

EFFECT OF A DEVELOPED EVIDENCE-BASED DISCHARGE PROTOCOL ON CANCER COLON PATIENTS SATISFACTION IS WE DO THE BEST PRACTICE IN OUR DISCHARGE PROCESS?

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ABSTRACT

Discharge planning is a process started in the first day of the patient admission and not an isolated event at the end of the patient's stay. Because discharge planning is an essential component of the patient care, crucially important in the hospital to support safe and timely discharge and failure to do this from the point of initial patient admission until discharge will have negative consequences for the patient's transition later in the care planning process. So the aims of this study were to assess the current satisfaction among cancer colon patients; Design evidence based discharge protocol for cancer colon patients, Implement the designed evidence based discharge protocol and evaluate the effect of this protocol on cancer colon patients' satisfaction. A quasi-experimental research design was utilized in this study. Method: A convenient sample of 96 adult male and female post-surgical cancer colon patients. Data were collected with the study questionnaire including demographic data, patient satisfaction questionnaire; that was measured by: (continuity of care, communication and social support system). Result: the patients who took the discharge protocol had higher patient satisfaction scores than who did not, patients taking the discharge protocol had higher patient continuity of care scores than who did not, the patients taking the discharge protocol had higher communication scores than who did not, the patients taking the discharge protocol had higher patient social support system scores than who did not. So the researcher recommends the application of this protocol can reconcile patients and their caregivers' needs and expectation better.

KEYWORDS: Discharge Protocol, Satisfaction, Communication, Social Support System

INTRODUCTION

Discharge planning is a process started in the first day of the patient admission and not an isolated event at the end of the patient's stay. It is crucially important in place to support safe and timely discharge. Identify any factors that would make a patient's discharge or transfer problematic, so that actions of a discharge planning can be taken early to be a part of a whole plan of care for the patient. Failure to do this at the point of initial admission assessment will have negative consequences for the patient's transfer later in the care planning process. Responsibility for the assessment and planning of discharge and transfer of care must rest with the ward multidisciplinary team. The ideal Discharge Planning strategy is designed to be flexible and adaptable to each hospital's environment and culture (DH, 2009).

Discharge planning, is an essential component of hospital care, has been affected by incentives to shorten hospital

stays. Changes in the healthcare environment, such as the Medicare prospective payment system and the impact of managed care, have made it difficult to ensure that effective hospital discharge planning is done. For all patients, discharge from the hospital is an important and vital part of the continuum of care. Discharge planning for hospitalized patients is essential to the patients' ability to continue healing and return to pre morbid functioning (Ruth 2015, Tracey, 2008).

Ensuring safe returning and transitions from hospital to home requires a methodical evidence based approach that includes a multidisciplinary team, patients and their family in the discharge process. Many healthcare organizations do not have discharge processes in place based upon scientific evidence; therefore, nurse managers have to actively considering how they might best support evidence-based nursing practice from an organizational perspective. Organized efforts to promote evidence-based nursing practice are crucial if the benefits of research utilization are to become widespread within the health services area (Fox croft& Cole, 2010).

MATERIAL AND METHODS

Hypothesis

The implementation of a developed discharge protocol will result in greater patient satisfaction scores related to discharge planning among cancer colon patients.

Design

A quasi-experimental research design was utilized in this study.

Sample

A convenient sample of 96adult male and female post surgical cancer colon patients who admitted to the fourth floor in NCI at Cairo University Hospitals,

Setting

The current study conducted in the National Cancer Institute which is affiliated to Cairo university hospitals. It is one of the largest educational university hospitals in Egypt; it admits and receives patients from all governorates of Egypt and other countries with different types of oncology patients. Most of these patients are colorectal carcinoma, leukemia, lung cancer, breast cancer, etc. The study conducted in the fourth floor (A, 1) it is consisted 4 rooms each one consisted from 5 bed capacity (total capacity about 15-20 bed).

TOOLS

The data were collected during sep.2015-march2016. Based on the literature review the following tools were constructed by the researcher to collect data pertinent to the current study. These tools are:

Socio demographic and Medical Data History Sheet

It includes patients demographic data such as age, gender, diagnosis, type of operation, marital status, place of residence, etc.

Patient Satisfaction Survey

Which consisted from three parts?

- The first part measure continuity of care (it consists of 25 question to measure the continuity of the provided care for the cancer colon patients).
- The second part measure communication. (It consists of 12 questions to measure the communication regarding the provided care for the cancer colon patients).
- The third and the last part measure social support system. (It consists of 19 questions to measure social support system regarding provided care for the cancer colon patients).

Scoring System

The researcher check the answer of the participants against 2 point scale as follow:-

- 1= yes which mean that, the answered item in the questionnaire already was performed and done.
- 0= no which mean that, the answered item in the questionnaire was not performed or not done.
- Cronbach alpha reliability coefficient was 0.85 during pilot study and showed0.92 for total sample.

CONTENT VALIDITY AND RELIABILITY

The questionnaire, developed tools and discharge protocol sheets were given to a Panel of three experts consisting of one Professor of Nursing Administration, faculty of nursing, Cairo University. One Professor and head of surgical oncology department (4th floor) (A) in national cancer institute Cairo- University and One Professor from medical surgical nursing department at faculty of Nursing, Cairo-University. Each expert was asked to check the adequacy of items that cover the domain under investigation, content, clarity, wording, length, format and overall appearance. Based on the experts' recommendations minor changes in wording had been made and a lot of questions and statements had been added.

PILOT STUDY

Pilot study conducted on 10% of the total sample who fulfilled the inclusion criteria to evaluate the content and test the feasibility, objectivity, clarity, relevancy and applicability of the study tools. Also test retest reliability was calculated to check reliability of the study tools.

ETHICAL CONSIDERATION

Before data collection, primary approval of the ethical committee Faculty of Nursing Cairo-University was obtained to carry out the study (IRPNO.FWA00019803). Also, an official permission obtained from the General Medical Director, Dean of National Cancer Institute and the head of 4th floor (A). Participation in the study was voluntary and based on the patients' ability to give informed consent; where it should be signed by participants after reading all its details; the ethical issues considerations include explaining the purpose and nature of the study, stating the possibility to withdraw from the study at any time. Confidentiality of the information will be assured. Their names did not appear on the study and will not be revealed in any reports that result from this dissertation. After data collection, final approval of the ethical committee at the Faculty of Nursing Cairo-University was obtained, after inspection of participants' acceptance consents.

TECHNIQUE FOR DATA COLLECTION

The current study was carried out on two phases; designing phase, implementation and evaluation phase.

Designation Phase

This phase was concerned with the managerial arrangements to carry out the study in addition to the construction and preparation of the different data collection tools, searching related evidenced based, designing discharge planning protocol. Specifications of roles of every member of the involved multidisciplinary discharge protocol team were done by the investigator based on literature review and panel of expertise recommendations to ensure successful implementation of the designed discharge protocol.

As regards preparation of the discharge protocol, needed tools and discharge assessment criteria, it required an extensive review of similar articles and randomized control trails (R CT) studies that performed on colorectal cancer patients as evidence based, relevant literature review and seeking specialty experts' recommendations.

Implementation and Evaluation Phase

Data of the current study were collected from November 2015 to March 2016, once official permissions were granted. A total number of 96 patients according to G power statistical analysis were recruited into the present study.

Daily, the investigator approaches the responsible head nurse as well as the responsible staff nurse of the department, to identify the number of newly admitted patients who were admitted for surgical procedures. Then, patients who admitted in the department firstly until the total number completed (48patient) were constituted as a retrospective group. After that the protocol was applied on further 48 patient admitted to the department after retrospective group and considered as a prospective group (48 patients). Both retrospective and prospective group were exposed to the routine hospital care. Then the prospective group was subjected to the designed discharge protocol on a daily base till discharge. Prospective group ones were supplied with a predetermined instructions and care as well as multidisciplinary team role (implementation of our discharge protocol) involving patient, relative and the team

For practical content which include care provided and instructions was given and taught for the prospective group on an individualized base and in some similar cases in the same room was performed in grouping base in several sessions ranged between three to five sessions. Every session took about 30min to 45min. for each patient every day. Patients' teaching relied on informal discussion with patients and their caregivers. It was provided according to the patients' tolerance and they allowed asking questions to clarify any misunderstanding.

Patient satisfaction questionnaire sheet (tool 2) was completed after admission of the retrospective group. For prospective group, it was completed after the implementation of the protocol and before patient discharge from the department.

STATISTICAL ANALYSIS

Upon completion of data collection, the data were scored, tabulated and analyzed by computer using the "Statistical Package for Social Science" (SPSS). The reliabilities of instruments were examined using Cronbach' alpha and were reported earlier.

Descriptive statistics such as frequency, percentage distribution, mean score and standard deviation were utilized in analyzing data pretended in this study. Relative statistical tests of significance were used to identify the relationships among the study variables. Threshold of significances is fixed at 5 percent (P value ≤ 0.05). Using an independent T test analysis to identify the difference among study variables

RESULTS

Socio demographic Characteristics

Table 1: Frequency Distribution of Socio Demographic Characteristics of the Studied Sample in Relation to Age, Diagnosis, Type of Operation, Marital Status, (N=96)

Variables	Group	Retrospective Group n=48		Prospective Group n=48	
		No	%	No	%
Age:					
1-20 < 30		0	0	2	4.2
2-30<40		17	35.4	6	20
3-40:50 and Above 50		31	64.6	18	60
Mean± SD		49.5 ±13.4		42.5± 16.03	
Mean± SD for total sample		Total 46.75+ 10.56			
Diagnosis:					
colorectal		48	100	48	100
Type of operation:					
Colostomy		15	31	14	29
Others		33	69	34	71
Marital status:					
1-married		48	100	44	91.7
2-unmarried		0	0	4	8.3

Table 2: The First Question (Total Patient Satisfaction)

Variable	No	Mean	Stander Deviation	Sig
Patient Satisfaction				
Retrospective	48	14.7917	3.935	.000
Prospective	48	47.2917	8.998	

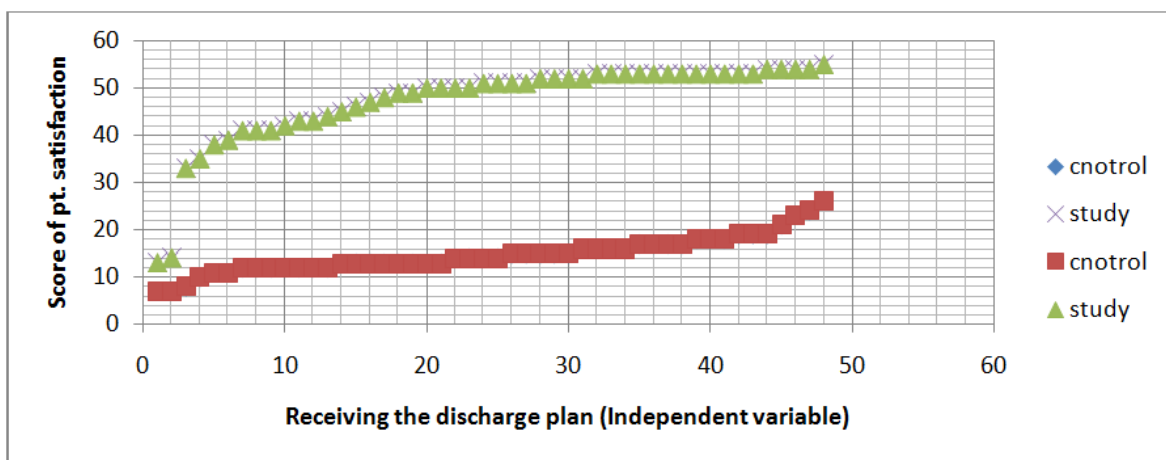


Figure 1: Total Patient Satisfaction

Table 3: Subtotal Patient Satisfaction (1-Continuity of Care)

Variable	No	Mean	Stander Deviation	Sig
Continuity of Care				
Retrospective	48	6.89	1.490	.000
Prospective	48	20.56	2.766	

Table 4: Patient Satisfaction (2-Communication)

Variable	No	Mean	Stander Deviation	Sig
Communication				
Retrospective	48	4.770	2.31	.000
Prospective	48	10.333	3.62	

Table 5: Patient Satisfaction (3- Social Support System)

Variable	No	Mean	Stander Deviation	Sig
Social Support System				
Retrospective	48	3.125	1.919	.000
Prospective	48	16.395	4.290	

Table 2 and figure 1 show that the patients taking the discharge protocol had higher patient satisfaction scores (M=47.2, SD=8.9) than did not took the discharge protocol (M=14.7, SD=3.9), $t(22.9)$, $P = .000$

Table (3,4,5) show that there is a statistically significance Difference in continuity of care, communication and social support system scores between two group($M=20.5$, $SD=2.7$) ($M=6.8$, $SD=1.4$), $t(30.1)$, $P = .000$, ($M=10.3$, $SD=3.6$) $t(M=4.7$, $SD=2.3$), $t(9.6)$, $P = .000$, ($M=16.3$, $SD=4.2$) ($M=3.1$, $SD=1.9$), $t(19.5)$, $P = .000$. Respectively.

DISCUSSIONS

As Regards to Socio Demographic and Medical Data:

The present study delineated that approximately more than two thirds of the studied sample' age was above 40 years old and more with mean of age (46.7). Also (90%) from them were married and about have of them were male patients.

In accordance to this result, Naylor, et.al.(1994) reported in a published study of a Randomized Clinical Trial(Comprehensive Discharge Planning for the Hospitalized Elderly) which Objective was To study the effects of a comprehensive discharge planning protocol, applied by nurse specialists, on patient and caregiver outcomes and cost of care in Hospital of the University of Pennsylvania. And stated that the Patients were older than 70 years and older and have of them been female.

Also, Dai, Chang, Hsieh and Tai (2003) stated in a research article entitled as "effects of a nurse designed discharge-planning project in a teaching hospital in Taiwan" The purpose of this study was to examine the effects of a nurse designed discharge-planning project in a teaching hospital in Taiwan. A before-and-after quasi-experimental design was used. On a sample of 171 patients were included in the study. With a mean age of 49.7 years

Also jack, et.al. (2009) studied in a Randomized clinical trials research article entitled" reengineering hospital discharge program to decrease re hospitalization" the aim of this study was to assess the effect of discharge intervention to

minimize patient readmission and enhance patients satisfaction toward discharge process. This study conducted in general medical service, academic hospital on 749 patients included in the study with mean of age 49.9.

what's more Ramerize, et.al (2011) in prospective study entitled "Enhanced recovery in colorectal surgery performed" involved 300 patients the majority of their age was more than 50 years and fifty-two % of the patients were women. All of them underwent elective colorectal resection for cancer following an enhanced recovery program. This prospective study, performed at 12 Spanish hospitals in 2008 and 2009, involved 300 patients. The main components of this program were: preoperative counsel, no colon preparation, administration of fluids one day earlier and on the morning of the surgery, body temperature control during surgery, avoiding drainages and nasogastric tubes, early mobilization, and the taking of oral fluids in the early postoperative period.

Moreover Ahmed, Lim, Khan, McNaught, & MacFie, (2010) studied the Predictors of length of stay in patients having elective colorectal surgery within an Enhanced recovery protocol" which aim was to identify which factors have the furthestmost impact at reducing the length of stay within an enhanced recovery program. Conducted on 231 patient, have of them approximately were (130) were female. Median age was 68 (with interval between56:76) years old patients.

As Regards to the Patient's Satisfaction

The current study results delineated, a higher statistically significant difference between the two studied groups in different assessment periods, indicating higher total and subtotal means satisfaction scores among the prospective group subjects.

The rational for satisfaction improvement among the study group subjects throughout the different assessment periods might be related to the provision of educational instructional information as a part of the developed discharge protocol.

Besides, the curiosity of the studied group subjects to know how to deal with the colostomy & ileostomy regarding, what happens before and after the operation, and follow up appointments of both males and females within prospective groups. Also we have to propose this improvement in the patients' satisfaction to support & collaboration from the National Cancer Institute officials' managers to implement a new idea in the setting and cooperation from all the staff who were worked in the 4th floor in the institute.

Bauer, Fitzgerald, Haesler and Manfrin (2009) agreed with these findings as they studied the "Hospital discharge planning for patients and their family. A review of the evidence based practice. This paper examined the available evidence based concerning hospital discharge practices and what practices were most beneficial for this group. The author conclude that the current evidence indicates that; address and involve relatives & the care givers and improve communication between staff, patient and their families and ongoing support before and after discharge defenility enhance hospital discharge planning for those patients and their families. But with adequate practice to avoid reverse un wanted outcomes.

In this regard, Mamon, et.al. (1992) tells in study examines the contribution of hospital discharge planning in meeting the needs of patients for care after their return home. Specifically, with involvement of a professional one in managing and coordinate this protocol to be in form of interdisciplinary form. Instructions were given according to patients' care needs which related to related to: (1) treatment, (2) activity limitations, and (3) other self-sufficiency limitations. Overall, 97 percent reported in the Findings which shows that the implementation of the home discharge

planning patients have significance important for enhancing a satisfied returning to a home specifically when involve a discharge planning case manager for every patients.

Also Lithner, Johansson, Klefsgard and Andersson, (2015) declared in study done in three hospitals in the south of Sweden entitled "The significance of discharge information for colorectal cancer surgery. This evidence was implemented in form of a qualitative study design by Thirty one interviews were performed with sixteen patients. The author concludes that: education and needed information and emotional support are seriously affecting the patients' ability to manage their daily lives after discharge. Trying to regain control in their life by using planned information before discharge was the overall theme rising from the interviews. The information and social & emotional support were necessary in order to facilitate and manage the transition from hospital to home after colorectal cancer surgery. The author recommended a need for active involvement of the patient and their families in the discharge planning.

A Multicentre Study

In relation to this Ramírez, ET. al. (2011), in study aimed to Enhance recovery in colorectal surgery by using a recovery program based on earlier published evidenced, the author assesses the short and medium term results achieved by this evidenced based program. The core elements of this program were: preoperative advice, with no colon preparation, goal directed fluid administration, body temperature control during surgery, avoiding drainages and nasogastric tubes, early mobilization, and the taking of oral fluids in the early postoperative period. He concludes that more than 56% of the patients were compliance and satisfied to this protocol implementation, but this compliance varied broadly in its different components that previously entitled. This research stated in its conclusion that; the implementation of this protocol is highly benefiting so it's highly recommended for colorectal cancer patients.

As well, in a qualitative study in Hong Kong by Wong, et.al.(2011), aimed to explore the perceived quality of current hospital discharge process and to identify barriers to effective discharge planning. By Focus group interviews that were conducted with different healthcare professionals who were currently responsible for coordinating the discharge planning process in the public hospitals the study was conducted. The conversation covered three major essential elements: current practice of the hospital discharge, barriers to effective discharge, and suggested structures and process for an effective discharge planning system. From the focus group interviews the author concluded and suggested improving the quality of hospital discharge process can be achieved by; including a multidisciplinary team approach with clearly specification of each team member roles, improving communication skills and be sensitive about psychosocial needs and support for patients specifically. The research, discharge planning policy and coordination across various healthcare parties and provisions were also suggested to be a key focus.

CONCLUSIONS

This study answered one research hypothesis; the hypothesis was: the implementation of a developed discharge protocol will result in greater patient satisfaction scores related to discharge planning among cancer colon patients. Fortunately, the researcher found that, the patients taking the discharge protocol had higher patient satisfaction scores than who did not take the discharge protocol.

REFERENCES

1. Ahmed, J., Lim, M., Khan, S., McNaught, C., & MacFie, J. (2010). Predictors of length of stay in patients having elective colorectal surgery within an enhanced recovery protocol. *International Journal of Surgery*, 8(8), 628–632. <http://doi.org/10.1016/j.ijssu.2010.07.294>
2. Bauer, M., Fitzgerald, L., Haesler, E., & Manfrin, M. (2009). Hospital discharge planning for frail older people and their family. Are we delivering best practice? A review of the evidence. *Journal of Clinical Nursing*, 18(18), 2539–2546. <http://doi.org/10.1111/j.1365-2702.2008.02685.x>
3. Dai, Y. T., Chang, Y., Hsieh, C. Y., & Tai, T. Y. (2003). Effectiveness of a pilot project of discharge planning in Taiwan. *Research in Nursing and Health*, 26(1), 53–63. <http://doi.org/10.1002/nur.10067>
4. DH (2009) Common assessment framework for adults: A consultation on proposals to improve information sharing around multi-disciplinary assessment and care planning.
5. Foxcroft, D. R., & Cole, N. (2010). Organizational infrastructures to promote evidence- based nursing practice (Review). *Cochrane Database of Systematic Reviews*. Retrieved September 15, 07 from (CD002212).
6. Jack, B. W., Chetty, V. K., Anthony, D., Greenwald, J. L., Sanchez, G. M., Johnson, A. E..... & Martin, S. (2009). A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. *Annals of internal medicine*, 150(3), 178-187.
7. Lithner, M., Klefsgard, R., Johansson, J., & Andersson, E. (2015). The significance of information after discharge for colorectal cancer surgery-a qualitative study. *BMC Nursing*, 14, 36. <http://doi.org/10.1186/s12912-015-0086-6>
8. Mamon, J., Steinwachs, D. M., Fahey, M., Bone, L. R., Oktay, J., & Klein, L. (1992). Impact of hospital discharge planning on meeting patient needs after returning home. *Health Services Research*, 27(2), 155–75. Retrieved from <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1069871&tool=pmcentrez&rendertype=abstract>
9. Naylor, M., Brooten, N., Jones, R., Lavizzomourey, R., Mezey, M., & Pauly, M. (1994). Comprehensive discharge planning for the hospitalized elderly: A randomized clinical trial. *Annals of Internal Medicine*, 120(20), 999–1006. Retrieved from <http://onlinelibrary.wiley.com/o/cochrane/cleed/articles/NHSEED-21995007014/frame.html>
10. Ramírez, J. M., Blasco, J. a, Roig, J. V, Maeso-Martínez, S., Casal, J. E., Esteban, F., & Lic, D. C. (2011). Enhanced recovery in colorectal surgery: a multicentre study. *BMC Surgery*, 11(1), 9. <http://doi.org/10.1186/1471-2482-11-9>
11. Ruth, M.(2015) Randomized Trial Of An Intensive Care Unit–Based Early Discharge Planning Intervention for Critically Ill Elderly Patients. *AMERICAN JOURNAL OF CRITICAL CARE*, July 2004, Volume 13, No. 4. Rush University College of Nursing, Chicago, Ill.
12. TRACEY L, (2008) The Impact Of A Nurse-Driven Evidence-Based Discharge Planning Protocol On Organizational Efficiency And Patient Satisfaction In Patients With Cardiac Implants A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in the College of Nursing at the

University of Central Florida Orlando, Florida

13. Wong, E. L., Yam, C. H., Cheung, A. W., Leung, M. C., Chan, F. W., Wong, F. Y., & Yeoh, E.-K. (2011). Barriers to effective discharge planning: a qualitative study investigating the perspectives of frontline healthcare professionals. *BMC Health Services Research*, 11(1), 242. <http://doi.org/10.1186/1472-6963-11-242>