SciELO Preprints

Status: Preprint has not been submitted for publication

Why extended visits in an adult ICU receive a more positive evaluation from patient relatives than from the health care team?

Claudia Eugênio Severigni, Emiliane Nogueira de Souza

DOI: 10.1590/SciELOPreprints.1106

This preprint was submitted under the following conditions:

- The authors declare that they are aware that they are solely responsible for the content of the preprint and that the deposit in SciELO Preprints does not mean any commitment on the part of SciELO, except its preservation and dissemination.
- The authors declare that the research that originated the manuscript followed good ethical practices and that the necessary approvals from research ethics committees are described in the manuscript, when applicable.
- The authors declare that the necessary Terms of Free and Informed Consent of participants or patients in the research were obtained and are described in the manuscript, when applicable.
- The authors declare that the preparation of the manuscript followed the ethical norms of scientific communication.
- The authors declare that the manuscript was not deposited and/or previously made available on another preprint server.
- The submitting author declares that all authors responsible for preparing the manuscript agree with this deposit.
- The authors declare that in the event that this manuscript has previously been submitted to a journal and being evaluated, they have received the journal's consent to make the deposit on the SciELO Preprints server.
- The submitting author declares that all authors' contributions are included on the manuscript.
- The authors declare that if the manuscript is posted on the SciELO Preprints server, it will be available under a Creative Commons CC-BY license.
- The deposited manuscript is in PDF format.
- If the manuscript is being reviewed and published by a journal, the authors declare that they have received authorization from the journal to make this deposit.

Submitted on (YYYY-MM-DD): 2020-08-17
Posted on (YYYY-MM-DD): 2020-09-03

Why extended visits in an adult ICU receive a more positive evaluation from patient relatives than from the health care team?

Claudia Eugênio[1]

Emiliane Nogueira de Souza[2]

1. RN, Ms, Hospital de Clínicas de Porto Alegre. ORCID: https://orcid.org/0000-0002-9470-8071
2. RN, PhD, University of Health Sciences of Porto Alegre (UFCSPA). ORCID: https://orcid.org/0000-0002-3873-4304

ABSTRACT

Intensive care units (ICUs) have adopted flexible visitation models as a way to favor care focused on the needs of patients and their families. OBJECTIVE: To evaluate an extended visitation model in an adult ICU from the perspective of family members and the health care team. METHODS: Cross-sectional study. This study was carried out with relatives of patients and with the health care team in a general ICU with an extended visitation model, in a hospital in the south of Brazil. The evaluation of the extended visitation policy was carried out using a 22-question survey. RESULTS: The answers of 95 accompanying family members and 95 members of the ICU care team were analyzed. Members of the nursing staff evaluated the changes in attitudes at work as negative (77.9%) , believe that the work gests interrupted (46.3%), and consider that it contributes little to decreasing anxiety and stress in the family. The accompanying family members evaluated the following elements more positively: decreased anxiety and stress in the family (91.6% versus 58.9%;p <0.01); family members get more information (86.3% versus 64.2%; p <0.01). CONCLUSION: Both groups evaluated as positive the majority of the aspects of the extended visitation model. However, the aspects that presented the greatest divergence in the evaluations, with a more negative perception from ICU health care team members, were the interference in their work, changes in attitudes at work, a lower

perception of the reduction in anxiety and stress in the family and patients, and discomfort caused by the presence of a relative.

RELEVANCE TO CLINICAL PRATICE

The nursing staff is able to improve the experience of families in the ICU environment, but they need support to overcome the barriers imposed by the implementation of a flexible visitation policy.

Key words: Intensive care units; visitors to patients; patient-centered care; nursing.

INTRODUCTION

Around the world, the visit to intensive care unit (ICU) patients traditionally takes place at restricted hours, due to the theoretical risk of increased physiological stress, damage to the organization of care of the critical patient, and the increased risk of infectious complications caused by a policy of flexible visitation (McAdam and Puntillo, 2013; Cabrera and Cunha, 2014; Ramos *et al.,* 2014). However, some ICUs are changing their restrictive visitation policy to an open or flexible visitation schedule, in order to favor care centered on patients' needs, increasing the satisfaction of the patients and their relatives (Vandijck *et al.,* 2010; Rosa *et al*., 2010; Puggina *et al*., 2014). However, some professionals show resistance and believe that the presence of a family member may lead to a greater workload of the nursing staff and to a greater disorganization of patient care (Ramos *et al.,* 2013; Giannini *et al*., 2013). Knowledge of the points in which professionals and family members agree and disagree regarding flexible visits can help optimizing a model that pleases patients, family, and staff, since the main interest is the recovery and the care of the patient in an extremely intensive environment (Goldfarb *et al*., 2017; Begonã and Tricas, 2012; Gerritsen *et al*., 2017; Cappellini *et al.,* 2017).

BACKGROUND

The hospitalization of a person in an ICU is characterized as a difficult time for the family, who can experience different feelings that involve not only the family member who is hospitalized but also his or her life perspectives, causing, in certain cases, emotional destabilization. The concept of the ICU as a place of gravity and death, coupled with the family's lack of preparation to deal with patients' hospitalization, leads some family members to experience feelings of uncertainty and impotence in the face of the inevitable and the unknown (Athanasiou et al., 2014).

Previous studies have shown that rigid times for the family's stay in the hospitalization unit, limited physical space, professionals unavailable to clarify the doubts of the relatives, lack of compassion toward the family's situation, and dissatisfaction with emerging needs are some of the barriers encountered in the interaction with the team in a highly intensive environment (Vandijck *et al.,* 2010; Huffines *et al.,* 2013).

The structure and norms of most hospitals have not been planned for caregivers and family members, i.e., the visiting hours, the limits of their responsibility for care, control of sleep, bathing, temperature, food, are organized according to hospital rules, not taking into account the habits and routines of patients and their families (Fumis *et al.*, 2015). ICU visitation has traditionally been carried out in a format that restricted the number of visitors in pre-established times, lasting, in general, from 30 to 60 minutes, during the different times of the day: morning, afternoon, and evening.

The visit of the relatives is positive for the recovery of ICU patients. In cases where messages or responses to patient care actions are not understood by the professionals, family members can assist in the interpretation and transmission of information between the patient and the staff (McAdam and Puntillo, 2013; Cabrera and Cunha, 2014; Ramos *et al.,* 2014; Vandijck *et al.,* 2010). .

If the family member stays in the hospital for longer, it is necessary to implement measures that provide satisfactory and comfortable conditions for their stay in the hospital environment. Among them, we highlight the preparation of the team to receive and inform these relatives, since the work routine often requires professional interaction with patients and their families. It is important to understand that the extended visitation approach is a complex process that takes into account the interests of patients and family members.

OBJECTIVE

To evaluate an extended visitation model in an adult intensive care unit from the perspective of family members and the health care team.

METHODS

Study design and participants

A cross-sectional study carried out in a 56-bed adult ICU, in a general hospital that has flexible family visiting hours in the South of Brazil, allowing up to two family members to remain at the patient's bedside for up to 12 hours during the day.

Inclusion criteria for accompanying family members were: belonging to the family of hospitalized patients, regardless of sex (parents, children, siblings, or spouses), older than 18 years of age, having remained for longer than two hours a day at the bedside of a patient who had been in the sector of the hospital for more than 48 hours, whichever the reason for the hospitalization. Caregivers selected by the family member responsible for the patient were also included. Family members and caregivers with visual impairments were excluded from the study. Also included were ICU care team members (nurse staff, physiotherapists, nutritionists, psychologists, and staff physicians) according to the following criteria: being part of the functional structure of the ICU; having been working in the sector for at least 3 months; and being familiar with the concept of flexible

visits of more than two hours a day. The questionnaires in which any of the questions were unanswered were excluded from the study.

Data collection

Data collection was carried out from September to December 2016. The assessment of the flexible visitation policy with the care team was made through the open visit questionnaire (Ramos *et al.,* 2013). All the questions were answered on a Likert scale: never (1), occasionally (2), often (3), and always (4), except for questions 20, 21 and 22 , which had three possible answers: yes (1), no (2), don′t know (3).

The subjects who were accompanying the hospitalized relative were invited to take part in the survey, and, after accepting, signed the Informed Consent Term. The questionnaires were given to the subjects, who answered in a private place, near or inside the ICU, and then left them in a reserved place in the research room. The same questionnaire was used to evaluate the flexible visitation policy for accompanying family members, with some questions adapted for better comprehension. Both questionnaires were self-administered and took approximately 30 minutes to complete. Sociodemographic variables were also collected from family members and caregivers.

The sample calculation for the care team members was based on a previous study, which used the evaluation tool for open visitation (Ramos *et al.,* 2013). Considering that positive evaluation responses were around 44.8% for the care team, with a 5% error and a significance of 5%, based on the contingent of professionals working in the sector, it was necessary to include 95 participants. The same number of participants was chosen for the group of relatives for comparison purposes.

Data analysis

Descriptive and analytical data analyses was carried out using the software Statistical Package for the Social Sciences (SPSS), version 21.0. For the presentation of

the results, the answers were grouped into negative (never / occasionally) and positive (frequently / always). The answers of questions Q3, Q4, Q9, Q10, Q11, Q12, Q13, Q14, and Q15 were encoded inversely. Categorical variables were presented in absolute (n) and relative (%) numbers. Continuous variables were presented as mean and standard deviation. Categorical variables were compared using the chi-square test. The comparison of the responses between the groups was carried out using Mann-Whitney's test. A $p < 0.05$ was considered statistically significant.

Ethical and research approvals

The institutional review board reviewed and approved this study (CAAE nº 54454016.5.0000.5345).

RESULTS

A total of 95 family members of patients admitted to the ICU and 95 members of the ICU care team were included. In relation to the members of the team, the majority of the participants were nursing technicians 57 (60%), nurses 19 (20%), physicians 11 (11.6%), and others 8 (8.4%). The average time the care team members had worked in the field was 4.2 years (SD, 4), with a mean age of 32 ± 6 years. The majority of the attending family members were women (78=82.1%). The mean age of the accompanying family members was 51 ± 12 years. Regarding the neurological status of the patients, 63 (66.3%) were conscious / able to speak. The most affected organ systems at the time of collection were neurological 23 (24.2%), respiratory 22 (23.2%), and cardiovascular 19 (20%).

The accompanying relatives had a more positive view of visiting flexibility than the ICU care team. Table 1 shows the percentage of responses categorized as positive or negative perceptions. All the answers differed significantly, except for the answers to questions 12 and 18. Among the questions that showed the greatest difference in the

positive perceptions were those related to interruptions in the work of the team (Q11), changes in team attitudes (Q16), and the reduction of anxiety and stress in the family (Q5).

Table 1: Comparison of the replies of family members and the care team, Porto Alegre, Brazil, 2017.

Questions	Accompanying family members n(%)		Nursing team n(%)		p
	Negative	**Positive**	**Negative**	**Positive**	
Q1- Do you think that flexible visits help in patient recovery?	7(7.4)	88(92.6)	23(24.2)	72(75.8)	<0.01
Q2- Do you think that flexible visits reduce the stress and anxiety of patients?	7(7.4)	88(92.6)	35(36.8)	60(63.2)	<0.01
Q3- Do you think that flexible visits make it difficult to provide care for the patient?	11(11.6)	84(88.4)	27(28.4)	68(71.6)	<0.01
Q4- Do you think that flexible visits interfere with the patients' privacy?	5(5.3)	90(94.7)	18(18.9)	77(81.1)	<0.01
Q5- Do you think that flexible visits reduce the anxiety and stress of the family?	8(8.4)	87(91.6)	39(41.1)	56(58.9)	<0.01
Q6- Do you think that flexible visits increase family trust?	24(25.3)	71(74.7)	29(30.6)	66(69.4)	<0.01
Q7- Do you think that the increase in visiting hours contributes to the satisfaction of the family in relation to the team?	6(6.4)	89(93.7)	18(19)	77(81)	<0.01
Q8- Do you think that flexible visits allow the family to have more information about the patient?	13(13.7)	82(86.3)	34(35.8)	61(64.2)	<0.01
Q9- Do you think that flexible visits force the family to remain with the patient?	6 (6.3)	89(93.7)	25(26.3)	70(73.7)	<0.01

Q10- Do you think that flexible visits harm the organization of the care provided for the patient?	3(3.2)	92(96.8)	18(18.9)	77(81.1)	<0.01
Q11- Do you think that the work of the ICU professionals suffers more interruptions with flexible visits?	6(6.3)	89(93.7)	44(46.3)	51(53.7)	<0.01
Q12- Do you think that flexible visits interfere with the priorities of the work of the ICU professionals?	16(16.8)	79(83.1)	21(22.1)	74(77.9)	0.47
Q13- Do you think that flexible visits lead to delays in analyzing and carrying out procedures with patients?	3(3.2)	92(96.8)	23(24.2)	72(75.8)	<0.01
Q14- Do you think that professionals feel uncomfortable when they examine the patient in the presence of the families?	2(2.2)	93(97.8)	25(26.3)	70(73.7)	<0.01
Q15- Do you think that professionals feel uncomfortable with the presence of the patients' families for longer periods?	7(7.4)	88(92.6)	14(14.8)	81(85.2)	<0.01
Q16- Do you think that flexible visits contribute to changes in work attitudes within the ICU?	38(40)	57(60)	74(77.9)	21(22.1)	<0.01
Q17- Do you think that flexible visits help families to feel responsible for the care of the patients?	39(41.1)	56(58.9)	55(57.9)	40(42.1)	<0.01
Q18- Do you think that ICU visitations should be changed in cases of conflict or at the request of the patients?	29(30.5)	66(69.5)	21(22.1)	74(77.9)	0.35
Q19- Do you think that ICU visitations should be changed in special cases, such as the end of life?	36(37.9)	59(62.1)	14(14.8)	81(85.2)	<0.01

DISCUSSION

This study has evaluated the policy of extended visitation in adult ICUs from the perspective of family members and ICU care team members, two years after they were established at a hospital in southern Brazil. Family members who accompanied patients in an adult ICU were predominantly female, professionally active, with a college or university degree, and were mainly the children of the patients. Previous studies identified women as the most present and participatory family members as caregivers in a hospital environment (Goldfarb *et al.,* 2017; Huffines *et al*., 2013). Even with many women now in the labor market, there are still a greater number of women in family care, a fact that may be related to the cultural conditions established by society, where women are engaged and involved in the care process when faced with the illness of a family member (Cappellini *et al*., 2014).

In this study we observed that most relatives and care team members have a positive perception of a companion, be them family or caregivers, staying at the bedside as they perceive benefits to the patient's recovery, thus alleviating the family's suffering. However, the results showed that family members have a more positive perception of the extended visit when compared to the care team in several aspects, which are highlighted below.

In terms of work interruptions and delays in analyzing and carrying out procedures with the extended visiting time, the accompanying relatives believe they are not interrupting and causing delays, but the perception of the care team differs significantly. Similar data were found in a study that verified nurses′ opinions about open visits, in which 75.5% of nurses believe that they make it difficult to plan nursing care, and 59.4% believe that they delay procedures with patients. However, they recognize that there are emotional benefits for family members and patients (Smithburger *et al*., 2017). Another

study evaluated the perceptions of the medical staff, nurses, and physical therapists, and the results showed that most of the professionals believe that there are delays in patient care and in the unit with the continuous presence of the family member (Gerritsen *et al.,* 2017). It is believed that the presence of certain family members may cause an increase in the workload of the professionals in the ICU and cause delays in the performance of tasks and routines. Cases were highlighted in which the family member frequently asks for information, making questions and requests to the nursing professionals, interrupts the team during procedures, walks between the other beds, interfering with the dynamics of the unit, or indirectly contributes to the patient's restlessness. In stressful situations such as these, it is up to the care team to evaluate the case and prioritize the patient's comfort, even if it is away from the family member. Thus, the approaches to visits should be individualized in each unit, since they must meet the needs of patients, families and health professionals.

Most members of the ICU care team evaluate as negative the changes in attitudes at work as a result of the extended visits, as opposed to the family, who mostly evaluates them as positive. The care provided by the professionals should convey security and confidence, enabling the patient and the family to understand and accept the established procedures and make the treatment more effective (Clark *et al*., 2016; Fumis *et al*., 2015). The presence of the companion in the ICU alters the daily life of the unit and causes structural and organizational changes, bringing about new spaces of social interaction. This fact shows the need for more effective communication strategies between those directly involved, since the accompanying family member has greater contact with the team and more time to observe the care of the patient.

In terms of the reduction of anxiety and stress in patients and relatives, it was observed that most participants perceive the decrease in these symptoms, but more than

a third of the care team believes that these symptoms can never or only occasionally be reduced in relatives and patients admitted to the ICU. It is known that the permanence of family members in very intensive environments for a longer period of time helps to reduce feelings of anxiety, stress, delirium and depression in patients (Rosa *et al*., 2010; Clark *et al*, 2016). On the other hand, some professionals and services believe that the presence of family members increases the physiological stress of the patients, since the presence of a family member may represent a barrier to care and assistance, and due to the fact that hospitalization will result in physical and mental exhaustion within the family (Cabrera and Cunha, 2014; Giannini *et al.,* 2013).

Regarding the discomforts caused by the presence of the family beside the patient, it was observed that this fact is more uncomfortable for the ICU care team, though the family barely perceive this. Similar data were found in a study which showed that the professionals felt uncomfortable when examining the patient in the presence of the family (Gerritsen et al., 2017). Some of these discomforts reported by the team may be caused by the lack of familiarity with having a visitor observing the everyday work practices of the sector and having the work dynamics changed due to possible questions from the relatives about the care of the patient. With the professionals carrying out their activities in the more open ICU visitation scenario, it will become natural and even profitable in the sense of permitting the participation and interaction with the accompanying patient and family member.

In our study, both groups agree that a positive aspect of the extended visit is that the family can obtain more information about the patient. A previous study showed that the nursing team of an evaluated ICU did not know how it can transmit security, both with regard to the type of information that may be given and in the interpretation of the care provided (Ellis *et al*., 2015). It must be emphasized that the preparation of the care

team to receive and inform these family members is paramount, since the daily work of the team requires the interaction of the professional with the patients and family members. Providing clear and continuous information can contribute to some decisions that the family needs to make in relation to the best patient behavior, since the constant and active presence of the family can help in the decisions shared between the team and the family regarding the best practices in terms of care and treatment. It should be noted that meetings between the multiprofessional team and the family members in the first 24-48 hours after admission are one of the possibilities of improving communication techniques, establishing combinations and clarifying doubts, setting goals to alleviate the stress and anxiety of family members, as well as establishing agreements of the rights and duties of the companions during the hospitalization period.

Extended visits allows the professionals to know the reality of each family as well as the support network of each patient, and to transmit information that brings comfort and eases the suffering experienced by the patients and their families, thus providing a more humanized assistance.

LIMITATIONS

This study has limitations. Firstly, the research was conducted in a single center. Secondly, because it was self-administered, some questions may have untrustworthy answers due to a lack of understanding of the issues.

IMPLICATIONS AND RECOMMENDATIONS FOR PRACTICE

It is up to the nurses and other members of the care team responsible for care management in intensive care settings to analyze the possibilities of making patient visits more flexible. The nursing team is able to improve the experience of families in the ICU environment because they are in direct daily contact with the patients and can offer support in moments of emotional difficulty when the family members meet (Eugênio and

Souza, 2017). In addition, they may involve the family in small tasks, such as helping the patient to eat, as well as during hygiene and comfort procedures, showing important images, explaining and orienting events with calm and tranquility and thus empowering the family and promoting the autonomy of part of the care.

In order to do so, teams need support to overcome the barriers imposed on the implementation of a flexible visitation policy. Knowledge of the different perceptions of professionals and family members is a way to optimize actions directed to an extended visitation model, since it is possible to elaborate strategies to educate family members and train professionals to deal with the increased presence of relatives in the ICU and reassess the number of professionals required per patient.

CONCLUSION

Both groups evaluated as positive the majority of the aspects related to the model of extended visitation. However, the aspects which were the most different in their assessments and had a more negative perception from the health team members were the interference in the work of the team and changes in attitudes at work. The health team also had a lower perception of the reduction of anxiety and stress in the family and patients, and of the discomfort caused by the presence of a relative.

What is known about the subject:

- Poor communication is a source of stress for those involved in intensive patient care, especially between staff and family;
- Most professionals believe that there are delays in the ICU patient care activities resulting from the continuous presence of the family member;
- The presence of the companion in the adult ICU changes the daily life of the unit and causes structural and organizational changes.

What this paper contributions are:

- It presents elements that can be considered for the planning and implementation of flexible visitation programs or policies in an ICU environment, which can also be used by care teams in discussions about the presence of the family member at the bedside, as a new space of social interactions;
- It recommends an initial systematized approach to family and support strategies for the team to overcome barriers resulting from the implementation of a flexible or open visitation policy.

REFERENCES

Athanasiou A, Papathanassoglou ED, Patiraki E, McCarthy MS, Giannakopoulou M. (2014). Family visitation in greek intensive care units: nurses' perspective. *American Journal of Critical Care*; **23**(4): 326-33. doi: 10.4037/ajcc2014986.

Begonã EI,S. Tricas S. (2012). Benefits of flexible visitation in the intensive care units for the Family of critical patients. *Enfermería Intensiva*; **23**(4): 179-88. doi: 10.1016/j.enfi.2012.08.001.

Cabrera LS, Cunha HF. (2014). Intensive care unit visitation policies in Brazil: firsts steps in Latin America. *Revista Brasileira Terapia Intensiva*; **26**(4): 328-9. doi: 10.5935/0103-507X.20140048.

Cappellini E, Bambi S, Lucchini A, Milanesio E. (2014). Open intensive care units: a global challenge for patients, relatives, and critical care teams. *Dimensions of Critical Care Nursing*; **33**(4): 181-93. doi: 10.1097/DCC.0000000000000052.

Chapman DK, Collingridge DS, Mitchell LA, Wright ES, Hopkins RO, Butler JM, Brown SM. (2016).Satisfaction With Elimination of all Visitation Restrictions in a Mixed-Profile Intensive Care Unit. *American Journal of Critical Care*; **25**(1): 46-50. doi: 10.4037/ajcc2016789.

Clark K, Milner KA, Beck M, Mason V. (2016). Measuring Family Satisfaction With Care Delivered in the Intensive Care Unit. *Critical Care Nurse*; **36**(6): e8-e14. doi: 10.4037/ccn2016276.

Ellis L, Gergen J, Wohlgemuth L, Nolan MT, Aslakson R. (2016). Empowering the "Cheerers": Role of Surgical Intensive Care Unit Nurses in Enhancing Family Resilience. *American Journal of Critical Care*; **25**(1): 39-45. doi: 10.4037/ajcc2016926.

Eugênio CS, Souza EN. (2017). Open visitation in adult icu: utopia or reality? *Revista de Enfermagem da Universidade Federal de Santa Maria;* **7**(3): 539-549. doi: http://dx.doi.org/10.5902/2179769222692

Fumis RR, Ranzani OT, Martins OS, Schettino G. (2015). Emotional disorders in pairs of patients and their family members during and after ICU stay. *PLoS One*; **10**(1): e0115332. doi: 10.1371/journal.pone.0115332.

Gerritsen RT, Hartog CS, Curtis JR. (2017). New developments in the provision of family-centered care in the intensive care unit. *Intensive Care Medicine*; **43**(4): 550-3. doi: 10.1007/s00134-017-4684-5.

Giannini A, Miccinesi G, Prandi E, Buzzoni C, Borreani C; ODIN Study Group. (2013). Partial liberalization of visiting policies and ICU staff: a before-and- after study. *Intensive Care Medicine*; **39**: 2180-7. doi: 10.1007/s00134-013-3087-5.

Goldfarb MJ, Bibas L, Bartlett V, Jones H, Khan N. (2017). Outcomes of Patient- and Family-Centered Care Interventions in the ICU: A Systematic Review and Meta-Analysis. *Critical Care Medicine*; **45**(10): 1751-1761. doi: 10.1097/CCM.0000000000002624.

Huffines M, Johnson KL, Smitz Naranjo LL, Lissauer ME, Fishel MA, D'Angelo Howes SM, Pannullo D, Ralls M, Smith R. (2013). Improving family satisfaction and participation in decision making in an intensive care unit. *Critical Care Nurse*; **33**(5): 56-69. doi: 10.4037/ccn2013354.

Kynoch K, Chang A, Coyer F, McArdle A. (2016). The effectiveness of interventions to meet family needs of critically ill patients in an adult intensive care unit: a systematic revi ew update. *JBI Database Systematic Reviews Implementation*; **14**(3): 181-234. doi: 10.11124/JBISRIR-2016-2477.

McAdam J, Puntillo K. (2013). Open visitation policies and practices in USICUs: can we ever get there? *Critical Care*; **17**(4): 171. doi: 10.1186/cc12763.

Puggina AC, Ienne A, Carbonari BSF, Parejo LS, Sapatini TF, Silva MJP. (2014). Perception of communication, satisfaction and importance of family needs in the Intensive Care Unit. *Escola Anna Nery*; **18**(2):277-83. doi: http://dx.doi.org/10.5935/1414-8145.20140040.

Ramos JF, Fumis RR, Azevedo LC, Schettino G. (2014). Intensive care unit visitation policies in Brazil: a multicenter survey. *Revista Brasileira Terapia Intensiva*; **26**(4): 339-46. doi: 10.5935/0103-507X.20140052.

Ramos JF, Fumis RR, Azevedo LC, Schettino G. (2013). Perceptions of an open visitation policy by intensive care unit workers. *Annals of Intensive Care*; **3**:34. doi: 10.1186/2110-5820-3-34.

Rosa RG, Tonietto TF, Da Silva DB, Gutierres FA, Ascoli AM, Madeira LC, Rutzen W, Falavigna M, Robinson CC, Salluh JI, et al. (2017). Effectiveness and Safety of an Extended ICU Visitation Model for Delirium Prevention: A Before and After Study. *Critical Care Medicine*; **45**(10): 1660-67. doi: 10.1097/CCM.0000000000002588.

Rosa BA, Rodrigues RM, Gallani BJ, Spana TM, Pereira C. (2010). Stressors at the intensive care unit: the brazilian version of the Environmental Stressor Questionnaire. *Revista Escola de Enfermagem USP;* **44**(3): 627-35. doi: http://dx.doi.org/10.1590/S0080-62342010000300011.

Schnock KO, Ravindran SS, Fladger A, Leone K,Williams DM, Dwyer Cl, Vu TG, Thornton K, Gazarian P . (2017). Identifying Information Resources for Patients in the Intensive Care Unit and Their Families. *Critical Care Nurs*e; **37**(6):e10-e16. doi: 10.4037/ccn2017961.

Skoog M, Milner K, Gatti-Petito J, Dintyala K. (2016). The impact of family engagement on anxiety levels in a cardiothoracic intensive care unit. *Critical Care Nurse*; **36**(2): 84-89. doi: 10.4037/ccn2016246.

Smithburger PL, Korenoski AS, Alexander SA, Kane-Gill SA. (2017). Perceptions of Families of Intensive Care Unit Patients Regarding Involvement in Delirium-Prevention Activities: A Qualitative Study. *Critical Care Nurse;* **37** (6): e1-e9. doi: 10.4037/ccn2017485.

Vandijck DM, Labeau SO, Geerinckx CE, De Puydt E, Bolders AC, Claes B, Blot SI. (2010). An evaluation of family-centered care services and organization of visiting

policies in Belgian intensive care units: a multicenter survey. *Heart Lung;* **39**(2): 137-46. doi: 10.1016/j.hrtlng.2009.06.001.

Abbreviations

ICU: Intensive Care Unit; SPSS: Statistical Package for Social Sciences.

Authors contributions

The authors are responsible for the study design, data collection and analysis. They revised and approved the manuscript.

Conflict of interests

The authors declare that they have no conflict of interests.

Funding

There is no funding for this research.