

Physiotherapy in the Care of Women with Breast Cancer: Proposal for a Care Pathway within the Health Care Network in the State of Rio de Janeiro

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Fisioterapia no Cuidado à Mulher com Câncer de Mama: Proposta de Fluxo Assistencial na Rede de Atenção à Saúde no Estado do Rio de Janeiro

Fisioterapia en la Atención a Mujeres con Cáncer de Mama: Propuesta de Flujo Asistencial en la Red de Atención de Salud en el Estado de Río de Janeiro

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ABSTRACT

Introduction: Breast cancer is the most prevalent malignancy among women, excluding non-melanoma skin cancer. **Objective:** To identify procedures, supplies, and resources required for physiotherapy care in breast cancer across different levels of health care, map medium-complexity physiotherapy services, and propose a care flow model. **Method:** This study was conducted in four stages: (1) a survey with physiotherapists to identify procedures and supplies utilized; (2) a focus group with specialists to analyze the organization of the Health Care Networks; (3) mapping of outpatient physiotherapy production in oncology using data from the Outpatient Information System; and (4) development of a proposal of care flow after breast cancer treatment. **Results:** The survey was completed by 48 physiotherapists, with a predominance of professionals linked to federal management (50.0%). Among the supplies used in the diagnosis, printed materials stood out (14.6%). In prevention and treatment actions, adequate physical space (18.8%) and physiotherapeutic exercises (14.6%) were the most frequently reported. The focus group identified two analytical axes (operational and structural). Mapping of outpatient production revealed intermunicipal care flows and a concentration of services in specific municipalities. Based on these findings, a care pathway was proposed involving the return of patients to their municipality of residence after discharge from high-complexity services. **Conclusion:** Gaps were observed in the organization of the health care network. The proposed care flow model may contribute to strengthening shared care between Primary Health Care and medium-complexity physiotherapy services.

Key words: Breast Neoplasms; Physical Therapy Modalities; Rehabilitation; Primary Health Care.

RESUMO

Introdução: O câncer de mama é a neoplasia mais prevalente entre as mulheres, excluindo-se o câncer de pele não melanoma. **Objetivo:** Identificar procedimentos, insumos e recursos necessários para a assistência fisioterapêutica no câncer de mama nos diferentes níveis de atenção à saúde, mapear os serviços de fisioterapia de média complexidade e propor um modelo de fluxo assistencial. **Método:** Estudo realizado em quatro etapas: (1) inquérito com fisioterapeutas para identificação de procedimentos e insumos utilizados; (2) grupo focal com especialistas para análise da organização das Redes de Atenção à Saúde; (3) mapeamento da produção ambulatorial de fisioterapia em oncologia a partir de dados do Sistema de Informação Ambulatorial; e (4) elaboração de proposta de fluxo assistencial após o tratamento do câncer de mama. **Resultados:** O inquérito foi respondido por 48 fisioterapeutas, com predominância de profissionais vinculados à gestão federal (50,0%). Entre os insumos utilizados no diagnóstico, destacou-se o material impresso (14,6%). Nas ações de prevenção e tratamento, destacaram-se espaço físico adequado (18,8%) e exercícios fisioterapêuticos (14,6%). O grupo focal identificou dois eixos analíticos (operacional e estrutural). O mapeamento da produção ambulatorial evidenciou fluxos intermunicipais de atendimento e concentração dos serviços em determinados municípios. Com base nesses achados, foi proposto um fluxo assistencial com retorno das pacientes ao município de residência após alta dos serviços de alta complexidade. **Conclusão:** Foram observadas lacunas na organização da rede. O modelo de fluxo assistencial proposto pode contribuir para o fortalecimento do cuidado compartilhado entre a Atenção Primária à Saúde e os serviços de fisioterapia de média complexidade.

Palavras-chave: Neoplasias da Mama; Modalidades de Fisioterapia; Reabilitação; Atenção Primária à Saúde.

RESUMEN

Introducción: El cáncer de mama es la neoplasia más prevalente entre las mujeres, excluyendo al cáncer de piel no melanoma. **Objetivo:** Identificar procedimientos, insumos y recursos necesarios para la atención fisioterapéutica en cáncer de mama en los diferentes niveles de atención sanitaria, mapear los servicios de fisioterapia de complejidad media y proponer un modelo de flujo asistencial. **Método:** Estudio realizado en cuatro etapas: (1) encuesta a fisioterapeutas para identificar procedimientos e insumos utilizados en la atención; (2) grupo focal con expertos para analizar la organización de las Redes de Atención Sanitaria; (3) mapeo de la producción ambulatoria de fisioterapia en oncología a partir de los datos del Sistema de Información Ambulatoria; y (4) elaboración de una propuesta de flujo asistencial tras el tratamiento del cáncer de mama. **Resultados:** La encuesta fue respondida por 48 fisioterapeutas, predominando profesionales vinculados a servicios de gestión federal (50,0%). Entre los insumos utilizados en el diagnóstico se destacó el material impreso (14,6%). En las acciones de prevención y tratamiento sobresalieron el espacio físico adecuado (18,8%) y los ejercicios fisioterapéuticos (14,6%). El grupo focal identificó dos ejes analíticos (operativo y estructural). El mapeo de la producción ambulatoria evidenció flujos intermunicipales de atención y concentración de servicios en determinados municipios. Con base en estos hallazgos, se propuso un flujo asistencial que prevé el retorno de las pacientes a su municipio de residencia tras el alta de los servicios de alta complejidad. **Conclusión:** Se observaron brechas en la organización de la red. El modelo de flujo asistencial propuesto puede contribuir al fortalecimiento del cuidado compartido entre la Atención Primaria de Salud y los servicios de fisioterapia de complejidad media.

Palabras clave: Neoplasias de la Mama; Modalidades de Fisioterapia; Rehabilitación; Atención Primaria de Salud.

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INTRODUCTION

Breast cancer is highly incident in Brazil with estimates of 78,610 new cases for each year of the triennium 2026-2028. 10,360 new cases are estimated annually for the same period in Rio de Janeiro¹.

Mortality rates of breast cancer are strongly related to access to health services and quality of healthcare offered to the patients². To reduce these rates, actions in health promotion and protection, prevention of diseases, timely diagnosis and comprehensive care, rehabilitation and maintenance of health are required³.

The World Health Organization (WHO) aims to reduce global mortality by breast cancer in the world population in 2.5%, thus avoiding 2.5 million deaths globally between 2020 and 2040 for women younger than 70 years of age⁴.

Directive GM/MS number 6,591, of February 4, 2025, created the Cancer Prevention and Control Network (RPCC) within the National Policy of Cancer Prevention and Control (PNPCC)^{5,6}. It is a comprehensive network providing integral care since health promotion, prevention, diagnosis, timely treatment ideally, rehabilitation and palliative care, while Directive GM/MS number 4,279 of September 30, 2010⁷ established guidelines for Primary Health Care (PHC) as coordinator of the healthcare and regulation of the care pathway. Additionally, it attempts to strengthen humanized care, integration among services and adoption of a patient-centered model.

The insertion of the physiotherapist in PHC was determined through the Extended Nucleus of Family Health in Basic Attention (NASF-AB)⁸ created by the Ministry of Health in 2008 to promote the consolidation of PHC in Brazil. These nuclei are formed by multiprofessional teams integrated with the Family Health teams. Once established, the task of NASF-AB⁸ will be developed under the responsibility of the teams to whom they are connected through shared and interdisciplinary care provided within the scope of clinical care and technical-pedagogic dimension⁹.

Despite all the advances identified in the role of the physiotherapist in PHC, there is still a tendency of relating the core of the professional action to rehabilitation, which reflects the characteristics of the formation that, for many decades, was focused to this type of function¹⁰.

Further to these aspects, the organization of the care to the oncologic patient is still strongly concentrated in high complexity services, frequently marked by a technicist approach. This model tends to fragilize the continuity of the care after the end of the oncologic treatment, contributing to lack of care for cancer survivors, especially in face of difficulties of articulation and transition among different levels of healthcare¹¹.

Physiotherapy in oncology plays a key role in minimizing the complications arising from oncologic treatment. The speciality oncologic physiotherapy is recognized by the Brazilian Federal Board of Physiotherapy and Occupational Therapy (Coffito), that establishes specific competences for the performance of the physiotherapist in prevention, treatment and rehabilitation of patients with cancer. The certified physiotherapist participates actively of the care to the woman with breast cancer since pre-habilitation – a period between diagnosis and beginning of the treatment – through functional evaluation, educational guidelines and physical fitness for the therapeutic procedures. During habilitation, that occurs in the course of clinical and/or surgical treatment, the physiotherapist performance involves interventions to maintain the functionality, prevention of complications and symptoms management such as pain, fatigue, limited mobility and lymphatic changes. In rehabilitation, physiotherapeutic follow-up attempts to reclaim the range of motion, muscle strength and functionality of the upper limb, in addition to prevention and treatment of lymphedema and other treatment-related sequelae. In palliative care, physiotherapy contributes to control the symptoms, preservation of the functional autonomy and improvement of the patient's quality of life¹².

In regard to the funding of the National Health System (SUS), the set of procedures for physiotherapeutic care of oncologic alterations is addressed in the system management of the procedures, medications and orthosis, prosthetics and means of locomotion (SIGTAP) of the Computer Department of SUS (DATASUS)¹³. These procedures are divided in three categories: pre and post-operation, clinical and palliative care. Nevertheless, Directive SAES/MS number 2.085¹⁴ dated September 9, 2024 established new rule for the category of palliative care.

In light of the several advances in the performance of the physiotherapist in oncology within SUS and all the mechanisms available for its structuring, they are still insufficient for the implementation of integrated physiotherapy actions to help the consolidation of RPCC^{5,15}.

Under this perspective, this study is aimed at identifying the procedures, supplies and resources necessary for physiotherapy care in breast cancer across many levels of healthcare. In addition, it is attempted to map medium-complexity services available in the state of Rio de Janeiro and propose a care pathway for survivors of breast cancer, following the logic of the health attention networks (HAN), an organizational model that articulates the services of different levels of complexity to ensure the integrality and continuity of healthcare.

METHOD

Study with triangulation of methods in four stages. In the first stage, an investigation with expert oncologic physiotherapists was conducted to identify the procedures, supplies, instruments and resources for the physiotherapeutic diagnosis, prevention and treatment. A Google Forms electronic form was emailed to all the physiotherapists registered in the Brazilian Association of Oncology Physiotherapy (ABFO). Professionals exclusively working in private clinics without any connection with SUS have been excluded.

The questionnaire was based on a document elaborated by the Technical Chamber of Physiotherapy in Oncology of the Regional Council of Physiotherapy and Occupational Therapy of the 2nd Region (Crefito-2), titled “Categorization of the Main Physiotherapy Consultations in Oncology in Basic Attention and Medium Complexity¹⁶”.

The questions addressed the necessary procedures for physiotherapeutic diagnosis, prevention and treatment, considering the instruments, supplies and resources for each one of them. Mixed questions have been elaborated with more than one option of response. In the end of the questionnaire, two questions about the level of attention where the professionals worked and their respective federative instance have been added.

The following clinical situations have been observed: cancer-related fatigue, loss of bone mass and sarcopenia, peripheral neuropathy, radiodermatitis, edema and lymphedema, pain, cicatricial alterations, lesion of peripheral nerves, limited range of motion and change of functionality. Descriptive statistics were utilized to analyze and interpret the data. The results obtained in the first stage of the study – the identification of therapeutic procedures, supplies, instruments and resources deemed necessary for the diagnostic, prevention and treatment of the main clinical alterations associated with breast cancer – were compiled and introduced to the participants in the second stage. The presentation was aimed at supporting the discussion of the focus group allowing critical analysis and validation of these information by specialists and improvement of the set of procedures and resources considered essential for physiotherapeutic care in the context of HAN.

The second stage consisted of a focus group formed by seven physiotherapists registered in ABFO whose objective was to understand the configuration of the care pathway of physiotherapy for breast cancer in the regions “*Metropolitana I*” and “*Norte Fluminense*” of the state of Rio de Janeiro and discuss and validate the procedures and supplies identified in the previous stage. The participants

were selected by purposive sampling, considering experienced oncologic physiotherapists working in SUS, outpatient units or hospitals in the state. Professionals who participated of the first stage were excluded to avoid direct influence of the responses earlier presented in the investigation and expand the diversity of perspectives in the analysis of the results.

The in-person meeting was conducted through a semi-structured script organized in thematic blocks of questions addressing the organization of HAN, the care pathway of physiotherapy for breast cancer and validation of the procedures and supplies identified in the previous stage. Initially, the results of the investigation of the first stage were presented to be discussed collectively by the participants. Next, the professionals were invited to reflect about the ideal organization of the physiotherapy services of medium-complexity, considering the instruments, supplies and resources necessary for a qualified care.

The group dynamics was audio-recorded, and later fully transcribed for analysis. The consensus was reached upon agreement among the participants after collective discussion of each thematic block, being considered valid the items the group has agreed upon in regard to relevance for physiotherapeutic care for breast cancer. The items that did not reach a consensus were excluded from the final set presented in the results.

The data analysis was performed in two stages. First, the transcriptions were thoroughly read to identify the recurring elements, similarities and discrepancies of the participants’ narratives. Next, the nuclei of meaning were identified and organized in two analytical axes: structural, related to funding and coverage of the health teams and operational, related to the process of referral, access, regulation of the services and continuity of the care. The analysis was driven by Giddens’ theory of structuration adopted as theoretical-methodological reference due to its explanatory potential in the articulation between structure and social practice.

To ensure the anonymity of the participants, the narratives were coded with initials and random numbers (Physio1, Physio2). The municipalities of origin were replaced by alphabetic letters.

A mapping of the approved outpatient production of the procedures of therapeutic care for breast cancer related oncologic alterations from 2017 to 2021 was produced in the third stage for the regions “*Norte Fluminense*” and “*Metropolitana I*” of the state of Rio de Janeiro. Data from SUS’ Outpatient Information System (SIA-SUS)¹⁷ referred to the medium-complexity physiotherapy procedures have been utilized: physiotherapy care in patients in pre and post-operative oncologic surgery and in patients in palliative care (SIGTAP)¹³. For the



present study, the registers were limited to the codes of the International Statistical Classification of Diseases and Related Health Problems (ICD-10)¹⁸ for malignant neoplasm of the breast (C50.0 to C50.9).

The professionals responsible for providing healthcare have also been identified according to the codes of the Brazilian Classification of Occupations (CBO)¹⁹ (2236-05, 2236-25, 2236-30, 2236-35, 2236-40, 2236-45, 2235-50, 2236-55 and 2236-60).

The data were aggregated according to the municipality of residence (origin) and the municipality where the procedures were performed (destiny). The National Registry of Health Establishments (CNES)²⁰ of DATASUS was surveyed to identify the units of medium-complexity and location in the respective health regions.

The relation between municipality of residence and municipality of destiny was considered as a pair origin-destiny, portraying the physical trajectory the patients follow within the healthcare network to submit to physiotherapy care. This relation was interpreted as intermunicipal care flow allowing to identify patterns of access and concentration of the services in the regions analyzed.

The analysis of these pairs origin-destiny allowed to examine the spatial interaction among the residence of the patients and services utilized, characterizing an ecologic design, since the data were analyzed in aggregate per municipality and not individually. With this approach, it was possible to understand the territorial organization of the offer of the services and transportation flows of the patients in HAN.

In the final stage, a proposal of shared care pathway among PHC and medium-complexity physiotherapeutic services was proposed. The results obtained in the previous stages were considered to elaborate the proposal, including the material discussed in focus group, the experience of experts participants, validation of the procedures and supplies identified in the investigation as well as the analysis of the enablers and barriers for the implementation of physiotherapy in HAN of the state of Rio de Janeiro.

All the participating professionals signed the Informed Consent Form (ICF). The Ethics Committee of the National Cancer Institute (INCA) approved the study, report number 5079264 (CAAE (submission for ethical review): 50788021.0.0000.5274) in compliance with Directives 466/2012²¹ and 510/2016²² of the National Health Council for studies with human beings.

RESULTS

In the first stage, the investigation was emailed to the physiotherapists registered in ABFO working in

SUS; of these, 48 expert physiotherapists responded to the questionnaire. Among the participants, 24 (50.0%) worked in public institutions, 20 (41.7%) in state institutions and four (8.3%) in municipal institutions. The highest concentration of participants was found in federal-managed high-complexity services.

Supplement material 1 presents the results obtained in the investigation, considering each clinical situation analyzed. The supplies utilized in the physiotherapeutic diagnosis and most utilized procedures and resources in prevention and treatment have been identified. For the diagnosis, printed material (14.6%), physical exam (12.5%) and specific questionnaires (6.3%) stood out. In the actions of prevention and physiotherapeutic treatment, the most mentioned resources were proper physical space (18.8%), physiotherapeutic exercises (14.6%), hula hoop and balls (12.5%), mats (19.4%), therapeutic guidelines and recommendations (10.4%) and manual therapy (8.3%).

In the second stage, the focus group was formed by seven expert physiotherapists, being four females (57.1%) and three males (42.9%). Most of them worked in the region "Metropolitana I" (85.7%; n=6), and one professional (14.3%), in the region "Norte Fluminense". Two physiotherapists (28.6%) worked in medium-complexity services, one (14.3%) was a member of the NASF-AB⁸ team and four (57.1%) worked in high-complexity units (Unacon) and high-complexity centers (Cacon).

The operational axis addressed questions related to access to services, geographical barriers, continuity of care and referral flows. The professionals reported the absence of formal mechanisms to ensure the continuity of care and highlighted the necessity of referral of patients to the municipality of origin for follow-up post clinical discharge of the surgical and/or systemic treatment, allowing the identification and early management of possible physical-clinical alterations (Chart 1).

The structural axis addressed aspects related to the fundings of oncologic physiotherapy and coverage of PHC health team and medium-complexity in HAN post hospital discharge. Among the main themes discussed, the disarticulation of HAN, institutional discharge, barriers for post-discharge treatment and fragilities in funding the services (Chart 2) stood out.

The consensus of the focus group on basic supplies and procedures for physiotherapeutic care resulted in the inclusion of some items that were not included in the initial questionnaire but were considered relevant by experts to validate the data of this stage (Supplemental Material 2). One item only was unanimously rejected: the Energy Conservation Technique (ECT) as procedure

for prevention and treatment of oncologic fatigue, loss of bone mass and sarcopenia. The experts reported that in these situations, the main therapeutic resource is physiotherapeutic exercise. However, ECT was considered appropriate to manage dyspnea.

Low-cost therapeutic resources based on the professional technical knowledge stood out among the enablers for the implementation of physiotherapy in HAN as strengthening, aerobic and relaxation exercises. It has been also pointed out the importance of the presence of trained physiotherapists in PHC for group pre-operation guidelines as well as the availability of physiotherapeutic follow-up in the same place where the radiotherapeutic treatment occurs. In addition, it was highlighted the necessity of dialogue among the levels of attention and strengthening of the communication among physiotherapy services.

The experts highlighted the difficulties to purchase specific materials for the sessions due to the morosity and bureaucracy of the bidding processes in public services, in addition to budget constraints for physiotherapy in different levels of attention as barriers for the action of the professionals. In addition, the lack of physiotherapists in public services, especially in PHC's multiprofessional teams and reduced availability of oncology skilled professionals were highlighted as well. According to experts, this scenario contributes to the difficulties of early identification of physical-clinical alterations in diagnosis, oncologic treatment or hospital discharge.

In stage 3, in the region “*Norte Fluminense*” (Supplementary Material 3), seven pairs origin-destiny were identified: three in the municipality Campos dos Goytacazes; two in Macaé and two in São Francisco de Itabapoana. The production identified was similar to the region *Metropolitana I* in relation to the finality of the procedure performed.

In the region “*Metropolitana I*” (Supplementary Material 4), 23 pairs origin-destiny have been identified, revealing the care pathway among the municipalities and physiotherapy services providers to patients with breast cancer: 11 in the municipality of Rio de Janeiro, four in Itaguaí, two in Belford Roxo, two in Magé, two in Nova Iguaçu, one in Japeri and one in Mesquita. It has been observed that the majority of the procedures was performed in patients in pre- and post-operation period followed by assistance to clinical oncologic patients.

Based on the results of previous stages and considering the current public policies, shared care and implementation of care pathway for breast cancer physiotherapy in HAN should occur since the referral of the patients with breast cancer post discharge from Unacon/Cacon, which, in fact, is the return of the patient to the municipality of

residence to continue the follow-up. It is proposed the elaboration of a Qualified Technical Report (QTR) to guide the return of the patient to the services of origin as supporting instrument to this process (Figure 1).

DISCUSSION

Overall, the results revealed important challenges related to the continuity of care and organization of the care network, particularly in what concerns the articulation among different levels of attention.

The discussion developed in the focus group was structured in two analytical axes — operational and structural — which allowed to understand, from the experts' experience, the main challenges of access to the services, referral flows and continuity of the healthcare. In relation to the mapping of the medium-complexity oncologic physiotherapy services, it stands out the importance of optimization of care pathways as a strategy to strengthen the organization of the network and ensure the continuity of the follow-up post hospital discharge. It was proposed a model of care pathway based on these findings that may help managers to organize the healthcare.

Oncology physiotherapy acts in every stage of the treatment and across all levels of attention. Regardless of its importance, it is still incipient with reduced number of experts, only 549 specialists in the whole country according to ABFO.

The fragile communication among different levels of attention was one of the aspects discussed in the focus group, further to the unfamiliarity of the dynamics of the network services functioning by part of the professionals. These factors can compromise the articulation among the services and hamper the continuity of the care, already described in the literature as one of the main challenges to organize the HAN²³.

Another additional aspect is the fragility of the connection of the patients with PHC making the demand “invisible” to the local management in some cases. The qualified action of the professional responsible for the referral and the dialogue with family members are essential elements to make the transition of the care feasible²⁴. This aspect was widely mentioned by the participants of the focus group, revealing the challenges related to the continuity of the patient-centered care and different actors, including health caregivers, family and the patients themselves.

Although the experts recognize the necessities post hospital discharge, there is no structured and established pathway for continuous follow-up of these patients in their municipalities of origin. For an effective and decisive



Chart 1. Themes and contents discussed in the operational axis

Axis	Theme	Content
Operational	Lack of reference and counter-reference pathways	"When these patients return to me there at PHC, it is through the network that I ended up creating with the girls of Cacon. I give my personal mobile number. If the Secretary has to do this, it doesn't pull through" (Physio2) "Oncologic patient has a suspicious lesion, has the diagnosis, attended high complexity unit, the ideal is to return and keep in basic attention ... unfortunately this doesn't happen. As soon as cancer is detected, apparently she receives a passport to be cared in high complexity, so, this counter-reference is lacking: a two-way road" (Physio4) "If a patient was referred, I did the counter-reference and referred to the gym in the city. But now as most of the patients are interns, I do "word-of-mouth" and they look for me because they don't have the counter-reference paper" (Physio6)
	State Regulation System (SER) vs. Municipal Regulation System (SISREG)	"To get to HC, only through SER, but some municipalities only through SISREG. The patient is lost until he/she reaches HC, but in terms of chemotherapy treatment and surgery, she was assigned to me through regulation and can be treated here but when she goes to radiotherapy, she will need to go through regulation again" (Physio4) "The polyclinic is under intervention by my health secretary, so if a patient comes here and says he/she is waiting in the queue for one year, why the regulation did not send her if there are beds available? (Physio1) "Municipality B is the most problematic to send a patient because they are SISREG, and not SER, there was a conflict there to send a patient to Cacon. We receive patients from every region and the same thing happens in all of them" (Physio4)
	Continuity of care	"We ask if the city offers physiotherapy and usually the answer is no, then we tell the patient to go to the city health secretary. Most of the times, they don't have and then we need to accommodate" (Physio5) "Patients with breast cancer are at advanced stage when they reach us, we see this. I can say that 20% is through SISREG and all the others through their own agenda, the doctor knows us and refers: "go to the polyclinic", they come nearly six months post-operation..." (Physio1) "I work in the countryside, a quite different reality. In SUS, out of my hospital, there is no healthcare for patients with breast cancer, today the service is quite centralized, only these patients do their treatment with us (Physio7)

functioning, it is paramount that the care pathways are carefully designed in points of attention in different levels of complexity and technological density³.

More recently, this model of attention was reinforced through Directive GM/MS number 6,591⁵/2025, that created the navigation program in RPCC. Navigation occurs in two levels: through state and municipal health managers who ensure the course of the care at the specialized treatment centers and integration of services through Care Management and Regulation Nuclei. This trajectory through the network can be seen as continuity of care or shared care²⁵.

According to the study participants, state and municipal regulation systems still face difficulties of communication among different levels of attention, which can compromise the care pathway of the patients. In addition, it was raised the hypothesis that part of the difficulties of access to physiotherapy is related to the scarcity of medium-complexity resources in certain municipalities.

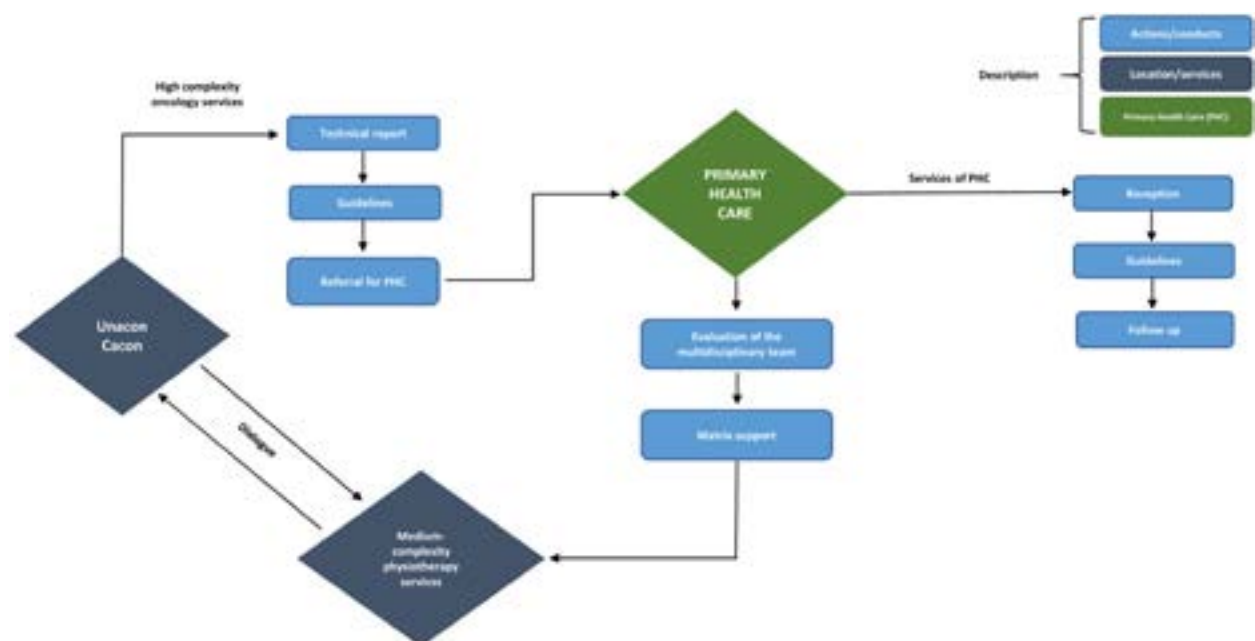
The availability of the materials utilized in the treatment of breast cancer related lymphedema is a relevant aspect. Supplies such as elastic garments, foam padding and compressive garments are not included in SUS' list of procedures. The materials currently available are compressive garments, self-adjusting devices and tubular compression bandages for amputees, which limits its applicability to treat lymphedema²⁶.

Compressive garments are an essential resource to treat and stabilize lymphedema, one of the most frequent complications post breast cancer treatment, but not as worse as pain²⁶. The effectiveness of the treatment relies on the availability of these resources, which reinforces its incorporation and regular supply in SUS. The expansion of access to these materials is not only a care-related issue, but also a question of health equity.

The physical-financial program consisting in the quantification of the materials estimated and the financial budget for investment is a relevant aspect to structure

Chart 2. Themes and contents discussed in the structural axis

Axis	Theme	Content
Structural	Disarticulation of the attention network	"We try to emphasize the necessity of pre-operation, but we never receive any patient. There is the "network" of radiotherapy and chemotherapy, we talk about this, they could come early to receive care. They could refer just at the beginning for prevention, but eventually, they come only three months after" (Physio1) "She needs to go through regulation again to do radiotherapy and this is the moment when she gets lost, and our principle of physiotherapy which is education, promotion, prevention, early detection and treatment of the complication gets lost too" (Physio4) "Physiotherapy is also seen as rehabilitation and this is a problem for us, if we want to prevent, the patient should not come later with a complication already installed (Physio5)
	Institutional discharge and barriers for treatment post hospital discharge	"The question of institutional discharge, after five years she is discharged and this brings up two issues: the ideal is to be cured from cancer, be discharged and be aware that the pathway is through primary health care, then she goes to primary health care and she is not cared because she was diagnosed with cancer" (Physio 4) "Lymphedema is an incurable chronic complication arising from cancer treatment. She should continue with this support since it is a chronic complication, preferentially close to where she lives and learn how to deal with this complication, but 10 years later, already discharged from the institution, we have to redo the admission" (Physio5)
	Fragilities in funding	"We don't have material, if I need any specific thing as wrapping, I ask the patient to buy" (Physio3) "We always report to the health secretary the necessity of material for wrapping in addition to compressive garments, without this, we are unable to continue the treatment, but when we move to stage 2, which requires compressive garments, they do not supply (Physio1) "I don't have so many patients. I buy the material and give to the patient" (Physio2)


Figure 1. Care pathway of physiotherapy for breast cancer survivors in health regions of the state of Rio de Janeiro

the services. As soon as the demand is identified, the acquisition of the supplies is feasible as well as the organization of the services and regular distribution of these materials²⁷.

Geographical barriers the users face are one of the factors influencing the access to physiotherapy. The distance between specialized services and residence of the patients can be a significant obstacle of access to treatment, especially in regions with poor transportation services²⁸.

Under the perspective of Giddens'²⁸ Structuring Theory, medium-complexity services can be understood as structuring resources where professionals imbued of their practical awareness can provide a more assertive management to mobilize these resources and make it a routine of the services¹⁵.

Within the state planning, the State Health Plan of Rio de Janeiro is a strategic instrument that determines guidelines and goals to organize care in the state. It was based on the Integrated Regional Planning (IRP) that defines care pathways for health priorities in the different health regions with participation of the State Health Council, ensuring social control²⁷.

Institutional discharge and barriers to post-hospital treatment should be included in the care pathway of breast cancer since diagnosis through clinical discharge of surgical and/or systemic treatment and respective follow-up, a fact that can explain the unfamiliarity of this type of attention, considering that, so far, physiotherapy is not listed in the care pathway of breast cancer in Rio de Janeiro.

The present study did not identify whether all the actual consultations were scheduled through the official regulation channels. In some cases, the patients may have been captured by spontaneous search or informal referrals made by the services who offer oncology physiotherapy. In other cases, the patients might have been referred by municipal regulation systems as occurs in Rio de Janeiro²⁹.

In that sense, Santos and Merhy³⁰ emphasize that health regulation differs from the market regulation since the sector has information asymmetry and risks that require a strong action by the State. Therefore, regulation is an important tool of public management to ensure equitable access to health services.

The reduced number of the study participants and in focal group and the concentration of the analysis in two health regions of Rio de Janeiro are among the study limitations. The inclusion of participants from other health regions could potentially widen the understanding of regional specificities in the organization of care pathways.

Despite these limitations, it was possible to identify common challenges in the organization of oncology

physiotherapeutic care, contributing for the reflection about the organization of care pathways in SUS. Also, the analysis of the experiences of the professionals allowed to detect convergences among different care scenario, which can support the implementation of strategies of strengthening of HAN in the state of Rio de Janeiro and other regions of the country.

CONCLUSION

The results of this study allowed to analyze the trajectory of women survivors of breast cancer in HAN and supported the proposition of a care pathway of physiotherapy for the return of the patients to their origin city after discharge from a high-complexity oncology service.

Overall, it has been observed the absence of structured protocols to receive and follow-up these patients in PHC after the end of the surgical and/or clinical treatment. Gaps have also been identified regarding the technical knowledge about the referrals flows for medium-complexity services and fragilities in following up what these patients need post-treatment.

This study reinforces the importance of structuring oncology physiotherapy in different levels of attention and their insertion in the care pathway of individuals with cancer in the state of Rio de Janeiro. In addition, it can help managers and health professionals that favor the continuity of care and expand the access of the patients to rehabilitation services.

CONTRIBUTIONS

All the authors contributed substantially to the study conception and design, acquisition, analysis and interpretation of the data, writing and critical review. They approved the final version for publication.

DECLARATION OF CONFLICT OF INTEREST

The author Anke Bergmann is the scientific-editor of INCA's *Revista Brasileira de Cancerologia* and declares conflict of interest. The author Mario Jorge Sobreira da Silva is associate-editor of INCA's *Revista Brasileira de Cancerologia* and declares conflict of interest. The other author has no competing interests.

DATA AVAILABILITY STATEMENT

All the content underlying the text is available in the manuscript.

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