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**MANAGEMENT CHALLENGES ARISING FROM COVID-19:
REORGANIZATION OF A HEALTHCARE SETTING AND INSIGHTS
FOR PATIENT TRANSFER WORKFLOWS**

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Keywords: Healthcare management; Public health; Patient transfer workflow; Delphi method.

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REORGANIZATION OF A MEDICAL AREA SETTING: AN EVALUATION SYSTEM FOR PATIENT TRANSFER WORKFLOWS

Abstract

The prerequisite for the provision of healthcare services, in a context of healthcare reorganization without increasing resources, is identified in the correct allocation of patients in healthcare organizations. During this period of the COVID-19 pandemic and also in the following period, access to high-intensity care will be subject to several challenges. There is, therefore, the need to promptly recognize the degree of patients complexity. It is essential to define criteria that make possible the identification of the patient correct allocation from the first access to the facility. In general, patient allocation should follow a multidisciplinary approach based both on the framing of needs by health professionals, and on an assessment that can make improvements to the health performance of the organization.

Starting from the identification of three gaps in the literature: (1) low research rate for the study of inter-departmental workflows; (2) low research rate for studying the elements of patient transfer management; (3) and low research rate to analyze the coordination between medical and non-medical professionals, this work aims to identify the critical issues related to the introduction of a new setting in a Central Italy hospital.

To achieve the objective, a qualitative research study has been carried out. The results highlighted two aspects relating to the criticalities of the new structure. These will need to be taken into account to best support patient transfer activities. Analyzing clinical, organizational, managerial, and technical problems in an integrated way will help improve the management efficiency of healthcare organizations as a whole.

Keywords: Healthcare management; Healthcare organization performance; Public health; Patient transfer workflow.

INTRODUCTION

The management of challenges in healthcare organizations is an important emerging construct that is understood in different ways, making its definition problematic (Doheir et al., 2019; Wilden et al., 2018). There is *'no widely accepted conceptualization that portrays the numerous influences that together make a [healthcare organization] more or less complex'* (Safford et al., 2007).

Some non-broad definitions tie the complexity of healthcare only to the patient's clinical conditions (Grembowski et al., 2014; Islam et al., 2016). While, other broad definitions recognize that the management of healthcare organizations is a complex issue influenced by multiple factors including the professionalism degree of experts involved in the organization as well as the presence of elements that cooperate to achieve good performance. Substantially, it is recognized that the complexity of healthcare organizations includes multiple, dynamic components interacting in non-linear, and unpredictable ways (Kuipers et al., 2013). Among all the components, the management of patients in a healthcare facility is the most complex component to manage for an organization (Concin et al., 2021).

Emerging debates such as those related to identification of the challenges to inter-departmental coordination activities that affect patient transfer workflow are increasingly popular and can help in finding current definitions of socio-technical requirements to better support patient transfer workflows. Patient transfers greatly influence the healthcare organization management. Since 2000s, Hendrich et al., (2004) studied that patient transfers took place frequently every day in American healthcare facilities. Nowadays, in light of the changes and major innovations that healthcare organizations have had to implement as a result of the COVID-19 pandemic, many hospitals are operating well beyond 100% of their capacity. Consequently, ensuring efficiency and speed in the transfer of patients between the different departments is essential to achieve good performance within the hospital. It should be noted that the correct, timely, and efficient patient transfer process affects the optimal provision of care appropriate to the patient's peculiarities. From the literature review performed, three literature gaps have been found: (1) low research rate has been devoted to the study of inter-departmental workflows; (2) low research rate has been devoted to the study of management elements of the patient transfers; (3) low research rate has been devoted to analyze the coordination between medical and non-medical professionals. This qualitative research study was conducted at a hospital level to try to respond, albeit partially, to these challenges.

RATIONALE

To examine the challenges to inter-departmental patient transfers, a qualitative research study at an academic hospital in the Center of Italy has been performed. In April 2021, considering the needs arising from COVID-19, the inpatient setting has moved its location to a new healthcare facility. At the same time, an organizational remodeling was carried out which involved several OUs: Internal Medicine, Neurology, and Pneumology. The OUs care setting provides for an intensity-of-care-based organization which in the previous allocation was classified into two levels (medium, and high clinical-care complexity). With the transfer to the new healthcare facility, the model has been fully realized with the creation of level three (low clinical-care complexity).

A few weeks after the transfer, critical issues related to the new low clinical-care setting emerged. Healthcare staff complained about the difficulty in completing routine activities with negative care outcomes which in some cases increased the risk of not being able to guarantee the safety of care.

To address these critical issues, the main aim of this study is to improve the management of the healthcare organization through the coordination of healthcare professionals. The qualitative method is widely used in the healthcare management theme to identify and provide a detailed understanding of complex interactions of technical and organizational issues (Roohi et al., 2020). Thus, in this study, a standard qualitative method was used to identify causes and to hypothesize corrective solutions.

METHODOLOGY

In order to achieve the research aim, the Delphi method was used. The Delphi method is an iterative process to collect and summarize the anonymous judgments of experts using a series of data collection and analysis. This technique is particularly useful when there is incomplete knowledge about a problem or phenomenon (Poortaghi et al., 2020). The Delphi method is based on 4 phases: (1) Participants anonymously express their opinion on the topic; (2) Opinions are collected and summarized in aggregate form in a single document; (3) Participants re-analyze the opinions emerged comparing it with their initial opinion; (4) Phase 1 is repeated (Linstone et al., 2002).

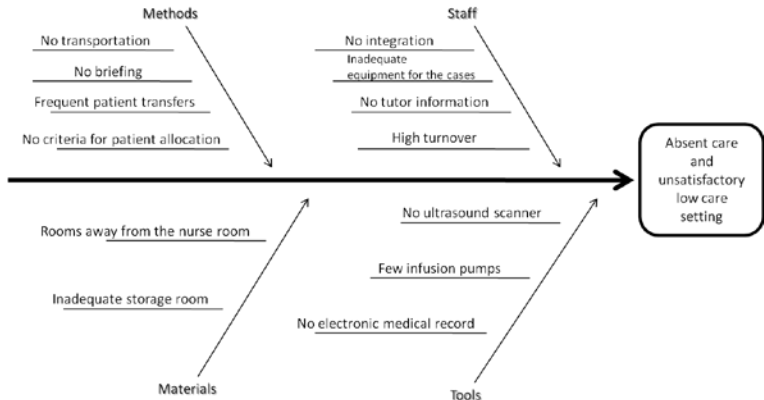
According to the abovementioned phases, professionals working in each of the three departments were enrolled. In total experts were 56 from Internal Medicine (17), Neurology (20), and Pneumology (19). Considering the participations, the sample was considered statistically significant. During the meetings, participants were asked to express what could be

the causes of the critical issues highlighted. Finally, using the Pareto diagram, the list of causes in order of importance was shown.

RESULTS

The issues were clustered and shown in a cause-effect diagram. Thirteen causes were found: 4 related to the “methods”; 2 “materials”; 4 “staff”; and 3 “tools” (Figure 1).

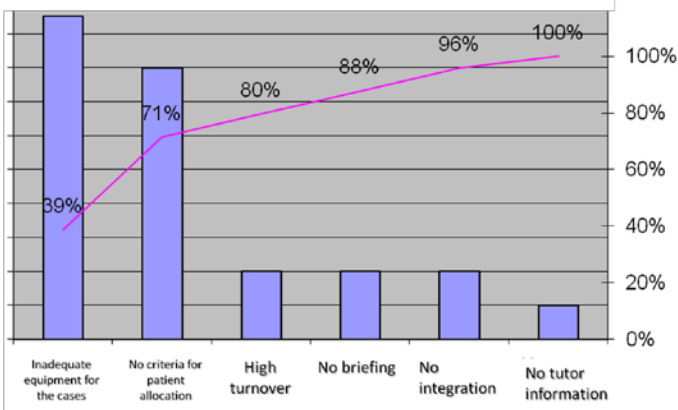
Figure 1. Criticality analysis of "low care" setting



The order of the causes was represented in a Pareto diagram (Figure 2).

The figure highlights that the two causes considered most relevant by the staff represent more than 90% of the reasons. The two elements: “Inadequate equipment for the cases” and “No criteria for patient allocation” are closely correlated as the perceived care commitment is linked to the lack of standardized tools for the evaluation and correct allocation of patients. Similarly, the criteria for the patients transfer to the setting of level 3, are not objectively defined and non-detailed indications have been set out, leaving considerable discretion to the healthcare professionals.

Figure 2. Identification of priority causes



CONCLUSIONS AND FUTURE RESEARCH

These findings highlight the complex and multi-departmental nature of patient transfer workflow. This study also starts to lay the foundations for future research examining issues related to patient transfer workflow such as the important role of the management within hospitals, the quality of the performance, and unintended consequences about the use of criteria to operate a correct allocation. For instance, the first challenge related to the ineffective inter-departmental interactions is impacted by the perceived status differences between the staff members of the various clinical and non-clinical experts. Qualitative method allowed to gain a deeper understanding of the specific details of the ongoing patient transfer process.

In the organizational context analyzed, the patients allocation to the different levels of care took place exclusively on the basis of clinical assessments. In light of the results and as already widely consolidated in the literature, the patients allocation should firstly respond to the patient's care needs and, secondly, consider the integration of different dimensions: clinical and technical (Parast and Golmohammadi, 2019). To address the challenges raised in this paper and better support patient transfer activities, future research will focus on integrating analysis of clinical, organizational, managerial and technical issues.

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