Original Article

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Quick Response Code:

Website:
www.jehp.net

DOI:
10.4103/jehp.jehp_748_22

Post-discharge follow-up system in psychiatric patients: A case study of Farabi Hospital in Isfahan

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Received: 01-06-2022
Accepted: 26-11-2022
Published: 29-09-2023

Abstract:

BACKGROUND: Mental illness is one of the most common problems in human societies and the continuation of care and post-discharge follow-up. This study was conducted to define a post-discharge follow-up framework for Farabi Hospital in Isfahan.

MATERIAL AND METHODS: This was a multistage study, including, interviews literature review, and focus group discussions. Participants included 18 purposefully selected nurses, physicians, and managers, directly involved in the discharge process of Farabi Hospital in Isfahan. The interviews were semi-structured. Data were organized using $MAXQDA_{10}$ software. The initial framework was set through the extraction of semantic main and secondary codes. The framework was finalized through three several focus group discussion sessions.

RESULTS: Results included of 17 sub-categories and seven main categories as "education," organizational arrangement," "team-building," "patient and family participation and trust," "engaging some supportive institutions of community," "process management" and "information management."

CONCLUSIONS: To implement a post-discharge follow-up system for psychiatric patients in Farabi Hospital of Isfahan must be concentrated to patient and family education, team building, organizational arrangements, participation, and trust of patients and family, while engaging community health centers and notice to information and management and process management.

Keywords:

Continuity of patient care, mentally ill person, patient discharge, patients

Introduction

The hospital discharge program is a valuable measure in improving the quality of care.[1] Planning for discharge can reduce the length of hospital stay, reduce hospitalization, and increase patient satisfaction.[2] As patients' needs become more complex, there is a greater need for an effective and planned discharge system to meet their needs and post-discharge care.[3] Management and continuity of care are especially recommended for chronic patients and complex clinical cases.[4] Today, mental illness is one of the most common problems in human societies and continuous care plays an important role in improving these patients. Preventing readmission of psychiatric patients is effective for both patients and their caregivers, in addition it could be effective in unnecessary costs and payments. Meanwhile, the readmission rate is one of the important indicators of quality of care for psychiatric patients.[1]

Among the factors that can reduce the readmission of psychiatric patients is effective patient education, greater coordination with outpatient providers, follow-up, and post-discharge care.[5]

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How to cite this article: Yaghoubi M, Behzadnezhad MM, Shaarbafchizadeh N, Javadi M, Alizade M. Post-discharge follow-up system in psychiatric patients: A case study of Farabi Hospital in Isfahan. J Edu Health Promot 2023;12:302.

Comprehensive discharge planning is a dynamic, continuous, and participatory process that should begin at the time of admission and aims to define the process of follow-up after discharge and provide the necessary support and care for patients and caregivers.[6]

Various factors must be integrated to run an effective post-discharge follow-up program. Some studies pointed out to necessary interventions in the process of patient transition[7] continuing the treatment and have a care plan[8] also family involvement.[9]

Yum pointed out that to facilitate the discharge process, to ensure the safe transition of patients from the hospital to the community, and to improve the patient's health outcome, a systematic and coordinated hospital discharge process is needed.[10]

In a study about affecting factors of patients' readmission to the hospital, in addition to pre-discharge factors that occur in the hospital, other post-discharge factors such as continuous care, some interventions in the outpatient department, and patient follow-up after discharge were emphasized.[1]

Agency for Healthcare Research and Quality[11] suggested a toolkit for continuous care and effective discharge implementation, and recommended some items such as: clear statement, implementation leadership, analyzing readmission rates and determine goals, recognizing patients in need to follow, revise current discharge workflow, assign responsibility, train discharge educators and follow-up telephone callers, deciding about "After Hospital Care Plan," developing process, and measuring the progress implementation.[11]

Yam *et al*. suggested the comprehensive discharge framework, including five domains: initial screening and evaluation, discharge planning, discharge coordination, discharge implementation, and post-discharge follow-up.[10]

Lin *et al*. have mentioned that the comprehensive discharge plan is a multidisciplinary alternative for care continuation. This study suggested a framework that includes patient identification, patient evaluation, goal setting, planning, implementation, coordination, and evaluation. This study also mentions that an effective discharge plan enforces care continuation and connection between hospital treatments and post-discharge care.[2]

In Iran's hospitals, there is no comprehensive and coherent system about post-discharge follow-up, but there are individual and scattered programs in which some hospitals employ some courses of action such as patient education, through which a nurse talks about patient medications or educational brochures are given to the patients.

It is obvious that the existing incoherent activities cannot meet the care and supportive needs of the patient after discharge, especially in psychiatric patients. Farabi Hospital is a highly specialized complex in the east of Isfahan that provides services for a wide range of psychiatric patients. This hospital with a capacity of 250 psychiatric beds and two psychiatric emergency units for men and women is one of the most important psychiatric centers in the Isfahan province. Considering the critical role of post-discharge follow-up for effective psychiatric management and decrease of readmissions in mental patients, this study was conducted to identify a post-discharge follow-up framework for mental patients.

Material and Methods

Study design and setting

This is a qualitative research, followed by literature review and three focus group discussions.

To determine the components of the comprehensive discharge framework, a qualitative research, using conventional content analysis approach, was conducted and to confirm suggested initial conceptual framework focus group discussions were done.

Study participants and sampling 18 managers, physicians, nurses, and patients of Farabi Hospital purposefully were participated in study. Inclusive criteria were work experience, familiarity with psychiatric patient care plan and needs, also involving in the discharge process of hospital.

Data collection tool and technique

Semi-structured interviews were used for data collection.

Interviews started with some main questions such as "What care does a psychiatric patient need after discharge?" and with some clarifying questions such as "what are the perquisites and s of continuous care for patients and following them after discharge?" were continued.

Before beginning the interview, informed consent form has been given to the subjects.

Goba and Lincoln criteria were used to ensure the robustness of the study. Data credibility was provided by regularly collecting data, prolonged engagement, and spending adequate time (an average of 5–7 weeks) for speaking with subjects, and researcher's neutrality. Transferability was obtained through providing detailed quotations and describing the method section of the

Table 1: Final framework of comprehensive psychiatric patient discharge program components

1-Organizational arrangements
• definite position in the organizational chart
• definite manpower
• definite office
2. Team building
• Physician
• Nurse
• Psychologist and occupational therapist
• Social worker
• official staff
3- education
• Patient education
• patient's family education
• Community education
4- Patient/family participation and trust
5- Collaboration of supportive institutions in the community
• Public and private supportive institutions/NGOs
• link with community health centers along with referral chain Reinforcement
6-Process management
• Strategic and operational plan
• define a clear process
7-Information management
• Electronic health record
• Software

study in detail. Conformability was done through regular collection, keep recorded media and memos to facilitate next reviews. MAXQDA10 software used for managing the data.

Extracted semantic, main, and secondary codes were organized as initial framework of the post-discharge follow-up model, which included seven categories and 21 subcategories.

To finalize and validate the initial framework, three 1- to 1.5-hour focused group discussion (FDG) sessions were conducted with participation of same subjects that were interviewed in initial step of study. Focus group discussion can discuss and doubt a research topic that requires collective feedback and identify latent or new meanings.[12]

During the discussion some post-discharge follow-up frameworks applied in another countries, were presented and discussed. The frameworks of AHRQ, Nordmark from Canada, the Michigan Medical School, the Yang-e-Konk from Hong Kong, and the John Lin model from Taiwan were used due to their comprehensiveness and clarity.

In FDG_s, in-depth questions were asked to attain accurate information for achieving a coherent and effective output. As well as interesting or new comments and ideas that were worth noting and pursuing were also be considered. Discussion sessions reached an overall consensus about categories and subcategories.

The opinions of the attendees were audio-recorded and transcribed. According to the transcriptions and notes during the FDG, the initial framework was modified as a framework constituted of 7 categories and 17 subcategories [Table 1].

Ethical consideration

This study is a part of research project of Isfahan University of Medical Sciences with the ethical code: IR.MUI.RESEARCH.REC.1398.669 and the scientific code 298174.

Results

Findings showed that the comprehensive discharge framework of the studied hospital includes seven main categories and 17 subcategories.

The main categories include:
- Education
- Organizational arrangements
- Team building
- Patient/family participation and trust
- Supportive institutions of community
- Process management
- Information management [Figure 1].

Education

Participants believed that education is the main infrastructure in the implementation of a comprehensive discharge system, and should include patients, their family, and community.

Patient education

"We need a cohesive structure to train the patient to return to the community." (Psychiatrist 1).

"From the time of admission, there should be a training team, to go to the wards and get information about the patient's condition, educate her/him, and continue her/him treatment and care." (Head of Quality Improvement Unit).

Patient's family education

"Perhaps 99% of patients' problems are related to family ignorance." (Executive Director 1).

"First of all, informing the families is very important, i.e., explaining patient condition; What are the causes of his illness? And how should we deal with it? What can we do for him? How we should support him?". (Merton)

Community education

"People including the general laypeople and even hospital staff, still do not know about the concept of post-discharge follow-up and why it should be done." (Chief nursing officer)

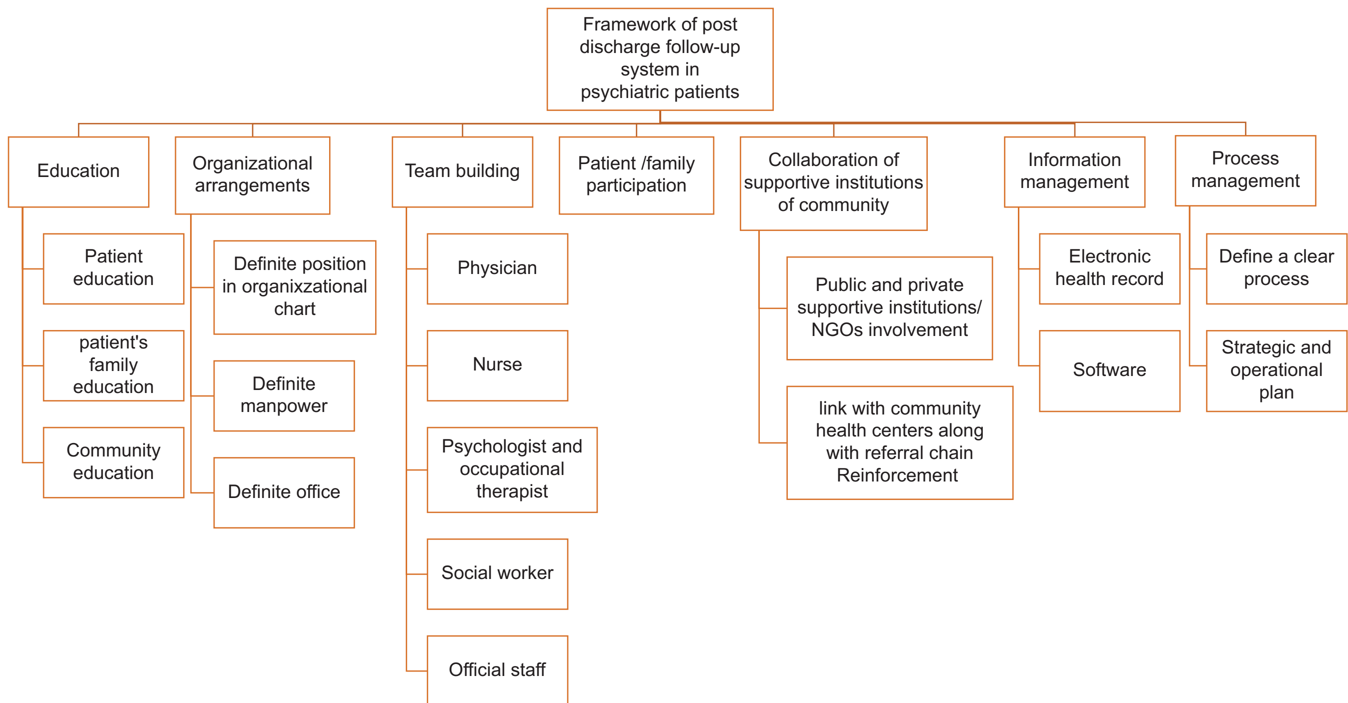

Figure 1: Final framework of comprehensive psychiatric patient discharge system

"The external institutions and organizations involved in the issue should know what discharge program is, how it works. what is its purpose and necessity? What they should be do? And how can they help?" (Nurse in charge of infection control)

Organizational arrangement

Based on the participants' point of view, to run this program effectively, we must have a specific office with specific manpower.

Definite position in the organizational chart:

"Generally, we must define a separate office for this work." (Patient Education Nurse)

"We must define the discharge unit in the hospital's organizational chart with a specific team" (Head of Quality Improvement Unit).

Definite manpower

"We. Must have a follow-up officer to do this" (head nurse)

"This process needs to specific, trained, and qualified manpower. Someone familiar with the necessity of the subject." (Head of Patient Safety Unit).

Definite office/location

"The main prerequisite of the implementation of so the mechanism is the existence of a definite unit with necessary supplements in a specific physical space." (Chief nursing officer).

Team building

Post-discharge follow-up is a team process in nature. Forming a discharge team and gathering people with different specialties were emphasized. This team should work together to achieve the best result for the patient.

Physician

"We. Should use our medical staff, of course, the doctor may not be a resident of this area, but he must be involved." ((Patient Education Nurse).

Nurse

"Well. The main job of training is usually with a nurse, Patient Education Nurse can be assigned as the manager of the team. And some of the nurses from different nursing levels, who work in different wards should also be involved in the issue," (Chief nursing officer).

"The hospital nursing staff, including caring and management team, should be involved, because this issue is related to care plan" (Nurse in charge of infection control)"

Psychologist and occupational therapist

"The psychologist must be active on this team, we need at least 1 psychologist for every 15 patients which can take enough time for the patient." (Psychiatrist 1).

"Occupational therapists because of the role they can play in the process of recovery and empowerment of the patient should be involved in this team" (occupational therapist)

Social worker

"This work is strongly linked to the field of social work. The number of social workers in the team should be large. because the issue is related to the patient's socioeconomic" (Psychiatrist 2)

Official staff

"This process creates some of the routine official duties, and this certainly does not need to a specialized clerk, we can use a simple office staff who is familiar with information technology to facilitate doing tasks" (*(Patient Education Nurse).*

Patient/family participation

Following the patient after discharge, requires communication between the hospital discharge team and the patient and his family.

"The hospital team should… First, know the patients well. assess their needs… Have an overview of the patient's family condition and needs, In this way, it is very easy to communicate with them…it takes less time but is much more effective" (head nurse1).

Collaboration of supportive institutions of community

After the patient returns to the community, different institutions and centers should be linked to the patient's treatment plan for effective following of patients. These centers can include the following:

Public and private supportive institutions/NGOs involvement

"The patients need a supportive strong system/responsible after discharge. Some institutions must be activated in this issue, which now we have not! Institutions such as welfare organizations should help us. Because these patients, economically and socially, are weak! They generally belong to weak families. And must be supported socioeconomically". (Psychiatrist 1)

"My suggestion to not leave patients after discharge is a supportive socioeconomically system, usually some institutions such as Imam Khomeini Relief Committee and Welfare Organization provide some occasional aids to our patients, but it is very insufficient. Supporting these patients should be serious, purposeful, and managed" (chief executive officer1)

"Now charities and NGOs (non-governmental organizations) work well in the health sector, but their work is incoherent. Charities need to be integrated, their resources managed and targeted. We have a lot of charities now! But they cannot be as effective as they should be" (social worker).

"The *private sector such as counseling clinics, social work clinics, and health promotion clinics should also cooperate. For those patients who have the adequate financial ability, this will reduce the burden of government institutions to some extent." (Head of Quality Improvement Unit).*

Link with community health centers along with referral chain reinforcement

"Our country's health network/community health centers are very efficient structure! And certainly can be used in this system as well. (Psychiatrist 1).

"well… every discharged patient is covered by a health center near their home if we connect to these health centers, and the patient is referred there, it will be very effective" (Nurse in charge of infection control).

"Community health centers can be very useful if they are linked with us.for doing Visits, the next examinations, screening, and necessary interventions. Of course, the referral system should be strengthened and the patient should be supported in the system so that he can easily use the services when needed. If the referral system does not strengthen, the patient will be wondered and the aimed result is not achieved" (Patient Education Nurse).

Information management

Patient information management was considered as one of the important factors in mental patients' post-discharge follow-up system. In this area, two sub-categories of software and electronic health record were mentioned.

Electronic health record

"I believe if the patient information system becomes electronic, this is a big step in itself for continuing care plan" (chief executive officer1)

Post-discharge follow-up system requires a database. Patient information must be completely electronic, information systems of Hospitals and Community health centers must be integrated and linked so that the patient was not left after discharge from hospital and the patient care plan can continue." (Chief executive Officer2).

Software

"A software is needed" (Head of Patient Safety Unit).

"There should be software that helps the nurse following patients.Give an alarm; for example, today the follow-up of such an issue or such a patient should be done according to the plan … and must have a care schedule for each patient" (Emergency room head nurse).

Process management

A coherent post-discharge follow-up system requires attention to process management, organizational planning, and commitment to it. Participants noted two important points.

Define a clear process

"A definite process must be written, and informed well." (Chief executive Officer2).

"We require a clear, legal, and precise protocol, so that all relevant people are involved and it is implemented continuously" (Chief nursing officer).

Strategic and operational plan

This issue must be targeted in the strategic plan of the hospital, and mentioned in long-term and short-term goals" (Chief nursing officer).

"It must be planned, we must know, what prerequisites should exist? Managers should support and also provide the necessary financial and human resources." (Emergency room head nurse).

Discussion

Based on the findings in this research, running a post-discharge follow-up system for psychiatric patients required the interaction of seven extracted categories. One of the extracted categories or components to run a follow-up program after discharge was training. Participants believed that the patient should be trained and empowered to return to the community. Studies show that the patient's capacity for treatment is highly correlated with autonomy, self-sufficiency, and ability.[13] Also, in the clinical evaluation of psychiatry, the patient's ability and education are considered as his basic rights.[14] Research shows that 55% of psychiatric patients and 66% of non-psychiatric patients can make decisions and participate in their care plans.[15]

Another category is considering the "organizational infrastructure." In this regard, another research has been mentioned to establish a management system and institutionalize a new process. It is necessary to create an organizational independent unit to take responsibility for the program. Also, a person should be appointed as the head or manager of the unit.[16]

Another category is "team-building." Due to the complexity and interdisciplinary nature of healthcare services, we are enforced to plan to work together.[17]

The suggested team includes psychiatrist, nurse, psychologist, occupational therapist, counselor, social worker, and office staff that must be put to work together effectively. Consisting with this finding, other studies have also shown that team-based psychiatry, active counseling, and engaging patient family reduce the length of hospital stay and care costs.[18] Another study mentioned that an effective discharge program should be applied to have the necessary capacity to fulfill these needs.[3] Phillips *et al*.[4] in their suggested comprehensive discharge system pointed to the complexity of diseases, needs of patients, and the necessity of implementing an inter-professional team approach.

The other main category is patient and family participation and trust. In another word, patient is a member of the treatment team and should be involved in this matter. The hospital must be activated for the patient and family trust and participation. In this concern, concentrating on initial evaluation of patient and family condition was recommended.

British National Medical Center also provides 10 key principles to effective discharge planning which emphasizes the involvement of the patient and the family.[19] Patient and family participation in treatment programs and follow-up has been emphasized in many sources.[19-21]

"Collaboration of supportive institutions of community" was another extracted category, supporting institutions such as welfare organizations, private clinics, and community health centers. The cooperation of such social institutions in dealing with and managing mental health problems is very effective.[22] Studies have shown that some socio-environmental factors at different levels (individual, interpersonal, organizational/institutional, community, and politics) affect the mental health of the community.[23] The role of primary healthcare centers in improving mental health need to participation and communication of psychiatric medical centers with primary healthcare centers has been emphasized in various studies.[24]

In Iran since 2014, the health revolution plan in community health centers, appropriate activities have been taken in the field of providing mental health services.[25] However, it seems that the lack of seriousness and some inconsistent performance of the health system, and lack of a link between community health centers and the medical centers have made the referral system inefficient. However, the integration, complete link between different levels of the health system, and strong referral chain are the most important factors of its effectiveness.

The inefficiency of the referral system has been discussed in a study conducted by Eskandari in Iran. He pointed out some obstacles such as "good program but incomplete implementation," "poor communication between the three levels of the health system," "self-referral and avoidance or ignorance of the referral system," and "poor knowledge about the referral system."[26]

Another extracted category was "information management." This category focuses on communication infrastructure, hardware and software facilities such as patient databases, applications for easier access, and implementation of electronic health records.

The traditional discharge summery sheet is insufficient today for the effective flow of information and continuous care.[27] As the complexity of the system increases, it becomes more difficult to work optimally without the assistance of information technologies and data management.[28]

Some hospitals demand direct communication and more effective methods to communicate with post-discharge care centers to provide better care.[29]

Many of the adverse events can be corrected with the effective flow of information,[30] and generally, there are links between patient safety and health records.[31]

In Iran's health system, the most important challenge is the multiplicity of information systems that need to integrate all of these systems in the form of a complete and effective electronic record.

Another mentioned category was "process management." Participants pointed out that it is necessary to define a clear and coherent process to connect all team members inside and outside the hospital.[2,10,11]

In addition for the implementation and sustainability of post-discharge follow-up, it is necessary to combine it with the strategic plan of the organization.

Limitation and recommendation

The impossibility of using patients' opinions due to special psychiatric conditions was one of the limitations of this study. In normal patients, using the opinion of the patient and family is definitely a way forward.

Conclusion

Implementing post-discharge follow-up system in psychiatric patients needs to engage some factors such as education of patients and families, assigning enough and appropriate manpower working as a team, involving and integrating supportive institutions in community, accelerating electronic health records project in the national level and enhancing IT infrastructure, providing financial resources and top managers commitment and support from program and including it in hospital strategic plan.

Acknowledgment

Hereby we thank all colleagues of the Farabi hospital for their valuable cooperation and provided support for this study.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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