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GUIDELINES FOR URINE COLLECTION FOR EXAMINATION: CHALLENGES PERMEATING NURSING PERFORMANCE

ORIENTAÇÕES PARA A COLETA DE URINA PARA EXAME: DESAFIOS QUE PERMEIAM A ATUAÇÃO DA ENFERMAGEM

ORIENTACIONES PARA RECOLECTAR ORINA PARA EXAMEN: DESAFIOS QUE PERMEAN LA ENFERMERÍA

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Objective: to identify the perception of nursing professionals in relation to the guidelines provided to the users for urine collection. Method: this is a qualitative, descriptive and exploratory research. Data collection took place in December 2015 and 45 health professionals participated in the study. Thematic content analysis was carried out. Results: the results were organized in three units of meaning: "Nature of the guidelines provided to users"; "Challenges experienced by professionals when guiding users"; and "Factors that influence user understanding". Conclusion: nursing professionals reported understanding the importance of providing good guidance to users; however, the difficulties experienced suggest weaknesses in the health education process, in the establishment of a link between professional-user, and in communication.

Descriptors: Urine Collection. Clinical Laboratory Techniques. Health Education. Public Health. Nursing Team.

Objetivo: identificar a percepção de profissionais de enfermagem em relação às orientações fornecidas aos usuários para a coleta do exame de urina. Método: pesquisa qualitativa, descritiva e exploratória. A coleta de dados ocorreu no mês de dezembro de 2015 e participaram do estudo 45 profissionais de saúde. Foi realizada a análise de conteúdo do tipo temática. Resultados: os resultados foram organizados em três núcleos de sentido: "Natureza das orientações fornecidas aos usuários"; "Desafios vivenciados pelos profissionais ao orientar os usuários"; "Fatores que influenciam a compreensão do usuário". Conclusão: os profissionais de enfermagem relataram compreender a importância de fornecer boas orientações aos usuários, contudo as dificuldades vivenciadas sugerem fragilidades no processo de educação em saúde, na instituição de vínculo entre profissional-usuário e na comunicação.

Descritores: Coleta de Urina. Técnicas de Laboratório Clínico. Educação em Saúde. Saúde Pública. Equipe de Enfermagem.

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Objetivo: identificar la percepción de los profesionales de enfermería sobre las orientaciones ofrecidas a los usuarios para la realización del examen de orina. Método: Investigación cualitativa, descriptiva y exploratoria. El muestreo se realizó en el mes de diciembre de 2015 con la participación de 45 profesionales de salud en el estudio. Se realizó el análisis de contenido tipo temático. Resultados: Los resultados fueron organizados en tres núcleos de sentido: "Naturaleza de las orientaciones ofrecidas a los usuarios"; "Desafíos vividos por los profesionales cuando orientan a los usuarios"; "Factores que influyen en la comprensión del usuario". Conclusión: Los profesionales de enfermería relataron comprender la importancia de darles buenas orientaciones a los usuarios, pero las dificultades vividas sugieren fragilidades en el proceso de educación en salud, en la creación del vínculo entre profesional-usuario y en la comunicación.

Descriptores: Recolecta de Orina. Técnicas de Laboratorio Clínico. Educación en Salud. Salud Pública. Equipo de Enfermería.

Introduction

In general, health services are expected to develop practices in which patients are protected from possible health care harm. This concern began to gain worldwide visibility as of 1999, with the publication of the report "To err is human", in which the error arising from health care becomes evident in daily professional life[1].

In Brazil, concern for patient safety has gained momentum since 2011. The Brazilian National Patient Safety Program (PNSP, acronym in Portuguese) was published in 2013 and its overall objective is to contribute to the qualification of health care in all institutions in the Brazilian territory. The program points to communication as one of the aspects to reach patient safety[2]. Thus, communication and teamwork can be considered as key dimensions of safe assistance[3-4].

It is estimated that 70% of clinical diagnoses are performed based on laboratory tests, and possible flaws in the analysis may lead to misdiagnosis and therapeutics. Laboratory errors may be due to incorrect procedures or lapses in previously planned, intentional or non-intentional actions[5]. Misunderstandings occur because of high turnover rates, neglect, lack of understanding of good laboratory practices and inefficient training. Errors can cause the refusal of biological material and have the following consequences: dissatisfaction, disorders, and anxiety on the part of the professional and the user; avoidable and unnecessary expenditures for the health system; and loss of reliability, security, and credibility of the service[6].

The cases of contamination of the biological samples of urine, by secretions, fluids and feces, generally occur by the inadequate hygiene of the user or accidental contamination of the sample during the collection. Exposure of the sample to room temperature for a long period of time and incorrect storage may also occur, characterizing problems in the pre-analytical stage, prior to the laboratory analysis itself[5].

Among nursing duties is the orientation and preparation of the users for the accomplishment of examinations, and the collection of materials for laboratory analysis[7]. In this way, the guidelines provided by professionals cross the communication and promote the space for reflection and construction of strategies that allow the participation of users, and listening to these professionals is essential to elucidate doubts and uncertainties[8].

During the preparation of this manuscript, studies were found that discuss the pre-analytical process in the laboratory, but the shortage of scientific production on the topic related to nursing practice was identified, especially in the context of primary health care. The search for studies that evidenced this gap was made based on the descriptors "urine collection" and "nursing" in the databases LILACS, BDENF, MEDLINE and CINAHL until October 2018. Thus, it is questioned: "How has the orientation of users been carried out for adequate collection of urine in primary care?"

The present study aims to identify the perception of nursing professionals regarding the guidelines provided to the users for the collection of the urine test.

Method

This is a research of qualitative, descriptive and exploratory design. The qualitative study was chosen because it allows identifying the meanings of human relations based on different points of view, considering what the interviewees feel about their practice. Thus, the problems portrayed are raised by the interviewees themselves, generating multiple realities for certain situations[9].

The data collection instrument consisted of a semi-structured questionnaire, with fields to fill in the identification data of the professional – age, sex, education, function, time of activity in the scheduling activity and orientation on laboratory exams - and questions about their process of work: "What are the guidelines given to the user at the time of delivery of the flask to the collection of urine? Have you been trained to provide these guidelines? What difficulties do you encounter in guiding the patient or caregiver? Do you believe that the user understands the importance of following the guidelines? Do you believe that the patient will take precautions not to contaminate the sample at the time of collection?"

The study was carried out with 45 nursing professionals who worked in the context of Primary Care of a municipality in the West region of Santa Catarina. To participate in the research, the professional should be in charge of providing guidelines for collecting urine and dispensing the collection bottles, which is the only criterion for inclusion. As exclusion criteria, it was established: being on medical leave, vacation or away for whatever reason in the period of data collection.

In order to carry out the interviews, a schedule of visits to all the 26 Basic Health Units (BHU) of the municipality in question was organized, and these visits occurred in December 2015. At the time of the visit, the researchers approached the coordination of the service for identifying the professionals that would meet the inclusion criterion. They were invited to participate in the study after explaining the study objectives. The interviews were conducted at UBS clinics to ensure the confidentiality and privacy of the participant. We invited 46 nursing professionals, identified as responsible for the development of activities related to the inclusion criteria of the research. Only one refused to participate.

After the signing of the Informed Consent Form and the Consent Form for Photographs, Videos and Recordings, the interviews were started, and were recorded, transcribed in full, and later analyzed. It was decided to interview all the professionals who performed the described activities, even if the data saturation had been reached. In this sense, it was decided to focus on the deepening, comprehensiveness and diversity of the understanding process[10].

The data were submitted to content analysis, thematic type, which consists of recognizing the nuclei of meaning that structure the dialogue. This operation is carried out in three stages: pre-analysis; exploitation of the material and treatment of the results obtained; and interpretation[11]. The speeches were analyzed in depth, identifying and grouping the sense nuclei, and they gave rise to the following categories: "nature of the guidelines provided to users"; "Challenges experienced by professionals when guiding users"; and "factors that influence the user's understanding".

In order to maintain the anonymity of the research participants, the lines were coded with the letter "P", for professional, followed by the initial letter of the professional category, being PN for Professional Nurse, PTN for Professional Nursing Technician and APN for Auxiliary Professional of nursing. In addition, the coding contains numeric digits according to the sequence of the interviews, from 1 to 45.

This study was approved by the Ethics Committee of Research with Human Beings and obtained a Consubstantiated Opinion no. 1,365,656.

Results

The characterization of the study participants showed that the highest percentage of professionals were female (93.3%), and the prevalence age was between 40 and 49 years (33.3%; n=15). Young people (between 20 and 29 years old) appeared in a lower percentage (11.1%, n=5). Regarding schooling, it was observed that 84.4% (n=38) had only high school education. The role of these professionals reveals that 53% (n=24) were nursing assistants; 40% (n=18) were nursing technicians and 6.7% (n=3) were nurses. Therefore, professionals who worked at medium level were identified, but had higher education in other areas of knowledge. The professional time spent in exam scheduling and bottle delivery showed that 40% (n=18) exercised this function for less than one year, followed by 20% (n=9) for 10 years or more. In total, 68.9% (n=31) stated that they did not receive training to perform this activity, of which 51.29% (n=26) were professionals who had been active in the activity for over a year.

Nature of User-Provided Guidelines

The guidelines provided to the users by health professionals involved collecting the first morning urine, performing intimate hygiene, observing bottle care, and specific guidelines. The procedure of urine collection has been guided as expressed in the speeches:

> *We advised collecting the first urine in the morning, despising the first jet out, then collecting the urine in the vial and pass the urine through the tub. This is the orientation we give.* (PTN.10).

> *One should collect the first urine in the morning, do the local hygiene, make the first jet in the toilet bowl, collect the intermediate jet, and launch the final jet into the toilet. Half a bottle is sufficient; that's it. Then bring it* [...] (APN.3).

Handling the vial used for collection of urine requires some care that is emphasized in order to avoid contamination:

> *When you open it, you have to be careful not to put your hands or fingers inside the jar so it does not contaminate. When opening the bottle, leave the inside of the lid facing up so that it does not become contaminated. When collecting, try not to put your hand inside, as I told you, so that it does not contaminate the bottle.* (PN.39).

For women, two professionals interviewed reported offering specific guidance on non-collection during the menstrual period or during the use of vaginal creams.

> [...] *like the menstruating girls, you know? We advise them not to bring urine collection. They should come and have their blood collected and leave the urine collection for another day, you know, or else, there will be blood in the urine, even without an infection, you know?* [...] (PTN.36).

> [...] *you can't be menstruating, you can't... vaginal cream, you know?* [...] (PTN.9).

Challenges experienced by Professionals in Guiding Users

The interviews allowed the identification of situations that interfere in the accomplishment of an adequate orientation. The difficulties encountered are associated with: lack of understanding of the technique; elderly people with difficulties of understanding and hearing; the fear of users in solving doubts; and overloading of professionals' activities.

Respondents reported that users did not understand the importance of the technique of urine collection, so they did not perform the intimate hygiene or despised the first urinary stream. This behavior became evident when professionals received the urine samples at the workplace:

> [...] *after you finish explaining, they* [users] *say: Oh, but what should I put in this one?* [...] *So they say this: is one from the day before and one is from the day after? No, it's on the same day; you know, you do the collection in a small bottle, in the tube... and put in both, right?* [...] *So you see that you directed everything, but they didn't understand what we said, you know?* (PTN.9).

> *They don't follow that guidance except for rare exceptions. We realize this when we receive the sample* [...] *if you ask him how he does it he won't say.* (PTN.43).

> *There are patients who have to repeat the exam twice, three times, because of the care that is not performed.* (APN.38).

The guidelines for the elderly present some difficulties, such as impaired hearing acuity, lack of accompaniment and family support for the examination, and the difficulty to understand the instructions about the procedure:

> *Hmm, the difficulty is the people who don't listen well* [...] *if there is no one in the family, people, usually elderly people, no... they are not well-oriented. You explain, explain, explain and they don't understand* [...] *Often the family doesn't help. Then they don't come or bring an exam and forget the other.* (APN.25).

> *Our difficulty is to explain to them in one day, to make the collection on the other day. Maybe on the other day, when they collect the urine, they no longer remember how they have to do it, especially elderly people, you know?* (PTN.40).

The professionals reported the fear of users to feel exposed to embarrassing situations when clarifying their doubts:

> [...] *I think they* [users] *are afraid to ask. I see that some are afraid to suddenly speak, and the professionals who are there guiding them, laugh at their faces* [...] *Even if they don't understand it, they stay quiet, you know?* (PTN.17).

> *Sometimes they say: oh, I get it! But, in fact, they were afraid they did not understand it, right? And ask again.* (PTN.10).

The overload of activities was described by the interviewees as factors that negatively influenced the moment of providing the guidelines:

> *Three years ago, in this place, we worked in a group of three people, because here it is necessary, um... to distribute the medication, to register the exit of the medication right away, to mark the exams, to register the exams, to make the request in the storeroom, give the dispensing of the storeroom as well; if a doctor needs something, I have to go to the warehouse, because if there is a problem I'm the one to blame. And today I'm alone.* (PTN.30).

> *In fact, they don't take it very seriously* [the orientation] [...] *Even the lack of time for you to explain in detail why you need to do it for the patients, you know?* [...] *You look and think they understand it, right? But they not always they do.* (PTN.15).

Factors Influencing User Understanding

Non-adherence to the guidelines provided is related to the lack of understanding of the meaning of certain words, expressed by the "lack" of understanding, as participants mentioned:

> *Because, especially the child, the mother, she has a lot of doubts, she does not even know what genital organ is* [...] *we deal with a population, well, I'm not saying it's 100% of the population, but a certain amount of it is needy. They lack even information and understanding; often a very basic diet; hygiene, good hygiene means wiping with a cloth, you know; wash with soap and water, and dry well. It's very complicated.* (PTN.17).

> *They have to be oriented with words that they understand, not with technical terms.* (PTN.24).

An interviewee's report drew attention, when informing that some users did not need guidance, because they would not understand the collection technique.

> [...] *but depending on the patient, it's no use talking too much, because the person does not understand it, you know? It's complicated.* (APN.26).

The degree of education of the user interfered with an adequate orientation:

> *Um, actually, as the population here is very needy, sometimes you try to explain, but they don't understand, you know?* [...] *As it is a population of low schooling, everything you say to them is very difficult to absorb, you know?* (APN.20).

Lack of awareness of the fact that urine is considered sterile leads users not to follow instructions:

> [...] *most of them don't, because they think pee is pee; there is no need to do* [hygiene; pee is considered dirty] [...] (PTN.45).

> *So, because of the lack of education, sometimes they think that* [...] *that urine is all the same, you know?* (APN.35).

Some professionals also present incorrect habits and understanding regarding urine collection:

> *For urine we don't guide them* [intimate hygiene] [...] *because we think that, supposedly, the person has to know, right?* [...] *I also don't know if this orientation would be appropriate, because they might think otherwise; they might think that we are telling them to wash. It's complicated.* (PTN.45).

> *They should collect the first urine in the morning. They make hygiene before, without soap, with nothing, right; just water. The first jet is thrown out of the pot and then they collect it.* (PN.13).

> *No, not hygiene. I don't recommend hygiene.* (PAE.27).

> *I don't think I need to, because she does not need to wash, take a shower to collect urine, only the initial jet is thrown away* [...] *She should take a shower only on Saturdays* [laughs]. (PTN.30).

It was identified, in some lines, the users' indifference about the moment of orientation, suggesting that they did not value this professional practice:

> *The lack of attention of the patients, because sometimes you are explaining here and they are looking out, messing with paper sheets, that is, they don't pay attention to what you say.* (APN.31).

> *Sometimes they say why there is a lot of unnecessary information. They told me this not once or twice* [...] (PTN.5).

Professionals reported that users tended to value the blood test more closely in relation to the urine test:

> *I think they don't give much importance to the urine test* [...] *so they think urine is just for taking the test* [...] *they don't care. They want more blood test* [...] (PTN.9).

> [...] *the only thing is that they don't know what defiles or not. They get it anyway, you know?* (PTN.41).

However, this situation was reversed when users had urinary symptoms. Then they began to worry about the result of the exam:

> *Some would. Others wouldn't take it too seriously* [...] *Oh, set the examination for some time in the future and come back when the antibiotic is over, ok? Then I set it. But they don't come because they have gotten better.* (APN.16).

> *I think they aren't very interested, especially those who are going to take a routine exam, which is just a routine, so... I don't have to do all this. Now, those who come with a symptom, such as pain to urinate, pain to... you know; this patient, yes, he understands well. If he doesn't understand, he asks again.* (PTN.19).

Discussion

The speeches of the study participants showed weaknesses and misconduct about the scientific knowledge for the appropriate professional orientation. Thus, the "nature of the guidelines provided to users" for urine collection requires strategies that seek to meet this need.

For an adequate urine collection procedure, users should be advised about the need to collect the first urine in the morning, or after urinary retention between two and three hours, as it ensures that the sample is concentrated, allowing the detection of substances that may not be observed in more diluted samples. The proper orientation is aimed to inform the collection of the intermediate jet, after neglecting the first jet, as it may contain secretions that may alter the result and lead to erroneous interpretation of the laboratory report. Hand washing should be performed prior to the procedure and intimate hygiene should be performed with soap and water to reduce the risk of sample contamination[12-13].

In the study, it was identified that some professionals did not orientate the intimate hygiene, or, still, they directed hygiene without soap. The performance of this procedure contributes to the non-contamination of the sample[5]. None of the interviewees spoke about the importance of women and men carrying out careful personal hygiene, taking into account anatomical issues for the hygiene and collection of biological material, showing that the incomplete information provided to the users would imply the incorrect accomplishment of the procedure. Men should be careful to retract the foreskin to perform proper hygiene, while women should move their large lips to perform intimate hygiene and material collection[12-13].

In relation to urine bottles, the use of large-mouth vials is recommended to facilitate the collection of urine by women and avoid contamination[12-13]. Thus, the bottles available in primary care in the study scenario were adequate to this principle.

The urine test is one of the most requested in primary care, since it has a low cost and its realization is fast, accurate and safe. However, the quality of the biological material depends on how the pre-analytical step was performed, which includes urine collection and constitutes the phase with the highest number of errors[14]. In order to minimize these shortcomings in the analytical process, professionals must provide adequate guidance to patients, and it is necessary to perform training for all professionals involved in the process of obtaining and analyzing biological samples, ensuring the reliability of the analytical procedures[15].

In relation to the difficulties faced in orienting users, professionals reported that users often received the necessary information, but did not understand the correct way to perform urine collection. Although the timing of the guidelines constituted an opportunity for health education, they were compromised by inappropriate communication between professionals and users. Professionals need to tailor information from the correct technique to informal vocabulary so that users can understand what some technical terms or unusual everyday words mean[16].

The noises in communication are evidenced in this study when the need for the user to repeat the collection of the exam is reported. To avoid

them, the validation of the information provided is a key element[16]. Professional awareness of the communication process should be worked on to qualify health care. The initiative to question the doubts regarding the guidelines provided should not be an initiative only of the users, but also of the professionals who, when questioning how the collection of urine should be done, make sure that users understood the technique, validating communication and making it effective[17].

Still about shortcomings in the communication process, professionals reported the challenge of orienting elderly users, who had hearing difficulties and sought health care without an accompanying person. The aging process brings with it physiological and functional changes, such as cognitive and sensorial losses, as well as changes in functional capacity. Still about shortcomings in the communication process, professionals reported the challenge of orienting elderly users, who had hearing difficulties and sought health care without an accompanying person. The aging process brings with it physiological and functional changes, such as cognitive and sensorial losses, as well as changes in functional capacity[18].

The fear of solving the doubts with the professionals suggests interference in the bond between professionals and users. In this way, professionals must demonstrate sensitivity in perceiving the subjectivities of communication, identifying the shortcomings and apprehension in verbalizing their longings[19], as well as promoting free space of pre-judgments about their cultural habits and knowledge considered common sense. The building and strengthening of the link between professionals and users can be compromised due to the overload of activities described by the interviewees. Excessive functions cause professionals to suffer from cognitive, physical and psychic wear[20], making it difficult to meet the users' individual demands and needs.

Communication failures appear as contributory factors for incidents in primary care that interfere with patient safety[21]. Another study corroborates this understanding when affirming that the failures in the communicative process are the most common mistakes made by health professionals[22]. Effective communication encourages the participation of patients and family members in providing safe care[2].

The factors influencing the level of user comprehension portrayed the need for an expanded view to identify situations of social vulnerability, which in this study were seen by the low level of education of users referred by professionals, by the lack of understanding of the meaning of some words, such as the lack of knowledge about what a genital organ is. This situation alerts us to the way language is used during professional orientation, which does not serve the singularities of the users and does not promote effective communication. Another study[23] points out that socioeconomic characteristics are factors that may be associated with inadequate hygiene habits, favoring the development of diseases of the urinary tract.

The fact that nursing professionals fail to guide some users because they believe they will not understand the procedure, as identified in this study, is worrying, since it starts from a presupposition and does not use a health education promotion strategy. Communication barriers need to be overcome through qualified listening and using words that facilitate user understanding[16]. As reported by practitioners, users believe that urine is a dirty substance and therefore caring for vial contamination or hygiene of the intimate region may be disregarded. This shows that users are not aware that, under normal conditions, urine is sterile[13].

In addition to common-sense knowledge being regarded as an obstacle by professionals, users' lack of attention has also been reported, suggesting they would not follow the guidelines because they did not consider urine examination is meaningful for the diagnosis of their health condition. However, this situation is reversed when users manifest urinary symptoms, since the results would indicate diseases of the urinary tract, a finding similar to that found in another study[24].

Research that addresses nursing orientations in primary care on urine collection was a

limitation to this study, due to its scarcity, a fact that made it difficult to discuss the results found.

Conclusion

The aspects that permeate the preanalytical stage of the urine collection about the guidelines provided to the users regarding the characterization of the participants of the study showed that a significant number of professionals who worked on the delivery of the bottles and orientation to the users in terms of the urine collection procedure, had high school education, were over 30 years old, had been working in the function for more than a year, and had not been trained for this activity.

Among the guidelines, inadequate intimate hygiene and non-specific guidance for men and women were two aspects that aroused attention, since they are basic information for the quality of the urine test sample. Thus, it was observed the non-valuation of guidelines related to intimate hygiene, suggesting that among them there were those who did not have knowledge about urine sterility and the need to avoid forms of contamination of the flask or urine by contact with the skin.

The difficulties cited by professionals and the misconceptions committed in the orientation to users suggest a relationship with the health education process, since the highest percentage of respondents claimed that they had not received formal training on the collection of biological materials for laboratory tests.

The information shared during the communication process and the development of the link between professionals and users interfere in the way users understand how to collect biological material and the need to follow the guidelines provided. Therefore, communication requires qualified listening, clarity and objectivity. Moreover, in order to favor the formation of a professional-user link, it should occur in a private environment, where users feel comfortable and have space to express their doubts.

The findings of this study allow suggesting that the training of primary care professionals on urine collection is a practice of permanent education in health, so it can result in the improvement of communication strategies as practices that promote patient safety, since they may contribute to avoid contamination risk in the urine examination and the inadequate diagnosis and treatment.

Collaborations:

1. conception, design, analysis and interpretation of data: Franciely Daiana Engel, Fernanda Karla Metelski and Arnildo Korb;

2. writing of the article and relevant critical review of the intellectual content: Franciely Daiana Engel, Fernanda Karla Metelski and Arnildo Korb;

3. final approval of the version to be published: Franciely Daiana Engel, Fernanda Karla Metelski and Arnildo Korb.

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