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## REFERÊNCIA

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# Factors associated with home care: support for care management within the SUS

FATORES ASSOCIADOS À ATENÇÃO DOMICILIÁRIA: SUBSÍDIOS À GESTÃO DO CUIDADO NO ÂMBITO DO SUS

LOS FACTORES ASOCIADOS CON LA ATENCIÓN DOMICILIARIA: SUBSIDIOS A LA GESTIÓN DE LA ATENCIÓN EN EL SUS

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## ABSTRACT

The identification of variables associated with the type of home care (HC) of the users of the Unified Health System (UHS) contributes to the management of care in the Health Care Network (HCN). The objective was to identify variables associated with HC users in Basic Health Units (BHU) selected from Belo Horizonte. It was a transversal study in two BHU with all users (n=114) in HC in the covered area. We used a multiple logistic regression analysis for selection (stepwise) of significant variables. Greater clinical involvement of users (OR=27.47), a sad emotional state (OR=24.36), risk for pressure ulcer by the Braden scale (OR=7.6) and semidependence by the Katz ADL index (OR=63.8) were obtained and were strongly associated with the type of HC (p<0.05). Variables based on the social, family and clinical context of the subjects subsidized the integral approach and decision-making of the healthcare team.

## DESCRIPTORES

Primary Health Care  
Home Care Services  
Standard of care  
Unified Health System

## RESUMO

A identificação de variáveis associadas ao tipo de atenção domiciliária (AD) dos usuários do Sistema Único de Saúde (SUS) contribui para a gestão do cuidado na Rede de Atenção à Saúde (RAS). Objetiva-se identificar variáveis associadas ao tipo de AD dos usuários em Unidades Básicas de Saúde (UBS) selecionadas de Belo Horizonte. Estudo transversal em duas UBS com todos os usuários (n=114) em AD da área de abrangência. Utilizou-se a análise de regressão logística múltipla para seleção (*stepwise*) de variáveis significativas. Obteve-se maior comprometimento clínico dos usuários (OR=27,47), estado emocional triste (OR=24,36), risco para úlcera por pressão pela escala de Braden (OR=7,6) e a semidependência para as AVD pelo índice de Katz (OR=63,8) como fortemente associadas ao tipo de AD (p<0,05). As variáveis fundadas no contexto social, familiar e clínico dos sujeitos subsidiaram a abordagem integral e a tomada de decisão da equipe de saúde.

## DESCRIPTORES

Atenção Primária à Saúde  
Serviços de Assistência Domiciliar  
Padrão de cuidado  
Sistema Único de Saúde

## RESUMEN

La identificación de variables asociadas al tipo de atención domiciliar (AD) de los usuarios del SUS contribuye para la gestión del cuidado en la Red de Cuidado de la Salud (RAS). Objetivo: identificar las variables asociadas al tipo de AD requerida por todos los usuarios del SUS en Unidades Básicas de Salud (UBS) de Belo Horizonte. Estudio transversal en dos UBS con todos los usuarios de AD (n=114) en el área de cobertura, análisis de regresión logística múltiple para la selección (*stepwise*) de las variables significativas. Mayor comprometimiento clínico (OR=27,47), el estado emocional triste (OR=24,36), la Escala de Braden (OR=7,6) y índice de Katz (OR=63,8) se asociaron con el tipo de AD (p<0,05). Las variables fundadas en el contexto social, familiar y clínico de los sujetos subsidiaron el abordaje integral y la toma de decisión del equipo.

## DESCRIPTORES

Atención Primaria de Salud  
Servicios de Atención de Salud a Domicilio  
Nivel de atención  
Sistema Único de Salud

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## INTRODUCTION

The recent national policy of Home Care (HC) in the Unified Health System (UHS), defined in GM Ordinance No. 2527 of October 27, 2011, revives important discussions, such as the perspective of network management, the role of primary care as coordinator of care, and the changes in the technical-assistance model, in construction.

According to that document, home care within the UHS is considered to be a care modality that is substitutive or complementary to what exists, characterized by a set of actions for health promotion, prevention, treatment and rehabilitation provided in the home, with guaranteed continuity and integration of care with the Health Care Networks (HCN). Among the actions developed, the home visit is distinguished as the main activity, which includes consultation of a higher level professional in the home, the identification of the person who cares for the user, planning, performing procedures, and systematic monitoring of the family.

Some studies have dealt with the distinction between the concepts of attention, assistance, care, home visit or hospitalization, depending on the complexity of professional practices, the clinical condition of the user and the use of hospital equipment required, with the intent to categorize the various types of Home Care that can be provided at the residence of the citizen<sup>(1-2)</sup>. The three types of home care modalities, now standardized, incorporate this discussion from the perspective of the HCN, proposed in GM Ordinance No. 4,279 of December 30, 2010, which is the rationale for why this study adopts the term home care for the different levels of the health system.

The three classifications of home care in the UHS provided in the current policy are: HC1 – the responsibility of primary care teams (PCT) and the nucleus of attention to family health (NAFH), HC2 and HC3, belonging to secondary care and linked to multidisciplinary home care teams (MHCT), formed by physicians, nurses and physiotherapists. In the case of home care of type 3 (HC3), this increases to include the MHCT, the support of the multidisciplinary support team (MST), formed by at least three of the following professionals: social worker, physiotherapist, speech therapist, nutritionist, dentist, psychologist, pharmacist and occupational therapist.

The type 1 home care (HC1) is conceptualized as a set of necessary actions for users with controlled and compensated health problems, with difficulty or physical impossibility of commuting to a health facility, requiring care with lower frequency and need for health resources. For the user in more acute clinical conditions, with limited mobility and who requires a higher frequency of care, health resources and monitoring, HC2 is recommended. For people who, in addition to

meeting the conditions for HC2, require the use of continuous oxygen therapy equipment, noninvasive ventilatory support, peritoneal dialysis or paracentesis, HC3 is indicated.

Despite the growth of public and private sector home care services in the country, characteristics of special programs, punctual, linked to hospitals or emergency care units (ECU), centered on reducing costs, with little coordination between levels of care and weaknesses in the use of information for action planning still prevail. On the other hand, there is evidence of change in home care practices, either by the innovations of health teams, or by the tension between the different forms of care – the professional, the therapeutic projects of the families, the caregivers and the users<sup>(3-4)</sup>.

A change in the way services are organized is based on the health needs of the population, or what it manages to base on studies of the demand for health services<sup>(3-5)</sup>, is a premise for structuring the HCN from a basis in Primary Care, as the organizing center of care<sup>(6)</sup>.

Care management, or the way in which care is revealed and is organized, occurs in the interaction between individuals,

capable of emancipatory subversions or impositions that are restrictive of human liberties<sup>(7)</sup>. It can articulate resources and subjects in the levels of care of the system, contributing to an expanded focus of the clinic in the organization of the services<sup>(8)</sup>.

The challenges to be overcome for expanded care to become reality in healthcare work include the fragmentation of actions, the overly technical training of professionals, lack of planning methods, and little use of the information available for planning<sup>(3,6,8-10)</sup>.

Given the need for reorganization of health teams practices from the HCN perspective, the adoption of classifying typologies according to the demand of the population is an important device for the management of care, for subsidizing planning and the integration of activities<sup>(1-4)</sup>.

In this context, this study aimed to identify the associated variables – in other words, those that most influenced the classification of the type of HC of the users in the territory of the Basic Health Units (BHU) – that support the management of care by the health teams, from the perspective of the HCN of the UHS.

## METHOD

### *Type of study*

This was a transversal inquiry study with a descriptive and an analytical step<sup>(11)</sup>. In the descriptive phase, we investigated the clinical, socioeconomic and family variables that characterized all the users and their caregivers in home care, in the catchment area from two UBS of Belo Horizonte. In

...the adoption of classifying typologies according to the demand of the population is an important device for the management of care, for subsidizing planning and the integration of activities.

the analytical phase, based on these variables, probabilistic models of multiple logistic regressions were estimated to identify variables strongly associated with the type of HC classification demanded by the users.

### **Scenario and population of the study**

Two of the BHU territories in Belo Horizonte, with a population of 5,736 users over 60 years of age, composed the scenario of investigation. A choice of these primary care services was justified by the existing partnership between the university and the health services, which facilitated discussions to tailor research objectives to the reality of the Family Health Teams (FHT). The selection of the BHU was non-probabilistic and intentional, in view of the applied and exploratory character of the research<sup>(12-13)</sup>.

The inclusion criterion was the census, in other words, it included all 120 people registered for the FHT of the two BHU who received assistance in the modality of professional HC. We interviewed 114 users in Home Care indicated by the FHT, 38 in BHU 1 and 76 in BHU 2. Six other users were interviewed by health professionals of the FHS, in their home visits, to verify the adequacy of instrument for the BHU work, therefore they were not included in the database of the present study.

### **Instrument and data collection**

Beginning with a literature review of existing instruments to address the elderly, hypertensive or bedridden users predominant in HC<sup>(15)</sup>, three dimensions were defined that synthesized the theoretical concepts for the care extended to the study population. The first dimension, the social and family context of the user, focused on the dynamics of family life and the social conditions of the user and the caregiver. The second assessed the degree of dependency for activities of daily living (ADL) and the risk for pressure ulcers (PU). The third examined the interview and clinical findings of the HC user. These dimensions guided the definition of the variables, the 72 items included in the instrument for data collection and a subset of items that guided the classification of the type of HC for the user, conducted by interviewers.

The main validated instruments that supported the identification or construction of the questionnaire items were<sup>(15)</sup>: a) WHOQOL (WHO Quality of Life), which measures quality of life; b) the Katz Index, for assessments of activities of daily living (ADL); c) the Braden Scale, for examination of pressure ulcers; d) the Caregiver Burden Scale, to assess caregiver burden; e) genogram, ecomap and familiogram, to assess the dynamics of family life; f) the Flanagan Scale, which measures subjective aspects that are more frequent in the elderly.

The construction of the questionnaire occurred in five steps, beginning with participant observation of the work in the FHT in both of the BHU, with immersion in the everyday services over six months, conducting 35 home visits

and identifying the technologies used by HC professionals. From the three defined dimensions and the literature review of the instruments for use in approaching the user and caregiver, the questionnaire matrix was constructed, composed of concepts, variables, indicators and items<sup>(12)</sup>. This step prioritized the identification of already validated items, together with others that were suited to the social, family and clinical approach of the subjects. With a preliminary version of the questionnaire defined, team training of the interviewers occurred and a pilot study was conducted with 30 users of another BHU that was not part of the sample, in which the quantity was defined by calculating the sampling fraction in the probabilistic sample<sup>(13)</sup>. In the fourth step, there were two discussion workshops with health professionals of the two BHU for semantic analysis of the items<sup>(16)</sup> and adaptation of the variables to the work of FHS, as a subsidy to care management. In the fifth step, analysis by judges occurred, using 80% as the degree of agreement among the specialists. After collecting data, the Pearson correlation was executed between the variables to select the items that would remain in the instrument, to approach the classification of the user for HC, adopting a value of 0.30 ( $p=0.05$ ) as a reference<sup>(17)</sup>.

The dependent variable *type of HC*, in the final version of the data collection instrument used in the classification of the user in HC by the interviewer, was categorized into a seven-point Likert scale, ranging from very close, close and less close to HC1 or HC2, interspersed by zero. During data collection, indications from the literature, official guidelines and the dimensions of the study, synthesized into a set of questionnaire items in a *check list* format, were taken as references for the classification of users.

Thus, for HC type 1, the following were considered: controlled and compensated health problems, some degree of dependence for ADL, inability to travel to a BHU, greater spacing between visits, and less need for more complex procedures. In HC type 2: high degree of clinical compromise (acute or chronic decompensation), social and epidemiological; greater dependence for ADL; impossibility to travel to a BHU; use of equipment; the need for more frequent visits and dependence for more complex procedures. Within this conceptualization, the classification of HC3, present in the current policy, was considered a variation of HC2.

The independent variables of the study distributed in the dimensions:

Social and family context: a) metric variables (family participation in care; personal relationships; degree of discomfort; and, fatigue in relation to the activities of the caregiver; sleep quality of the caregiver) and b) categorical variables (age range of the user; gender; education; household income; housing conditions; family profile; feelings about the illness and family life; gender of the caregiver; age range of the caregiver; health problems of the caregiver; chief complaint; use of medications; caregiver profile; degree of caregiver burden; level of education; occupation of

caregiver; feelings toward the care and family life; physical safety and protection; material resources for HC;

Degree of ADL dependence and risk for pressure ulcers:  
a) metric variables: Katz and Braden scale;

Interview and clinical findings of the users: a) metric variables: gagging during feeding; quality of sleep; degree of discomfort and fatigue; alcoholism and smoking; physical security; mobility; visual acuity; hearing acuity; mental status assessment; evaluation and assessment of the emotional state of the communication and b) categorical variables (health problems of the user; chief complaint; medication use; dietary intake; fluid intake; urinary habits; intestinal habits; assessment of hemodynamics; general appearance; respiratory auscultation; use of supplemental oxygen; cardiovascular system; abdominal evaluation of members; genitourinary system; nutritional status; body hygiene; oral hygiene; skin integrity).

Data collection occurred in a single visit in the home of the user, with a mean application time of 45 minutes. The interviewers, previously trained in the pilot test, received new orientations and direct supervision of performance during the collection. We observed the accuracy of the information, especially at the moment of classification of the user on the type of HC, conducted after the interview, from the checklist of items with the indications of each of the care modalities, which was decisive for the quality and harnessing of all information. The insertion of the 114 cases occurred at the end of the collection, with double entry in the database and checking of archives in the Statistical Package for the Social Sciences (SPSS), version 15.0.

### **Data analysis and ethical aspects**

In logistic regression analysis the dependent variable considered was the type of home care, categorized as 0=HC1 and 1=HC2. The exploratory analysis was conducted of the complete database, of missing and atypical cases, and of the normality of the metrics variables. After the simple descriptive analysis, the preparatory steps for multivariate analysis and the examination of the correlations which exist between the independent variables followed to identify collinearity.

In crude logistic regression analysis, variables were identified that were significantly associated with the type of HC, grouped in hierarchical blocks: sociodemographic, clinical, psychosocial, degree of dependency and household conditions. The multiple logistic regression models estimated included all significant variables identified in the crude analysis, respecting the hierarchical blocks previously described. The choice of the final model was based on the selection of variables for the step-wise method of estimation, considering as the inclusion criterion  $p < 0.05^{(17)}$ . The odds ratios (OR) were estimated, with their respective 95% confidence intervals (CI95%) and statistical significance ( $p$ ), for each variable statistically associated with the type of HC.

The research was approved by the ethics committees on research of the *Federal University of Minas Gerais* – UFMG (ETIC 449/08) and SMSA/BH (007/2008).

## **RESULTS**

### **Sociofamiliar context of the user and situation of the caregivers**

Of the 114 users evaluated in the BHU territory, 73.6% were classified as HC1 and 26.3% as HC2 (BHU 1: 72.4% as HC1, 27.6% as HC2; BHU 2: 80% as HC1; 20% as HC2). The majority of the HC users were women (69.3%), aged 66-95 years (65.7%), having studied, on average, up to primary education (89.3%), received up to three times the minimum wage (72.8%) and lived in conditions with adequate water and sanitation (93%). They were accompanied by caregivers (76.3%), but some lived alone and did not receive care from another person (23.6%), although they needed it. The caregiver activity was exercised by women (83.1%), between 46 and 75 years (65.5%), a family member (95.4%), with educational level up to high school (86.1), with no occupation, or who were retired (80.4%).

Users that expressed their feelings about the dynamics of family life (72.8%) left to do things on a day-to-day basis, such as work or leisure (91.5%), felt sad or lonely (53%) and some reported changes in affective relationship between the family members (20%). This situation was extended to caregivers, who abandoned their social activities or work (73.5%), sometimes with feelings of sadness, loneliness or tiredness (19.5%) and disturbances in family relationships (32.1%). The caregivers of the users often felt pain (mean 3.03) and fatigue (mean 3.19) at the end of the day, but were never demotivated to care for the infirm person at home (mean 1.86), felt no difficulty with sleep (47.1%); but were rarely disposed toward leisure activities (mean 3.03). Households generally had adequate conditions in terms of cleanliness and ventilation (71%), but some items posed a risk for the elderly and bedridden, such as slippery floors (42.9%), floor and wall moisture (37.7%), rugs which increased the possibility of falls (34.2%), steps (82.4%), ramps (42.9%) and uneven surfaces (66.6%).

There was a lack of equipment for home care, such as wheelchairs (31.7%), bedside commodes (32.8%), hospital beds (53.5%), eggshell mattresses (51.2%), walker (44.4%), cane (31.25%) and materials for bandaging/dressings (58.3%).

### **Dependence in ADL, risk for pressure ulcers, user interview and clinical data of the user**

Part of the users (41.2%) at risk for pressure ulcer depended on others to perform their ADLs during the day (57.9%), such as bathing, dressing, toileting, moving around, feeding or maintaining sphincter control; some (32.4%) were dependent for more than five of these six functions on a day-to-day basis. Almost all had some health problem

(99.1%) with the most prevalent being systemic arterial hypertension (HBP, 70%), type II diabetes (DM, 29.8%) and cerebrovascular accident (CVA; 26.3%). These health problems also affected the caregivers (70.1%), who reported the presence of HBP (55.7%) and DM type II (29.8%).

Pain was a very frequent sensation among the users in HC (52.8%), those who always (22.1%) or sometimes (30.7%, mean 2.14) felt it, and few reported a disposition for leisure (mean 1.89, sometimes). More than half had difficulty sleeping (56.1%), rarely or sometimes needed medication for it (73.7%), but there were those who presented constant dependence (18.3%) on pharmaceuticals to fall asleep.

They presented forgetfulness in day-to-day life (63%), had locomotion (85%, mean 3.63) and visual difficulties, (49%, mean 3.59), but could hear fairly well (57.8%, mean 1.18). Some presented mental confusion (15.7%), difficulty speaking (36.7%), paresia (21.9%) or plegia (17.5%) of limbs; others were emaciated (28.9%), had dry skin (28.9%), presence of wounds (13.1%) and presented inadequate oral (20.1%) or body (13.1%) hygiene.

Regarding hemodynamic evaluation of the respondents, there were cardiopulmonary alterations on auscultation

(19.9%), in the blood pressure levels (44.7%) and in the fluid intake (35.9%). Concentrated urine (19.3%), urinary (76.2%) and fecal incontinence (49.9%), decrease in intestinal bowel sounds (14%), dry skin and mucosa (12.2%) were identified.

Users who needed type 2 home care (HC2) in general were women (66.7%), more than 61 years of age (86.7%), with some high school education (86.7%), with higher clinical compromise (26.6%) and psychosocial factors, and with a more pronounced degree of dependence and inadequacies of the household (Table 1).

The crude logistic regression analysis of the sociodemographic, psychosocial, clinical and degree of dependence variables indicated the association of the HC2 type for users between 60 and 80 years; with some degree of education; with a history of CVA; neoplasms; using medication; history of gagging; with limited mobility; frequent forgetfulness; greater clinical compromise (acute or uncompensated); confused state of consciousness; feelings of sadness; changes in affective relationship between family members; weak disposition for leisure; presence of wounds; pressure ulcer risk; need for and availability of hospital beds; semidependence on the Katz index; presence of ramps at home ( $p \leq 0.05$ ) (Table 2).

**Table 1** – Sociodemographic, clinical, psychosocial, level of dependence, and household condition variables of the users classified in HC1 and HC2 - Belo Horizonte, 2009-2010

Variables	HC TYPE 2 n=30 (%)	HC TYPE 1 n=84 (%)	Total 114 (%)
<b>Sociodemographics</b>			
<b>Age</b>			
<60 years	4 (13.3)	26 (30.9)	30(26.3)
61-80	18 (60)	25 (29.8)	43(37.7)
81 and more	8 (26.7)	33 (39.3)	41(35.9)
<b>Sex</b>			
Female	20 (66.7)	59 (70.2)	79(69.2)
Male	10 (33.3)	25 (29.8)	35(30.7)
With education	26 (86.7)	52 (61.9)	78(68.4)
Income greater than 3 times MW	4 (14.3)	23 (28.0)	27(23.6)
<b>Clinical issues</b>			
HBP	23 (76.7)	57 (67.9)	80(70.1)
DM type 2	9 (30)	25 (29.4)	34(29.8)
CVA	12 (40.0)	18 (21.4)	30(26.3)
Alzheimer	2 (6.7)	3 (3.6)	5(4.3)
Neoplasms	4 (13.3)	3 (3.6)	7(6.1)
Osteoarthritis	1 (3.33)	5 (5.95)	6(5.2)
Medication use	26 (86.7)	81 (96.4)	107(93.8)
History of gagging	8 (26.7)	8 (9.5)	16(14.0)
Physical pain in daily life	13 (43.3)	32 (38.1)	45(39.4)
Difficulty sleeping without using medications	11 (36.7)	22 (26.2)	33(28.9)
Dependence on medication to sleep, frequent & always	10 (33.3)	24 (28.6)	34(29.8)
Difficulty with locomotion, frequent & always	30 (100)	71 (84.5)	101(88.5)

Continue...

...Continuation

Variables	HC TYPE 2 n=30 (%)	HC TYPE 1 n=84 (%)	Total 114 (%)
<b>Sociodemographics</b>			
Forgetfulness, frequent & always (n=85)**	13 (58.0)	21 (33.3)	34(40.0)
Clinical impairment or acute descompensation	8 (26.7)	4 (4.8)	12(10.5)
<b>Psychosocial</b>			
Provision for leisure rarely or never	16 (53.3)	26 (31.0)	42(84.3)
Confused and drowsy state of consciousness	11 (36.7)	7 (8.3)	18(15.7)
Aggitated emotional state	4 (13.3)	6 (7.2)	10(8.7)
Sad emotional state (n=93)**	10 (52.6)	12 (16.22)	22(23.6)
Loneliness, often or always (n=83)**	7 (35.8)	15 (23.4)	22(26.5)
Alterations in family relations	9 (30%)	8 (9.5)	17(14.9)
<b>Level of dependence and home conditions</b>			
Presence of wounds	10 (33.3)	5 (5.9)	15 (13.1)
Braden Scale	20 (66.7)	27 (32.1)	47(41.2)
<b>Katz Index:</b>			
Independent for 6 functions	2 (6.7)	18 (21.4)	20(17.5)
Independent for 5 functions	1 (3.3)	16 (19.0)	17(14.9)
Independent for 4 functions	5 (16.7)	6 (7.1)	11(9.6)
Independent for ≤3 functions	22 (73.3)	44 (52.4)	66(57.8)
Ventilation or adequate room lighting	10 (60)	64 (76.2)	74(64.9)
Presence of ramps in the home	22 (73.3)	27 (32.1)	49(42.9)
Hospital bed available for those who need it (n=28)	8(66.7)	5(31.2)	13(46.4)

\*\* number of responses to the item

**Table 2** – Crude logistic regression adjusted for selection of associated variables with the type of HC required by users in the HBU territory - Belo Horizonte, 2009-2010

Variables*	Crude analysis n=114			Adjusted analysis n=93		
	OR	(CI 95%)	p-value	OR	(CI 95%)	p-value
<b>Sociodemographics</b>						
Age						
<60 years						
61-80	4.68	1.27-21.25	0.009	13.29	0.86-204.64	0.064
81 and more	1.58	0.37-7.91	0.49	7.85	0.51-120.29	0.139
Sex						
With education	0.84	0.32-2.33	0.72	–	–	–
Income greater than 3 times MW	4.00	1.21-17.04	0.01	–	–	–
<b>Clinical issues</b>						
HBP	0.43	0.10- 1.45	0.14	–	–	–
HBP	1.56	0.55-4.82	0.36	NI	–	–
DM type 2	1.01	0.36-2.71	0.98	NI	–	–
CVA	2.44	0.89-6.53	0.05	–	–	–
Alzheimer	1.93	0.15-17.64	0.48	NI	–	–
Neoplasms	4.15	0.65-29.77	0.056	–	–	–
Osteoarthritis	0.54	0.01-5.19	0.58	NI	–	–
Medication use	0.24	0.03-1.55	0.056	–	–	–
History of gagging	3.45	0.99-11.81	0.02	–	–	–
Physical pain in daily life	1.24	0.48-3.13	0.61	NI	–	–
Difficulty sleeping without using medications	1.63	0.60-4.29	0.28	NI	–	–

Continue...

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Variables*	Crude analysis n=114			Adjusted analysis n=93		
	OR	(CI 95%)	p-value	OR	(CI 95%)	p-value
Difficulty sleeping without using medications	1.63	0.60-4.29	0.28	NI	-	-
Mediations, frequently or always	1.25	0.45-3.30	0.62	NI	-	-
Diff w/ mobility, frequently or always	-	-	0.022	NI	-	-
Forgetfulness, freq or always (n=84)**	2.89	0.95-8.92	0.03	-	-	-
Clinical compromise (acute or decompensated)	7.27	1.72-35.37	<0.001	27.47	1.84- 410.88	0.0016
<b>Psychosocial</b>						
Disposition for leisure	2.55	0.99-6.54	0.029	-	-	-
Consciousness: confused and drowsy	6.37	1.92-21.78	<0.001	-	-	-
Aggitated emotional state	1.97	0.38-9.03	0.31	-	-	-
Sad emotional state (n=93)**	5.75	1.66-19.59	<0.001	24.36	2.54-234.01	0.006
Loneliness. freq or always (n=83)**	1.91	0.53-6.40	0.24	NI	-	-
Alterations in family relations	4.07	1.21-13.62	0.007	-	-	-
<b>Degree of dependency</b>						
Hospital bed available (n=28)	4.4	0.70-29.52	0.06	-	-	-
Hospital bed (not needed)						
Needs and has hospital bed	6.04	1.50-25.95	0.002	-	-	-
Needs and does not have hospital bed	1.37	0.28-5.37	0.62	-	-	-
Presence of wound	7.9	2.12-32.19	<0.001	-	-	-
Braden – risk for pressure ulcer	4.22	1.60-11.45	0.001	7.60	1.23-47.07	0.029
Katz Index: (indep. 6 funtions)						
Independent in 5 functions	0.56	0.01-11.95	0.65	6.75	0.14- 326.24	0.334
Independent in 4 functions	7.5	0.86-91.21	0.02	44.66	0.87- 2395.25	0.059
Independent in ≤3 functions	4.5	0.92-42.87	0.04	63.88	1.44- 2830.18	0.032
Inadequate ventilation/lighting	0.47	0.18-1.27	0.09	-	-	-
Presence of ramps in home	5.81	2.12-16.86	<0.001	13.15	2.16-79.87	0.005

\*The parentheses indicate the categories of reference for analysis (comparison groups); for the other variables, references are omitted and complementary categories (e.g., for income variable, the reference is income is up to 3 minimum wages (MW), and so on). NI=not included in the multivariate model (crude analysis p>0.20) \*\* Number of responses to the item.

In the adjusted model by logistic regression, variables remained strongly associated with type of HC and the greater clinical involvement of users (OR=27.47, p=0.001), a sad emotional state (OR=24.36, p=0.006) the risk for pressure ulcers by the Braden scale (OR=7.6, p=0.029) and semidependence by the Katz ADL index (OR=63.8, p=0.036). Furthermore, the presence of ramps in the home (OR=13.14, p=0.005) appeared to be strongly associated with HC2 type, possibly indicating a consequence of this condition. Based on a conservative decision regarding the adjustment of the other variables in the model and their relevance, the age variable was retained in the final model, albeit not statistically significant (p=0.064)

## DISCUSSION

The social, family and clinical profile of the user in HC translates the situation of the elderly population that is served by UHS, characterized by: low education and income,

generally women, with mobility problems, chronic degenerative health problems, dependence for ADLs that demand care at home from family, sometimes generating dynamic tensions in the home<sup>(5,18-20)</sup>.

The precarious social conditions, accentuated by the suffering of living with a long term infirmity at home, intensify the complexity of the situation that home care health professionals faced, with the ability to generate reflections about caring and about life itself. Thus, although the possibility of restructuring the health care model exists, there is tension between the different knowledge, realities and dynamics of life in home care, which is able to generate significant changes in the approach to health<sup>(3-4)</sup>, the low power of the users to exert pressure tends to maintain the hegemony of the professional, by means of a dialectical relationship between the aid and the power that characterizes the politics of care<sup>(7)</sup>.

Given the complexity of social, clinical and epidemiological problems that the health teams faced in HC, the need for tools,



applied knowledge and conceptions of care to act in the encountered reality persists. As the locus of care is inverted from the health service to the home, the logic of care is modified.

In the health services, there is a greater standardization of procedures which customarily unify disciplines dealing with human beings, resulting in imprisonment of care in senseless acts. By entering the homes of people, they are interacting with the daily living, the conflicts and the dynamics of the private lives, as well as the socio-economic poverty of the majority of the Brazilian population that uses the UHS. Deprived of the walls, of the manuals and techniques that protect the health services, professionals find themselves, many times, with few options for interventions in the complex situation encountered, especially that comprehensively address the family, who are deemed part of this enlarged practice<sup>(8-10)</sup>, or to devise care within a relationship permeated by power, capable of triggering libertarian possibilities in the subjects involved.

In these terms, one should invest in an extended approach of care for the management of disruptive interactions between professionals, users, caregivers and family, in favor of autonomy. A critical epistemology and dialectic of care centered in the humanity that is sapiens (*wise man*) and demens (*mad man*), reason and madness, communion and destruction, power and counter-power, body, soul and desire is defended here. One has to invest in the production of emancipatory biopolitics of subjects centered on philosophical, ontological, and ecological and political conceptions, synthesized in the trihedron *knowledge for improved care, delivering care to confront, delivering care to emancipate*<sup>(8)</sup>.

The context of life, the material conditions for HC, the dynamics of family life, the subjectivity of the user and of the caregiver are aspects somewhat deepened through the practice of the professionals, who reclaim the lack of references to do it<sup>(15,21)</sup>. The caregiver vulnerability detected in this and other studies<sup>(18)</sup>, whether physical, social or emotional, becomes equally dependent on the HC of the health teams, which increases the complexity of the approaches needed on the part of the professionals, inducing them to work in an interdisciplinary network<sup>(3-4,8,21)</sup>.

From the conditions of the users and caregivers evaluated in this investigation, health needs that required priority nursing interventions were visualized<sup>(18-20)</sup>, coordinated by the work of teams in the HC UHS. In this sense, the most influential variables for the classification of the user in this study subsidized a comprehensive look at the reality, contributing to the management of care that considered much more than the biological and physical body in the service network. Proof of this is that the items comprising the instrument for approaching the user in HC, in particular the reduced version of the questionnaire, proved to be adequate both for research and for the work process of the professionals<sup>(15)</sup>.

The variables identified that significantly influenced the classification of the HC2 type allowed the intertwining

of clinical and emotional conditions, and the socio-family context of the user and of the caregiver. In other words, in the age between 60 and 80 years, the degree of clinical compromise, a sad emotional state, the risk for pressure ulcers, the semidependence for ADL based on the Katz Index, and the presence of ramps at home showed the interdependence of physical, mental and social aspects in the production of the conditions of health, requiring interdisciplinary, epistemological and ontological approaches to care within the network of HC.

It is noteworthy that the association between the presence of ramps in the home and the HC2 type of classification represented a possible reverse causality bias, due to the transversality of the study and the inability to identify the timing of the events. Thus, it is probable that the presence of the ramp did not determine the condition of the user, but rather that its presence was determined by her condition, being due to adaptations made by the family to accommodate the most clinically compromised user (HC2).

Some variables related to the social (absence of the caregiver, elderly caring for elderly, accentuated feelings of sadness and loneliness, alterations in the affective relationship, changes in the pace of work and family life), environmental (absence of equipment for HC, inadequate household conditions) and caregiver context (overload, lack of guidance, pain, fatigue, or lack of disposition for leisure) synthesized the urgent need for plural approaches for care and are translated into signals for health surveillance<sup>(1-4)</sup>. In addition, monitoring the user classification in HC by means of variables that signal their health condition enables teams to strengthen their continuity of care within the HCN environment.

As a limitation of the study, we point to the fact that the transversal nature of the study did not permit clear establishment of timing of the events being studied. That said, the predominance of the HC1 type in the investigated population, inherent in the profile of the population of the FHT, pointed to the need for investigations in less homogeneous cases to permit greater generalization of the results (external validity).

## CONCLUSION

The variables associated with the classification of the type of Home Care identified in this research subsidized the decision-making of the team about the priorities and the better form of caring for health needs of those that needed home care in this health territory, substantiating the expanded management of care in the Health Care Networks of the UHS. The network perspective expressed in microtools of the organization of health services - such as lines of care, coordination of the clinic, the cases, health conditions and waiting lists - can be enhanced by monitoring variables that influence the classification type of Home Care by the teams, predicated on the socio-familial context, in the assessment of ADLs, in the interview and clinical data of the users.

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