



## POSITIVE EVALUATION OF THE ASSISTANCE PROVIDED TO PEOPLE WITH DIABETES MELLITUS IN PRIMARY CARE<sup>1</sup>

Aliny de Lima Santos\*

Sonia Silva Marcon\*\*

Nataly Cristina Bastos Silva\*\*\*

Vitória Hibary Nati\*\*\*\*

Gabriela Grasso Pacheco\*\*\*\*\*

Ludmila Lopes Maciel Bolsoni\*\*\*\*\*

Herbert Leopoldo de Freitas Góes\*\*\*\*\*

### ABSTRACT

**Objective:** To verify the factors associated with the positive evaluation of the assistance provided to people with type 2 diabetes in Primary Health Care. **Method:** Descriptive cross-sectional study with interview of 408 people with type 2 diabetes from the urban area of a city in the southern region of Brazil covered by 65 Family Health Strategy teams. A questionnaire containing sociodemographic, clinical, behavioral variables and indicators of assistance and access to health services in primary care was used; the Pearson's chi-square test, multiple logistic regression and Odds Ratio were performed to analyze which factors were related to a positive evaluation of the care provided. **Results:** The prevalence of positive evaluation of the care provided was 81.9%. The factors that showed a significant association with a positive evaluation were: male gender (OR = 2.96), physical activity (OR = 2.54), receiving care on the same day the person goes to the Basic Unit (OR = 2.60), receiving oral antidiabetics and/or insulin (OR = 0.12), receiving guidance on proper nutrition (OR = 2.72), and being able to show test results more easily (OR = 3.09). **Conclusion:** Type 2 diabetes can be an indicator of the quality of service provided by FHS teams and user satisfaction is related to the quality of the service, embracement of demands, and continuous care.

**Keywords:** Diabetes mellitus. Primary health care. Family Health. Health service evaluation.

### INTRODUCTION

In recent years, studies have emphasized the evaluation of the performance of health actions and programs with the objective of guaranteeing the quality of care and subsidizing decisions so as to meet the real needs of the population<sup>(1)</sup>. In the context of quality in health, evaluating means diagnosing a reality in order to intervene in it, so that, by checking gaps, services can adapt and meet minimum quality standards<sup>(2)</sup>.

Quality can be measured by assessing the needs and expectations of users, for whom programs are instituted and who intend to satisfy. Thus, addressing the assessment that users make of the services implies a judgment of their characteristics and quality, also providing

information to complete and balance them<sup>(2)</sup>.

Thus, the analysis of the perception/satisfaction of health services from the perspective of users allows for greater adaptation and promotion of care based on real needs. It is imperative that technical assessments are complemented with the perception of the individuals to whom the care is intended<sup>(3-4)</sup>.

National studies<sup>(1-2,4)</sup> have shown that the perception of individuals about public health services is directly related to expectations about them and to some dimensions related to the care received, such as availability of medicines, organization of the service, access and bonding. Satisfaction, in turn, can favor adherence to the prescribed treatment and better coping with the disease<sup>(1-2,4)</sup>. In turn, international and national

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\*Nurse, PhD in Nursing, University Center of Maringá - UNICESUMAR, Maringá, PR, Brazil. E-mail: aliny.lima.santos@gmail.com. ORCID: <https://orcid.org/0000-0002-4392-4452>.

\*\*Nurse, PhD in Philosophy of Nursing, Professor of the Undergraduate and Graduate Nursing courses of the State University of Maringá, Maringá, PR, Brazil. E-mail: soniasilva.marcon@gmail.com. ORCID: <https://orcid.org/0000-0002-6607-362X>.

\*\*\*Nurse, Specialist in Adult Intensive Care, Paraná Hospital, Maringá, PR, Brazil. E-mail: bastosnataly@gmail.com. ORCID: <https://orcid.org/0000-0002-5905-0067>.

\*\*\*\*Medical student, University Center of Maringá - UNICESUMAR, Maringá, PR, Brazil. E-mail: vihibary\_@hotmail.com. ORCID: <https://orcid.org/0000-0001-9677-4534>.

\*\*\*\*\*Medical student, University Center of Maringá - UNICESUMAR, Maringá, PR, Brazil. E-mail: gaab\_gpc79@yahoo.com. ORCID: <https://orcid.org/0000-0001-8564-3432>.

\*\*\*\*\*Nurse, PhD student in nursing at the State University of Maringá, Professor at the University Center of Maringá - UNICESUMAR, Maringá, PR, Brazil. E-mail: ludmilalopesbolsoni@gmail.com. ORCID: <http://orcid.org/0000-0002-1645-8572>.

\*\*\*\*\*Nurse, PhD in Nursing, Professor of Undergraduate and Graduate Nursing courses of the State University of Maringá, Maringá, PR, Brazil. E-mail: hfgoes@uem.br. ORCID: <https://orcid.org/0000-0002-6071-692X>.

studies show that satisfaction and, consequently, the quality of the health service, are associated with lower rates of hospitalization and hospital readmission, as well as other health problems and complications<sup>(5-6)</sup>.

With regard to care for people with type 2 diabetes mellitus (DM2), it is in the Primary Health Care (PHC), more specifically in the Family Health Strategy (FHS), that most of the prevention and treatment actions are concentrated. This condition is considered sensitive to PHC, which means to say that complications related to DM2 (hospitalizations, for example) can be reduced with effective actions at this level of health care<sup>(7)</sup>.

In view of the relevance of PHC for coping with chronic conditions such as DM2, evaluation processes have demonstrated the advances and gaps in the development of the Unified Health System (SUS) in order to foster the creation of policies and the response of services. In the meantime, the Program for Improving the Access and Quality in Primary Care (PIAQ), implemented since 2011 and which completed its third cycle in 2018, institutionalized a financial incentive from the Ministry of Health to improve the standard of care offered to SUS users through FHS teams<sup>(8)</sup>.

The PIAQ is based on the evaluation of the structure of health services and the work process, as well as and the results obtained through them. Among the fundamental indicators for assessing the quality of health services, user satisfaction is one of the most important for measuring results and readjusting actions<sup>(8-9)</sup>.

It is understood that evaluations of this service from the perspective of users are important because they bring different realities that can contribute to the elaboration of plans more focused on user needs, for the reformulation of the teams' work processes, as well as for the reorientation, prioritization of managers and their best qualification for the new demands that have been built with new social realities<sup>(7)</sup>.

The choice to investigate the impact that the actions have on the users' evaluation of the care by the FHS to a specific group of users was due to the magnitude of the problem of DM2<sup>(10)</sup>, a public health problem with high social cost and

great impact in terms of increasing morbidity and mortality, being among the conditions which are most sensitive to PHC<sup>(11)</sup>. Furthermore, multiple efforts have been made to enhance the diagnosis, registration, monitoring and assistance to this public<sup>(8)</sup>.

Furthermore, there are studies which investigated user satisfaction with health services<sup>(8)</sup>, some using the PIAQ framework<sup>(9)</sup>, but no one was found that specifically assessed the satisfaction of users with diabetes. So, the following question is raised: which aspects positively interfere in the satisfaction with the care provided in PHC among users with DM2?

It is believed that the survey of the abovementioned aspects may help to improve the PHC directed to diabetic patients. Thus, the objective of the study was to verify the factors associated with the positive evaluation of the care provided to people with DM2 in PHC.

## METHODOLOGY

This is an evaluative, cross-sectional study carried out with individuals with DM2, assisted by FHS teams in a municipality in the southern region of Brazil. At the time of data collection, the municipality had 29 Basic Health Units, 66 FHS teams and 7,562 people aged 15 or over registered in the Hypertensive and Diabetic Registration and Monitoring System - HIPERDIA – with diagnosis of DM2.

As inclusion criteria, only people aged 18 years or older, diagnosed with DM2 and who were seen by the respective FHS teams at least once in the last six months were considered eligible. People with DM2 registered in the rural FHS team were excluded.

With the number of individuals eligible to be included in the study, lists with the names and addresses of people with DM2 were requested in 65 out of 66 FHS teams (one of the 66 was a rural FHS). Afterwards, the participants were randomly drawn.

For the calculation of the sample size, a prevalence of 50% for DM2 was adopted, aiming at greater variability of the studied event, associated with an estimate error of 5%, reliability and precision of the sample of 95%, with an additional of 15% (55 individuals) for possible losses, resulting in a sample of 420

individuals. After refusals and address changes, 408 people with DM2 were effectively interviewed.

Considering the subjectivity and complexity of the users' evaluation as to the way they perceived the care received, which generated discussions about satisfaction surveys, and also aware of the relevance of grasping such information and the incipience of validated instruments that would allow addressing this aspect within the scope of PHC, a structured instrument was created for this study with a snapshot of some questions to assess the satisfaction of users present in the PIAQ form, which was also used in national studies that addressed satisfaction of PHC users<sup>(9,12-13)</sup>.

In the present study, satisfaction on the part of the interviewees will be referred to as "positive evaluation of the care received", identified by the sum of a set of six questions about the service, namely: have you thought of making a complaint about the service? (yes = 0; no = 1); would you like something to be different in the service? (yes = 0; no = 1); are you satisfied with the service received? (no = 0; yes = 1); are you well received by all team professionals? (no = 0; yes = 1); would you indicate the service to a friend or family member? (no = 0; yes = 1); and what score would you give to the service? (< 7 = 0; > 7 = 1). A total score of 6 and 5 points was considered to indicate a positive evaluation; 4 and 3, intermediate evaluation; and 2, 1 and 0, negative evaluation. For the purpose of analysis, the intermediate and negative categories were grouped.

The determining factors tested were: a) Sociodemographic characteristics - sex (male and female), age group, color (white and non-white), marital status (with and without a partner), education (illiterate, elementary school, high school and higher education) and income (number of minimum wages); b) Clinical and behavioral characteristics: time of diagnosis, periodicity of capillary blood glucose measurements, adherence to adequate food, frequency of physical activity, practice of smoking, and alcohol consumption; c) Indicators of the care received (time of registration in the FHS team, frequency of care by the same physician, by the same nurse and in HIPERDIA

groups; availability of evaluation and medical consultation in the groups, frequency of weight, blood pressure, capillary glycemia and waist circumference measurements, examination of the feet, and cardiac auscultation; delivery of oral antidiabetics and/or insulin, request for blood and urine tests, scheduling of tests at the BHU, ease to show test results to the physician, offer of guidance on the disease and related complications, physical activity, adequate nutrition and correct use of oral antidiabetics and/or insulin); d) Service access indicators: availability of scheduling of consultations, receiving consultations on the same day that the patient visits the BHU, number of days of wait for the consultation, and whether the waiting time when arriving for the consultation is long.

The practice of physical activity was considered when dynamic exercises (walking, cycling, gymnastics, among others) were performed with a minimum frequency of three times a week and a minimum duration of 30 minutes each session<sup>(14)</sup>. The dietary pattern was analyzed considering the following aspects: affirmation of never or almost never eating sweets, sugars, diverse carbohydrates (cookies, breads, cakes, etc.) and foods rich in fats; always or almost always eating five or more servings of fruits and vegetables a day; always or almost always using a sweetener; and eating five or more meals daily. Inadequate dietary pattern was indicated by the affirmation of three or less of these items<sup>(15)</sup>.

Four hundred and eight (408) individuals were interviewed, approached in their homes, according to subsamples proportional to the numbers of people with DM2 registered in each FHS team in the city. Interviews were carried out from December 2013 to July 2014, during the weekdays and on Saturdays, in the morning and afternoon. When the individual was not at home, two further visits were made at different times. If it was not possible to carry out the interview, the next individual on the list was contacted, with only one substitution allowed.

The completed instruments were checked for the presence of failures before compilation into a database using Microsoft Office Excel 2010 software. After organizing this initial database, the data were transferred to the SPSS version 20 software. The analysis was carried out using

descriptive statistics, using absolute and relative frequencies, and then, there was an association of the independent variables with the variable of interest (positive evaluation of the care received) through bivariate analysis (Pearson's chi-square). In the modeling process, the variables were included in the multiple logistic model according to the lowest p-value; all variables with significance less than 20% were inserted in the analysis, using the stepwise technique.

When working with multichannel independent variables, the reference category for tests was the one in which the proportion of individuals was lower. The measure of association used was Odds Ratio (OR), with a 95% confidence interval and a level of significance established when  $p < 0.05$ . The Hosmer-Lemeshow test was used to verify the goodness of fit of the multiple logistic regression model, in which the closer to 1.0, the better the goodness of fit of the model.

The study complied with national and international ethical standards and recommendations for research with human beings and the project was authorized by the Permanent Ethics Committee for Research involving Human Beings of the State University of Maringá (COPEP) (Opinion 448.162/2013). After clarification on the objectives and criteria for participation, all participants signed two copies of the Informed Consent Form (ICF).

## RESULTS

The analysis of the sociodemographic profile revealed a predominance of females (69.4%), in the age group above 70 years (39.0%) followed by those aged 60 to 70 years (38.5%), white skinned (77.2%), with a partner (69.4%), with a family income below two minimum wages (44.9%) and with complete elementary school (59.1%) or illiterate (20.8%). The most frequent time since diagnosis of DM2 was five to ten years (39.2%). Regarding the variable of interest, it was observed that most of the 408 users with DM2 in the study (81.9%) evaluated the care received in PHC as positive, followed by 14.7% who evaluated it as intermediate and 3.4% as negative.

With regard to sociodemographic and behavioral characteristics, the bivariate analysis

showed a significant association between the positive evaluation of the care received and the male sex, realization of physical activity, and non-use of cigarettes (Table 1).

Regarding the variables related to the service, there was a significant association between positive evaluation and the frequency of care in HIPERDIA groups, individual assessment and medical consultation during group meetings, request for blood tests related to the disease, and waiting time for a medical consultation with the FHS team (Table 2).

Table 3 shows the frequency with which some activities are carried out and guidelines given during care, according to the people who evaluated the care received as positive.

There was a predominance of positive evaluation among individuals who, when attended by the FHS teams, had their weight checked, cardiac auscultation performed, and received oral antidiabetics and/or insulin and guidance about the disease and its complications, the importance of frequent physical activity and adequate nutrition, and correct use of oral antidiabetics and/or insulin.

According to Table 4, with respect to the variables related to access to services offered by the FHS team, a significant association was identified between positive evaluation and care provided by the same physician, scheduling of tests at the BHU, ease to show test results to the physician of the team, receiving consultations on the same day that the patient visits the BHU, and waiting time when arriving for the consultation.

In the multiple analysis, there was a greater chance of a positive evaluation of care for DM2 among male users who practice physical activity, who were seen on the same day they went to the BHU, who received oral antidiabetics and/or insulin and guidance on adequate food, and who were able to show the results of their exams to the physician more easily. However, this positive assessment was not independent of being seen by the same physician, long waiting time to receive a consultation, provision of guidance about the use of oral antidiabetics and/or insulin, and the frequency with which they are assisted in HYPERDIA groups (Table 5).

**Table 1.** Bivariate analysis of sociodemographic data, time of diagnosis of the disease, periodicity of capillary blood and behavioral glucose measurements according to the positive evaluation of care for DM by users, Maringá, PR, Brazil, 2014.

Variables	Total (n = 408)	Positive evaluation (n = 334)	
	n (%)	n (%)	p-value
Sex			
Male	125 (30.6)	112 (89.6)	<b>0.008</b>
Feminine	283 (69.4)	222 (78.4)	
Color			
White	315 (77.2)	256 (81.3)	0.568
Non-white	93 (22.8)	78 (83.9)	
Marital situation			
With partner	283 (69.4)	230 (81.3)	0.666
Without partner	125 (30.6)	103 (83.1)	
Education			
Illiterate	85 (20.8)	71 (83.5)	0.844
Elementary school	240 (59.1)	195 (80.9)	
High school	66 (15.9)	54 (83.1)	
Higher education	17 (4.2)	14 (82.4)	
Income (MW)			
< 2	183 (44.9)	149 (81.4)	0.090
2 - 4	142 (34.8)	112 (78.9)	
> 4	83 (20.3)	73 (88.0)	
Age			
< 60	92 (22.4)	67 (74.4)	0.078
60 – 70	157 (38.5)	132 (84.1)	
> 70	159 (39.0)	133 (83.6)	
Time of diagnosis (years)			
< 5	90 (23.1)	66 (73.3)	0.235
5 – 10	160 (39.2)	134 (83.3)	
11 – 20	117 (28.7)	100 (85.5)	
> 20	41 (10.0)	34 (82.9)	
Periodicity of capillary blood glucose measurements			
Daily	84 (20.6)	73 (86.9)	0.149
Monthly	38 (9.3)	29 (76.3)	
Quarterly	123 (30.1)	101 (81.3)	
Irregular	163 (40.0)	132 (81.0)	
Adherence to adequate food			
Yes	98 (24.0)	84 (85.7)	0.258
No	310 (76.0)	250 (80.6)	
Physical activity			
Yes	205 (50.2)	181 (88.3)	<b>0.001</b>
No	203 (49.8)	153 (75.4)	
Smoker			
Yes	48 (11.8)	33 (68.8)	<b>0.014</b>
No	360 (88.2)	301 (83.6)	
Alcohol consumption			
Yes	39 (9.6)	30 (76.9)	0.678
No	369 (90.4)	304 (82.4)	

**Table 2.** Bivariate analysis of the association of variables related to services offered by the same FHS team to users with DM2 who positively evaluated the care provided by FHS teams (n = 334), Maringá, PR, Brazil, 2014.

Variables related to the offer of care	Total	Positive evaluation	
	n (%)	n (%)	p-value
Time of care in the FHS (years)			
< 5	105 (25.7)	82 (78.1)	0.250
5 – 10	127 (31.1)	108 (85.0)	
10 -20	130 (31.9)	109 (83.8)	
< 20	46 (11.3)	35 (37.7)	
Frequency of consultations			
Monthly	30 (7.4)	24 (80.8)	0.010
Bimonthly	29 (7.1)	28 (96.6)	
Quarterly	316 (77.5)	261 (83.5)	
Irregular	33 (8.1)	21 (63.6)	
Positive evaluation of the medical consultation			
Yes	254 (62.3)	217 (85.4)	0.017
No	154 (37.7)	117 (76)	
Request for blood test*			
Yes	336 (82.4)	282 (82.3)	0.009
No	67 (16.4)	47 (70.1)	
Request for urine test*			
Yes	283 (69.4)	233 (82.3)	0.666
No	118 (28.9)	95 (80.5)	
Waiting time for medical consultation (days)			
1 – 4	180 (44.1)	147 (81.7)	0.044
5 – 10	143 (35.0)	123 (86.0)	
> 10	85 (20.8)	64 (75.3)	

\*Valid data used

**Table 3.** Distribution and bivariate analysis of the variables related to the services offered by the FHS teams according to frequency of performance, from the perspective of people with DM2 who evaluated the care as positive (n = 334), Maringá, PR, Brazil, 2014.

Variables related to the services offered	Positive evaluation of the care received (n=334)			p-value
	Always n (%)	Sometimes n (%)	Never n (%)	
Assessment of:				
Weight	279 (85.4)	20 (71.7)	35 (77.8)	0.022
Blood pressure	321 (81.9)	11 (84.6)	2 (66.2)	0.766
Capillary glycemia	280 (82.1)	33 (80.5)	21 (80.3)	0.957
Abdominal circumference	159 (82.4)	62 (80.5)	113 (81.9)	0.888
Feet	38 (80.9)	32 (82.1)	264 (82)	0.982
Cardiac auscultation	132 (86.3)	64 (85.3)	138 (76.7)	0.022
Delivery of antidiabetics/insulin	306 (83.6)	13 (81.2)	15 (57.7)	0.004
Offer of guidance on:				
The disease	115 (87.6)	111 (84.1)	68 (68.7)	<0.001
Complications	147 (86.5)	94 (83.2)	93 (74.4)	0.009
Physical activity	200 (84.7)	71 (85.5)	63 (70.8)	<0.001
Adequate food	183 (86.3)	105 (85.4)	46 (63.0)	<0.001
Use of antidiabetics and/or insulin	222 (84.4)	85 (81.7)	27 (65.9)	0.011

**Table 4.** Distribution and bivariate analysis of variables related to access to services offered by FHS teams, according to frequency of performance, from the perspective of people with DM2 who evaluated the care as positive (n = 334), Maringá, PR, Brazil, 2014

Variables related to access to services offered	Always n (%)	Sometimes n (%)	Never n (%)	p-value
	n (%)	n (%)	n (%)	
Patient seen by the same physician	260 (85.2)	57 (77.0)	17 (58.9)	0.001
Patient seen by the same nurse	235 (81.6)	80 (86.0)	19 (70.4)	0.174
Scheduling of requested exams by the BHU*	299 (83.9)	16 (76.2)	19 (63.3)	0.016
Ease to show test results to the physician	254 (84.9)	67 (81.7)	13 (48.1)	<0.001
Receiving the consultation on the same day	96 (88.1)	101 (84.2)	136 (76.4)	0.035
Leaves the BHU with the consultation scheduled	202 (83.8)	95 (81.2)	36 (73.5)	0.127
Delay to receive a consultation when arriving at the BHU	35 (67.3)	128 (82.6)	171 (85.1)	0.012

\*Valid data used

**Table 5.** Multiple analysis of sociodemographic variables and relation to the offer and access to the service, according to satisfaction of people with DM2 assisted by FHS teams, Maringá, PR, Brazil, 2014.

Variables*	Positive evaluation	
	OR <sub>adjusted</sub> <sup>†</sup> (CI95%)	p
Ease to show test results to the physician (sometimes)	3.09 (1.03; 9.27)	<b>0.044</b>
Ease to show test results to the physician (always)	2.88 (1.08; 7.67)	<b>0.034</b>
Guidance on proper nutrition (sometimes)	2.72 (1.18; 6.26)	<b>0.019</b>
Guidance on proper nutrition (always)	2.22 (1.03; 4.75)	<b>0.041</b>
Physical activity (yes)	2.54 (1.37; 4.73)	<b>0.003</b>
Delivery of drugs (sometimes)	0.12 (0.02; 0.72)	<b>0.020</b>
Sex (male)	2.96 (1.38; 6.37)	<b>0.005</b>
Consultation on the same the patient goes to the BHU (always)	2.60 (1.17; 5.74)	<b>0.018</b>

\* Model adjusted by the variables: "Seen by the same physician", "Long waiting time for consultations", "Guidance on the use of medication", and "Frequency of consultations"; †Quality of adjustment verified by the Hosmer and Lemeshow test: p = 0.917.

## DISCUSSION

The data obtained corroborate with another national study that, although did not focus on individuals with DM2, showed a high level of satisfaction of users of PHC services, especially with regard to access, problem-solving, effectiveness, services offered and consultations with physicians, especially when these gave the opportunity for the patients to ask questions about their health condition<sup>(7)</sup>. This data points to the need to put into practice the attributes of Primary Care, mainly with regard to access to the service at the first contact and longitudinality, aiming at better user satisfaction, better bonding with primary care and, consequently, better control of chronic diseases and prevention of their complications.

The multiple analysis showed that male users who frequently practice physical activity, who had no difficulty to show the results of the exams to the physician of the team, received guidance on proper nutrition, received consultations on the same day they went to the BHU, and received oral antidiabetics and/or insulin had a greater chance of evaluating the care as positive. It should also be noted that this model was not independent of the frequency of visits, being seen by the same physician, waiting to receive a consultation at the BHU, and receiving guidance on the proper use of oral antidiabetics and/or insulin.

The association found between positive evaluation of the care offered and the male sex deserves to be highlighted, considering the fact that the female sex was predominant in the studied sample. This fact may be associated with the greater demand for health services on the

part of women, either as the focus of the health service sought or as a companion of a family member, friend or neighbor seeking health care, which probably allows them to have a more accurate and more rigorous assessment of care when compared to men<sup>(16)</sup>.

A study developed in Rio Grande do Norte, whose objective was to find the factors that influenced the access of male individuals to PHC, found that the long waiting time for consultations, low problem-solving capacity of the service, and working hours incompatible with the work of the patients were decisive in the negative assessment of PHC by the users. Moreover, the feeling of self-sufficiency among men, as well as the search for health services only when symptoms are of concern to them, reduced the access of these individuals to PHC<sup>(17)</sup>. Thus, satisfaction assessment studies have shown that satisfaction is more related to the bond, access and longitudinality of care than to the search for services offered by the teams<sup>(1)</sup>.

Nevertheless, access to services also appeared as a predictor variable for the positive evaluation of care, and the wait to be assisted was an adjustment variable for the predictive model found.

The ease of receiving a consultation and the waiting time have often been associated with the satisfaction of service users in Brazil<sup>(2)</sup> and also in other countries<sup>(18)</sup>. It must be considered that the difficulty of accessing the services offered by BHUs is a frequent complaint among users across the country, as shown in studies developed in the Federal District and also in other regions of Brazil<sup>(19)</sup>, in which the absence of this attribute was linked to reports of dissatisfaction. Users' dissatisfaction with the

waiting time, regarding the scheduling of consultations at the BHU, may indicate difficulties related to the organization of the health service and the guarantee of access to care in a timely and resolving manner, aspects closely related to the achievement of the objectives of the FHS. The difficulty of accessing primary care can, in turn, result in greater demand for emergency care and disorganization of the health system<sup>(20)</sup>.

As for medical care, it was observed that always being seen by the same professional and the frequency with which care was provided at the BHU were relevant aspects for the positive evaluation of users with DM2, since they remained as adjustment variables.

Higher frequency of medical consultations carried out in PHC in fact leads to better adherence to treatment<sup>(21)</sup>, and this, in turn, maintains a strong relationship with satisfaction with the health services. However, in the present study it was observed that users attended more frequently (monthly) were less satisfied than those who went to the BHU with longer intervals. This result may be related to the greater proportion of users who are monitored bimonthly or quarterly, but also to the fact that the frequent search can be an indication that the disease is not under control.

It is noteworthy that the continuity of care with the same health professional implies a longitudinal interpersonal relationship, which favors greater success in health interventions, greater adherence to the proposed treatment, and increased user satisfaction with the services provided to him<sup>(24)</sup>.

However, although nurses are among the professionals who are most involved with the care provided in PHC, developing managerial and direct care actions for users in an integrated and articulated manner with the entire FHS team, no significant association was found between positive evaluation and being seen by the same nurse. This data can also be explained by the fact that nurses are increasingly imbued with administrative-bureaucratic activities, such as organizing the service and teamwork, and this reduces the time dedicated to direct health care and contact with the users<sup>(22)</sup>.

Nevertheless, the inverse association between the positive evaluation of care and the delivery

of oral antidiabetic and/or insulin in the “at times” option deserves to be highlighted, showing that such activity, when sporadic, is an inhibitor of positive evaluation. This finding confirms results of another study carried out with 143 public service users in Rio Grande do Sul, in which the reduced availability of medications was one of the factors that most generated dissatisfaction<sup>(23)</sup>.

In turn, individuals who practiced physical activities reported positive evaluations more frequently. This finding suggests that better control of blood glucose levels and, in turn, DM2, well-being and improvement in quality of life provided by frequent physical activity<sup>(24)</sup>, found in more than half of the users participating in the present study (50.2%), also favored the positive evaluation of the care received.

In the present study, the provision of guidance on adequate nutrition was also a predictor of positive evaluation. This guidance included the adjustment variable of correct use of oral antidiabetics and/or insulin. Educational activities such as lectures and group discussions increase the adherence of diabetic patients to treatment, in addition to contributing to knowledge about their health condition. Thus, it is necessary and fundamental to recognize the importance of associating clinical treatment with health promotion activities. Thus, offering health promotion actions to users through guidance leads to better control of the disease and may be related to greater satisfaction with the health service<sup>(25)</sup>.

Another tool that can be applied in clinical practice to better control chronic diseases, especially in complex cases, and consequently, increase user satisfaction is the Singular Therapeutic Project, aiming at comprehensive, multiprofessional attention and sharing of care.

Thus, several determinants influence the positive evaluation of the care received by people with DM2, and the interaction between them results in a certain level of acceptability and satisfaction. In spite of being a complex interaction, as it is a subjective aspect based on perceptions and experiences, it is clear here that aspects such as the professional-user interaction (the bond, symbolized by the consultation with the same physician), the availability of medicines, and access to services perceived as



necessary by users are relevant and important for users to consider health care satisfactory.

A possible limitation of this study is inherent to the fact that the perception of users varies according to their expectations regarding the service received and the way they were assisted the last time they visited the BHU. Furthermore, this was a cross-sectional study, with data collected in a single moment, making it impossible to monitor possible changes in the way individuals perceive the service. However, the results found are valid for this and other scenarios, as it is through the evaluation of the determinants of satisfaction that further training and qualification in the care provided will be possible, in order to align it as much as possible with the users' expectations. This will contribute both to the improvement and enhancement of the system and to the education of the population and their adherence to the proposed treatment, leading to the prevention of health problems and complications.

## CONCLUSION

The results of this study showed that the evaluation on the part of users of PHC with DM2 was mostly positive, and the determining factors for such evaluation were the male sex, frequent practice of physical activity, possibility to show test results to the physician of the team,

provision of guidance on proper nutrition, possibility of receiving a consultation on the same day that the patient goes to the BHU, and provision of oral antidiabetics and/or insulin. It should be also noted that the logistical model was not independent of having consultations with the same physician, the frequency of consultations, the waiting time to receive a consultation at the BHU, and guidance on the proper use of oral antidiabetics and/or insulin.

Based on the findings, it is understood that user satisfaction is related with access to quality service, based on the purposes of the embracement of their demands and needs. It is also related to the care provided over time and in a continuous manner and to a satisfactory bond between users and the team, favoring interpersonal relationships and the coordination of care as an integrative practice of health actions and services with problem-solving capacity.

Finally, the analysis of satisfaction of users with DM2 can be a sensitive indicator of the quality of the service provided by FHS teams, as DM2 is a disease that is mostly followed-up and treated in PHC. It is, therefore, pertinent to propose the continuity of studies of this nature through qualitative methodologies because they allow the identification of which subjective elements affect the satisfaction of users with the care received.

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## AVALIAÇÃO POSITIVA DA ASSISTÊNCIA ÀS PESSOAS COM DIABETES MELLITUS NA ATENÇÃO BÁSICA

### RESUMO

**Objetivo:** Verificar os fatores associados à avaliação positiva da assistência prestada às pessoas com diabetes tipo 2 na Atenção Primária. **Método:** Estudo descritivo transversal, no qual foram entrevistadas 408 pessoas com diabetes tipo 2, da zona urbana de um município da região Sul do Brasil, de 65 equipes da Estratégia Saúde da Família. Foi utilizado questionário contendo variáveis sociodemográficas, clínicas, comportamentais e indicadores da assistência e do acesso ao serviço de saúde na atenção básica; realizado o teste qui-quadrado de Pearson, regressão logística múltipla e cálculo do Odds Ratio para análise dos fatores relacionados à avaliação positiva da assistência. **Resultados:** A prevalência da avaliação positiva da assistência prestada foi de 81,9%. Os fatores que apresentaram associação significativa com a avaliação positiva foram: sexo masculino (OR=2,96), atividade física (OR=2,54), ser atendido no mesmo dia em que vai à Unidade Básica (OR=2,60), receber os antidiabéticos orais e/ou insulina (OR=0,12) e orientações sobre alimentação adequada (OR=2,72); e conseguir mostrar os resultados de exames com maior facilidade (OR=3,09). **Conclusão:** O diabetes tipo 2 pode ser um indicador da qualidade do serviço prestado pelas equipes da ESF e a satisfação dos usuários está relacionada ao serviço de qualidade, ao acolhimento às demandas e ao cuidado contínuo.

**Palavras-chave:** Diabetes mellitus. Atenção primária à saúde. Saúde da família. Avaliação de serviço de saúde.

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## EVALUACIÓN POSITIVA DE LA ATENCIÓN A LAS PERSONAS CON DIABETES MELLITUS EN LA ASISTENCIA BÁSICA

### RESUMEN

**Objetivo:** verificar los factores asociados a la evaluación positiva de la atención ofrecida a las personas con diabetes tipo 2 en la Asistencia Primaria. **Método:** estudio descriptivo transversal, en el que fueron entrevistadas 408 personas con diabetes tipo 2, del área urbana de un municipio de la región Sur de Brasil, de 65 equipos de la Estrategia Salud de la Familia. Fue utilizado cuestionario conteniendo variables sociodemográficas, clínicas, de comportamiento e indicadores de la atención y del acceso al servicio de salud en la asistencia básica; fueron realizados prueba de chi-cuadrado de Pearson, regresión logística múltiple y cálculo del Odds Ratio para análisis de los factores relacionados a la evaluación positiva de la atención. **Resultados:** la prevalencia de la evaluación positiva de la atención ofrecida fue de 81,9%. Los factores que presentaron asociación significativa con la evaluación positiva fueron: sexo masculino (OR=2,96), actividad física (OR=2,54), ser atendido en el mismo día que va a la Unidad Básica (OR=2,60), recibir los antidiabéticos orales e/o insulina (OR=0,12) y orientaciones sobre alimentación adecuada (OR=2,72); y conseguir mostrar los resultados de exámenes con más facilidad (OR=3,09). **Conclusión:** la diabetes tipo 2 puede ser un indicador de la calidad del servicio ofrecido por los equipos de la ESF y la satisfacción de los usuarios está relacionada al servicio de calidad, a la acogida a las demandas y al cuidado continuo.

**Palabras clave:** Diabetes mellitus. Atención primaria de salud. Salud de la familia. Investigación en servicios de salud.

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**Corresponding author:** Aliny de Lima Santos. Street Pioneiro Gumercindo Correia de Aguiar, 52. Maringá/PR, Brazil. Phone: (44) 99805-8836. E-mail: [aliny.lima.santos@gmail.com](mailto:aliny.lima.santos@gmail.com)

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