ORIGINAL ARTICLE

Effect of nursing led discharge instructions on improvement of post discharge care management in heart failure patients at tertiary care hospital of Karachi, Pakistan

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Abstract

Objective: To assess the impact of nursing discharge instructions on post-discharge care management in heart failure patients.

Method: The quasi- experimental non-randomized study was conducted at the National Institute of Cardiovascular Diseases, Karachi, from January to December 2017, and comprised in-patients suffering from heart failure. They were divided into two equal groups. In the intervention group, discharge instructions and written material was thoroughly given by the nurses other than routine existing instructions for effective post-discharge care management. The control group received discharged instructions under existing routine. Data was analysed using SPSS 21.

Results: Of the 80 patients, there were 40(50%) in each group with no significant difference in terms of age, gender and education (p>0.05 each). Regarding awareness and control of the disease, adherence with medication and proper management of their illness, the intervention group had higher level of competency than the control group (p=0.001).

Conclusion: Provision of nursing interventions to educate the patient of heart failure during hospitalisation, on discharge, follow-up day and continuous guidance on telephone significantly improved the post-discharge care management of the patients.

Keywords: Perceived readiness for discharge, Cardiovascular diseases, Hospital discharge instruction, Discharge planning, Effective communication.

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Introduction

Heart failure is a chronic and progressive disease, and more than 20 million people are living with heart failure worldwide.[1,2] In the general population, its prevalence is 2-3%. In Pakistan, the burden of heart disease is approximately 35-40% of the overall disease burden.[3-5] The main reason for such a high incidence of heart disease in Pakistan is unawareness of healthy lifestyle, excessive use of junk food having high cholesterol, uncontrolled body-weight, less exercise and physical activities along with excessive use of tobacco. Apart from other things, cardiovascular treatment cost is much higher than is the case with other diseases.[6]

It is a crucial movement for a patient of heart disease to transit either from one healthcare institution to another, or transit from hospital to home. However, the healthcare personals can make it safer through better communication with the patient and their caretakers.[5] The most important procedure is to make a patient ready for post-discharge care management at home. This process starts as soon as a patient of heart failure is admitted to hospital and continues till the discharge time through continuous planning for better home nursing services or identifying a healthcare facility for persons in emergency.[7] The period soon after the discharge of a patient is critical due to predicted health hazards as the patients are not fully aware of the transitional abnormalities, and thus develop complications that affect their future health outcomes. It also increases the cost of treatment due to re-admission and reduces the quality of life.[8] However, it is documented that the transition period can be made safer. It all depends on the ability of a patient, learning capabilities, home support and self-care management abilities.[9] The patients' perceived readiness assessment scale has been used to determine the patient's abilities for functional activities,

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self-care management, physiological and social factors. On the other hand, proper information regarding available healthcare facility and community resources are provided.[10]

For the management of quality of healthcare in future in heart failure cases, nurses could play an important role during the discharge process.[11] They should guide such patients regarding all the crucial risk factors which could develop any complication, requirement of change of prescribed medication, their strict compliance with follow-up, change of lifestyle, diet, improvement in health management skills and importance of exercise for them.[12]

The concept of patient's perceived readiness for discharge and readiness for post-discharge care management could only be described by the patients or their family members or by the health personals treating them in hospitals. In determination of the competency of a patient on moving from the hospital setup to home setup, the patient questions and his/her point of views are the most important factors that need to be taken up by the health team for proper and safe recovery process. To reduce the hospital stay and improve their quality of life, coordination between such patients, their health caregivers and health providers, especially nurses, play a very important role.[12]

It has been observed that majority of patients do not receive proper discharge instructions and they get discharged with inadequate post-discharge information vital for their future care of life. Due to such incomplete instructions, mostly complications develop and patients again come to the same healthcare unit for proper management. According to a study, discharge transit has three stages, firstly, the in-hospital period where the patient is prepared for post-discharge care, secondly, at the time of discharge when the outcome has been measured, and, thirdly, the post-discharge period, in which patient's self-determination of his/her own capabilities to cover the upcoming requirement of the self-care management, family support, community services and to know where to contact in any emergency.[10]

The role of nurses is very important in safe and proper transit of a patient from hospital to home environment. However, their inadequate transfer of information is basically due to their lack of proper training for discharge process, poor coordination between health staff and availability of relevant discharge instruction material. Due to such things, patients suffer a lot and they remain dissatisfied with hospital quality care and discharge with low perceived readiness. They fail to manage their post-discharge care effetively, come with complications and increase the risk of re-admission.[13]

The care of patients is the main responsibility of nurses and they do it through proper management and coordination with the patient. For this important role, nurses should be properly educated for post-discharge management of the patients.[14]

Sometimes, doctors discharge a patient early without his/her proper training for home self-care management due to overcrowding, cost affordability of the patient, and poor interventional coordination between the patient and healthcare providers. Patient requires critical information on disease, diagnosis, symptoms, medication, diet and weight management, lifestyle (controlled physical activity), patient education and counselling, any special instructions specific to disease, early signs of complication, discharge and follow-up instructions, husband-and-wife relationship and warm-up exercises. The patients also need guidance on medicine availability, transport facility for follow-up, healthcare facility in the community and identification of available support at home for care along with additional instruction for the patients presenting with history of hypertension, diabetes or any other disease. Patient must be discharged at the right time and their perception of perceived readiness for post-discharge care management before discharge must be considered. The current study was planned to assess the impact of nursing discharge instructions on post-discharge care management in heart failure patients at a tertiary care hospital. It was also planned to assess the impact of nursing discharge instructions on the perceived readiness for discharge in heart failure patients.

Subjects and Methods

A quasi-experimental, non-randomised study was conducted at the National Institute of Cardiovascular Diseases (NICVD), Karachi, from January to December 2017. After approval from the scientific committee, institutional review board (IRB) and board of advanced studies and research (BASR) of Dow University of Health Sciences (DUHS), Karachi, the sample size was calculated in line with literature.[15] The sample was raised using non-probability purposive sampling and comprised heart failure in-patients who were divided into two equal intervention and control groups. All the researchers were

trained and experienced in teaching. They were given similar kind of written guidelines prepared with the help of discharge material taken from Aga Khan University Hospital (AKUH), and American Heart Association.[16,17] They taught the patients individually, keeping in view their health condition after taking written informed consent from them. In the intervention group, discharge instructions and written discharge material was given by the researcher nurses other than the routine existing instructions for perceived readiness for discharge and post-discharge care management. The control group received instructions as per routine discharge protocol of the hospital. Instructional material was provided having critical information on the disease, diagnosis, signs and symptoms, medication, diet and weight management, lifestyle (to control physical activity), patient education and counselling, any special instruction, early sign of complications, discharge and follow-up instructions, husband-wife relationship and warm-up exercises. The patients were properly guided regarding medication, follow-up schedule, availability of transport, community health facilities, and identification of available support at home for care. Instructional material was given to the patients with discharge summary. The intervention group was provided phone numbers of the researchers to contact for guidance and in case of any emergency.

The patients' perceived readiness assessment scale[9,10] was used to check the level of perceived readiness for post-discharge care management before and after the discharge of the patients through telephonic communication. The collected data was analysed using SPSS 21. Chi-square test was used for demographic data and perceived readiness for post-discharge care management between the two groups.

Results

Of the 80 patients, there were 40(50%) in each group with no significant difference in terms of age, gender, education and marital status (p>0.05 each) (Table 1). Regarding admission related characteristics of the patients, 37(92.5%) of control group and 34(85%) of interventional group were admitted through emergency. Only 12(30%) of the control group and 37(92.5%) of the interventional group knew the purpose of discharge instructions (p=0.001). Family history of heart disease was higher in the control group (p=0.026). In both the groups, 22(55%) subjects each stayed in the hospital for 4-7 days (Table 2).

Table-1: Demographic Characteristics.

Groups Characteristics	Control n (%)	Interventional n (%)	*p*-value
Age(years) Mean ± SD	57.8 ± 13.85	58.2 ± 8.38	0.103
Gender			0.363
Male	32(80.0%)	35(87.5%)	
Female	8(20.0%)	5(12.5%)	
Marital Status			NA*
Unmarried	5(12.5%)	5(12.5%)	
Married	29(72.5%)	29(72.5%)	
Widow	6(15.0%)	6(15.0%)	
Education Level			0.768
Primary	25(62.5%)	29(72.5%)	
Middle	8(20.0%)	5(12.5%)	
Matric and above	7(17.5%)	6(15.0%)	

*Not Applicable, due to same data in both groups; SD: Standard deviation

Table-2: Admission Related Characteristics.

Groups Characteristics	Control group n (%)	Interventional group n (%)	*p*-value
Nature of Admission			0.241
Emergency	37(92.5)	34(85.0)	
OPD	3(7.5)	6(15.0)	
Know the purpose of discharge instruction			<0.001
Yes	12(30.0)	37(92.5)	
No	28(70.0)	3(7.5)	
Severity of illness			0.051
Low	5(12.5)	7(17.5)	
Moderate	18(45.0)	26(65.0)	
High risk	17(42.5)	7(17.5)	
Nature of care Financing			0.260
Government	15(37.5)	20(50.0)	
Private	25(62.5)	20(50.0)	
Discharge Destination			0.241
Home alone	0	3(7.5)	
Home with spouse/family member	40(100)	37(92.5)	
Family history of heart disease			0.026
Yes	16(40.0)	7(17.5)	
No	24(60.0)	33(82.5)	
Diet			0.366
Regular	19(47.5)	15(37.5)	
Special diet	21(52.5)	25(62.5)	
Length of Hospital Stay			0.747
2-3 Days	10(25.0)	13(32.5)	
4 - 7 Days	22(55.0)	22(55.0)	
8 - 10 Days	8(20.0)	5(12.5)	

OPD: Out-patient department

For perceived readiness for post-discharge care management, 22 questions were asked, and 16(73%) of them were not significantly different (p>0.05). The intervention group was more ready for discharge in several aspects (Tables 3-5).

Table-3: Perceived Readiness for Discharge.

	Control group n (%)	Interventional group n (%)	*p*-valve
you believe you planned ready to go home (discharge from the hospital)			0.179
Not Ready	16(40.0)	22(55.0)	
Totally Ready	24(60.0)	18(45.0)	
Physically ready to go home			0.003
No pain or discomfort	18(45.0)	31(77.5)	
Severe pain or discomfort	22(55.0)	9(22.5)	
Your pain or discomfort today			0.133
No pain or discomfort	32(80.0)	26(65.0)	
Severe pain or discomfort	8(20.0)	14(35.0)	
Your strength today?			0.284
Weak	11(27.5)	7(17.5)	
Strong	29(72.5)	33(82.5)	
Your energy level today			1.00
Low energy	5(12.5)	5(12.5)	
High energy	35(87.5)	35(87.5)	
Stress do you feel today			0.133
None	32(80.0)	26(65.0)	
A great deal	8(20.0)	14(35.0)	
Emotionally ready to go home			0.263
Not ready	17(42.5)	22(55.0)	
Totally ready	23(57.5)	18(45.0)	
Physical ability to care for yourself			0.004
Not able	28(70.0)	15(37.5)	
Totally able	12(30.0)	25(62.5)	

Table-5: Well able to perform care at home.

	Control group n (%)	Interventional group n (%)	*p*-valve
Well able to perform your personal care (hygiene, bathing, toileting, eating) at home			0.501
Not at all	20(50.0)	23(57.5)	
Extremely well	20(50.0)	17(42.5)	
Well able to perform your medical treatment (surgicalincision, respiratory treatments, exercise, rehabilitation, taking your medications in the correct amount and at the correct time) at home			0.639
Not at all	25(62.5)	3(7.5)	
Extremely well	15(37.5)	37(92.5)	
Need emotional support after go home			0.775
None	8(20.0)	7(17.5)	
A great deal	32(80.0)	33(82.5)	
Need help with personal care after go at home			0.166
None	12(30.0)	18(45.0)	
A great deal	28(70.0)	22(55.0)	
Need help with house hold activities (for example cooking, cleaning, shopping babysitting) after go home			0.485
None	24(60.0)	27(67.5)	
A great deal	16(40.0)	13(32.5)	
Need help with medical care needs (treatment, medication)			0.121
None	27(67.5)	33(82.5)	
A great deal	13(32.5)	7(17.5)	

Table-4: Knowledge regarding taking care at home.

	Control group n (%)	Interventional group n (%)	*p*-valve
Know about taking care of your personal needs			0.084
Knowing nothing at all	25(62.5)	8(20.0)	
Well Known	15(37.5)	32(80.0)	
Know about taking care of medical needs (treatments, medications) after go home			0.021
Knowing nothing at all	20(50.0)	10(25.0)	
Well Known	20(50.0)	30(75.0)	
know about problems (sign of complication) to watch for after go home		0.648	
Knowing nothing at all	23(57.5)	5(12.5)	
Well Known	17(42.5)	35(87.5)	
know about who and when to call if you have problems after go home			0.654
Knowing nothing at all	20(50.0)	8(20.0)	
Well Known	20(50.0)	32(80.0)	
Know about restrictions (what you are allowed and not allowed to do) after go home			0.469
Knowing nothing at all	19(47.5)	6(15.0)	
Well Known	21(52.5)	34(85.0)	
know about what happens next in your follow-up medical treatment plan after go home			0.245
Knowing nothing at all	12(30.0)	17(42.5)	
Well Known	28(70.0)	23(57.5)	
know about services and information available to you in your community after go home?			0.356
Knowing nothing at all	13(32.5)	17(42.5)	
Well Known	27(67.5)	23(57.5)	
well handle the demands of life at home			0.024
Not at all	22(55.0)	12(30.0)	
Extremely well	18(45.0)	28(70.0)	

Discussion

The study found that a detailed discharge process worked better for heart patients. Comparing the various findings of the current study with literature, similar results have been reported earlier.[18,19] A study[20] showed 23% subjects were not ready for discharge, and had low satisfaction with healthcare services. Other studies[21,22] reported that 28% were ready for discharge and the remaining 72% were not ready because of uncontrolled pain, not relieving symptom and unsatisfied self-care management. Only 65% patients had paperwork ready for discharge, but out of these 22% understood typical information on it. In the current study, 47.5% subjects were not ready for discharge and the majority of them were in the control group.

One study[23] assessed medications at home also. At baseline, there was no difference in both the groups. Our study also found the same status for medication.

The strength of our study is that through nursing

interventions related to education of heart failure patients at discharge was established as a way to reduce complications in these patients. However, the study was conducted at one public-sector hospital, and the result are not generalisable.

It is recommended that proper discharge planning and structural teaching for each patient shall be in place prior to discharge

Conclusion

Provision of nursing interventions to educate patients of heart failure during hospitalisation, on discharge, follow-up day and continuous guidance on telephone significantly improved the post-discharge care management of the patients.

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