# Scheduling, waiting time, absenteeism and repressed demand in outpatient physical therapy care

*Agendamento, tempo de espera, absenteísmo e demanda reprimida na atenção fisioterapêutica ambulatorial*

Andréa Godoy Pereira *
Amanda Medeiros Gomes
Leila Simone Foerster Merey
Alessandro Diogo de Carli
Mara Lisiane de Moraes dos Santos

Universidade Federal de Mato Grosso do Sul (UFMS), Campo Grande, MS, Brazil

**Date of first submission:** August 17, 2021
**Last received:** January 10, 2022
**Accepted:** February 7, 2022
**Associate editor:** Aldo Fontes-Pereira

*** Correspondence:** andreagpfisio004@gmail.com

## Abstract

**Introduction:** Access to physiotherapy services needs to be timely, avoiding the establishment of disabilities in users. Analyzing the demands in physiotherapy provides a basis for planning both the management of queues and preventive actions and the reorganization of services, directing them to the main needs of the public. **Objective:** To identify users who needed outpatient physiotherapy services in the Unified Health System (SUS) in Campo Grande/MS and to characterize those cared for and repressed demand, as well as analyzing absenteeism and the waiting time for access. **Methods:** We used secondary data from the Vacancy Regulation System and performed association and multivariate analyses, with a significance level of 5%. **Results:** Females were predominant and their number increased year by year; the largest number of requests was for adult motor disorders. The average waiting time in the period (2017-2019) was approximately 2.5 months. Absenteeism was 34% and increased yearly. Most appointments and absenteeism were from users from the region of greatest social exclusion. Most referrals of repressed demand were for primary care and for physical therapy treatment in adult motor disorders. **Conclusion:** The results showed excessive waiting time between the request and the scheduling, high rates of absenteeism and repressed demand. These aspects act synergistically as barriers to access to outpatient physical therapy care in the public network in the capital city studied, with significant negative impacts on users' recovery.

**Keywords:** Access to health services. Physical therapy modalities. Primary health care. Rehabilitation.

## *Resumo*

***Introdução:*** *O acesso aos serviços de fisioterapia precisa ser em tempo oportuno evitando instalação de incapacidades aos usuários. Analisar as demandas em fisioterapia dá embasamento ao planejamento tanto da gestão de filas quanto de ações preventivas e reorganização dos serviços, direcionando-os às principais necessidades da população.* ***Objetivo:*** *Identificar usuários que necessitaram de serviços ambulatoriais de fisioterapia no Sistema Único de Saúde (SUS) em Campo Grande/MS, caracterizar a demanda atendida e reprimida, bem como analisar o absenteísmo e o tempo de espera para o acesso.* ***Métodos:*** *Foram utilizados dados secundários do Sistema de Regulação de Vagas e realizadas análises de associação e multivariada, com nível de significância de 5%.* ***Resultados:*** *O gênero feminino foi predominante e aumentou ano a ano; o maior número de solicitações foi para alterações motoras do adulto. O tempo de espera médio no período (2017-2019) foi de aproximadamente 2,5 meses. O absenteísmo foi de 34% e aumentou ano a ano. A maioria dos agendamentos e do absenteísmo foi de usuários provenientes da região de maior exclusão social. A maioria dos encaminhamentos da demanda reprimida foi da atenção básica e para o tratamento fisioterapêutico nas alterações motoras do adulto.* ***Conclusão:*** *Os resultados evidenciaram tempo excessivo de espera entre a solicitação e o agendamento, altos índices de absenteísmo e demanda reprimida. Esses aspectos atuam sinergicamente como barreiras de acesso ao cuidado fisioterapêutico ambulatorial da rede pública na capital estudada, com impactos negativos importantes na recuperação dos usuários.*


***Palavras-chave:*** *Acesso aos serviços de saúde. Atenção primária a saúde. Fisioterapia. Reabilitação.*

## Introduction

One of the priorities of quality health systems is easy, uncomplicated and timely access,[1] and the waiting time for access to specialized care (SC) services is an essential feature of problem-solving health systems.[2]

Managing waiting lines in health services is a challenge. Half of the Organization for Economic Co-operation and Development (OECD) countries consider the waiting time for elective procedures a critical problem,[3] and systems with different forms of organization and a predominance of private providers, as is the case of Australia, Canada and New Zealand, also have this concern.[4] In Brazil, long waiting times for scheduling appointments, tests and surgeries are the biggest cause of dissatisfaction among users of the Unified Health System (SUS).[5]

In Brazil, long waiting times for scheduling appointments, tests and surgeries are the biggest cause of dissatisfaction among users of SUS,[6] generating care gaps that result in prolonged waiting times to access services. Eliminating or reducing waiting time contributes to comprehensive care for the health needs of users and timely access, avoiding the occurrence of long-term or permanent physical disabilities.

Such factors are essential both for the effectiveness of the treatment and for not burdening the health systems and social security, because when users are not able to access rehabilitation at the right time, their condition tends to worsen, requiring longer time away from work, showing more absences in scheduled appointments[7] and suffer anxiety because they are waiting for treatment.[8]

Studies on the access and quality of physical rehabilitation services are still poorly explored. Some studies have shown long waiting times[9] and insufficient supply,[10] reaffirming the context in which rehabilitation is traditionally a low-priority topic for many governments,[2] which reflects the scarcity of services around the world.[6]

Analyzing the demand for outpatient physical therapy services in the public network is essential for planning measures for the management of queues and organization of services. Knowing the waiting time to access the services and which physiotherapy procedures are the most performed allows us to reorganize the offer aimed at the main needs of the population, in addition to providing indicators for the planning of preventive actions developed within the scope of the different services of the Health Care Network.[11]

Accordingly, the aim of this study was to identify the users who needed outpatient physiotherapy services in Campo Grande/MS, characterize the demand met and the repressed demand in the SUS outpatient services, also analyzing absenteeism and the waiting time for access to physical therapy services.

## Methods

This was a descriptive retrospective analytical study, carried out from the analysis of secondary data from the

Vacancy Regulation System (SISREG) of the Municipal Health Department (SESAU) of Campo Grande/MS.

The procedures were grouped into two categories: physiotherapeutic care for adult motor disorders and pre- and postoperative physiotherapeutic care for adult musculoskeletal disorders. It was decided to group the procedures into two major categories due to the large number of pathologies defined by different codes of the International Classification of Diseases of the users in the referrals, which would make a presentation in tables and a relevant statistical analysis unfeasible. The other procedures, as they consisted of a low percentage of referrals, were categorized as "others", covering: ophthalmology, neurology, pulmonology, cardiology, burns, oncology, palliative care and urogynecology, in both adults and children, and pediatric musculoskeletal procedures. In this analysis, categorical variables (origin of referrals, procedures, absenteeism and place of residence) and quantitative variables (sex, age and waiting time) were used.

Comparisons between 2017 and 2019, between living places by urban region, between procedures and between referral origins, in relation to quantitative variables, were made using one-way ANOVA, followed by the Tukey post-test. Comparisons between non-absentees and absentees and between sexes, also in relation to quantitative variables, were made using the student t-test. The assessment of the association between the categorical variables analyzed was performed using the chi-square test, with Bonferroni correction when necessary. The evaluation of the linear correlation between the age of users and the time between request and authorization, between request and scheduling and between authorization to scheduling was performed using Pearson's linear correlation test.[12]

The multivariate evaluation of the association of the evaluated variables and absenteeism was performed by calculating the adjusted odds ratio and its confidence interval, in bivariate logistic regression analysis, using the "Enter" method, and this analysis was performed in a separated between categorical variables and quantitative variables. The other results were presented in the form of descriptive statistics or in the form of tables.[12] The statistical analysis was performed using the SPSS statistical program, version 24.0, considering a significance level of 5%.

On the basis of the geographic coordinates of the addresses of the patients and the places of care, the distances between the points were calculated, using the vector analysis tool "distance to the nearest center". Distances were calculated separately for each care unit. Means, interquartile range (25 and 75%), 95% confidence interval (CI) of the mean, minimum and maximum of distances were calculated.

This study was approved by the Human Research Ethics Committee of the Federal University of Mato Grosso do Sul (UFMS), under Approval No. 3.174.925 (CAAE: 02617418.7.0000.0021).

## Results

The sample consisted of 32,085 individuals, of which 685 were excluded due to inconsistency in their data. The final sample consisted of 31,400 users scheduled for SUS outpatient physical therapy. From January to December 2017, 13,729 users were scheduled, 16,375 users from January to December 2018 and 1,296 users from January to February 2019.

Regarding repressed demand, the sample comprised 1424 users in the period between January and February 2019. Only this information was available in SISREG at the time of extraction.

Among scheduled users, the females were predominant (59.4%) and increased year by year (58.8% in 2017, 59.3% in 2018 and 66.4% in 2019), and the highest number of procedures performed was for adult motor disorders (61.5%). The average waiting time was 2.5 months and increased yearly (Table 1).

The time between request and authorization, between request and scheduling and between authorization and scheduling increased significantly over the years evaluated, being higher in 2019 (Table 1).

The absenteeism rate was higher in 2018 and 2019, and in 2019 it was 2.16 times higher than in 2017. Absenteeism was shown to be associated with age, and the older the age, the lower the absenteeism. There was an association between absenteeism and the time interval between the request and the appointment, and the longer this time, the greater the absenteeism. Both the majority of those scheduled and the majority of absentees came from the Anhanduizinho region (Tables 1 and 2).

**Table 1** - Description of users scheduled for outpatient physical therapy of the Unified Health System (SUS) in Campo Grande/MS from January 2017 to February 2019

| Variable | Year | | | p | Total |
|---|---|---|---|---|---|
| | 2017 | 2018 | 2019 | | |
| **Total attendances** | **13,729** | **16,375** | **1,296** | **-** | **31,400** |
| **Sex** | | | | | |
| Female | 58.8 (8,075)[b] | 59.3 (9,711)[b] | 66,4 (861)[a] | < 0.001 | 59.4 (18,647) |
| Male | 41.2 (5,654)[a] | 40.7 (6,664)[a] | 33.6 (435)[b] | | 40.6 (12,753) |
| **Age** (years) | 50.48 ± 0.15[b] | 50.60 ± 0.13[b] | 52.05 ± 0.45[a] | 0.006 | 50.61 ± 0.10 |
| **Waiting time** (days) | | | | | |
| Request to authorization | 40.90 ± 0.52[c] | 129.74 ± 1.03[b] | 208.61 ± 3.52[a] | < 0.001 | 94.15 ± 0.66 |
| Request to scheduling | 48.98 ± 0.51[c] | 138.57 ± 1.02[b] | 217.93 ± 3.54[a] | < 0.001 | 102.68 ± 0.66 |
| Authorization to scheduling | 8.08 ± 0.04[c] | 8.83 ± 0.04[b] | 9.32 ± 0.19[a] | < 0.001 | 8.53 ± 0.03 |
| **Origin of referral** | | | | | |
| Primary care | 18.0 (2,472)[b] | 13.5 (2,213)[c] | 27.9 (362)[a] | < 0.001 | 16.1 (5,047) |
| Specialized care | 45.8 (6,287)[c] | 48.1 (7,872)[b] | 56.9 (738)[a] | | 47.4 (14,897) |
| Complementary network | 36.2 (4,968)[b] | 38.4 (6,280)[a] | 14.8 (192)[c] | | 36.4 (11,440) |
| Others | 0.0 (2)[b] | 0.1 (10)[b] | 0.3 (4)[a] | | 0.1 (16) |
| **Procedures** | | | | | |
| Physiotherapeutic care in adult motor disorders | 60.3 (8,282)[b] | 61.2 (10,015)[b] | 77.6 (1,006)[a] | < 0.001 | 61.5 (19,303) |
| Physiotherapeutic care in pre- and postoperative patients with adult musculoskeletal disorders | 29.9 (4,107)[a] | 28.3 (4,639)[b] | 15.6 (202)[c] | | 28.5 (8,948) |
| Others* | 9.8 (1,340)[a] | 10.5 (1,721)[a] | 6.8 (88)[b] | | 10.0 (3,149) |
| **Absenteeism** | | | | | |
| No | 71.2 (9,773)[a] | 61.8 (10,114)[b] | 50.2 (650)[c] | < 0.001 | 65.4 (20,537) |
| Yes | 28.8 (3,956)[c] | 38.2 (6,261)[b] | 49.8 (646)[a] | | 34.6 (10,863) |
| **Residence by urban region** | | | | | |
| Anhanduizinho | 27.7 (3,731)[a] | 25.8 (4,145)[b] | 25.8 (326)[ab] | < 0.001 | 26.6 (8,202) |
| Bandeira | 13.3 (1,796)[a] | 12.7 (2,036)[a] | 13.8 (175)[a] | | 13.0 (4,007) |
| Centro | 5.2 (707)[a] | 5.3 (850)[a] | 6.5 (82)[a] | | 5.3 (1,639) |
| Imbirussu | 16.1 (2,247)[a] | 14.0 (2,239)[b] | 15.2 (192)[ab] | | 14.9 (4,594) |
| Lagoa | 16.7 (2,247)[a] | 16.2 (2,606)[a] | 13.6 (172)[b] | | 16.3 (5,025) |
| Prosa | 6.7 (898)[b] | 7.5 (1,199)[a] | 6.3 (80)[ab] | | 7.1 (2,177) |
| Segredo | 14.3 (1,929)[b] | 18.5 (2,967)[a] | 18.8 (238)[a] | | 16.7 (5,134) |
| Not indicated | 258 | 333 | 31 | | 622 |

Note: The results are presented as relative frequency (absolute frequency) or the mean ± standard error of the mean. p in the chi-square test (for categorical variables) or in one-way ANOVA (for quantitative variables). Different letters in the row indicate a significant difference between the years evaluated in the chi-square test with Bonferroni correction (for categorical variables) or in the Tukey post-test (for quantitative variables) ($p < 0.05$). *Others: procedures that exhibited minimum percentages of requests in the areas of ophthalmology, neurology, pulmonology, cardiology, burns, oncology, palliative care and urogynecology, in both adults and children, and pediatric orthopedics were grouped.

**Table 2** - Analysis of absenteeism in outpatient physical therapy services of the Unified Health System (SUS) in the city of Campo Grande/MS from January 2017 to February 2019 associated with sex, origin of referral, procedure, place of residence and waiting time

| Categorical variables | Odds ratio (95%CI) | p |
|---|---|---|
| **Absenteeism** | | |
| 2017 | 1 | |
| 2018 | 1.55 (1.48 - 1.63) | < 0.001 |
| 2019 | 2.16 (1.92 - 2.43) | < 0.001 |
| **Sex** | | |
| Male | 1 | |
| Female | 0.99 (0.94 - 1.04) | 0.598 |
| **Origin of referral** | | |
| Complementary network | 1 | |
| Primary care | 1.64 (1.50 - 1.79) | < 0.001 |
| Specialized care | 1.63 (1.51 - 1.77) | < 0.001 |
| Others | 4.91 (1.69 - 14.31) | 0.004 |
| **Procedure** | | |
| Physiotherapeutic care in adult motor disorders | 1 | |
| Physiotherapeutic care in pre- and postoperative patients with adult musculoskeletal disorders | 1.23 (1.14 - 1.34) | < 0.001 |
| Others | 0.95 (0.86 - 1.04) | 0.262 |
| **Residence by urban region** | | |
| Anhanduizinho | 1 | |
| Bandeira | 0.96 (0.89 - 1.04) | 0.351 |
| Centro | 0.85 (0.76 - 0.957) | 0.007 |
| Imbirussu | 0.91 (0.84 - 0.98) | 0.013 |
| Lagoa | 1.01 (0.94 - 1.09) | 0.837 |
| Prosa | 1.02 (0.92 - 1.12) | 0.770 |
| Segredo | 1.00 (0.93 - 1.08) | 0.963 |
| **Quantitative variables** | **Odds ratio (95%CI)** | **p** |
| Age | 0.99 (0.99 - 0.99) | < 0.001 |
| Time between request and authorization | 1.00 (1.00 - 1.01) | 0.930 |
| Time between request and scheduling | 1.01 (1.00 - 1.01) | 0.024 |

Note: p-value in the bivariate logistic regression analysis using the "Enter" method. The time between authorization and scheduling was initially included in the analysis, but this variable did not pass the criterion of the "Enter" method to be used in the final analysis.

Regarding the repressed demand, 1,424 users were identified waiting for access to physical therapy services. The average age of users was 52.41 years, with most being female. The referral of the vast majority of these users came from primary care (PC) and was for physical therapy in motor disorders (Table 3). The average distances between address of each of the patients in relation to the place where they were treated showed that the shortest distance traveled (4.13 km) was for the service of the Specialized Rehabilitation and Diagnosis Unit (UERD), which is located in the Imbirussu region, and the longest distance was to the Clínica Movimento (6.62 km) which is located in the central region of Campo Grande/MS (Table 4).

**Table 3** - Characterization of users in repressed demand for outpatient physical therapy of the Unified Health System (SUS) in relation to age, sex, origin of referral and procedure in the period from January to February 2019 in the city of Campo Grande/MS

| Variable | Mean ± SEM ou % (n) |
|---|---|
| **Age** (years) | 52,41 ± 0,43 |
| **Sex** | |
| Female | 69.7% (993) |
| Male | 30.3% (431) |
| **Origin of referral** | |
| Primary care | 98.9% (1,409) |
| Complementary network | 0.8% (12) |
| Specialized care | 0.1% (1) |
| Others | 0.1% (2) |
| **Procedure** | |
| Physiotherapeutic care in motor disorders | 97.3% (1,385) |
| Physiotherapeutic care in pre and postoperative patients with musculoskeletal disorders | 2.0% (28) |
| Physiotherapeutic care in patients with neurokinetic functional disorders with systemic complications | 0.3% (4) |
| Physiotherapeutic care in patients with urogynecological disorders | 0.2% (3) |
| Physiotherapeutic care in patients with neurokinetic functional disorders without systemic complications | 0.2% (3) |
| Physiotherapeutic care in patients before and after cancer surgery | 0.1% (1) |

Note: SEM = standard error of the mean.

**Table 4** - Distance (in km) for the service points of the United Health System (SUS) in the city of Campo Grande/MS.

| Service unit | Mean | IQR 25% | IQR 75% | 95%CI cri | | Minimum | Maximum |
|---|---|---|---|---|---|---|---|
| ACBR | 5.61 | 3.80 | 7.34 | 5.51 | 5.72 | 0.28 | 12.84 |
| ANACORPUS | 6.35 | 4.84 | 8.08 | 6.31 | 6.39 | 0.06 | 15.33 |
| Clínica Movimento | 6.62 | 5.00 | 8.58 | 6.57 | 6.67 | 0.14 | 14.50 |
| UCDB | 5.14 | 2.63 | 6.36 | 5.02 | 5.26 | 0.24 | 15.67 |
| UERD | 4.13 | 1.81 | 6.03 | 4.03 | 4.22 | 0.04 | 14.04 |

Nota: ACBR = Associação Campograndense Beneficente de Reabilitação; UCDB = Universidade Católica Dom Bosco; UERD = Unidade Especializada em Reabilitação e Diagnóstico

## Discussion

Waiting times, absenteeism and repressed demand for outpatient health services are a current and relevant topic.[7] In the field of outpatient physical therapy, the literature shows few investigations that systematize, present and discuss these data for Brazilian cities. The results of this study showed long waiting times for access to physical therapy treatment in the SUS. In addition, most users came from regions of greater social vulnerability in the city, and there was a high percentage of absenteeism and repressed demand. Such data are extremely worrisome; however, they are part of the context in which rehabilitation has traditionally been a low priority for many governments,[13] which is reflected in the insufficient supply of services around the world.[6]

Most appointments were for women seeking treatment for clinical and surgical motor disorders, consistent with another investigation.[11] It is noteworthy that the number of women scheduled increased considerably year after year, a phenomenon that needs to be further investigated.

Disorders of the musculoskeletal system are among the ones that most affect the population that seeks medical and physical therapy care,[14] and are the most common cause of chronic disability in the world.[15] The impact of these conditions on people's lives is significant because of the direct expenses generated by the treatment and the consequent decrease in productivity, compromising economic, social and emotional aspects, in addition to individual physical well-being.[16]

Users with neurological impairments appeared in much fewer numbers in this study, possibly because of the fact that in the city studied, these users are regulated by other flows.

The waiting time for access to physical therapy services was long and increased considerably over the years, indicating the public network's difficulty in meeting high demands in a timely manner, compromising access and evidencing inequalities. There were similar results where the waiting time in physical rehabilitation ranged from 1 to 6 months for patients with stroke and children with cerebral palsy,[17] and 67 days for victims of traffic accidents.[9] Delaying the beginning of rehabilitation hurts the concept of access based on the provision of services in timely and opportune conditions that guarantee good results.[1] In addition to users' dissatisfaction, this delay can impact the effectiveness of treatment[18] and also users' income by reducing work capacity.[16]

Regarding absenteeism, there was a significant year by year increase, influenced by the waiting time. The association between waiting time for consultations in SC and absenteeism was also observed by Farias et al.[7]

Missing appointments and tests is a complex phenomenon, and one must consider how the user's health needs were transformed over the waiting time, since such a significant percentage of absenteeism impairs the continuity of treatment, generates repetition of PC actions and idleness in the SC,[19] services, reflecting the increase in waiting lines.

The higher the age group, the lower was the absenteeism, which can be explained by the presence of more intense symptoms in older people[20] and/or by the fact that younger people adhere less to treatments.[21] Another hypothesis that may contribute to these results is free transport provided for the elderly, since the lack of financial resources to travel to health services is one of the reasons for absenteeism,[19] as well as the existence of little or no health transport.[22]

Absenteeism was higher in adult motor disorders when compared with pre- and postoperative patients in adult musculoskeletal disorders. Possibly those who are waiting for surgery or are in postsurgical recovery have more symptoms. Patients with better adherence to treatment have a better self-perception of health[23] and the need for rehabilitation.[8]

The Anhanduizinho region had the largest number of appointments and also the highest absenteeism, and there is no public physiotherapy service in the region. It is the region with the highest rates of social exclusion in the municipality,[24] and absenteeism may be related to the economic barrier to accessing health services. The groups that most need health services are those that have the greatest difficulty in accessing them.[25] The more specialized the services, the farther away they are from the users' living region,[26,27] which hinders access to outpatient services of physiotherapy. [28]

Regarding the distance traveled by users to access health services, the longest average distance corresponded to a clinic located in the central region of the city, and the shortest distance was to a service located in the Imbirussu region. Even though it is the service closest to users, it is located in one of the regions where absenteeism rates were very high. This result may be related to the fact that users in this region were also referred to other more distant services. Still, this region is among the ones with the highest rate of social exclusion in the municipality.[24]

The referral of the vast majority of users in repressed demand came from PC and was for physical therapy treatment in motor disorders. At the same time, among users who managed to schedule an appointment in the same period, considering the general average, only 16% were referred via PC, indicating that users referred via PC have considerable access difficulties.

Between 72% and more than 80% of rehabilitation cases referred to SC are likely to be treated in PC,[29,30] with the physical therapist of first contact performing triage and making referrals as needed,[31] selecting only complex cases for care in the polyclinics, and optimizing the flow and work process of the physical therapist.[32] This mode of organization reduces waiting time, requests for examinations, demand for SC or the need for a clinic visit with general practitioners, provides adequate referrals to orthopedics and patient satisfaction.[33]

There are reports of the work of the physical therapist in PC working on queue management, education and

health promotion in individual, group or home care,[34] treatment for low back pain,[35] knee osteoarthritis,[36] face-to-face sessions complemented with online resources,[37] home care[38] and even care for patients with chronic obstructive pulmonary disease,[39] even though this practice is routine in SC.

The increase in non-communicable chronic diseases and the population aging process should produce increasing demand for physical therapy services. Additionally, covid-19 brings new demand, requiring planning so that these users, often affected by severe sequelae, have continuity of care after hospital discharge. In addition to specialized rehabilitation services, there are recommendations that PC physiotherapists develop treatment plans for these patients in the area.[40]

To expand and qualify outpatient physical therapy care, a comprehensive and collective effort is necessary, with the production of knowledge about the demands and the resoluteness of care in different population groups and health situations, at different points in the network. It is urgent to organize and implement a line of care in the area of physical rehabilitation in the capital studied. São Bernardo do Campo was successful with this initiative, reducing waiting lines and contributing to the resolubility of the service with adequate and timely support to users.[31]

Considering the limitation of studies in the area, it is recommended to carry out research like this in other regions, as well as investigations into the effects of physical therapy care in PC on different indicators, such as reducing the number of referrals to SC and the waiting time access to physical therapy services, in addition to user satisfaction.

## Conclusion

This study showed important problems in users' access to outpatient physical therapy services in the SUS during the period studied: excessive waiting time between the request and treatment scheduling, high rates of absenteeism and repressed demand. All these aspects act synergistically as barriers to accessing outpatient physical therapy care in the municipality studied, with substantial negative impacts on users' recovery.

The care void for many users can accentuate the situation of social vulnerability, as the lack of physical rehabilitation can make it impossible for them to work. It is necessary to reorganize these treatments in the municipality, increasing the offer of services both in PC and SC.

Although this study addressed a specific reality in a Brazilian capital, it is important to give visibility and intensify the debate on the historical problems of access to physical rehabilitation services in Brazil and in the world. No other studies were identified that analyze, in general and considering different demands for physical therapy rehabilitation units, data on waiting times, absenteeism and repressed demand in outpatient physical therapy services in the SUS.

## Authors' contributions

AGP and MLMS were responsible for designing the study, writing the manuscript and analyzing and interpreting the data. AMG, LSFM, ADC and MLMS reviewed the manuscript and approved the final version.

## References

1. World Health Organization. Global status report on road safety 2013: supporting a decade of action. Geneva: WHO; 2006 [cited 2015 Jan 20]. Available from: https://apps.who.int/iris/handle/10665/78256

2. Silva A. A framework for measuring responsiveness. Series of GPE Discussion Papers: n. 32. EIP/GPE/EBD. Geneva: World Health Organization; 2010. Full text link

3. Hurst J, Siciliani L. Tackling excessive waiting times for elective surgery: a comparison of policies in twelve OECD countries. Paris: OECD; 2003.

4. Schoen C, Osborn R, Huynh PT, Doty M, Davis K, Zapert K, et al. Primary care and health system performance: adults' experiences in five countries. Health Aff (Millwood). 2004;Suppl Web Exclusives:W4-487-503. DOI

5. Giovanella L, Mendonça MHM, Almeida PF, Escorel S, Senna MCM, Fausto MCR, et al. Saúde da família: limites e possibilidades para uma abordagem integral de atenção primária à saúde no Brasil. Cienc Saude Colet. 2009;14(3):783-94. DOI

6. Brigth T, Wallace S, Kuper H. A Systematic review of access to rehabilitation for people with disabilities in low - and middle - income countries. Int J Environ Res Public Health. 2018;15(10):2165. DOI

7. Farias CML, Giovanella L, Oliveira AE, Santos Neto ET. Tempo de espera e absenteísmo na atenção especializada: um desafio para os sistemas universais de saúde. Saude Debate. 2019;43(5):190-204. DOI

8. Keely E, Liddy C, Afkham A. Utilization, benefits, and impact of an e-Consultation service across diverse specialties and primary care providers. Telemed J E Health. 2013;19(10):733-8. DOI

9. Sousa KM, Oliveira WIF, Alves EA, Gama ZAS. Fatores associados ao acesso à reabilitação física para vítimas de acidente de trânsito. Rev Saude Publica. 2017;51:54. DOI

10. Matsumura ESS, Sousa Jr AS, Guedes JA, Teixeira RC, Kietzer KS, Castro LSF. Distribuição territorial dos profissionais fisioterapeutas do Brasil. Fisioter Pesqui. 2018;25(3):309-14. DOI

11. Reis KS, Cavalcante PGL, Aguiar DF, Santos FCV, Hazime FA. Georreferenciamento e políticas públicas de acesso à fisioterapia na atenção primária na cidade de Parnaíba-PI. Rev Pesqui Fisioter. 2019;9(2):237-42. DOI

12. Rowe P. Essential statistics for the pharmaceutical sciences. Chichester, EN: John Wiley & Sons; 2007.

13. WHO. World Report on Disability. Genebra, CH: World Health Organization and The World Bank; 2011. Full text link

14. Oliveira AC, Braga DLC. Perfil epidemiológico dos pacientes atendidos na clínica de ortopedia da Universidade Paulista. J Health Sci Inst. 2010;28(4):356-8. Full text link

15. Conelly LB, Woolf A, Brooks P. Cost-effectiveness of interventions for musculoskeletal conditions. In: Jaminson DT et al. Disease Control Priorities in Developing Countries. 2 ed. Washington: The Word Bank; 2006. Full text link

16. Woolf AD, Erwin J, March L. The need to address the burden of musculoskeletal conditions. Best Pract Res Clin Rheumatol. 2012;26(2):183-224. DOI

17. Ribeiro KSQS, Neves RF, Brito GEG, Sousa KM, Lucena EMF, Batista HRL. Acesso à reabilitação pós-AVC na cidade de João Pessoa, Paraíba. Rev Baiana Saude Publica. 2012;36(3):699-712. DOI

18. Stucki G, Stier-Jarmer M, Grill E, Melvin J. Rationale and principles of early rehabilitation care after an acute injury or illness. Disabil Rehabil. 2005;27(7-8):353-9. DOI

19. Bender AS, Molina LR, Mello ALSF. Absenteísmo na atenção secundária e suas implicações na atenção básica. Espaç Saude. 2010;11(2):56-65. Full text link

20. Malta DC, Oliveira MM, Andrade SSCA, Caiaffa WT, Souza MFM, Bernal RTI. Fatores associados à dor crônica na coluna em adultos no Brasil. Rev Saude Publica. 2017;51(Suppl 1):2-9s. DOI

21. Tavares NUL, Bertoldi AD, Mengue SS, Arrais PSD, Luiza VL, Oliveira MA, et al. Fatores associados à baixa adesão ao tratamento farmacológico de doenças crônicas no Brasil. Rev Saude Publica. 2016;50(Supl 2):10s. DOI

22. Othero MB, Ayres JRCM. Healthcare needs of people with disabilities: subjects' perspectives through their life histories. Interface (Botucatu). 2012;16(40):219-33. DOI

23. DiMatteo MR, Giordani PJ, Lepper HS, Croghan TW. Patient adherence and medical treatment outcomes: a meta-analysis. Med Care. 2002;40(9):794-811. DOI

24. Sauer L, Campêlo E, Capillé MAL. O mapeamento dos índices de inclusão e exclusão social em Campo Grande/MS: Uma nova reflexão. Campo Grande: Editora Oeste; 2012.

25. Lima JC, Azoury EB, Bastos LHCV, Coutinho MM, Pereira NN, Ferreira SCC. Desigualdades no acesso e utilização de serviços de saúde no Brasil. Saude Debate. 2002;26(60):62-70.

26. Souza FOS, Medeiros KR, Gurgel Jr GD, Albuquerque PC. Do normativo à realidade do Sistema Único de Saúde: revelando barreiras de acesso na rede de cuidados assistenciais. Cienc Saude Coletiva. 2014;19(4):1283-93. DOI

27. Albuquerque MSV, Lyra TM, Farias SF, Mendes MFM, Martelli PJL. Acessibilidade aos serviços de saúde: uma análise a partir da Atenção Básica em Pernambuco. Saude Debate. 2014;38:182-94. DOI

28. Silva MA, Santos MLM, Bonilha LAS. Users' perceptions of outpatient physiotherapy in the public healthcare system in Campo Grande (MS, Brazil): problem-solving capacity and difficulties. Interface. 2014;18(48):75-86. Full text link

29. Hartvigsen J, Hancok MJ, Kongsted A, Louw Q, Ferreira ML, Genevay S, et al. What low back pain is and why we need to pay attention. Lancet. 2018;391(10137):2356-67. DOI

30. Foster NE, Anema JR, Cherkin D, Chou R, Cohen SP, Gross DP, et al. Prevention and treatment of low pain: evidence, challenges, and promising directions. Lancet. 2018;391(10137):2368-83. DOI

31. Carmo D. Atenção Especializada no SUS: da máquina de produção de procedimentos a uma rede de produção de cuidados [dissertação]. São Paulo: Universidade de São Paulo; 2017. DOI

32. Carneiro LC, Sanson JR, Silva MLB. Inclusão da fisioterapia na Atenção Primária: experiência na Unidade Básica de Saúde Rio Tavares. Col Gest Saude Publica. 2012;10:113-31.

33. Downie F, McRitchie C, Monteith W, Turner H. Physiotherapist as an alternative to a GP for musculoskeletal conditions: a 2-year service evaluation of UK primary care data. Br J Gen Practic. 2019;69(682):e314-20. DOI

34. Braghini CC, Ferreti F, Ferraz L. Atuação do fisioterapeuta no contexto dos núcleos de apoio à saúde da família. Fisioter Mov. 2017;30(4):703-13. DOI

35. Stochkendahl MJ, Kjaer P, Hartvigsen J, Kongsted A, Aaboe J, Andersen M, et al. National clinical guidelines for non-surgical treatment of patients with recent onset low back pain or lumbar radiculopathy. Eur Spine J. 2018;27(1):60-75. DOI

36. Barten DJJA, Swinkels LCS, Dorsman SA, Dekker J, Veenhof C, Bakker DH. Treatment of hip/knee osteoarthritis in Dutch general practice and physical therapy practice: an observational study. BMC Fam Pract. 2015;16:75. DOI

37. Kloek CJJ, Bossen D, Spreeuwenberg PM, Dekker J, Bakker DH, Veenhof C. Effectiveness of a blended physical therapist intervention in people with hip osteoarthritis, knee osteoarthritis, or both: a cluster-randomized controlled trial. Phys Ther. 2018;98(7):560-70. DOI

38. Johansson K, Bergström A, Schröder K, Foldevi M. Subacromial corticosteroid injection or acupuncture with home exercises when treating patients with subacromial impingement in primary care - a randomized clinical trial. Fam Pract. 2011; 28(4):355-65. DOI

39. Skumlien S, Skogedal EA, Ryg MS, Bjørtuft O. Endurance or resistance training in primary care after in-patient rehabilitation for COPD? Respir Med. 2008;102(3):422-9. DOI

40. Brasil. Conselho Nacional de Secretários de Saúde - CONASS. Guia orientador para o enfrentamento da pandemia Covid-19 na Rede de Atenção à Saúde. Brasília; 2020 [cited 2021 Jul 17]. Available from: https://tinyurl.com/4fxf6k8p