Erratum

Regarding the article "Right to health: (in) congruence between the legal framework and the health system", with DOI number: 10.1590/1518-8345.0995.2679, published in the Rev. Latino-Am. Enfermagem. 2016;24:e2679, page 7:

Where was written:
“Filipa Alexandra Veludo Fernandes
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1649-023, Lisboa, Portugal
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Now Read:
“Fernando Mitano
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Bairro de Marrere
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Regarding the article "Analgesic efficacy of lidocaine and multimodal analgesia for chest tube removal: A randomized trial study", with DOI number: 10.1590/0104-1169.0498.2642, published in the Rev. Latino-Am. Enfermagem. 2015 Nov.-Dec.;23(6), page 1000:

Where was written:
“Conclusion: the present study suggests that the analgesic effect of the subcutaneous administration of 1% lidocaine combined with multimodal analgesia is most efficacious.”

Now Read:
“Conclusion: the present study suggests that the analgesic effect of the subcutaneous administration of 1% lidocaine combined with multimodal analgesia is less effective.”

Regarding the article "Drug use, mental health and problems related to crime and violence: cross-sectional study", with DOI number: 10.1590/0104-1169.0478.2663, published in the Rev. Latino-Am. Enfermagem. 2015;23(6):1173-80, page 1173:

Where was written:
“Janet Titus Bourdreaux”

Now Read:
“Janet C. Titus”
Regarding the article "Potential access to primary health care: what do the data from the National Program for Access and Quality Improvement show?", with DOI number: 10.1590/0104-1169.1069.2672, published in the Rev. Latino-Am. Enfermagem. 2016;24:e2672, page 1:

Where was written:
"Severina Alice da Costa Uchôa¹
Ricardo Alexandre Arcêncio²
Inês Santos Estevinho Fronteira³
Ardigleusa Alves Coêlho⁴
Claudia Santos Martiniano⁴
Isabel Cristina Araújo Brandão⁵
Mellina Yamamura⁶
Renata Melo Maroto⁷"

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Ricardo Alexandre Arcêncio²
Inês Fronteira³
Ardigleusa Alves Coêlho⁴
Claudia Santos Martiniano⁴
Isabel Cristina Araújo Brandão⁵
Mellina Yamamura⁶
Renata Melo Maroto⁷
Anny Karine Freire da Silva⁸"

Where was written:
"Objective: to analyze the influence of contextual indicators on the performance of municipalities regarding potential access to primary health care in Brazil and to discuss the contribution from nurses working on this access. Method: a multicenter descriptive study based on secondary data from External Evaluation of the National Program for Access and Quality Improvement in Primary Care, with the participation of 17,202 primary care teams. The chi-square test of proportions was used to verify differences between the municipalities stratified based on size of the coverage area, supply, coordination, and integration; when necessary, the chi-square test with Yates correction or Fisher’s exact test were employed. For the population variable, the Kruskal-Wallis test was used. Results: the majority of participants were nurses (n=15,876; 92.3%). Statistically significant differences were observed between the municipalities in terms of territory (p=0.0000), availability (p=0.0000), coordination of care (p=0.0000), integration (p=0.0000) and supply (p=0.0000), verifying that the municipalities that make up area 6 tend to have better performance in these dimensions. Conclusion: areas 4, 5 and 6 performed better in every analyzed dimension, and the nurse had a leading role in the potential to access primary health care in Brazil."

Now Read:
"Objective: to analyze the influence of contextual indicators on the performance of cities regarding potential access to primary health care in Brazil and to discuss the contribution from nurses working on this access. Method: a multicenter descriptive study using secondary data from External Evaluation of the National Program for Access and Quality Improvement in Primary Care, with the participation of 17,202 primary care teams. The chi-square test of proportions was used to verify differences between the cities stratified in the dimensions on size of the coverage group, supply, coordination and integration. When necessary, the chi-square test with Yates correction or Fisher’s exact test were employed. For the population variable, the Kruskal-Wallis test was used. Results: the majority of participants were nurses (n = 15,876; 92.3%). Statistically significant differences were observed between the cities in terms of territory (p=0.0000), availability (p=0.0000), coordination of care (p=0.0000), integration (p=0.0000) and supply (p=0.0000), verifying that the municipalities that make up area 6 tend to have better performance in these dimensions. Conclusion: weakness in smaller cities, confirming inequities in the potential access to Primary Health Care in Brazil as challenges for universal coverage. The preponderant role of nurses for its achievement is highlighted."
Where was written:

"1 Post-doctoral fellow, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisboa, Portugal. Associate Professor, Departamento de Saúde Coletiva, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil. Scholarship holder from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brazil.

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7 Doctoral student, Departamento de Odontologia, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil.”

Now Read:

"1 Post-doctoral fellow, Instituto de Higiene e Medicina Tropical, Universidade Nova de Lisboa, Lisboa, Portugal. Associate Professor, Departamento de Saúde Coletiva, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil. Scholarship holder from Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq), Brazil.

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7 Doctoral student, Departamento de Odontologia, Universidade Federal do Rio Grande do Norte, Natal, RN, Brazil.

8 Specialist in Reading and Text Production.”

Page 2

Where was written:

"In Brazil, the issue of universal and equitable access has been a concern since the creation of the Unified Health System UHS (SUS) in 1988. This idea is reinforced by the National Policy of Primary Care - BANP (PNAB), in which the potential for access to comprehensive care management through multidisciplinary, interdisciplinary team work is emphasized(3).”

Now Read:

"Since the 1988 constitution, Brazil has made efforts towards universal coverage as a right through the Unified Health System (SUS). In 1994, the Family Health Strategy was implemented, based on comprehensive care and multidisciplinary teamwork. Through this strategy, the coverage rate was expanded, reaching 57% of the population (108 million people) in 2013(3).”

Where was written:

“Research scenario

In 2012, SUS had 36,361 Basic Health Units (BHU) and 33,404 Family Health Teams (FHT) with coverage in 5,297 municipalities. The adherence to PMAQ occurred with 17,202 Primary Care Teams (PCT). Among these, 16,566 FHT and 636 non- FHT were distributed in 3,944 (70.8%) of the total municipalities, in 14,111 Basic Health Units (BHUs)(3). “
Research scenario

Adherence to cycle I of the PMAQ amounted to 17,482 Primary Care Teams (PCT), distributed across 3,944 (70.8%) of all cities and 14,111 Basic Health Units (BHUs). In this group, 17,202 were recruited for the study, as their questionnaires were validated in the database of the Ministry of Health.

Classification of municipalities according to the context variables

The municipalities listed in the study are classified into six strata, considering the per capita Gross Domestic Product (GDP), the percentage of the population with health insurance, the percentage of the population on the Bolsa Família (Family Grant) program, the percentage of the population in extreme poverty, and the population density.

The composition of the extracts considered for each municipality were: the lowest score among the percentage of the population with Bolsa Família, and the percentage of the population in extreme poverty: area 1 - Municipalities with scores lower than 4.82 and a population of up to 10,000 inhabitants; area 2 - Municipalities with scores lower than 4.82 and a population of up to 20 thousand inhabitants; area 3 - Municipalities with scores lower than 4.82 and a population of up to 50 thousand inhabitants; area 4 - Municipalities with scores between 4.82 and 5.4, and population of up to 100 thousand inhabitants; area 5 - Municipalities with scores between 5.4 and 5.85, and population of up to 500 thousand inhabitants; and municipalities with a score lower than 5.4, and population between 100 and 500 thousand inhabitants; and area 6 - Municipalities with population over 500,000 inhabitants, or a score less than 5.85.

Variables under consideration to evaluate potential access:
The variables considered for evaluating potential access are described in Table 2. The table shows the dimension, characteristic and nature of the variables that are included.

Plan of analysis

Initially, the descriptive analysis of the characteristics area of the municipalities', professional category, and median number of professionals per team was calculated.

Regarding the performance of municipalities in terms of access, four dimensions of the PMAQ instrument were measured: coverage area, supplies, customer coordination, and integration.

The variables were dichotomized into yes and no. Thereafter, the sum of the responses for each item was calculated, dividing this number by the total sample. To verify differences between the municipalities in relation to the size of potential access, the chi-square test of proportions was used. The chi-square test with Yates or Fisher's exact test correction was applied when necessary. For the population variable, the Kruskal-Wallis test was used to verify differences in relation to the median inhabitants monitored by areas.

After the analysis of the performance of the municipalities within the areas, in relation to access, multivariate statistics by multiple correspondence analyses (MCA) was used, given that the instrument variables were categorical.

The MCA implementation was based on the steps of Spencer and Mingoti, in which the tabulation of responses generated a matrix, with rows corresponding to the participating health professionals, and the columns corresponding to the variables. Subsequently, the matrix turned into a complete disjunctive table (CDT). In the table, the columns represent characteristics of the variables, in which the intersection of Row I with Column J is the \( x_{ij} \), which is 0 or 1, indicating that the area either has or does not have the characteristic.

The perceptual map was formed by this technique, which is a visual representation of the variables in two or more dimensions. Each variable has a spatial position in the perceptual map, variables perceived as similar or associated are allocated to proximal points on the map, while those not perceived as similar are represented as distal points. The proximity indicates the correspondence between the categories represented in rows and columns of the table.

The component row or column influences the construction of the axes through its inertia, in relation to the
center of gravity. The inertia means the variance of the data set \[^{13}\]. From the MCA it was possible to extract the most representative dimensions in terms of inertia, which in the study corresponded to the first two. Its contribution to inertia was considered a criterion for selection of the variables.

**Results**

Table 1 shows characteristics of the sample of 17,202 teams recruited for the study, according to the PMAQ area. The majority of participants were nurses \(n = \)\%, and many of them had less than three years of experience after completing their education.

Among the models of care, in all areas, there was a predominance of the Family Health Strategy (FHS) without oral health. In general, there is a median of one (1) physician, nurse, nursing technicians, and dentist per team. All modalities of care investigated showed that most of the teams did not provide the patient with the opportunity to choose a desired unit for treatment and follow up.

In Table 2, the performance of municipalities in terms of patient access is verified, considering the area established in PMAQ.

Statistically significant differences were identified between the municipalities of area 1, 2 and 3 with area 4, 5 and 6, and the professionals of the last areas had more qualifications \((p=0.0000)\).

Regarding the career plan, no statistically significant difference \((p = 0.0000)\) was observed, and the municipalities of area 4, 5 and 6 had better indicators; lowest values were found in areas 1, 2 and 3. Also, these areas showed statistically significant differences associated with their training policy and continuing education \((p=0.0000)\).

According to Table 2, statistically significant differences in terms of population coverage were observed, in which area 5 and 6 monitored a median number of people with access well above that of areas 1, 2 and 3. Also, statistically significant differences were present between the municipalities in terms of coverage area \((p=0.0000)\), availability \((p=0.0000)\), coordination of care \((p=0.0000)\), integration \((p=0.0000)\) and supply \((p=0.0000)\), verifying that the municipalities that form area 6 tend to have better performance in these dimensions.

**Table 1 - Characteristics of study sample, PMAQ Project, Brazil (2012)**

| Variables                          | PMAQ Areas |
|-----------------------------------|------------|
|                                   | 1          | 2          | 3          | 4          | 5          | 6          |
| Professional category \(n (\%)\)  |            |            |            |            |            |            |
| Physician                         | 72 (0.42)  | 59 (0.34)  | 52 (0.30)  | 91 (0.53)  | 143 (0.83) | 576 (3.35) |
| Nurse                             | 2.068      | 2.179      | 2.425 (14.10) | 3.119 (18.13) | 2.615 (15.20) | 3.480 (20.23) |
| Dentist                           | 35 (0.20)  | 35 (0.20)  | 50 (0.29)  | 56 (0.33)  | 56 (0.33)  | 101 (0.59) |
| Years of work/experience \(n (\%)\) |            |            |            |            |            |            |
| Less than 1 year                  | 546 (3.17) | 693 (4.03) | 801 (4.66) | 995 (5.78) | 830 (4.83) | 875 (5.09) |
| Between 1-3 years                 | 867 (5.04) | 966 (5.62) | 1.068 (6.21) | 1.384 (8.05) | 1.133 (6.59) | 1.598 (9.29) |
| Greater than three years          | 743 (4.32) | 608 (3.53) | 652 (3.79) | 881 (5.12) | 843 (4.90) | 1.673 (9.73) |
| Don’t know/ No response           | 9 (0.05)   | 6 (0.03)   | 6 (0.03)   | 6 (0.03)   | 8 (0.05)   | 11 (0.06)  |
| Type of team \(n (\%)\)           |            |            |            |            |            |            |
| Family Health Teams with oral health | 1.832 (10.66) | 1.798 (10.45) | 2.041 (11.86) | 2.464 (14.32) | 1.767 (10.27) | 2.173 (12.63) |
| Family Health Teams without oral health | 261 (1.52) | 398 (2.31) | 423 (2.46) | 720 (4.19) | 942 (5.48) | 1.824 (10.60) |
| Primary care team with oral health | 59 (0.34)  | 57 (0.33)  | 45 (0.28)  | 59 (0.34)  | 57 (0.33)  | 51 (0.30)  |
| Primary care teams without oral health | 7 (0.04)  | 9 (0.05)   | 11 (0.06)  | 15 (0.09)  | 43 (0.25)  | 39 (0.23)  |
| Others                            | 4 (0.02)   | 6 (0.03)   | 4 (0.02)   | 7 (0.04)   | 3 (0.02)   | 66 (0.38)  |
| Do not Know/No response           | 2 (0.01)   | 5 (0.03)   | 3 (0.02)   | 1 (0.01)   | 2 (0.01)   | 4 (0.02)   |
| Minimum number of physicians in the primary care staff of BHU \(n= 16643\) | 1 | 1 | 1 | 1 | 1 | 1 |
| Minimum number of nurses in the primary care staff \(n=16643\) | 1 | 1 | 1 | 1 | 1 | 1 |
| Minimum number of dentists in the primary care staff \(n=16643\) | 1 | 1 | 1 | 1 | 1 | 1 |
| Minimum number of nursing technicians in the primary care staff \(n=16643\) | 1 | 1 | 1 | 1 | 1 | 1 |
Table 2 - Performance of municipalities on patient access according to the areas, Brazil, 2012

| Dimension               | Variables                                                                 | PMAQ areas                                                                 | 1       | 2       | 3       | 4       | 5       | 6       | p value  |
|-------------------------|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------|---------|---------|---------|---------|---------|----------|
| Personal qualification  | Complementary education (n=17,202)                                        |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 1,708 (9.93) | 1,795 (10.43) | 2,050 (11.92) | 2,694 (15.66) | 2,460 (14.30) | 3,642 (21.17) |         |
|                         | No                                                                        |                                                                             | 457 (2.66) | 478 (2.78) | 477 (2.77) | 572 (3.33) | 354 (2.06) | 515 (2.99) |         |
|                         | Career development programs (n=16,936)                                     |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 253 (1.49) | 159 (0.94) | 246 (1.46) | 574 (3.39) | 581 (3.43) | 1,810 (10.69) |         |
|                         | No                                                                        |                                                                             | 1,877 (11.08) | 2,069 (12.22) | 2,245 (13.26) | 2,647 (15.63) | 2,194 (12.95) | 2,279 (13.46) |         |
|                         | There are continuing education activities involving primary care professionals (n=17,113) |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 1,432 (8.37) | 1,596 (9.33) | 1,878 (10.97) | 2,601 (15.20) | 2,481 (14.50) | 3,969 (23.19) |         |
|                         | No                                                                        |                                                                             | 720 (4.21) | 658 (3.85) | 630 (3.68) | 650 (3.80) | 325 (1.90) | 173 (1.01) |         |
|                         | How many people for whom the team is responsible                           |                                                                             |         |         |         |         |         |         | 0.0001†  |
|                         | Mean                                                                      |                                                                             | 2165 (12.16) | 2273 (13.21) | 2527 (14.83) | 3266 (19.83) | 2814 (16.88) | 4157 (23.98) |         |
|                         | Risk and vulnerability criteria were considered for defining people for whom the team is responsible (n=15,691) |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 1,024 (6.53) | 1,141 (7.27) | 1,323 (8.43) | 1,705 (10.87) | 1,423 (9.07) | 2,648 (16.88) |         |
|                         | No                                                                        |                                                                             | 951 (5.60) | 877 (5.59) | 937 (5.97) | 1,265 (8.06) | 1,115 (7.11) | 1,282 (8.17) |         |
|                         | There is definition of team coverage area (n=17,150)                       |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 2,086 (12.16) | 2,197 (12.81) | 2,456 (14.32) | 3,190 (18.60) | 2,763 (16.11) | 4,113 (23.98) |         |
|                         | No                                                                        |                                                                             | 68 (0.40) | 60 (0.35) | 63 (0.37) | 71 (0.41) | 43 (0.25) | 40 (0.23) |         |
|                         | There is a population uncovered by primary care surrounding the team's coverage area (n=17,092) |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Yes                                                                       |                                                                             | 369 (2.16) | 534 (3.12) | 888 (5.20) | 1,083 (6.34) | 1,391 (8.14) | 1,513 (8.85) |         |
|                         | No                                                                        |                                                                             | 1,783 (10.43) | 1,724 (10.09) | 1,618 (9.47) | 2,170 (12.70) | 1,406 (8.23) | 2,613 (15.29) |         |
|                         | How often people from outside the team's coverage area are served by this team (n=16,855) |                                                                             |         |         |         |         |         |         | 0.000*   |
|                         | Every day of the week                                                     |                                                                             | 900 (5.34) | 828 (4.91) | 1,001 (5.94) | 1,247 (7.40) | 1,255 (7.45) | 2,152 (12.77) |         |
|                         | Some days of the week                                                     |                                                                             | 966 (5.73) | 1,135 (6.73) | 1,201 (7.13) | 1,502 (8.91) | 1,222 (7.25) | 1,673 (9.93) |         |
|                         | Any day of the week                                                       |                                                                             | 248 (1.47) | 243 (1.44) | 266 (1.58) | 451 (2.68) | 287 (1.70) | 178 (1.65) |         |
| Dimension          | Variables                                                                 | PMAQ areas                   | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | n (%) | p value |
|--------------------|---------------------------------------------------------------------------|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| Availability       | Patients who spontaneously arrive and have their needs heard and assessed (n=17,140) | Yes                          | 2.121 (12.37)           | 2.202 (12.85)  | 2.442 (14.25) | 3.180 (18.55) | 2.689 (15.69) | 4.078 (23.79) | 0.000* |
|                    |                                                                           | No                           | 38 (0.22)                | 59 (0.34)      | 80 (0.47)     | 83 (0.48)     | 108 (0.63)    | 60 (0.35) |
|                    | The team performs risk and vulnerability assessment in the intake of patients (n=13,739) | Yes                          | 1.265 (9.21)            | 1.385 (10.08)  | 1.645 (11.97) | 2.286 (16.64) | 2.050 (14.92) | 3.442 (25.05) | 0.0066* |
|                    |                                                                           | No                           | 192 (1.40)               | 221 (1.61)     | 248 (1.81)    | 324 (2.36)    | 236 (1.72)    | 445 (3.24) |
|                    | The schedule is organized to conduct home visitation (n=13,739)           | Yes                          | 1.418 (10.16)           | 1.628 (11.67)  | 1.865 (13.37) | 2.391 (17.14) | 2.253 (16.15) | 3.697 (26.50) | 0.000* |
|                    |                                                                           | No                           | 134 (0.96)               | 115 (0.82)     | 114 (0.82)    | 149 (1.07)    | 104 (0.75)    | 60 (0.35)  |
|                    | Keep a record of high risk patients referred to other points of care (n=17,104) | Yes                          | 826 b(4.83)             | 818 (4.78)     | 1.104 (6.45)  | 1.474 (8.62)  | 1.353 (7.91)  | 2.385 (13.94) | 0.000* |
|                    |                                                                           | No                           | 1.310 (7.66)            | 1.439 (8.41)   | 1.405 (8.21)  | 1.785 (10.44) | 1.449 (8.47)  | 1.756 (10.27) |        |
|                    | There is a document proving (n=17,104)                                    | Yes                          | 605 (7.60)              | 638 (8.02)     | 913 (11.47)   | 1.206 (15.15) | 1.132 (14.22) | 1.978 (24.85) | 0.000* |
|                    |                                                                           | No                           | 221 (2.78)              | 180 (2.26)     | 191 (2.40)    | 268 (3.37)    | 221 (2.78)    | 407 (5.11)  |
|                    | There are protocols that guide the prioritization of cases needing referral (n=17,037) | Yes                          | 581 (3.41)              | 613 (3.60)     | 807 (4.74)    | 1.213 (7.12)  | 1.228 (7.21)  | 2.907 (17.06) | 0.000†  |
|                    |                                                                           | No                           | 1.558 (9.14)            | 1.636 (9.60)   | 1.685 (8.89)  | 2.036 (11.95) | 1.567 (9.20)  | 1.206 (7.08) |
|                    | There is a regulation center (n=17,201)                                   | Yes                          | 1.880 (10.93)           | 2.066 (11.86)  | 2.239 (13.02) | 2.907 (16.90) | 2.540 (14.77) | 4.027 (23.41) | 0.000* |
|                    |                                                                           | No                           | 284 (1.65)              | 267 (1.55)     | 288 (1.67)    | 359 (2.09)    | 274 (1.59)    | 130 (0.76)  |
|                    | There is a referral form for patients moving to other points of care (n=17,201) | Yes                          | 1.752 (10.19)           | 1.828 (10.63)  | 2.138 (12.43) | 2.970 (17.27) | 2.615 (15.20) | 4.055 (23.57) | 0.000* |
|                    |                                                                           | No                           | 412 (2.40)              | 445 (2.59)     | 389 (2.26)    | 296 (1.72)    | 199 (1.16)    | 102 (0.59)  |
|                    | Receive enough basic medicines from pharmacy to serve its population (n=17,161) | Yes                          | 1.459 (8.50)            | 1.490 (8.68)   | 1.722 (10.03) | 2.210 (12.88) | 1.830 (10.66) | 2.898 (16.89) | 0.000* |
|                    |                                                                           | No                           | 378 (2.20)              | 457 (2.66)     | 614 (3.58)    | 644 (3.75)    | 718 (4.18)    | 2.077 (6.28) |
|                    | Do not receive                                                            | No                           | 318 (1.84)              | 320 (1.86)     | 187 (1.09)    | 406 (2.37)    | 263 (1.53)    | 172 (1.00)  |
| Integration        | Offers service of complementary and integrative practices for patients of the area (n=17,199) | Yes                          | 235 (1.37)             | 230 (1.34)     | 305 (1.77)    | 381 (2.22)    | 512 (2.98)    | 1.546 (8.99) | 0.000* |
|                    |                                                                           | No                           | 1.929 (11.22)           | 2.042 (11.87)  | 2.222 (12.92) | 2.885 (16.77) | 2.301 (13.38) | 2.611 (15.18) |        |
|                    | Conducts home visits (n=17,199)                                           | Yes                          | 2.146 (12.48)           | 2.262 (13.15)  | 2.521 (14.66) | 3.253 (18.91) | 2.802 (16.29) | 4.148 (24.12) | 0.0075* |
|                    |                                                                           | No                           | 18 (0.10)               | 10 (0.06)      | 6 (0.03)      | 13 (0.08)     | 11 (0.06)     | 9 (0.05)   |
|                    | The families in the coverage area are visited at intervals according to risk and vulnerability assessment? (n=17,132) | Yes                          | 1.963 (11.48)           | 2.069 (12.08)  | 2.345 (13.69) | 2.997 (15.30) | 2.621 (15.30) | 3.986 (23.27) | 0.000* |
|                    |                                                                           | No                           | 183 (1.07)              | 193 (1.13)     | 176 (1.03)    | 256 (1.49)    | 181 (1.06)    | 162 (0.95)  |

* p value statistically significant (p<0.05)
† Kruskal-Wallis test

When compared by professional category (Table 3), a statistically significant difference is again identified, in which a higher proportion of both physicians as well as dentists tend to refer to more positive aspects of their units than nurses.

The proportion of nurses who tends to identify weaknesses in relation to the organization of services is much greater than other professionals.

In complementary education, for example, whereas there is one "No" for each 4 "Yes" assigned by physicians in this item, and almost one "No" for each three "Yes" assigned by dentists, among nurses this proportion was almost five, which was statistically significant (p = 0.0046). Career development programs was also another point on which this difference was very significant (p = 0.0046), where again, the proportion of nurses who reported the absence of or lack of participation in was much higher than other categories.
When a comparative analysis of the APS related to the models of care was conducted, the FHT with or without oral health predominated. Statistically significant differences were identified in career development program variables, where the proportion of professionals linked to the FHT, which has career development programs, was much smaller than the professionals integrated in other models of care (p=0.0000). Similarly, a statistically significant association regarding continuing education activities (p=0.0000) was observed, records of the documentation of cases referred for other services (p=0.0462), protocols to guide professionals for referrals to other services (p=0.0000) and use of complementary practices (p=0.0000). A significant difference was observed in the home visits, where the FHT presented a higher proportion of visits compared to the other two forms of attention (p=0.0000).

Table 3 - Performance of primary care for patient access to the health system according professional category, Brazil, 2012

| Variables                                      | Professional Category | Physician | Nurse | Dentist | P value |
|-----------------------------------------------|-----------------------|-----------|-------|---------|---------|
|                                               |                       | Yes %     | No %  | Yes %   | No %   | Yes %   | No %  |         |         |
| Complementary education n=17202               |                       | 800 4.6   | 193 1.1 | 13285 77.2 | 2591 15.1 | 264 1.5 | 69 0.4 | 0.0000* |         |
| Career development programs n=17113           |                       | 303 1.8   | 670 4.0 | 3224 19.0 | 12412 73.3 | 98 0.6 | 229 1.4 | 0.0000* |         |
| Continuing education activities n=17113        |                       | 853 5.0   | 132 0.8 | 12850 75.1 | 2951 17.2 | 254 1.5 | 73 0.4 | 0.0000* |         |
| All patients have their needs heard and assessed n=17047 |   | 966 5.6   | 25 0.15 | 15362 90.1 | 380 2.2 | 309 1.8 | 15 0.1 | 0.3984* |         |
| The team performs risk assessment during the intake n=13730 |   | 777 5.6   | 95 0.7  | 11066 80.6 | 1538 11.2 | 223 1.6 | 31 0.2 | 0.5189 |         |
| Schedule is organized for home visitation n=11473 |   | 743 6.5   | 27 0.2  | 10013 87.3 | 480 4.2 | 201 1.8 | 9 0.1 | 0.3815 |         |
| High risk patients are registered when referred n=13658 |   | 488 3.6   | 378 2.8  | 6261 45.9 | 6284 46.0 | 136 1.0 | 111 0.8 | 0.0004* |         |
| Form to register the patient referral n= 6885 |                       | 377 5.5   | 111 1.6 | 5159 75.0 | 1102 16.0 | 107 1.6 | 29 0.4 | 0.0105* |         |
| Protocols that guide the prioritization of cases for referral n=13606 |   | 533 3.9   | 329 2.4  | 5797 42.6 | 6704 49.3 | 129 1.0 | 114 0.8 | 0.0000* |         |
| Regulation center for referral n=17047         |                       | 905 5.3   | 76 0.4  | 14274 83.7 | 1468 8.6 | 292 1.7 | 32 0.2 | 0.2347 |         |
| Forms for referral of patients n=17047         |                       | 915 5.4   | 66 0.4  | 14029 82.3 | 1713 10.1 | 294 1.7 | 30 0.2 | 0.0001* |         |
| Sufficient medicines in primary care to meet population needs n=17015 |   | 606 3.6   | 373 2.1  | 10721 63.0 | 4992 30 205 1.2 | 118 0.7 | 0.0000* |         |
| Offering integrative and complementary practices n=17045 |   | 273 1.6   | 707 4.2  | 2865 16.8 | 12877 75.6 | 46 0.3 | 277 1.6 | 0.0000* |         |
| The team performs home visitation n=17045      |                       | 977 5.7   | 4 0.02 | 15690 92.1 | 52 0.31 | 320 1.9 | 3 0.02 | 0.1846 |         |
| The families of coverage area are frequently visited |   | 927 5.5   | 50 0.3  | 14636 86.2 | 1054 6.2 | 289 1.7 | 31 0.2 | 0.0142* |         |

*p <0.05

Table 4 - Performance of primary care for access to the patient according to the model of care, Brazil, 2012

| Activities                                      | Model of care | FHT (with or without oral health) | Team AB | Other model | P value |
|------------------------------------------------|---------------|----------------------------------|---------|-------------|---------|
|                                               |               | Yes % | No % | Yes % | No % | Yes % | No % |         |         |
| Complementary education - V23 n=17185          |               | 13883 | 80.8 | 2760 | 16.1 | 383 | 2.2 | 69 | 0.4 | 75 | 0.4 | 15 | 0.1 | 0.3059 |
| Career development programs n=16923 v24       |               | 3516 | 21.0 | 12876 | 76.1 | 99 | 0.6 | 344 | 2.0 | 7 | 0.1 | 81 | 0.5 | 0.0000* |
| Continuing education activities n=17100 v25    |               | 13487 | 78.9 | 3074 | 18.0 | 283 | 2.2 | 66 | 0.4 | 80 | 0.5 | 10 | 0.1 | 0.0000* |
| All patients have their needs heard and assessed n=16987 v31 | | 16055 | 94.6 | 397 | 2.3 | 422 | 2.5 | 15 | 0.1 | 85 | 0.5 | 3 | 0.0 | 0.1754 |
| The team performs risk assessment during the intake n=13723 v32 | | 11710 | 85.3 | 1626 | 11.8 | 283 | 2.1 | 33 | 0.2 | 66 | 0.5 | 5 | 0.1 | 0.3987 |
| Schedule is organized for home visitation n=11473 v33 | | 10678 | 93.1 | 486 | 4.2 | 236 | 2.1 | 22 | 1.32 | 43 | 0.4 | 8 | 0.1 | 0.3815 |
| High risk patients are registered when referred n=13658 v34 | | 6685 | 50.0 | 6588 | 48.2 | 167 | 1.2 | 147 | 1.1 | 33 | 0.2 | 38 | 0.3 | 0.1323 |
| Form to register the patient referral n=6885 v35 | | 5483 | 79.6 | 1202 | 17.5 | 136 | 2.0 | 31 | 0.5 | 24 | 0.4 | 9 | 0.1 | 0.0462* |
The Multiple Correspondence Analysis enabled the creation of the perceptual map shown in Figure 1, which demonstrates that the map can be divided into quadrants; on the right side, quadrants are plotted municipalities that showed better indicators in terms of qualification than those on the left.

This figure demonstrate that the municipalities that comprise areas 5 and 6 present better indicators with regard to the training of their health professionals; the municipalities that are concentrated closer to the center have regular values. Thus they had some satisfactory indicators and others that were unsatisfactory, and municipalities of areas 1 and 2 had less satisfactory indicators for this item.

![Perceptual Map](image)

Note: V23 Do you have or are you taking complementary education?; V24 Do you have career development programs?; V25 Are there continuing education activities in the municipality involving primary care professionals? Answers 1(Yes); 0 (No)

Figure 1 - Qualification for professionals working in the context of primary health care, according to the area of PMAQ, Brazil (2012)

Figure 2 expresses the performance of municipalities in terms of availability, coordination of care, integration and supply using a perceptual map. On the right side of the map, the municipalities that showed better indicators are represented, and on the left side are those with poorer indicators.

Considering this evaluation with all of these attributes, the single area with satisfactory indicators across all of these dimensions was area 6; the municipalities of area 4 and 5 showed median values, with satisfactory indicators in some of those and unsatisfactory in others; however, the municipalities of area 5 were better than area 4; the municipalities of area 1, 2 and 3 did not achieve satisfactory results in these dimensions.
Discussion

The prevailing participation of nurses as respondent in all area reveals their involvement with this level of assistance. In this sense, they are potentially able to cooperate with the UHC coverage by their role in all health care levels, and their particular desire to contribute to the achievement of the goal. The organization of nurses in international networks has been recognized by the PAHO/WHO, with an emphasis on achieving UHC and access to health care for the entire population\(^5\).

In the assessment of the contextual or socioeconomic indicators and health, and the influence of professional qualification and territorial process in APS, areas 4, 5 and 6 showed better performance in all analyzed dimensions. The best performance of the professional qualification in the present study, in areas 4, 5 and 6, was also observed in a study conducted in large cities, where more than half of physicians and nurses had participated in some training process in the prior 30 days\(^15\).

Although a statistically significant difference was found between the areas with respect to career plan, all areas showed a weak performance in this item, which can be explained by the way in which professionals are recruited. A study, conducted in Minas Gerais, showed that 75% of municipal health secretaries use temporary contracts for provision of services by professionals with higher education\(^16\).

This study highlights significant findings on the existence of continuing education actions. Continuing professional development is important, using information and communication technologies that facilitate the qualification of these professionals for the job. Such strategies also contribute to improving the problem solving within the FHU, and
promote communication between specialists and generalists\(^{(17)}\).

With regard to coverage areas in Brazil, currently, the population coverage estimated by the APS teams becomes important as an universal indicator of success with the guidelines and goals of SUS\(^{(10)}\). It is necessary to note that, although the average number of persons under the responsibility of the team is within the recommendation of the Ministry of Health\(^{(17)}\), this number is considered high, if we consider that, in Brazil, the teams are responsible for a large number of activities\(^{(19)}\).

To enable access to the population that is not covered by primary care, teams comply with the principle of universality, but also tend to undergo activity overloads, considering that more and more frequently the APS/FHT have new responsibilities delegated to them, and face responsibilities for diseases, priority groups, problems or specific situations\(^{(20)}\). A similar situation is seen in the UK and Europe, where professionals also develop a wide range of tasks, which include, among others: prevention activities, acute care/curative activities, treatment for patients with chronic conditions, and emergency treatment. These professionals are responsible for a roster of almost 2,250 people\(^{(21)}\).

Regarding availability, the unscheduled demand by patients to have their needs met and evaluated occurred in all areas, with better performance in areas 4, 5 and 6. These findings differ from those found by Giovanella, Fausto and Fidelis, which showed barriers to spontaneous demand and non-priority groups. Home visits are on the professional schedules in all areas of the municipalities. Similarly, this activity was observed as a routine of physicians and nurses in four large cities\(^{(17)}\). When comparing the models of care, there was a predominance of home visits being conducted by the FHT, a similar result to that found in a study with southern and northeastern cities\(^{(10)}\).

In the coordination of care, despite the significant differences between the areas, all areas presented unsatisfactory performance regarding the registration of referrals to other points of care, featuring a referral process without accountability and relationship with the patient.

In the integration of care, the existence of a central registration is present in the municipalities of the area analyzed, predominantly in 4, 5 and 6. Similar results were noted by physicians and nurses of the FHT that recognized the existence of a central registration for appointments and exams\(^{(23)}\).

With regard to the provision of health actions and services, there was a statistical significance in all aspects evaluated. The availability of medicines in the basic pharmacy to meet the population was observed in municipalities of all areas. In some cities of the country, this distribution is more related to priority groups\(^{(19)}\). It is remarkable to note the low supply of complementary and integrative practices for patients of the area, which may be linked to the fact that this type of care integrates a specialized service network, such as acupuncture offered in Porto Alegre\(^{(24)}\).

In the work process of the APS teams, the nurse takes on several assignments, among them: planning, individual and collective care, management, and systematic assessment of developed actions (PNAB. 20123), which may justify the tendency of nurses to negatively evaluate the actions of the organization. In the daily nursing work of the FHT units, difficulties occur, mainly related to lack of training for implementation of actions\(^{(23)}\).

Regarding the contribution of nurses to universal access, the study showed that the majority were nurses, which shows in a way the involvement of this category of professional with the APS. The nurse has a more focused training for this area, with well-aligned curricula to the SUS social policy, with content in anthropology and sociology, health management, leadership and community sanitation practices, making her more sensitive to innovations in the context of the APS, and more motivated to promote change.

One important issue is that most nurses eventually assume leadership in the teams, strategically, and taking the forefront of primary care as a new mode of social production in health. The low pay of these professionals in the private sector makes many find the SUS to provide a chance for stability, which is very positive in terms of securing professionals in that category. One challenge is the establishment of a new model that values their core competence and recognizes their autonomy in prescribing and care. The hegemonic model with centrality in medical practice tends to push them out of this process.

**Limitations**

The study was not conducted in all the Brazilian municipalities, and only in those in which the teams voluntarily qualified for the PMAQ; thus, the results should be interpreted with caution because they do not retain the ability to be generalized. There is the possibility of selection bias, as not all staff members were included; only one staff member was chosen, and this was voluntary. Additionally, the study has design limitations, as it is a cross-sectional design, and is guided by interviews of professional. There was no monitoring of the teams for a period of
time, or triangulation of data obtained from interviews with others, such as observation, records or statements of patients, which would increase the accuracy of the findings. However, it is important to note that the PMAQ is the first evaluation of this scope and methodological homogeneity and, despite the limitations, the findings contribute in the advancement of knowledge regarding APS-enhanced access, its critic nodes and also a situational diagnosis of which municipalities have advanced more in terms of universal coverage systems and those which have not.

Conclusion

The study showed that there is a relationship between access and socioeconomic conditions: as the area of the municipalities increases, the access to services tends to be better. However, within a context of social inequalities and iniquities, weaknesses are perceived that jeopardize the organization of health activities in the municipalities regarding the availability, care coordination, integration, and supply, particularly in the municipalities grouped in areas 1 to 3. Given the involvement of the nurse with the organization of health care, this professional has contributed to the potential access of APS in Brazil.

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Research scenario

Adherence to cycle I of the PMAQ amounted to 17,482 Primary Care Teams (PCT), distributed across 3,944 (70.8%) of all cities and 14,111 Basic Health Units (BHUs)

Population and sample

The study population included professionals linked to the primary care team and qualified in PMAQ, namely physicians, nurses, and dentists. In each team, only one sampling unit was selected for the study.

Measures and data sources

The questionnaires with closed-ended questions were provided on tablets, administered by interviewers who had the same training, under supervision. Next, they were sent online to the Ministry of Health system, accessed and validated by the higher education institution, based on a consistency analysis protocol and validation of the data collected through Validator’s online, PMAQ-AB. The characteristics of the respondents and four (4) dimensions of the
Module II questionnaire - Interview with professional of Primary Care Team and Document Checking of the Health Unit External Evaluation of the first cycle of the PMAQ-AB, were included here for data analysis\(^7\). The dimensions that were representative of the potential levels of access according to the authors’ judgment were chosen and are described in the analysis plan.

**Classification of cities according to the context variables**

The cities listed in the study are classified into six groups, considering the per capita Gross Domestic Product (GDP), the percentage of the population with health insurance, the percentage of the population on the Bolsa Família (Family Grant) program, the percentage of the population in extreme poverty, and the population density.

The composition of the extracts considered for each municipality were: the lowest score among the percentage of the population with Bolsa Família program, and the percentage of the population in extreme poverty: group 1 - Cities with scores lower than 4.82 and a population of up to 10,000 inhabitants; group 2 - Cities with scores lower than 4.82 and a population of up to 20 thousand inhabitants; group 3 - cities with scores lower than 4.82 and a population of up to 50 thousand inhabitants; group 4 - Cities with scores between 4.82 and 5.40, and population of up to 100 thousand inhabitants; group 5 - Cities with scores between 5.4 and 5.85, and population of up to 500 thousand inhabitants; and cities with a score lower than 5.4, and population between 100.1 and 500 thousand inhabitants; and group 6 - Cities with population over 500,000 inhabitants, or a score equal or higher than 5.85\(^7\).

The variables under consideration to evaluate the potential access are described in Tables 1, 2 and 3 with dimensions, variables, their characteristic and nature:

**Analysis plan**

Initially, the descriptive analysis of the characteristics of the cities’ groups was undertaken in terms of resources offered. Regarding the performance of the cities in terms of access, this was measured using four dimensions of the PMAQ tool: coverage group, supplies, customer coordination and integration. Therefore, the variables were dichotomized into yes and no, using the chi-square test of proportions to verify differences between the cities in relation to the size of potential access was used. The chi-square test with Yates’ correction or Fisher’s exact test was applied when necessary. For the population variable, the Kruskal-Wallis test was used to verify differences in relation to the median inhabitants monitored by group. In all tests applied, alpha was set at 5% (\(\alpha = 0.05\)).

**Ethical aspects**

The multicenter project that led to the database was approved by the Research Ethics Committee at Universidade Federal do Rio Grande do Sul, under number 21904, on March 13\(\text{th}\) 2012, and complied with the recommendations of National Health Council Resolution 196/1996 of the Ministry of Health.

**Results**

In total, 17,202 teams were recruited for the study, the majority being nurses (\(n = 15,876; 92.3\%\)), with between one and three years of experience. In addition, 963 physicians participated in the study (5.6%) and 363 (2.1%) dentists with an equivalent length of experience.

Among the subjects enrolled, most professionals are affiliated with the Family Health Strategy (FHS) with oral health (\(n = 12,075; 70.2\%\)). There was a median of one (1) physician, nurse, nursing technicians, and dentist per team. The data also reveal that 5991 (49.6%) participants could not answer whether the users covered by their unit could choose what health service to be followed at.

In Table 1, the performance of cities in terms of patient access is verified, considering the group established in PMAQ. Statistically significant differences were identified between the cities of groups 1, 2 and 3 with groups 4, 5 and 6, and the professionals of the last groups had more qualifications (\(p = 0.0000\)). Regarding the career plan, statistically significant difference (\(p = 0.0000\)) were also observed, and the cities of group 4, 5 and 6 had better indicators; lowest values were found in groups 1, 2 and 3. Also, these groups showed statistically significant differences associated with their training and continuing education policy (\(p = 0.0000\)).
According to Table 2, the performance indicators related to resource availability, coordination and integration capacity are highlighted. As observed, again, groups 4, 5 and 6 present better scores, with statistical significance, such as having the users’ needs listened to (p=0.0000), welcoming with risk classification (p=0.0000) and organized agenda for home visits (p=0.0000). Records of complaints and team conducts for care coordination, as well as the existence of a registry system (p=0.0000) and the presence of an established regulation system (p=0.0000) were other aspects on which cities 4, 5 and 6 performed better.

Table 3 presents the cities’ performance concerning the supply or list of services. Cities classified in groups 4, 5 and 6 presented better indicators in terms of sufficient drugs to attend to their population (p=0.0000). Nevertheless, a larger proportion of professionals in group 6 reported on the use of alternative or complementary health practices (p=0.0000).

Table 1 – Performance of cities concerning professional qualification and territorialization for users’ access to the universal coverage systems by groups. Program for Better Access and Quality of Basic Care, Brazil, 2012.

| Dimension | Variables | Groups | 1 n (%) | 2 n (%) | 3 n (%) | 4 n (%) | 5 n (%) | 6 n (%) | p value* |
|-----------|-----------|--------|---------|---------|---------|---------|---------|---------|----------|
| Professional Qualification | Do you have or are you taking a complementary degree (n=17,202) | | | | | | | | 0.000 |
| | Yes | 1,708 (9.93) | 1,795 (10.43) | 2,050 (11.92) | 2,694 (15.66) | 2,460 (14.30) | 3,642 (21.17) | | |
| | No | 457 (2.66) | 478 (2.78) | 477 (2.77) | 572 (3.33) | 354 (2.06) | 515 (2.99) | | |
| | Is there a career plan (n=16,936) | | | | | | | | 0.000 |
| | Yes | 253 (1.49) | 159 (0.94) | 246 (1.46) | 574 (3.39) | 581 (3.43) | 1,810 (10.69) | | |
| | No | 1,877 (11.08) | 2,069 (12.22) | 2,245 (13.26) | 2,647 (15.63) | 2,194 (12.95) | 2,279 (13.46) | | |
| | Are there continuing education actions involving basic care professionals (n=17,113) | | | | | | | | 0.000 |
| | Yes | 1,432 (8.37) | 1,596 (9.33) | 1,878 (10.97) | 2,601 (15.20) | 2,481 (14.50) | 3,969 (23.19) | | |
| | No | 720 (4.21) | 658 (3.85) | 630 (3.68) | 650 (3.80) | 325 (1.90) | 173 (1.01) | | |
| Territorialization | How many people are under the team’s responsibility (n=15,691) | | | | | | | | 0.0001† |
| | Average | 2165 | 2273 | 2527 | 3266 | 2814 | 4157 | | |
| | Were risk and vulnerability criteria considered to define the people under the team’s responsibility | | | | | | | | 0.000 |
| | Yes | 1,024 (6.53) | 1,141 (7.27) | 1,323 (8.43) | 1,705 (10.87) | 1,423 (9.07) | 2,648 (16.88) | | |
| | No | 951 (5.66) | 877 (5.59) | 937 (5.57) | 1,265 (7.86) | 1,115 (7.11) | 1,282 (8.17) | | |
| | Is the team’s coverage group defined (n=17,150) | | | | | | | | 0.0000 |
| | Yes | 2,086 (12.16) | 2,197 (12.81) | 2,456 (14.32) | 3,190 (18.60) | 2,763 (16.11) | 4,113 (23.98) | | |
| | No | 68 (0.40) | 60 (0.35) | 63 (0.37) | 71 (0.41) | 43 (0.25) | 40 (0.23) | | |
| | Is there population uncovered by basic care within the coverage group of the team (n=17,092) | | | | | | | | 0.0000 |
| | Yes | 369 (2.16) | 534 (3.12) | 888 (5.20) | 1,083 (6.34) | 1,391 (8.14) | 1,513 (8.85) | | |
| | No | 1,783 (10.43) | 1,724 (10.09) | 1,618 (9.47) | 2,170 (12.70) | 1,406 (8.23) | 2,613 (15.29) | | |
| How frequently does this team attend to people from outside the coverage group (n=16,855) | | | | | | | | | 0.0000 |
| | All weekdays | 900 (5.34) | 828 (4.91) | 1,001 (5.94) | 1,247 (7.40) | 1,255 (7.45) | 2,152 (12.77) | | |
| | Some weekdays | 966 (5.73) | 1,135 (6.73) | 1,201 (7.13) | 1,502 (8.91) | 1,222 (7.25) | 1,673 (9.93) | | |
| | No weekdays | 248 (1.47) | 243 (1.44) | 266 (1.58) | 451 (2.68) | 287 (1.70) | 178 (1.65) | | |

* statistically significant p value (p<0.05).
† Application of Kruskal-Wallis test.
Source: Database of Program for Better Access and Quality of Basic Care – 1st cycle, Ministry of Health, Brazil, 2012.
Table 3 – Performance of cities concerning the supply and list of services for user access to universal coverage systems by groups, Program for Better Access and Quality of Basic Care, Brazil, 2012.

| Dimension    | Variables                                                                 | Groups                     | p value* |
|--------------|---------------------------------------------------------------------------|----------------------------|----------|
| Supply       | Receives sufficient drugs from basic pharmacy to attend to its population (n=17,161) | 1 (12.37) 2 (12.85) 3 (14.25) 4 (15.65) 5 (16.99) 6 (23.79) | 0.0000   |
|              | Yes 1,211 2,202 2,442 3,160 2,689 4,078 | No 38 59 80 83 108 60 |          |
|              | Does not receive drugs 316 320 187 406 263 172 | |          |
|              | Offers integrative and complementary practices to users within the territory (n=17,199) | 1 (12.37) 2 (13.14) 3 (15.77) 4 (22.22) 5 (22.98) 6 (8.99) | 0.0000   |
|              | Yes 235 230 305 381 512 1,546 | No 1,299 2,042 2,222 2,885 2,301 2,611 |          |
|              | Performs home visits (n=17,199) | 1 (12.48) 2 (13.15) 3 (14.66) 4 (18.91) 5 (16.29) 6 (24.12) | 0.0075   |
|              | Yes 2,146 2,262 2,521 3,253 2,802 4,148 | No 18 10 6 13 11 9 |          |
|              | The families within the coverage group are visited periodically according to risk and vulnerability assessments (n=17,132) | 1 (11.46) 2 (12.08) 3 (13.69) 4 (15.30) 5 (15.30) 6 (23.27) | 0.0000   |
|              | Yes 1,963 2,069 2,345 2,997 2,621 3,986 | No 183 193 176 256 181 162 |          |

*Statistically significant p value (p<0.05).

Source: Database of Program for Better Access and Quality of Basic Care – 1st cycle, Ministry of Health, Brazil, 2012.

Discussion

The prevailing participation of nurses as respondents in all groups reveals their involvement with PHC. The organization of nurses in international networks, recognized by the Pan American Health Organization, highlights
this role for universal health coverage\(^{(15)}\). In the assessment of the influence of contextual indicators and health on professional qualification and territorialization, groups 4, 5 and 6 showed better performance with a larger population size and socioeconomic development. This reflects the unequal distribution of physicians and qualified nurses, a limiting factor of universal coverage\(^{(13, 15)}\). This factor also happens in different countries, such as the United States, Australia\(^{(12)}\), Mexico, Ghana and Thailand\(^{(13)}\), China\(^{(14)}\). The strategies to attract and fix the professionals are context-based and multifaceted and their qualification in the course of their career stands out in the global scope\(^{(12, 15)}\).

The PMAQ revealed qualification and continuing education strategies for the teams, combined with the use of information and communication technologies, which facilitate the qualification, improve the problem-solving ability and enhance the communication between general PHC practitioners and specialists\(^{(16)}\).

With regard to territorialization, each health team attends to an appropriate number of people. In Brazil, the territorialization gains further depth with the expanded coverage of the Family Health Strategy, following the logic supply-service-territory, despite the increasing flexibility of the territory for the population’s needs, bonding and accountability. Nevertheless, planning based on the service logic ends up limiting the supply\(^{(17)}\).

On the one hand, Family Health takes form as a strategy towards universal coverage, including populations that used to be unattended. On the other hand, despite respecting parameters, the large number of people, the wide range of tasks, with promotion, prevention and treatment for priority groups, chronic illnesses, strategic situations of vulnerability put a strain on the professionals\(^{(18)}\). The Brazilian experience affirms that multiprofessional teamwork enhances the different dimensions of care in view of the expanded coverage\(^{(19)}\). This aspect concerning the greater impact of the primary care teams’ interprofessional cooperation, particularly in cases of chronic illnesses, can be observed in the literature from other countries, clearly showing the need for clarifications on its potentials and limits\(^{(20)}\).

In terms of availability, it is verified that the needs of the users who spontaneously visit the service are assessed and attended to in all groups, also with better performance for groups with larger populations. The Family Health initiatives to integrate the two types of demands – spontaneous and scheduled – represent one of the main challenges for access. There is a change from technical to user-centered care, the base of the PHC principles. Based on the international accumulation of lessons learned since the 1990’s in Denmark and the United Kingdom, in 2005, the Institute of Medicine (IOM) launches a proposal to implement it by 2020 as one of the quality domains of the primary health care reform in the United States\(^{(21)}\).

In this study, the home visit is present on the agenda of professionals from cities in all groups. The home visits are fundamental for PHC and are a positive element of the access. Nevertheless, assessing their occurrence is not enough. Their impact on the health conditions and quality of the processes should also be assessed. In a research undertaken in Germany, it was revealed that the PHC professionals are in doubt on their efficacy, consider it as an obligation and do not feel motivated to make the visits\(^{(22)}\). This reflection reveals, for the Brazilian reality as well, the need to debate with the professionals on their effects and forms of incentive.

In the forwarding to other care points, despite significant differences between groups, it is observed that all groups present hardly satisfactory behavior, revealing difficulties in user accountability outside the BHS. Regulation centrals more frequently exist in the same groups highlighted earlier. These points reveal weaknesses in the coordination, continuity and integration of care at the different levels of network care. The Health Care Networks represent the Brazilian option to further the access and quality recommended by the Pan American Health Organization, as a way to fight the fragmentation and promote the integration of health systems in Latin America and the Caribbean. In these systems, despite particularities and complexities, a range of challenges is faced due to the coexistence of subsystems and different degrees of integration in the same system, besides structural issues\(^{(23)}\).

Concerning the supply of health actions and services, statistical significance was verified in the groups for all aspects assessed, including basic drugs. According to WHO, the systems that implemented the universal coverage need to address appropriate medication use, verify its benefits and avoid waste in order to guarantee sustainability\(^{(24)}\). The low level of integrative and complementary practices was verified for users on the territory, as the SUS has recommended since 2006. In addition, WHO reafirms the importance of integrating scientific and traditional medicine for the purpose of global health\(^{(25)}\).

**Limitations**

The generalizability of the external evaluation committee of the first PMAQ cycle is limited because it did not cover all teams and worked with a statistically non-representative sample that, due to feasibility issues and/or the
political nature of the assessment, presupposes the municipal health manager’s voluntary adherence. Nevertheless, its unique range across the Brazilian territory with a homogeneous method, is undeniable. The cities’ grouping reveals inequities in the supply, advances and critical knots among the groups of cities. The main limitation is that, because of its multifaceted nature, the object needs to be analyzed by parts. Based on the available data, the needs dimensions could not be assessed, nor could the effective use of the services and their impact on population health. The information was based on “done/not done” answers, and further depth is needed as to how the actions are being accomplished and their appropriateness to the demands and quality parameters. Other studies are needed, using multiple methods capable of articulating quantitative data with qualitative case studies, with a view to better apprehending the complexity of the object.

Conclusions

The study showed that there is a relationship between access and socioeconomic conditions: as the group of the cities increases, the access to services tends to be better. However, within a context of social inequalities and iniquities, weaknesses are perceived that jeopardize the organization of health activities in the cities regarding the availability, care coordination, integration, and supply, particularly in the cities grouped in groups 1 to 3. Given the involvement of the nurse with the organization of health care, this professional has contributed to the potential access to PHC in Brazil. The curricula for work in this group are aligned with the social policies of the SUS, which include contents on anthropology, sociology, health management, leadership and health practices in the communities. This factor makes the nurses more porous to innovations and team leaderships in the PHC context, with greater motivation to promote changes, as opposed to low remuneration in the private sector. Their engagement entails the challenge of recognition for nursing competencies and autonomy in prescription and in care not exclusive to the medical category.

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