

A IMPORTÂNCIA DA ENFERMAGEM DE REABILITAÇÃO NAS UNIDADES DE CUIDADOS INTENSIVOS PORTUGUESAS

LA IMPORTANCIA E LA ENFERMERÍA DE REHABILITACIÓN EN LAS UNIDADES DE CUIDADOS INTENSIVOS PORTUGUESAS

THE IMPORTANCE OF REHABILITATION NURSING IN THE PORTUGUESE INTENSIVE CARE UNITS

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RESUMO

Objetivo: Conhecer a importância da Enfermagem de Reabilitação nas unidades de cuidados intensivos (UCI's) portuguesas.

Métodos: Análise secundária do inquérito nacional de avaliação da organização dos cuidados de reabilitação, nas unidades de cuidados intensivos portuguesas.

Resultados: Em Portugal há 2.9 enfermeiros por unidade, com formação especializada em reabilitação por unidade. Este valor aumenta nas unidades em que a reabilitação tem por base um modelo misto e diminui nas unidades que recorrem a equipas externas especializadas. 40% destes profissionais não desempenham funções na sua área de especialização e apenas 26.4% desempenham funções a tempo inteiro. As unidades com enfermagem de reabilitação a tempo inteiro efetuam mais frequentemente a avaliação da condição física na alta (38.7 versus 8.9%), contudo não há participação destes profissionais na avaliação pós-alta em nenhuma UCI. Não são observáveis diferenças nos resultados assistenciais entre as UCI que integram enfermeiros de reabilitação e as que não o fazem.

Conclusão: Os enfermeiros com especialidade em enfermagem de reabilitação estão presentes na maioria das UCI's nacionais e constituem uma peça importante nos cuidados prestados.

Palavras chave: enfermagem de reabilitação; cuidados intensivos; organização e administração

RESUMEN

Objetivo: Conocer la importancia de la rehabilitación de enfermería en las unidades de cuidados intensivos (UCI's) portuguesas.

Métodos: Análisis secundaria del estudio nacional para evaluar la organización de la atención de rehabilitación en unidades de cuidados intensivos portuguesas.

Resultados: En cada UCI portuguesa hay 2.9 enfermeras con formación especializada en rehabilitación. Este valor aumenta en las unidades en que la rehabilitación se basa en un modelo mixto y disminuye en las unidades que recurren a equipos externos especializados. 40% de estos profesionales no desempeñan funciones en su área de especialización y sólo el 26.4% desempeñan funciones a tiempo completo. Las unidades con enfermería de rehabilitación a tiempo completo efectúan más a menudo la evaluación de la condición física en el alta (38.7 frente al 8.9%), sin embargo no hay participación de estos profesionales en la evaluación post alta en ninguna UCI. No se observan diferencias en los resultados asistenciales entre las UCI que integran enfermeros de rehabilitación y las que no lo hacen.

Conclusión: Los enfermeros con especialidad en enfermería de rehabilitación están presentes en la mayoría de las UCI nacionales y constituyen una pieza importante en los cuidados prestados.

Palavas clave: enfermería en rehabilitación; cuidados críticos; organización y administración

ABSTRACT

Objective: To know the importance of Rehabilitation Nursing in Portuguese Intensive Care Units (ICUs).

Methods: Secondary analysis of the national evaluation survey of the organization of rehabilitation care in Portuguese intensive care units.

Results: In Portugal there are 2.9 nurses per unit, with specialized training in rehabilitation. This value increases in units where rehabilitation is based on a mixed model and decreases in units that resort to specialized external teams. 40% of these professionals do not perform functions in their area of specialization and only 26.4% perform full-time functions. Units with full-time rehabilitation nursing more frequently assess the physical condition at discharge (38.7 versus 8.9%); however, these professionals do not participate in the post-discharge evaluation in any ICU. There are no observable differences in care outcomes among ICUs that are part of rehabilitation nurses and those who do not.

Conclusion: Nurses with a specialty in rehabilitation nursing are present in most of the national ICUs and are an important part of the care provided.

Keywords: rehabilitation nursing; critical care; organization and administration

INTRODUCTION

In most developed countries, rehabilitation is part of the care provided to people in critical situations, and its importance is particularly recognized in early mobilization, a safe and beneficial practice that should be a priority in this context.⁽¹⁾

As a rule, mobilization and other rehabilitation techniques are mostly carried out by physiotherapists integrated into the team or on call, depending on the country under analysis.^(2,3) In Portuguese intensive care units, physiotherapy is mostly carried out on call by the intensive care physician, however nurses with specialized training in rehabilitation, commonly referred to as rehabilitation nurse (RN), also take part in the rehabilitation process.⁽⁴⁾ This specialization in nursing emerged in Portugal in the 60^{'s} based on the North American model. Initially, specialists were trained for the Alcoitão Physical Medicine and Rehabilitation Center and later, the increase in the number of RNs allowed them to integrate rehabilitation or respiratory kinesitherapy services and also to integrate primary health care and hospital services, without having a homogeneous distribution based on the needs of this specialized care.⁽⁵⁾

According to the Order of Nurses, *“the rehabilitation nurse designs, implements and monitors differentiated rehabilitation nursing plans, based on people’s real and potential problems. (...) their intervention aims (...) to ensure the maintenance of the clients’ functional capacities, to prevent complications and avoid disabilities, as well as to provide therapeutic interventions aimed at improving residual functions, maintaining or regaining independence in life activities (...)”*. The rehabilitation nursing specialist intervenes above all “at the level of neurological, respiratory, cardiac, orthopedic functions”⁽⁶⁾, fitting into what the critically ill patient’s rehabilitation care needs will be.⁽⁷⁻⁹⁾

These nurses are dispersed throughout almost all units, even though, due to lack of resources or management options, they do not always perform functions within the area of specialization. Even so, we can find RNs integrated in the multidisciplinary team of ICUs or integrated in specialized teams that go to the units to provide rehabilitation care, as part of a heterogeneous organization based on 3 base models:⁽⁴⁾

1. Internal model - rehabilitation care provided by the unit’s team, present in about 23% of the units;
2. External model - rehabilitation care provided by a specialized external team, present in 25% of the units;
3. Mixed Model - rehabilitation care provided by the unit’s team in conjunction with care provided by an external team, in a mixture of the previous models, the most common situation covering 52% of the units.

In this context, the RN is present in all units that use the internal model and in about 19% of the specialized external teams that provide rehabilitation care to critically ill patients.⁽⁴⁾

In this issue, we intend to analyze this information in more detail in order to understand the importance of Rehabilitation Nursing in Portuguese Intensive Care Units. The research question asked was: What is the importance of rehabilitation nurses in the care of critically ill patient, adult, in Portugal? The specific objectives of this work are:

- Determining the availability of nurses with specialized training in rehabilitation in Portuguese ICUs;
- Assessing the rate of use of these professionals to perform specialized functions in the area of rehabilitation;
- Assessing whether the number of rehabilitation nurses in each unit is related to the organization of rehabilitation care;
- Determining the participation of rehabilitation nurses in the mobilization of critically ill patients;
- Assessing the influence of the presence of rehabilitation nurses on assisted care outcomes;
- Assessing the participation of rehabilitation nurses in possible patient assessments after discharge from the ICU.

METHODS

It is a secondary analysis of the national survey to assess the organization of rehabilitation care in Portuguese intensive care units. The study was conducted between November 2016 and March 2017, through an online survey of Head Nurses or Responsible Nurses of the 58 adult ICU’s that integrate the Portuguese Society of Intensive Care database. The survey consisted on a total of 28 questions, grouped into: institution characterization, unit characterization, team characterization, rehabilitation care organization, availability of resources and results.⁽⁴⁾

Statistical analysis was performed using the program IBM SPSS Statistics version 22. Regarding descriptive statistics, frequencies, percentages, means and standard deviations were calculated.

The Chi-Square test was used to compare the distribution of the number of RNs according to the different models of organization of rehabilitation care and to compare the assessment of physical condition at discharge between ICUs with and without RNs.

The comparison of care results was performed using the Mann-Withney test for independent samples.

A significance level of 0.05 was used.

Study approved by the Ethics Committee of the University of Beira Interior (Opinion CE-FCS-2016-028).

RESULTS

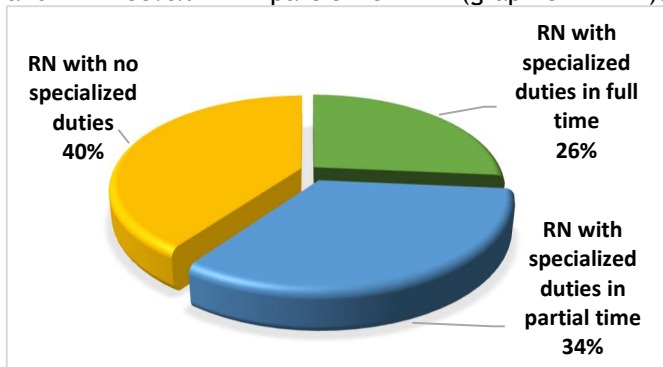
Forty-eight valid surveys were obtained for 42 medical-surgical or multipurpose units, 3 neurosurgical units and 2 cardiothoracic units (1 survey does not mention the type of unit). These units represent a total of 399 intensive care beds and 132 intermediate care beds.

Availability of nurses trained in rehabilitation

A unit integrates in its team, on average, 31.6 ± 14.7 nurses, of which around 9.6% have specialized training in rehabilitation nursing. These ICUs include a total of 140 nurses with this type of specialization, on average 2.9 ± 1.8 nurses per unit.

- 93.8% of units have nurses with specialized training in rehabilitation in their team;
- 75.0% of the units have nurses with specialized training in rehabilitation in specialized functions;
- 45.8% of the units have nurses with specialized training in rehabilitation that are performing full-time specialized functions.

In absolute terms, 60% of nurses with specialized training perform specialized functions, 26.4% full-time and 33.6% part-time (graphic 1).



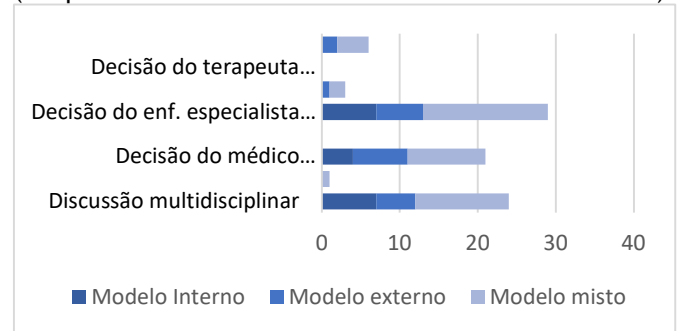
Graphic 1. Time to perform specialized functions.

Analyzing the distribution of the number of RNs according to the different models of organization of rehabilitation care (Table 1), we find that, in average terms, it is in the mixed model (articulation of the rehabilitation care provided by the ICU team with specialized external teams) that there is a greater number of nurses with specialized training in rehabilitation per ICU (3.6 ± 2.0 nurses/unit). In contrast, units where rehabilitation care is provided by external teams are those that have fewer RNs in their team (1.58 ± 1.17).

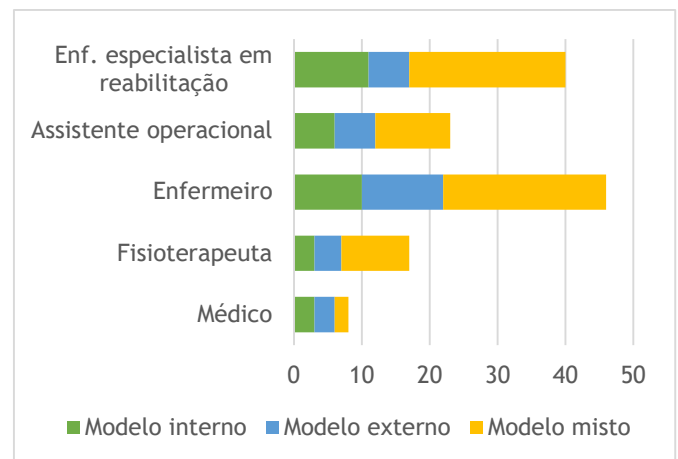
In addition to the RNs integrated in the intensive care teams, in 10 units (about 17%) these professionals are part of the external teams that provide rehabilitation care in these services.

Participation in the mobilization and entry of patients

In addition to the rehabilitation activities carried out in bed, the RNs, regardless of the model of organization of rehabilitation care, are generally the promoters of the mobilization of patients out of bed (Graphic 2) and actively participate in this procedure, usually in conjunction with the caregiver nurse (Graphic 3).



Graphic 2. How the decision to mobilize patients out of bed is made



Graphic 3. Elements that usually participate in the mobilization of patients out of bed

Influence in the results

Out of the 48 units under analysis, only 19 reported the results related to length of stay, ventilation time and mortality rate. These results do not differ significantly because there are nurses with rehabilitation training in the team or because there are full-time RNs (Table 2).

Participation in discharge and post-discharge assessment

With regard to the assessment at discharge, only in about 22% of the units the functionality of the patients is assessed. However, there are significant differences

Organization model		Internal model	External model	Mixed model	Value of p
N° of nurses specialized in rehabilitation	Total	31	19	90	0.003
	(Average ± Standard deviation)	(2.82 ± 0.75)	(1.58 ± 1.17)	(3.60 ± 2.00)	
Number of full-time rehabilitation nurses	Total	14	3	20	0.096
	(Average ± Standard deviation)	(1.27 ± 1.42)	(0.25 ± 0.45)	(0.80 ± 0.96)	
Number of part-time rehabilitation nurses	Total	14	0	33	0.006
	(Average ± Standard deviation)	(1.27 ± 1.35)	(0.00 ± 0.00)	1.32 ± 1.60)	
Number of rehabilitation nurses who do not perform duties	Total	3	16	37	0.129
	(Average ± Standard deviation)	(0.27 ± 0.46)	(1.33 ± 1.37)	(1.48 ± 2.20)	

Table 1. Analysis of the distribution of the number of RN according to the different models of organization of rehabilitation care

ICU with rehabilitation nurse		No	Yes	Value of p
Average length of stay (days)	N	2	26	0.894
	(Average ± Standard deviation)	7.45 ± 0.78	7.37 ± 2.33	
Average time of invasive ventilation (days)	N	0	20	
	(Average ± Standard deviation)		5.73 ± 2.69	
Mortality rate	N	1	23	1.000
	(Average ± Standard deviation)	21.00 ± - -	20.79 ± 6.21	
ICU with full-time rehabilitation nurse		No	Yes	Value of p
Average length of stay (days)	N	16	12	0.347
	(Average ± Standard deviation)	7.65 ± 2.23	7.02 ± 2.32	
Average time of invasive ventilation (days)	N	11	9	0.370
	(Average ± Standard deviation)	6.43 ± 2.24	4.87 ± 3.07	
Mortality rate	N	13	11	0.228
	(Average ± Standard deviation)	19.51 ± 4.95	22.32 ± 7.12	

Table 2. Comparison of care outcomes between units with and without rehabilitation nurses

between units that have full-time RN and those ones that do not have nurses in these conditions ($\chi^2(2) = 5,373$; $p = 0.020$; $N = 41$), with the first ones to perform this type of assessment more frequently (38.7 versus 8.9%).

The numbers of assessments after discharge are slightly lower, with only 12.5% of units reporting perform this type of follow-up, and even so, in a very different way. The participation of specialist nurses in rehabilitation in this evaluation was not mentioned.

DISCUSSION

Nurses with a specialization in rehabilitation nursing are present in most of national ICUs, an unparalleled situation internationally⁽¹⁰⁾. In addition to the work they develop with patients, taking the initiative to start the rehabilitation process early and developing a appropriate plan to the patient's condition, ⁽⁴⁾ these professionals promote, as evidenced in this analysis, the mobilization of patients out of bed, meeting the guidelines that advocate early mobilization of these patients.⁽¹¹⁾

In addition to the clinical work, research projects are developed in specific areas of rehabilitation for critically ill patients, namely at the respiratory level,

(12-16) motor (17) and also in the promotion of autonomy⁽¹⁸⁾ and in the competences to care for the person with dependence on self-care⁽¹⁹⁾. This development seems to be closely related to the creation of a master's courses in rehabilitation nursing, since most of the investigations were carried out in this context.

Although this article presents some traces of what is the intervention of rehabilitation nursing in intensive care units, we are convinced that we only present the tip of the iceberg and that researches in this area has high potential. It would be interesting to know in fact how early mobilization is and whether we comply with international recommendations, which has not always been seen in researches carried out in other countries.⁽²⁰⁻²²⁾ In this particular aspect, rehabilitation nursing could strengthen its position, as it is a sensitive context in which it is essential to master a set of very specific competences within the reach of the RNs. This statement also goes through the documentation of the practice and the indicators are the best tool. The Order of Nurses and the Rehabilitation Nursing Specialty College have already taken some steps in this direction, disclosing a set of indicators that are potentially sensitive to rehabilitation care.⁽²³⁾ Those that are most suitable and possibly complemented with some more indicators must be identified to this context.⁽²⁴⁻²⁶⁾ In order to develop this work, it will be important to increase the participation of RNs in the assessment of the physical condition of patients at discharge and post-discharge, and to monetize the 40% of nurses with specialized training who at that time did not perform functions in the area.

CONCLUSION

Nurses with a specialty in rehabilitation nursing are present in most national ICUs and constitute an important element in the care of critically ill patients, a unique situation in the international context. Its intervention involves developing individual care plans, including out-of-bed mobilization, and its activity is supported by a growing scientific production. At this moment, we do not have data that allow us to infer about the influence on care outcomes, in general, or more specifically on functionality or gains in self-care, targets of intervention in this specialty.

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