ORIGINAL ARTICLE

REVISTA ENFERMAGEM ATUAL IN DERME

# *HOME CARE IN PUBLIC HEALTH: MACRO, MESO AND MICRORREGIONAL PERSPECTIVES IN MINAS GERAIS, BRAZIL*

# *ATENCIÓN DOMICILIARIA EN SALUD PÚBLICA: PERSPECTIVAS MACRO, MESO Y MICRORREGIONALES EN MINAS GERAIS, BRASIL*

# ATENÇÃO DOMICILIAR NA SAÚDE PÚBLICA: PERSPECTIVA MACRO, MESO E MICRORREGIONAL EM MINAS GERAIS, BRASIL

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**ABSTRACT**
**Objective:** To investigate data on home care in public health, from a macro, meso and micro regional perspective in Minas Gerais (MG), Brazil. **Method:** Study with ecological design. Data were extracted from the Health Information System for Primary Care (SISAB) of the Brazilian Ministry of Health and refer to home care provided from 2016 to 2018. Variables stratified by: gender, type of home care were explored. 1, 2 or 3, scheduled or unscheduled care, post-death visit and outcome. The macro perspective was the state of Minas Gerais, the meso the northern region of the state and the micro-region the municipality of Montes Claros (MG). **Results:** In Minas Gerais, 665,395 home visits were carried out, most frequently for women (51.72%). It was observed that scheduled appointments had frequencies above 95%. In the evaluated period, there was an increase in home visits after the patient's death. Home care modality 2 was the most prevalent in the investigated regions and, in addition, there is a preponderance for the permanence of patients in home care. In Montes Claros, attendances with urgency/emergency outcome (0.05%), hospitalization (0.09%), administrative/clinical discharge (0.26%) and death (0.45%) were low. **Conclusion:** Significantly, the appointments were mostly scheduled, suggesting planning of health actions in Minas Gerais. The need to remain in the HC implies low rates for clinical/administrative discharge, which may impact the resolution of the health system.
**Keywords:** Home Nursing; Health Care; Public Health; Health Profile; Unified Health System.

**RESUMEN**
**Objetivo:** Investigar datos sobre la atención domiciliaria en salud pública, desde una perspectiva macro, meso y micro regional en Minas Gerais (MG), Brasil. **Método:** Estudio con diseño ecológico. Los datos fueron extraídos del Sistema de Información en Salud para la Atención Primaria (SISAB) del Ministerio de Salud de Brasil y se refieren a la atención domiciliaria brindada entre 2016 y 2018. Se exploraron variables estratificadas por: género, tipo de atención domiciliaria 1, 2 o 3, atención programada o no programada, visita posterior a la muerte y resultado. La perspectiva macro fue el estado de Minas Gerais, la meso la región norte del estado y la microrregión el municipio de Montes Claros (MG). **Resultados**: En Minas Gerais se realizaron 665.395 visitas domiciliarias, con mayor frecuencia a mujeres (51,72%). Se observó que las citas programadas tenían frecuencias superiores al 95%. En el período evaluado, hubo un aumento de las visitas domiciliarias después de la muerte del paciente. La modalidad de atención domiciliaria 2 fue la más prevalente en las regiones investigadas y, además, hay preponderancia para la permanencia de los pacientes en la atención domiciliaria. En Montes Claros, las atenciones con resultado de urgencia/emergencia (0,05%), hospitalización (0,09%), alta administrativa/clínica (0,26%) y muerte (0,45%) fueron bajas. **Conclusión:** Significativamente, las citas fueron en su mayoría programadas, lo que sugiere la planificación de acciones de salud en Minas Gerais. La necesidad de permanencia en el HC implica bajas tasas de alta clínico/administrativa, lo que puede impactar en la resolución del sistema de salud.
**Palabras clave:** Atención Domiciliaria de Salud; Cuidado de la Salud; Salud Pública; Perfil de Salud; Sistema Único de Salud.

**RESUMO**
**Objetivo:** Investigar dados de atenção domiciliar na saúde pública, a partir da perspectiva macro, meso e microrregional no âmbito de Minas Gerais (MG), Brasil. **Método:** Estudo com delineamento ecológico. Os dados foram extraídos do Sistema de Informação em Saúde para a Atenção Básica (SISAB) do Ministério da Saúde brasileiro e se referem aos atendimentos domiciliares efetuados no período de 2016 a 2018. Exploraram-se as variáveis estratificadas por: sexo, modalidade de atenção domiciliar 1, 2 ou 3, atendimento programado ou não, visita pós-óbito e desfecho. Considerou-se a perspectiva macro o estado de Minas Gerais, meso a região do norte do estado e microrregional o município de Montes Claros (MG). **Resultados:** Em Minas Gerais foram efetuados 665.395 atendimentos domiciliares, com maior frequência para assistência às mulheres (51,72%). Observou-se que os atendimentos programados apresentaram frequências acima de 95%. No período avaliado, houve aumento de visitas domiciliares após o óbito do paciente. A modalidade de atendimento domiciliar 2 foi a mais prevalente nas regiões investigadas e, além disso, registra-se preponderância para a permanência de pacientes na atenção domiciliar. Em Montes Claros, os atendimentos com desfecho urgência/emergência (0,05%), internação hospitalar (0,09%), alta administrativa/clínica (0,26%) e óbito (0,45%) foram baixos. **Conclusão:** De modo significativo, os atendimentos foram majoritariamente programados, sugerindo planejamento de ações em saúde em Minas Gerais. A necessidade de permanecer na AD implica em baixos índices para alta clínica/administrativa, o que pode impactar na resolubilidade do sistema de saúde.
**Palavras-chave**: Assistência domiciliar; Atenção à Saúde; Saúde Pública; Perfil de Saúde; Sistema Único de Saúde.

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## INTRODUCTION

In Brazil, the change in the epidemiological profile associated with the phenomenon of population aging stands out as a focus of concern for public health actions. In view of this, innovations are sought in care models that meet the need to promote health for the population[1-4]. Home Care (HC) emerges from this perspective, being worked on the precepts of the Health Care Network (HCN), which is part of the Brazilian Sistema Único de Saúde (SUS), with the purpose of promoting comprehensive, universal, resolutive care that enables the use of welcoming and humanization in patient care[5-6].

The practice of HC enables greater access to health services and provides continuity of essential treatments and care, commonly needed by people with Chronic Noncommunicable Diseases (NCDs)[5,7-8]. Brazil works with the Política Nacional da Atenção Domiciliar (PNAD), established by Ministry of Health Ordinance No. 2.029/2011. Home care is regulated by Ordinance No. 825/2016 and has become a relevant care modality in the context of Brazilian public health[9-10]. However, studies warn that there is a national and international deficit in the supply of HC services considering the demand for health care and the current needs[4].

HC has three modalities: Home Care 1, 2 and 3 (HC1, HC2 and HC3). The modalities are based on care needs, frequency of home visits, complexity of multidisciplinary care and use of resources. The HC1 modality is offered by the Primary Health Care (PHC) teams and has a longer interval between visits and multiprofessional interventions, considering the clinical stability of the patient and the satisfactory care support offered by family members/caregivers[9,11].

On the other hand, the HC2 and HC3 modalities are the responsibility of the Home Care Service (HCS), being linked to the demands of hospitals, Emergency Care Units (ECU) and PHC[9,10]. Individuals assisted through these modalities need complex, intense and continuous multidisciplinary assistance, in addition to having minimum weekly visits and extensive use of equipment and resources[11-13].

From the perspective of Brazil, the socioeconomic relevance of the state of Minas Gerais (MG) is considered, which, however, in the northern region of the state, presents socioeconomic and natural characteristics similar to the Brazilian northeast. Additionally, in the northern region of MG, the municipality of Montes Claros stands out, considered a hub city because it is the main urban center of reference in the region and, therefore, demonstrates characteristics of a regional capital in the north of Minas Gerais. Thus, with three geographical units of different particularities, this study is justified, which aims to investigate data on home care in public health, from the macro, meso and micro-regional perspective in the context of Minas Gerais, Brazil.

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## METHODS

Study with ecological, analytical and descriptive design. Data were extracted from the Sistema de Informação em Saúde da Atenção Básica (SISAB), of the Ministry of Health, Brazil, referring to home care from 2016 to 2018. Data are aggregated and in the public domain, without identifying users and, therefore, without ethical commitment in the analysis. SISAB is part of the strategy of the Department of Primary Care (DAB/SAS/MS) called e-SUS Primary Care (e-SUS AB). SISAB data were saved in 2019, registered on the official website of the Ministry of Health.

The data refer to three geographic regions of Minas Gerais, Brazil, in the macro-regional (state of Minas Gerais - MG), meso-regional (northern region of the state of MG) and micro-regional (municipality of Montes Claros, pole city in the north of MG) perspective. It should be noted that the macro and mesoregional assessments were carried out based on municipalities with data available at SISAB.

For the state of Minas Gerais, data from 29 municipalities were found (macro-regional evaluation). Of these 29 municipalities, five are located in the north of Minas (mesoregional evaluation). The municipalities of MG available are: Barbacena, Belo Horizonte, Betim, Bom Despacho, Caratinga, Contagem, Francisco Sá (north of MG), Ibirité, Ipatinga, Itaobim, Jaíba (north of MG), Jequitinhonha, Juiz de Fora, Lagoa Santa, Monte Carmelo, Montes Claros (north of MG), Nova Lima, Pará de Minas, Pirapora (north of MG), Poços de Caldas, Ribeirão das Neves, Sabará, São Lourenço, Sarzedo, Taiobeiras (north of MG), Uberaba, Uberlândia, Varginha and Vespasiano.

The information studied was presented by year - in the period from 2016 to 2018 - and by macro, meso and micro-regional unit. Regarding the number of consultations, the variables stratified by: gender; modality of care (HC1, HC2, HC3 - which refer to the degree of complexity of the patient's health); scheduled or unscheduled care, post-death visit and outcome (permanence in the HC, administrative/clinical discharge, death, referral to primary care, urgency and emergency situation, and hospitalization).

The results are presented in absolute values and percentages, means and standard deviation for the three regional units of Minas Gerais (micro, meso and macro-region). The study was conducted with public domain data related to home care. Therefore, it is worth mentioning that there was no direct involvement with human beings, not requiring the approval of the research by a Research Ethics Committee (REC) and, additionally, the norms for research involving human beings of Resolution 466/12 of the National Health Council.

## RESULTS

In the three-year period from 2016 to 2018, 665,395 home visits were carried out in Minas

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Gerais in the SUS network. It is observed that there is a greater number of attendances in women registered in the state of MG (51.72%) and in the north region (51.08%). In Montes Claros, there is a greater number of consultations for males (53.86%), with an average of 7,415 assistance services for this population group. Furthermore, during this period, it should be noted that Montes Claros carried out 49.15% of the services provided to women in the north of Minas Gerais and 59.93% of the services provided to men. Table 1 presents the attendance records in MG, north of the state and Montes Claros during the three-year period, stratified according to gender.

**Table 1 -** Description of the number of home visits by sex, Minas Gerais, Brazil, 2016 to 2018.

| **Regional Unit** | **Year** | **Female** | **Masculine** | **Total** |
|---|---|---|---|---|
| | | **N (%)** | **N (%)** | **N (%)** |
| **Macroregion:** | 2016 | 109.067 (52,54) | 98.537 (47,46) | 207.604 (100,0) |
| Minas Gerais | 2017 | 103.002 (51,51) | 96.951 (48,49) | 199.953(100,0) |
| | 2018 | 132.041 (51,21) | 125.797 (48,79) | 257.838(100,0) |
| **Total** | **2016 -2018** | **344.110 (51,72)** | **321.285 (48,28)** | **665.395 (100,0)** |
| | | **Average (SD)** | **Average (SD)** | |
| | | 114.703,33 (15.318,03) | 107.095,00 (16.215,809) | - |
| | **Year** | **N (%)** | **N (%)** | **Total** |
| **Mesoregion:** | 2016 | 11.138 (48,80) | 11.687 (51,20) | 22.825 (100,0) |
| North of MG | 2017 | 10.980 (50,79) | 10.640 (49,21) | 21.620(100,0) |
| | 2018 | 16.645 (52,91) | 14.814 (47,09) | 31.459(100,0) |
| **Total** | **2016-2018** | **38.763 (51,08)** | **37.121 (48,92)** | **75.884 (100,0)** |
| | | **Average (SD)** | **Average (SD)** | |
| | | 12.921,00 (3226,05) | 12.373,67 (2174,88) | - |
| | **Yeat** | **N (%)** | **N (%)** | **Total** |
| **Microregion:** | 2016 | 7.024 (47,32) | 7.817 (52,68) | 14.841 (100,0) |
| Montes Claros | 2017 | 5.533 (44,24) | 6.974 (55,76) | 12.507 (100,0) |
| | 2018 | 6.497 (46,57) | 7.454 (53,43) | 13.951 (100,0) |
| **Total** | **2016-2018** | **19.054 (46,14)** | **22.245 (53,86)** | **41.299 (100,0)** |
| | | **Average (SD)** | **Average (SD)** | |
| | | 6.351,33 (756,10) | 7.415,00 (422,851) | - |

Source: SISAB, 2016-2018.

SD = standard deviation; N = number.

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There were scheduled and unscheduled home visits. A higher frequency was observed for recording scheduled appointments, and in all years, both in the macro, meso and micro-regional context, the values were above 95% (table 2). In the three-year period, scheduled appointments in Montes Claros corresponded to 6.21% of the total in Minas Gerais and unscheduled appointments to 6.31% and, in relation to the records in the north of the state, they were 54.87% and 43.49%, respectively. Records in the north of MG corresponded to 11.30% of scheduled appointments in the state and 14.25% of unscheduled appointments. In addition, there was a general trend towards an increase in home visit rates after the patient's death observed in the period evaluated.

**Table 2 -** Description of the number of scheduled or unscheduled home visits, and home visits after the patient's death, Minas Gerais, Brazil, 2016 to 2018.

| **Regional Unit** | **Year** | **Scheduled Servisse N (%)** | **Unscheduled Servisse N (%)** | **Total N (%)** | **Home visit after death N** |
|---|---|---|---|---|---|
| **Macroregion:** Minas Gerais | 2016 | 201.253 (97,00) | 6.311 (3,00) | 207.564 (100,0) | 37 |
| | 2017 | 193.560 (96,90) | 6.127 (3,10) | 199.687 (100,0) | 266 |
| | 2018 | 250.858 (97,50) | 6.392 (2,50) | 257.250 (100,0) | 588 |
| **Total** | **2016-2018** | **645.671 (97,20)** | **18.830 (2,80)** | **664.501 (100,0)** | **891** |
| **Mesoregion:** North of MG | 2016 | 22.318 (97,90) | 482 (2,10) | 22.800 (100,0) | 5 |
| | 2017 | 20.851 (96,60) | 729 (3,40) | 21.580 (100,0) | 40 |
| | 2018 | 29.851 (95,10) | 1.523 (4,90) | 31.374 (100,0) | 85 |
| **Total** | **2016-2018** | **73.020 (96,40)** | **2.734 (3,60)** | **75.754 (100,0)** | **130** |
| **Microregion:** Montes Claros | 2016 | 14.672 (98,90) | 169 (1,10) | 14.841 (100,0) | 0 |
| | 2017 | 12.085 (96,70) | 407 (3,30) | 124.492 (100,0) | 15 |
| | 2018 | 13.312 (95,60) | 613 (4,40) | 13.925 (100,0) | 26 |
| **Total** | **2016-2018** | **40.069 (97,10)** | **1.189 (2,90)** | **41.258 (100,0)** | **41** |

Source: SISAB, 2016-2018.

N = number.

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Between 2016 and 2018, in Minas Gerais, the HC2 modality corresponded to 88.60% of the total attendances in the state, 92.70% of the attendances in the north of Minas Gerais and 98.10% of the attendances in Montes Claros. HC1 and HC3 modalities had the same percentage of attendances in Montes Claros (0.90%). As for the description of the type of HC modality, it was observed that there were no records in the SISAB in 894 cases in the state of MG, 130 in the north of Minas Gerais and 41 in Montes Claros (Table 3).

**Table 3 -** Description of the number of home visits in the HC1, HC2 and HC3 modalities, Minas Gerais, Brazil, 2016 to 2018.

| **Regional Unit** | **Year** | **HC1 N (%)** | **HC2 N (%)** | **HC3 N (%)** | **HC uninformed N (%)** | **Total N (%)** |
|---|---|---|---|---|---|---|
| **Macroregion:** | 2016 | 15.403 | 181.975 | 10.186 | 40 | 207.604 |
| Minas Gerais | | (7,42) | (87,65) | (4,91) | (0,02) | (100,0) |
| | 2017 | 12.989 | 178.293 | 8.405 | 266 | 199.953 |
| | | (6,50) | (89,20) | (4,20) | (0,10) | (100,0) |
| | 2018 | 14.108 | 229.194 | 13.948 | 588 | 257.838 |
| | | (5,50) | (88,90) | (5,40) | (0,20) | (100,0) |
| **Total** | **2016-2018** | **42.500** | **589.462** | **32.539** | **894** | **665.395** |
| | | **(6,40)** | **(88,60)** | **(4,90)** | **(0,10)** | **(100,0)** |
| **Mesoregion:** | 2016 | 1.293 | 20.909 | 598 | 5 | 22.805 |
| North of MG | | (5,70) | (91,68) | (2,60) | (0,02) | (100,0) |
| | 2017 | 916 | 20.132 | 532 | 40 | 21.620 |
| | | (4,20) | (93,10) | (2,50) | (0,20) | (100,0) |
| | 2018 | 985 | 29.334 | 1.055 | 85 | 31.459 |
| | | (3,13) | (93,20) | (3,40) | (0,27) | (100,0) |
| **Total** | **2016-2018** | **3.194** | **70.375** | **2.185** | **130 (0,20)** | **75.884** |
| | | **(4,20)** | **(92,70)** | **(2,90)** | | **(100,0)** |
| **Microregion:** | 2016 | 72 | 14.516 | 253 | 0 | 14.841 |
| Montes Claros | | (0,50) | (97,80) | (1,70) | (0,00) | (100,0) |
| | 2017 | 231 | 12.148 | 113 | 15 | 12.507 |
| | | (1,90) | (97,10) | (0,90) | (0,10) | (100,0) |
| | 2018 | 51 | 13.859 | 15 | 26 | 13.951 |

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| | | | | | | |
|---|---|---|---|---|---|---|
| | | (0,40) | (99,30) | (0,10) | (0,20) | (100,0) |
| **Total** | **2016-2018** | **354** | **40.523** | **381** | **41** | **41.299** |
| | | **(0,90)** | **(98,10)** | **(0,90)** | **(0,10)** | **(100,0)** |

Source: SISAB, 2016-2018.

HC = home care; N = number.

With regard to the clinical outcome, most records were for the permanence of patients in home care, with rates of 88.24% of care in Minas Gerais, 97.51% in the north of the state and 98.97% in Montes Claros (table 4).

The referral of patients from Primary Care to the HC occurred in 0.18% of the consultations in Montes Claros. Patients with an urgent/emergency clinical outcome corresponded to 0.05% of the consultations, both in the north of Minas Gerais and in Montes Claros.

Hospitalization was an outcome registered for 0.09% of the consultations in Montes Claros, 0.12% in the north of the state and 0.33% in Minas Gerais. On the other hand, death was accounted for in 0.52% of visits in the macro-regional perspective, 0.49% in the meso-regional and 0.45% in the micro-regional.

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**Table 4 -** Description of home visits by clinical outcome, Minas Gerais, Brazil, 2016 to 2018.

| Regional Unit | Year | Permanence N (%) | Forwarding PHC N (%) | Urgency / emergency N (%) | Hospital internment N (%) | Administrative/ Clinic discharge N (%) | Death N (%) | Total N (%) |
|---|---|---|---|---|---|---|---|---|
| **Macroregion:** | 2016 | 186.451 (90,78) | 12.156 (5,92) | 418 (0,21) | 659 (0,32) | 4.786 (2,33) | 912 (0,44) | 205.382 (100,0) |
| MG | 2017 | 173.701 (86,87) | 17.382 (8,69) | 789 (0,39) | 647 (0,33) | 6.379 (3,19) | 1.055 (0,53) | 199.953 (100,0) |
| | 2018 | 225.022 (87,27) | 20.518 (7,96) | 920 (0,36) | 895 (0,35) | 8.994 (3,48) | 1.485 (0,58) | 257.834 (100,0) |
| **Total** | **2016-2018** | **585.174 (88,24)** | **50.056 (7,55)** | **2.127 (0,32)** | **2.201 (0,33)** | **20.159 (3,04)** | **3.452 (0,52)** | **663.169 (100,0)** |
| **Mesoregion:** | 2016 | 22.347 (97,98) | 331 (1,45) | 15 (0,07) | 22 (0,10) | 34 (0,15) | 56 (0,25) | 22.805 (100,0) |
| North of MG | 2017 | 21.325 (98,64) | 35 (0,16) | 8 (0,04) | 21 (0,10) | 104 (0,48) | 127 (0,58) | 21.620 (100,0) |
| | 2018 | 30.320 (96,38) | 701 (2,23) | 14 (0,05) | 45 (0,14) | 188 (0,60) | 191 (0,60) | 31.459 (100,0) |
| **Total** | **2016-2018** | **73.992 (97,51)** | **1.067 (1,41)** | **37 (0,05)** | **88 (0,12)** | **326 (0,42)** | **374 (0,49)** | **75.884 (100,0)** |
| **Microregion:** | 2016 | 14.770 (99,52) | 23 (0,15) | 9 (0,06) | 0 (0,00) | 11 (0,08) | 28 (0,19) | 14.841 (100,0) |
| Montes Claros | 2017 | 12.333 (98,60) | 31 (0,25) | 6 (0,05) | 18 (0,14) | 42 (0,34) | 77 (0,62) | 12.507 (100,0) |
| | 2018 | 13.770 (98,70) | 21 (0,16) | 6 (0,04) | 17 (0,12) | 54 (0,39) | 83 (0,59) | 13.951 (100,0) |
| **Total** | **2016-2018** | **40.873 (98,97)** | **75 (0,18)** | **21 (0,05)** | **35 (0,09)** | **107 (0,26)** | **188 (0,45)** | **41.299 (100,0)** |

Source: SISAB, 2016-2018.

N = number.

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## DISCUSSION

The results outline an overview of home care in the state of Minas Gerais, Brazil, with details for the north of the state and for the main municipality of this region, Montes Claros. In the 2016-2018 period, more than 665,000 homes visits were registered in the SUS network, throughout the state of Minas Gerais, with a higher number of HC in women, both in the macro and mesoregional perspective. In this regard, Montes Claros presents different results, with a higher number of visits to men, corresponding to 59.9% of the total number of visits to men in the northern region of the state.

In line with data referring to Montes Claros (MG), a almost experimental study developed in the city of Santa Maria (RS), Brazil, when evaluating the functional capacity of post-discharge patients admitted to the Home Care Service of a university hospital, recorded a greater male participation in home visits[14].

In the evaluated period, it is observed that scheduled appointments were, significantly, majority in all geographic units studied and unscheduled appointments were registered in 2.8% of appointments in the state. It is worth mentioning that the scheduled service in Montes Claros represented more than half of the total performed in the north of Minas Gerais, which demonstrates the relevance of the SUS network in the municipality, considered a hub city in the northern region of Minas Gerais.

The dominance of scheduled appointments corresponds to the objectives that affect the practice of HC, since the programming for the continuity of treatments carried out by the outpatient practice at home is a regulating factor in the results obtained on health care. The schedule guarantees visits on the exact days and times when the patient and caregivers are at home and, therefore, ensures compliance with the complete schedule of the health teams[9,15].

At another point, it is still possible to state that the global form of organization and planning of HC makes it possible to use the best care parameters and advance in the care and individual needs of patients[16]. Therefore, it is important to organize and plan actions within the HC[17].

Home visits after the patient's death increased linearly from 2016 to 2018. This result suggests a greater importance attributed by the team to this type of visit over the years. The continuity of care, with regard to longitudinality, a basic principle of Primary Health Care, establishes emotional bonds with patients and family members.

The bonds created, in an affective way, are pointed out as important points to establish trust between users and health professionals. It allows constituting a cooperative process, understood as a humanized care process[9,17]. Affectiveness in

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HC care represents a therapeutic potential, by filling needs and providing complete well-being to the patient[18-20].

In the context of public health, the relationship of longitudinality is established, understood as the follow-up of a patient by the same professional, with the character of a personal relationship[21]. The establishment of affective relationships can be considered an important tool in the care provided in the HC[18,20].

The different HC1, HC2 and HC3 modalities represent different levels of health care according to the demand for technology attributes and the complexity of the patients' health situation[11]. HC1 is intended for patients who have more controlled, less complex health conditions, but who are physically unable to travel to a health unit. This modality is the responsibility of teams linked to Primary Health Care[9,11,16].

On the other hand, HC2 and HC3 make up the 'Best at Home' [10] care modalities, aimed at patients with greater care needs, beyond the capacity of the basic network. The HC2 modality works with patients who have a health condition with requirements for a higher frequency of care and resources and who are unable to travel to the health unit[9]. These patients are commonly assisted by Multidisciplinary Home Care Teams (MHCT)[10-13].

Alternately, HC3 is for those who need specific therapies and equipment, of greater complexity and, commonly, will not be discharged from home care. In this category, the need for non-invasive mechanical ventilation, peritoneal dialysis and oxygen therapy can be highlighted[12,16]. Assistance in the HC3 modality is the responsibility of the MHCT[9-10].

In this study, the HC2 modality had records of over 88.5% of attendances throughout the three-year period and regions evaluated. Furthermore, the percentage of HC2 in Montes Claros over the total of the same modality in the mesoregion reached rates above 57%, which reinforces the significance of the SUS network in the municipality in question and for the north of MG.

A documental analysis study on the consolidation of the use of SUS services in the national territory is congruent with the records, pointing out that HC2 assistance is concentrated in the Northeast and Southeast regions[1]. In this direction, the state of Minas Gerais contributes to this significant overlap of HC2, as observed in the present study. It should be noted that patients assisted in the HC2 modality, in cases of improvement or control of the health situation, will be referred to primary care, while in HC3, the permanence is presented continuously according to the necessary clinical approach[9-12].

In home care, the multidisciplinary applicability of teams at home, working to

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prevent complications, is reinforced. In home care, simplified rehabilitation measures are used, linked to the reality of the domestic environment, with co-responsibility and individual action in their own care[22-23].

The outcome “patient's permanence in the service” was the most registered in all geographic regions, micro, meso and macroregions. Records for 'urgency/emergency and death' in the municipality represent more than 50% of the total records for these same outcomes in the mesoregion. This result is considered in light of the fact that the municipality holds most of the home visits in the north of MG, with more urgency/emergency records being expected, as well as deaths. However, it should be noted that deaths were recorded in less than 1% of the total number of records in the geographic units and years investigated. Result considered positive, which suggests that HC has potentially contributed to the improvement of the health condition and, therefore, in the life expectancy of the patients.

In the current study, hospital admission records in the municipality remained lower than 50% in relation to the mesoregion, unlike what was observed for the urgency/emergency outcomes and deaths. HC carries, since its implementation, this perspective of reducing and even replacing hospital stays with home health care. This health care method decongests the hospital system and presents economy traits[10], such as inputs, structural maintenance and outsourced services [11-13,24].

The clinical/administrative discharge records in the municipality refer to 32.8% of the consultations in the northern region of the state. Result consonant with the high frequency of registrations for permanence in HC and the low frequency of referrals to primary care. On the other hand, the permanence of patients in the HC services and the non-referral to the primary care of the SUS can be explained by the greater number of consultations in HC2 and HC3, therefore, patients in situations with more complex care[4-5]. Patients in HC are only referred to primary care after the condition has stabilized [9,10,19].

As limitations of the study, it should be noted that the research was conducted from records made available in the Ministry of Health system, which contain information from part of the municipalities in the state and in the northern region of MG. Therefore, the results found do not represent the entirety of Minas Gerais, as well as the north of the state. The lack of home care records for some municipalities is an important finding that needs to be investigated, as hypotheses arise that some municipalities are not in the system due to the non-availability of the HC service or due to lack of data input into the system. ministerial. Despite the inherent limitation of the database, the importance of this study is

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emphasized, as it explores the municipalities of MG that had data available in the official Brazilian system and for describing an overview of HC - a relevant strategy for health promotion and rehabilitation -, hitherto not investigated, from the perspective of the state to the pole municipality in the north of Minas Gerais.

## CONCLUSIONS

For the most part, home care in the state and in the north of Minas Gerais was carried out in women, unlike Montes Claros, with more records in men. The high frequency of appointments scheduled in the three perspectives of investigation, micro, meso and macro-regional, suggests planning of actions by the health team, with more appointments for HC2. The patient's post-death home visit was incorporated into the HC model, with an increase in records over the three-year period, which encourages an affective bond between professionals, patients and family members; favored by the permanence of patients in HC, longitudinally. The low death records in the three regional units studied highlight the relevance of HC in health care.

In Montes Claros, records of 'permanence' in the service, urgency/emergency and death accounted for more than half of the records in the north of Minas. It is considered important to implement strategies that can improve collective health indicators in the municipality's PHC, such as disease and aggravation prevention, which require long-term HC and low records for clinical/administrative discharge and referrals to primary care.

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