

Access indicators in physical rehabilitation services for musculoskeletal disorders in Belo Horizonte (MG)

Indicadores de acesso nos serviços de reabilitação física das desordens musculoesqueléticas em Belo Horizonte (MG)

Indicadores de acceso en servicios de rehabilitación física para trastornos musculoesqueléticos en Belo Horizonte (MG)

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ABSTRACT | The growing demand for care in the physical rehabilitation services of the Unified Health System (SUS) exceeds the supply, resulting in long waiting lines. This study is an exploratory quantitative research, which aims to present indicators to ease the access to physical rehabilitation services related to musculoskeletal disorders. Data were collected from the medical records of users residing in the northwest and west regions of Belo Horizonte (MG), who were over 18 years old and underwent treatment at the Specialized Rehabilitation Center IV (CER-IV) in 2019. The following indicators were obtained: absenteeism at the time of assessment; average time to start treatment according to priority; mean treatment time; and average number of users served per month. The analysis was based on 362 medical records. The mean time to start treatment was approximately 69 days and the mean treatment period was 94 days. The service absorbed around 30 new users per month and presented an absenteeism rate of 16.8%. It is believed that the indicators presented will possibly favor the management and control of the SUS rehabilitation services waiting lines.

Keywords | Rehabilitation Centers; Physical Rehabilitation; Health Indicators; Physiotherapy; Musculoskeletal Diseases.

RESUMO | A crescente demanda por atendimento nos serviços de reabilitação física do Sistema Único de Saúde (SUS) excede a oferta, o que resulta em longas filas de espera. Neste estudo, realizou-se uma pesquisa quantitativa de cunho exploratório que teve por objetivo a apresentação de indicadores para facilitar o acesso aos serviços de reabilitação física no que tange às desordens musculoesqueléticas. Os dados foram colhidos dos prontuários de usuários residentes nas regiões noroeste e oeste de Belo Horizonte (MG), com mais de 18 anos de idade, submetidos a acolhimento no Centro Especializado em Reabilitação IV no ano de 2019. Obtiveram-se os seguintes indicadores: absenteísmo no momento da avaliação; tempo médio para início do tratamento de acordo com a prioridade; tempo médio de tratamento; e média de usuários atendidos ao mês. A análise deste estudo foi pautada em 362 prontuários. O tempo médio para início de tratamento foi de aproximadamente 69 dias e o período médio de tratamento, de 94 dias. O serviço absorveu cerca de 30 novos usuários ao mês e apresentou índice de absenteísmo de 16,8%. Acredita-se que os indicadores apresentados possivelmente favorecerão a gestão e o controle das filas de espera dos serviços de reabilitação do SUS.

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Descritores | Centros de Reabilitação; Reabilitação Física; Indicadores de Saúde; Fisioterapia; Doenças Musculoesqueléticas.

RESUMEN | La creciente demanda de atención en los servicios de rehabilitación física del Sistema Único de Salud (SUS) supera la oferta, lo que se traduce en largas colas de espera. Este estudio es una investigación cuantitativa exploratoria, que tuvo como objetivo presentar indicadores para facilitar el acceso a los servicios de rehabilitación física con respecto a los trastornos musculoesqueléticos. Se recolectaron datos de las historias clínicas de los usuarios residentes en las regiones noroeste y oeste de Belo Horizonte (en Mina Gerais, Brasil), mayores de 18 años de edad y que ingresaron al Centro Especializado en Rehabilitación IV en 2019.

Se obtuvieron los siguientes indicadores: Absentismo al momento de la evaluación; tiempo medio para iniciar el tratamiento según la prioridad; tiempo medio de tratamiento y número medio de usuarios atendidos por mes. El análisis de este estudio se basó en 362 historias clínicas. El tiempo medio para iniciar el tratamiento fue de aproximadamente 69 días y el período medio de tratamiento, 94 días. El servicio recibió casi 30 nuevos usuarios al mes y presentó una tasa de absentismo del 16,8%. Los indicadores presentados pueden favorecer la gestión y control de las listas de espera de los servicios de rehabilitación del SUS.

Palabras clave | Centros de Rehabilitación; Rehabilitación Física; Indicadores de Salud; Fisioterapia; Enfermedades Musculoesqueléticas.

INTRODUCTION

Integrity, universality and equity are the principles of the Brazilian Unified Health System (SUS)¹. The services are divided into levels of care to ensure the applicability of said principles and service management is based on regionalization and in health care networks (RAS)².

The budget share destined to musculoskeletal dysfunctions is estimated at 22.6% of the total, evidence of the demand for rehabilitation services, one that typically exceeds the supply of services, resulting in long queues for care³.

To guarantee assistance, the municipality of Belo Horizonte (MG) has four Rehabilitation Centers (CREABs), two of which are accredited as Specialized Rehabilitation Centers (CERs). These four services serve the nine health districts of the capital⁴.

Referral to physical rehabilitation from orthopedic disorders requires a screening/reception process to assign priority to cases and include patients in the National Regulatory System (SISREG). Professionals from various health areas screen patients by interviewing and classifying them into priority degrees according to the complexity: under regulation and high, medium, or low priority. Cases of greater complexity are preferably referred to the CERs or CREABs, medium complexity ones are referred to health providers (associated clinics or universities) and low complexity cases must be referred to the Family Health Support Centers (NASFs).

Rehabilitation services currently use the number of users in the queue in relation to the number of vacancies

offered as the indicator of access. Although it is an important piece of data—due to providing an estimate of the time required for the service to absorb all the demand—the waiting time for each level of complexity is unaccounted for. SISREG also automatically changes the priority degree according to the user's wait time, disregarding the prioritization assigned at the time of the reception.

Lemos et al.⁵ showed the main errors that occur during the user embracement process, such as unnecessary referrals, divergences when assigning priority between the professionals who do the screening, and the lack of understanding of the complexity of each service (CREABs, providers, and NASF). Identifying the factors that perpetuate waiting lines in rehabilitation can contribute to better planning and control of public spending, in addition to ensuring the timely patient care³.

Considering that health planning is mandatory for public entities⁶ and that the definition of responsibilities institutes the permanent need for information that favors the reflection of public administrators and helps decision making⁷, better understanding physical rehabilitation units in their performance and the importance of standardizing their actions⁸.

This study aims to address possible indicators that help public administrators in the planning of actions to facilitate timely access to rehabilitation services of musculoskeletal disorders. The specific objectives of this study were: to present the mean waiting time for the beginning of treatment, considering the priority assigned at the time of reception, and the recommended

time to start according to internal protocol; to analyze the mean number of new users assisted per month and mean time of rehabilitation; to identify the level of absenteeism and its relationship with the waiting time in each degree of prioritization assigned; to identify, from a bibliographic search, the possible consequences for the patient and the public health system, if the required care is not provided in a timely manner; and to define what factors may be contributing to the maintenance of queues.

This is a study of great relevance for public health management due to the scarcity of data available so far. The available tools (SISREG and Indicator Extractor) are difficult to use and incomplete, with no consolidated reports being provided.

METHODOLOGY

Study design and ethical considerations

This is a quantitative research of exploratory nature. The study design followed the norms of ethical standards set out in the Helsinki Declaration of 1961 (revised in Hong Kong in 1989, and in Edinburgh, Scotland, in 2000) and in the guidelines and norms regulating research involving human subjects of the National Health Council of the Brazilian Ministry of Health, Resolution No. 196/1996, updated by resolutions No. 466/2012 and No. 580/2018.

This research project did not entail expenses for the Municipal Health Department of Belo Horizonte (MG).

Population studied

The population was composed of SUS users, aged 18 years or older, under user embracement at the Rehabilitation Center IV (CER-IV), in 2019, living in the west and northwest regions of Belo Horizonte (MG).

Sample

In total, 686 medical records of patients referred due to orthopedic disorders for treatment in CER-IV were obtained, among which 128 were excluded after application of the exclusion criteria, and an additional 196 because due to the absence of records of evaluation or discharge. The analysis was thus based on 362 medical records.

Inclusion criteria

- SUS user aged 18 years or older, with demand for rehabilitation of orthopedic dysfunctions;
- Resident in the northwest or west region of Belo Horizonte (MG);
- Submitted to user embracement at CER-IV in 2019;
- Referred to CER-IV for Physical or Occupational Therapy; and
- Who was discharged from treatment until February 2020, in order to avoid the possible bias caused by the COVID-19 pandemic.

Exclusion criteria

- Users referred for treatment at associated clinics, colleges, universities, or NASF; and
- Users who did not start rehabilitation.

Data collection

Data collection occurred in CER-IV during August and September 2021, after work hours and on Saturdays, in places previously agreed upon with the administration, in order not to compromise the work routine, according to Resolution No. 580/2018, Chapter II, Articles 5 and 6. Nominal data from the physical medical records were used regarding:

- The date of user embracement;
- The degree of priority assigned during the process;
- The beginning and end of treatment.

Data analysis

The data were organized in an Excel spreadsheet to obtain the following indicator information:

- Absenteeism at the time of evaluation;
- Mean time to start treatment according to priority;
- Mean treatment time;
- Mean number of users served per month.

RESULTS

The total number of patients evaluated was 362, with 53 years as the mean age, ranging from 18 to 94 years. Among these patients, 23 (6.35%) were discharged at the time of evaluation because they did not present demand

and three (0.83%) were referred for follow-up in primary care because they presented injuries or other factors that prevented the immediate start of systematic rehabilitation.

Table 1 shows the distribution of the 362 cases according to the degree of priority assigned during the

embracement process, presenting total absenteeism, the waiting time to start treatment, and the mean time users remained in treatment according to the prioritization at the time of embracement. Absenteeism in relation to the waiting time for the start of treatment is also presented.

Table 1. Absenteeism, mean waiting time for the start of treatment, and mean treatment time

	Priority assigned during embracement - N (%)	Mean waiting time to start treatment in days (least days - most days)	Mean treatment time in days (least days - most days)	Absenteeism - N (%)	Mean waiting time - absenteeism in days (least days - most days)
Regulation	26 (7.2)	33 (8-131)	120 (46-231)	4 (1.1)	87 (55-131)
High priority	279 (77)	63 (0-299)	91 (8-337)	50 (13.8)	102 (14-235)
Medium priority	55 (15.2)	114 (3-195)	97 (7-294)	7 (1.9)	148 (138-163)
Low priority	2 (0.6)	165 (158-172)	93 (8-177)	0 (0)	0
Total	362 (100)	69 days (mean)	94 days (mean)	61 (16.8)	106 days (mean)

Considering a 16.8% rate of absenteeism for evaluation, the mean number of new users for treatment absorbed by CER-IV was 30 per month.

DISCUSSION

This study showed that, during the embracement, 77% of the demand was classified as high priority; the mean waiting time for the start of treatment was 69 days; the mean time of treatment was 94 days; and the absenteeism rate was 16.8%.

Several factors can contribute to the excessive demand for health services such as:

- a) lack of registration update of users; b) communication problems with users; c) lack of selection for care; d) lack of monitoring of scheduling by users; e) more flexible working hours; f) type of contract with associated clinics; g) communication and integration problems between contracted services and the Municipal Network; and h) abandonment of care by users⁹.

Pereira and Silva⁹ also argue that these factors contribute to the perpetuation of waiting lines, causing

the chronification of the clinical picture and generating sequelae. This can affect the participation in activities of daily living and predispose the patient to the onset of other diseases, for example, depression¹⁰.

According to Meneses et al.³, musculoskeletal disorders are frequent in health services and present high cost. Therefore, a good management of the waiting list would ensure the application of the principle of equity, in addition to greater control of public spending.

Lemos et al.⁵ proposed that the International Classification of Functioning, Disability and Health (ICF)¹¹ should be adopted as a theoretical framework when assigning priority to clinical pictures during the reception in the CREABs and that the Protocol for Identification of Problems for Rehabilitation (PLPR) should be used as a strategy to standardize the screening of new cases. However, the embracement process is currently carried out by professionals from various health areas, including some not as familiar with the ICF. In addition, the PLPR fell into disuse because professionals consider it too long and difficult to apply. The authors also note that severe cases, children and adolescents should be treated as a priority in the CERs, and that cases classified as high priority or under regulation should be treated as soon as possible, whereas those classified as medium priority should be

treated within three months⁵. The present study found a waiting time for the start of treatment of more than two months for high priority cases and more than three months for medium priority ones, which may result in chronification and sequelae.

For Siqueira¹², the relationship between providers and the system should be mediated by the health regulator. Therefore, it is clear the importance of human resources (HR) training for this function to be well performed. According to him, the reduction of the waiting period drastically reduces absenteeism to consultations and specialized examinations, which prevents the worsening of diseases and, consequently, reduces the costs to health systems. The results of the present study suggest a direct relationship between waiting time for the start of treatment and the absenteeism rate, especially when analyzing cases classified as “under regulation” and “high priority”, because users who waited for a longer period (respectively, 64% and 62%) were the ones who missed the evaluation the most.

Scardoelli¹³ points to little efficiency of services, also highlighting the need for better HR management. During data collection, the archiving of physical records in incorrect places, the lack of records in physical or electronic medical records, and/or the lack of detail in important data, for example, the discharge of the patient were observed. We believe that these factors may be related to the professionals’ lack of training or time, or even to failures in SISREG, such as electronic or physical medical records in duplicate. These data reinforce the importance of HR training for functions to be well performed. Future investigations in this area could also be useful.

This study follows the studies of Lemos et al.⁵ and Pereira and Silva⁹, who argue about a possible failure in the selection stage during user embracement as a potential problem, since almost 16% of the cases referred to the CER-IV were classified as of medium or low complexity, when the service should primarily attend to more complex cases. Meneses, Silva and Silva³ showed that referral to NASF of patients with low complexity pictures was an effective alternative to shorten the queue, improve waiting time for care, and control public expenses, and it may also be an applicable strategy to control queues in CER-IV. Additionally, Ferrer et al.¹⁴ concluded that the low resolution of cases at NASF for medium complexity cases increases the demand in the secondary rehabilitation service.

CER-IV absorbs, on average, 30 new users per month for physical rehabilitation. Ordinances No. 793/2012 and

No. 835/2012 establish that, in the physical rehabilitation modality, a minimum of 200 users per month must be attended in CER units¹⁵. This number includes adult patients and children assisted by the neurology and orthopedics team. Considering that the mean treatment time observed in this study was 94 days, at the end of the third month, at least 45% of the users assisted in the physical rehabilitation modality would come from adult orthopedics. This number, plus the users assisted in the other modalities, possibly meets the number established by the ordinances.

The mean treatment time was similar for the different degrees of priority attributed at the time of embracement, therefore, it was impossible to affirm that the waiting time for the start of rehabilitation influenced the treatment length. Further analyses would require the evaluation of the different diagnostic hypotheses, degree of patient’s compliance, functionality, among other aspects, which was not the objective of this study. One factor that probably influenced rehabilitation time was discharge due to discontinuity of treatment/abandonment, observed in most cases. Pereira and Silva⁹ also mentioned this as a factor of perpetuation of queues and, despite being a fact observed during data collection, it was not the object of this study. Therefore, further studies are suggested to evaluate the rate of discontinuity of treatment in rehabilitation centers and the factors that contribute to it.

Some limitations of this study should be mentioned, such as data collection in a single rehabilitation center and the sole inclusion of orthopedic patients, which hinders the generalization of results and the evaluation for a general structure for rehabilitation indicators. Thus, future studies are suggested to evaluate a greater number of patients and rehabilitation centers.

CONCLUSION

The referral of cases classified as medium or low priority to CER-IV may hinder the timely access to care for more severe cases. The training of HR, in addition to the elaboration of a study that better evaluates the criteria for inclusion of the user for treatment in rehabilitation centers during the embracement process would be useful, because it is possible that the professionals responsible for embracement are still following subjective criteria and not the ICF.

The absenteeism rate in the evaluation was higher for patients who waited longer for care. On the other hand,

it was impossible to affirm that the waiting time for the start of rehabilitation influenced the treatment period. One factor that possibly interferes in the interpretation of this data is the large number of infrequency discharges observed, so a complementary study on the subject is also necessary.

This study presented some indicators to assist in the planning of health actions in rehabilitation. It is likely that the computerizing of data on these indicators, associated with HR training, may help the management and control of waiting lines.

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