RESEARCH

INTERMITTENT CATHETERIZATION PERFORMED BY HOME CAREGIVERS

CATETERISMO VESICAL INTERMITENTE REALIZADO PELOS CUIDADORES DOMICILIARES EM UM SERVIÇO DE ATENÇÃO DOMICILIAR

CATETERISMO VESICAL INTERMITENTE REALIZADO POR CUIDADORES DOMICILIARIOS DEL SERVICIO DE ATENCIÓN DOMICILIARIA

Camila Vilaça Salles Campos [1]
Kênia Lara Silva [2]

[1] Post graduate candidate in Clinical Management in the Basic Health Care System, School of Nursing of the Federal University of Minas Gerais (UFMG). Belo Horizonte, MG – Brazil.
[2] Registered nurse; PhD in Nursing; Assistant Professor of the Department of Applied Nursing, School of Nursing of the UFMG. Belo Horizonte, MG – Brazil.

Corresponding Author: Kênia Lara Silva. E-mail: kenialara17@yahoo.com.br
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ABSTRACT

This descriptive and exploratory study aims at evaluating intermittent catheterization performed by caregivers to users registered at the Home Care Service in Betim, Minas Gerais. Data was collected through interviews and observation of the catheterization technique during home visits to six patients. The latter were predominantly female, aged between 9 and 44 years, who depended on catheterization due to neurogenic bladder caused by spinal trauma, myelomeningocele or leukaemia. Caregivers were usually female (either mother or sister) aged between 29 and 57 years. With regards to catheterization, results show that caregivers followed standard procedures concerning hands and urinary meatus hygiene, use of gloves and lubricants, storage and reuse of catheters. Public health system offered little support to home care; its main role was to provide nursing supplies. The detection of urinary tract infection in most of the patients indicates the need of health care education rather than only technical training for caregivers. The study concludes that the nurse, as health care agent, must promote IC training and actions that implicate the health care team, the caregiver and the user in the process.

Keywords: Home Health Care, Urinary Catheterization, Nursing Care.

RESUMO

O estudo teve como objetivo analisar a prática do cateterismo vesical intermitente realizada no domicílio pelo cuidador do usuário cadastrado no Serviço da Atenção Domiciliar de Betim, Minas Gerais. Estudo descritivo-exploratório no qual os dados foram obtidos por meio de entrevistas e observação da técnica de cateterismo durante acompanhamento domiciliar de seis usuários do serviço. Os resultados revelaram as características dos pacientes dependentes do cateterismo vesical intermitente e de seus cuidadores. Prevalecem pacientes do sexo feminino, com idade entre nove e 44 anos, dependentes do cateterismo por acometimento do quadro de bexiga neurogênica secundária a traumatismo raquimedular por acidente, mielomeningolece ou leucemia. Os cuidadores são, a maioria, mulheres (mãe ou irmã) com idade entre 29 e 57 anos. Em relação ao procedimento do cateterismo, os resultados indicam o seguimento das normatizações do protocolo do serviço de atenção domiciliar quanto à higienização das mãos e do meato urinário, uso de luvas e lubrificantes, acondicionamento e reutilização do cateter. Os resultados indicam, ainda, que o apoio oferecido pelos serviços de saúde do SUS-Betim, para o cuidado no domicílio, encontra-se insuficiente como rede assistencial, sendo considerados apenas como fornecedores de materiais. A infecção no trato urinário, na maioria dos usuários, reflete a necessidade de uma educação em saúde para cuidador e não somente um treinamento tecnicista. Conclui-se que o enfermeiro como agente do cuidado deve fundamentar o ensino do cateterismo vesical intermitente em uma atenção integral, que vise à corresponsabilidade da equipe de saúde, do cuidador e do próprio usuário.

Palavras-chave: *Assistência Domiciliar; Cateterismo Urinário; Cuidados de Enfermagem.*

RESUMEN

El objetivo del presente estudio fue analizar la práctica del cateterismo vesical intermitente efectuada en el domicilio por el cuidador del usuario registrado en el Servicio de Atención Domiciliaria de Betim, Minas Gerais. Se trata de un estudio exploratorio descriptivo con datos recogidos en entrevistas y durante observación de la técnica de cateterismo en el seguimiento domiciliario de seis usuarios del servicio. Los resultados determinaron las características de los pacientes dependientes del cateterismo y de sus cuidadores. Prevalecían pacientes del sexo femenino, con edad entre 9 y 44 anos, dependientes del cateterismo debido a un cuadro de vejiga neurogénica secundaria a traumatismo raquimedular por accidente, mielomeningocelis o leucemia. La mayoría de los cuidadores eran mujeres (madre o hermana) con edad entre 29 y 57 años. Con relación al procedimiento del cateterismo, los resultados indicaron que se siguieron las normas del protocolo del servicio de atención domiciliaria referentes a higienización de las manos y del meato urinario, uso de guantes y lubricantes, acondicionamiento y reutilización del catéter. También se observó que el apoyo de los servicios del sistema único de salud de Betim no es suficiente como red asistencial y que funciona apenas como suministrador de material. La presencia de infección urinaria en la mayoría de los usuarios señala que, aparte de la capacitación técnica, los cuidadores precisan tener educación en salud. Se concluye que el enfermero como agente del cuidado debe fundamentar la enseñanza del cateterismo vesical intermitente en la atención integral de salud, con miras a la responsabilidad compartida entre el equipo de salud, el cuidador y el propio usuario.

Palabras clave*: Atención Domiciliaria; Cateterismo Vesical, Cuidados de Enfermería.*

INTRODUCTION

Health care practices can happen in different contexts, such as health care institutions, businesses, schools and households; the latter is designated home or domiciliary care. In Europe before the creation of hospitals, health care was provided in people´s homes.[1] Earlier social norms dictated that women should keep house and care for the sick, while men should act as breadwinner and bearer of moral authority.[1]

The institutionalization of nursing care emerged concomitantly with the evolution of the Catholic Church and the need to exclude from social life people with infectious diseases and mental disorders. It gained momentum with the development of an industrial capitalist society that financed health care improvements, as well as scientific and technological innovation.[1]

The health system model based on curative and hospital-centred care prioritize individual and specialized medical consultations for treating illnesses or rehabilitating patients, supported by high technologies. This model is still the choice model of current society despite the high costs it generates – mainly due to high hospitalization rates and the use of technologies.[2,3]

In order to reverse this disease-based model and optimize public spending on health services, domiciliary health care reemerges. It aims at moving from a hospital-centred, curative, individualized, decontextualized and mechanistic approach, to one that is integrated, humanized and equitable regarding health promotion, prevention, treatment, users' rehabilitation and autonomy.[4]

The construction of this "new" health care model is an opportunity to reorganize the health services based on a problem-solving approach and humanized care; one that takes the users' needs into consideration, as well as their family context and sociocultural values. Moreover, it would provide a solution to the financial problems of the health system, reducing the risk of nosocomial infections, hospitalization rates and long-term hospital stays.[5]

To provide home care means to relocate nursing practices, technologies and institutionalized health care knowledge to the home setting. On the one hand, this relocation gives caregivers more freedom to establish and carry on their activities (e.g. definition of bathing times, food and medicines);[6] on the other, it leaves a number of issues unanswered, such as the negotiation of therapeutic plans, implementation of health care projects that depart from institutionalized routines, infection control at home and waste management.[7]

The health care provided to patients at their homes is different from that one provided in hospitals, particularly in relation to care practices performed by caregivers, and the risk of infection. Nursing practices should be adjusted to the new environment so they could be fulfilled by the user or the caregiver, even if they lack specific training. Surveys and records of procedures performed at home, their cost-effectiveness, user and family satisfaction, their efficacy and effectiveness, their advantages and disadvantages should be evaluated.[5]

The present study aims at analysing the performance of the intermittent catheterization in home settings by caregivers of users registered at the Home Care Services (SAD) of the municipality of Betim, in the state of Minas Gerais.

Intermittent catheterization (IC) is the periodic drainage of urine through a catheter inserted through the urethra into the bladder, using a clean technique (not aseptic). It is indicated for bladder emptying in patients with neurogenic bladder disorders, spinal cord injury, and in patients with urinary retention, in order to prevent urinary tract infection, treat Vesicoureteral reflux and promote urinary continence, thus preventing chronic kidney disease. It is a prolonged treatment and, in some cases, for life, and should be adapted to the particular needs of each patient. The IC mimics the natural processes of urination and improves social interaction and self-esteem.

The clean technique in bladder catheterization was introduced in 1972 by *Lápides et al.*; it is easier to use and better suited to the socioeconomic conditions of users suffering from neurogenic bladder. It presents low rates of urinary tract infections when performed aseptically; the technique replaces urethrovesical indwelling catheters and cystostomy in patients treated at home.[8]

The focus of this study is the IC, a ground-breaking procedure in domiciliary care. It presents a high frequency rate in this type of health service, and it requires a technique typical of the institutionalized health care. Moreover it measures how efficient the training of caregivers is: the rate of urinary tract infection in IC users may indicate failures in its implementation or in the identification of the warning signs of infection.

Betim is located in the metropolitan area of Belo Horizonte. It has a population of approximately 422,159 inhabitants. The health system is organized according to the Unified Health System (SUS) principles: regionalization and hierarchization. The city´s health system consists of twelve basic health units (UBS), nineteen family health units (UBSF), four emergency care units (UAI), three hospitals and one maternity hospital. It has specialist services, health referral system, health surveillance, regulation, control and evaluation programs, laboratory services and therapeutic and diagnosis support services.

The home care service in Betim was created in 1997 within a deinstitutionalization programme and the implementation of the Therapy and Home Care programs. It aimed at optimizing hospital beds in the newly created Betim Regional Hospital (HPRB), and at ensuring quality, equity and universality of care in the SUS.

Concomitantly, the Home Care Team (GAD) of the Basic Health Unit of one of the city´s districts – physician, nurse, nursing assistant, social worker and pharmacy assistant – offers continuity of care to users recently discharged from hospital.[9]

The local Department of Health implemented the Community Health Programme and the Family Health Strategy that introduced home care to provide a more dignified and humanized care to users and face a public health system crisis (shortage of hospital beds, increased hospital costs, high rates of infections).[10]

The service was based on the Home Care Program (PAD) and began systematic operation in August 2005, with the implementation of routines, norms and specific references.[10] The Board of Directors of the National Health Surveillance Agency approved resolution No 11 that changed the services name to Home Care Service (SAD). Thereafter home care teams were formed in the UBS and the UBSF units.[11] The number of users increased from 326 in 2005 to 487 users in 2006 and 665 users in 2007, attended by 40 home care teams. The health care practices performed include from therapeutic support, basic training and basic activities of daily living (i.e. oral hygiene, bathing, medication, feeding) to hospital routines (bladder catheterization, dressings, tracheostomy suction, enteral nutrition therapy, insulin therapy).[11]

Home care-acquired infections are much less frequent than nosocomial infections. It is necessary however to readjust some technical nursing procedures to an environment that has fewer technological devices.[12]

Data on the most frequent nursing procedures in the home environment and infection control is scarce.[5] Home care practices with the highest risk of infections are: antivenom serum infusion and administration of drugs; ostomy care (gastrointestinal, gastric, bladder and tracheostomy); urinary catheterization (indwelling and intermittent), gastric and nasoenteric intubation; venous catheterization; respiratory therapy; parenteral and enteral nutrition; dressings and specimen collection for laboratory tests.[12]

The nurse should be the professional responsible for offering support and instructing the family on the procedures. The present study results could evaluate the quality of nursing practice in domiciliary care.

METHOD

This is a descriptive and exploratory study. Field work was carried out in health units in Betim and in the home of users registered at the SAD between 2005 and 2008. Field work allowed the researchers to build empirical knowledge, to approach the context studied as well as to promote the interaction between the players in that particular environment.[13]

The study participants were users dependent on a caregiver to perform IC. The inclusion criteria were: caregivers with no health care training and responsible for the care; users that were dependent on others for the performance of intermittent catheterization and intact cognitive abilities

An earlier survey carried out at the SAD identified fifteen registrations of which seven needed catheterization. Of the remaining eight, one had moved to another city and one did not feel comfortable while being observed during the procedure. Thus, the researchers visited the six users registered at the SAD Betim and their respective caregivers.

Data was collected after the approval of the research by the Committee on Ethics in Research of the Pontifical Catholic University of Minas Gerais (resolution No 2250.0.000.213-8). All participants signed the Statement of Informed Consent after being informed about the research objectives.

The home visits were previously scheduled through the area´s community health agent and the units´ nurse. The user and respective caregiver received two home visits during which data was collected. During the first visit the project was explained and the subjects' participation detailed. The second visit aimed at collecting data.

Data was collected through structured interviews. At this stage, the interview lasted approximately 40 minutes with 15 minutes for direct observation of the procedure performed by the caregiver using a script previously prepared (Table 1).

Data from the questionnaire was organized and analysed by descriptive statistics. The results were presented in charts and tables.

RESULTS AND DISCUSSION

Of the six IC users participating in the study, four were female and two were male, aged between 9 and 43 years. The majority presented neurogenic bladder caused by spinal cord injury (Table 2).

The performance of intermittent catheterization (IC) by a caregiver in the home environment was due to: neurogenic bladder caused by myelomeningocele, spinal cord injury due to motorcycle accidents, fall, firearm accident, and leukaemia, which supports the findings of Fera, Lelis and Glashan.[8]

Regarding the caregivers, five were female and one male – three mothers, two sisters and one husband (Table 3). Concerning the education level, one had incomplete primary education, three had incomplete secondary education and one had complete secondary education. Employment situation was as follows: one caregiver worked outside the home, one was a student and the others stayed at home.

The caregiver is responsible for caring for the needs of the users and improve their health and quality of life.[1,2] She/he is generally a family member with no training in healthcare that receives no remuneration and performs the tasks without the help of other family members. They highlighted that the lack of family support was physically and emotionally exhausting. The amount of time spent in caring for the patient had negative consequences in their self-care, professional education, social life and leisure activities.

Table 1 - Data collection

User´s name:	Age:
Health unit:	
Data of admission at SAD:	
Diagnosis:	
Caregiver´s name:	Age:
Degree of kinship:	
Education level:	
Profession:	

Housing and sanitation information	Yes	No
Electricity		
Sewage network		
Access to drinking water system		
Garbage collection		

1) Have you been trained to perform intermittent catheterization (IC)? By whom?
2) In case you have doubts, who do you look for?
3) Where do you get supplies from (i.e. gloves, gauze, and catheter)?
4) Have you ever ran out of supplies? What did you do? Which procedure had to be performed?
5) Is there a constant place for the performance of the IC at home?
6) Has the basic health unit supplied your needs for the performance of the IC?
7) Did the user have urinary tract infection after the IC? Has she/he used any antibiotics lately?

Procedure: intermittent catheterization	
Techniques used:	
1) Hand washing before the procedure:	( ) Yes ( ) No
2) Hygiene of the urinary meatus prior to catheter insertion:	( ) Yes ( ) No Obs.:
3) Use of gloves during procedure:	( ) Yes ( ) No Obs.:
4) Position adopted:	( ) Sitting ( ) Lying down Obs.:
5) Use of lubricant prior to catheter insertion:	( ) Yes ( ) No Obs.:
6) Position of the penis for catheter insertion:	( ) Horizontally ( ) Laterally ( ) Tilted downwards
7) Containers for the collection of the urine drained:	( ) Plastic collector ( ) Plastic recipient ( ) Other recipients ( ) Toilet ( ) Others: _____
8) Frequency (in hours):	( ) Every 3 hours ( ) Every 4 hours ( ) Every 6 hours ( ) Every 8 hours ( ) Every 12 hours
9) Catheter calibre:	( ) 14 ( ) 12 ( ) 10
10) Substances used for cleaning reusable catheter:	( ) Water ( ) Water and soap ( ) Water and boiling afterwards ( ) Water, soap and boiling afterwards ( ) Water and soaking in PVP-I ( ) Water, soap and soaking in PVP-I
11) Reusable catheter storage:	( ) Clean cloth ( ) Glass jar with plastic lid ( )) Plastic recipient ( ) Others: _____
12) Disposal of waste:	( ) With domestic garbage ( ) Take it to health unit to be disposed of ( ) Vacant lot

Table 2 - Distribution of the six IC users, according to sex, age, diagnosis, years of use, and date of admission. Betim, 2009

User	Gender	Age	Diagnosis	Years of use	Date of Admission
A	F	17	Neurogenic bladder caused by spinal cord injury due to leukaemia	11	09/17/2006
B	M	09	Neurogenic bladder caused by myelomeningocele	09	08/08/2006
C	M	33	Neurogenic bladder caused by spinal cord injury due to firearm accident	03	04/24/2006
D	F	34	Neurogenic bladder caused by spinal cord injury due to motorcycle accident	02	07/23/2008
E	F	40	Neurogenic bladder caused by spinal cord injury (T8 - T9) due to fall	02	05/30/2008
F	F	44	Neurogenic bladder due to spinal cord injury due to firearm accident	05	12/21/2007

Table 3 - Distribution of caregivers of IC users according to gender, age, education and degree of kinship. Betim, 2009

Caregivers	Gender	Age	Level of education	Employment situation	Degree of kinship
A	F	38	Incomplete secondary education	Stays at home	Mother
B	F	35	Incomplete secondary education	Stays at home	Mother
C	F	57	Incomplete primary education	Stays at home	Mother
D	F	36	Complete secondary school	Stays at home	Sister
E	M	45	Complete secondary school	Watchman	Husband
F	F	29	Incomplete primary school	Student	Sister

The results presented below show the performance of IC by caregivers. All caregivers performed hand hygiene before the IC; four used soapy water and two used only water. There is no need to use any antiseptic; hand washing before IC should be done with soap and water.[14]

Intimate hygiene prior to IC was mentioned by most of the caregivers and observed during fieldwork: 86% of the caregivers perform the cleaning of the urinary meatus before the IC using mostly soap and water. Only one did not perform hygiene of the urinary meatus: the catheter was introduced immediately after the shower. Hand washing with mild soap and cleaning of the urethral meatus prior to IC is one of the steps recommended by the Home Care Service protocol (SAD) and it eliminates the need for antiseptic.[14] In this regard, water and soap are sufficient to remove the microorganisms found on the skin surface, especially in sweat glands, sebaceous glands and hair follicles.[14]

When inquired about the non-use of procedure gloves caregivers replied that they had been trained in the rehabilitation hospital in which the users were admitted and believed that in the home environment it was not necessary to wear gloves since there was less risk of infection. Caregivers were instructed to use gloves only when the user has urinary infection. This finding agrees with Beast, Lelis and Glashan[8] and SAD protocol. According to them, self-catheterization requires only hand washing with soap and water. Procedure gloves are required when the task is performed by the caregiver.

Lubricant was used by 67% of the caregivers (Figure 1). According to them it facilitates the insertion of the catheter, since some users still feel a little pain caused by bladder filling. This practice corroborates Morooka and Fáro[14] that claim that the use of sterile water-soluble lubricant prevents urethral injury during catheterization.

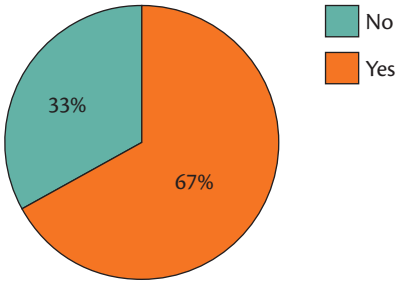

Figure 1 - Distribution of caregivers of IC users according to the use of lubricants for catheter insertion. Betim, 2009.

Regarding the most comfortable position for performing catheterization, three users preferred lying down in bed; and three sitting when bathing or lying down in bed. According to the SAD protocol[10], the users should choose the most comfort-

able position. In cases of impairment of the bone – marrow, male users prefer sitting and female users sitting with flexed knees or lying down. Regarding the male user, a caregiver reported positioning the penis in a right angle and another kept it in a lateral position. The female participant reported exposure and withdraw of the vulva and inner labia for catheter insertion.

The most cited containers for drainage of urine were plastic containers with a graduated plastic bag to measure urine volume or a plastic bag (Table 4). A glass container or PET bottle was also used.

Table 4 - Distribution of caregivers of IC users according to container used to collect urine in intermittent catheterization. Betim, 2009

Recipient	Nº	%
Plastic collector	01	16,6
Toilet	01	16,6
Plastic container	02	33,4
Others	02	33,4
Total	**06**	**100%**

According to the SAD protocol, the catheter must be wrapped in a clean lidded container and stored in the refrigerator or in a cool place, after cleaning. With the exception of the graduated plastic bag used by a single caregiver, other containers do not enable accurate measurement of the drained volume. Elimination in the toilet prevents urine checking for colour or existing residues, thus marring the detection for signs of infection.

Data collected revealed that most caregivers cleanse the catheter with soap and water (Table 5). One caregiver did not reuse the catheter since the amount provided to the user was sufficient to perform the procedure twice a day.

Table 5 - Distribution of the caregivers of IC users according to products to clean the catheter for reuse. Betim, 2009

Catheter care	Nº	%
Water and soap	04	66.7
Wash with water and boil it	01	16.6
Do not reuse the catheter	01	16.6
Total	**06**	**100%**

The SAD protocol recommends washing the catheter, externally and internally, with mild soap and water, and a 10 or 20 mL syringe, rinsing and drying it with a clean cloth. None of the caregivers used the syringe. Reuse of the catheter is suggested by Headstones *et al.*[15] after washing it with soap and water, followed by soaking in running water, drying and storing after each use.

Caregivers mentioned several materials for the storage of catheters after cleaning – clean and ironed cloth, lidded plastic container (e.g. butter jar) and compress (Table 6). We highlight that only one user did not reuse the catheter.

Table 6 - Distribution of the caregivers of IC users according to storage of reusable catheter. Betim, 2009

Type of packaging	Nº	%
Clean cloth	01	16,6
Lidded plastic container	03	50,0
Compress	01	16,6
Do not reuse	01	16,6
Total	**06**	**100%**

Regarding the disposal of waste generated by IC at home, the majority of caregivers reported to dispose of it with household waste; one of them declared to throw it in a vacant lot near his residence. Such findings highlight the need to broaden the discussion about the management of waste generated in home care.[7]

When questioned about possible urinary tract infection (UTI) after IC performance and the use of antibiotics in recent months, the caregivers responses were varied, but all users had had UTI, whether early on, or have it recurrently (Table 7).

Table 7 - Distribution of the caregivers of IC users according to urinary tract infection (UTI) in recent months. Betim, 2009

UTI	Nº	%
With infection and using antibiotics at the time of the interview	02	33,4
UTI at the beginning of procedure	01	16,6
UTI happened 6 months before	03	50,0
Total	**06**	**100%**

Most users had recent urine lab exam results to confirm infection or its absence. All users reported having used antibiotics. When they were asked "how do you know if the user has urinary tract infection?" the researchers found that most caregivers did not recognize UTI symptoms.

For a safe and correct IC performance by a home caregiver ensuring the reuse of the urinary catheter without risk of infection, the nurse should train and guide them about the clean techniques to be used.

Caregivers were asked about the training in IC procedure. Most said they had been trained, but it turned out that only one caregiver had been trained by an assistant nurse of a basic care unit. The others accompanied the user to hospital admission at the System of Rehabilitation Hospitals that offered training sessions carried out by the nurse: they observed the performance of an IC and performed it under the supervision of the same nurse. One of the users mentioned another hospital as training provider.

During the observation of the IC at home, caregivers were asked about their doubts during the performance of their first IC and who had answered them. The caregiver trained by a member of the UBS team had doubts that were solved by other team members. Caregivers trained by the System of Rehabilitation Hospitals had no doubts about the procedure. These data confirm Fera, Lelis and Glashan[8] that nurses are responsible to instruct about the need of IC, the anatomy and physiology of the urinary system through verbal description and practical demonstration and supervision of the catheterization".

Data analysis allowed the researchers to confirm that the health units of the Unified Health System (SUS) at Betim operate alongside the System of Rehabilitation Hospitals (SARAH). In this context the main health unit acts exclusively as a provider of nursing supplies (gauze, gloves procedures, and catheter lubricants), whereas the SARAH is the reference institution for the health care of those users. Caregivers highlighted that they were trained by a SARAH nurse on how to perform IC at home. In addition, after hospital discharge, patients were monitored by an urologist and a physiotherapist on a weekly basis.

During the interviews with caregivers the researchers assessed that there is a restriction to the organization of a health care system based on domiciliary care, which requires a combined effort of families and people being cared at home.[16] Although home care is an alternative to the care of people who have functional losses, public health services are not prepared to give full assistance to the user and family/caregiver.[17] The home care program at Betim and the service it provides lacks coordination, despite the existent protocol and the implementation of a Home Care Service; it is not able to provide an integrated care to users at home and compels them to look for other institutions.

Home care is an approach to health care that implicates the family in the care of the patient.[17] The caregiver should be empowered and encouraged by health professionals to exercise health care practices, but the health care professionals should also offer support to the process.

Caregivers were trained to perform the IC; however, during the visits some asked the researchers about the signs of urinary tract infection; others demonstrated anxiety: "I'm afraid of piercing her bladder". Such situations revealed that health education should be promoted but not with a technicist approach.

Nurses should be responsible for meeting the information needs of caregivers, such as getting them acquainted with the anatomy and physiology of the urinary system, verbal orientation, explanation of procedures and supervision when carrying out the procedure. The nurses will be able to identify those needs if they manage to get into the users/caregivers home.

The nurse as a member of the Family Health Program (ESF) team should contemplate this health care model as a strategy to meet the needs of users who have some type of dependence. The lack of opportunity to look for the support of other services (whether for mobility problems or the scarcity of health services catering for this population group) means that those needs are neglected.[17]

In a comprehensive care approach the nurse as an autonomous "health care agent" should offer support to the teaching of intermittent catheterization, in actions that promote the implication of the health care team, the caregiver and the user.

FINAL CONSIDERATIONS

The study findings reflect the context of a small portion of the population cared for in a home setting. Given that limitation, the researchers recommend further studies encompassing new and more users and addressing other conditions and health care issues.

Despite those limitations, the study identified the techniques used by caregivers in the implementation of the intermittent catheterization at the users' home. The practice was performed by a single caregiver, which was a family member.

The nursing practice was re-located to a domestic setting and inserted in the users/caregivers daily life. The IC was performed by caregivers with no professional training who used their creative abilities to readjust the home environment to the users' needs.

Because the majority of caregivers had been trained by the health team of another institution, they did not strictly follow the technical procedures recommended by local policies. Nevertheless, there were few discrepancies between the techniques prescribed in the protocol and the ones performed in the users' home.

The transfer of health professional responsibilities to caregivers and health care units being considered by caregivers as mere providers of supplies demonstrate that the Home Care Service at Betim offers inadequate services as health system. Furthermore the system is unable to provide integrated care to home users, forcing them to search for other institutions.

The existence of cases of urinary tract infection reflects the need for health education actions not only technicist training. It is up to the nurse, as a SUS health team member, to provide support during the period IC is needed. The anatomy of the urinary system, demonstration of techniques and supervision of caregivers' actions should be approached in a way they can be assimilated by that population group. Such actions promote better understanding of the procedure and create a link between caregiver, health professional and user with no need for external assistance.

Given such context, it is necessary to discuss the nursing strategies best suited to promote health education of caregivers, to encourage and to empower them to perform the IC procedure taking into account the users' safety and well-being.

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