition.<sup>9</sup>

Delirium can present in three forms: hyperactive, hypoactive or mixed. Patients with the hyperactive subtype may be restless, disoriented, and hallucinate, which is recognized by the health team earlier. In the hypoactive subtype, the patients present apathetic, slightly confused and disoriented, being confused with depression or dementia, being present in up to two-thirds of the patients. The mixed subtype is characterized by fluctuation between the types of the disease manifestation. The hypoactive has a worse prognosis when compared to the hyperactive, since it implies an extension in the use of mechanical ventilation.<sup>2</sup>

Thus, in the first category the nurses demonstrate that they have the knowledge about what delirium is, sometimes not describing it with the exact words of the bibliographies, but bringing concepts that they believe to be part of its definition, including identifying its main subtypes, however, did not cite the mixed subtype, which is the confluence between the hyperactive and hypoactive subtype.

In the second category *Non-pharmacological measures* in the management of delirium, nurses cited what measures they identified and which they use in their daily practice, the most cited measure was verbal guidance in time and space along with auxiliary devices to this location, as clocks, televisions, windows, among others:

[...] situate the patient in time and space [...] we have clocks with outdated hours in the box and we want the patient to be situated, there are many boxes here that have no window, always the same vision, and you start like this, to lose the notion of time and space [...] (Subject 2)

[...] try to locate the patient, talk about where they are, the day that is, the time [...] when it is day to leave everything open, when it is night, leave only a light on [...] (Subject 5)

Verbal guidance, use of televisions to guide, clock, [...] well-lit beds with window, presence of family members inside the box to help guide the patient [...] (Subject 6)

The reorientation measures used by the nursing team present good results in reducing the occurrence of delirium. It is composed of calling the patient by name, guiding them in relation to the day, date, time, place, answering doubts and stimulating memory, associated with the supply of books, magazines, and presence of clock in the beds, are some effective measures to reduce the occurrence of this condition.<sup>10</sup>

The second most cited measure was the presence of the relatives in the ICU together with the non-use of mechanical restraint, necessary only when the safety of the patient is at risk:

[...] not to leave the patient restrained, try to leave them quiet, if there is a patient who is very agitated, we ask to call a relative so that they can stay with this patient, so that the patient can feel more secure [...] (Subject 1)

[...] I think contention is something that has to be evaluated, if it is a patient that has some risk, they have to be contained, but if they are a patient that does not have any device, it is better that they are not contained, that contention goes to end, I think, making the delirium issue worse [...] the family, you try to leave some family member, extend the visiting hours, so that this family member stays with the patient [...] (Subject 4)

It is noteworthy the participation of the family in the reorientation process, since they are people with whom the patient has greater coexistence and end up bringing them, more easily to reality. In the day by day of the intensive therapy, mechanical restraint ends up being used when the patient is agitated and presents a risk to themselves or others. For this reason, it is fundamental that the nursing team is sensitized that mechanical restraint should only be used when it is the only possible way to prevent damage. Nonetheless, the methods for preventing and managing the causes of psychomotor agitation should not be overlooked,

using strategies of effective communication, reorientation, reduction of noise and prioritization of comfort.<sup>11</sup>

It was also mentioned the importance of the patient's sleep quality to prevent delirium:

[...] the planning of the patient's night, the rest of this patient with the reduction of light, medication for them to sleep [...] there are patients who spend the night awake, so I think this also triggers sleep deprivation, which is an important component for delirium [...] (Subject 1)

[...] during the night, that the patient can sleep. Turn off the lights, so they can establish this schedule that we have to stay awake during the day and at night to sleep and try to reduce noise [...] (Subject 4)

Adapting and organizing medication schedules and procedures in order not to disturb the patient's sleep period are important measures to prevent the patient's deprivation. Noise reduction, minimization of exposure to artificial light at night, a pleasant ambient temperature, limitation of social isolation and mobility restriction are measures that may aid in the management of delirium, both in the prevention and in the course of this condition.<sup>12,3</sup>

The non-pharmacological measures used to manage delirium that emerged in the nurses' speeches were: verbal orientation in time and space, as well as devices that assist in this location such as television, clock, windows with incidence of sunlight, restrict the use of mechanical restraint, avoid sleep deprivation taking care of the luminosity and noise in the environment and to facilitate the presence of the familiar with the patient. This demonstrates that in addition to nurses knowing the pathology, they also employ techniques and objects to assist in non-pharmacological management.

For the development of delirium there are several intrinsic risk factors such as: age greater than 70 years, institutionalization, visual or auditory loss, history of depression, dementia, heart failure, stroke, epilepsy, renal and hepatic disease, HIV infection, consumption of alcohol in the previous month, use of psychotropic drugs and malnutrition. Acute conditions such as the consumption of illicit drugs, metabolic alterations, sepsis, among others, are also risk factors. Environmental factors are very important in the development of delirium, many are found in the ICU, such as anticholinergic, sedative and analgesic medications, physical restraint, use of invasive devices, deprivation of sunlight, sleep and social interaction.<sup>2</sup>

Non-pharmacological management aims to act on modifiable risk factors. Some general measures recognized in management are: maintaining adequate hydration and nutrition of the patient, maximizing oral administration, stimulating early mobilization by minimizing the use of physical restraints and restrictions for catheter use, maintaining adequate bowel movement, use analgesia when necessary, improve sleep quality, and minimize the incidence of invasive procedures.<sup>14</sup>

Early mobilization is important to maintain muscle activity, passive or active, minimizing atrophy, decreasing days of mechanical ventilation and length of stay in the ICU.13 This item was cited only by one participant, perhaps because it is something more of the practice of physiotherapists in the reality of the study. It is proven that ICUs adopting delirium prevention protocols that include early mobilization present better outcomes for patients. The form used to perform early mobilization depends on the degree of severity of the patient's pathology and can be active, such as leaving the bed and walking, or passive, through muscular movement exercises. But the most important thing is for the health team to decide together what kind of mobilization the patient is able to perform. Nurses should actively participate in this decision and also question the obstacles that prevent mobilization, so, through critical thinking, help in the prevention of delirium.15

Participants brought several non-pharmacological measures in the management of delirium; however the removal of invasive devices, adequate intestinal transit, adequate analgesia and sedation, adequate hydration and nutrition were not mentioned, perhaps because they were actions inherent to nursing care or perhaps because they are actions prescribed by physicians, such as removal of invasive equipment and analgesia and sedation. Nursing care is also important to maintain control of the patient's physiology, as organic dysfunctions can also cause delirium.

In the third category *Enabling aspects of the use of non-pharmacological measures in the management of delirium*, the subjects bring what, for them, facilitates the application of non-pharmacological measures in their day by day. According to the nurses, knowledge about delirium is one of the factors that contributed to the use of these measures:

[...] I think the professional has to know that the patient is presenting some sign or symptom of delirium and try, first with these non-pharmacological treatments. And what facilitates me is the knowledge, knowing what I have to do when the patient is presenting this state. (Subject 7)

To know what delirium is, to know how the incident happens in intensive care, and to know what the benefit is, to know that it reduces mortality [...] it is knowledge itself, and obviously, goodwill and interest, because it has people who know and do not have to know what delirium is, what it is, and what measures can be taken. (Subject 8)

Intensivist nurses can and should improve the quality of patient care by early recognition of the risk factors and symptoms of delirium, using observation and the application of specific scales for evaluation.<sup>13</sup> Nursing actions in relation to the hospital environment may be a preventive factor for the development of delirium. Care with the environment is fundamental, making it more welcoming and familiar if it diminishes the misinterpretations and confusions that can occur with the patients.<sup>13</sup>

To assist in the early identification of one of the most used scales, and that can be applied by any professional, it is the Confusion Assessment Method (CAM), in this instrument, delirium evaluation is performed in two stages, the first one evaluates sedation through of the Richmond Sedation and Agitation Scale, and according to the score obtained on this scale, a second evaluation step is used, which is the direct evaluation, where the presence of the dysfunction is assessed based on the following characteristics: 1) change acute mental state or floating course of the same, 2) lack of attention, 3) disorganized thinking and 4) altered level of consciousness. For the patient to be considered as presenting delirium, the presence of the first and second characteristics added to the third or fourth mentioned in the above order should be present.<sup>9,11</sup>

Nurses provide direct care to the patient and are in a better position to apply delirium scales and modify risk factors. These scales are a quick way of identification that alert the professionals about the development of this pathology so that interventions are implemented. The main barriers encountered by nurses for the use of these instruments are the difficulty of evaluating intubated or sedated patients, the complexity and the lack of knowledge about the scales, so it is extremely important the permanent education on the subject. Early identification and the removal of possible risk factors may prevent their onset and improve outcomes.<sup>3</sup>

For the nurses, the presence of the relative with the patient is an important factor that assists in the management of delirium and its prevention:

Before this familiar (enter the patient's room), look this happens to your relative, they are different from what they were at home, so, you will see that they will speak some things that do not agree, right, you also guide this familiar so that they can help [...] (Subject 1)

[...] which facilitates [...] I think the ICU staff is changing, we are allowing more things for the patient, like the extended visit. (Subject 10)

The family member who will accompany the patient or will visit him or her should be instructed to talk to their hospitalized family member, assisting in orientation in time and space. The family presence is important in the prevention of delirium also due to emotional support. Delirium can be prevented by creating a more familiar environment for the patient, both by promoting the

presence of known persons as well as by bringing to them objects of daily life.<sup>13</sup>

In this category, the aspects that make it easier for nurses to use non-pharmacological measures in the management of delirium are the importance of knowledge so that symptoms can be identified and prevented, as well as the presence of relatives to assist the patient in this process. It should be emphasized that knowledge about the subject is fundamental, since without it is not possible to carry out the measures for prevention and management, for that reason the importance of the diffusion of this theme in activities of education and professional improvement, besides the application of specific scales to base care.

The fourth category Difficulties aspects of the use of non-pharmacological measures in the management of delirium brings what, for nurses, are the barriers faced by them in daily practice for the prevention and management of delirium. They bring the importance of nursing staff orientation on the subject:

The nursing technicians themselves sometimes do not know how to handle the patient with delirium, sometimes (the patient) is aggressive and agitated, people do not understand that this is due to delirium, so sometimes the patient may even be coerced [...] sometimes you will talk, explain to the employee, but not always they will act in the most correct way. (Subject 12)

I think the main one of all is when the team is also oriented, especially when the team of nursing technicians are aware of these measures so they understand why we are doing or why we are asking, why if they do not collaborate, it becomes a more difficult process [...] (Subject 9)

Nursing professionals are the ones who remain most of the time beside the patient, so it is important to raise awareness about the pathology and non-pharmacological measures in the management of delirium. It is necessary to implement periodic educational activities on the subject, in order to increase the dissemination of knowledge, especially for the early detection of signs and symptoms, as this helps to improve the prognosis and reduce adverse events.<sup>10</sup>

It is known that delirium causes an increase in nursing workload, as well as an anxiety factor for the team, because it causes fear that the patient may suffer some adverse event, such as dropping or removal of invasive devices. Therefore, there is a tendency to always ask for the use of sedatives and antipsychotics, but in the long term the use of some mediations may even exacerbate the disease process.<sup>10</sup>

The most commonly used pharmacological measure for the treatment of delirium is the administration of haloperidol (first generation antipsychotic), which should be reserved for patients with a high degree of agitation or who are at risk of harm, and the lowest dose should be used and for a short time. Prophylactic antipsychotic administration is indicated in the elderly postoperatively, but there is no evidence of its effectiveness in critically ill patients.<sup>16</sup>

The development and exacerbation of delirium may be related to the use of drugs in 12% to 39% of cases, drugs commonly used in intensive care, such as propofol, meperidine, morphine, anticholinergics, antidepressants, corticosteroids, also showed potential for delirium development. In this way, the nurse can act in the reduction of the use of sedative drugs in minimum levels, so that they are sufficient for the comfort and safety of the patients, leading to the reduction of the need to use mechanical containment, and thus, enabling the early mobilization, which contributes to the better clinical evolution of patients.<sup>17</sup>

The nurses also brought the difficulties faced by them regarding the physical structure and materials:

[...] from the practical part, there are missing televisions, there are missing windows, to tell what is day and what is night for this patient, then, I think every ICU box should have a television for them to look at a newspaper [...] What is day and what is night? [...] (Subject 11)

[...] physical structure and material, we have few box with window, we have box very badly planned, small sometimes [...] the lack of availability of televisions [...] (Subject 3)

The subjects emphasized the lack of windows in the beds and the lack of televisions for all the patients. The windows provide the incidence of sunlight, which is important for the patient to be able to see the light and to orient themselves when it is day and when it is night. The use of television meets the orientation in time and space, as well as the approximation of familiar objects. The physical area of the unit can influence patients' outcomes in order to improve sleep and reduce the frequency of nosocomial infections. The existence of windows allowing a change in daytime lighting and the presence of clocks contribute to the improvement of the sleep-wake cycle and for orientation. 13

In this subcategory, nurses bring up again that the team's lack of knowledge about the subject makes it difficult for non-pharmacological measures to be used with greater security and ownership, and it is important to stress again the importance of health education actions. It is also observed that the barrier most strongly highlighted by the participants was the physical structure of the ICU and the lack of material resources, barriers that are independent of the care provided, that go beyond the assistance dimension and depart to the size of the financial resources.

### CONCLUSIONS

This study made it possible to identify the non-pharmacological measures in the management of delirium described by nurses of an adult ICU, as well as to identify the aspects that facilitate and the aspects that make it difficult to use them. From the perspective of these nurses, the measures that emerged from their speech were: verbal orientation in time and space as well as the devices that assist in this location, windows that can promote the incidence of sunlight, restriction of the use of mechanical restraint, avoid sleep deprivation and facilitate the presence of the relative within the ICU environment. The difficulties identified for the use of non-pharmacological measures were the barriers of physical structure, material resources and lack of information on the subject.

Nurses' knowledge about the factors that may precipitate the occurrence of delirium and the preventive measures of its occurrence should guide the planning of nursing care, as well as the establishment of effective communication with the patients and their relatives, as well as with the others members of the health team to obtain positive results on patients' outcomes.<sup>17</sup>

Nowadays, there is little data on the practices of nurses regarding the evaluation of delirium and the knowledge barriers they have. It is proven that the sensitivity for the recognition of this condition in the ICU is low without the use of screening tools, noting that early recognition of the condition is fundamental to the outcome and is in direct proportion to the health team's familiarity with its manifestations and, so education on this subject is the key to appropriate management.

It is important to carry out training and ongoing education activities on the subject, so that the whole team is aware of the care taken in the prevention and management of delirium. It is evident the need for a dialogue between the purchasing and maintenance of materials with the assistance team, so that the materials that the team needs to provide adequate assistance in the prevention of this condition are acquired. It is recommended to adopt daily scales to monitor delirium, since prevention leads to a better outcome for patients and a reduction of costs with hospital admission, as well as enhancing knowledge about the issue.<sup>18</sup>

This study was performed in a specific reality, so that its data cannot be generalized, but can contribute to other researches in other environments that deal with this same theme. It is recommended that future research be done on the perception of delirium with other professional categories and on the difficulties encountered in the application of screening scales.

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