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CONTRIBUTOS DOS ENFERMEIROS DE REABILITAÇÃO NUM SERVIÇO DE MEDICINA INTERNA

CONTRIBUTIONS OF REHABILITATION NURSES IN AN INTERNAL MEDICINE SERVICE

*CONTRIBUCIÓN DE LOS ENFERMEROS DE REHABILITACIÓN EN UN SERVICIO
DE MEDICINA INTERNA*

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RESUMO

Com o envelhecimento da população portuguesa, o aumento das patologias chamadas crónicas e o maior grau de dependência dos clientes, torna-se imprescindível a alocação de Enfermeiros Especialistas em Reabilitação (EER) nos serviços de Medicina Interna. Desta forma, é também importante a avaliação da sua presença, para que se possa realizar um planeamento das intervenções.

É neste contexto que surge esta investigação; trata-se de um estudo quantitativo, transversal e retrospectivo realizado num serviço de medicina de um hospital da região norte de Portugal e tem como principal objetivo descrever a atividade de enfermagem de reabilitação, de forma a fomentar o espírito de autocrítica, permitindo um melhor planeamento da prestação de cuidados especializados.

Durante o período compreendido entre 1 de janeiro de 2019 e 31 de dezembro de 2020 deram entrada no serviço em causa 1786 clientes; destes, 882 tiveram implementados planos de enfermagem de reabilitação. Foram realizadas 4130 intervenções, sendo que as mais frequentes foram “cinesioterapia respiratória” e “fortalecimento muscular”. Também se optou por comparar a produtividade dos dois anos uma vez que o número de recursos humanos foi diferente tendo-se concluído que durante o ano 2020 conseguiu-se alcançar mais 236 clientes do que no ano anterior o que permite inferir que a resposta pode ser melhorada alocando mais enfermeiros de reabilitação ao serviço. Sugere-se que sejam implementados programas específicos para as patologias mais frequentes (doenças e perturbações do aparelho respiratório e do aparelho circulatório) e que sejam realizados estudos randomizados que permitam comprovar a eficácia dos programas de reabilitação.

Descritores: enfermagem de reabilitação, medicina interna, estudo quantitativo

ABSTRACT

With the aging of the Portuguese population, the increase in so-called chronic diseases, and the patients' higher level of dependence, the allocation of Rehabilitation Specialist Nurses (RN) in Internal Medicine services have become essential, and it is important to assess their presence so that interventions can be planned.

This is a quantitative, cross-sectional, and retrospective study conducted at the ward of Medicine in a Hospital of North Portugal. The main purpose of this study is to characterize and describe the activity of rehabilitation nurses in the above-mentioned unit to foster a spirit of self-criticism, thus allowing for better planning of care provision.

During the period between January 1, 2019, and December 31, 2020, 1786 clients were admitted to the service in question; of these, 882 had rehabilitation nursing plans implemented. There were performed 4130 interventions of rehabilitation; the most frequent was “respiratory kinesiotherapy” and “muscle strengthening”. The productivity of the two years was also compared (because the number of human resources was different, higher in 2020), and it was concluded that during 2020, 236 more clients were reached, which allows us to conclude that the response can be improved by allocating more rehabilitation nurses to the service. It is suggested that should be implemented specific programs for the most frequent pathologies (respiratory and circulatory diseases and disorders) and should be conducted randomized studies to study the effectiveness of rehabilitation programs.

Descriptors: rehabilitation nursing, internal medicine, quantitative study

RESUMEN

Con el envejecimiento de la población portuguesa, el aumento de las llamadas enfermedades crónicas y el mayor grado de dependencia de los pacientes, se hace imprescindible la asignación de Enfermeras Especialistas en Rehabilitación (ERE) en los servicios de Medicina Interna. Por lo tanto, también es importante evaluar su presencia para poder planificar las intervenciones.

En este contexto se llevó a cabo este estudio, que es cuantitativo, transversal y retrospectivo, realizado en un servicio médico de un hospital de la región norte de Portugal, y cuyo objetivo principal es describir la actividad de las enfermeras de rehabilitación para fomentar el espíritu de autocrítica, permitiendo así una mejor planificación de la prestación de los cuidados especializados.

Durante el periodo de tiempo comprendido entre el 1 de enero de 2019 y el 31 de diciembre de 2020, 1786 clientes ingresaron en el servicio en cuestión; de ellos, 882 tenían planes de enfermería de rehabilitación implementados. Se realizaron un total de 4130 intervenciones, siendo las más frecuentes la “kinesioterapia respiratoria” y el “fortalecimiento muscular”. También se optó por comparar la productividad de los dos años ya que el número de recursos humanos era diferente y se concluyó que durante el año 2020 se pudo llegar a 236 clientes más que en el **año anterior lo que permite inferir que se puede mejorar la respuesta destinando más enfermeras de rehabilitación al servicio. Se sugiere que se implementen programas específicos para las patologías más frecuentes (enfermedades y trastornos respiratorios y circulatorios) y que se realicen estudios aleatorios para probar la eficacia de los programas de rehabilitación.**

Descritores: enfermería de rehabilitación, medicina interna, estudio cuantitativo

INTRODUCTION

Population aging is a frequently mentioned aspect in Portugal. The average life expectancy in 1970 was 67.1 years and in 2019 it was 81.1 years old⁽¹⁾. Currently, human aging is seen as an increasingly long process accompanied by physiological and biological changes, often associated with degenerative processes that can compromise people's functional capacity⁽²⁾. In this way, with the aging of the population come chronic pathologies which, in terms of hospital health care, modify the level and hours of care provided; the dynamics of Internal Medicine services are influenced and doors are opened that encourage a change in the hospitalization paradigm.

According to Temido et al (2018), the percentage of clients aged over 65 admitted to internal medicine services doubled, with the median age changing from 61 to 79 years old. There was also an increase in the number of secondary diagnoses (64.8% had 6 or more diagnoses), clearly illustrating the complexity of this population⁽³⁾.

Analyzing the fact that 73.8% of the population aged over 65 has chronic illnesses and these alter their perception of health⁽⁴⁾, the work of RN in internal medicine services becomes essential.

The RN have as a fundamental objective in their professional action the maintenance and promotion of well-being, quality of life, promotion of self-care and recovery of functionality, prevention of complications and maximization of capacities ^(5,6).

The RN are inserted in multidisciplinary teams and by having an intervention based on evidence, they lead to health gains, which are translated into years of life, reduction of episodes of illness or shortening of their duration, reduction of situations of disability, increase of functionality and reduction of avoidable suffering and improvement of quality of life⁽⁷⁾. Thus, the RN develop a set of activities that allow minimizing the effect of aging and recurrent hospitalization.

In 2017, the Directorate-General for Health highlighted the need to adapt health services to the elderly population, also highlighting the benefits of shorter hospital stays ⁽⁸⁾.

It is in this sense and with the aim of answering the following questions:

- Q1: How is the health condition of clients admitted to the medical service during 2019 and 2020 characterized?
- Q2: What rehabilitation nursing interventions were carried out in this period of time?
- Q3: What is the relationship between the number of RN and the number of clients with an implemented rehabilitation plan?

that this study appears, allowing to strengthen the evidence on rehabilitation nursing, a need identified by Fernandes, Gomes, Magalhães & Lima in 2019 ⁽⁹⁾.

In this way, it is intended to contribute to the dissemination of the care provided by the RN and its results in the health of citizens, allowing to generate knowledge, evaluate practices and provide evidence for teaching, thus contributing to the evolution of the profession⁽¹⁰⁾.

METHODOLOGY

A quantitative, cross-sectional and retrospective study was carried out in the context of a medical service at a hospital in the central-north region of Portugal.

The Medicine X service consists of (physically) 11 rooms with 36 beds. In the same physical space, the Neurology service operates, which consists of 4 beds. The rehabilitation nursing team provides specialized care to both services and, when requested, supports the inpatient Medicine Y and Stroke Unit. However, for this study, only beds referring to the Medicine X service were counted.

Through non-probabilistic sampling, all clients who had intervention from the RN and who were admitted to the service in the period between January 1, 2019, and December 31, 2020, were selected.

During the same period of time, that is, two years, data were collected. This period was selected since human resources in rehabilitation nursing doubled in 2020, a particularity that allowed for a more detailed analysis and comparison of the provision of RN care.

The data referring to the sample were collected through a grid previously created by the RN, which contained the client's file number, gender, age, the main pathology associated with the hospitalization, the start and end date of the intervention plan and the techniques used.

The interventions implemented in this period were grouped according to the information described in Diário da República n.º 132 (2017) ⁽¹¹⁾ and represented in table 1.

The remaining information, which allowed comparison with the selected sample, was requested from the SEPAG service at Hospital X. This was obtained through the records made in the computer systems by the institution's clinicians and technical assistants.

The data obtained were introduced and analyzed in the Excel® computer program, since it is a program that is easily accessible in Portuguese health institutions. Descriptive statistics were used using measures of central tendency and dispersion.

During the performance of this study, all the assumed ethical aspects were respected, so authorization was requested from the highest body for data collection and processing, these were treated ensuring the anonymity of the participants and the principles of academic integrity were complied with throughout the process.

Table 1: Interventions described in Diário de República n.º 132 (2017)

Intervention	Código
Aerosols	60438
Respiratory kinesitherapy	60430
Postural drainage	60435
Percussion/vibration technique	61139
Mobilization of secretions with flutter / acapella	61137
Nasotrachobronchial aspiration with catheter	80890
Mechanical cough assistance (cough assist)	60434
Manual muscle strengthening	61102
Effort re-education with continuous monitoring	61134
Exercise reconditioning training	80203
Manual joint mobilization	60290
Balance and gait training	60404
Muscle strengthening/joint mobilization	61104
Manual dexterity training	61068
Motor coordination training	61070
Training in the use of technical aids	61045
Functional reeducation of each member	
Swallowing training	
Daily Life Activities Training	61087
Intermittent catheterization training	1027
Training of family members / Caregivers	61029
Application/adaptation to vests, collars, straps or splints	79230
Immobilization with velpeau/Gerdy	79270

RESULTS AND DISCUSSION

During the analyzed period, 1786 clients were admitted, of which 849 were male and 937 were female (table 2). The mean age was 77.5 years old. These results corroborate those of the Portuguese Society of Internal Medicine, which points out that the demography of clients hospitalized in internal medicine services has a clear prevalence of elderly age groups, with 76% of clients aged 70 or over ⁽¹²⁾.

The average length of stay was 13.5 days with a median of 9.5 days (Table 2). The average length of hospital stay is higher than that presented in 2018 in the study carried out by Martins, Sanches and Carvalho, where they found an average delay of 9.5 days in an inpatient service with the same characteristics as a hospital in the interior of southern São Paulo, Portugal ⁽¹³⁾. This delay may be due to several factors, such as the aging of the population and diversification of the interior of the country, since it is a value that can be superimposed on data referring to previous years and other hospitals with a coverage area with similar characteristics. In the study carried out by Carvalho (2018), in 2015, the length of stay at the ARS Center varied between 8.65 days and 15.49 days ⁽¹³⁾.

Table 2: Characterization of Medicine X service customers

	2019	2020
Total number of hospitalized clients	906	880
Female customers	444	493
Male customers	462	387
Occupancy rate	103.48%	86.21%
Average age	77	78
Median age	82	82
Average length of stay	13	14
Median length of stay	9	10

Source: own authorship with data provided by the SEPAG of the ULS X

During 2019, the rehabilitation nursing team of the Medicine X service consisted of one element with an individual work contract to work 35 hours a week, while in 2020, the same team consisted of two elements, totaling 70 hours weekly.

In this way, the team consisted of a rehabilitation nurse providing full-time specialized care for 1414 hours, approximately 176 days, calculated according to the formula presented in the standard for calculating safe allocations of nursing care ⁽¹⁴⁾, that is, 48.9% of the time, while in 2020 the team had a full-time rehabilitation nurse, every working day, for 83 days. In other words, 32.8% of working days had 2 rehabilitation nurses working simultaneously, although sometimes these elements were shared with two other inpatient services.

Table 3: Characterization of clients who benefited from rehabilitation nursing care in the Medicine X service

	2019	2020
Number of customers	323	559
Number of female customers	150	290
Number of male customers	183	269
Average age	80.12	80.27
Maximum ages	102	101
Minimum ages	23	26
Average days of treatment	9.20	10.91
Maximum days of treatment	47	60
Minimum days of treatment	1	1

Source: own authorship

Table 3 allows us to verify that, during the biennium, of a total of 882 clients who had intervention in rehabilitation nursing care, 440 were female and 452 were male with an average age of 80 years old (minimum of 23 years old and a maximum of 102 years old). The average duration of the rehabilitation program was 10 days, with a minimum of 1 day and a maximum of 60 days.

Of the total number of clients admitted in 2019 (906 clients), 323 had rehabilitation nursing interventions implemented, that is, 35.65% of clients were the target of this specialized practice. In 2020, 63.5% had implemented a rehabilitation plan, reflecting an increase of 27.9%.

Table 4: Rehabilitation nursing interventions implemented more often.

Intervention	Code	N.º of interventions 2020	N.º of interventions 2019	Difference between two years
Aerosols	60438	48	124	-76
Respiratory kinesitherapy	60430	334	177	157 (28.5%)
Postural drainage	60435	240	162	78 (19.4%)
Percussion/vibration	61139	235	163	72 (18.1%)

Nasotracheobronchial aspiration	80890	203	101	102 (33.6%)
Manual muscle strengthening	61102	268	167	101 (61.6%)
Manual joint mobilization	60290	187	154	33 (9.7%)
Balance and gait training	60404	182	153	29 (54.3%)
Muscle strengthening	61104	195	179	16 (4.27%)

Source: own authorship

In order to facilitate understanding, the most relevant interventions were selected (performed more often) presented in table 4. In total, in addition to these, 858 more specialized interventions were performed, making a total of 4130.

As can be seen in the same table, there was an increase in the number of interventions between 61.6% and 4.27%, with a negative value referring to aerosols since during the year 2020, due to contingencies related to the SARS-COVID19 pandemic it was not allowed to be carried out in the internment service.

The interventions that were most often carried out in the two-year period (respiratory kinesiotherapy, postural drainage, manual muscle strengthening) meet the assistance needs associated with the most frequent medical diagnoses in this service under study. These results corroborate the retrospective study by Martins, Sanches, & Carvalho (2018) where it was concluded that the main diagnoses referring to the admission of centenarian clients, in the Medicine service, during the period of 10 years, were related to: infectious pathology of the respiratory disease, dehydration, stroke and heart failure⁽¹³⁾, as well as the study by Mendes (2019) in which the main reasons for hospitalization in a medical service were: pneumonia, ischemic stroke and tracheobronchitis⁽¹⁵⁾.

Table 5: 10 Most frequent GDH in the Medicine X service during the 2019-2020 biennium

GDH	Nº
Alcoholic liver diseases	35
Major respiratory infections and/or inflammation	38
Renal insufficiency	43
Pulmonary embolism	49

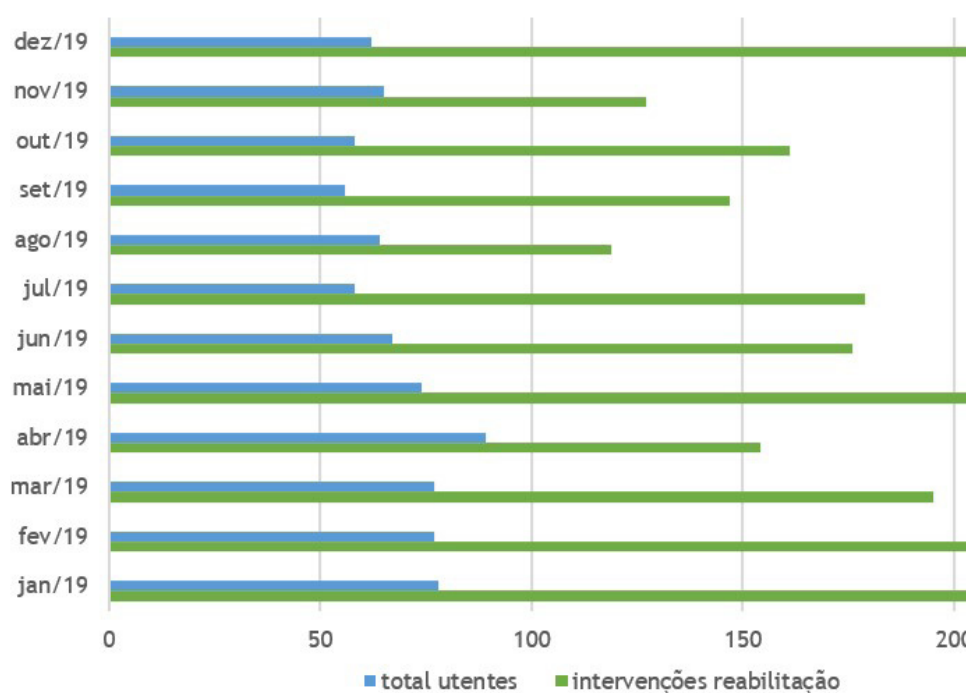
Septicemia and/or disseminated infections	64
Kidney and/or urinary tract infections	79
Stroke and/or precerebral occlusion with infarction	80
Minor respiratory signs, symptoms and/or diagnoses	142
Cardiac insufficiency	197
Other pneumonias	259

Source: own authorship with data provided by SEPAG of ULS Guarda

Considering the year 2019 and observing Figure 1, we can see that there is an increase in hospitalized clients and rehabilitation nursing interventions in the winter period, with a slight decrease in the warmer months.

For this analysis, the year 2020 was not considered since it is an atypical year due to the SARS-COVID19 pandemic. There was a late access to health care by clients, which slightly modified their characteristics, so that the number of clients hospitalized per month or time of year cannot be compared with other years.

Figure 1: total interventions according to year and month



Source: own authorship

CONCLUSION

In order to answer the questions posed in this study, and according to the results presented, it can be concluded that the clients of the medicine service X were characterized by having an average age of 77.5 years, with an average hospitalization of 13.5 days.

Comparing both years, in 2020 it was possible to include a full-time rehabilitation nurse, allowing the allocation of 2 rehabilitation nurses (although shared with other services), which provided the provision of rehabilitation nursing care to over 236 clients than in the previous year, that is, 27.9% more. There was also an increase in the number of interventions implemented, such as “muscle strengthening”, which was carried out 101 times more than in the previous year (61.6%). However, this number of rehabilitation nurses is insufficient, since they did not respond to all needs in specialized care, with only 63.5% of the clients of the Medicine X service being evaluated in the best year, which is clearly insufficient for the reality of an Internal Medicine service, whose target population is elderly clients, the vast majority with multimorbidity and with a high degree of dependence on self-care.

In this way, considering:

1. The advantages associated with implementing rehabilitation nursing plans,
2. The investigation carried out by Lima, Ferreira, Martins and Fernandes (2019) where they concluded that hospitalization is a factor that worsens mobility and that clients subject to rehabilitation nursing interventions are more likely to preserve their function⁽¹⁶⁾,
3. The Order of Nurses (2019) recommends that there should be “per service, at least 2 (two) specialist nurses in Rehabilitation Nursing, for every 15 clients”⁽¹⁴⁾,

It recognizes the need to allocate more RN in Medicine services in order to prevent the consequences of immobility and promote the potential for rebuilding independence, given the specific characteristics of the older population, often hospitalized in this type of care.

Despite the contingencies, a high number of rehabilitation nursing interventions were carried out (4130 interventions to 882 clients). The areas that were most developed during this period were: respiratory kinesiotherapy (postural drainage and associated techniques), muscle strengthening/joint mobilization and balance and gait training. These interventions are associated with the most frequent pathologies in the service: diseases and disorders of the respiratory system, the circulatory system and the nervous system.

As a difficulty felt, it can be pointed out some complexity in accessing the data related to the Medicine X service and the reduced time available for recording and analyzing them.

The limitations of this study are essentially related to the short period analyzed and the impossibility of making some comparisons with the year 2020 due to the SARS-COV19 pandemic.

For future investigations, it is proposed to carry out randomized experimental studies that allow the concrete evaluation of the effectiveness of rehabilitation nursing intervention plans applied in Internal Medicine services and individualized programs should be created according to the most frequent nursing diagnoses in the field of rehabilitation.

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