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Professionals' practice and quality of actions to control cervical cancer: a cross-sectional study

Atuação de profissionais de saúde e qualidade das ações no controle de câncer cervicouterino: um estudo transversal

Tiempo de trabajo de profesionales y calidad de las acciones de control del cáncer cérvicouterino: un estudio transversal

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Abstract

Objective: to assess the working length of physicians and nurses in Primary Health Care (PHC) and the quality of actions taken to control cervical cancer (CC). **Methods:** this is a cross-sectional study, conducted from January to March 2019, in a health region comprised of 19 municipalities located in the state of Bahia, Brazil. The sample consisted of 241 PHC physicians and nurses. The CC care line was used as a tracer condition. The outcome experience length in PHC in the same municipality was chosen, categorized as < 2 years and ≥ 2 years and representative indicators of PHC quality. Pearson's χ2 and Fisher's exact tests were used. **Results:** the prevalence of length of experience in PHC was 43.57% (95%CI: 37.40%; 49.94%) for < 2 years, and 56.43% (95%CI: 50.06%; 62.60%) for ≥ 2 years. There was a higher prevalence, with a statistically significant difference, of the quality indicators for the longest working length. **Conclusions and implications for practice:** professional turnover seems to affect the longitudinal care of women in the chosen care line. It is suggested to expand the number and role of nurses, especially in PHC services, for greater resolution and efficiency of the health system.

Keywords: Primary Health Care; Health Workforce; Cervical Cancer; Quality of Health Care; Regional Health Planning.

Resumo

Objetivo: avaliar o tempo de atuação de médicos e enfermeiros na Atenção Primária à Saúde (APS) e qualidade das ações desenvolvidas para controle do câncer cervicouterino (CC). **Métodos:** estudo transversal, conduzido de janeiro a março de 2019 em região de saúde compreendida em 19 municípios localizada no estado da Bahia, Brasil. A amostra foi de 241 médicos e enfermeiros da APS. Utilizou-se a linha de cuidado do CC como condição traçadora. Elegeram-se o desfecho tempo de atuação na APS no mesmo município, categorizado em < 2 anos e ≥ 2 anos, e indicadores representativos da qualidade da APS. Os testes χ^2 de Pearson e exato de Fisher foram empregados. **Resultados:** a prevalência de tempo de atuação na APS foi 43,57% (IC95%: 37,40%; 49,94%) para < 2 anos e 56,43% (IC95%: 50,06%; 62,60%) para ≥ 2 anos. Observaram-se maiores prevalências, com diferença estatística significativa, dos indicadores de qualidade para o maior tempo de atuação. **Conclusões e implicações para a prática:** a rotatividade profissional parece afetar o cuidado longitudinal de mulheres na linha de cuidado eleita. Sugere-se a ampliação do número e do papel dos enfermeiros, especialmente nos serviços de APS, para maior resolutividade e eficiência do sistema de saúde.

Palavras-chave: Atenção Primária à Saúde; Mão de Obra em Saúde; Neoplasias do Colo do Útero; Qualidade da Assistência à Saúde; Regionalização.

Resumen

Objetivo: evaluar el tiempo de actuación de médicos y enfermeros en la Atención Primaria de Salud (APS) y la calidad de las acciones desarrolladas para el control del cáncer cérvicouterino (CC). **Métodos**: estudio transversal realizado de enero a marzo de 2019, en una región sanitaria que comprende 19 municipios en el estado de Bahía, Brasil. La muestra fue de 241 médicos y enfermeros de APS. La línea de cuidados de CC fue la condición trazadora. Se eligió el resultado tiempo trabajando en APS en el mismo municipio, categorizado en < 2 años y ≥ 2 años e indicadores representativos de calidad de APS. Se utilizaron pruebas exactas de chi-cuadrado de Pearson y Fisher. **Resultados**: la prevalencia del tiempo de actuación en APS fue del 43,57% (IC95%: 37,40%; 49,94%) para < 2 años y del 56,43% (IC95%: 50,06%; 62,60%) para ≥ 2 años, considerado incipiente. Se observó una mayor prevalencia, con diferencia estadísticamente significativa, de los indicadores de calidad para un mayor tiempo de actuación. **Conclusiones e implicaciones para la práctica**: la rotación de profesionales parece afectar la atención longitudinal de las mujeres en la línea de cuidado elegida. Se sugiere la ampliación del número y el papel de enfermería, especialmente en los servicios de APS, para una mayor resolutividad y eficiencia del sistema sanitario.

Palabras clave: Atención Primaria de Salud; Fuerza Laboral en Salud; Neoplasias del Cuello Uterino; Calidad de la Atención de Salud; Regionalización.

INTRODUCTION

Cervical cancer (CC) is a serious public health problem, as it is still one of the leading causes of death among women worldwide[1,2]. CC mainly affects young adults, who have many economic and care responsibilities with their families[2]. The disease has a heterogeneous distribution, being more prevalent in low- and middle-income countries, showing different exposures to risk factors, economic context, lifestyle and access to health care services[1].

CC is an important marker of health inequity[3,4], as it is a long-course, highly preventable disease and a controlled problem in countries with well-established vaccination, screening and treatment[5]. In this sense, Primary Health Care (PHC), in the regional logic, is constituted as the main strategy to deal with chronic diseases[6].

In Brazil, as well as in the global overview, the distribution of CC is different between regions, with higher prevalence in the North and Northeast[5]. The health region chosen for the study is located in the state of Bahia, in the Northeast, and therefore reflects such a scenario. The region is mostly composed of municipalities with little economic capacity, low urbanization rate, large territorial extension and stagnation or decrease in the population, which mean important synergistic barriers to attract and retain professionals[7].

In rural and inaccessible municipalities, there are a large number of vulnerable women and high rates of CC[2-4,8-10]. On the other hand, they find it difficult to attract and retain professionals[6], especially physicians[11]. This high turnover hampers the longitudinality of care and the formation of bonds[12,13], generating persistent disparities in access to services[8] and losses in health care quality[14].

The availability and distribution of professionals is unequal throughout the world and, although there is no definition of an adequate minimum period for working in PHC, the workforce strengthening is essential for the transformation of health care models[15]. It is, therefore, essential to influence the social determination, multidisciplinary teams linked to the community and that know their areas of action[7].

Within the scope of PHC, nurses are more involved in the search and screening of women[16], favoring the construction of a relationship of trust[17,18]. From this perspective, it becomes a key subject for maintaining follow-up[19] and users' positive perception of care[20].

The expansion of nurses' roles in PHC[21] and professional training[14,20] contribute to service quality, reflecting in better comprehensiveness[22] and resoluteness of the health care network. Thus, they help to minimize geographic, organizational, structural and symbolic access barriers, which can negatively influence the screening of women[17,18].

The definition of service quality becomes complex when considering the term polysemy. To adopt a clear and concise concept of PHC quality, the Brazilian National Policy on Primary Care (*Política Nacional de Atenção Básica*) and the Brazilian National Program for Improving Access and Quality of Primary Care (PMAQ-AB - *Programa Nacional de Melhoria do Acesso e da Qualidade da Atenção Básica*) bring essential aspects for the adequate provision of PHC care[7,23]. Based on these assumptions, indicators were chosen to assess the quality of services provided in PHC in the line of women's health care.

In addition to notably influencing PHC quality, better retention of professionals generates less costs for the health system and better results for the population[10]. In this sense, the present study sought to assess working length of physicians and nurses in PHC and the quality of services provided, using CC as a tracer condition.

METHODS

This is a cross-sectional study carried out from January to March 2019. CC care line was chosen to assess the quality of services provided[24] in PHC in the Vitória da Conquista health region, Bahia, Brazil. This health region comprises 19 municipalities with approximately 33% of the population residing in rural areas. At the time of collection, there were 177 Family Health teams (FHt), 83 from urban areas and 94 from rural areas, comprising 354 physicians and nurses working in vast territories and many women in social vulnerability (Table 1).

The sample was calculated adopting a 50% prevalence for unknown events, 80% power and 95% confidence level, obtaining a minimum number of 240 physicians and nurses, considering 30% for possible losses. After sample calculation, the selection of respondents was based on a random drawing, taking into account the proportional number of physicians and nurses registered in the FHt of each municipality. The inclusion criterion was to be a physician or nurse in the FHt of the 19 municipalities in the health region. Professionals who were not working during the collection period (holidays, leaves, etc.) were excluded.

Physicians and nurses from the FHt were elected as they were responsible for collecting the Pap smear at Family Health Units (FHU), in addition to monitoring patients in precursor lesions and CC cases. From this perspective, physicians and nurses operate care line management in the micropolitics of health work, through health promotion actions and monitoring of CC control.

Interviews were conducted through the application of questionnaires by properly trained interviewers, using tablets. The elaborated questionnaire was adapted from an instrument applied in research in Bahia[25], in which information from the Brazilian National Cancer Institute (INCA)[5] and Primary Care Journals is aggregated[23]. KoboToolbox®, version 1.4.8, was used for data programming and storage. A pilot study was carried out in a municipality in a neighboring health region to adapt the research instrument, the field logistics and organization. Such data were not used for analysis.

The length of experience in PHC in the same municipality was the outcome considered in the study, dichotomized into < 2 years and ≥ 2 years. To assess PHC quality, the independent variables were used: function (physician; nurse); sex (male; female); age (20-29 years; 30-39 years; ≥ 40 years); graduate (yes; no); complete FHt (yes; no); frequency of Pap smear testing (monthly; biweekly; weekly or more); carrying out joint efforts

Table 1. Sociodemographic and health characteristics, Vitória da Conquista health region, Bahia, Brazil, 2019.

Location	Distance from the headquarter	RZ/UZ pop. (2010)*	HDI (2010)*	Pop. benefited from the PBF (2019) †	FHS coverage (2018) ‡	Number of FHt (2018) §
Maetinga	130km	4,221/2,817	0.538	39.2%	100%	RZ:04/UZ:01
Ribeirão do Largo	109km	3,955/4,647	0.540	45.1%	100%	RZ:03/UZ:01
Cordeiros	162km	5,617/2,551	0.579	28.8%	100%	RZ:02/UZ:02
Mirante	139km	8,698/1,809	0.527	31.6%	100%	RZ:04/UZ:01
Caraíbas	82.7km	7,709/2,513	0.555	35.9%	100%	RZ:03/UZ:01
Bom Jesus da Serra	95.1km	7,345/2,768	0.546	39.4%	100%	RZ:02/UZ:02
Piripá	124km	6,588/6,195	0.575	28.5%	100%	RZ:04/UZ:02
Presidente Jânio Quadros	122km	9,454/4,198	0.542	37.3%	100%	RZ:04/UZ:03
Caetanos	72.5km	10,348/3,291	0.542	43.1%	100%	RZ:05/UZ:01
Tremedal	82.5km	13,090/3,939	0.528	33.9%	100%	RZ:04/UZ:03
Belo Campo	63.7km	6,992/9,029	0.575	38.7%	100%	RZ:03/UZ:03
Condeúba	149km	9,436/7,462	0.582	32.8%	100%	RZ:05/UZ:03
Encruzilhada	97.9km	18,636/5,130	0.544	33.2%	100%	RZ:06/UZ:02
Anagé	52.3km	20,592/4,924	0.540	36.3%	100%	RZ:08/UZ:03
Cândido Sales	85.5km	8,632/19,286	0.601	33.8%	100%	RZ:03/UZ:07
Planalto	47.5km	9,612/14,869	0.560	33.9%	100%	RZ:06/UZ:03
Barra do Choça	30.7km	12,381/22,407	0.551	39.4%	100%	RZ:06/UZ:06
Poções	69.1km	10,042/34,659	0.604	37.7%	100%	RZ:04/UZ:11
Vitória da Conquista	Headquarter	32,127/274,739	0.678	16.9%	44.5%	RZ:18/UZ:28
Health region	__	205,475/422,309	__	__	71.1%	RZ:94/UZ:83

Pop – population; RZ – rural zone; UZ – urban zone; HDI - Human Development Index; PBF - *Programa Bolsa família*; FHS - Family Health Strategy; FHt - Family Health team. Source: own elaboration based on *IBGE data; †data from the *Cadastro Único*; ‡data from the e-Gestor primary care; §data provided by municipal primary care coordination.

that, in the context of PHC, are collective actions to expand access to services offered in the so-called typical weeks, also reducing waiting lines for the preventive exam (yes; no); record monitoring to identify women with delayed collection (yes; no); follow-up of women during treatment in specialized care (yes; no); access to sanitary transport provided by the Municipal Health Department (never/sometimes; always); existence of women in the unit diagnosed with CC in the last 12 months (yes; no); and diagnosis of high-grade squamous intraepithelial lesion (HSIL) (yes; no) (Figure 1).

The choice of explanatory variables, considered indicators of PHC quality, was based on the PMAQ-AB's external assessment instrument. In this sense, in addition to enabling the analysis of issues related to the result and work process of PHC, it also allows the assessment of aspects of the structure to provide opportunities for the realization of longitudinality attributes, coordination of care, comprehensiveness, using women's health care line[14].

Descriptive analyzes were obtained through absolute (n) and relative (%) frequency measures. Differences between proportions were evaluated by Pearson's $\chi 2$ and Fisher's exact tests. Analyzes adjusted for sex, age and marital status were performed, taking into account that such variables can act as potential confounders for professionals' fixation and working length. A p-value ≤ 0.05 was used and the Stata statistical package (Stata Corporation, College Station, USA), version 15.0, was used for data analysis.

Descriptive analysis of the variables was performed by care level, by means of frequencies

The research was approved by the Institutional Review Board of the *Universidade Federal da Bahia*, under Opinion 624,168, of April 24, 2014 and CAAE (*Certificado de Apresentação para Apreciação Ética* - Certificate of Presentation for Ethical Consideration) 27247414.0.0000.5556. All participants provided written consent to participate in the research. The ethical precepts of Resolution 466/2012 of the Brazilian National Health Council (*Conselho Nacional de Saúde*) were followed.

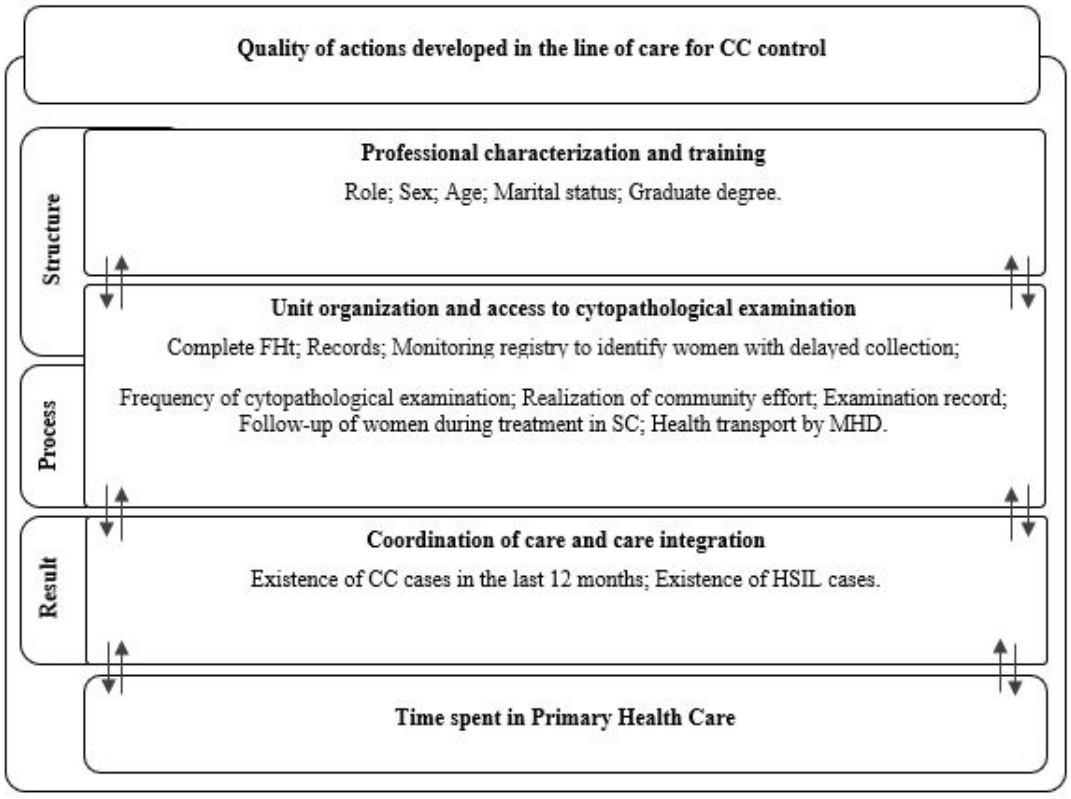

Figure 1. Conceptual model of analysis of length of action and quality of actions developed in the line of care for cervical cancer control.
CC - cervical cancer; FHt - Family Health teams; SC - specialized care; MHD - Municipal Health Department; HSIL: high-grade squamous intraepithelial lesion.
Source: own elaboration based on the theoretical framework carried out for research.

RESULTS

The prevalence of PHC working length in the same municipality was 43.57% (95%CI: 37.40;49.94, for < 2 years, and 56.43% (95%CI: 50.06;62.60), for ≥ 2 years. A total of 241 professionals (109 physicians and 132 nurses) were interviewed, most of them female (71.8%), aged between 30 and 39 years (47.7%), without a partner (51.9%) and who had undergone graduate studies (67.2%) (Table 2).

Regarding PHC organization, most professionals reported being in complete teams (94.6%). Pap smear testing offer was at least once a week (67.7%). Still, the majority (74.7%) reported that the units eventually made joint effort to expand access to Pap smear. Record was performed in almost all units (96.7%) and its monitoring to identify women who could have delayed collections (74.3%) (Table 2).

It was also reported that women continued to be followed up by their respective FHt (76.7%), even during treatment in specialized care and that users were able to access health transportation (65.5%), offered by the Municipal Health Department. However, more than half of the professionals indicated that there were cases of women diagnosed with HSIL (53.6%) in their health units (Table 2).

The comparison for the different working length and the chosen quality indicators can be seen in Table 3. An analysis showed that there was a difference between the role performed and working length, being more common the longer time among nurses (68.2%) compared to physicians (42.2%; p<0.001). Among professionals with working length ≥2 years, there was higher prevalence with statistical difference for females (69.5%; p=0.004), age ≥ 40 years (76.8%; p<0.001) and with a partner (69.8%; p<0.001). Most professionals with working length ≥2 years (70.4%) had graduate degrees, while only 29.6% of those with working length <2 years reported having graduate studies (p<0.001).

Regarding unit organization and access to screening test, Pap smear testing every two weeks (69.6%) and weekly or more (62.0%) p=0.033 and joint efforts to expand access are more frequent among professionals with longer experience (62.6%; p=0.032). Likewise, exam record (57.9%; p=0.023) and its monitoring to identify women that may have delayed collection (63.7%; p<0.001) were reported as the most common practices among professionals with more time (Table 3).

Regarding coordination of care and care integration, most professionals with experience ≥ 2 years reported that there

Table 2. Characterization of Family Health teams and units, Vitória da Conquista health region, Bahia, 2019.

Variable	Sample distribution		
	n	%	95%CI
Professional characterization and training			
Role			
Physician	109	45.2	39.01-51.60
Nurse	132	54.8	48.40-60.99
Sex			
Male	68	28.2	22.86-34.27
Female	173	71.8	65.73-77.14
Age			
20 to 29 years	70	29.1	23.63-35.14
30 to 39 years	115	47.7	41.44-54.07
≥ 40 years	56	23.2	18.30-29.03
Marital status			
Without a partner	125	51.9	45.52-58.16
With a partner	116	48.1	41.84-54.48
Graduate degree			
No	79	32.8	27.11-39.00
Yes	162	67.2	61.00-72.89
FHU organization and access to Pap smear testing			
Complete FHt			
No	13	5.4	3.14-9.10
Yes	228	94.6	90.90-96.85
Frequency of Pap smear testing offer			
Monthly	22	9.9	6.56-14.57
Fortnightly	50	22.4	17.39-28.41
Weekly or more	151	67.7	61.25-73.56
Carrying out joint effort			
No	58	25.3	20.08-31.41
Yes	171	74.7	68.59-79.91
Pap smear testing record			
No	8	3.3	1.66-6.53
Yes	233	96.7	93.47-98.34
Record monitoring to identify women with delayed collection			
No	62	25.7	20.56-31.66
Yes	179	74.3	68.34-79.43
Follow-up of women during treatment in SC			
Never or sometimes	52	23.3	18.19-29.37
Always	171	76.7	70.63-81.80

95%CI - 95% confidence interval FHU - Family Health Unit. FHt - Family health team. SC - specialized care MHD - Municipal Health Department. CC - cervical cancer. HSIL - high-grade squamous intraepithelial lesion. Source: own elaboration based on research data.

Table 2. Continued...

Variable	Sample distribution		
	n	%	95%CI
Health transportation by MHD			
Never or sometimes	69	34.5	28.19-41.41
Always	131	65.5	58.59-71.81
Coordination of care and care integration			
Existence of CC cases in the last 12 months			
No	150	68.8	62.30-74.65
Yes	68	31.2	25.35-37.70
Existence of HSIL cases			
No	103	46.4	39.89-53.03
Yes	119	53.6	46.97-60.11

95%CI - 95% confidence interval FHU - Family Health Unit. FHt - Family health team. SC - specialized care MHD - Municipal Health Department. CC - cervical cancer. HSIL - high-grade squamous intraepithelial lesion. Source: own elaboration based on research data.

Table 3. Working length in Primary Health Care and quality indicators according to dimensions, Vitória da Conquista health region, Bahia, 2019.

Dimensions/variables	< 2 years (105) n (%)	≥ 2 years (136) n (%)	Total (241) n (%)	p-value
Professional characterization and training				
Role				
Physician	63 (57.8)	46 (42.2)	109 (45.2)	
Nurse	42 (31.8)	90 (68.2)	132 (54.8)	<0.001*
Sex ‡	n=74	n=123	n=197	
Male	34 (51.5)	32 (48.5)	66 (33.5)	
Female	40 (30.5)	91 (69.5)	131 (66.5)	0.004*
Age				
20 to 29 years	47 (67.1)	23 (32.9)	70 (29.0)	
30 to 39 years	45 (39.1)	70 (60.9)	115 (47.7)	
≥ 40 years	13 (23.2)	43 (76.8)	56 (23.3)	<0.001*
Marital status				
Without a partner	70 (56.0)	55 (44.0)	125 (51.9)	
With a partner	35 (30.2)	81 (69.8)	116 (48.1)	<0.001*
Graduate degree				
No	55 (69.6)	24 (30.4)	79 (32.8)	
Yes	50 (30.4)	112 (69.1)	162 (67.2)	<0.001*
FHU organization and access to Pap smear testing				
Complete FHt				
No	5 (38.5)	8 (61.5)	13 (5.4)	

*Pearson's chi-square test; †Fisher's exact test; ‡The variable sex only maintains a statistically significant difference after adjusting for age and marital status and the variable frequency of Pap smear testing only maintains a statistically significant difference after adjusting for sex, age and marital status. FHU - Family Health Unit; FHt - Family Health Team; SC - specialized care; MHD - Municipal Health Department; CC - cervical cancer; HSIL - high-grade squamous intraepithelial lesion. Source: own elaboration based on research data.

Table 3. Continued...

Dimensions/variables	< 2 years (105) n (%)	≥ 2 years (136) n (%)	Total (241) n (%)	p-value
Yes	100 (43.9)	128 (56.1)	228 (94.6)	0.780†
Frequency of Pap smear testing offer ‡	n=82	n=128	n=210	
Monthly	14 (63.6)	8 (36.4)	22 (10.5)	
Fortnightly	14 (30.4)	32 (69.6)	46 (21.9)	
Weekly or more	54 (38.0)	88 (62.0)	142 (67.6)	0.033†
Carrying out joint effort	n=95	n=134	n=229	
No	31 (53.5)	27 (46.5)	58 (25.3)	
Yes	64 (37.4)	107 (62.6)	171 (74.7)	0.032*
Pap smear testing record				
No	7 (87.5)	1 (12.5)	8 (3.3)	
Yes	98 (42.1)	135 (57.9)	233 (96.7)	0.023†
Record monitoring to identify women with delayed collection				
No	40 (64.5)	22 (35.5)	62 (25.7)	
Yes	65 (36.3)	114 (63.7)	179 (74.3)	<0.001*
Follow-up of women during treatment in SC	n=89	n=134	n=223	
Never or sometimes	25 (48.1)	27 (51.9)	52 (23.3)	
Always	64 (37.4)	107 (62.6)	171 (76.7)	0.170*
Health transportation by MHD	n=85	n=115	n=200	
Never or sometimes	34 (49.3)	35(50.7)	69 (34.5)	
Always	51 (38.9)	80 (61.1)	131 (65.5)	0.160*
Coordination of care and care integration				
Existence of CC cases in the last 12 months	n=91	n=127	n=218	
No	70 (46.7)	80 (53.3)	150 (68.8)	
Yes	21 (30.9)	47 (69.1)	68 (31.2)	0.029*
Existence of HSIL cases	n=91	n=131	n=222	
No	54 (52.4)	49 (47.6)	103 (46.4)	
Yes	37 (31.1)	82 (68.9)	119 (53.6)	0.001*

*Pearson's chi-square test; †Fisher's exact test; ‡The variable sex only maintains a statistically significant difference after adjusting for age and marital status and the variable frequency of Pap smear testing only maintains a statistically significant difference after adjusting for sex, age and marital status. FHU - Family Health Unit; FHt - Family Health Team; SC - specialized care; MHD - Municipal Health Department; CC - cervical cancer; HSIL - high-grade squamous intraepithelial lesion. Source: own elaboration based on research data.

were cases of women diagnosed with CC at their FHU (69.1%; p=0.029) and HSIL (68.9%; p=0.001) (Table 3).

In the adjusted analyzes for the variables sex, age and marital status (data not shown in the table), the statistical differences remained for the quality indicators: function (p<0.001), graduate degree (p<0.001), carrying out joint efforts (p=0.032), Pap smear record (p=0.009), record monitoring to identify women with delayed collection (p<0.001), existence of CC cases in the last 12 months (p=0.008), and existence of HSIL cases (p=0.001). The frequency indicator of Pap smear testing and the sociodemographic variable gender show statistical differences only after adjustment (Table 3).

DISCUSSION

The health region showed a prevalence of working length of professionals in PHC in the same municipality ≥ 2 years, just over half. Furthermore, the findings demonstrate statistically

significant differences for the categories of nurses' working length and role, having a graduate degree, in addition to frequency of offer, record and monitoring of Pap smear testing.

Although there are no studies or protocols with defined adequate periods, it is considered that a longer working length provides opportunities to comply with the longitudinality attribute and bond formation in PHC[15]. Employee retention in rural territories, not only in Brazil but in other countries, for more than 20 months is still difficult[9-11], especially for PHC physicians. The consequences are worse health outcomes for the population, higher costs for the health system[10] and breaking or not forming a bond between professionals and the community[12].

For chronic conditions, the longitudinality of care within the care networks is essential[6], allowing the FHtto act based on family and community guidance[26]. In the line of care studied, this fact becomes paramount in service provision, as the Pap smear is accompanied by several taboos and cultural precepts[18] that create barriers to screening[17]. Furthermore, the fear of women to perform the procedure with male nurses[9,17] and young[18], can be overcome, because trust and adherence to treatment increase when follow-up is done by the same professional over time[14].

There was a higher prevalence, with a statistically significant difference, of nurses working in primary care in the same municipality for a longer time, compared to physicians. The difficulty in securing and attracting professionals is still a great challenge, especially in relation to physicians in the northeast[13]. The average length of stay in FHU is greater among nurses[20].

The expansion of nursing professionals' roles is debated in several countries[21] and, for the CC care line, they are usually the team members most involved in the search, screening and acceptance of users' demands[16].

Follow-up care is quite likely when women are accompanied by nurses[19], because they seek a safe environment to perform the screening test, as well as feelings of appreciation and trust[17]. Therefore, a therapeutic relationship based on maintaining the bond and encouraging users to become protagonists of their health care is necessary, resulting in adequate care. Properly trained nurses produce high quality care and achieve good results for patients' health, being as resolute as physicians[21].

Professional training to offer appropriate actions is another important factor in health care quality[21] and requires investments within the PHC[27]. In this regard, professionals with longer experience were more likely to have a graduate degree. This fact highlights the greater probability of stable bonds being configured as a stimulus for professionals to feel motivated to qualify. More capable teams develop the attributes of longitudinality[28] and completeness, being better evaluated by users[20], acting as a filter for specialized services, avoiding bureaucracy and excessive and unnecessary referrals[14].

Working length also showed differences for organizational structure and process factors such as the frequency of cytopathological offer, carrying out joint efforts, record and frequent monitoring of record, where there was higher prevalence for a period of two years or more. Professionals who form a link with the health unit and work longer may have a more adequate work process[7,12]. Carrying out joint efforts at the FHU is a strategy adopted in order to expand access and improve screening, minimizing barriers[18]. On the other hand, the absence of population screening and maintenance of control of women examined through some type of record, demonstrate to promote health inequalities, in addition to lesser effectiveness and efficiency of the system[29].

Better team organization[12] and record with constant monitoring[29] allow for the construction and maintenance of a link between the team and users, revealing the involvement of professionals with the community[18,28]. The ongoing relationship between the team and women depends on continuous monitoring strategies and tenacious structure improvement and process components of the services[13,30], especially in the care of women who are more vulnerable to CC[4,17,22].

The need for more organized, quality PHC services that are resolute is evident[27], when verifying CC and HSIL cases, which are still quite prevalent in the territories[1,2,29]. There was statistical significance between time ≥2 years and reports of HSIL and CC in the last twelve months. Such findings may be related to the higher prevalence in rural women, due to the complexity of the territories or the fact that there are over-screened women[18,22], while many get late diagnosis. It is noteworthy that professionals who remain in the same service for longer are more likely to come across a case of CC or HSIL. It is necessary to carry out more in-depth studies for a better understanding of these phenomena.

CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

The longer professional experience has higher prevalence of quality indicators of actions to control CC. The findings of this study highlight the need for a comprehensive screening program with quality, which has PHC as a gateway from the perspective of regionalization, as well as adequate funding for a universal health system. Rural and remote territories have peculiar characteristics, accumulating a large number of injuries and deaths from CC in women, and they also face a high professional turnover. Such factors impact service quality and highlight the need for policies to attract and retain effective professionals that are appropriate to the contexts of different countries.

As a limitation of this study, it should be considered that the cross-sectional design does not provide causal inference and the type of analysis proposed does not allow establishing association relationships. However, evidence suggests striking weaknesses in the quality of PHC services.

It is strongly suggested, for managers and policy makers, to adopt measures for qualifying the health workforce, structuring a professional career plan to provide more security and stability, it can impact on higher quality services and reduce preventable deaths. It is also proposed a greater appreciation of nurses' role, who have great potential to optimize the resolution and efficiency of services, especially in the context of PHC. It is recommended that further studies be carried out, to better elucidate the data indicated.

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Data collection. Eduarda Ferreira dos Anjos. Kaue Batista Andrade.

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