

Nursing protocol for the care of people with diabetes *mellitus* in primary care

Protocolo de enfermagem para o cuidado da pessoa com diabetes *mellitus* na atenção primária

Protocolo de enfermería para la atención de personas con diabetes *mellitus* en atención primaria

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Abstract: Objective: to evaluate the contribution of the Nursing Protocol - Volume I, for the health care of people with type 2 diabetes mellitus from the perspective of nurses and doctors working in Primary Health Care. **Method:** qualitative evaluative research, carried out with 22 professionals, including 19 nurses and three doctors, from June to August 2017, using semi-structured interviews and data analysis from the perspective of conventional content. **Results:** it became evident that the Protocol was implemented in an organized and systematic manner, with a focus on comprehensive care and alignment between doctors and nurses through inter-consultation. It promoted the expansion of access to health for people with diabetes, offering autonomy, support and resolution to nurses. **Conclusion:** the Protocol contributed to the qualification of nursing care for people with diabetes, with nurses' recognition and confidence in relation to the quality of content, relevance and applicability.

Descriptors: Protocols; Nurses and nurses; Diabetes mellitus; Nursing care; Primary health care

Resumo: Objetivo: avaliar a contribuição do Protocolo de Enfermagem - Volume I, para o cuidado à saúde de pessoas com diabetes *mellitus* tipo 2 na perspectiva de enfermeiros e médicos que atuam na Atenção Primária à Saúde. **Método:** pesquisa avaliativa qualitativa, realizada com 22 profissionais, sendo 19 enfermeiros e três médicos, no período de junho a agosto de 2017, utilizando entrevistas semiestruturadas e análise de dados na

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perspectiva de conteúdo convencional. **Resultados:** evidenciou-se que o Protocolo foi implantado de forma organizada e sistemática, com foco no cuidado integral e alinhamento entre médicos e enfermeiros por meio da interconsulta. Promoveu a ampliação do acesso à saúde das pessoas com diabetes oferecendo autonomia, respaldo e resolutividade aos enfermeiros. **Conclusão:** o Protocolo contribuiu para a qualificação do cuidado de enfermagem às pessoas com diabetes, com reconhecimento e confiança dos enfermeiros em relação à qualidade do conteúdo, pertinência e aplicabilidade.

Descritores: Protocolos; Enfermeiras e enfermeiros; Diabetes mellitus; Cuidados de enfermagem; Atenção primária à saúde

Resumen: Objetivo: evaluar la contribución del Protocolo de Enfermería - Volumen I, para la atención de la salud de las personas con diabetes mellitus tipo 2 desde la perspectiva de los enfermeros y médicos que trabajan en Atención Primaria de Salud. **Método:** investigación evaluativa cualitativa, realizada con 22 profesionales, 19 enfermeras y tres médicos, de junio a agosto de 2017, mediante entrevistas semiestructuradas y análisis de datos desde la perspectiva de contenido convencional. **Resultados:** se evidenció que el Protocolo se implementó de manera organizada y sistemática, con foco en la atención integral y la alineación entre médicos y enfermeras a través de la interconsulta. Promovió la expansión del acceso a la salud para las personas con diabetes, ofreciendo a los enfermeros autonomía, apoyo y resolución. **Conclusión:** el Protocolo contribuyó a la calificación de la atención de enfermería a las personas con diabetes, con el reconocimiento y la confianza de las enfermeras en relación a la calidad del contenido, relevancia y aplicabilidad.

Descriptor: Protocolos; Enfermeras y enfermeros; Diabetes mellitus; Cuidado de enfermería; Primeros auxilios

Introduction

Type 2 diabetes mellitus (DM2) is, according to the Brazilian Diabetes Society, a metabolic disorder characterized by persistent hyperglycemia, resulting from deficiency in insulin production or its action, or in both mechanisms.¹ Care for people with DM requires a multidisciplinary role, with emphasis on the nurse, who must carry out educational and care activities, including nursing consultation, ordering tests and renewing medications, the latter two of which, provided that they are established in municipal protocols.²

The use of nursing protocols in the care of people with DM2 is recognized as fundamental for the improvement of the health of this population and bringing positively effecting care.¹ The nurse is responsible for tasks such as the development of educational activities and training the team in caring for these people.²

The proposal to create care protocols is based on the recognition that they have advantages, such as: promoting greater safety for professionals and users; more uniform care

actions among professionals; improvement in decision making; incorporation of new technologies; rational use of resources; dissemination of knowledge; professional communication; and coordination of care. They are developed based on the best and most current scientific evidence, dealing with legal instruments for clinical use.³⁻⁴

Thus, in 2015 the Nursing Care Systematization Commission of the Municipal Health Department of Florianópolis/Santa Catarina (SC) developed and published the Nursing Protocol on hypertension, diabetes and other factors associated with cardiovascular diseases - Volume I. This protocol was and has been systematically updated by the nurses who make up the referred committee, which subsequently developed five other protocols in different areas of nursing practice. The development of the protocol was due to the recognition of the need to give nurses greater autonomy in caring for people with DM2 and arterial hypertension, as well as providing safety and legal support in their work in Primary Health Care (PHC). This Protocol expands the clinical performance of nurses, especially in tasks that were, until now, performed exclusively by doctors, such as ordering tests and updating medication prescriptions.⁵

The creation of Nursing Protocols contributes to the systematization of care, qualifying the care provided to the population. However, even with the presence of these instruments implemented in some institutions, research on the topic is still scarce.⁶⁻⁷ In this sense, it is essential that the implementation process is monitored and evaluation in order to consolidate and/or reorient the practice of using the protocols.

In this context, the research question that led the study was “What is the contribution of the Nursing Protocol - Volume I of the Municipal Health Department of Florianópolis to the health care of people with DM2 treated in PHC?” and the objective of the research was to evaluate the contribution of the Nursing Protocol - Volume I, to the health care of people with DM2 from the perspective of nurses and doctors who work in PHC.

Method

A qualitative evaluative research. In order to carry out this evaluation, the National Primary Care Policy, the principles and guidelines: universality, resolution, longitudinality, coordination of care, ordering of networks and community participation were used as a theoretical reference.⁸

The focus of the evaluation was chapter two of the Nursing Protocol - Volume I, which refers to the care of people with DM2, due to its relevance to public health. The content of the chapter includes: fasting blood glucose request; medication renewal; requesting follow-up tests for people who already have a diagnosis of diabetes; general assessment of the person with diabetes, including assessment of the feet; guidance on drug treatment.⁵

The study was carried out in the city of Florianópolis/SC with 22 professionals, 19 nurses and three doctors who worked in 10 Health Centers (HC) in the four Sanitary Districts of the city. HCs were selected in which nurses had incorporated the practice of using the Nursing Protocol in Hypertension, Diabetes and other factors associated with cardiovascular diseases - Volume I, since its implementation, which started in the same year of its publication in 2015. This information was obtained by the management that accompanies the implementation of the Protocol in the HCs.

The selection of nurses was intentional and met the following inclusion criteria: have an employment relationship with the Municipal Health Department; provide health care to people with DM; and, use the Nursing Protocol - Volume I in caring for people with DM since its implementation. Initial information about who could be included in the study was obtained from the PHC management sector and confirmed with the professional when inviting him to participate in the study. Therefore, professionals who indicated that they are using the Protocol effectively and had knowledge about it were part of the study.

The inclusion of doctors was based on the indication of nurses who were working with these professionals in the care of people with DM, as long as the selection criteria were met: be employed in the Municipal Health Department; share the care of the person with diabetes with the nurse. All invitations to doctors and nurses were made verbally and there was no refusal by nurses among those who met the inclusion criteria, however two doctors did not accept to participate, stating a lack of time.

Data collection took place between June and August 2017 by means of individual interviews that were guided by a semi-structured script, with an average duration of 35 minutes. They were recorded, with the interviewees' consent, using digital audio recording equipment. The interviews included basic questions: Tell me a little about your career in nursing or medicine and the choice to work in primary care? What is it like to care for people with DM in this HC? What is your perception about the use of Nursing protocols in PHC?

The recordings of the interviews were transcribed and the data analysis took place through qualitative analysis of conventional content⁹, which generated a codification of 230 codes organized by similarity resulting in two categories: Expansion of nursing care and Safety of the nurse's performance in care to people with DM.

The ethical and legal aspects of Resolutions 466/2012 and 510/2016, which approve the guidelines and regulatory standards for research involving human beings, from the National Health Council were respected. The study was approved by the Ethics and Research Committee with Human Beings on May 15, 2017 under No. 2,064,389. All participants signed two copies of the Free and Informed Consent Form. In order to preserve anonymity, nurses were identified using a numerical system (E1 to E19) and doctors (Em1 to Em3).

Results

Among the 22 participants in the investigation, 17 were female and five were male, aged between 26 and 48 years. The length of training ranged between four and 36 years, and the length of experience of these professionals in PHC ranged between two and 23 years.

In general, the Nursing Protocol was evaluated by the participants as a document that brought improvements to the health service, contributed to the work process, renewed and qualified this service, offering autonomy, support and resolution to the nurse, in the care of people with DM in PHC.

Expansion of nursing care

The Protocol implemented at the PHC in Florianópolis/SC enabled nurses to conduct more comprehensive procedures, such as requesting tests for clinical investigation, tracking DM and renewing prescriptions for medications for continuous use, thus providing agile care. The professional has become more autonomous in practice, allowing them to act on the most common health demands in his daily work.

I think the Protocol allows nurses to be autonomous and you will be able to expand this access, expand patient care. At least I saw in other municipalities that the nurse's performance is very restricted, and then all this monitoring of the patient, longitudinality, all this is lost when the nurse is not inserted in the care. So, the Protocol provides this support, this theoretical contribution and makes it possible for the nurse to act in a much more autonomous way, often disconnected from the doctor at that moment of consultation, he starts and ends the care alone. (E06)

The Protocol also provided an opportunity to strengthen duties that were already performed by nurses, such as health education, prevention of diabetic foot and other

complications. The systematic assessment of the feet of people with DM was considered an important advance in nursing care, since previously these assessments were only occasionally performed or not performed at all.

Because doctors don't exam feet, they don't have time. So, we managed to give patients that maybe, the vast majority never did. We know the importance of what it is, that such a simple, cheap and quick exam can avoid complications in a person's life. (E01)

Within this practice of using the Protocol, there was an expansion of the nurse's access to people with DM, due to the possibility of another professional working aimed at comprehensiveness and recognition of the resolution in care. In this sense, according to some of the nurses and doctors interviewed, some attributes of PHC were strengthened.

I think that, especially in terms of access, if you expand nursing care, you give more support for nurses to work. Otherwise, we would not be able to meet spontaneous demand, patient queues would increase, there would be no space on the agenda. Before the Protocols, we had a lot of difficulty in this access issue, of course we ended up doing it, but with inter-consultation, having to have the support of the doctor in all situations. Today we have independence to act. (E11)

I think that when accessing, it increases the resoluteness of nursing, this expands access because you will have more than one trained professional to care for these patients, so it turns out that we can serve a larger number of people and this increases access. From the moment the person starts to spend more with both the doctor and the nurse a bond is created because he has more contact with this professional. (Em2)

Physicians who work with nurses who incorporated the Protocol in their practice recognized the improvement in the monitoring of people with DM, and also perceived a strengthening of the sharing of actions with nurses.

Look, what I know is that nursing problem solving has increased. Before, several things that the nurse could not do, now they can do it. So, teamwork improved, role sharing. (Em2)

Now the role of the Protocol is essential, because the demand for many things that do not necessarily have to be doctor-centrist, and other things that even nursing has a greater potential than we do. (Em1)

Despite this prevalence in recognizing the positive aspects of the Protocol for the care of people with DM, some weaknesses were also identified in this implementation. Nurses recognized that excessive demand can impair the use of the Protocol.

I think one difficulty is the fact that nurses are overloaded with work, with an immense demand pressure. (E02)

Another aspect that has brought difficulties is the fact that the private network of pharmacies does not accept the medication prescribed by nurses. This situation occurs when the drug is not available in the HC and the person needs to buy it in private pharmacies, if there is no therapeutic alternative.

Despite some difficulties, nurses valued actions made possible by the use of the Protocol, in the perspective of expanding the clinic and qualifying care for people with DM.

Safety in care for people with diabetes mellitus

After the implementation of the Protocol, the nurses feel empowered to assume practices that were previously performed only by the doctor. The Protocol gives them confidence by maintaining updates and the possibility of revision based on new evidence. In addition, they consider that developing activities such as prescribing medications and ordering tests is the recognition of the good training of nurses for such clinical activities.

From the beginning of its implementation, nurses identified the Protocol as being a clear and explanatory document, streamlined and objective, it is available online and in PDF format, facilitating its use in their daily practice. The objective way in which the Protocol is presented facilitates its during consultations.

The protocol is great, because we are aware of the Ministry's attention books, but it is difficult for you to stop and read everything, because they are big. So, I think that the municipality's protocol gives us support, expands our assistance, makes us more resolute in some cases, and it is very streamlined. (E01)

Even though they initially felt a little unsure regarding the use of the Protocol, especially in relation medication prescriptions renewal, they started to recognize the facilities it brings in the care of people with DM when they included it in their routine. However, they recognize and suggest that continuing education should be institutionalized in the municipality, contributing even more to the training of professionals.

We must invest a lot in permanent training, because there will always be new people, there will always be doubts, people who forgot, something to update. (E02)

Look, I think that a big challenge for us is having time, everyone, the entire team, to have time to stop to read and study the new protocol, because it is new information, so you need time to read, to study. And I think a challenge is to know, because there are new things that are allowed and there are things that are not, so remembering everything, what is possible and what is not possible, I see this as a difficulty. (Em2)

The standardization of the conduct established by the Protocol gives the certainty that they are including all the necessary basic care, but still maintains its autonomy in the decisions related to each specific situation.

[...] it's nice even to encourage the colleague and to value our profession, you know? Because I think the Protocol, it values the nurse's knowledge,

the training and the education we had. This is very much ours, it belongs to our class, our category to sign this, to say: "yes, the university has trained us. Yes, I feel safe to do that!". (E08)

I can tell you that we have changed our work dynamics a lot, the protocol came in part, we have used it for more than diabetes, for other things there are many things that sometimes in the service itself to accommodate spontaneous demand, the nursing comes to discuss a case and when it fits in what is in the protocol, sometimes they discuss some questions with us, they go there and prescribe that situation. (Em3)

Aiming to expand the implementation of the Protocol, training was carried out in the State, given by nurses from the Municipal Health Secretariat with the support of the Regional Nursing Council of SC to other municipalities, encouraging adherence in other locations. This was because the implementation of the Protocol, a pioneer and a novelty in the professional routine, caused some insecurities due to the difficulty of exchanging experience.

And then the suggestion is to think about the role of nurses in other countries, for example, in other places where we know that the role of nurses is broader than here in Brazil. We know that in Brazil, Florianópolis has been a pioneer in this. So, I understand that it generates insecurity. (E8)

Among the aspects related to the nurse's role, after the implementation of the Protocol, the study participants also recognized improvement in the longitudinality attribute, which promotes greater adherence to treatment for people with DM.

I think it [the protocol] comes to reinforce the attributes of primary care, in relation to access, teamwork and coordination of care. Because we stop focusing only on the doctor, on the monitoring performed by the doctor and leave the patient free, with greater access to look for the team. In terms of access, people have one more professional. Before it was just the doctor, now he has the doctor and the nurse can do this type of care for him. (E08)

I don't know if longitudinality influences it, because it is independent of the protocol. It is primary care so I think it will not bring that much change, but it can help. Coordination of care helps because the nurse will become part of the patient's care and I think that is it. (Em2)

In addition, exam requests also allow better coordination of care for people with DM. Because, when nurses work on renewals and exam requests, the coordination of the care of people with DM is reinforced, allowing the professional and team to improve the way the treatment adherence is monitored and evaluated, as well as the need for interventions by other professionals.

Wow, it's helping a lot in everything! In the scheduled and spontaneous consultation, the medication is renewed, only the insulinized patient is left out. It helps a lot! I have already renewed several prescriptions; it facilitates patient compliance. [...] The patient is already connected, brings the exams, shows us whether we have to do the consultation or not, it facilitates everything and speeds up the service. (E16)

Doctors also recognized the qualification of nurses and identify their potential. The acceptance of physicians of this Protocol seems to be linked to their insertion in PHC, understanding the importance of it and perceiving it as an advance in the expansion and qualification of care for people with DM.

Look, I think the protocol itself is something that can contribute a lot! I think that in Florianópolis we have compared, I will not say like all of Brazil, because there are many different realities, but due to the work I do with the Ministry I have had the opportunity to follow the work of other municipalities in primary care. What I see is that Florianópolis has a group of very well qualified nursing professionals, even before the protocol existed. That is why, perhaps, we came out on this almost initiative, I can't say they do not have the same in other places, but try to create this protocol, better systematize nursing work, to what extent nursing can have autonomy to do some things, I think they come very well like that. (Em3)

Discussion

Protocols for the care of people with DM are recognized in different realities as essential for the organization and promotion of greater safety in care, enabling an adequate, effective and up to date assistance.¹⁰⁻¹² Convergent to these indications, the results of the present study indicated that the Protocol contributes to the autonomy and expansion of clinical practice for nurses caring for people with DM.

The municipality of Florianópolis/SC is a pioneer in the elaboration and implementation of the Nursing Protocol in the State, including assistance aimed at comprehensive care, which adds the practice of requesting laboratory tests and prescribing medicines, as a legal activity to this professional. Clinical protocols are recognized as a tool that provides greater autonomy and safety to the nurse's practice.⁷

Even though the present study did not evaluate the clinical results in people with DM, a favorable evaluation of the professional nurses and doctors is observed, showing that the Protocol brought about clinical changes by increasing treatment adherence in this population. The process of implementing the Protocol was guided by participatory methodologies, which included the involvement of the social actors involved, reflecting on bonds of mutual trust between peers. This strategy of involving professionals is seen as promoting greater reliability and encouraging the adoption of their recommendations.¹³ In addition, the involvement of professionals may have been an important element related to the deepening of knowledge about this chronic condition, since studies have shown that these professionals in different countries have significant knowledge deficits in many aspects of diabetes treatment, and that this is a long-standing and ongoing problem.^{11,14}

The methodology for discussing clinical cases, applied during training for the preparation of the Protocol was very well evaluated by the study participants. In this sense, the use of methodologies that use the discussion of clinical cases, such as problem-based learning,

is recognized for its effectiveness in health education. This strategy minimizes complaints related to the difficulties of professional practice, offering security for clinical practice.¹⁵⁻¹⁶

With the implementation of the Protocol, the expansion of nursing care for people with DM in PHC was recognized, which was directly related to the empowerment of these professionals to perform the conduct described in the Protocol, maintaining the understanding of teamwork. The capacity of nurses to expand their actions is based on training at the undergraduate and also graduate levels of quality and which is focused on the implementation of health policies in Brazil.¹⁷

Despite the fact that care to people with DM has been established in national programs for some time, barriers are still found, especially due to the lack of autonomy of nurses to request exams and prescription renewal.¹⁸ The Protocol brought autonomy to nurses, and strengthened the actions performed in nursing consultations as an attribution of the profession. These actions reinforce the importance of comprehensive care for people with DM at this level of health care and reinforce conducts that benefit the quality of life of this public, such as the prevention of their acute and chronic complications.

Considering the relevance of comprehensive care, the existence of gaps is recognized, even in developed countries such as the United States, indicating that guidelines and protocols are implemented and evaluated, aiming at the development of health care that considers the needs of people with DM.¹ Some studies have shown the need to pay attention to nurse training in relation to the care of people with DM, combined with other actions that help to minimize the heavy workload they face. They also emphasize the importance of conducting research in the workplace.^{11,13}

The Protocol provided a reorganization of the work process in these teams, systematizing nursing care for this population. It also promoted the exercise of actions, such as the prescription of medications and the ordering of tests, which are already established in

Brazilian legislation, but are still not widespread in Brazil in relation to the care of people with DM. The Law on Professional Exercise of Nurses establishes that nurses can prescribe medications, when included in public health programs and routines approved by the institution. Regarding the request for routine and complementary tests, the nurse can request them in the exercise of their professional activities. Therefore, these actions are legally supported and belong to the scope of the nurse's duties.¹⁹

Depending on the nurses' perspective, doctors also considered that the Protocol contributed to nurses' autonomy, strengthening the bond, access, resolution and coordination of care, and essential in the care of people with DM, and converges with the attributes of the National Primary Care Policy.⁸ The introduction of the Protocol in the work dynamics strengthened the inter-consultation and the relationship between doctor and nurse, increasing the discussions of clinical cases and the sharing of care, bringing new ways of reaching agreed actions. Regarding nursing protocols, support from the medical professional strengthens work process interdisciplinarity.²⁰

Excessive demand was identified as a negative factor in nurses' care. The use of protocols, as well as better conduct, can be impaired when there is an excess of demand for care for this professional. The increase in workloads in PHC and the excess demand are aspects understood as responsible for the dissatisfaction of health professionals in the work environment.^{2,21}

There is an objection regarding the acceptance of nurses' prescriptions in private pharmacies, even if regulated by the Ministry of Health.²² This situation is limiting, especially in cases of temporary lack of medication in the public network, requiring a medical consultation in order to receive a prescription. Therefore, it is necessary to make progress at the national level related to the acceptance of nursing prescriptions supported by clinical protocols in health services.

In this study, the participants recognized that the use of the Protocol strengthened the security of care for people with DM, as nurses reported greater confidence in their care regarding this population, favoring better conduct to this demand. The standardization of care is another highlighted safety factor, allowing a homogeneous conduct between the category, as well as between the doctor-nurse binomial, understanding that the Protocol is in accordance with the Practical Guide for Doctors and Nurses used in the municipality.^{4, 6-8}

The way in which the Protocol is presented and accessed, also responds to the needs of its use in practice. The objectivity of the material that can be accessed during a consultation has relevance for its use to be viable and incorporated in practice. The ease of use of the protocol and its easy access are considered positive points when evaluating protocols.^{6-7, 23}

Nurses recognize that they are promoting greater adherence to the treatment of people with DM. This may be related to the consolidation of longitudinality. The bond established with this population through the recognition of work in PHC seems to be a driving force in this situation, constituting the principles and guidelines in the National Primary Care Policy.^{8, 24}

Conclusion

Evaluating the contribution of the Nursing Protocol - Volume I, regarding the health care of people with DM, from the perspective of nurses and doctors who work at PHC in Florianópolis/SC, allowed us to recognize that in addition to fulfilling its role in standardizing conduct, guided by scientific evidence, the Protocol also contributed to the qualification of nursing care. This favorable assessment is supported by arguments that show that it is recognized and trusted by the category in relation to the quality of the content, relevance and applicability.

Regarding the nurse's performance, it enabled professional autonomy and support for the implementation of the principles and guidelines of the National Primary Care Policy, such

as strengthening the bond, longitudinality, coordination of care, resolution and improvement of accessibility, by expanding the clinic. In addition, the Protocol contributed to improve nursing care in relation to its clinical practice, with more theoretically supported actions and coordination with other team professionals.

Regarding limitations, the study only evaluated the contribution of the Nursing Protocol from the perspective of doctors and nurses, suggesting that further research be developed including managers and users, with clinical evaluation of the users after its implementation, thus expanding the evaluation of the protocol in question.

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