Quality of Transition of Care in a Tertiary Care Hospital: Patients' Perspective

Dr. Arjunsinh Vaghela¹, Dr. Maj Shiva D², Dr. Muskan Panwar³

^{1,3}Junior Resident, Department of Hospital Administration, Armed Forces, Medical College, Pune ²Joint Director Medical Services, Hospitals Project, Delhi

ABSTRACT

Background: Persons with continuous complex care frequently require care in multiple settings. During transitions between settings, there is evidence that the quality of care is jeopardized for these patients. **Objectives:** The present study aims to measure the quality of transitional care at a tertiary care hospital in India using the Care Transition Measure (CTM) and to explore the association between the quality of care transition and patients' characteristics.

Materials and Methods: The CTM was administered to 314 People Living with HIV (PLHIV) in four different wards. The measure included the following sections: (a) demographic and medico-administrative characteristics of the patients age, sex, education, the number of comorbid conditions, the type of admission, length of stay (LOS), the discharge diagnosis, and hospital admissions for the same condition as for the index hospitalization in the past 3 months. (b) The CTM is composed of 15 questions administered to patients after discharge from the hospital. The measure comprises four subdimensions: critical understanding, importance of preferences, management preparation, and the existence of a written and understandable care plan. The score in the CTM ranges from 0 to 100, with lower scores indicating a lower quality of transitional care.

Results: The total mean score was 42.2, with a wide range (from 0.0 to 100.0). The highest scores were attributed to the factor "Critical Understanding", whereas lowest scores were attributed to the factor "Care plan" (52.1 vs. 20.9). The factors "Level of communication" with the medical staff, "Management Preparation", and "Importance of preferences" had an average score of about 39.0 (38.5, 41.4, and 33.5, respectively). Patients admitted from the emergency department had significantly higher CTM scores than those admitted from the outpatient department (P=0.023). Patients with an LOS of more than 6 days had significantly higher CTM scores compared with patients with an LOS of less than 6 days (P=0.006). Patients admitted for the same diagnoses as for the index hospitalization more than three times within the previous 3 months had a significantly higher CTM score than those admitted less than three times (P=0.017).

Conclusion: The quality of transitional care at study hospital is suboptimal. An adequate plan for preparing patient discharge and follow-up after discharge should be designed.

Keywords: Care Transition Measure, Chronic disease, Transitional Care

INTRODUCTION

Patients with chronic conditions require care across multiple settings [1]. The Institute of Medicine, an American non-profit, nongovernmental organization that provides national advice on issues relating to



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

biomedical science, medicine and health, calls for greater integration of healthcare delivery across different settings to improve the quality of transitional care through timely transfer of patient information and arrangements of post-discharge follow-up [2]. Despite these facts, there is evidence of poorly executed transitions, especially in the interface between the hospital and the community services [3]. Ineffective transition occurs in the form of patients being inadequately informed about their care plan and patients being discharged with incomplete diagnostic work-ups. Many patients either do not receive discharge summaries at the time of discharge or are given incomplete & sketchy discharge summaries [3,4].

Poor transitions between hospitals and community threaten the quality and the safety of patient care. Studies demonstrate a higher risk of patient readmission and preventable adverse events, especially medication errors and discrepancies [3,5]. These types of problems result in increased healthcare cost [6]. Intangible costs of poor transitions occur in the form of anxiety resulting from the lack of understanding of self-care, inability to contact healthcare practitioners for guidance, and disregard for patient preferences in their own plan of care [6].

These conditions were selected because of two reasons.

- First, there was a high likelihood that patients diagnosed with any of these chronic conditions would require post-hospital care in the form of home self-care or care at the primary care clinic, and thus will experience additional care transitions [9].
- Second, from among several chronic conditions, PLHIV cases are being affected more by poor transitional care.

One important strategy towards improving the transitional care is measuring the quality of this care. As patients are the only common thread across different settings, they are best suited to judge the quality of this type of care [6]. The Care Transition Measure (CTM) is one of the few available measures to test quality of care during transitions from the patients' perspective [6,7]. The present study aimed to measure the quality of transitional care at a tertiary care hospital using CTM and to explore the association between quality of care transition and patients' characteristics.

MATERIALS AND METHODS

Study Sample - A total of 314 patients were selected. This sample size was based on the assumption that the prevalence of adequate discharge preparation is 50%. To achieve a 95% confidence interval around the expected prevalence and an error of $\pm 6\%$ around this estimate, the minimum required sample size was found to be 267 patients. This sample was approximated to 314 patients to increase the accuracy.

The study population consisted of patients in the study hospital. Inclusion criteria were being an inpatient PLHIV cases and admitted to one of the following wards: (a) Male Medical Ward (MMW), (b) Female Medical Ward (FMW) and (c) Dermatology Ward (DW) and (d) Other Wards (OW).

Inclusion Criteria - PLHIV cases admitted to any of the following 04 wards in study hospital.

Exclusion Criteria - Patients who died in the hospital and those who did not stay for even one night in the hospital.

On each day during the study period, an admission list for each of the selected diagnosis was prepared from the hospital admission register on the basis of the chronology of admission. A random number generator was used to produce a random allocation sequence. Eligible patients, selected randomly, were approached at their discharge. All patients approached expressed their willingness to participate. The sample was distributed almost equally on different diagnoses (MMW, n=72; FMW, n=74; DW, n=88; OW, n=80).



Data collection

The study design was descriptive and used a cross-sectional approach. The CTM was administered to patients. The measure included two sections. The first section covered demographic and medico-administrative characteristics of patients such as age, sex, education, number of comorbid conditions, type of admission, LOS, discharge diagnosis, and previous hospital admissions for the same condition as for the index hospitalization in the past 3 months. Patients' characteristics were selected after a thorough review of other studies assessing the quality of care during transitions. The second section included items of the CTM. The CTM comprised of 15 items designated to patients after discharge from the hospital. The CTM is based on the conceptual framework tested by its developers and comprises of four sub-dimensions: critical understanding, importance of preferences, management preparation, and the existence of a written and understandable care plan [10]. Validated Marathi & English versions of the CTM were used [11]. CTM was measured for its reliability and validity, and its scores were significantly different between healthcare facilities known to vary in the level of system integration and different patient health status levels [7,12]. Patients were asked to state their opinion about all items on a four-point Likert scale as follows: strongly disagree, disagree, agree, and strongly agree.

Statistical analysis

Raw data were coded and data analyzed using SPSS Ver 20.0. Descriptive statistical data analysis method was applied to analyze quantitative data was scored by calculating the percentages and means. Using the Shapiro–Wilk test for testing the distribution of data, data turned out to be not normally distributed. Thus, nonparametric tests were used to compare means, Mann–Whitney U-test was used for comparison of two means and Kruskal–Wallis test was used to compare more than two means. The 5% level was used as the cutoff value for statistical significance.

The protocol for scoring was as follows:

- (1) Responses were coded as Strongly Disagree=1; Disagree=2; Agree=3; Strongly Agree=4.
- (2) A mean score was computed for each respondent on the basis of the following:
- (a) For each respondent, the number of questions answered was counted
- (b) For each respondent, the sum of responses across all questionnaire items was computed by adding Step 1 values across answered questions

(c) A mean for each respondent was obtained by dividing the sum of scores obtained in Step 2b by the count obtained in Step 2a.

(3) A linear transformation of the result of Step 2c was performed to obtain a 0-100 score. The following formula was used: 0-100 CTM Score for each respondent=[(Step 3c result-1)/3]100. This score reflects the overall quality of care transition, with lower scores indicating a poorer quality transition and higher scores indicating a better transition [13].

RESULTS

The mean age of the study population was 61.5 years, ranging from 18 to 86 years. Most subjects were in the age group of 55–65 years (34.4%), whereas the lowest numbers were in the age group of 18–45 and > 75 years (8.3 and 8.9%, respectively). The study subjects were predominantly males (87.3%). Nearly two-thirds of the subject population had no formal education (60.5%) though 33.1% could read & write. Only 5.7% had a University degree. About half of the sample had one to two co-morbid conditions and one-third did not have co-morbidities (52.3 and 29.3%, respectively).



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u>

• Email: editor@ijfmr.com

Table 1: Characteristics of the study population					
Characteristics	N = 314 (%)				
Age (years)					
18 - 44	8.3				
44 - 54	19.1				
55-64	34.4				
65 – 74	29.3				
>75	8.9				
Mean + SD	61.5 + 11.3				
Range	18 - 86				
Sex					
Male	87.3				
Female	12.7				
Education					
Illiterate	27.4				
Read and Write	33.1				
Some school education	20.4				
Technical Diploma	13.4				
University Degree	5.7				
Number of Co-morbid Conditions					
None	29.3				
1-2	52.2				
3 - 4	17.2				
5	1.3				
Mean + SD	1.4 + 1.2				
Range	0-5				
Source of Admission					
Emergency Department	37.2				
Outpatient Department	62.7				
Length of stay (days)					
1-2	24.2				
3	20.4				
$\frac{3}{4-5}$	33.8				
6+	21.7				
Mean + SD	5.1 + 5.3				
Median	4.0				
Range	$\frac{4.0}{1-50}$				
Discharge Ward	1 - 50				
MMW	22.9				
FMW	23.6				
	23.0				
DW					
OW	25.5				

Table 1: Characteristics of the study population



Hospital Admissions for the same condition as for the index	
hospitalization in the past 3 months	
Not previously admitted	59.2
Admitted once	14.0
Admitted two times	13.4
Admitted > 3 times	13.4

Most of the subjects were admitted from the Emergency Room (87.3%). About half f the sample had an LOS of 3–5 days (54.2%). The mean LOS was 5.1 days, with a wide range (1–50 days). Discharge wards included MMW, FMW, DM and OW (22.9, 23.9, 28.0, and 25.5%, respectively). There was no history of prior hospitalization for the same illness in the past 03 months in 59.2% cases. (Table 1).

The total mean score of the CTM measure was 42.2, with a wide range (from 0.0 to 100.0). The highest mean score was attributed to the factor "Critical Understanding", whereas the lowest mean score was attributed to the factor "Care Plan" (52.1 vs. 20.9). "Level of Communication" with the medical staff, "Management Preparation", and "Importance of Preferences" had an average score of about 39.0 (38.5, 41.4, and 33.5, respectively). As for individual items constituting each factor, most of the items constituting critical understanding had a score of around 60, except for the item 'understand medications' side effects', which had a score 10.2. Regarding the factor 'preference important', all items ranged from 30.0 to 40.0. Regarding the factor 'management preparation', the highest score was attributed to the item 'understand how to manage health' compared with the item 'understand signs and symptoms', which attained the lowest score (59.1 and 20.3, respectively). As for the factor 'level of communication with the medical staff', the ability to contact the physician after discharge had a low score compared with the item 'medical staff', the ability to contact the physician after discharge had a low score compared with the item 'medical staff', the ability to contact the physician after discharge had a low score compared with the item 'medical staff', the ability to contact the physician after discharge had a low score compared with the item 'medical staff' answered all my questions' (11.3 vs. 65.8) (Table 2).

Factors and items of CTM measures	CTM score
Factor 1: Critical Understanding	
Confident knew how to manage	63.26
Understand care responsibilities	53.29
Confident could do what needed	64.22
Understand medications' purpose	61.37
Understand how to take medications	59.88
Understand medications' side effects	10.23
Total	52.04
Factor 2: Important Preferences	
Preferences deciding health needs	30.55
Preferences deciding where needs met	30.00
Agreed health goals and means	40.00
Total	33.51
Factor 3: Management Preparation	
Understand how to manage health	59.18

Table 02 showing scores on different factors on the Care Transition Measure



Range	0 - 100
Grand Total	42.2
Total	38.61
medical problem	
I can contact my doctor after discharge if I want to ask about any	11.33
Medical staff answered all my questions	65.89
Factor 5: Level of Communication with the Medical Staff	
Total	16.94
Had written care plan	6.41
Had written list appointments and tests	27.48
Factor 4: Care Plan	
Total	41.46
Had information needed for self-care	43.94
Understand what makes better or worse	42.36
Understand signs and symptoms	20.38

A significant association was found between some patient characteristics and the aggregate CTM score. Patients admitted from the ER had a significantly higher CTM score than those admitted from the outpatient department (P=0.023). Patients with LOS of more than 6 days had a significantly higher CTM scores compared with patients with LOS of less than 6 days (P=0.023). Patients discharged from FMW had significantly higher CTM scores than those from MMW, DM, and OW (P=0.000). Patients admitted for the same diagnoses as for the index hospitalization more than three times within the previous 3 months had a significantly higher CTM score than those admitted less than three times (P=0.017) (Table 3).

Characteristics	Mean CTM	SD	Median	P- value*
	Score			
Age (years)				0.083
18 - 44	36.31	2.60	33.33	
44 - 54	44.97	2.74	54.90	
55-64	46.75	2.62	48.95	
65 - 74	37.44	2.39	34.44	
>75	40.20	2.59	36.66	
Sex				0.594
Male	41.78	2.50	38.88	
Female	45.35	3.19	46.27	
Education				0.140
Illiterate	40.64	2.85	35.71	
Read and Write	40.28	2.58	39.05	
Some school education	48.33	2.14	45.40	
Technical Diploma	38.28	2.54	35.29	

Table 03 Association between Care Transition Measure Scores & Patient Characteristics



E-ISSN: 2582-2160 • Website: www.ijfmr.com

• Email: editor@ijfmr.com

Number of Co-morbid				0.462
Conditions				
None	39.62	2.35	37.96	
1-2	42.70	2.81	39.63	
3 – 5	45.05	2.31	39.21	
Source of Admission				0.023
Emergency Department	43.78	2.61	41.42	
Outpatient Department	34.76	2.38	33.33	
Length of stay (days)				0.006
1 - 2	43.32	2.25	38.33	
3	33.62	2.58	30.33	
4-5	42.45	2.56	43.75	
6+	48.78	2.85	53.33	
Discharge Wards				0.000
MMW	31.31	2.08	31.31	
FMW	54.45	2.63	58.33	
DM	37.93	2.61	38.27	
OW	45.49	2.47	45.40	
Hospital Admissions for the				0.017
same condition as for the				
index hospitalization in the				
past 3 months				
Not previously admitted	48.65	2.81	52.66	
Admitted once	45.33	2.24	47.91	
Admitted two times	46.28	2.50	54.16	
Admitted three times or more	53.28	2.34	64.58	

*The Mann–Whitney U-test was used for comparing two independent samples and the Kruskal–Wallis test for comparing the means of more than two independent samples.

DISCUSSION

A growing body of literature emphasizes that negative outcomes are linked to deficiencies in transitions of care across several settings. The present study aimed to assess the quality of transitional care at a tertiary care hospital in India from the patients' perspective using the CTM. The results reveal that the transitional care received by the study population was suboptimal compared with studies in USA and Singapore using the same measure and another study in Canada using a different measure (the total CTM score in the present study was 42.2 compared with a total score of 66.0 in Singapore, 67.34 in USA, and a mean score percentage of 80.8 in Canada) [12,14,15].

Considering different dimensions of the CTM measure, the highest score was attributed to the dimension of "Critical Understanding" and the lowest to "Care Plan" (52.04 vs. 16.94, respectively). Critical understanding was relatively high when compared with other dimensions. Mostly, patients' understanding is a result of the chronic course of their illness and the numerous encounters faced through the long course of the disease. Knowledge accrued by patients about their illness is mainly due to the chronicity of their



disease and repeated contact with the healthcare system. This is substantiated by the finding that patients with > 03 hospitalizations in the preceding 03 months were better informed than those with fewer admissions.

Patients discharged from DM wards had better CTM scores than those from other wards. The reasons for these are many:

- All of them would have been serving soldiers with better educational standards than with civilian PLHIV admitted to other wards
- Serving personnel are also exposed to repeated HIV/AIDS IEC activities and thus have higher awareness of the disease, its course and management.
- Serving personnel are categorized for medical disabilities and this has an adverse impact on their service career prospects. So, most patients will be motivated to be healthy/ fit. Hence, they would be interested in knowing more about their illness.
- Patients in MMW & FMW are likely to be sicker than those in DM & were thus likely to be less able to register information being provided to them by Healthcare workers.

The scores of patients concerning the quality of medication transition varied, wherein scores related to understanding the medication purpose and understanding how to take medications were much higher than understanding the side effects of medication (61.37 and 59.88 vs. 10.23). This trend agrees with that of a study performed in USA, where 37.2% were able to recount the purpose of all their medications and 14.0% were able to state the common side effect(s) of all their medications [4]. The lack of sufficient information about the medication was found, by several studies, to be caused by insufficient patient information about medications at hospital discharge [16,17]. However, this could not be ascertained by our methodology and needs further study. It has been found that hospital physicians tend to overestimate patients' understanding about their medications, [18] despite the fact that patients like to receive better information about the purpose and the side effects of their medications [19].

In the present study, the least scores were attributed to the dimension of 'care plans', with a score of 6.41 to the sub-dimension 'had written care plans' and a score of 27.48 to the sub-dimension 'had written list appointments and tests'. This finding was in concordance with that of a review study, in which discharge summaries at the first post-discharge visit often lacked important information such as diagnostic test results (missing from 33 to 63%), treatment or hospital course (7–22%), test results pending at discharge (65%) and follow-up plans (2–43%) [3]. It has been demonstrated in the literature that noncompliance with discharge plans resulted in an increased incidence of hospital readmission after discharge, medication-related adverse events and emergency department visits [20–22].

Further study is needed to ascertain the link between insufficient care plans and negative outcomes. However, it is rational to assume that a structured and extended patient-physician communication would improve patient understanding for their discharge care plans. The literature emphasized that a significant proportion of patients have low health literacy, which is 'the degree to which individuals can obtain, process and understand the basic health information and services they need to make appropriate health decisions', which renders them unable to fully comprehend medical instructions from physicians and hide their limited understanding out of shame or embarrassment [23–26]. This proportion increases among the elderly and among individuals who have not completed high school [25], who represent nearly four-fifth and two-fifth of our study sample, respectively. The inability to process health information could also be coupled by a tendency of physicians to use medical jargon, deliver too much information at a time, not confirming patient understanding and overestimating patients' literacy levels [27–29]. There is strong case



for multiple short sessions with patients which will also provide opportunities for checking patient comprehension and reinforcement.

Thus, it is recommended, in the current study setting, to use instruments commonly used to measure health literacy and to adjust the method of communication to this level [30,31]. In Indian hospitals, all patients receive a discharge summary listing their medications, diagnostic testing, course of hospitalization, and discharge instructions. However, this summary is written in English just for the purpose of communicating the patient's condition with the other physicians. Other studies found that discharge instructions written in a language other than the patient's native language may be indecipherable, especially if this language barrier is combined with a patient population with a low educational attainment as was the case in the present study [32].

Thus, it is recommended to provide the patient with an organized Marathi and easily understandable summary with symptoms to expect with their condition, medications they will be taking, how to take these medications, what side effects to expect, follow-up appointments, self-care instructions and whom to contact if problems develop [4,33,34]. The written discharge summary should be combined with verbal instructions for further assertion [35]. Verbal instructions should be well communicated between the healthcare provider and the patient using read-back and teach-back techniques to ensure patients' understanding. Additional measures that might enhance understanding are counseling of patients by a pharmacist before and after discharge and comprehensive discharge planning and instruction by nurses. Reinforcement by different members of the healthcare team enhances patient understanding and therefore compliance [4].

Scores attained on the dimension of 'management preparation' was relatively low (41.46). Results of a Brazilian study suggest that patients are mostly given discharge instructions at the moment they leave the hospital instead of being developed throughout the hospitalization period [36]. This means that many oral instructions are given at the same time, which makes it difficult for patients to understand and, thus, often leads to errors. Discharge instructions are mostly delivered mechanically and hurriedly, without taking each patient's needs into consideration. Hospital discharge planning should start as soon as patients are admitted to the institution and should be developed throughout the hospitalization period. It is also recommended to develop a checklist that describes the processes necessary for a safe and optimal discharge and the recommended timeline of when to complete each step, starting from the first day of admission [37].

As for the dimension concerning patients' agreement on care plans, the total score was 33.5 compared with scores of 66.6 and 67.2 in two studies conducted in Singapore and USA, respectively [12,14]. This could be explained by the desire of healthcare providers to maintain control, lack of time and lack of training in skills of providing a patient-centered care in the current study setting. In South-East Asian healthcare set-ups, the approach is often paternalistic and patients surrender their autonomy to make informed decisions giving to their behind faith in their doctors. In addition to provider-related factors, a previous research found that younger, better-educated, women, patients having adequate knowledge about their condition and those with no co-morbidity are more willing to play an active role in their own care process [38,39]. In the present study, the highest proportions of the respondents were men, with low educational attainment and having one or more co-morbid conditions (87.3, 80.9, and 70.7%, respectively).

In addition, scores for sub-dimensions of 'understand how to manage health', 'understand signs and symptoms' and 'understand what makes better or worse' were low (59.18, 20.38, and 42.36, respectively),



indicating that patients are not adequately informed about their conditions to take a decision in their own care. The lack of willingness of patients to share in their own health decisions may, in turn, result in the unwillingness of health providers to ask for patient participation. Shared patient provider decision making has been reported to enhance patient satisfaction, understanding and confidence in the decisions, and most importantly, enhance patient safety [39]. It is pivotal to increase patient awareness of their right and duty to actively participate in their own care decisions. Healthcare should become collaborative and participative rather than paternalistic.

In the present study, the ability to contact the physician in case of a health set back attained a very low score (11.33). Previous research identified that patient's frustrations were more centered on identifying whom to contact after hospital discharge, rather than knowing as to which symptoms to watch out for [10]. Post-discharge follow-up, even by telephone, was found to reduce near term hospital readmissions and subsequent hospital cost, especially among patients with chronic illness [40].

STRENGTHS & LIMITATIONS OF THE STUDY

This study is one of the the first of its kind in a hospital catering to a heterogenous population; bothe servicemen and civilians to assess transition of care. However, this heterogeneous mix makes the results more generalizable.

The CTM tool should ideally be administered to patients 1 - 2 weeks after discharge. We administered the tool upon discharge as many of our patients are outstation ones and may not be contactable on phone after discharge. So, there might be a positive recall bias.

This study was conducted only on one subset of hospital patients, namely those with HIV/AIDS. Including other types of patients might have thrown up different findings as most of these patients are sick & low on hope & morale.

Moreover, most of them are on medications for multiple diseases and these medicines are well known to have adverse effects.

RECOMMENDATIONS

- This study has brought out some important strength and some drawbacks in our healthcare delivery. These need to be addressed as we are likely to have more patients with multiple co-morbidities attending our healthcare facilities in future.
- There is a pressing need discuss long term health goals and strategies, not only with the patient but also with their family members who are actively engaged in their care.
- Patient education should have not be the responsibility of the treating doctors alone. As discussed conducting multiple short sessions with frequent reiterations is a better strategy to educate people with complex diseases and multiple co-morbidities. The role of peer educations in the field of HIV/AIDS cannot be ignored.
- Sensitization of junior doctors, nurses and allied healthcare professionals on transition of care is necessary. Provision of a check-list of items, to be discussed with patients before discharge will help a long way in improving patient outcomes.

CONCLUSION

The quality of transitional care at our study hospital is suboptimal. An adequate plan for preparing patient discharge and follow-up after discharge should be designed. This discharge plan should be well



communicated with the patient in written and verbal formats in the patients' native language. Health providers should seek feedback from the patients to ensure their understanding. In addition, patients should be encouraged to play an active role in their healthcare process after being well informed about their medical conditions.

Conflicts of interest: None

Source of Funding: Nil

REFERENCES

- 1. Coleman EA. Falling through the cracks: challenges and opportunities for improving transitional care for persons with continuous complex care needs. J Am Geriatric Soc 2003; 51:549–555.
- 2. Institute of Medicine. Crossing the quality chasm: a new health system of the twenty-first century. Washington, DC: National Academy Press.
- 3. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. JAMA 2007; 297:831–841.
- 4. Makaryus AN, Friedman EA. Patients' understanding of their treatment plans and diagnosis at discharge. Mayo Clin Proc 2005; 80:991–994.
- 5. Forster AJ, Murff HJ, Peterson JF, Gandhi TK, Bates DW. The incidence and severity of adverse events affecting patients after discharge from the hospital. Ann Intern Med 2003; 138:161–167.
- Rennke S, Nguyen OK, Shoeb MH, Magan Y, Wachter RM, Ranji SR. Hospital-initiated transitional care interventions as a patient safety strategy: a systematic review. Ann Intern Med 2013; 158:433– 440.
- 7. Parry C, Mahoney E, Chalmers SA, Coleman EA. Assessing the quality of transitional care: further applications of the care transitions measure. Med Care 2008; 46:317–322.
- 8. Shawky S. Could the employment-based targeting approach serve Egypt in moving towards a social health insurance model? East Mediterr Health J 2010; 16:663–670.
- 9. Gage B. Impact of the BBA on post-acute utilization. Health Care Financ Rev 1999; 20:103–126.
- 10. Coleman EA, Smith JD, Frank JC, Eilertsen TB, Thiare JN, Kramer AM. Development and testing of a measure designed to assess the quality of care transitions. Int J Integr Care 2002; 2:e02.
- 11. Shadmi E, Zisberg A, Coleman EA. Translation and validation of the Care Transition Measure into Hebrew and Arabic. Int J Qual Health Care. 2009; 21:97–102
- 12. Coleman EA, Mahoney E, Parry C. Assessing the quality of preparation for post hospital care from the patient's perspective: the care transitions measure. Med Care 2005; 43:246–255.
- Coleman E. Scoring the CTM-15. Available at: https://files.pbworks.com/ download/t4pxbWZzPK/unmhospitalist/27099690/CTM-15-SCORING.pdf?ld=1. [Accessed 16 December 2012].
- Bakshi AB, Wee SL, Tay C, Wong LM, Leong IY, Merchant RA, Luo N. Validation of the care transition measure in multi-ethnic South-East Asia in Singapore. BMC Health Serv Res 2012; 12:256. doi: 10.1186/14726963-12-256.



- 15. Hadjistavropoulos H, Biem H, Sharpe D, Bourgault-Fagnou M, Janzen J. Patient perceptions of hospital discharge: reliability and validity of a patient continuity of care questionnaire. Inte J Qual Health Care 2008; 20:314–323.
- Micheli P, Kossovsky MP, Gerstel E, Louis-Simonet M, Sigaud P, Perneger TV, Gaspoz JM. Patients' knowledge of drug treatments after hospitalisation: the key role of information. Swiss Med Wkly 2007; 137:614–620.
- 17. Toren O, Kerzman H, Koren N, Baron-Epel O. Patients' knowledge regarding medication therapy and the association with health services utilization. Eur J Cardiovasc Nurs 2006; 5:311–316.
- 18. Makoul G, Arntson P, Schofield T. Health promotion in primary care: physician-patient communication and decision making about prescription medications. Soc Sci Med 1995; 41:1241–1254.
- 19. Calkins DR, Davis RB, Reiley P, Phillips RS, Pineo KL, Delbanco TL, Iezzoni LI. Patient-physician communication at hospital discharge and patients' understanding of the post discharge treatment plan. Arch Intern Med 1997; 157:1026–1030.
- 20. Hood JC, Murphy JE. Patient noncompliance can lead to hospital readmissions. Hospitals 1978; 52:79–82.
- Bedell SE, Jabbour S, Goldberg R, Glaser H, Gobble S, Young-Xu Y. Discrepancies in the use of medications: their extent and predictors in an outpatient practice. Arch Intern Med 2000; 160:2129– 2134.
- 22. Budnitz DS, Pollock DA, Weidenbach KN, Mendelsohn AB, Schroeder TJ, Annest JL. National surveillance of emergency department visits for outpatient adverse drug events. JAMA 2006; 296:1858–1866.
- 23. Institute of Medicine, Committee on Health Literacy. Health literacy: a prescription to end confusion. Washington, DC: National Academy Press.
- 24. Kripalani S, Weiss BD. Teaching about health literacy and clear communication. J Gen Intern Med 2006; 21:888–890.
- 25. Ong LM, de Haes JC, Hoos AM, Lammes FB. Doctor-patient communication: a review of the literature. Soc Sci Med 1995; 40:903–918.
- 26. Schillinger D, Bindman A, Wang F, Stewart A, Piette J. Functional health literacy and the quality of physician-patient communication among diabetes patients. Patient Educ Couns 2004; 52:315–323.
- 27. Parikh NS, Parker RM, Nurss JR, Baker DW, Williams MV. Shame and health literacy: the unspoken connection. Patient Educ Couns 1996; 27:33–39.
- 28. Bass PF 3rd, Wilson JF, Griffith CH, Barnett DR. Residents' ability to identify patients with poor literacy skills. Acad Med 2002; 77:1039–1041.
- 29. Powell CK, Kripalani S. Resident recognition of low literacy as a risk factor in hospital readmission. J Gen Intern Med 2005; 20:1042–1044.
- 30. Davis TC, Long SW, Jackson RH, Mayeaux EJ, George RB, Murphy PW, Crouch MA. Rapid estimate of adult literacy in medicine: a shortened screening instrument. Fam Med 1993; 25:391–395.
- 31. Parker RM, Baker DW, Williams MV, Nurss JR. The test of functional Health Literacy in Adults. J Gen Intern Med 1995; 10:537–541.
- 32. Karliner LS, Auerbach A, Na ´poles A, Schillinger D, Nickleach D, Pe ´rez-Stable EJ. Language barriers and understanding of hospital discharge instructions. Med Care 2012; 50:283–289.



- 33. Kripalani S, Jackson AT, Schnipper JL, Coleman EA. Promoting effective transitions of care at hospital discharge: a review of key issues for hospitalists. J Hosp Med 2007; 2:314–323.
- 34. Louis-Simonet M, Kossovsky MP, Sarasin FP, Chopard P, Gabriel V, Perneger TV, Gaspoz JM. Effects of a structured patient-centered discharge interview on patients' knowledge about their medications. Am J Med 2004; 117:563–568.
- 35. Johnson A, Sandford J. Written and verbal information versus verbal information only for patients being discharged from acute hospital settings to home: systematic review. Health Educ Res 2005; 20:423–429.
- 36. Pompeo DA, Pinto MH, Cesarino CB, Ferreira de Araujo RD, Poletti NA. Nurses' performance on hospital discharge: patients' point of view. Acta Paul Enferm 2007; 20:345–350.
- 37. Soong C, Daub S, Lee J, Majewski C, Musing E, Nord P, et al. Development of a checklist of safe discharge practices for hospital patients. J Hosp Med 2013; 8:444–449.
- 38. Longtin Y, Sax H, Leape LL, Sheridan SE, Donaldson L, Pittet D. Patient participation: current knowledge and applicability to patient safety. Mayo Clin Proc 2010; 85:c53–c62.
- 39. Say R, Murtagh M, Thomson R. Patients' preference for involvement in medical decision making: a narrative review. Patient Educ Couns 2006; 60:102–114.
- 40. Harrison PL, Hara PA, Pope JE, Young MC, Rula EY. The impact of post discharge telephonic followup on hospital readmissions. Popul Health Manag 2011; 14:27–32.

Annexure "A" Care Transition Measure Questionnaire

Dear participant,

This questionnaire-based study is being done to assess the quality of transitional care among patients posthospital discharge with an end objective to recommend an effective discharge planning. The identity of the respondents will not be divulged at any moment. Filling of this form by the respondent will be taken as informed consent for participation in the study.

Thank you for participating

With warm regards

Age:....in years

Gender: Male/Female

Education:

- 1. Less than high school/ 7th pass
- 2. High school/ 10th pass
- 3. Some college/ Discontinued graduation
- 4. College degree/ Graduate

Health status during last 12 months:

- 1. Poor
- 2. Good



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

3. Very good

1. Agreement on Care Plan

	Items	What is your opinion about it					
S.No		Strongly agree	Agree	Disagree	Strongly disagree	Do not know	
a)	Before I left the hospital, a staff member discussed my health problem with me						
b)	The staff member who discussed it with me was:						
	Chief doctor/ Junior doctor/ PG re	sident/ Staff	° nurse/ C	ounsellor/ A	nother patie	nt	
c)	Before I left the hospital a staff member discussed with my caregiver/family members about what my health care needs would be						
d)	when I left the hospitalBefore I left the hospital a staffmember discussed with mycaregiver/family members aboutwhere my health care needs wouldbe met when I left the hospital						
e)	Before I left the hospital, I was given a written summary of my illness						
f)	Before I left the hospital, I had the required information which is needed to be able to take care of myself						

2. Understanding Care Plan

		What is your opinion about it				
S.No	Items	Strongly	Agree	Disagree	Strongly	Do not
		agree			disagree	know
a)	The care giver discussed the					
	immediate and long-term goals					
	regarding my treatment with me and					
	my family members					
b)	I was told when to visit the hospital					
	next					



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

c)	I was told whom to meet			
d)	I was given a list of tests that I			
	needed to get done before my next			
	visit			
e)	I was told where to get them done			
f)	I was told about symptoms which			
	would mark worsening of my illness			
g)	I was told whom to contact in an			
	emergency			
h)	I was given a readable and easily			
	understood written plan that			
	described how all of my health care			
	needs were going to be met.			
i)	I had a good understanding of the			
	things I was responsible for in			
	managing my health.*			
j)	When I left the hospital, I was			
	confident that I knew what to do to			
	manage my health.			
k)	When I left the hospital, I was			
	confident I could actually do the			
	things I needed to do to take care of			
	my health.			

3. Medications

		What is your opinion about it				
S.No	Items	Strongly agree	Agree	Disagree	Strongly disagree	Do not know
a)	The names of my medicines were told to me	0				
b)	I was shown the tablets and explained what each one was and what the strength of those tablets was					
c)	I was clearly explained when to take my medicines.					
d)	I was told about dietary precautions associated with the medications					
e)	I was clearly explained about the side effects of the various medications prescribed to me					



E-ISSN: 2582-2160 • Website: <u>www.ijfmr.com</u> • Email: editor@ijfmr.com

Annexure "B"

vaOdyakIya kaLjaI pirvat-na maaojaNyaasaazI p`SnaavalaI

vaya :vaYa-: s~I /pu\$Ya

iSaxaNa :

- 1. 7vaI pasa
- 2. 10 vaI pasa
- 3. pdvaI pUva- iSaxaNa
- 4. ka^laoja pdvaI

tumacao svaasqya gaolyaa 1 vaYa- ksaM haot?

- 1. Kraba
- 2. caaMgala
- 3. KUp Cana

kaLjaI GaoNyaasazI KalaIla gaaoYTIMcaI maaihtI malaa doNyaat AalaI Aaho :

- 1. ha^ispTla saaoDNyaapUvaI- sTaf maoMbarnao maaJyaa AaraogyaacaI samasyaa jaaNaUna GaovaUna cacaa- kolaI haoya /naahI.
- 2. cacaa- kolaI Asalyaasa kaoNaI kolaI? (vairYz Da^@Tr /kinaYT Da^@Tr/pI.jaI Da^@Tr/pircaairka/samaupdoSak/[tr \$gNa)
- 3. ha^ispTla saaoDNyaapUvaI- maaJyaa kaLjaI vaahka saaobat maaJyaa AaraogyaaSaI inagaDIt garjaaMba_la cacaa- kolaI Aaho. haoya/naahI
- 4. puZIla tpasaNaI saazI malaa kuzo jaayacao Aaho yaacaI saivastr maaihtI doNyaat AalaI Aaho. haoya/naahI
- 5. maaJyaa AajaarpNaaba_lacaI saMixaPt maaihtI ha^ispTla saaoDNyaapUvaI- malaa ilahUna idlaI Aaho. haoya/naahI
- 6. maaJyaa tMdu\$stIsaazI va Aajaar bara haoNyaaba_lacaI AavaSyak tI sava- maaihtI malaa doNyaat AalaI Aaho. haoya/naahI

KalaIla maaihtI maI kaLjaIpUva-k samajaUna GaotlaI Aaho :

- 1. Aajaar bara haoNyaasaazI laagaNaara kalaavaQaI va AaOYaQaaopcaaraM saMdBaa-t maaJyaaSaI AaiNa maaJyaa kaLjaIvaahkaSaI cacaa-JaalaolaI Aaho. haoya/naahI
- 2. puZIla tpasaNaIsaazI maI kovha yaayacao Aaho to malaa saaMigatlao Aaho. haoya/naahI
- 3. maI kaoNa% yaa BaoTayacao Aaho to hI malaa saaMigatlao Aaho. haoya/naahI
- 4. maaJyaasaazI garjaocyaa sava- tpasaNyaacaI yaadI malaa doNyaat AalaI Aaho. haoya/naahI
- 5. yaa tpasaNyaa kuzo haotIla to malaa saaMgaNyaat Aalao Aaho. haoya/naahI
- 6. maaJyaa AajaarpNaacaI laxaNao AaiNa %yaamauLo haoNaa-yaa ~asaaMcaI jaaNaIva malaa k\$na doNyaat AalaI Aaho. haoya/naahI
- 7. tatDInao laagaNaa-yaa madtIsaazI ([ma-jaMsaIsaazI) maI kaoNaalaa BaoTayacao Aaho to malaa saaMgaNyaat Aalao Aaho. haoya/naahI

ilaMga



- 8. GarI gaolyaavar maaJyaa tMdu\$stIsaazI maI kaoNatI]paya yaaojanaa kravayaacaI Aaho to malaa samajaNaa-yaa BaaYaot ilahUna idlao Aaho. haoya/naahI
- 9. vairla sava- gaaoYTI malaa pUNa-pNao samajalyaa AsaUna maI maaJyaa AaraogyaacaI kaLjaI jabaabadarInao GaovaU Sakona.
- 10. ha^ispTla maQaUna GarI jaatanaa, malaa pUNa- ivaSvaasa Aaho ik maaJyaa tMdU\$stIsaazI AavaSyak tI kaLjaI maI pUNa-pNao GaovaU Saktao/Sakto. haoya/naahI

AaOYaQaaopcaar :

- 1. maaJyaa AaOYaQaaMcaI naavao malaa saaMgaNyaat AalaI Aahot. haoya/naahI
- 2. maaJyaa Aajaaravar AaOYaQao kSaap`karo pirNaama krtIla, %yaaMcaI pa^var kaya Aaho ho malaa AaOYaQao daKvaUna samajavaNyaat Aalao Aaho. haoya/naahI
- 3. gaaoLyaa/AaOYaQao GaoNyaacaI vaoL malaa spYTpNao samajaavaNyaat AalaI Aaho. haoya/naahI
- 4. AaOYaQaaopcaar caalaU Asatanaa, Aaharaba_la Asalaolyaa sava- saUcanaa malaa doNyaat Aalaolyaa Aahot. haoya/naahI
- 5. AaOYaQaaopcaaraMmauLo jar kahI duYprINaama haoNaar AsatIla tr %yaaMcaI malaa saivastr maaihtI doNyaat AalaI Aaho. haoya/naahI