

Early detection of breast cancer in primary care center

Detecção precoce do câncer de mama em Unidades Básicas de Saúde

Detección precoz de cáncer de mama en unidades básicas de salud

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Descriptores

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Abstract

Objective: To analyze the actions for early detection of breast cancer performed by primary care nurses, according to the different configurations of primary care center.

Method: Cross-sectional study, carried out in a total of 38 primary care center. The centers were selected by calculating a simple random sample; the inclusion criteria were nurses of both genders, with at least one year working in the health center. The different hypotheses considered were evaluated by a bivariate analysis in the contingency table, using the chi-square test or Fisher's exact test; all tests performed considered a bidirectional α of 0.05 and a 95% confidence interval (CI).

Result: Out of the 133 nurses in the study, 46.6% worked in primary care center of the Family Health Strategy, 31.6% in mixed centers and 21.8% in traditional ones. There was a better performance for the Family Health Strategy model, with statistically significant results for the following actions: investigation of risk factors ($p < 0.001$); orientation of the ideal age for clinical breast examination and the importance of its performance ($p = 0.002$ and $p < 0.001$ respectively); educational meeting on breast cancer ($p < 0.001$); active search for women with suspicious medical reports ($p = 0.002$) and referral to the health center ($p < 0.001$).

Conclusion: The actions for early detection of breast cancer performed by nurses differ in relation to the configuration of the Primary care center, and those from the Family Health Strategy model are closer to the recommendations of the Ministry of Health.

Resumo

Objetivo: Analisar as ações para detecção precoce do câncer de mama realizadas por enfermeiros da atenção primária, de acordo com as diferentes configurações de unidades básicas de saúde.

Método: Estudo de corte transversal, desenvolvido em 38 unidades básicas de saúde. As unidades foram selecionadas mediante cálculo de amostra aleatória simples; os critérios de inclusão foram os enfermeiros de ambos os sexos, com tempo mínimo de um ano de atuação na unidade. As diferentes hipóteses cogitadas foram avaliadas por meio de análise bivariada na tabela de contingência, utilizando o teste de qui-quadrado ou teste exato de Fischer; todos os testes realizados levaram em consideração um α bidirecional de 0,05 e intervalo de confiança (IC) de 95%.

Resultado: Dos 133 enfermeiros do estudo, 46,6% atuavam em unidades básicas da Estratégia Saúde da Família, 31,6% em unidades mistas e 21,8% em unidades tradicionais. Houve melhor desempenho para o modelo Estratégia Saúde da Família, com resultados estatisticamente significativos para as seguintes ações: investigação dos fatores de risco ($p < 0,001$); orientação da idade ideal para exame clínico das mamas e a importância de sua realização ($p = 0,002$ e $p < 0,001$ respectivamente); reunião educativa sobre câncer de

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mama ($p < 0,001$); busca ativa de mulheres com laudo suspeito ($p = 0,002$) e encaminhamento à unidade de referência ($p < 0,001$).

Conclusão: As ações para a detecção precoce do câncer de mama realizadas pelos enfermeiros diferenciam-se em relação à configuração da Unidade Básica de Saúde, sendo que as do modelo Estratégia Saúde da Família se aproximam mais das recomendações do Ministério da Saúde.

Resumen

Objetivo: Analizar las acciones para la detección precoz de cáncer de mama realizadas por enfermeros de atención primaria, de acuerdo con las diferentes configuraciones de las unidades básicas de salud.

Métodos: Estudio de corte transversal, llevado a cabo en 38 unidades básicas de salud. Las unidades fueron seleccionadas mediante cálculo de muestra aleatoria simple. Los criterios de inclusión fueron enfermeros de ambos sexos, con un tiempo mínimo de un año de actuación en la unidad. Las diferentes hipótesis consideradas fueron evaluadas mediante el análisis bivariado en la tabla de contingencia, utilizando la prueba χ^2 de Pearson o prueba exacta de Fisher. Todas las pruebas realizadas tuvieron en consideración un α bidireccional de 0,05 e intervalo de confianza (IC) de 95 %.

Resultado: De los 133 enfermeros del estudio, el 46,6 % actuaba en unidades básicas de Estrategia Salud de la Familia, el 31,6 % en unidades mixtas y el 21,8 % en unidades tradicionales. Se observó un mejor desempeño en el modelo Estrategia Salud de la Familia, con resultados estadísticamente significativos en las siguientes acciones: investigación de los factores de riesgo ($p < 0,001$), orientación sobre la edad ideal para examen clínico de las mamas y la importancia de su realización ($p = 0,002$ y $p < 0,001$ respectivamente), reunión educativa sobre cáncer de mama ($p < 0,001$), búsqueda activa de mujeres con resultados sospechosos ($p = 0,002$) y derivación a la unidad de referencia ($p < 0,001$).

Conclusión: Las acciones para la detección precoz de cáncer de mama realizadas por los enfermeros se diferencian según la configuración de la unidad básica de salud, entre las cuales el modelo Estrategia Salud de la Familia está más cerca de las recomendaciones del Ministerio de Salud.

Introduction

In Sao Paulo city, the municipalization of health provided by the Unified Health System – *Sistema Único de Saúde* (SUS) took place in 2001. The city took over the network of health centers in the State and incorporated it into the network of primary care centers (PCCs) that already existed. Concomitantly, the implementation and expansion of the Family Health Strategy (FHS) began⁽¹⁾

Even with the implementation of the FHS, the PCCs were structured in two care models: the Traditional one and the Family Health Strategy.⁽¹⁾ Both models have the same objectives of prevention, promotion, diagnosis, treatment and rehabilitation. However, the traditional model favors medical care for basic specialties, based on the complaint-conduct format and, on the service structure itself, has limited performance in the community and in the promotion and prevention actions.^(1,2)

On the other hand, in FHS they work as a team, the role of the nurse is valued and, with the community health workers (CHW), there is a greater possibility of carrying out actions for promotion, prevention and early detection of diseases.⁽²⁾ It is noteworthy that the FHS model proposes the reorganization of Primary Health Care (PHC) and the consolidation of SUS, with the work process based on the principles of expanded clinic, in proximity and in the bond with families and the community.⁽²⁾

In some PCC, these models coexist and are nominated Mixed-PCC, therefore, the composition of the teams and the way of working correspond to the two models presented.⁽¹⁾ Thus, the terms type or configuration of PCC were adopted in this study to refer to the different organizational arrangements of these services, since the Mixed PCC itself does not configure any health care model.

In PHC, regardless of the care model, nurses expand their performance, due to autonomy in their practices, participation in educational processes, in movements of social organization, management and team leadership,⁽³⁾ in addition to being the main interlocutor of policies and public health programs.

One of the challenges of these professionals, in the context of care to the main health problems of the female population is related to the actions directed to the screening and early diagnosis of breast cancer,⁽⁴⁾ regardless of the type of PCC in which they develop their work activities.

Worldwide, breast cancer has an incidence of 46.3% before 75 years old, being the leading cause of death among women.⁽⁵⁾ In Brazil, 59.700 new cases of this neoplasm are expected for the 2018-2019 biennium, with an estimated risk of 56.33 cases per 100,000 women,⁽⁶⁾ constituting a public health problem that gains visibility on the national health policy agenda.^(7,8)

The current guidelines of the Ministry of Health (MH) for the early detection of breast cancer define

PHC as the main setting of this activity,^(7,8) having the population's awareness of this pathology as strategies; identification of signs and symptoms and biennial mammography (MMG) for women aged 50 to 69 years old.⁽⁷⁾ The breast self-examination (BSE) and the clinical breast examination (CBE) are not indicated as a screening method. However, it is recommended that these actions should be part of the orientation of women to know their own bodies, as well as the propaedeutic of the care of nurses and physicians.

It should be noted that until mid-2015, annual CBE was recommended for all women over 40 years old with subsequent MMG in the presence of changes,^(8,9) and the data collection instrument for this study was developed at the time this guideline was still in force.

Studies point to gaps in the actions of nurses in the early detection of breast cancer in the PCC. Two integrative reviews identified a lack of scientific technical knowledge about this neoplasm^(4,10) and a current study highlights the need for investments in professional training and management of health services.⁽¹¹⁾

Therefore, this study aimed to analyze the actions of early detection of breast cancer performed by nurses in primary care according to the different configurations of Primary Care Centers.

Methods

This is a cross-sectional study, carried out with nurses who performed their work activities in 38 PCCs of the Southeast Health Coordination in Sao Paulo. The estimated population of the assigned territory is 2705 660 inhabitants, of which 1433857 are women, 744452 are in the age group of the target population for actions to control breast cancer.⁽¹²⁾

Nurses were selected by simple random sampling, considering the models of the 90 PCCs existing in 2011, resulting in a total of 17 Traditional-PCC, 12 FHS-PCC and nine Mixed-PCC. Those who did not work directly with users and who acted as managers were excluded. Thus, the sample con-

sisted of a total of 133 nurses, 62 from FHS-PCC, 42 from Mixed-PCC and 29 from Traditional-PCC. It is noteworthy that the City Government of Sao Paulo signs management contracts with Social Organizations, which are responsible for some of these PCCs.

A questionnaire constructed and validated by Marques⁽¹³⁾ was used, which includes identification data, training, actions for the control of breast cancer (investigation of risk factors, clinical breast examination, mammography, ultrasound and breast self-examination) and general actions (use of information systems, educational meetings and nursing consultation).

Nurses were interviewed, from January to March 2014, by one of the researchers in this study in a private area, with prior appointment, at the PCCs and signed the informed consent form. At the end of the data collection, the information was transmitted to the database hosted on the *Breast Cancer Observatory website*. Double entry was performed in 10% of the questionnaires and in 10% of the questions, with 100% agreement (Kappa coefficient 1.00).

The actions for early detection of breast cancer resulting from information on risk factors, CBE, MMG and BSE were adopted as a dependent variable. The types of PCC constituted the independent variables.

Qualitative variables are presented as the number of absolute and relative frequency. To compare the actions performed and the type of PCC, the chi-square test or Fisher's exact test was used.

All tests performed considered a bidirectional α of 0.05 and a 95% confidence interval (CI) and were performed with computational support from IBM SPSS 20 (Statistical Package for the Social Sciences) and Excel 2010[®] (Microsoft Office) software's.

The project was approved by the Research Ethics Committees (REC) from the Federal University of Sao Paulo (UNIFESP) and the Health Coordination of the Southeast region in the city of Sao Paulo and followed the ethical-legal precepts for research with human beings, in accordance with Resolution 466/2012 of the National Health Council.

Results

The total number of participants is shown in the lines of tables 1, 2 and 3 (n=133), and in the columns, the number of nurses according to the type of PCC, in order to allow comparison of the groups.

Table 1 shows that most nurses in the PCC (64.7%) had worked for less than five years in the PCC, 81% in the Mixed-PCC and 67.8% in the FHS-PCC. The Traditional-PCC had the highest percentage of nurses (31%) with more than ten years of experience. Regarding training, 81.2% of the nurses reported having taken a specialization course, with this proportion being lower among those who worked in Traditional-PCC (69%).

Regarding the training course on the recommended actions for the control of breast cancer, there was a higher frequency in the Mixed-PCC (68.3%) and FHS (62.3%) when compared to the Traditional-PCC (50%) (Table 1).

Table 1. Professional characteristics of nurses, according to different types of PCC (n=133)

Variables	Types of Primary Care Centers			Total n(%)
	FHS* n(%)	Traditional n(%)	Mixed n(%)	
Working time				
<5 years	42(67.8)	10(34.5)	34(81.0)	86(64.7)
5-10 years	10(16.1)	10(34.5)	3(7.1)	23(17.3)
>10 years	10(16.1)	9(31.0)	5(11.9)	24(18.0)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Highest academic degree				
Bachelor's degree	7(11.3)	6(20.7)	4(9.5)	17(12.8)
Specialist's degree	51(82.3)	20(69.0)	37(88.1)	108(81.2)
Master's degree	4(6.4)	2(6.9)	1(2.4)	7(5.3)
PhD	0(0.0)	1(3.4)	0(0.0)	1(0.7)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Family Health/Public Health/Obstetrics Specialist				
Yes	44(71.0)	13(44.8)	30(71.4)	87(65.4)
No	18(29.0)	16(55.2)	12(28.6)	46(34.6)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Training on actions recommended by the Ministry of Health				
Yes	38(62.3)	14(50.0)	28(68.3)	80(61.5)
No	23(37.7)	14(50.0)	13(31.7)	50(38.5)
Total	61(100.0)	28(100.0)	41(100.0)	130**(100.0)

*FHS – Family Health Strategy; **missing data=3;

Most nurses (72.9%) mentioned the annual indication of the frequency for carrying out the MMG, and only 12.1% mentioned the biennial periodicity as recommended by the MH Guideline. Out of the

133 nurses, 6.0% indicated the age group equal or greater than 50 years old to perform MMG, most indication of the age group equal or greater than 40 years old (61.6%). In the Traditional-PCC, 27.6% did not remember the age indicated. As for the waiting time between the MMG request and the return of the result, the period of one to three months of waiting in the different organizational arrangements of the PCC investigated. However, nurses who did not remember this period was those from the Traditional-PCC (24.1%). Out of the 133 nurses, 59 (44.4%) reported difficulties for the execution of MMG. The highest percentage was in the FHS-PCC (46.8%) and the most mentioned difficulties were scheduling the test and users who missed it. The nursing consultation was performed by 95.5% of the total number of nurses, being lower in the Traditional-PCC (86.2%). It is also observed that 82.3% and 67.5% of nurses from FHS and Mixed PCC performed 10 to 20 consultations per day, respectively, while in the Traditional-PCC 67% of nurses performed less than 10 consultations per day (Table 2).

Regarding the investigation of risk factors, there was a statistically significant difference among the respondents of the different PCC models ($p < 0.001$), since all nurses at FHS-PCC reported performing this action, when compared to 62,1% from the Traditional-PCC. The performance of CBE was part of the routine of 93.5% of nurses at FHS-PCC, 95.2% at Mixed-PCC and 65.5% of nurses at Traditional-PCC. Regarding educational meetings, a higher proportion was observed in the FHS-PCC (79.0%), compared to the Traditional-PCC (35.7%). These differences were statistically significant. The active search for women with malignancy suspected MMG reports was mentioned by more than half of nurses from different organizational configurations, with a higher proportion for FHS-PCC ($p = 0.002$), when compared to other types of PCC. Referral to the unit for women with suspected MMG results for malignant neoplasm was reported by 50.0% of nurses at FHS-PCC, a higher and statistically significant value when compared to nurses from other PCC configurations ($p < 0.001$) (Table 3).

Table 2. Actions performed by nurses from different types of PCC for early detection of breast cancer (n=133)

Variables	Types of Primary Care Centers			Total n(%)
	FHS* n(%)	Traditional n(%)	Mixed n(%)	
Indicated period of the MMG				
Annual	47(75.8)	13(44.9)	37(88.1)	97(72.9)
Biennial	8(12.9)	6(20.7)	2(4.8)	16(12.1)
There is no interval establishment	1(1.6)	0(0.0)	0(0.0)	1(0.7)
Another period	6(9.7)	10(34.4)	3(7.1)	19(14.3)
Total	62(100.0)	42(100.0)	42(100.0)	133(100.0)
Age range to perform the 1st MMG				
<35 years old	1(1.6)	2(6.9)	0(0.0)	3(2.3)
35 – 39	19(30.6)	5(17.2)	6(14.3)	30(22.6)
≥ 40 years old	37(59.7)	12(41.4)	33(78.6)	82(61.6)
≥ 50 years old	3(4.9)	2(6.9)	3(7.1)	8(6.0)
No age restriction	2(3.2)	0(0.0)	0(0.0)	2(1.5)
Does not know	0(0.0)	8(27.6)	0(0.0)	8(6.0)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Waiting time between MMG request and result return				
< 1 month	0(0.0)	3(10.4)	3(7.1)	6(4.5)
1 – 3 months	48(77.4)	15(51.7)	28(66.7)	91(68.4)
> 3 to 6 months	8(12.9)	3(10.4)	6(14.3)	17(12.8)
Another period	2(3.2)	1(3.4)	0(0.0)	3(2.3)
Does not return	0(0.0)	0(0.0)	1(2.4)	1(0.7)
Does not remember	4(6.5)	7(24.1)	4(9.5)	15(11.3)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Difficulties in performing MMG				
Yes	29(46.8)	11(37.9)	19(45.3)	59(44.4)
No	32(51.6)	13(44.9)	20(47.6)	65(48.9)
Does not know	1(1.6)	5(17.2)	3(7.1)	9(6.7)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Factor that hinders the MMG**				
Scheduling	20(44.4)	9(20.0)	16(35.6)	45(100.0)
Lack of technician to carry out the MMG	2(50.0)	1(25.0)	1(25.0)	4(100.0)
Lack of mammography	6(46.1)	4(30.7)	3(23.1)	13(100.0)
User absence	12(63.1)	2(10.6)	5(26.3)	19(100.0)
Nursing consultations				
Yes	62(100.0)	25(86.2)	40(95.2)	127(95.5)
No	0(0.0)	4(13.8)	2(4.8)	6(4.5)
Total	62(100.0)	29(100.0)	42(100.0)	133(100.0)
Number of nursing consultations per day***				
< 10	11(17.7)	17(68.0)	13(32.5)	0(0.0)
10-20 consultations	51(82.3)	8(32.0)	27(67.5)	0(0.0)
Total	62(100.0)	25(100.0)	40(100.0)	127(100.0)
Reason for NOT performing the nursing consultation**				
Lack of time	0(0.0)	3(100.0)	0(0.0)	3(100.0)
Work overload	0(0.0)	4(80.0)	1(20.0)	5(100.0)
Lack of appropriate setting	0(0.0)	1(50.0)	1(50.0)	2(100.0)

*FHS – Family Health Strategy; **Question with more than one possible answer; ***missing data=6

Discussion

The MH guidelines for the control of breast cancer have been revised in line with scientific evidence and establish a set of actions for the adoption of healthy habits, screening, early diagnosis, treatment, rehabilitation, and palliative care. They propose a cross-sectional, integrated and intersectoral policy that will dialogue with the most diverse areas to promote longevity with quality of life for the Brazilian female population. It focuses on performing early breast cancer detection actions in Primary Care and attributes to nurses the responsibility for managing and executing most of these actions.

In Brazil, Primary Care has as its main care model the Family Health Strategy coexisting with other organizational arrangements for the functioning of the PCC.⁽²⁾ Despite some flexibility in the structuring of these services, the guidelines for the control of breast cancer are the same. In the literature, the approach on the actions for early detection of breast cancer is incipient, especially comparing the results obtained in these different types of PCC.

The results of this study show a higher proportion of nurses working in FHS-PCC, as well as in Mixed-PCC, where most of them worked in the logic of the FHS. This result corroborates the changes in the PHC structure in the city of Sao Paulo, since there was an increase in the coverage of this PCC model, going from 22.49% in 2005 to 38.7% by March 2019⁽¹⁴⁾, a fact that can also explain the greater proportion of nurses with less than five years of experience in the FHS and Mixed PCC.

Regarding the training of nurses, most of them reported being specialists, especially those from the FHS-PCC. It can be reflected that the training of professionals for PHC has been an object of concern, suggesting that the demand for specialization may be related to the ones of the labor market.⁽¹⁵⁾

There was also a substantial growth in the nurse's duties in the primary care network, however, according to Melo's study,⁽¹⁵⁾ there is a need for greater institutional investment in the process of continuing education of these professionals regarding their performance in PHC. In addition, it is necessary to modernize the teaching strategies used and the

Table 3. Association among variables related to early detection of breast cancer according to the different types of PCC (n=133)

Variables	Types of Primary Care Centers						Total n	p-value
	FHS* (n=62)		Traditional (n=29)		Mixed (n=42)			
	Yes n(%)	No n(%)	Yes n(%)	No n(%)	Yes n(%)	No n(%)		
Investigation of risk factors	62(100.0)	0(0.0)	18(62.1)	11(37.9)	40(95.2)	2(4.8)	133	<0.001
Performance of BCE	58(93.5)	4(6.5)	19(65.5)	10(34.5)	40(95.2)	2(4.8)	133	<0.001
Guidance on the age of onset of BCE	47(75.8)	15(24.2)	12(41.4)	17(58.6)	33(78.6)	9(21.4)	133	0.002
Difficulty in carrying out the BCE	32(51.6)	30(48.4)	19(65.5)	10(34.5)	17(40.5)	25(59.5)	133	0.117
Educational meeting	49(79.0)	13(21.0)	10(35.7)	18(64.3)	29(69.1)	13(30.9)	132**	<0.001
Active search for women with suspected MMG report	55(88.7)	7(11.3)	17(58.6)	12(41.4)	28(66.7)	14(33.3)	133	0.002
Active search for women who missed MMG	19(30.6)	43(69.4)	4(13.8)	25(86.2)	14(33.3)	28(66.7)	133	0.147
Referral to the unit	31(50.0)	31(50.0)	5(17.2)	24(82.8)	7(16.7)	35(83.3)	133	<0.001
Family Health/ Public Health/ Obstetrics Specialist	44(71.0)	18(29.0)	13(44.8)	16(55.2)	30(71.4)	12(28.6)	133	0.031

Fisher's exact test; *FHS – Family Health Strategy; **missing date=1; p-value=0.05

contents taught, aiming at their real contribution to the health system centered on this care model.⁽¹⁶⁾

It is noteworthy that there is a certain inconsistency among health promotion actions, disease prevention and injuries to be developed by PHC nurses and the rules for monitoring the work of these professionals established in Sao Paulo. There is a preponderance of individual consultations and programmatic actions in the composition of the production goals that make up the criteria for evaluating and monitoring the management contracts signed between the city government and the Social Organizations responsible for the PCC.⁽¹⁷⁾ On the other hand, the actions of promotion and prevention requires time and persistence, as they involve the creation of bonds, a key element of this process and one of the assumptions that govern PHC.

The nursing consultation is the main production indicator for nurses and, in this study, almost all nurses reported performing it, with this percentage being 10% lower in the Traditional-PCC. It is noteworthy that the pressure to meet the goals may be less for nurses from Traditional-PCC hired by the State as Public Servants. Thus, it is necessary to consider the influence of different employment bonds and ways of monitoring the quality of the actions carried out in PHC.

Although the evaluation of the work in FHS is guided by goals, the rigidity with which this process has been built, contributes to the overload of professionals. This situation generates distortions in the teams work process, overestimating the fulfillment of quantitative indicators, a condition that has been

identified as a limiting factor for the quality of nurses' work in different programs and assignments.^(18,19)

Another aspect observed concerns the Normative Instrument for Technical, Administrative and Financial Monitoring of the agreements of the Family Health Strategy in Sao Paulo, which establishes only the Proportion of Accompanied Pregnant Women as an indicator for monitoring and evaluation in the women's health dimension.⁽¹⁷⁾ Thus, the actions for early detection of breast cancer, although encouraged by the Ministry of Health in different documents,⁽⁷⁻⁹⁾ can be neglected, as they compete with other quantitative production goals.

Thus, providing comprehensive health care for women is a challenge that needs to be overcome with responsibility. It is necessary to comply with the recommendations of the Ministry of Health⁽²⁰⁾ both by nurses and health teams, and the services that make up SUS. There is sufficient evidence to justify the investment in the early detection of breast cancer,⁽²¹⁾ considered a disease that has a good prognosis, as long as it is diagnosed and treated in time.⁽²²⁾

Regarding the period and the age range for MMG, there is a non-conformity of the actions for the early detection of this neoplasm according to the recommendation of the Ministry of Health.⁽⁷⁾ It is considered that the screening are tests performed on asymptomatic individuals⁽⁷⁾ and that the requirements for its indication must be strictly followed, since the iatrogenic damages are not always balanced with the compensation of the cure, control or relief of the felt illness. People who perceive themselves as

healthy should be prevented from having their health dimensions shaken indefinitely, due to poorly performed screening interventions.⁽²³⁾

It should also be noted that at the time of data collection, MMG requests were the sole responsibility of physicians in Sao Paulo, whose conduct may be influenced by the recommendations⁽²⁴⁾ of the Brazilian College of Radiology and Diagnostic Imaging (CBR), of the Brazilian Society of Mastology (SBM) and the Brazilian Federation of Gynecology and Obstetrics Associations (FEBRASGO), which indicate the performance of MMG for all women aged 40 to 69 years old, with annual frequency, diverging from the Consensus Document⁽⁹⁾ and the new Guidelines⁽⁷⁾ of the Ministry of Health that recommend screening by MMG for women aged 50 to 69 years old, with an interval of two years between the tests.

This scenario of divergences can interfere with the actions taken by nurses and highlights the need for a consensus to be established in the city for PHC to coordinate health care networks. It is noteworthy that the Regional Nursing Council of Sao Paulo (Coren),⁽²⁵⁾ along with the Secretary of Health,⁽²⁶⁾ authorize nurses to request MMG in the Primary Care network.

Regarding women with a malignant suspected MMG report, most nurses reported performing the active search, with the FHS-PCC nurses standing out, with a statistically significant difference in relation to the other PCC configurations. As for the active search for absent women, it was mentioned by a small number of nurses working in the three types of PCC. This result corroborates the studies by Sousa⁽²⁷⁾ and Teixeira,⁽²⁸⁾ that highlight the deficiency in the active search for absent people and point out the need for greater control, by the PCC, of women in the different possibilities of therapeutic itineraries.

It is noteworthy that active search actions are very important for both screening and the diagnosis and the beginning of treatment. Its non-execution denotes PHC failures to act as the health care coordinator for registered users.⁽⁴⁾

The referral of women with an altered MMG test to the units deserves attention, as just over a

quarter of the nurses reported performing it. This result can be explained by the referral flows established in the city for breast cancer, which centralizes this function in medical professionals. Such determination prevents full compliance with activities that can be performed by nurses in PHC^(26,29) and in services where there is no easy access to the physician, with the risk of delay in referral and, consequently, in the qualification of the diagnosis and initiation treatment.

There were no studies related to breast cancer that compared the FHS and traditional care models. On the other hand, this comparison has been approached in studies with different focuses and point to the superiority of the FHS model regarding the traditional one in carrying out specific actions,⁽³⁰⁾ of the service organization focused on the national primary care policy - PNAB,⁽³¹⁾ professional training,⁽³⁰⁾ better performance and resolvability,⁽³²⁾ as well as greater user satisfaction.

In this study, when comparing the results obtained from the relationship between the performance of actions for the early detection of breast cancer and the type of PCC, there was a better performance for the FHS-PCC, with statistically significant results for the variables, investigation of the risk factors, educational meeting on the theme, professionals specialized in Family Health/Public Health/Obstetrics, as well as nurses with training courses.

These findings allow us to raise the hypothesis that nurses at FHS-PCC had more favorable results, possibly because this care model assumes, in a more effective way, the role of redirecting care practice, acting as the ordering center of SUS health care networks.

On the other hand, the study by Barbosa⁽³³⁾ observed the lack of familiarity with the high risk factors and the indications for MMG to be performed with a total of 80 FHS nurses in Sao Luiz - Maranhao.

The results allow an evaluation of the actions for early detection of breast cancer in part of the PHC network in Sao Paulo. The reduction in mortality from this neoplasm depends on a set of other coordinated actions of the Health System and con-

stitutes an important dimension of comprehensive health care for Brazilian women.

It is worth noting that the implementation of the FHS model in urban centers is complex, a fact that can lead to the coexistence of the types of FHS, Mixed and Traditional PCC as shown in this study.

It should also be noted that the improvement in breast cancer morbidity and mortality indicators, pursued by the guidelines of the Ministry of Health, requires commitment in the qualification of the work processes of SUS clinical and management practices.

It is considered a limitation of the study to not carry out a separate analysis of the results corresponding to the nurses from Mixed-PCC, since out of the 42 nurses linked to this PCC configuration, only eight of them worked in the traditional model. Considering this imbalance and the risk of bias in the analysis of the results, we focus our discussion on the comparison of the actions performed by nurses from the FHS and traditional models.

Conclusion

When analyzing the actions performed by PHC nurses in the southeastern region of Sao Paulo for the early detection of breast cancer, from the different PCC configurations, we can conclude that all have inadequacies. There is no active search for all patients with altered mammographic reports, there are mistakes in indicating the frequency of MMG, in the investigation of risk factors and in the referral to the health center. However, these inadequacies differ according to the different models of health care adopted. The FHS-PCC tend to be more consistent with the recommendations of the National Primary Care Policy and the Ministry of Health for early detection of breast cancer than other types of PCC. This study also allowed us to state that there is a need for adjustments to be made in the execution of these actions, in order to adapt them to the guidelines recommended by the Ministry of Health and not only follow what is recommended by the city government of Sao Paulo to control this condition, as well as reduce disparities among PHC ser-

vices. Thus, new quasi-experimental studies are necessary for the intervention process, through qualitative and quantitative methodologies that contribute to the broadening and deepening of this topic, with the perspective of behavioral and cultural changes in the professional and the health policy for care.

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Collaboration

Melo FBB, Figueiredo EN, Gutiérrez MGR and Rosa AS, participated in the design of the study, analysis, and interpretation of data, writing of the article, critical review of the content and approval of the final version to be published. Panobianco MS participated in the critical review of the content and approval of the final version to be published.

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