






PREVENTION OF BREAST CANCER THROUGH PRIMARY HEALTH CARE TRAINING

Prevenção do câncer de mama por meio da capacitação na atenção básica

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ABSTRACT

Introduction: The main barrier to the management of breast cancer cases in Brazil is mainly due to the long periods of time between the diagnosis of the patient and the beginning of treatment. **Objective:** To improve access to information, treatment and screening of cancer cases through the training of primary health care professionals. **Methods:** Two “booklets” containing information on breast cancer were created: one for the Community Health Agents (CHAs) and the other for the Primary Health Care Nurses and Doctors (PHCND). Two theoretical and practical training modules were also created: one for the CHAs and another for the PHCNDs. The theoretical module consisted of lectures about breast cancer, and in the practical module, doctors and nurses were inserted in the mastology outpatient service of the Alcides Carneiro Hospital. **Results:** Clinical procedures in 2016 (before training) and 2017 (after training) showed a 31% increase in mastologist consultations, 41% in the number of patients undergoing surgeries and 42% in breast surgeries. From 2016 to 2017 there was a 16.5% reduction in the incidence of breast cancer and the number of deaths remained stable. **Conclusions:** Primary health care training increased and qualified the early detection of breast cancer in the city of Petrópolis-RJ, optimized the population’s access to the specialized service and improved the quality of life of women with breast cancer. Primary health care training was effective, low cost and could be replicated in other Brazilian municipalities.

KEYWORDS: breast cancer; training; primary health care.

RESUMO

Introdução: A principal barreira na condução do câncer mama no Brasil ocorre principalmente por conta do elevado tempo entre o diagnóstico e o tratamento efetivo da paciente. **Objetivo:** Melhorar o acesso à informação, ao tratamento e ao rastreamento dos casos de câncer por meio da capacitação dos profissionais da atenção básica. **Métodos:** Duas cartilhas contendo informações sobre o câncer de mama foram elaboradas: uma para os agentes comunitários de saúde (ACS) e a outra para enfermeiros e médicos da atenção básica (EMAB). Dois módulos de treinamentos teóricos e práticos também foram criados: um para os ACS e outro para EMAB. O módulo teórico consistiu de palestras sobre câncer de mama, e no módulo prático, médicos e enfermeiros foram inseridos nos ambulatórios de mastologia do Hospital Alcides Carneiro. **Resultados:** Os procedimentos clínicos em 2017 (após as capacitações) mostraram um aumento de 31% nas consultas com um mastologista, 41% no número de pacientes operados e 42% nas cirurgias de mamas, em comparação com 2016 (antes das capacitações). De 2016 para 2017 houve uma redução de 16,5% dos casos de câncer de mama e o número de óbitos ficou estável. **Conclusões:** A capacitação da atenção básica ampliou e qualificou a detecção precoce do câncer de mama no município de Petrópolis, Rio de Janeiro, agilizou o acesso da população ao serviço especializado e melhorou a qualidade de vida da mulher com câncer de mama. A capacitação na atenção básica foi efetiva, de baixo custo e poderá ser replicada em outros municípios brasileiros.

PALAVRAS-CHAVE: câncer de mama; capacitação; atenção básica.

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INTRODUCTION

Breast cancer is the most common type of cancer among women in the world; and is the leading cause of death among women in Brazil¹. This is due to the fact that a large number of cases of the disease are diagnosed in advanced stages, where the possibility of disease control is lower.

Cancer is relatively rare before the age of 35, however its occurrence is increasing progressively, especially after 50 years of age. As a result of population growth and aging, direct costs with diagnosis, medication and hospitalization, as well as indirect costs with loss of productivity due to early mortality and costs will continue to increase, becoming a global concern.

The Brazilian government and the agencies linked to the Ministry of Health are concerned about the growing increase of this malignant cancer. In the biennium 2018-2019, 59,700 new cases of breast cancer are estimated¹. In order to educate and raise awareness among the female population every year during October, known as "Pink October", breast cancer prevention campaigns are publicized on television and in print media to alert women to the seriousness of this disease. One of the main recommended actions is primary prevention, firstly focusing on the importance of healthy habits, such as avoiding smoking, alcohol and fatty foods, and encourage fruit, vegetable and cereal intake, in addition to maintaining an ideal weight. Another important measure is related to secondary prevention, such as self-examination, clinical examination, mammography screening, and access to treatment when diagnosed with breast cancer. A well-informed population is an effective tool in the prevention of cancer and the early detection of the disease.

It is worth mentioning that the main aspects that prevent breast cancer related to changes in healthy habits, include: increased intake of fruits and vegetables, reduced consumption of red meats, processed foods and alcoholic beverages, as well as smoking, obesity and sedentary lifestyle²⁻⁵.

The main strategy for the early detection of breast cancer is through mammography screening. According to the Brazilian Society of Mastology (SBM), mammography is recommended from the age of 40, however, the Ministry of Health recommends this examination between 50 and 69 years of age, as mammography is an important intervention in primary health care, together with the identification of signs and symptoms by health professionals⁶. It is also emphasized that mammography does not prevent breast cancer, but rather helps with its early detection. According to data from the Hospital Cancer Registry of the Alcides Carneiro Teaching Hospital (HAC), it is verified that 49.8% of the patients diagnosed with breast cancer in the city of Petrópolis and treated in HAC from January 2011 to December 2016 are in the 50 to 69 age group, but 29.7%, who are between 40 and 49 years of age and between 70 and 74 years old, would not be included in the screening, without adding the 12.4% who are 75 years old and older⁷. Another important point to highlight is that the average

size of tumors in HAC during this period was 2 to 3 cm in diameter, and most were detected during self-examination or clinical examination. It is probable that with organized and timely screening, that these cancers could have been detected earlier, which could have contributed to a reduction in breast cancer and, consequently, to the number of deaths.

Thus, women start to become increasingly concerned after 40 years of age. Women considered to have low-incomes seek primary health care through the Unified Health System (SUS), while those with higher incomes seek private care. In SUS, patients have difficulties in receiving a breast cancer diagnosis as well as treatment. It is common for cancer patients to leave treatment because of the long waiting time to access the mastology service. Therefore, the main motivation for this research is to reduce the time between the diagnosis of cancer patients and the beginning of their treatment.

In order to improve the patient's access to the first consultation and shorten the interval before treatment, an intervention in primary health care was proposed in this study, as it is the main gateway for users and is responsible for the referral of those who require health units with more technological devices^{8,9}.

Thus, the main objective of this research was to improve access to information and optimize the screening of cancer cases through the training of primary health care professionals to ensure that treatment is performed, guiding the community through face-to-face meetings so that their doubts were clarified and the information was absorbed in order to promote the patient's well-being and dignified health.

To achieve these objectives, the work with primary health care consisted of a set of integrated actions involving family health professionals, doctors, nurses and community health agents (CHA), aimed at increasing access to early breast cancer diagnosis, to train professionals and CHAs, in order to improve the treatment of cancer patients and to reduce the mortality from this disease.

The studies were carried out in the city of Petrópolis, Rio de Janeiro, and were supported by the Petrópolis Medical School (FMP), the HAC, the Petrópolis municipal government and the Roche chemical and pharmaceutical company S.A (ROCHE), which funded the research, aiming to accelerate the access of patients to the diagnosis of breast cancer and its treatment.

METHODS

The medicine and nursing undergraduate students at the Faculdade de Medicina de Petrópolis (FMP) and Arthur Sá Earp Neto College (FASE), together with family health professionals and the CHAs participated in breast health research through social actions such as lectures and meetings, aiming to promote community integration and raise awareness about the social problem that breast cancer represents.

Firstly, the health professionals were trained and the students were informed about breast cancer, its importance as a public health problem, its epidemiology, diagnosis, treatment, implication in the patient's quality of life and the importance of early diagnosis.

Next, the integrative activities were developed by four academic areas: oncology, radiology, women's health and FMP family health, which planned actions in the communities aiming at the inclusion of breast health education. The results of the work provided the preparation of two booklets containing guidelines on breast care and health for primary health care professionals. One booklet was addressed to CHAs (Figure 1A) and the other to nurses and primary care physicians (Figure 1B).

The booklets present key information on breast cancer and emphasize cancer as a public health problem. They aimed to serve as a quick, practical and easily accessible guide for professionals, aiming at prevention, screening, symptom recognition, patient referral to specialized services and treatment follow-up. The booklets were distributed and used in training and in the health unit as reference sources¹⁰.

A timetable for training meetings was also created, in which the primary health care professionals were divided into groups so that they could participate more actively in the training, which lasted from May to September 2017. Two training modules were developed: one for the CHAs and another for primary health care nurses and doctors whose activities are described below.

Training of community health agents

A total of about 350 CHAs from the Petrópolis municipality was divided into groups of 70 participants who were to be trained through scheduled meetings held in the auditorium of the FMP / FASE cultural center.

The programmed activities consisted of lectures on breast cancer, colorectal cancer and lymphomas. The main topics

covered were: importance of early diagnosis of breast cancer, risk factors, modification of lifestyle habits as protective factors, the preconception regarding the tests performed for the detection of tumors, their importance in the care of cancer patients and the identification of community members with a problem and who should be taken to the health care network.

As part of breast cancer-related activities, FMP / FASE students constructed theatrical sketches. The sketches addressed different themes, such as patients' right to privacy with respect to professional anonymity, the importance of seeing a health professional, self-examination, mammography and physical examination of the breasts. This strategy was recognized in 2017 as an innovative practice by the FMP / FASE, as it is an interesting way to break the user's bias in letting the doctor do the clinical breast examination and by showing the importance of the attitude of the CHA towards the stigma related to breast cancer in the community.

Training of nurses and primary care physicians

Approximately 130 professional nurses and doctors from the city of Petrópolis received theoretical and practical primary health care training during their available hours. The professionals were initially organized into two groups of 65 participants, aiming to make this training more productive and participative. The training of nurses and primary health care physicians also included lectures on breast cancer, colorectal cancer and lymphomas. The main topics covered were: epidemiological overview of breast cancer, colorectal cancer and lymphoma, the main signs and symptoms, the importance of early diagnosis, diagnostic methods, screening and treatment of cancer.

The theoretical activities covered the main signs and symptoms of breast cancer, risk and protective factors, clinical examination of the breasts, detection strategies, mammography and breast ultrasonography, BIRADS system, treatment and follow-up of the patient, conditions for referral to mastology, referral and counter-referral.

In the practical training activities on breast cancer, the group of nurses and doctors was subdivided into 5 subgroups of 26 participants. The primary health care professionals were put in the outpatient clinics of the HAC in order to receive a practical experience on the subject. The breast cancer patient was attended by a maximum of two professionals per treatment room, in order to improve the performance of the practical experience and to help the patient feel comfortable.

It is worth noting that in order for the practical training to become didactic, patients with benign and malignant palpable nodules were selected, in order to improve the practice of the clinical examination of the breast and the differences between the malignant and benign tumors, the correlation with the findings of the physical examination with the phases of the menstrual cycle, clinical / radiological correlation and the BIRADS system.

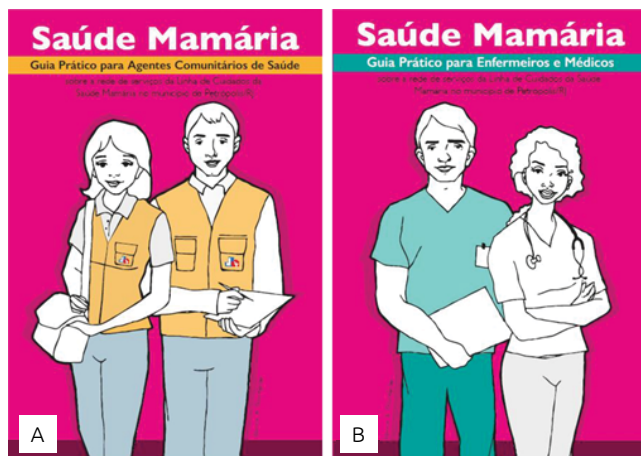


Figure 1. (A) Booklet for community health agents; (B) booklet for professional nurses and primary care physicians.

During the care of patients, prevention activities through the control of modifiable risk factors such as diet, physical activity and healthy lifestyle habits were reinforced as strategies for primary prevention of breast cancer. In addition, we have shown that adequate patient referral is critical to improving access to secondary care.

RESULTS

After the training period of the CHAs, nurses and physicians, a comparative study of clinical procedures was performed in 2016 (before training) and 2017 (after training) on patients who had operations, surgeries and mastology consultations (Figure 2).

In addition, comparative studies of mammography examinations performed in the period from 2012 to 2017 for women residing in Petrópolis were performed. Table 1 shows the information of the patients related to the mammograph screening for the 50 to 69 age group, incidence of breast cancer and the number of deaths caused by breast cancer in the studied period.

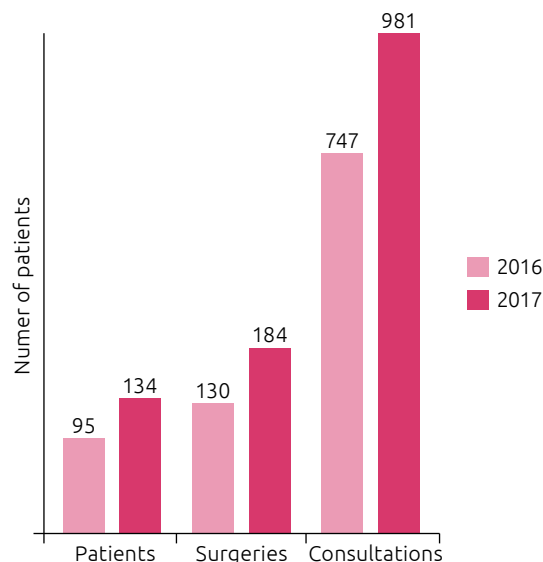
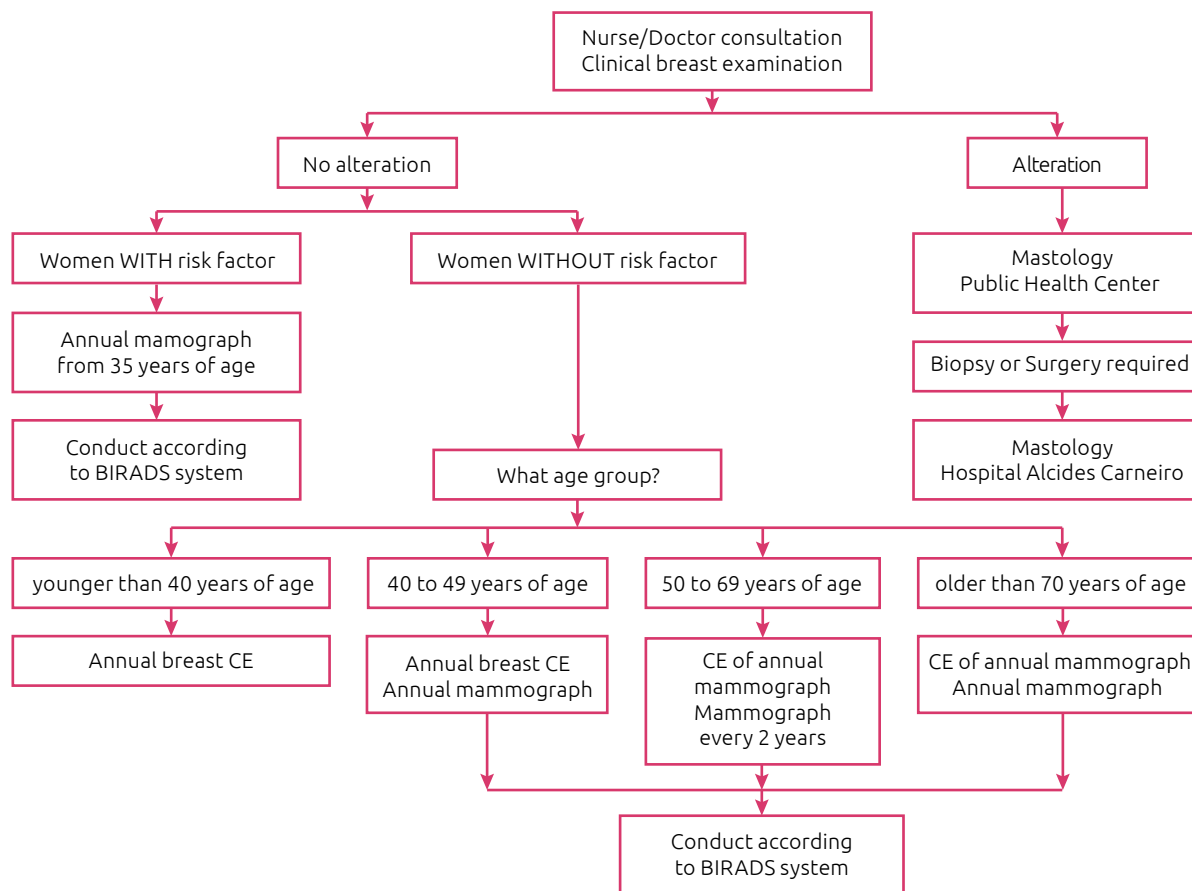


Figure 2. Comparative study of clinical procedures performed in 2016 and 2017. 41% increase in patients undergoing surgeries, 42% in performed surgeries and 31% in mastology consultations.



CE: clinical examination.

Figure 3. Breast examination flowchart for primary health care in the city of Petrópolis, Rio de Janeiro.

As a consequence of this research, the Department of Health of the city of Petrópolis adopted a new flowchart focused on breast changes for primary health care (Figure 3). The flowchart prioritizes the care of patients who had already undergone imaging tests and who were classified as BIRADS category 4 or 5 (Figure 4).

DISCUSSION

The breast health booklets (Figure 1A and 1B), which served as practical guides for nurses, physicians and CHAs, and the creation of the flow of patients by the Department of Health of the city of Petrópolis were essential procedures for the regulatory physician in the National System Regulation (SISREG) to make appropriate referrals and prioritize services to users.

The results showed a 31% increase in patients undergoing operations, 41% in surgeries and 42% in mastology consultation (Figure 2). Studies have confirmed that women have a greater awareness about breast cancer, with secondary prevention as a great option in the intervention process.

Table 1 shows that mammographs performed for the 50-69 age group indicate an increase in the period from 2012 to 2017. Regarding the incidence of breast cancer, there is a growth between 2013 and 2016, and a reduction of 16.5% from 2016 to 2017. It is also noted that deaths caused by breast cancer increased between 2014 and 2016, and that the number of deaths remained stable from 2016 to 2017. These results are significant, indicating that the reduction in the incidence and stability of deaths due to breast cancer is clear evidence of the success resulting from

the training in primary health care, which motivates the continuity of the study.

The new flowchart (Figure 3) adopted by the Health Department of Petrópolis gave fast access to patients with cancer classified as BIRADS category 4 or 5 (Figure 4) to the HAC mastology outpatient clinic. This procedure is focused on the histopathological investigation, improvement in access to effective treatment and, consequently, improvement in the quality of life of the patient.

CONCLUSIONS

This research expanded and qualified the early detection of breast cancer in the city of Petrópolis, through primary health care training, improving access to specialized services; and contributed to a reduction in mortality of patients with this disease.

The breast health booklets served as practical guides for nurses, physicians and CHAs, and were fundamental for the appropriate referral and prioritization of patient care.

In the period from 2016 to 2017, there was a 41% increase in patients who had had surgery, 42% in surgeries and 31% in mastology consultations, demonstrating a greater awareness among women regarding breast cancer. Consequently, there was a 16.5% reduction of breast cancer, and the number of deaths remained stable during this period.

This research allowed the coordination of health care of the Petrópolis Municipal Health Secretary to adopt a new flowchart for patients with breast disease, with a hierarchal flow of care. This fact allowed primary health care patients with imaging tests

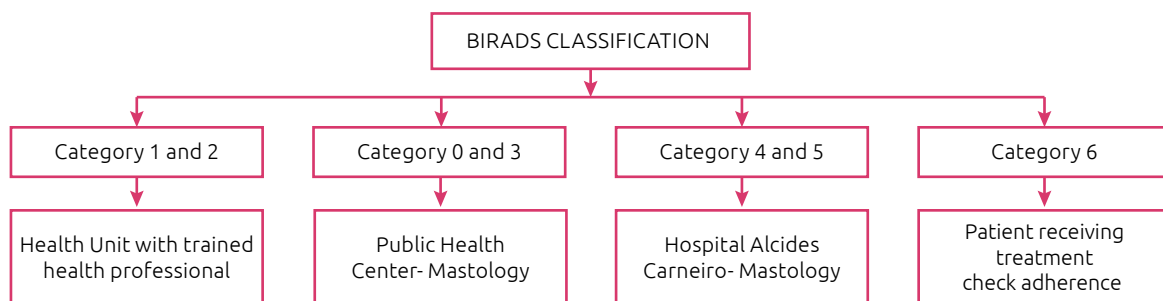


Figure 4. Flowchart after screening mammography results in the city of Petrópolis, Rio de Janeiro.

Table 1. Comparative studies of mammography exams performed in the period from 2012 to 2017 for women residing in Petrópolis¹¹.

Description: mammographs performed	2012	2013	2014	2015	2016	2017
Screening in the age range of 50-69 years	4.046	3.258	3.306	4.420	5.545	5.551
Incidence of breast cancer	134	103	133	149	164	137
Deaths from breast cancer	43	48	43	49	51	51

Source: based on SISMAAMA / HST / SMH / CTO / SISCAN data, subject to revision.

classified as BIRADS category 4 or 5 to be referred directly to the CHA, and prepared for treatment.

Together with primary health care, the use of the booklets and the new care flow chart adopted by the city of Petrópolis, Rio de Janeiro, the time between the first consultation, the diagnosis and the beginning of breast cancer treatment was reduced, reducing mortality and improving the quality of life of women with breast cancer. The studies showed that this primary health

care action was effective and low cost and can be replicated in other Brazilian municipalities.

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