Cogitare Enfermagem

CASE REPORT

TELECARE CENTRAL: NURSING INTERVENTION PERSPECTIVE*

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ABSTRACT
Objective: To report the development and applicability of a Telecare Central as a nursing intervention.
Method: A descriptive experience-report-type study of a technological project financed for the creation of a communication and information technology network for the telephone follow-up of adults and the elderly, using online software to carry out the interventions.
Results: The information system enabled telephone intervention in a systematized manner, as well as the storage of the collected data. In the example adopted (follow-up of a facectomy), there was an increased demand for guidance on the 1st and 4th postoperative days regarding discomfort control, use of the eye patch, cleaning of the operated eye, use of eye drops, use of glasses and guidance on self-care.
Conclusion: The telephone follow-up by the nurse favors continuity of the home care measures.

DESCRIPTORS: Telenursing; Nursing Care; Nursing Informatics; Geriatric Nursing; Health of the Elderly.

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RELATO DE CASO / REPORTE DE CASO

CENTRAL DE TELECUIDADO: PERSPECTIVA DE INTERVENÇÃO DE ENFERMAGEM

RESUMO

Objetivo: relatar o desenvolvimento e aplicabilidade de uma Central de Telecuidado como intervenção de enfermagem.

Método: estudo descritivo, do tipo relato de experiência, de um projeto tecnológico financiado para criação de uma rede de tecnologia da informação e comunicação para acompanhamento por telefone de adultos e idosos, utilizando um software on-line para realização das intervenções.

Resultados: o sistema de informação possibilitou a intervenção por telefone de forma sistematizada, bem como o armazenamento dos dados coletados. No exemplo adotado, de seguimento de facectomia, demonstrou-se a demanda aumentada de orientações no 1° e 4° dia de pós-operatório, referente ao controle do desconforto, uso do tampão ocular, limpeza do olho operado, utilização do colírio, uso dos óculos escuros e orientações quanto ao autocuidado.

Conclusão: o acompanhamento por telefone realizado pela enfermeira favorece a continuidade dos cuidados em domicílio.

DESCRITORES: Telenfermagem; Cuidados de Enfermagem; Informática em Enfermagem; Enfermagem Geriátrica; Saúde do Idoso.

CENTRAL DE TELECUIDADO: PERSPECTIVA DE LA INTERVENCIÓN DE ENFERMERÍA

RESUMEN

Objetivo: describir el desarrollo y la capacidad de aplicación de una Central de Telecuidado como intervención de enfermería.

Método: estudio descriptivo del tipo "informe de experiencia" sobre un proyecto tecnológico financiado para crear una red de tecnología de la información y comunicación para el seguimiento telefónico de adultos y ancianos, utilizando un software en línea para realizar las intervenciones.

Resultados: el sistema de información hizo posible realizar intervenciones por teléfono en forma sistematizada, así como almacenar los datos recopilados. En el ejemplo adoptado (seguimiento de facectomia), se demostró la mayor demanda de pautas orientadoras en el 1er y 4° día del post-operatorio, referente al control del malestar, al uso del parche para el ojo, a la limpieza del ojo operado, a la utilización de colirio, al uso de lentes oscuros y a pautas orientadoras relacionadas con el autocuidado.

Conclusión: el seguimiento telefónico realizado por la enfermera favorece la continuidad de los cuidados en el domicilio.

DESCRIPTORES: Tele-Enfermería; Cuidados de Enfermería; Informática en la Enfermería; Enfermería Geriátrica; Salud de los Ancianos.

INTRODUCTION

Telecare consists of a health technology characterized by the use of telecommunications and computer technologies in the provision of remote nursing care, for the follow-up of adults and elderly individuals at home by means of telephone calls, video conferencing, virtual consultations and/or cell phone messages[1-3]. It has been shown to be an effective technology in modifying the lifestyles of patients in chronic health and surgical conditions[1,4].

A number of studies point out that telecare is related to the strengthening of guidelines received during hospital discharge, to the speed of patient access to health professionals, to the reduction of the waiting times for consultations, and to the reduction of time and cost in locomotion for face-to-face consultations, in addition to enabling an increase in the frequency of contacts and facilitating the return of the patient[1-5]. Thus, the objective of the study was to report the development and applicability of a Telecare Central as a nursing intervention.

METHOD

A descriptive experience-report-type study of a project called Elderly Telemonitoring Central: TELE_IDOSO_RIO - Public Notice 06/2013 Pro-Elderly, started in 2014 and financed by the Carlos Chagas Filho Foundation for Research Support of the state of Rio de Janeiro.

The Central is located in the Aurora de Afonso Costa Nursing School of the Fluminense Federal University, in the city of Niterói-RJ, and has an air-conditioned room equipped with permanent telemonitoring and teleconferencing material. Among these materials, there are seven bays to support computers and chairs, AOC computers with I5 processors, 8GB of memory, 1TB and 21.5 screen monitors, 4x12 HDL telephone exchange central; Software Controller for connections; connection recorder (USB) with all the connections digitally recorded and archived, Intelbras HSB 20 headset, Thin Client access terminals and Visual identity. The room also has cabinets, a meeting table and a bookcase with books from the nursing area (Figure 1).

Figure 1 - Telecare room. Niterói, RJ, Brazil, 2016

To make the calls, online software was developed to support during the calls. This information system made it possible to conduct the telephone interview in an organized and quick manner, with online filling in of the connection instrument, organization and storage of the data collected during the interview.

The Java Script, Html5 and Jquery PHP programming languages were used to build the software, in addition to the design concepts of Booststrap, CSS and XHTML. The system was developed and integrated with the Mysql Database and the system components hosted on the following link: http://www.teleidoso.com.br/rio/sys_admin/.

The construction of the software resulted in a system with eight screens: 1st screen - User identification, with login and personal password of each researcher; 2nd screen - Home Panel; 3rd screen - Help, with videos to assist in understanding the operation of the system; 4th screen - Patient, composed of new registrations, view and/or update registration, diagnosis, pathology, surgeries; 5th screen: Clinic, which corresponds to the care posts and specialties; 6th screen: Schedule, with the dates when connections must be made; 7th screen: Protocols, which are the connection tools for each specialty registered in the system; and 8th screen: Settings, as shown in Figure 2.

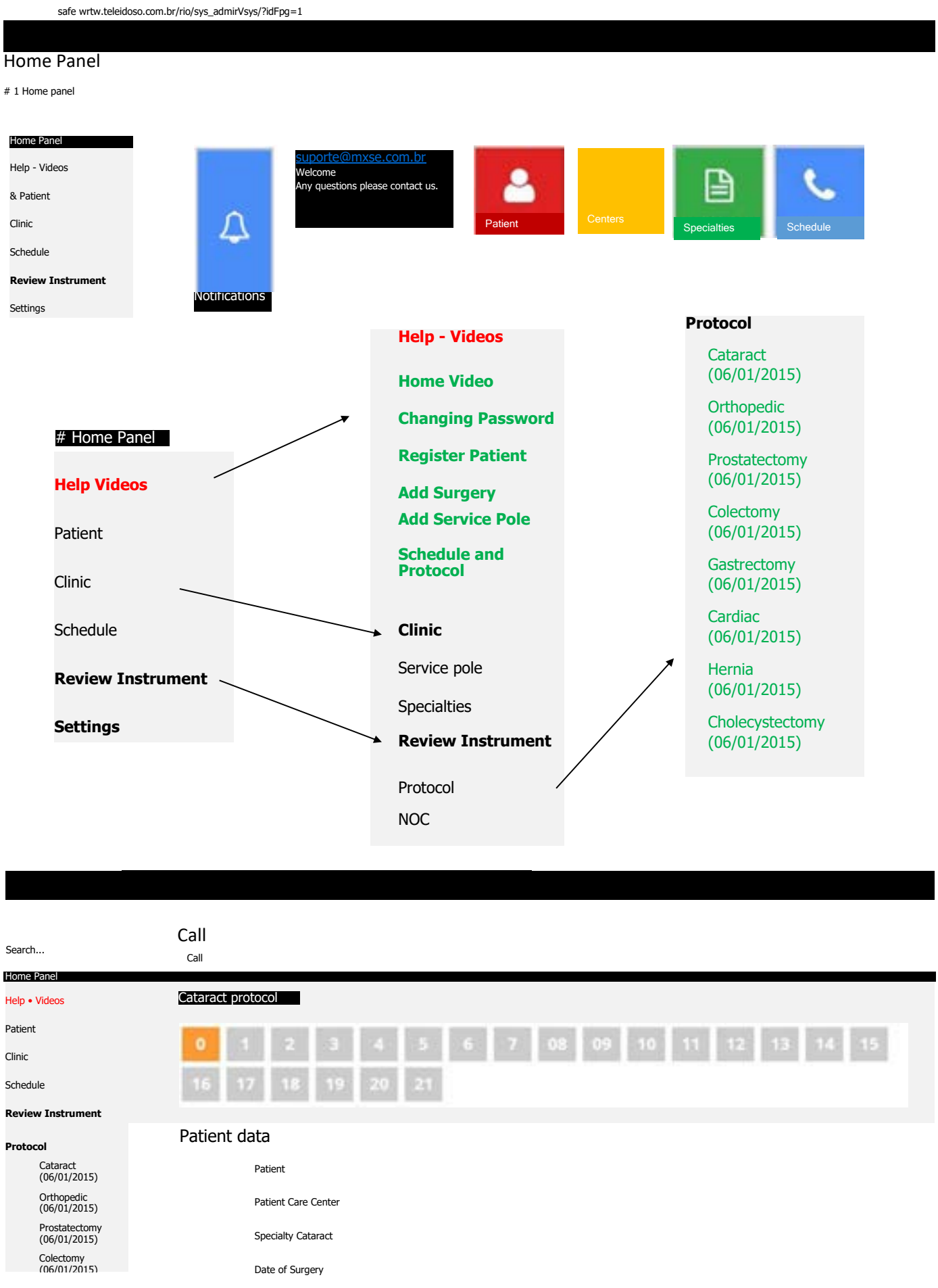

Figure 2 - Main screens of the Tele Idoso system. Niterói, RJ, Brazil, 2019

Connection protocols were tested for postoperative cataract surgery, orthopedics, prostatectomy, colectomy, gastrectomy, cardiac surgery, herniorrhaphy and cholecystectomy. Currently, the remote follow-up of elderly individuals with dementia and their caregivers and cancer patients undergoing chemotherapy is in progress.

The study was approved by the Research Ethics Committee of the University Hospital under opinion No. 791,556.

RESULTS

The information system enabled the intervention by telephone in a systematic way, as well as the storage of the collected data. The following is an example of a telephone intervention performed on elderly patients in the postoperative period of facectomy surgery.

The telephone follow-up was conducted from August 2016 to February 2017 in 48 elderly individuals in the postoperative period of facectomy, from two hospitals located in the city of Niterói-RJ.

The following criteria were established: 1) Inclusion Criteria: being 60 years of age or older, being in the postoperative period of cataract surgery and having a cell phone or landline available for contact by the nurse. 2) Exclusion Criteria: presence of dementia or individuals with hearing loss without a companion or family member who could receive telephone interventions, and patients who underwent surgery to treat previous surgical complications. 3) Discontinuity Criteria: answering less than 75% of the phone calls and not availing time for guidance on the phone.

The face-to-face consultations in the ophthalmology outpatient clinic were maintained and occurred on the first, seventh and thirtieth postoperative days, with the provision of guidance on postoperative care and evaluation of the operated eye. The telephone follow-up consisted of four calls, made on the 1st postoperative day (first call made for the initial contact), 4th postoperative day (second call), 10th postoperative day (third call) and 20th postoperative day (fourth call)[1].

The calls were made from the telecare center, during business hours during week days, and from 8 am to 12 pm on Saturdays. During the calls, online software was used to conduct the interview and to complete the connection protocol, which consisted of a semi-structured form containing questions about postoperative recovery and guidance regarding home care[1] (Figure 3).

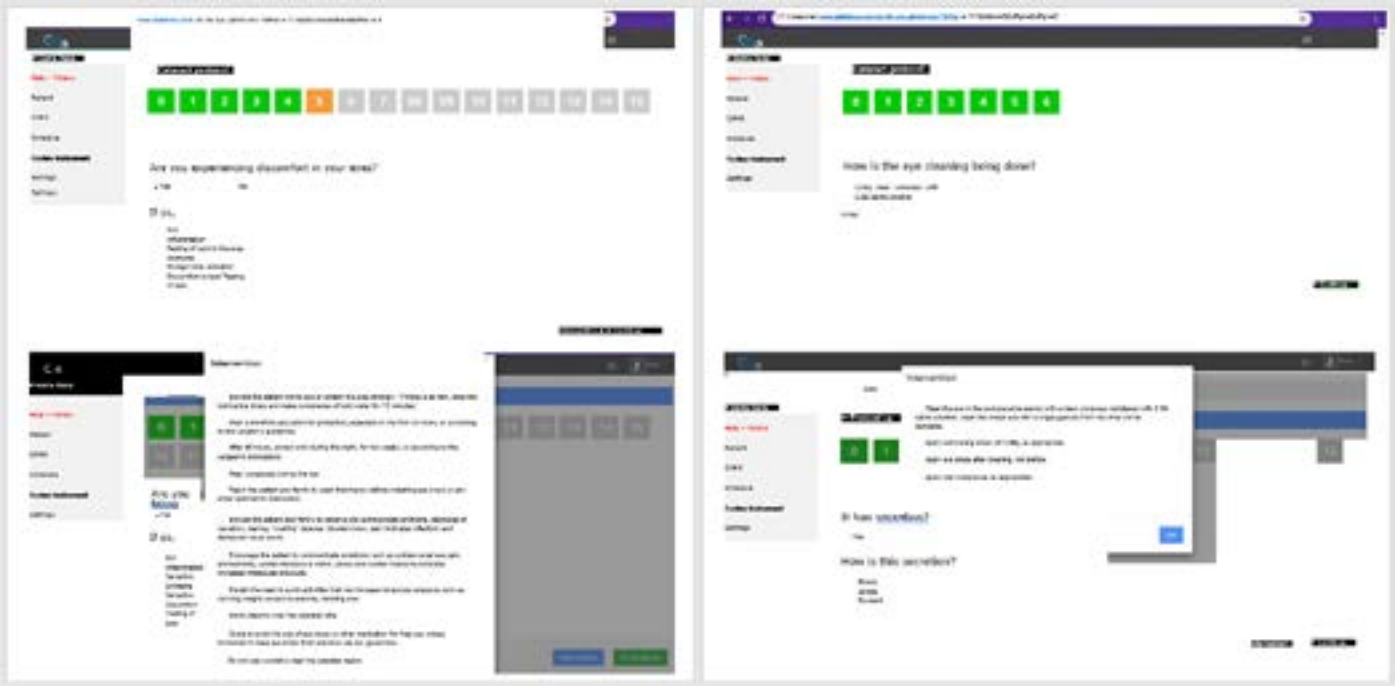

Figure 3 - Screen of the connection protocol and intervention model - Tele Idoso. Niterói, RJ, Brazil, 2019

The main answers given by the participants during the calls are described in Table 1.

Table 1 - Patients's answers during the calls (n=48). Niterói, RJ, Brazil, 2019

VARIABLES X TIME	D1 of PO	D4 of PO	D10 of PO	D20 of PO
	1st call n (%)	2nd call n (%)	3rd call n (%)	4th call n (%)
How have you been:				
Regular	03 (6.3)	01 (2.1)	02 (4.2)	02 (4.2)
Fine	32 (66.7)	26 (54.2)	17 (35.4)	12 (25)
Great	13 (27.1)	20 (41.7)	29 (60.4)	34 (70.8)
How do you feel:				
Confident	23 (47.9)	36 (75.0)	46 (95.8)	47 (97.9)
Anxious	21 (43.8)	10 (20.8)	02 (4.2)	01 (2.1)
Worried	06 (12.5)	03 (6.3)	00 (0)	00 (0)
Annoyed	01 (2.1)	01 (2.1)	00 (0)	00 (0)
Do you feel pain in the operated eye:				
No	34 (70.8)	41 (85.4)	48 (100)	48 (100)
Yes	14 (29.2)	07 (14.6)	00 (0)	00 (0)
Do you feel discomfort in the operated eye:				
No	11 (22.9)	20 (41.7)	45 (93.8)	45 (93.8)
Yes	37 (77.1)	28 (58.3)	03 (6.3)	03 (6.3)

What kind of discomfort:				
Itch	04 (8.3)	02 (4.2)	00 (0)	00 (0)
Inflammation	06 (12.5)	03 (6.3)	00 (0)	00 (0)
Erythema	30 (62.5)	22 (45.8)	01 (2.1)	01 (2.1)
Discomfort to light	16 (33.3)	14 (29.2)	03 (6.3)	03 (6.3)
Foreign body sensation	04 (8.3)	02 (4.2)	00 (0)	00 (0)
Feeling of sand in the eyes	20 (41.7)	16 (33.3)	03 (6.3)	03 (6.3)
Tearing	13 (27.1)	07 (14.6)	02 (4.2)	02 (4.2)
How is your eyesight:				
Good	25 (52.1)	35 (72.9)	47 (97.9)	46 (95.8)
Blurred	23 (47.9)	11 (22.9)	01 (2.1)	01 (2.1)
Diminished	06 (12.5)	08 (8.4)	00 (0)	00 (0)
Uses the eye patch:				
No	21 (43.8)	44 (91.7)	48 (100)	48 (100)
Yes	27 (56.3)	04 (8.3)	00 (0)	00 (0)
Cleaning of the operated eye:				
0.9% PS and Gauze	31 (64.6)	43 (89.6)	43 (89.6)	40 (83.3)
Soap and water	10 (21.8)	05 (10.4)	05 (10.4)	06 (12.5)
Alcohol 70%	01 (2.1)	00 (0)	00 (0)	00 (0)
Does not clean the eye	06 (12.5)	00 (0)	00 (0)	02 (4.2)
Presents secretion:				
No	40 (83.3)	45 (93.8)	45 (93.8)	45 (93.8)
Yes	08 (16.7)	03 (6.3)	03 (6.3)	03 (6.3)
Needs help for self-care:				
No	08 (16.7)	24 (50)	39 (81.3)	40 (83.3)
Yes	40 (83.3)	24 (50)	09 (18.8)	08 (16.7)

Table 2 shows the main interventions performed during the telephone follow-up. There was a greater demand for guidance in the first postoperative days, mainly regarding discomfort control, use of the eye patch, cleaning of the operated eye, use of eye drops, use of sunglasses and guidance on self-care. As care was understood and incorporated into daily habits, the demand for guidance also decreased.

Table 2 - Nursing interventions performed during the telephone follow-up (n=48). Niterói, RJ, Brazil, 2016 (continues)

INTERVENTION X TIME	**D1 of PO**	**D4 of PO**	**D10 of PO**	**D20 of PO**
	1st call n (%)	**2nd call n (%)**	**3rd call n (%)**	**4th call n (%)**
Controlling pain	14 (29.2)	08 (16.7)	01 (2.1)	01 (2.1)

Controlling discomfort	**38 (79.2)**	**29 (60.4)**	**05 (10.4)**	**04 (8.3)**
Guidelines for alterations in the sight	23 (47.9)	12 (25)	01 (2.1)	01 (2.1)
Use of the eye patch	**47 (97.9)**	03 (6.3)	00 (0)	00 (0)
Care in cleaning of the operated eye	**48 (100)**	**47 (97.9)**	**13 (27.1)**	**03 (6.3)**
Care when using eye drops	**48 (100)**	**48 (100)**	**08 (16.7)**	**03 (6.3)**
Use of sunglasses	**48 (100)**	**48 (100)**	**07 (14.6)**	**02 (4.2)**
Guidelines for self-care	**40 (83.3)**	**23 (47.9)**	**07 (14.6)**	**03 (6.3)**
Feeding guidelines	05 (10.4)	03 (6.3)	02 (4.2)	00 (0)
Guidelines for the intake of liquids	26 (54.2)	19 (39.6)	**12 (25)**	10 (20.8)
Controlling nausea and vomits	01 (2.1)	01 (2.1)	00 (0)	00 (0)
Total of guidelines provided	338	241	56	27

DISCUSSION

The Telecare Central proved to be a nursing intervention strategy by allowing guidance to the patient at home, early diagnosis of health needs, prevention of diseases and complications, greater adherence to the proposed treatments and home care[1-2,5].

Telecare has been used by nurses as a strategy for the educational process, for the identification of signs of complications and for guidance regarding the search for medical care. The guidance provided by telephone is part of the health education strategies and is effective in health promotion, with a consequent improvement in knowledge and self-care[2,5]. However, it is noteworthy that telecare is part of a health care system, designed not to replace, but to complement the hospital care service, extended to the home, as well as to improve access to information and enhance adherence to treatment[3].

The nursing intervention by telephone allowed the patient to be followed-up after hospital discharge, as well as to offer important guidelines for the surgical recovery, independence and autonomy of the elderly.

CONCLUSION

Telephone follow-up by the nurse favors continuity of home care. Thus, when incorporated into clinical practice, technologies are an important tool, as long as they are integrated into human care in its multiple dimensions and specificities.

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