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Nursing Consultation in Primary Health Care: Care for people with chronic cardiometabolic diseases

Consulta de enfermagem na Atenção Primária à Saúde: cuidado às pessoas com doenças crônicas cardiometabólicas

Consulta de enfermería en la Atención Primaria de Salud: el cuidado a los individuos con enfermedades crónicas cardiometabólicas

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Abstract: Objective: to design a nursing consultation instrument for people with high blood pressure and/or type 2 diabetes mellitus being followed up in Primary Health Care. **Method**: methodological study comprising two stages developed in a Basic Health Unit (UBS) in the interior of the state of São Paulo. Stage 1 was related to designing the instrument and validating its content with five judges. Stage 2 was related to pre-testing and evaluation of its measurement properties. The questionnaire was pre-tested with 30 people with high blood pressure and/or diabetes mellitus that attended the UBS. **Results**: the questionnaire had a high content validity index (CVI = 0,96) and moderate feasibility (considering the administration time). **Conclusion**: the instrument was adequate to the reality and need of primary health care in terms of content.
Keywords: Nursing; Diabetes mellitus; High blood pressure; Surveys and questionnaires; Validation study

Resumo: Objetivo: desenvolver um instrumento para Consulta de Enfermagem às pessoas com hipertensão arterial e/ou diabetes *mellitus* tipo 2 em seguimento na Atenção Primária à saúde. **Método:** estudo metodológico, composto por duas etapas, desenvolvido em Unidade Básica de Saúde (UBS) no interior do Estado de São Paulo. A Etapa 1 correspondeu à Construção do Instrumento e à Validação de Conteúdo por cinco juízes. A Etapa 2 correspondeu ao pré-teste e à avaliação de suas propriedades de medida. O questionário foi pré-testado com 30 pessoas com hipertensão arterial e/ou debates *mellitus* usuárias da UBS. **Resultados:** o questionário apresentou alto índice de validade de conteúdo (IVC = 0,96) e moderada aplicabilidade (pelo tempo de aplicação). **Conclusão:** o instrumento se apresentou adequado à realidade e à necessidade da Atenção Primária em termos de conteúdo.
Descritores: Enfermagem; Diabetes mellitus; Hipertensão; Inquéritos e questionários; Estudos de validação

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Resumen: Objetivo: desarrollar un instrumento para la Consulta de Enfermería a los individuos con hipertensión arterial y/o con diabetes mellitus tipo 2 en monitoreo en la Atención Primaria de Salud. **Método**: estudio metodológico dividido en dos etapas y llevado a cabo en una Unidad Básica de Salud (UBS) en el estado de São Paulo. La Etapa 1 consistió en la Elaboración del Instrumento y la Validez de Contenido por cinco expertos. La Etapa 2 correspondió a la prueba previa y a la evaluación de sus propiedades de medida. El cuestionario se aplicó previamente a 30 individuos con hipertensión arterial y/o con diabetes mellitus, todos usuarios de la UBS. Resultados: el cuestionario reveló alto índice de validez de contenido (IVC = 0,96) y moderada aplicabilidad (por el tiempo de aplicación). **Conclusión:** el instrumento fue adecuado a la realidad y la necesidad de la Atención Primaria en cuanto al contenido.
Descriptores: Enfermería; Diabetes mellitus; Hipertensión; Encuestas y cuestionarios; Estudio de validación

Introduction

High blood pressure (HBP) and type 2 diabetes mellitus (DM2), considered chronic non-communicable diseases (CNCD), place a heavy burden on the financial and human resources of the Brazilian Unified Health System (SUS), besides being difficult to deal with and care for by families and patients. In 2015, Brazilian spending with DM was approximately R$ 4 billion, given its chronicity, i.e., continuous treatment.[1] In 2018, HBP accounted for 59% of direct costs related to drug treatment, a relevant financial impact (more than R$ 2 billion per year) in Brazil.[2] Estimated spending with cardiovascular diseases, in turn, increased 17% between 2010 and 2015, reaching R$ 37.1 billion in 2015.[3]

In view of the impact of HPB on health, it is important to recognize that the disease is characterized by increased and persistent levels of systolic ≥ 140 and diastolic ≥ 90 mmHg blood pressure (BP), mainly caused by the stiffening of the arteries, and consequently, by increased peripheral vascular resistance (PVR), often caused by high sodium consumption and aggravated by risk factors, such as obesity.[4]

DM2, in turn, which accounts for 90 to 95% of all DM cases, is characterized by decreased insulin secretion from pancreatic β cells and/or by insulin resistance and, consequently, by a higher level of circulating glucose in the bloodstream. For diagnosis of the disease the thresholds are fasting glucose rate ≥ 126mg/dl or percentage of glycated hemoglobin ≥ 6.5%. 1

One may assume that these two pathologies (HBP and DM) are interconnected by their damage and risk factors. Dyslipidemia, metabolic syndrome, heredity, poor diet, high salt intake, smoking and physical inactivity are linked to increased cardiac death.[5] In 2016, HBP was directly linked to 45% of cardiac deaths, while only 54.1% of patients diagnosed with HBP kept it under control.[6] DM, in turn, is present in the lives of 1 in 10 American adults and has a prevalence of type 2.[1]

In 2019, about 17 million people were affected by DM, with Brazil ranking fifth among countries with the greatest number of affected people. It is estimated that, in 2045, more than 20 million people will have DM, and Brazil will record half of deaths from DM estimated for the group of countries in South and Central America.[7] Therefore, there is evident need for greater knowledge of the costs of CNCDs in order to improve the investment of financial and human resources in Primary Health Care (PHC), prioritizing integrated and intersectoral policies to prevent, address and control high blood pressure and diabetes, since preventive treatment would afford greater benefits for patients and decrease SUS costs.[2]

Given the chronicity and need for continuous treatment of HBP and DM2 in PHC, nurses play an essential role. Through interventions and monitoring, they are present in the stages of medical diagnosis, adherence to and understanding of drug treatment, prescription and indication of non-drug treatments, performance in risk factors, monitoring of signs and symptoms and interventions in social aspects, such as patients' family context and support networks. In this sense, one of their main working tools is nursing consultation (NC).

NC is a private activity of nurses in which the nursing process (NP) is carried out in five stages: survey of possible nursing problems and health needs requiring intervention, through medical history and oral reports; clinical observation of possible changes, signs and symptoms during physical examination (nursing record); nursing diagnosis (ND), to establish care priorities; intervention and implementation of planning; evaluation of processes and their

results; and record-keeping of activities, mainly ND and actions annexed to the patient's medical history and records. Thus, NS enables nurses to provide care for people with HBP and DM2, especially regarding adherence to medication and non-drug treatments.[8]

The International Classification for Nursing Practice (ICNP) stands out as a means to achieve systematized ND to better provide unified nursing action and care, given the pressing need for this kind of work in PHC in SUS. ICNP aims to systematize the terminology used by nurses, facilitating care planning through the organization of patient data and enabling standardized classification.[9]

Considering the need for continuous care due to the chronicity of HBP and DM2, and given the role of nurses in preventing diseases and promoting health, the NP must be carried out systematically and properly recorded. This makes it possible to provide the best evolution and follow-up of the health condition of people with HBP and DM, since they are silent diseases that require various kinds of care.

Thus, an ND instrument is needed for people with HBP and DM2 in order to facilitate and encourage the NP in NC, seeking the best evolution and appropriate monitoring of their health condition. Therefore, this study aimed to design a Nursing Consultation instrument for people with HBP and/or DM2 cared for in Primary Health Care.

Method

This is a study with a methodological approach[10] aimed at designing a NC for PHC, comprising two stages and developed in a Basic Health Unit (BHS) in the interior of the state of São Paulo. This BHS belongs to the southern region of a health district. The nursing staff is composed of three nurses and ten nurse technicians. The BHS is a center of practice and internship for undergraduate nursing and medical students. The population in the area covered

by the UBS is 42,467, of whom 1,275 (3.0%) are registered with HBP and 715 (1.7%) with DM2. Comparison between the local BHS data and the national parameters for DM and HBP strongly suggests underreporting since, according to national parameters,[11] 21.4% of the population aged over 18 have HBP and 6.9% have DM – which would correspond locally to 9,088 and 2,930 inhabitants, respectively.

The methodological path followed is described below.

Stage 1: Instrument Design and Content Validation

In order to design an instrument or questionnaire, it is internationally recommended that the researcher define the variables of interest and their dimensions through bibliographic research, in addition to consultation with scholars in the area and representatives of the population of interest.[12] Thus, a survey of the national and international literature was carried out, as well as of BHS medical records, to collect data that would enable the design of items to holistically evaluate patients with HBP and/or DM2.

Theoretical framework

Self-Care Theory indicates the need for intervention when self-care is impaired, i.e., when a person does not make progress in caring alone for their well-being. Through the nursing process, the consultation should guide the nurse to observe and plan care by acting, guiding, supporting, teaching and being close to patients, raising their awareness about the preservation of their well-being.[13] Thus, nursing consultation guided by the instrument in question helps in organizing care offered to people with high blood pressure and or diabetes so they may practice self-care within their personal, family and social possibilities, relying on professional intervention.

It is noteworthy that the proposed consultation meets the recommendations of the Chronic Care Model of the Pan American Health Organization,[12] which aims to reorganize the work in PHC with people with chronic conditions, adopting supported self-care as one of its

premises. In this model, nursing consultation, based on supported self-care, guides care through adequate clinical management of the chronic disease, necessary changes in lifestyle and attention to the patient's emotional aspects.

The theoretical framework selected to be used at this stage was ICNP, designed by the International Council of Nurses.[9] ICNP was created to provide a unified scientific language common to nursing worldwide. This classification allows nurses to identify nursing diagnoses through nursing phenomena.

Content validation

Content validation is one of the main steps in designing instruments and basically relies on an evaluation by specialists. Experts or judges must evaluate the instrument as a whole, determining its scope (to what extent each concept was covered by the items and whether all its dimensions were included), clarity (wording of items and whether they were written in understandable and appropriate language) and pertinence (or representativeness, whether the items reflect the concepts and are relevant and appropriate to the goals).[14]

At this stage, the experts may suggest adding or deleting items. The judges' evaluation is twofold: qualitative evaluation and quantitative evaluation.

The Content Validity Index (CVI) was used for quantitative evaluation. This index measures the percentage of judges who agree on the instrument and its items, with a minimum agreement level of 0.80 (or 80%),[1] using a four-point Likert scale. Thus, for each item, the answers include: 1 = not relevant or not representative, 2 = item needs major revision to be representative, 3 = item needs minor revision to be representative, 4 = relevant or representative item. The index is calculated by adding the items marked "3" or "4" by the judges. Items that received a score of "1" or "2" must be reviewed or eliminated. The formula is: [CVI = Number of "3" or "4" answers/Total number of answers.

The qualitative evaluation can also be carried out by the judges through suggestions to modify or revise the text or document layout, for example. Thus, this evaluation was done individually and independently by the judges through an interactive process between the researchers and the committee members, in which the judges suggested which points of the instrument could be improved in order to clarify the controversial points of the final instrument.

In the present study, five judges were selected, all nurses, who met at least one of the following selection criteria: having experience in PHC and/or being a researcher with knowledge in designing and validating instruments. The judges, invited by email, received a version of the instrument and a specific questionnaire to carry out the evaluation.

Stage 2: Pre-testing and evaluation of the instrument's properties

At the end of Stage 1, the preliminary version of the instrument was submitted to the pre-testing stage. In this stage, the instrument must be administered to a sample size varying from thirty to forty subjects, according to international recommendations.[15] The feasibility of the instrument can also be evaluated at this stage, in this case based on the time spent filling it out, measured in minutes.[10]

Population, sample and sampling procedure

No participants were recruited in the designing stage of the instrument. Stage 2, in turn, involved the recruitment of people with HBP and/or DM2 in clinical follow-up at the above-mentioned facility who met the following selection criteria: previous medical diagnosis of HBP and/or DM2 and capable of communicating effectively, showing acceptable orientation and cognition to be included in the study. Thus, for the pre-testing stage, 30 participants were included in this research.

Data collection

Data were collected between September 2018 and February 2019, in the pre-testing stage only, already with the final version of the instrument as revised by the judges. They were collected by the researcher, individually, in a private environment, through an interview. The interview was based on the recommendations for conducting a nursing consultation in Primary Health Care, lasting approximately one hour, depending on the user's need. The patient's medical records at the facility were also consulted on this occasion.

Data analysis

CVI was evaluated according to the above-mentioned calculations, with an index above or equal to 0.80 being considered an acceptable value. Feasibility was assessed by the time spent in the interview, timed in minutes.

Ethical aspects

The project was approved by the institution's Research Ethics Committee under Opinion 2,338,122/2018, on October 19, 2017, according to Resolution 466/2012 of the National Health Council. All participants signed an informed consent form.

Results

Stage 1 consisted of designing the instrument and validating its content. The designing process was based on research in the national and international literature on the main aspects to be evaluated during an NC and the most commonly observed health phenomena in patients in follow-up care.

After being designed, the instrument was submitted to the appreciation of five judges regarding the pertinence and clarity of its items. The judging committee comprised five nurses: a doctoral student with extensive experience in outpatient care for DM; two nurses of the Family Health Strategy program, one with a master's degree and the other a doctoral student; a

nurse working in management; and a nursing professor with extensive experience in management and research involving ICNP.

A survey was made of the main NDs recorded in nursing consultations at the health facility between January 2017 and February 2018. During this survey with the medical records of 30 people in Primary Health Care follow-up at the UBS in question, missing records of the diagnostic and planning stages of the NP were observed, even though the NC was performed.

Chart 1 shows the selected NDs. It should be noted that the NDs found relate to people with DM2, people with HBP and also people with both diseases at the same time, which happens often due to their chronicity, similarities and risk factors.

Chart 1 - Nursing diagnoses for people with HBP and DM selected and included in the 2017 International Classification for Nursing Practice (ICNP).

Alcohol abuse (or alcoholism)	Hypoglycemia
Tobacco abuse	Impaired food intake
Effective adherence to therapeutic regimen	Effective skin integrity
Impaired adherence to therapeutic regimen	Normal blood glucose levels
Positive family support	Impaired tactile perception
Poor knowledge of therapeutic regimen	Polypharmaceuticals (or polypharmacy)
Health-seeking behavior	Altered blood pressure
Impaired physical exercise behavior	Normal blood pressure levels
Impaired psychological condition	Problem with acquiring medication
Dyspnea	Effective response to therapy
Ischemic pain	Risk of impaired heart function
Neurogenic pain	Risk of impaired peripheral neurovascular function
Vascular pain	Risk of foot or leg ulcer
Peripheral edema	Overweight

Side effect of medication	Previous smoking
Lack of family support	Foot or leg ulcer
Hyperglycemia	Visual impairment

Following the design of the instrument, the judges' evaluation showed a CVI of 0.96. The preliminary version had two-sided pages (for data collection) and another page with the nursing diagnoses and planning, which covered the main data to be collected and aspects to be evaluated. The items comprised data on sociodemographic and clinical characterization, habits and lifestyle, physical examination and laboratory data.

The judges had 15 days to make their considerations about the instrument, individually and remotely. At the end of that period, they submitted their evaluations via email. The research team met in order to accept the suggestions and produce the final version. The final version of the instrument was obtained at the end of Stage 1 (Appendix 1).

Thus, after the two stages, an instrument with three pages was produced, two for structured data collection and one for nursing diagnoses and nursing planning. The final instrument underwent pre-testing by the researcher, to evaluate its feasibility, with a sample of 30 people with HBP and/or DM2 who attended the BHS. On that occasion, they were informed that they would participate in a research stage, and those who agreed to participate signed the informed consent form. Regarding the feasibility of the instrument, it was observed that the average time spent on its administration was approximately 50 minutes.

Discussion

As a science, nursing uses a body of exclusive knowledge and asserts itself as a discipline, using a theoretical framework of great conceptual evolution, based on theories with values specific to the profession.[13] To this end it uses NC which, besides being an important tool of

health education, provides a link between nurses and patients, in addition to enabling the development of professional autonomy and independence.[16]

This requires the use of standardization in order to design instruments with valid measurement properties. Therefore, this study aimed to validate the content of the NC instrument administered to people with DM2 and/or HBP. This validation was achieved through agreement among the judges, accounting for a CVI value of 0.96. The instrument was considered adequate regarding its measurement aims, since the literature often suggests and uses the CVI value of 0.80 to verify the validity of new instruments in general.[14]

During the process of validating the instrument's content, the different experiences and professional expertise of the committee of experts proved to be opportune, since distinct types of theoretical and practical knowledge were combined to evaluate people with DM2 and/or HBP. Another noteworthy contribution in validation studies is the possibility of validating an instrument according to demand, meeting the population's health needs, an important factor in nursing care.[16]

The aspects to be evaluated in a person with HBP and/or DM2 in follow-up PHC are diverse and largely concern health-related behaviors, such as home and office blood pressure and/or capillary blood glucose measurement; adherence to and maintenance of a healthy, low-sodium and/or low-carbohydrate diet; regular physical activity; attendance to medical and nursing appointments; adherence to drug treatment; monitoring of symptoms related to disease decompensation; weight maintenance or loss, when indicated; among others.[17] However, there is a recognized need to synthesize data collection during NC for more efficient use of the data collected and subsequently evaluated by the nurse, not least to optimize working time.

During the survey of ND in the medical records of people with DM2 and/or HBP in PHC follow-up, the absence of records related to the diagnostic and planning stages of NP was noted. This corroborates the findings of another study undertaken in the same municipality, in which

the absence of execution and recording is attributed to extrinsic factors, such as lack of human resources, lack of care facilities and the actual institutional culture – whereby the nurse in charge cannot define the number of people to be monitored, whether through NC or humanized care, for example.[18]

Irregular work scheduling, lack of physical space, the multiple duties of nurses and bureaucratization of care are deteriorating elements.[15] A study discussed the weaknesses of and limitations to performing NC within the Family Health Strategy program of a district health system in the South of Brazil, and despite the recognized role played by consultation in nursing practice, there are still obstacles to its execution, such as lack of incentive, lack of understanding of the importance of NC for good nursing work and lack of ownership of the nursing process.[16,18]

The step of data collection of the designed instrument helps gain insight of the patients' economic and social situation, for once it has been filled out and attached to the medical record, less information need be collected in subsequent visits. In addition, this step of the instrument becomes a guide to the most relevant aspects to be observed by the nurse, although the anamnesis and physical examination conducted by the nurse are still necessary.

In turn, the second part of the instrument, comprising the set of Nursing Diagnoses and Planning, can be used regardless of the form of data collection listed, facilitating the execution of the nursing process in a systematic way and according to ICNP taxonomy.[9] In addition, it allows the inclusion of other diagnoses besides those pre-selected and validated for that specific group, and also for the definition of results and interventions according to the reality understood by the nurse.

Although several aspects were synthesized, the instrument obtained in this study is nonetheless considered quite long, with an average administration time of 50 minutes. However, it should be considered that a significant portion of the information will not be collected in all

consultations, for example, sociodemographic and clinical characterization, which can be filled in by changing some data or including information on pre-existing health conditions, which would contribute to reduce the administration time. The NC would also be intermittent, and the nurse could schedule this evaluation according to the availability of his or her working time and taking into account the demand and priority of people, according to the degree of evaluation.

The time spent executing and recording the NP suggests that it is a limiting factor. Therefore, the instrument's feasibility can be considered moderate in relation to the work reality of nurses providing PHC – which can be understood as a limitation to its practicability. The literature indicates that the amount of administrative activities carried out by nurses seems to be an obstacle to the execution of care and private activities, such as NC.[19]

However, the instrument's design enabled it to adequately meet the needs of nurses in providing care, since through NC nurses are able to more successfully solve the population's problems, favoring the quality of care they provide, which often makes them role models for PHC staff.[16] The use of Self-Care Theory is an important aspect during these stages, bearing in mind that using any nursing theory, especially the most prominent ones, requires understanding the nature of people and their interaction with the environment in which they live, in order to better define which interventions improve their health and well-being.

Improving health care should be the main goal, one that has proven useful for the expansion of the profession as a science.[12] In addition, comprehensive health care, based on systematic services with thorough theoretical grounding, is essential for nurses.

Conclusion

It is concluded that the instrument for NC in PHC aimed at people with DM2 and HPB has content validity and feasibility. Following all the design and validation stages, the resulting instrument proved to be effective for use in PHC, as it is consistent with reality and health care

requirements, listing the main aspects to be viewed by nurses and facilitating the clinical reasoning process to determine nursing diagnoses, results and actions.

In pre-testing, the instrument also proved to be adequate to assist in the posterior evolution and evaluation of the health status of people with DM2 or HBP, which suggests its use for a more accurate follow-up of the population's health. The proposed instrument is a tool that can be reproduced in the different health services that provide care to people with those health conditions and may also help in the organization of the nursing working process and the evolution of the profession as a science.

A limitation of this research is the subjectivity of the evaluation of the committee of judges, requiring the use of additional validity measures, such as statistical validation of the feasibility and reproducibility parameters, for greater consistency and representativeness in nursing care practice. Further research is recommended with a larger sample size to demonstrate the robustness of the instrument, which can be applied to other contexts of chronic diseases. Such strategies are low-cost and can be associated with usual care and implemented in the care of people with DM or HBP. The focus on self-knowledge and self-care can be an effective tool for building patients' bond with the health facility and encouraging their autonomy.

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Appendix 1 - Final instrument for nursing consultation with people with high blood pressure and/or type 2 diabetes mellitus in primary health care – version submitted to the judging committee. Campinas, 2018.

INSTRUMENT FOR NURSING CONSULTATION
IN HYPERTENSION AND/OR DIABETES MELLITUS TYPE 2 IN PRIMARY CARE

1. DATA GATHERING
1.1 SOCIODEMOGRAPHIC CHARACTERIZATION

Name:_____**Birth date :** ___/___/____
Mother's name:_____
SUS Card: _____
Health Unit:_____**Reference Prontuário:** ____ **Team no:** _____
Address:_____
Who you live with/family composition: _____
_____
Marital status: ☐ single ☐ married/living with partner ☐ widowed ☐ separated/divorced
Level of schooling: ☐ Incomplete High school ☐ Complete High school ☐ Incomplete midschool ☐ Complete midschool ☐Incomplete undergraduate ☐ Complete undergraduate
Characteristics of housing: ☐ owend ☐ rented ☐ ceded ☐ occupation
☐ masonry ☐ wood ☐ mixed ☐ plastic/canvas ☐ other: _____
Number of rooms:_____**Sanitation Status:** _____

Occupation:_____
Religion:_____
Family income (U$):_____**Who contributes:**_____
Support network (who you live with, people you can count on a daily basis):_____
_____

Family Background: ☐ MI. Who:_____ ☐ DM. Who:_____ ☐ Hypertension.Who: _____
☐ Stroke. Who:_____ ☐ Sudden death. Who:_____ ☐ Cancer. Who: _____
☐ Other. Which ondes and who: _____
Diagnostic Hypotheses: ☐ DM ☐ Hypertension ☐ Dyslipidemia ☐ Other: _____
Medications in use:

Drug	Dosis	Schedule

Difficulties in drug adherence: _____
_____

1.3 HABITS AND LIFESTYLE

How many people eat meals daily in the house: _____
Who is responsible for food preparation:_____
- Breakfast: _____
- Morning snack:_____
- Lunch: _____
- Afternoon Coffee: _____
-Dining: _____
- Evening snack: _____

Liters of oil/week:_____**Kg of salt/month:** _____
Use of ready-made seasonings (bouillon in tablets/sachets): ☐ No ☐ Yes. Frequency: _____
Consumption of processed and ultra-processed foods: _____
Difficulties with dietary adherence: _____
Water intake (glasses of water/day):_____
Alcohol Consumption: ☐ No ☐ Current. Drink type: _____ Pregresso.Drink type: _____

Physical Activity Practice: ☐ PA leisure. Type:_____Frequency:_____ x/week
☐ PA Locomotion. Type:_____Frequency:____ x/week
☐ PA at woork. Type:_____Frequency:_____x/week
☐ Sedentary

Difficulties to practice PA: _____
_____

Urinary habits: Urinare rate:_____x/dia ☐ No changes reported
☐ Polaciúria (frequente) ☐ Polyuria
☐ Stress urinary incontinence
☐ Urinare incontinence due to urinary incontinencel ☐ Mixed iurinary ncontinence ☐ Night enuresis
Observations:_____

Bowel habits: Frequency of bowel movements:_____x/week ☐ No changes reported Incont
☐ Fecal incontinence ☐ Blood in stool
☐ Frequent constipation ☐ excessive force evacuate
Observations:_____

Sleep and rest: ☐ No changes reported ☐ Difficulties falling asleep
☐ Difficulties maintaining sleep during the night ☐ Excessive sleep
Observations:_____

Visual Acuity: Last ophthalmologist evaluation:____/____/_____ ☐ No changes reported ☐ Use of glass

Observations:_____

Smoking: ☐ Denies ☐ Passive smoker
☐ past smoker– years/pack: _____
☐ Corrent smoker – years/pack: _____

1.4 PHYSICAL EXAM

Weight:_____kg **Height**:_____cm **Abdominal Circumference**:_____cm **BMI**_____kg/m²

Adults (20-59 anos): ☐<18,5 (low weight) ☐ 18,5 -24,9(eutrophic) ☐ 25 – 29,9 (overweight) ☐ 30 – 39,9 (obesity)
elderly (≥ 60 anos): ☐ <22 (low weight) ☐ 22 - 27 (eutrofia) ☐ >27 (excess weight)

Stting bloog pressure:_____mmHg **Standing blood pressure:**_____mmHg
Hearte rate :_____bpm **Respiratory rate**:____rpm

Carotid pulse (R): ☐ Full ☐ Filiform ☐ Rhythmic ☐ Arrrhythmic **Carotid pulse (E)**: ☐ Full ☐ Filiform ☐ Rhythmic ☐ Arrhythmic
Radial Pulse (R): ☐ Full ☐ Filiform ☐ Rhythmic ☐ Arrhythmic **Radial Pulse (E)**: ☐ Full ☐ Filiform ☐ Rhythmic ☐ Arrhythmic

Cardiac auscultation: _____
Lung auscultation: _____

Evaluation in lower ☐ Varicose veins ☐ Edema (____/4+) ☐ Pain (characterize):_____)
☐ Glowing skin ☐ absence of hair ☐ Color (characterize):_____)
☐ Increased temperature ☐ Decreased temperature
☐ Injury (characterize):_____)

Foot evaluation: ☐ Tactile Sensitivity Preserved ☐ Alteration in tactile sensitivity ☐ Calluses ☐ Injury

Observations: _____

Assessment of nails: ☐ Preserved ☐ Pointed ☐ Ingrown ☐ Other: _____
Assessment of articulations: ☐ preserved range ☐ limited range ☐ Edema ☐ Pain ☐ Other:_____

Pedioso pulse (R): ☐ Absent ☐ Present ☐ Full ☐ Filiform ☐ Rhythmic ☐ Arrhythmic
Pedioso pulse (L): ☐ Absent ☐ Present ☐ Full ☐ Filiform ☐ Rhythimic ☐ Arrhythmic

Laboratory Exams (___/___/_____): Fasting blood glucose:_____glycated haemoglobin _____ HDL: _____LDL: C h olesterol:____Triglycerides:_____ VLDL:_____Na:_____K:_____Ca:_____Uric acid:_____Thyroid-stimulating hormone:_____Tetraiodo thyroxine:_____Urea:_____Creatinine:_____Aspartate transferase:_____Alanine transaminase:____glomerular filtration rate: _____Physicochemical urinalysis_____

Other observations: _____

2. NURSING DIAGNOSES – ICNP (List for correlation between the items 2, 3.1 e 3.2)

- ☐ Alcohol Abuse (or Alcoholism)
- ☐ Tobacco Abuse (or Smoking)
- ☐ Effective Therapeutic Regimen
- ☐ Adherence Impaired Therapeutic
- ☐ Regimen Positive Family Support
- ☐ Low Regime Awareness
- ☐ Health Seeking Behavior
- ☐ Impaired Physical Exercise Behavior
- ☐ Impaired Psychological Condition
- ☐ Dyspnea
- ☐ Ischemic Pain
- ☐ Neurogenic Pain
- ☐ Vascular Pain
- ☐ Peripheral edem
- ☐ Medication Side Effects
- ☐ Lack of Family Support
- ☐ Hyperglycemia
- ☐ Hypoglycemia
- ☐ Impaired Food Intake
- ☐ Effective Skin Integrity
- ☐ Blood Glucose Levels in Normal Limits
- ☐ Impaired Tactile Perception
- ☐ Polypharmacy
- ☐ Altered Blood Pressure
- ☐ Blood Pressure Within Normal Limits
- ☐ Problem with Medication Acquisition
- ☐ Response to Effective Therapy
- ☐ Risk of Impaired Cardiac Function
- ☐ Risk of Impaired Peripheral Neurovascular Function
- ☐ Risk of foot or leg ulcer
- ☐ Overweight
- ☐ Prior smoking
- ☐ Ulcer on foot or leg
- ☐ Vision impairment

Other:

☐ _____
☐ _____
☐ _____

3. NURSING PLANNING

3.1 EXPECTED RESULTS

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

3.2 NURSING PRACTICE

☐ _____
☐ _____
☐ _____
☐ _____
☐ _____

_____ Responsible nurse (Signature and registration number at COREN)

____/____/____ Date

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