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## Care practices directed to people with obesity in Primary Health Care in Rio de Janeiro: an analysis of the structure and work processes

*Práticas de cuidado direcionadas às pessoas com obesidade na Atenção Primária à Saúde no Rio de Janeiro: uma análise da estrutura e processos de trabalho*

### Abstract

**Introduction:** Obesity stands out worldwide as a public health problem and the relevant role of Primary Health Care (PHC) in the care of people with obesity has been recognized. **Objective:** This article intends to analyze and compare the work processes and the availability of structure in PHC for care practices directed to people with obesity in Rio de Janeiro state and municipality. **Methods:** A descriptive, cross-sectional study with a quantitative approach was carried out, using data from the PMAQ-AB, cycles 1 and 2. **Results:** Rio de Janeiro city and state have a compatible structure for carrying out care practices directed to people with obesity; the city has approximately 100.0% availability in most variables. Regarding work processes, it was identified that in 2013, only 20.4% and 25.1% underwent nutritional assessment and scheduled agenda according to the risk classification for obesity, 34.7% and 65.4%, in the state and municipality, respectively. **Conclusions:** The structure available in Rio city and state contributes to the execution of care practices directed to people with obesity, however the work process has a more fragile aspect, and this component was better evaluated in Rio de Janeiro city.

**Keywords:** Obesity. Primary Health Care. Health Evaluation. Integrality in Health.

### Resumo

**Introdução:** A obesidade destaca-se mundialmente como problema de saúde pública, e o relevante o papel da Atenção Primária em Saúde (APS) no cuidado das pessoas com obesidade tem sido reconhecido. **Objetivo:** O presente artigo tem por objetivo analisar e comparar os processos de trabalho e a disponibilidade de estrutura na APS para as práticas de cuidado direcionadas às pessoas com obesidade no estado e município do Rio de Janeiro. **Métodos:** Realizou-se estudo descritivo, transversal, de abordagem quantitativa, a partir de dados do PMAQ-AB, ciclos 1 e 2. **Resultados:** A cidade e o estado do Rio de Janeiro apresentam estrutura compatível para a realização das práticas de cuidado direcionadas às pessoas com obesidade, tendo a cidade aproximadamente 100,0% de disponibilidade na maioria das variáveis. Com relação aos processos de trabalho, identificou-se que em 2013 realizavam avaliação nutricional apenas 20,4% e 25,1% e programavam agenda segundo classificação de risco para obesidade 34,7% e 65,4%, no estado e município, respectivamente. **Conclusões:** As estruturas disponíveis na cidade e estado do Rio contribuem para a realização das práticas de cuidado direcionadas às pessoas com obesidade, mas o

processo de trabalho tem aspecto mais frágil, componente que foi mais bem avaliado na cidade do Rio de Janeiro.

**Palavras-chave:** Obesidade. Atenção Primária à Saúde. Avaliação em Saúde. Integralidade em Saúde.

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## INTRODUCTION

Obesity has gained prominence in the international public policy agenda, due to the proportions and increasing prevalence worldwide, being currently recognized by the World Health Organization (WHO) as a global epidemic. It became a declared public health object in the early 1990s, when WHO began to reinforce the social and environmental aspects involved in the expansion of obesity and the need for healthy habits and food.<sup>1</sup>

Worldwide, it is estimated that more than two billion people are overweight.<sup>2</sup> In Brazil, obesity has been growing at a dizzying rate in both genders and in different social classes in a more expressive way in the lower income groups.<sup>3</sup>

Data from Health Ministry (HM) of 2019 show that in the group of 27 Brazilian capitals, the frequency of overweight was 55.4%, and obesity reached 20.3%. In Rio de Janeiro city, the frequency was 57.1% and 21.7%, respectively.<sup>4</sup> In addition to the impacts on health, there is the economic weight of the treatment of obesity, as well as chronic diseases related to it. According to Oliveira,<sup>5</sup> Brazilian Unified Health System (SUS) spends US\$ 269.6 million (R\$ 488 million) annually on the treatment of diseases associated with obesity and US\$ 64.2 million (R\$ 116 million) on the treatment of diseases related to severe obesity.

In the last ten years, Health Ministry has been working on facing obesity, implementing policies to combat this condition<sup>6-11</sup> and developing guidelines for the organization of obesity care around the creation of care lines.<sup>12,13</sup>

Clinical Pathways (CP) is a form of organization of care, services and health actions that intend to incorporate the best available evidences on protocols, therapeutic guidelines and multidisciplinary clinical practice<sup>14</sup> that must be developed in different points of the Health Care Network (HCN). In turn, its implementation depends on the managers and health professionals involved, especially in agreeing referral and counter-referral flows, to facilitate the access of users with overweight and obesity to SUS units and services.<sup>13</sup>

In Brazil, the official documents that guide the implementation of the CP recommend coordination by Primary Health Care (PHC), which has shown an increasing expansion in recent years, especially due to the growth of the Family Health Strategy (FHS), and reached, in October 2020, 76.19% of the population covered in Brazil, 60.21% in Rio de Janeiro state and 47.92% in Rio de Janeiro municipality.<sup>15</sup> Because of this capillarity and its centrality in the coordination of care, it represents a strategic point of HCN in the care of individuals with overweight and obesity.

Rio de Janeiro state has a peculiar history in the health area, mainly because it was the capital of the Republic, presenting many national health institutions and its political configuration generated by the merger of Guanabara state and the old state,<sup>16</sup> what conferred a singular process in the municipalization of the health services.

The analysis of the models of assistance to individuals with obesity in PHC in Rio de Janeiro state, as well as in other units of the federation, points out the limits of actions based on the biomedical model, affirming the need and urgency to organize again health services and qualify the care for these individuals.<sup>9</sup> In this way, the relevance of PHC for care actions related to obesity has been highlighted, although improvements are indispensable for its effective performance.<sup>17</sup>

Thus, in the municipality, a network is created that adds a heritage of hospitals (state and federal) and overly complex services to a set of PHC services and mixed units, created more recently to respond to the multiple and varied needs and vulnerabilities.

In Rio de Janeiro city, the history of PHC is characterized by deep changes that have occurred since 2009, with the remodeling of PHC.<sup>18</sup> Regarding the care of people with obesity, the pioneering implementation of three Obesity Reference Centers (ORC) linked to PHC even before the ordinances that establish the guidelines of the CP for Overweight and Obesity in SUS.<sup>7,8</sup> These units, which were implemented in 2011, and in 2020 had their activities

interrupted, were composed of a multiprofessional team (nutritionist, doctor, nurse, physical educator and psychologist). The implementation of ORC, while indicating an advance in the construction of CP in obesity, presented some obstacles because in practice it played the role of offering the recommended multiprofessional clinical treatment, but its effectiveness was still limited, due to the lack of network articulation with other levels of health care.<sup>19</sup>

The care related to food and nutrition, a fundamental aspect for CP in obesity,<sup>20</sup> encompasses actions in the different points of the HCN and includes: diagnosis and Food and Nutritional Surveillance (FNS); Promotion of Adequate and Food (PAHF); Food and Nutrition Education (FNE); dietary guidance and dietary prescription; in addition to providing food for special purposes, food for hospitals nutritional support.<sup>21</sup> Regarding the care of people with obesity, PHC, in addition to the mentioned actions, is responsible for supporting self-care, adequate reception and multiprofessional therapy assistance to users after surgery.<sup>12,21</sup>

In this context, this article intends to analyze and compare the work processes and the availability of structure in PHC for care practices directed to people with obesity in Rio de Janeiro state and municipality.

## METHOD

This is a descriptive, cross-sectional study with a quantitative approach, based on secondary data from the external evaluation component available from the PMAQ-AB. Information from cycles 1 and 2 of the program, carried out in the periods 2011/2012 and 2013/2014, were considered, respectively. These data are for free access and are available on the website of the Secretariat of Primary Health Care / Health Ministry.

The PMAQ-AB was created in 2011 by the HM and its main objective was to induce the expansion of access and the improvement of the quality of Primary Care through the institution of continuous and progressive processes that expand the capacity of the three spheres of government to offer services with guarantee of a nationally comparable quality standard, regionally and locally.<sup>22</sup> It included the gathering of information through a visit by the external evaluation and certification team, through the use of specific standards for evaluation.<sup>23</sup>

The instrument used to perform the external evaluation is composed of modules, and in this article, data from Module I, which evaluates the structure through observation of the Primary Health Care Unit (PHCU), and Module II, which describes the processes of work through interviews with the professionals of the PHC teams and verification of documents at the PHCU, were analyzed.

This article is organized under the perspective of Donabedian,<sup>24</sup> who proposed a systemic analysis scheme that considers the triad: structure, process and result. The structure refers to the relatively stable conditions of health services, including instruments, material and human resources and the physical and organizational context in which health actions are carried out. Thus, the characteristics of the structure contribute to the development of care processes and influence their consequent results.

Based on what the legislation advocates,<sup>7,8</sup> there were selected from the variables available in the PMAQ-AB, those related to care practices directed to people with obesity. Regarding the structure, the variables related to the presence of the nutritionist, equipment and available inputs for carrying out the care practices that may be involved in actions directed to people with obesity were analyzed: number of nutritionists in the unit that compose the expanded team; number of adult pressure devices under using conditions, 150.0 kg anthropometric scale; 200.0 kg anthropometric scale; infant scale; anthropometric ruler; glucometer; measuring tape and availability of reagent strips to measure capillary blood glucose. The choice to assess the presence of the nutritionist happened because, traditionally, it is the professional who is responsible for acting with these subjects.

Regarding the work processes, the variables that describe the activities related to care practices or that favor their performance, with the potential to improve the health of people with obesity, were examined, such as: offering actions for people with obesity; offering educational and health promotion actions to support self-care for chronic diseases; encouragement and development of body practices and physical activities; conducting anthropometric assessment, nutritional assessment; carrying out - in the context of the Health in School Program (HSP) - food security actions and promoting healthy eating.

The variables on specific care of people with obesity were also analyzed, available only in cycle 2, namely: organization of the agenda to offer actions directed to people with obesity; registration of people with obesity in the territory; scheduling and offering consultations for people with obesity; programming the team's agenda according to the classified risk for people with obesity; registration of users with higher risk of obesity referred to other points of care; recording of the measurement of weight and height of users at different stages of life: recording weight and height data measured in medical records, booklets, information systems or others; organization of follow-up consultations for users with a BMI greater than 30 Kg/m<sup>2</sup>, invitation to take part in group activities focused on healthy eating and physical activity, and articulation with the matrix support team (Extended Family Health Center and others) to support the monitoring of this user in the PHCU.

The steps of this study consisted of an initial search of the PMAQ-AB instruments for the selection of variables in cycles 1 and 2 related to the care practices directed to people with obesity; then, a descriptive analysis was performed, using simple frequency, identifying the availability and quality of the data. Thus, the first tabulation was prepared, with the application of exclusion criteria: (1) variables with errors in the bank and (2) variables with responses of 30% or more of "Don't know / did not answer", considering that the latter comes from inadequate wording or understanding of the question.

Data analysis was performed using Microsoft Excel® 2016 version and SPSS 22.0 software and allowed to make the comparison between both cycles (2011/2012 and 2013/2014), identifying advances and setbacks in the analyzed period in relation to the structure and work processes focusing on PHC practices.

## RESULTS

In the 1st cycle of the PMAQ-AB, in Rio de Janeiro city, 179 health teams were evaluated in module I and 324 teams in module II; and in the state, 1,830 and 1,047, respectively. In the 2nd cycle, there was an increase in the number of teams and 613 were evaluated in Rio city and 1,881 in the state (table 1).

In cycle 1, there was limited adherence to the PMAQ-AB by the municipalities, up to 50.0% of family health teams could participate. In cycle 2, there was no limit to the number of teams; therefore, it was possible to hire again all the teams in cycle 1 and include new teams, with the voluntary adhesion of the municipal management, and this justifies the increase of the adhesion from one cycle to the other.

**Table 1.** Team participation in PMAQ-AB cycles 1 and 2 in Rio de Janeiro state and municipality, 2011 and 2013.

Place	Cycle 1 (2011)		Cycle 2 (2013)	
	Module I (n)	Module II (n)	Module I (n)	Module II (n)
Rio de Janeiro State	1830	1047	1189	1881
Rio de Janeiro	179	324	172	613

The evaluation of the available structure in PHCU that can contribute to the care practices directed to people with obesity is shown in table 2, which gathers information about equipment and supplies related to the daily management of obesity and the comorbidities most commonly associated with it, as well as the presence of a nutritionist.

The presence of a nutritionist in the expanded team in Rio de Janeiro state and capital, respectively, was 15.2% and 35.8% of the teams in 2011, and in 2013 2.7% and 44.8% of the teams, which demonstrates an important growth in the city and in the state.

In general, all equipment and supplies were available in larger quantities in 2013. The pressure device was the most available instrument, when compared to the others analyzed in this study.

The anthropometric scale, the equipment most used to monitor the nutritional status of the population, was more present in the version that limits the measurement of weight to 150.0 Kg in 2011, both in the state and in the municipality; and in 2013, the 200.0 kg scale was in greater proportions, an important element for the care of users with obesity.

The glucometer, measuring tape and reagent strips for measuring capillary blood glucose have a greater number in Rio de Janeiro city when compared to the state, both in 2011 and in 2013.

**Table 2.** Presence of nutritionist, equipment and supplies related to care practices directed to people with obesity in Rio de Janeiro state and municipality, according to selected variables from cycles 1 and 2 of PMAQ-AB 2011 and 2013.

Variables	Cycle 1 (2011)		Cycle 2 (2013)	
	Rio de Janeiro State	Rio de Janeiro	Rio de Janeiro State	Rio de Janeiro
	n (%)	n (%)	n (%)	n (%)
<i>Number of nutritionists in the unit that take part in the expanded team</i>	<b>n:1,793</b>	<b>n: 148</b>	<b>n: 1,189</b>	<b>n: 116</b>
None	1520 (84.8)	95 (64.2)	324 (27.2)	64 (55.2)
1 professional	237 (13.2)	35 (23.6)	264 (22.2)	48 (41.4)
2 or more	36 (2.0)	18 (12.2)	601 (50.5)	4 (3.4)
<i>Adult pressure device (number in using conditions)</i>	<b>n:1,830</b>	<b>n: 179</b>	<b>n: 1,189</b>	<b>n: 172</b>
None	64 (3.5)	2 (1.1)	0 (0.0)	0 (0.0)
1	502 (27.4)	1 (0.6)	230 (19.3)	0 (0.0)
2 or more	1264 (69.1)	176 (98.3)	959 (80.7)	172 (100.0)
<i>150 kg anthropometric scale (number in using conditions)</i>	<b>n: 1,827</b>	<b>n: 177</b>	<b>n: 1,189</b>	<b>n: 122</b>
None	295 (16.1)	49 (27.7)	14 (1.2)	3 (2.5)
1	1123 (61.5)	11 (6.2)	640 (53.8)	15 (12.3)
2 or more	409 (22.4)	117 (66.1)	535 (45.0)	104 (85.2)

**Table 2.** Presence of nutritionist, equipment and supplies related to care practices directed to people with obesity in Rio de Janeiro state and municipality, according to selected variables from cycles 1 and 2 of PMAQ-AB 2011 and 2013. (Continues)

Variables	Cycle 1 (2011)		Cycle 2 (2013)	
	Rio de Janeiro State	Rio de Janeiro	Rio de Janeiro State	Rio de Janeiro
	n (%)	n (%)	n (%)	n (%)
<i>200 kg anthropometric scale (number in using conditions)</i>	<b>n: 1,828</b>	<b>n: 178</b>	<b>n: 346</b>	<b>n: 122</b>
None	1520 (83.1)	102 (57.3)	2 (0.6)	2 (1.7)
1	210 (11.5)	15 (8.4)	200 (57.8)	15 (12.7)
2 or more	98 (5.4)	61 (34.3)	144 (41.6)	101 (85.6)
<i>Infant scale (number in using conditions)</i>	<b>n: 1,828</b>	<b>n: 177</b>	<b>n: 1,125</b>	<b>n: 172</b>
None	202 (11.0)	4 (2.3)	11 (1.0)	0 (0.0)
1	1286 (70.4)	23 (13.0)	808 (71.8)	11 (6.4)
2 or more	340 (18.6)	150 (84.7)	306 (27.2)	161 (93.6)
<i>Anthropometric ruler (number in using conditions)</i>	<b>n: 1,825</b>	<b>n: 175</b>	<b>n: 1,097</b>	<b>n: 172</b>
None	293 (16.1)	19 (10.9)	9 (0.8)	0 (0.0)
1	1084 (59.4)	22 (12.5)	674 (61.5)	9 (5.2)
2 or more	448 (24.5)	134 (76.6)	414 (37.7)	163 (94.8)
<i>Glucometer (number in using conditions)</i>	<b>n: 1,822</b>	<b>n: 171</b>	<b>n: 1,051</b>	<b>n: 171</b>
None	296 (16.2)	4 (2.4)	1 (0.1)	0 (0.0)
1	1063 (58.3)	32 (18.7)	529 (50.3)	11 (6.4)
2 or more	463 (25.4)	135 (78.9)	521 (49.6)	160 (93.6)
<i>Measuring tape (number in using conditions)</i>	<b>n: 1,829</b>	<b>n: 178</b>	<b>n: 1,189</b>	<b>n: 172</b>
Always available	1651 (90.3)	155 (87.1)	1119 (94.1)	167 (97.1)
Sometimes available	41 (2.2)	12 (6.7)	22 (1.9)	5 (2.9)
Never available	137 (7.5)	11 (6.2)	48 (4.0)	0 (0.0)
<i>Capillary blood glucose measuring reagent strips</i>	<b>n: 1,829</b>	<b>n: 178</b>	<b>n: 1,189</b>	<b>n: 172</b>
Always available	1289 (70.4)	168 (94.4)	908 (76.3)	167 (97.1)
Sometimes available	292 (16.0)	7 (3.9)	127 (10.7)	5 (2.9)
Never available	248 (13.6)	3 (1.7)	154 (13.0)	0 (0.0)

\*n = health care units

Table 3, below, describes the work processes performed by PHC professionals. As it can be noted, 2011 data show that approximately 50.0% of the teams in Rio de Janeiro city and state did not offer actions for people with obesity, and although this proportion was reduced in 2013, it still remained high (42, 3% in the state and 32.0% in the municipality).

The proportion of educational actions and health promotion for healthy eating was higher in Rio de Janeiro city than in the state in both years analyzed, but this showed a reduction in the 2nd cycle, when compared to the 1st. The offer of this same type of action for chronic diseases in general (with no specific focus on obesity) showed a positive increase from one year to the next.

Physical activity was more encouraged and developed at PHCU and / or in the territory by the teams, when compared to other body practices, both in Rio de Janeiro city and state.

The anthropometric assessment increased in the state but decreased among teams in Rio de Janeiro city. The nutritional assessment showed an even worse result, with a reduction in the two periods analyzed and more than 70.0% of the teams in 2013 (in Rio de Janeiro state and city) reporting that they did not carry out this type of assessment.

Regarding the articulation among sectors and actions in schools, a high proportion of teams stated that they carry out food security actions and promote healthy eating, increasing in 2013. Body practices and physical activity in the context of Health in School Program (HSP) were very present, with improvement in the periods analyzed and with more than 64.0% of the teams offering these activities in 2013 in Rio de Janeiro city.

**Table 3.** Frequency of teams that developed care practices directed to people with obesity in Rio de Janeiro state and municipality, according to selected variables from cycles 1 and 2 of PMAQ-AB, 2011 and 2013.

Variables	Cycle 1 (2011)		Cycle 2 (2013)	
	Rio de Janeiro State n (%)	Rio de Janeiro n (%)	Rio de Janeiro State n (%)	Rio de Janeiro n (%)
<b>Offer of actions for specific groups:</b>				
<i>People with obesity</i>	<b>n: 989</b>	<b>n: 318</b>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	484 (48.9)	165 (51.9)	1085 (57.7)	417 (68.0)
No	505 (51.1)	153 (48.1)	796 (42.3)	196 (32.0)
<b>Offer of educational and health promotion directed actions:</b>				
<i>For healthy eating</i>	<b>n: 1,047</b>	<b>n: 324</b>	<b>n: 1,783</b>	<b>n: 605</b>
Yes	786 (75.1)	281 (86.7)	1173 (65.8)	460 (76.0)
No	261 (24.9)	43 (13.3)	610 (34.2)	145 (24.0)
<i>For groups to support self-care for chronic diseases</i>	<b>n: 1,047</b>	<b>n: 324</b>	<b>n: 1,783</b>	<b>n: 605</b>
Yes	627 (59.9)	244 (75.3)	1285 (72.1)	501 (82.8)
No	420 (40.1)	80 (24.7)	498 (27.9)	104 (17.2)
<b>Encouragement and development in the Basic Health Unit and / or in the territory:</b>				
<i>Body practices</i>	<b>n: 1,018</b>	<b>n: 322</b>	<b>n: 1,783</b>	<b>n: 605</b>
Yes	424 (41.7)	165 (51.2)	761 (42.7)	334 (55.2)
No	594 (58.3)	157 (48.5)	1022 (57.3)	271 (44.8)
<i>Physical activities</i>	<b>n: 1,018</b>	<b>n: 322</b>	<b>n: 1,783</b>	<b>n: 605</b>
Yes	703 (69.1)	283 (87.9)	1176 (66.0)	545 (90.1)
No	315 (30.9)	39 (12.1)	607 (34.0)	60 (9.9)
<b>Clinical assessment activities carried out by the team:</b>				
<i>Anthropometric assessment</i>	<b>n: 822</b>	<b>n: 269</b>	<b>n: 1,411</b>	<b>n: 502</b>
Yes	328 (39.9)	151 (56.1)	748 (53.0)	266 (53.0)
No	494 (60.1)	118 (43.9)	663 (47.0)	236 (47.0)
<i>Nutritional assessment</i>	<b>n: 822</b>	<b>n: 269</b>	<b>n: 1,411</b>	<b>n: 502</b>
Yes	259 (31.5)	103 (38.3)	288 (20.4)	126 (25.1)
No	563 (68.5)	166 (51.2)	1123 (79.6)	376 (74.9)
<b>Health in School Program</b>				
<i>Food security actions and promotion of healthy food (educational activities about the promotion of healthy food and lifestyles)</i>	<b>n: 822</b>	<b>n: 269</b>	<b>n: 1,411</b>	<b>n: 502</b>
Yes	599 (72.2)	215 (79.9)	1080 (76.5)	442 (88.0)
No	223 (27.1)	54 (20.1)	331 (23.5)	60 (12.0)
<i>Promotion of body practices and physical activities at schools</i>	<b>n: 822</b>	<b>n: 269</b>	<b>n: 1,411</b>	<b>n: 502</b>
Yes	368 (44.8)	144 (53.5)	668 (47.3)	323 (64.3)
No	454 (55.2)	125 (46.5)	743 (52.7)	179 (35.7)

\*n = family health teams



Data from the 2nd cycle of the PMAQ-AB in 2013 allowed us to analyze the performance of specific activities directed to obesity (table 4). In all the issues analyzed, Rio de Janeiro city showed better proportions than Rio de Janeiro state, but it was still possible to notice a large number of teams that do not carry out actions directed to these users, who have specific questions to be dealt with and should be looked at more carefully by the teams.

In Rio de Janeiro city, 63.1% of the teams keep records of people with obesity in their territory, and in the state, 37.3% do it. The offer of consultations for this public and the scheduling of the arrangements for users with obesity apart from other groups were carried out by 68.0% and 65.4%, respectively, representing greater proportions in the capital.

Regarding the behavior adopted with users identified with obesity, in Rio de Janeiro city, the largest proportion of the teams invites the user to take part in group activities directed to healthy eating and physical activity (83.8%) and drives them to a specialized service. (82.1%). In Rio de Janeiro state, referral to a specialized service was the most reported among all the actions carried out, as well as the scheduling of follow-up consultations for these users in the PHCU itself (62.3%).

**Table 4.** Frequency of teams that developed care practices directed to people with obesity in Rio de Janeiro state and municipality. according to selected variables from cycle 2 of the PMAQ-AB. 2013.

Variables	Cycle 2 (2013)	
	Rio de Janeiro State n (%)	Rio de Janeiro n (%)
<i>Agenda organization: For which groups does the team offer actions? People with obesity</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.085 (57.7)	443 (72.3)
No	796 (42.3)	170 (27.7)
<i>The team has a record of people with obesity in its territory</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	701 (37.3)	387 (63.1)
No	1.180 (62.7)	226 (36.9)
<i>The team programs to offer consultations for which specific situations: Obesity</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	838 (44.6)	417 (68.0)
No	1.043 (55.4)	196 (32.0)
<i>The schedule of the team's agenda is in accordance with the classified risk. for which situations: Obesity</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	653 (34.7)	401 (65.4)
No	1.228 (65.3)	212 (34.6)
<i>The team keeps a record of the highest risk users referred to other points of attention: Obesity</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	755 (40.1)	389 (63.5)
No	1.126 (59.9)	224 (36.5)
<b>The team systematically measures the weight and height of the following users:</b>		
<i>Children under 2 years old</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.826 (97.1)	612 (99.8)
No	55 (2.9)	1 (0.2)
<i>Children under 10 years old</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.596 (84.8)	527 (86.0)
No	285 (15.2)	86 (14.0)
<i>Pregnant</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.792 (95.3)	610 (99.5)
No	89 (4.7)	3 (0.5)
<i>Adults with high blood pressure and diabetes</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.718 (91.3)	597 (97.4)
No	163 (8.7)	16 (2.6)

**Table 4.** Frequency of teams that developed care practices directed to people with obesity in Rio de Janeiro state and municipality. according to selected variables from cycle 2 of the PMAQ-AB, 2013. (Continues)

Variables	Cycle 2 (2013)	
	Rio de Janeiro State n (%)	Rio de Janeiro n (%)
<b>The team systematically measures the weight and height of the following users:</b>		
<i>Users attended at Basic Health Unit</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.281 (68.1)	438 (71.5)
No	600 (31.9)	175 (28.5)
<i>Does the team record weight and height data measured in medical records, booklets, information systems or others?</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.842 (97.9)	611 (99.7)
No	39 (2.1)	2 (0.3)
<b>After identifying an adult with obesity (BMI greater than 30 kg / m<sup>2</sup>), what does the team do?</b>		
<i>Arrange follow-up consultations at PHCU</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.171 (62.3)	494 (80.6)
No	710 (37.7)	119 (19.4)
<i>Invite to take part in group activities directed to healthy eating and physical activity</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	112 (59.1)	514 (83.8)
No	769 (40.9)	99 (16.2)
<i>Activates Matrix Support team (NASF and others) to support the monitoring of this user at PHCU</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.063 (56.5)	418 (68.2)
No	818 (43.5)	195 (31.8)
<i>Refers to specialized service</i>	<b>n: 1,881</b>	<b>n: 613</b>
Yes	1.555 (82.7)	503 (82.1)
No	326 (17.3)	110 (17.9)

\*n = family health teams

## DISCUSSION

Increasing the availability of structure and adapting work processes in PHC have an influence on the care offered to users with obesity in SUS. Regarding Rio de Janeiro state and capital, data from the PMAQ-AB point out that inputs and equipment related to daily management of obesity had their availability increased when cycles 1 and 2 were compared. It is noteworthy that, in the capital, availability reached 100.0% in almost all items in cycle 2. Regarding the structure, there was an increase in the number of nutritionists in the period, both in the state and in the capital, however, far from reaching 100.0%. Regarding the work processes, there is a challenging picture for the performance of CP in obesity and the guarantee of comprehensive care, although in the comparison between the two cycles there has been an improvement in some components.

Investments in the consolidation and expansion of PHC in Brazil until 2015 had a positive impact on the structuring<sup>25,26</sup> of care practices. The HM, in the last 15 years, has been dedicated to standardizing the issue of physical structure, equipment and necessary inputs for the development of actions within the scope of PHC in the national territory, with the publication of several documents, such as the Physical Structure Manual of PHCU in 2008;<sup>27</sup> the National PHCU Implementation Plan for FHS in 2009;<sup>28</sup> and the PHCU Requalification Program in 2011.<sup>29</sup>

It is also noteworthy that national programs may have contributed to guarantee the structure of the BHU, such as: Bolsa Família Program, due to the monitoring of their conditionalities;<sup>30</sup> and Hiperdia, intended to the registration and monitoring of patients with high blood pressure and / or diabetes mellitus treated.<sup>31,32</sup>

In relation to Rio de Janeiro municipality, in 2009 the so-called PHC reform began, which not only presented a large expansion of the assisted population, but also increased its resolution, through the implementation of a series of tools, which contributed to a better organization and management of work processes within the PHC, namely: basic portfolio of services; user portfolio; construction of the Information and Communication Technology Observatories in Health Systems and Services (OTICS-RIO); institution of a local regulation commission; incorporation of the evaluative culture and planning within the PHC scope; improvements in information management.<sup>33</sup>

Although the supply of structure is high for both the state and the municipality, the 200.0 kg scale, which is an important instrument for nutritional assessment, including people with super obesity, is the least available item in the PHCU. This picture harms the implementation of an effective and comprehensive CP for obesity, since adequate furniture and equipment are provided in official documents that discuss the care of people with obesity.<sup>7,8,12,13</sup> The use of scales that do not support the weight of people with obesity can impact the reception and generate embarrassment for these users, bringing difficulties beyond those already daily experienced,<sup>34</sup> in addition to make the proper nutritional diagnosis difficult.

The variable that showed the lowest availability was the presence of the nutritionist and considering that this professional is important in actions to promote adequate and healthy food and nutritional assistance,<sup>35-37</sup> these actions may be affected in Rio de Janeiro city. However, it is noteworthy that the complexity required by the care of people with obesity requires multidisciplinary and interdisciplinary action able to create substantial changes in work processes.

The fragility regarding the work processes related to care directed to people with obesity is noticed in Food and Nutritional Surveillance (FNS) results and in the execution and register of specific interventions for people with obesity. FNS includes the register of anthropometric data, as well as the carrying out of the nutritional diagnosis, the register process of the information and referrals.<sup>38</sup> However, in practice, comparing the cycles, there is a reduction in the anthropometric and nutritional assessments by the teams, as well as in the study by Nascimento et al.,<sup>39</sup> which found that FNS data have been restricted to those produced by the monitoring the Bolsa Família Program conditionalities. Other studies confirm that the measurement of weight and height has been greater in children, pregnant women and users with high blood pressure and diabetes, a group that is related to other important HM programs, which may indicate that users who are not in these mentioned groups have less access to monitoring nutritional status.<sup>39,40</sup>

In order to be effective, FNS needs to become an integral part of the teams' work process,<sup>38</sup> because its weakness or inconsistency can affect the longitudinality and coordination of care for people with obesity. Research carried out by Medrado et al.<sup>41</sup> using data from the PMAQ-AB, in Rio de Janeiro state, highlighted the need to reinforce the role of health surveillance as a qualifying element in the management and organization of work processes.

In addition, the record of information on activities directed to the care of people with obesity was low, that is, considering the interventions and referrals generated from the identification and diagnosis of obesity. Both the consultation scheduling and the activation of the matrix team were greater in the municipality than in the state, limiting different capacity regarding the routine of care and agenda elaboration for people with obesity.

Regarding the recording of information, it should be noted that in Rio de Janeiro city the use of electronic medical records by PHC units has increased a lot in recent years,<sup>18</sup> and perhaps it might be responsible for the highest result in the city, when compared to the state.

The offer of actions directed to people with obesity also presented some weaknesses, mainly related to the low number of teams that reported the execution. This fragility may be related to the forms of organizing the agenda and risk stratification of users.<sup>42,43</sup>

It was identified that 40% and 60% of the teams in the city and state, respectively, do not register the referral of these users to other levels of health care, although such action is recommended by the instructional manual of the HM for the "Regional organization of CP of overweight and obesity in the HCN of people with chronic diseases",<sup>13</sup> thus affecting coordination and ensuring comprehensive care.

The performance of nutritional care practices in conjunction with the matrix support team for monitoring the users with obesity at the PHCU was the least performed action by the teams, in opposition to what is recommended by the instructional manual, which describes that the management and treatment of users who present obesity in grades I and II ( $BMI \geq 30.0 \text{ kg / m}^2$  and  $\leq 40.0 \text{ kg / m}^2$ ) involve the actions described for the overweight group by PHC, including dietary prescription; behavioral therapy - when necessary, after evaluation with the matrix support team and pharmacotherapy.<sup>12,13</sup>

In Rio de Janeiro municipality, the low follow-up of the user with obesity in PHC may have been affected by the misunderstanding of the role of a service such as the ORC, which has often been characterized as responsible for the care of people with obesity, preventing the PHC recognized its role and responsibilities in the care of obesity.<sup>19</sup>

The offer of educational and health promotion actions directed to chronic non-communicable diseases (CNCD) was carried out by most teams and confirms the results found in the study by Medina et al.,<sup>44</sup> which analyzed PMAQ-AB variables in Brazil and in the Southeast Region, where more than 71.7% and 65.1%, respectively, of the teams reported carrying out such actions, and also in the study by Medrado et al.,<sup>41</sup> according to which 82.5% said they performed community or group activity. The importance of these actions is emphasized since they contribute to the comprehensive care of people with obesity.

As for the performance of body practices and physical activities, the results may be related to the implementation of the Health Academy Program, which is a strategy for health promotion and production of care for Brazilian municipalities implemented by the Health Ministry in 2011.<sup>45,46</sup> Once again, data from Rio de Janeiro city are higher than those of the state, which can be associated with the Carioca Academy Program, which since 2009 has been an opportunity for health promotion, through community and multisectoral action centered on the insertion of the practice of regular physical activity at PHCU.<sup>47</sup>

The activities related to the HSP obtained high percentages of execution. However, it should be noted that the data contained in the PMAQ-AB do not allow the analysis of the strategies used in the planning and execution of actions, which would allow a more adequate assessment. Several studies show that these actions do not denote intersectoral work, but comprise the performance of specific activities by the health team in the school environment, where there is no sharing of decisions and integrated actions.<sup>48,49</sup>

This study has some limitations. In addition to those already known, with the use of secondary data, we highlight the non-availability, in the database, of the same variables for the two cycles analyzed and the selection bias related to the voluntary adherence of the teams to the PMAQ-AB. It is also noteworthy, as a limitation, the fact that the data only address FNS with respect to work processes related to nutritional status, with no possibility to conclude about the dimension of dietary practices.

In relation to group activities on education and health promotion, they only incorporate the aspects of carrying out the activities, not allowing to understand relevant aspects to their evaluation, such as themes, strategies, places of action and types of community and / or intersectoral established partnerships.

In general, the analysis of work processes demonstrates the importance of continuing education actions for professionals within the scope of PHC,<sup>20,50</sup> in addition to discussing the training of future professionals as an important strategy to be promoted and strengthened to improve processes of work related to the care of the person with obesity.

## CONCLUSION

The results demonstrate that Rio de Janeiro city presents better results in relation to the set of municipalities in the state in comparison between cycles 1 and 2, regarding the structure and the work process. It is noteworthy that, as a metropolis, Rio de Janeiro has limitations related to both the complexity of the health care network and the social vulnerabilities of the territories, although there is the advantage of having gone through period of expansion of PHC investments from 2009 to 2016.

It is supposed that the discussion about the structure and work processes related to the care practices directed to people with obesity developed in PHC can contribute to its strengthening, as well as to consider again the organization of the health care network, proposing improvements and advances, especially regarding the organization of the clinical pathways.

It is necessary to organize again the work processes related to PHC, moving the axis which considers the health professional to another one that values teamwork and further qualifies the relationship between worker and user. In this sense, embracement is a possibility of change in the production of care, also starting from the premise that it is necessary to attend all people who look for health services, guaranteeing access to PHC and other levels of care, focusing on integrality.

The results of this study can guide and support new researches and evaluative studies, to direct the planning of managers to the organization of services and actions of food and nutrition, especially the care of people with obesity.

Finally, it is necessary to reinforce the main role that the evaluation processes - with special emphasis on the contributions of the PMAQ-AB - can play with the PHC teams, once their formative, reflective and qualifying potential of the decision-making process is reinforced, promoting effective planning possibilities.

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