Original Article

Caring for Acutely Ill Patients in General Wards: A Qualitative Study

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Abstract

Introduction: The number of acutely ill patients has risen in general wards due to the aging population, more advanced and complicated therapeutic methods, economic changes in the health system, therapeutic choices and shortage of intensive care unit beds. This may lead to adverse events and outcomes with catastrophic results. The purpose of this study was to describe the conditions of acutely ill patients, from the perspective of caregivers.

Methods: The study was conducted in Tehran University of Medical Sciences and its two affiliated general teaching hospitals. Ten nurses and physicians participated in interviews, which were analyzed using qualitative content analysis methods.

Results: Four main categories of difficulties in caring for acutely ill patients in general wards were described: problems in identifying acutely ill patients, problems in clinical management of acutely ill patients, inappropriate use of Intensive Care Unit (ICU) beds, and poor structure for mortality control. The staff do not appropriately diagnose the signs of deterioration. There are problems with the appropriate management of acutely ill patients, even if they are considered to be acutely ill and in need of special attention in general wards.

Conclusion: Many shortcomings exist caring for acutely ill patients, ranging from identification to clinical management; there are also structural and contextual problems. An immediate plan is necessary to circumvent the challenges and to improve the care for acutely ill patients. These challenges highlight the need for changes in current levels of care for acutely ill patients, as well as the need for appropriate support systems.

Keywords: Acutely ill patients, general ward, inappropriate care, suboptimal care

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Introduction

Increased life expectancy, more advanced and complex therapeutic methods, economic changes in health system and diverse therapeutic choices have all led to an increase in the number of acutely ill patients.[1,2] This trend has increased the demand for intensive care beds in hospitals.

On the other hand, the emphasis placed by health policy makers on decreasing the length of hospital stay, alongside the high costs as well as the limited number of available Intensive Care Unit (ICU) beds have resulted in an increasing number of these patients, who would have been normally cared for in ICUs, but are hospitalized in general wards.[2]

Consequently, due to the discrepancy in the quality of care provided in general wards and ICUs, which occurs even in the most suitable care systems, some deterioration in the condition of acutely ill patients may be expected and in some instances, the management and care process for these patients are delayed.[1]

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Today this trend is a critical issue in Iranian hospitals and improving the quality of care for these patients has become a key objective. In Iran, shortcomings such as scarcity of intensive care beds,[3,4] an aging population[5] and an increase in the diseases that come with aging,[6,7] lead to acutely ill patients being cared for in general wards instead of ICUs. In the hospital which is the main setting for this study, it has been observed that as many as two or three patients with assisted ventilation may be cared for in a general medical ward. The hospital records show that over a period of six months, 520 acutely ill patients were on the waiting list for ICU beds. These patients have complex problems and a higher risk of adverse events when they receive inappropriate care.[8,9]

Since few studies exist that focus on the care received by such patients in Iran, an exploratory study using qualitative methods seems a good choice, as qualitative studies are particularly useful when knowledge about a phenomenon is limited or uncertain.[10] In this study, in order to determine the quality of care based on the experience of staff in general wards rather than hospital guidelines for this group of patients, an exploratory qualitative study was carried out in Tehran University of Medical Sciences (TUMS) and two related general teaching hospitals.

Methods

Since few studies exist that focus on the condition of such patients in Iran, carrying out a qualitative study seemed appropriate. A

qualitative study with a conventional qualitative content analysis method was used[11] to provide knowledge and understanding of the surveyed subject.

Setting and Sampling

The setting of the present study was TUMS and its two affiliated teaching hospitals, which are two of the most important general and teaching hospitals in Iran.

The population of the present study consisted of service providers involved in caring for acutely ill patients. These participants were selected based on agreement to enter the study, working as either a physician or a nurse, being knowledgeable about the condition of acutely ill patients, able to give deep and rich information about these patients, and having at least 5 years of work experience. Sampling was purposeful based on the findings gained from the analysis of the previous interviews. Sampling was continued until information saturation was achieved.

Data collection

Semi-structured face-to-face interviews were carried out with participants during the year 2010. The questions were arranged with flexibility beforehand, as were the time and location of the interviews. Some of the main interviews questions are shown in Table 1. The participants consented to participation, and the interviews were only recorded if the interviewer was given express permission to do so. Two interviews were done in the treatment deputy of TUMS, and others were in hospitals. All interviews were conducted and recorded in Persian. Data collection ended when no new information was collected and information saturation was achieved.

Data analysis

A conventional qualitative content analysis method was used to analyze the data. The content analysis method is a method to analyze oral, visual, and written data, and it is applied to identify categories, which explain the phenomenon.[11,12] A conventional qualitative content analysis was employed in which coding categories were derived directly and inductively from the data.[12]

Analysis and coding were concurrent with data collection. This began with the first interview, and continued until the last. The interviews were transcribed verbatim immediately after each interview and re-read several times to obtain a comprehensive view of the data. Then, each interview text was imported to the MAXQDA software for analysis and coding. In MAXQDA, interviews texts were coded line by line. In this freely generated coding, meaningful statements and paragraphs were identified, marked as the units of analysis and codes were assigned to them.

In the next stage, using comparison on the basis of similarities and differences, codes with similar meanings were grouped together to form categories and subcategories, and a label was assigned to each. The analysis was finalized by identifying several categories that emerged during describing the current state of acutely ill patients.

Rigor

The credibility of the study was supported by maximum variant sampling and member checking. Participants were chosen from different age categories with different work experiences, educational degrees, and organizational grades. To enhance the dependability and conformability of data, a team-based approach for data analysis was used. One researcher (A.J) collected and analyzed the data and three other research team members (A.R, L.S and N.J) discussed and verified the codes and categories in order to reach a consensus. All codes and categories were agreed by them. Thick description of the sample and setting of study may help readers make decisions about the transferability of findings. Selecting participants from different hospitals and departments of the university and different professions, along with contextual features of the sample and setting of this study could help readers decide on the transferability of the findings. This indicates that the findings of this study can be transferred to other settings facing similar situations, especially in Iran. The readers can refer to the participants' quotations and descriptions on the context and field of research for generalization to other fields.

Ethical considerations

This study was part of a study which was approved by the ethical committee of the TUMS with grant number 10612. Participation in the study was entirely voluntary and all the participants provided informed consent.

Results

The participants consisted of 4 physicians and 6 nurses involved in management and care for acutely ill patients. Staff administrators received reports about acutely ill patients from all hospital wards; they were also responsible for coordinating with the university to

Table 1. Example Interview Questions

How do you define acutely ill patients?
Do you have any special grading system for selecting those acutely ill patients who should be admitted to general wards?
How do you evaluate the condition of acutely ill patients in your hospital?
How is the condition of the acutely ill patients in wards?
Do you have any protocol or guideline for admitting acutely ill patients in ICU?
Do you have any plan for acutely ill patients' follow up?
How is the patient's state when discharged from ICU and transferred to a general ward?
Is there a person or office responsible for following acutely ill patients in the hospital's chart of organization? Do you have any record of acutely ill patients' readmissions to ICU?
Do you have any plan to control the rate of mortality or the length of stay?

find ICU beds for ill patients, and preparing the equipment and staff to take care of these patients. All physicians were responsible for management and treatment of acutely ill patients.

All physicians were male and the nurses were female. The mean length of work experience was 15.9 years (range from 5 – 27 years). The capacity of participants varied from staff to deputy of the university (Table 2). The main categories of difficulties in caring for acutely ill patients in general wards were "problems in identifying acutely ill patients", "problems in clinical management of acutely ill patients", "inappropriate use of ICU beds" and "poor structure for mortality control".

Problems in identifying acutely ill patients

It was problematic to identify acutely ill patients in general wards and it was not conducted in accordance with recommendations. This problem was caused by using individual judgment instead of formal criteria, missing acutely ill patients and deterioration of their condition, and lack of nurse-physician communication.

Using individual judgment instead of formal criteria

Some participants indicated that they identified acutely ill patients by their individual judgment not by guidelines or protocol; it may be that they do believe in the guidelines but find them inconvenient or impractical to use. One of the physicians stated, "I can say which patient is ill. For example, *systemic lupus erythematosus* patients with thrombocytopenia and kidney involvement need more care".

One other physician gave the following opinion about the use of reference books in identifying acutely ill patients, "In some instances, we have scientific criteria which exist in our references, and different people use them in various fields with different methods; however, some use them more and some not at all. In general, we have no grading system for identifying acutely ill patients and it depends on the ward or our scientific board member in each ward to decide".

Missing acutely ill patients and deterioration of their condition

Participants stated that some acutely ill patients in general wards were missed or not identified in time and their condition deteriorated as a result of inappropriate care:

"We have this shortcoming that no one can definitely diagnose the patient's problem. In some cases, the physician may care for acutely ill patients as a normal patient, and then the patient might suddenly enter the critical state".

One member of nursing staff gave the following description about repeated transfers from general wards to ICU, "Unfortunately, because of the shortage of ICU beds, a patient who really needed post ICU service was transferred to a general ward. Finally, he acquired so many problems that might have led to his death. Last week, we had another case who was admitted to the neurosurgery ICU more than 4 times due to changes in his condition".

Lack of nurse-physician communication

Problems in nurse-physician relationships were another point mentioned by the participants. One nurse said, "There is no openness between our physicians and nurses. Our sole aim is caring for the patient, but unfortunately, no logical relationship exists between physicians and nurses, and this probably affects the diagnosis of acutely ill patients and their treatment".

One physician participant added, "Even when we go to a patient's bedside to evaluate him/her, no nursing staff is present. Also in some wards, when the physicians attend for consultation concerning the patient's condition, the nurses refer the physician to patient's records without offering any clarification of the patient's condition".

This category shows that there are no protocols or guidelines for identifying acutely ill patients and there are problems in identifying acutely ill patients.

Problems in clinical management of acutely ill patients

Usual care for acutely ill patients, overcrowding of acutely ill patients in general wards, staff and equipment shortages, inability to educate and train all staff, problems with cardiopulmonary resuscitation (CPR) team were all problems in clinical management of acutely ill patients.

Usual care for acutely ill patients

Most acutely ill patients were admitted to general wards, instead of ICU. Therefore, in some instances, they did not receive appropriate care. A participating nurse said, "Some patients, who

Table 2. Some Characteristic of Participants

ID	Profession	Sex	Experience/Years	Capacity
1	Physician	Male	5	Head of the emergency ward
2	Physician	Male	18	Health's deputy of the university
3	Physician	Male	20	Head of the hospital
4	Nurse	Female	27	Matron of the hospital
5	Nurse	Female	12	Nursing supervisor
6	Nurse	Female	27	Matron of the hospital
7	Nurse	Female	17	Head of the nursing office
8	Nurse	Female	12	Staff
9	Nurse	Female	15	Staff
10	Physician	Male	6	Staff

are discharged from ICU, still need more care. But these patients receive usual care in general wards".

A physician commented, "When a patient needs permanent care, even if he has been discharged from ICU, his care must be continued, no matter which ward he is in. Unfortunately, critical care for these patients does not continue outside of ICU. We have seen patients getting problems outside of ICU. For example, one patient had airway and tracheal suction done for him in ICU, but his breathing problems were exacerbated outside of ICU".

Overcrowding of acutely ill patients in general wards

Overcrowding of acutely ill patients in general wards is another point indicated in the interviews. One of the physicians said, "We have extreme shortage of ICU bed in our hospital and university, too. Usually, all beds in the ICU are full, and we have no extra beds for a new patient".

The shortage of ICU beds leading to acutely ill patients staying in general wards was also mentioned by a nurse, "When the number of beds in the ICU is low, we cannot transfer our ICU candidate patients to ICU. We always have a long list of patients that need to be transferred to ICU".

Staff and equipment shortages

Some participants believed that staff and equipment shortage were factors affecting patient care. A participating physician said, "We need permanent nursing care to stay by the bed and evaluate the patient´s health 24 hours a day, and also we need a fixed physician to know about the health and condition of the acutely ill patients 24 hours a day, too".

Sometimes the shortage of nursing staff would cause the blocking of beds, "For example, our Emergency ICU has 16 beds with equipment, but due to lack of staff, only 10 beds are active".

Inability to educate and train all staff

The difficulty in providing all ward staff with intensive care training was another factor mentioned by our participants, "We cannot train all nurses to care for very ill patients; staff rotation in the wards is common". Another nurse participant said, "due to the shortage, new nurses start working in the wards, even in critical wards, immediately after graduation from universities and without enough experience or training and without even receiving an inductive tour of the hospital or ward".

Problems with CPR team

Some participants believed that CPR teams delayed responding to acutely ill patients in general wards. One nurse participant said, "When does the CPR group arrive? Too late! Unfortunately, in the final stage of a long illness and they only attend for resuscitation or intubation". CPR team members also had other responsibilities beside CPR during their working shifts which also contributed to their delayed presence in some instances. "One of the ICU nurses along with residents of cardiology and anesthesiology are our CPR team members. They have lots of tasks to do and responsibilities in the ward and other parts of hospital as well as being in the CPR group".

This category indicated that the care given to acutely ill patients in general wards may be the same as that of other patients who are not acutely ill.

Inappropriate use of ICU beds

Lack of guidelines for ICU admission and emotional decision making, and favoritism were the subcategories of this category.

Lack of guidelines for ICU admission and Emotional decision making

The respondents indicated that in the hospitals, no defined written policy or protocol existed for admitting the patients to ICU: "We have no guidelines for transferring our patients to ICU. We have too many reasons for ICU admission; of course, the final decision is made by the physician and sometimes depends on the views of the consultant and head of the ICU ward".

Some participants believed that making decisions emotionally, as opposed to logically, plays a critical role in ICU admission. Sometimes acutely ill patients are admitted to ICU in order to satisfy their family. One of the nurse participants said, "In some cases, we admit the patient to ICU simply to satisfy his parents or family, sometimes even end-stage patients with poor prognosis".

One of the physician participants said, "We have controversial aspects in choosing candidate patients for ICU, for example: the patient is in a terminal stage and chances of survival are extremely low, even if the patient is admitted to ICU, but admission occurs anyway, due to moral distress. Now, I want you to know something important about this decision making process, and that is that some of these patients do not have the indications to stay in ICU".

Favoritism

Another important aspect of patient selection for ICU admission was choosing the patient based on personal preference or favoritism because the patient's family was known to physician/nurses or other staff:

"I know that some patients are not selected correctly. It is because of preferring some patients against the scientific indications to transfer to the ICU. I mean, that in our system, sometimes the ill patients that really needed it could not be transferred to ICU, because of some recommendation such as physician or other staff in choosing patients".

One of the physicians said, "Recommendation is an important factor that could be really seen in our hospital. For example, we had a case 2 days ago, I don't know who recommended the patients, but we were informed that the patient was on his way to the hospital. After we prepared the bed, we faced a 91-year-old man who was admitted directly to ICU after being operated on".

This category shows that lack of predefined protocols for ICU admission leads to emotional decision making and favoritism in ICU admission because of familiarity between the patient or patient's family with hospital staff, and finally inappropriate use of ICU beds.

Poor structure for mortality control

According to our participants, there is no explicitly defined policy for decreasing the rate of mortality in hospitals, "I do not recall any mortality or morbidity reports that moved our authorities and made them consider and think about designing a mortality reduction plan".

Mortality rates for hospitals were recorded, but no analysis was performed or reported and no attempts were made to give feedback to hospital managers. A nurse participant said, "You see, we have a mortality rate index but have no analysis system in place".

There was not enough attention paid to mortality analysis. Also, a sufficient and effective system for providing the staff with

follow-up or feedback was lacking, whereas feedback is one of the most important quality indicators of hospital care.

Discussion

Problems in identifying acutely ill patients, problems in clinical management of acutely ill patients, inappropriate use of ICU beds and poor structure for mortality control were our main findings in relation to the current state of acutely ill patients in Iranian hospitals.

Our findings indicated an absence of protocols to govern the diagnosis of acutely ill patients and over-reliance on personal judgment. In some developed countries, track and trigger system were developed to improve diagnosis and care of acutely ill patients.[13] But such a system is lacking in Iran and identification of acutely ill patients is generally based on the professional judgment of clinical staff. Lack of protocols for identifying acutely ill patients leads to overlooked patients, inappropriate care being delivered, and deterioration of patient health in general wards, as has been mentioned in other studies.[1,9,14]

Good communication between physicians and nursing staff is critical for improving patient care.[15,16] Our findings show that lack of open communication may lead to deterioration of acutely ill patients health. In this case, the underlying cultural factors that facilitate or hinder communication between professionals is important.[17] In Iran, the nurse-physician relationship leans towards a system that puts the nurse completely under the control of the physician and does not give them enough opportunity to actually contribute to the decision making process.[18] This has caused a sub-optimal interpersonal relation between these two groups of health care providers and consequently has influenced diagnosis and care.[15,16]

Even if a patient is diagnosed as acutely ill, problems in clinical management still remain. Sometimes the number of acutely ill patients in general wards is very high, and therefore ward staff are unable to handle them. High number of acutely ill patients in a general ward might lead to increased workload of ward staff, which consequently leads to all patients receiving low quality care.[19] When acutely ill patients stay in general wards, they receive the usual care for general ward patients, which is not enough. The fact that acutely ill patients in general wards often receive inappropriate or suboptimal care has been indicated in other studies as well.[1,14,20]

Another important finding, which has also been mentioned by other researchers,[14] is related to the low level of knowledge and work experience among some nursing staff. Although no studies have assessed knowledge of general ward nurses regarding care for acutely ill patients in Iran, studies evaluating the knowledge of triage in emergency wards[21] and CPR guidelines,[22] have indicated the need for nurses to be better educated. Education alongside training and skills-upgrading is more efficient in improving nurses knowledge and the quality of care they provide.[23]

Shortage of nursing staff and equipment were additional problems in clinical management of acutely ill patients. Although a standard and adequate number of nurses will result in better care outcomes and the quality of care will improve, the nurse-to-population ratio varies in different countries.[24,25] The standard ratio of nurses to beds is 1.5 – 2, while this ratio is 0.8 in Iran. There are 110,000 active hospital beds in Iran, and based on the upper rate, Iran needs 220,000 nurses, but the number of nurses is under 100,000.[18]

Beyond the consistent nurse shortage, lack of medical equipment was another factor contributing to suboptimal care of acutely ill patients. Lack of equipment is one of the most important contributive factors for suboptimal care in hospitals.[14]

Our findings also pointed at shortcomings in the CPR process. CPR team are responsible for multiple tasks, have to cover all wards in the hospital and are often distant when required to attend to a patient, making the CPR team ineffective. Prompt attendance of the CPR team is an important predictor of successful resuscitation.[26] CPR success rates in Iranian teaching hospitals are reported low.[26–28]

Our study showed that no guideline or protocol is used for ICU admission, and emotional judgment and favoritism were important factors which affected the patients' ICU admission. This may be related to the Eastern culture which puts a high priority on interpersonal connections in daily life.[29,30] The same culture may also influence the decision making process, making it a more emotional, rather than scientific, matter. In this situation, some decisions can interfere with logical admission of patients for ICUs, which can create an ethical challenge.

Lack of an efficient structure for controlling the rate of mortality and morbidity also affects care given to acutely ill patients. According to the Iranian Ministry of Health and Medical Education guidelines, one of the most important quality control indicators of any hospital is the ratio of deaths to admitted cases. This proportion is divided into 3 parts: desirable, moderate and undesirable.[31] Although these indices are measured in hospitals, there is no evidence of any study comparing the results with developed countries.[32]

In summary, the finding described the state of acutely ill patients and the contextual factors that affect it. Obviously, the context and culture of each health care system is different, and it has a crucial effect on care.[33] Factors such as lack of nurse-physician communication, shortage of nursing staff and equipment, emotional decision making and favoritism affect the management and care of acutely ill patients. The high number of acutely ill patients in general wards, along with lack of guidelines for acutely ill patients identification and clinical management, as well as the limited number of ICU beds lead to many problems in caring for and managing acutely ill patients. These problems and situations highlight the need for changes in the current state in Iran, as in the developed countries, numerous approaches and strategies have been implemented for timely identification of acutely ill patients and staff alerting[13] and caring of these patients.[34]

This study was limited to descriptions and experiences provided by a small group of nurses and physicians in the general teaching hospitals. Clearly, obtaining the views of physicians from different groups, nurses from different wards, and studying different type of hospitals such as private hospitals, the centers outside Tehran might help identify different perspectives regarding acutely ill patients.

In conclusion, our findings show that many shortcomings exist in the care of acutely ill patients in Iran, which range from identifying them to clinical management, as well as structural and contextual problems. Bearing in mind the ever-increasing number of acutely ill patients, it is important to consider quality of care and support for these patients. An immediate plan is necessary to circumvent the challenges and to improve the care for acutely ill patients in Iranian hospitals.

It has been recommended to consider policies and programs to improve the capacity of general wards in diagnosing and managing acutely ill patients, as well as to enhance the competencies of staff through improving their knowledge, skills, and attitude towards acutely ill patients. Establishment of support systems or counseling centers in hospitals, educating and training staff especially nurses about acutely ill patients could possibly help prepare them for acutely ill patients caring. Based on international experience, incorporating critical care systems into hospitals can make health care workers more familiar with caring for acutely ill patients.

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