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BARREIRAS E CRITÉRIOS PERCECIONADOS PELOS MÉDICOS DE MEDICINA GERAL E FAMILIAR NA REFERENCIAÇÃO PARA REABILITAÇÃO RESPIRATÓRIA NOS CUIDADOS DE SAÚDE PRIMÁRIOS

PERCEIVED BARRIERS AND CRITERIA FOR REFERRAL TO PULMONARY REHABILITATION USED IN PRIMARY HEALTH CARE BY GENERAL PRACTITIONERS

BARREIRAS Y CRITERIOS PERCIBIDOS POR LOS MÉDICOS DE MEDICINA GENERAL Y FAMILIAR EN LA REFERENCIA PARA REHABILITACIÓN RESPIRATORIA EN LA ATENCIÓN PRIMARIA DE SALUD

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RESUMO

Introdução: A doença pulmonar obstrutiva crónica abrange componentes farmacológicos e não farmacológicos. O componente não farmacológico mais custo-efetivo é a reabilitação respiratória, uma intervenção indidualizada e abrangente, incluindo exercício físico, educação e mudança de comportamento, para melhorar a condição física e psicológica e promover a adesão a comportamentos saudáveis a longo prazo.

O objetivo deste estudo foi compreender os hábitos e barreiras percebidas pelos médicos de família portugueses ao encaminhar pessoas com doença pulmonar obstrutiva crónica para reabilitação respiratória.

Metodologia: Conduziu-se um estudo transversal para avaliar o conhecimento, práticas de referenciação e as barreiras percebidas pelos médicos de família em relação à reabilitação respiratória através de um questionário online.

Resultados: Foram obtidas 61 respostas, das quais 31,1% (n=19) dos participantes nunca referenciaram para reabilitação respiratória. Dos que referenciaram, o critério mais utilizado foi a limitação funcional 78,5% (n=33). Este critério foi considerado extremamente importante para a referenciação por 64% (n=39) dos participantes deste estudo.

Discussão: Para aumentar o encaminhamento para reabilitação respiratória, os médicos devem estar consciencializados sobre as vantagens destes programas. A divulgação dos programas existentes é essencial para garantir que sejas conhecidos. As informações da avaliação do impacto dos programas na condição da pessoa devem ser compartilhadas com o referenciador.

Conclusão: A falta de programas de reabilitação respiratória disponíveis, a baixa adesão da pessoa com doença pulmonar obstrutiva crónica ,a ausência de feedback dos resultados de programas anteriores e a falta de conhecimento dos critérios de referênciação são as barreiras mais percebidas pelos médicos de família.

Descritores: Reabilitação respiratória; Doença Pulmonar Obstrutiva Crónica; Médicos de Família; Encaminhamento e Consulta; Reabilitação

ABSTRACT

Introduction: Chronic obstructive pulmonary disease encompasses both pharmacological and non-pharmacological components. The most cost-effective non-pharmacological component is pulmonary rehabilitation, an individualised, comprehensive intervention, including exercise training, education, and behavior change, to improve the physical and psychological condition and promote adherence to long-term healthy behaviors.

The aim was to understand the habits and barriers perceived by Portuguese general practitioners when referring people with chronic obstructive pulmonary disease to pulmonary rehabilitation and the criteria valued in decision-making.

Methodology: We conducted a cross-sectional study to assess general practitioners' knowledge, referral practices, and perceived barriers regarding pulmonary rehabilitation using an online questionnaire. The questionnaire evaluated knowledge of PR benefits, referral criteria, and existing barriers.

Results: Sixty-one responses were obtained, of which 31.1% (n=19) never referred to PR. Of those who were referred, the most used criterion for referral, 78.5% (n=33), was functional limitation. This criterion was considered extremely important for referral by 64% (n=39) of the participants in this study.

Discussion: To increase referrals to pulmonary rehabilitation, doctors must raise awareness of the advantages of these programmes. Publicising existing programmes is essential to ensure that general practitioners know these responses. Information from the assessment of the impact of pulmonary rehabilitation programmes on a person's condition should be shared.

Conclusion: Insufficient available PR programmes, Lack of patient adherence and feedback of programme outcomes and lack of knowledge of referencing criteria are the most perceived barriers by general practitioners to referring patients to pulmonary rehabilitation programmes.

Descriptors: Pulmonary rehabilitation; Pulmonary Disease, Chronic Obstructive; Physicians, Family; Referral and Consultation; Rehabilitation

RESUMEN

Introducción: La enfermedad pulmonar obstructiva crónica (EPOC) abarca componentes farmacológicos y no farmacológicos. El componente no farmacológico más rentable es la rehabilitación pulmonar (RP), una intervención integral basada en una evaluación completa de la persona seguida de una intervención individualizada, que incluye entrenamiento físico, educación y cambio de comportamiento, para mejorar la condición física y psicológica y promover la adherencia a comportamientos saludables a largo plazo.

El objetivo fue comprender los hábitos y las barreras percibidas por los médicos de familia portugueses al derivar a personas con EPOC a la RP y los criterios valorados en la toma de decisiones.

Metodología: Realizamos un estudio observacional transversal para evaluar el conocimiento, las prácticas de derivación y las barreras percibidas de los médicos de familia con respecto a la rehabilitación pulmonar (RP) mediante un cuestionario en línea.

El cuestionario evaluó el conocimiento de los beneficios de la RP, los criterios de derivación y las barreras existentes.

Resultados: Se obtuvieron sesenta y un respuestas, de las cuales el 31,1% (n = 19) nunca derivó a RP. De los derivados, el criterio más utilizado para la derivación, 78,5% (n = 33), fue la limitación funcional. Este criterio fue considerado extremadamente importante para la derivación por el 64% (n = 39) de los participantes en este estudio.

Discusión: Para aumentar las derivaciones a la RP, los médicos deben concienciar sobre las ventajas de los programas de RP para los pacientes con EPOC. Es fundamental dar a conocer los programas de RP existentes en hospitales o comunidades para garantizar que los médicos de familia conozcan estas respuestas. La información de la evaluación del impacto de los programas de RP en la condición de una persona debe compartirse en los sistemas de información utilizados por los médicos de familia.

Conclusión: Los programas de RP insuficientemente disponibles, la falta de adherencia del paciente y la retroalimentación de los resultados del programa y la falta de conocimiento de los criterios de referencia son las barreras más percibidas por los médicos de familia para derivar a los pacientes con EPOC a los programas de RP.

Descriptores: Rehabilitación pulmonar; Enfermedad Pulmonar Obstructiva Crónica; Médicos de Familia; Remición y Consulta; Rehabilitación

INTRODUCTION

Chronic Obstructive Pulmonary Disease (COPD) is a heterogeneous lung disease that causes persistent, and often progressive, airflow obstruction. The most common symptoms include dyspnea, cough, and sputum production. COPD is estimated that COPD is the third leading cause of death and one of the main causes of morbidity worldwide[1].

Pulmonary rehabilitation (PR) is the most cost-effective non-pharmacological component. PR is a comprehensive intervention based on a complete assessment of the person followed by individualised intervention, which includes, among other components, exercise training, education, and behavior change aimed at improving the physical and psychological condition and promoting adherence in the long term to healthy behaviours[2].

PR reduces the perception of dyspnea, improves the global health condition, and allows people with stable COPD to exercise tolerance. It reduces the number of hospitalisations among people with COPD who have had a recent exacerbation and symptoms of anxiety and depression[1,2].

In Portugal, only 2% of people with COPD have access to PR[3,4], a problem also identified at an international level[5]. In addition to this, there is low adherence to them, which is justified by structural and contextual limitations (e.g. the existence of few institutions that make PR available; difficulties in transporting people), factors associated with people (e.g. low level of knowledge about the disease itself; lack of social and family structure and support; economic difficulties) and factors associated with referrers (e.g. low level of knowledge/familiarity generalisation of referring doctors about COPD, PR and the referral process)[6].

Considering the documented benefits of PR in disease management, improved health status, and acknowledging current limitations to access, ensuring improved access to PR for patients with COPD is crucial to optimise disease control, patient functionality and health-related quality of life, and potentially prolong and stabilise the positive effects of PR on health and disease control[1,2].

While some healthcare professionals recognised the value of PR programmes, many remained unsure about the specific benefits for patients. The lack of robust evidence for improving referral practices makes it challenging to formulate concrete recommendations for improving referral rates[9].

This study aimed to understand the habits and barriers perceived by Portuguese general practitioners when referring people with COPD to PR and the criteria valued in decision-making.

METHODOLOGY

This was an observational, descriptive, cross-sectional study. The population under study was general practitioners (GP) working in the national health service in Portugal (residents and interns)

A team-developed online questionnaire assessed referral practices, perceived barriers to referral, and knowledge about PR among general practitioners, specialists, and interns. The questionnaire employed a multiple-choice format to assess perceived barriers and a Likert scale to evaluate knowledge about PR. This survey was then administered to the volunteer sample participating in the study.

This study was performed following the Declaration of Helsinki and received approval from the Matosinhos Local Health Unit ethics committee (32/CES/JAS). The researcher obtained written informed consent from the participants.

Responses to the questionnaire were anonymous and confidential.

Statistical processing was carried out using IBM SPSS V28 software. We calculated frequencies and percentages for each response option of the nominal variables. This was done for the overall GP population and stratified by trainee level.

RESULTS

Sixty-one participants responded to the online questionnaire between April and October 2022; 72.1% (n=44) were residents and the remaining were interns. The participants are distributed from all around the country, with 67% (n=41) from the Oporto district, 16% (n=10) from the Faro district, 8% (n=5) from Lisbon district, and the remmaining sample from Viseu, Braga, Castelo Branco districts and Madeira Autonomous Region.

The characteristics of the participants are presented in Table 1, where the general and differentiated characteristics between GP Residents and interns are presented.

Of the physicians who reported ever referring patients to PR programmes (n=64), a majority 68.9% (n=42) indicated referring only to hospital-based programs. Additionally, among these referring physicians, a substantial proportion 83.3% (n=35) reported referring five or fewer patients to PR overall.

According to the results presented in Figure 1, the most commonly used criterion for referral is a person's functional limitation.

Table 1 – Participants characteristics

	GP residents (72.1%)	GP Interns (27.9%)	Total
Age m(SD)	40 (7.5)	32 (5)	38 (7.7)
Feminine gender % (n)	72.7(32)	76.5(13)	73.8(45)
Particular interest in respiratory diseases % (n)	52.3(23)	52.9(9)	52.5(32)
Never referenced to PR%(n)	13.6(6)	76.5(13)	31.1(19)

FGM – General and Family Medicine; PR – Pulmonary rehabilitation; m – mean; sd – standard deviation; n – Absolute frequency; % - Percentage

Figure 1 - Criteria used to decide on a referral for pulmonary rehabilitation.

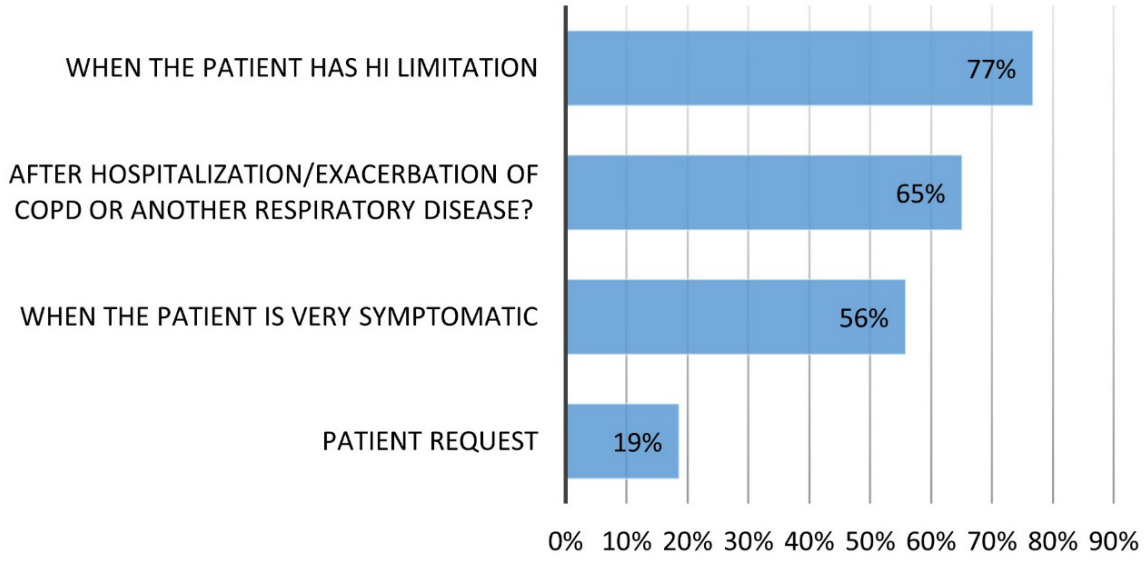
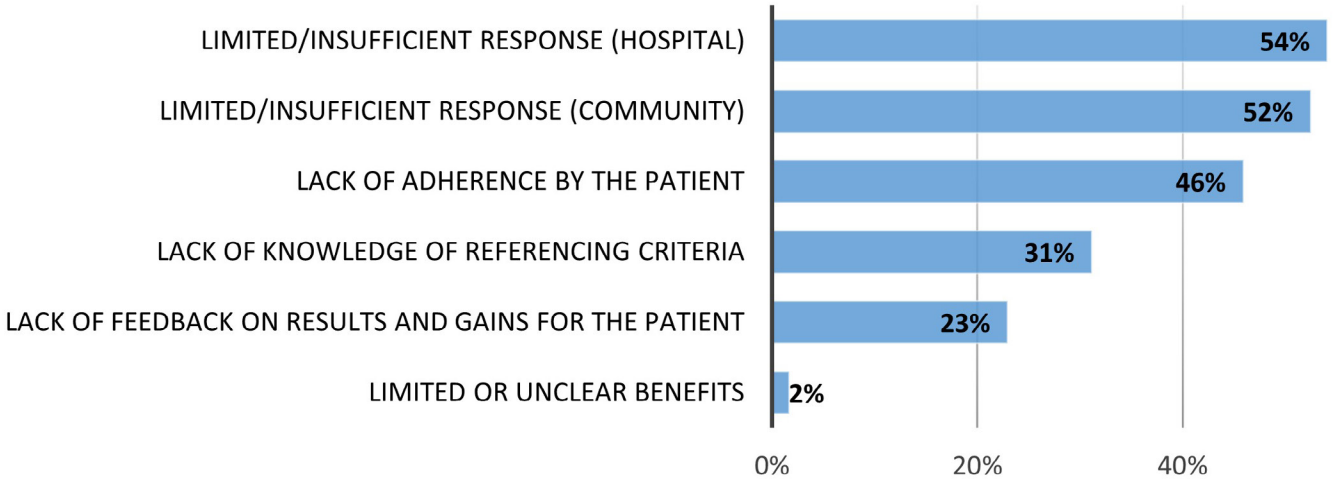


Figure 2 - Barriers perceived by general practitioners regarding referral to PR.



In addition to the barriers in Figure 2, participants identified therapeutic inertia (sic) and reduced GP consultation time.

Table 2 – Importance attributed to pulmonary rehabilitation by benefit

Benefits	Nothing important %(n)	Not important %(n)	Neither very nor unimportant %(n)	Very important %(n)	Extremely important %(n)
Improvement of dyspnea	0	0	5(3)	51(31)	44(27)
Increased health-related quality of life	0	0	2(1)	39(24)	59(36)
Increased exercise tolerance	0	0	5(3)	52(32)	43(26)
Increased activities of daily living performance	0	0	2(1)	44(27)	54(33)
Improvement of anxiety symptoms	0	0	21(13)	54(33)	25(15)
Improvement of depression symptoms	0	3(2)	21(13)	51(31)	25(15)
Reduction in the number of hospitalisations	0	2(1)	10(6)	44(27)	44(27)
Reduction in admissions to the emergency department	0	0	15(9)	43(26)	43(26)
Reduction in mortality	0	2(1)	15(9)	43(26)	41(25)

It should be noted from the results presented in Table 2 that 79% considered rehabilitation to be very or extremely important in improving the symptoms of anxiety, just as 76% considered this treatment to be very important in improving the symptoms of depression. Concerning mortality reduction, 17% did not attribute much importance to PR.

Table 3 – Criteria used for referral to pulmonary rehabilitation

Criterion	Nothing important %(n)	Not important %(n)	Neither very nor unimportant %(n)	Very important %(n)	Extremely important %(n)
COPD GOLD A	15(9)	33(20)	25(15)	23(14)	5(3)
COPD GOLD B	2(1)	10(6)	16(10)	59(36)	13(8)
COPD GOLD E	0	0	8(5)	33(20)	59(36)
Recent exacerbation of COPD	2(1)	2(1)	5(3)	52(32)	39(24)
Functional limitation	0	0	5(3)	31(19)	64(39)

It should be noted that functional limitation is extremely important for referring to PR in 64% of participants, with the criterion for characterising the disease as GOLD B and E being considered extremely important by 5% and 13% of participants, respectively.

DISCUSSION

A descriptive analysis of the results was preceded, from which an attempt was made to understand what could be optimised with regard to raising awareness of the importance of referral for pulmonary rehabilitation, as well as what changes could be proposed, also taking into account the barriers identified by the population. Referral for this treatment is considered essential for people with COPD and is described in the literature[1].

Although pulmonary rehabilitation programmes in the community and at home have already demonstrated, through randomised clinical trials, that their benefits are equivalent to programs in specialised centres [1,10–13], it appears that most general practitioners only refer to hospital programs (76,2%). The geographic distribution of participants may be the origin of this number, as well as the lack of pulmonary rehabilitation programmes in the community or at home and the criteria of severity and associated comorbidities that determine the location of the PR [1,14].

Referral to PR based on the person's functional limitation is the criterion most frequently used by general practitioners in this study. According to national and international guidelines[1,14], the PR should be considered whenever the person presents COPD impact values, assessed by the CAT or mMRC, above 10 or 2, respectively, which could not translate into functional limitation [1,15,16]. It should be noted that people with severe exacerbations in the last year, or at least two moderate exacerbations, are classified as GOLD E and have a formal indication for PR, even though they do not present the values previously mentioned in the CAT and mMRC instruments. Therefore, functional limitation alone, despite being relevant for referencing, should not be the only criterion to be used for referencing.

Referral to the user's request should also be highlighted, mentioned by 19% (n=8) of respondents, which could be important in taking advantage of the person's motivation to carry out the program, increasing its benefit. However, it is important to evaluate the formal referral criteria in order to be able to offer the most appropriate treatment to the person[1,10,14].

Pulmonary rehabilitation programmes in the community or at home may be a response to people's low adherence to this treatment, as lack of adherence was reported by 46% (n=28) of participants, and may be related to factors structural such as the lack of uneven geographical distribution of PR centres and related to the person such as economic factors, displacement and absenteeism[6-8].

This study found that general practitioners report a lack of feedback on the results of the PR programme as one of the barriers, not being able to have the best perception of the benefit that the person has. Given the existing means of communication in the national health system, it will be essential to define information exchange circuits between the PR programs and the referring professional[17].

With regard to the perception of the benefits of PR, general practitioners demonstrate that they are aware of the benefits of this treatment according to the available evidence, highlighting that this knowledge does not seem to be as robust in relation to the

improvement of symptoms of anxiety and depression, which currently present evidence of level A[1].

The criteria used for the referral decision (Table 3) reveal the need for permanent updating to use evidence-based criteria, making it necessary to develop communication strategies that facilitate the arrival of information to professionals, given that 31% (n=19) of respondents assume they do not know the referencing criteria. It should be noted that general practitioners are aggregators of complex and multidisciplinary information and are referrers for various treatments and specialities. Support systems must be developed using information technologies[17].

Regarding the authors' knowledge, this is the first study carried out at a national level that explores the barriers perceived by general practitioners to referral for pulmonary rehabilitation, the criteria they use as a basis for making this referral, and the knowledge about the benefits of the treatment.

Study limitations:

The respondents were mainly in the district of Porto. There are pulmonary rehabilitation reference centres in this area, and this response also exists in the community, which could influence the percentage of doctors who have already had experience referring to PR. It would be important to have a sample that included more participants from other more peripheral regions with less access to these centres, particularly in the country's interior and more rural areas.

Although the number of respondents is low and the sample is not representative of the population, the analysis of the results allows us to consider possible measures to be implemented to increase the perception of the importance of pulmonary rehabilitation and its benefits.

CONCLUSION

Our analysis revealed that functional limitations were the primary criterion guiding family physician referrals to PR programmes.

A significant barrier identified by general practitioners was the lack of feedback regarding patient outcomes within PR programmes. This limited their ability to fully assess the programme's benefits for their patients. Given existing communication channels within the national healthcare system, establishing standardised information exchange protocols between PR programmes and referring physicians is crucial[17].

General practitioners in this study demonstrated awareness of the established evidence supporting the benefits of PR. However, their knowledge appeared less robust regarding the programme's effectiveness in improving anxiety and depression symptoms, despite Level A evidence supporting this benefit[1].

It is important to acknowledge that general practitioners manage a complex array of medical information and refer patients across diverse specialties. To address potential information overload, the development of information technology-based support systems is warranted.

This study highlights the urgent need to optimize the referral process for pulmonary rehabilitation, as it has identified significant gaps in the clinical practice of general practitioners. Understanding the barriers perceived by professionals, as well as the criteria used for referrals, allows us to identify critical points for intervention. Moreover, the study emphasizes the importance of improving communication between pulmonary rehabilitation programmes and general practitioners, ensuring feedback on therapeutic outcomes. This information is essential for an accurate assessment of treatment benefits and for making more assertive clinical decisions.

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