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Study on the Coordination Mechanism of Integrated First Aid Nursing in the Hospital

Shuyu Yang*
Hainan Vocational University of Science and Technology, Haikou 571126, Hainan, China

****Author to whom correspondence should be addressed.***

Abstract: Patients with acute and critical illness develop rapidly, and the time requirement of rescue is very high. The connection between pre-hospital first aid and in-hospital emergency nursing directly determines the success rate of rescue and rehabilitation. There are many problems in the traditional emergency nursing mode, such as the separation in the front yard, the lag of information transmission, the loose flow connection and the lack of cooperation. This paper briefly introduces the concept and practical value of integrated first aid nursing in pre-hospital and in-hospital, combs out the prominent problems in the current coordinated operation of first aid nursing, clarifies the basic principles of integrated and coordinated construction, and sets up a systematic and coordinated operation mechanism from the aspects of information exchange, process optimization and team cultivation, to clear up barriers in each link of first aid nursing, reduce rescue and treatment time, comprehensively improve the overall efficiency of first aid nursing services, and provide reference basis for the standardized and coordinated development of first aid nursing in medical institutions.

Keywords: Pre-hospital first aid; In-hospital first aid; First-aid nursing; Cooperative mechanism

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1. Introduction

First aid nursing is the core of the medical and health system to protect the safety of the masses. It covers a series of continuous work, such as on-the-spot emergency treatment, en route transfer monitoring, in-hospital emergency rescue, follow-up symptomatic treatment, etc. In the course of emergency treatment, accidental injury treatment and critical illness treatment, it is difficult to achieve the ideal treatment effect in a single link of nursing service. At present, there are still some common problems in most medical institutions, such as poor communication, a random handover process, scattered resource allocation and a lack of personnel cooperation. Therefore, it is of great practical value to study the coordination mechanism of pre-hospital and in-hospital emergency nursing for improving the emergency nursing system, enhancing the comprehensive emergency treatment ability, and ensuring the safety of patients.

2. Summary of integrated first aid nursing in the hospital

2.1. Core connotation and operational characteristics of integrated first aid nursing

The integrative first aid nursing in a hospital is a kind of modern first aid nursing service mode, which integrates all the

nursing links, such as first aid, transfer monitoring, in-hospital reception and emergency treatment. Its core connotation lies in breaking the independent operation barriers between pre-hospital first aid and in-hospital first aid, unifying nursing service standards, handover norms and treatment concepts, realizing the whole process of first aid nursing coherent, seamless connection and coordinated advancement, changing the traditional operation pattern of segmented and fragmented first aid nursing, and building an integrated first aid nursing service system.

Integrative first aid nursing has four distinct operating characteristics: timeliness, coherence, integrity and coordination. It focuses on rapid treatment, smooth handover and efficient linkage. Different from the routine nursing service, this model pays more attention to the coordination and connection among posts and links, and emphasizes the synchronization of information, process and disposal. At the same time, we should pay attention to the integrality of on-the-spot treatment, en route monitoring and in-hospital continuous treatment, and implement nursing work step by step so as to comprehensively guarantee the orderly, efficient and stable development of first-aid nursing services.

2.2. Responsibilities and service scope of pre-hospital and in-hospital first-aid nursing

Pre-hospital first-aid nursing shall be mainly responsible for the preliminary assessment of accidents and emergencies, judgment of illness, basic life support, emergency treatment of trauma, pain management and control, airway maintenance, hemostasis and dressing and other emergency operations, as well as the monitoring of illness, monitoring of signs, emergency intervention and basic nursing and pacification on the way of patient transit. The main service scope covers the early emergency treatment of various emergencies, accidental injuries and emergency and critical situations outside the hospital, and the core duties are to quickly stabilize the basic vital signs of patients, avoid the continuous deterioration of the condition, and strive for valuable treatment time for the follow-up rescue in the hospital.

In-hospital first-aid nursing shall focus on the rapid reception of patients after admission, review of patients' conditions, opening of green channels, cooperation in special examinations, execution of rescue operations, symptomatic nursing intervention, coordination and docking of multiple departments and other work, and shall undertake various types of patients transferred before admission, and rapidly connect with and deepen the treatment process. The scope of services shall include rapid triage for emergency treatment, rescue cooperation for critically ill patients, prevention and control of complications, dynamic monitoring of illness conditions, preoperative preparation, handover of follow-up care, etc., focus on improving systematic rescue and treatment and nursing, stabilising patients' conditions, linking up follow-up specialist treatment, forming a complete first aid work chain which is echoed from top to bottom and linked with pre-hospital care [1].

2.3. Practical value of establishing an integrated emergency nursing coordination mechanism

Establishing a coordinated pre-hospital and intra-hospital integrated emergency nursing mechanism can effectively shorten the overall time of patients from onset to hospitalization, reduce delays and omissions in intermediate handover links, greatly improve the success rate of emergency rescue for critical patients, and effectively reduce the risk of disability, mortality and poor prognosis. Through unified collaborative work standards, all handover processes shall be standardized, errors and omissions in nursing work shall be reduced, and the overall standardization and safety of first-aid nursing shall be continuously improved, to effectively provide solid nursing guarantee for the life and health of patients and improve the quality of clinical first-aid work.

The integrated coordination mechanism can optimize the reasonable allocation of medical first aid resources, coordinate the allocation of various resources such as pre-hospital first-aid personnel, in-hospital nurses, first-aid equipment, drugs and materials, etc., avoid problems such as resource dispersion and waste and repeated allocation, and improve the utilization efficiency of first-aid resources. At the same time, they shall be able to straighten out the work duties of all posts, strengthen the tacit understanding between nursing and medical care, improve the situation of chaotic connection and loose cooperation of traditional first aid work, promote the steady development of first aid nursing work towards standardization, standardization, systematization and integration, and comprehensively enhance the overall emergency rescue comprehensive strength of medical institutions.

3. Main problems existing in the cooperation of pre-hospital and in-hospital emergency nursing

3.1. The channel of first aid information transmission and sharing is not smooth

At present, most medical institutions lack a unified first aid information exchange platform, and the key information, such as patients' conditions, physical signs, disposal measures and previous medical history, collected on the spot for pre-hospital emergency treatment cannot be transmitted to the emergency department in the hospital rapidly, completely and synchronously. Most of them rely on oral reporting and simple telephone communication to complete the handover of information. The content of information transmission is scattered and vague, which is prone to information omission, content deviation, delivery delay, etc. As a result, the nursing staff in the hospital cannot grasp the true conditions of patients in advance and cannot do a good job in preparation for emergency treatment in advance.

The information sharing channel is single and blocked, and lacks a systematic and digital information transmission carrier. It is difficult to update the dynamic changes of illness, real-time vital signs and nursing intervention in transit. It is difficult to predict the severity of the patient in advance, to reserve first aid materials in advance, to open a rescue channel, and to allocate corresponding nursing personnel. Poor information exchange has become the primary obstacle to the high efficiency of pre-hospital first aid collaboration, seriously affecting the overall efficiency of first aid.

3.2. Lack of standardization in the connection process of emergency nursing

At present, there is no uniform standard procedure for the handover of pre-hospital emergency care, and the handover content, sequence and key points are not clearly defined. The handover between the pre-hospital nursing staff and the in-hospital reception staff is simple and general, with only a brief description of the general condition of the patient, ignoring the core contents such as key disposal details, medication, potential risks, special precautions, etc., the handover process is only a formality, and various potential problems such as disconnection of nursing work and disconnection of rescue and treatment are extremely easy to occur.

All medical institutions have not formed a unified standardized connection management system, and there is no unified process basis for the connection of pre-hospital transfer and handover, hospitalization and triage, and rescue. Different nursing staff have different handover habits, and the overall connection order is chaotic. In some critical patients, the handover process is cumbersome and repeated inquiry and check, wasting valuable treatment time, and it is easy to have vague division of responsibilities, work prevarication and other phenomena. Nonstandard connection process can directly reduce the operating efficiency of first aid and increase the risk of nursing work, which is not conducive to the steady advance of the integrated first aid nursing mode.

3.3. Lack of cooperation, awareness and professional competence of medical personnel

Most of the pre-hospital nurses only pay attention to on-the-spot treatment and safe transfer, but neglect to communicate with the hospital in advance and synchronize the disease information. The nursing staff in the hospital lacked the work philosophy of active connection and advanced judgment, and waited passively for the patients to be admitted before carrying out the relevant nursing work [2]. The two sides lacked integrated and collaborative first aid thinking, and lacked initiative and linkage in overall cooperation, so it was difficult to form an efficient and collaborative pattern.

Some nurses have uneven professional abilities in comprehensive first aid. They are not familiar with the key points of cooperation and the standard of joint first aid. At the same time, there is a lack of special training on systematic and integrated first aid collaboration, and the comprehensive knowledge of first aid, emergency response ability and cross-post collaboration ability of personnel needs to be improved, which makes it difficult to meet the requirements for high-standard integrated first aid nursing collaboration and restricts the implementation of the overall collaboration mechanism.

4. Basic principles of coordinated construction of pre-hospital and in-hospital integrated first aid nursing

4.1. Fast and efficient closed-loop convergence principle

The principle of fast and efficient closed-loop connection is the primary core principle of the integrated first aid collaborative work, and always focuses on the core objectives of fast treatment, seamless connection, and race against time, to reduce the time consumption in all handover links and clear barriers to the operation of the whole first-aid process. Inefficient issues such as pre-hospital treatment, en route monitoring, handover and emergency rescue shall be eliminated, and the patient's treatment shall be completed as soon as possible to firmly grasp the golden treatment time.

Insisting on the concept of closed-loop connection, we need to build a closed-loop first-aid nursing system through the whole process, from the rescue outside the hospital, to the smooth transfer and handover, to the hospital treatment and rehabilitation, to maintain the consistency and unity of nursing services throughout the whole process, leaving no management gaps and service breakpoints. We shall, by orienting towards the goal of efficient treatment, optimize various connection processes, simplify redundant links, enhance the overall circulation speed, ensure continuous nursing services, and comprehensively guarantee the efficient, smooth and orderly promotion of first-aid work.

4.2. Principle of unified and standardized coordination

The principle of unified, standardized, overall planning and cooperation requires the unification of the standards for first-aid nursing services, handover management system, operation specifications, communication caliber and work requirements, to realize the standardization and homogeneity of nursing work between the two sides and avoid the collaboration obstacles caused by different standards and processes. We shall make overall planning and coordination of the nursing force before the hospital, all departments and posts in the hospital, unify work deployment and management requirements, achieve clear division of labor, consistent pace and unified management, and enhance overall collaboration standardization.

It is necessary to follow the concept of overall planning and cooperation, integrate various resources such as first-aid manpower, equipment, medicine, site, etc., carry out unified dispatch, reasonable allocation and comprehensive utilization, and break the decentralized management mode of each department acting on its own. Take the overall situation of emergency treatment as the core, plan the contents of all nursing work as a whole, coordinate and promote the connection and cooperation of all links in a unified manner, standardize the requirements for various operations and handover, and promote the standardized, unified and intensive coordinated operation of pre-hospital emergency treatment nursing work [3].

4.3. Principle of division of labor, complementarity, linkage and treatment

The principle of work division, complementarity, linkage and treatment shall clearly define the core responsibilities of pre-hospital and in-hospital nursing posts, and clearly define the scope of work, work focus and post responsibilities of both parties, to achieve the goal of performing their respective duties, fulfilling their respective responsibilities and clarifying the division of labor. The pre-hospital work shall focus on the early emergency response and safety transfer, and the hospital shall focus on deepening the rescue and systematic nursing, shall not shirk responsibilities or overlap with each other, and shall consolidate their respective basic work by relying on the division of work among different posts, and form a good work pattern with complementary advantages and mutual support.

Based on a clear division of labor, strengthen two-way linkage, close cooperation, and mutual help and complementarity. Dock with the hospital in advance to notify the patient of his/her illness, make preparations for receiving patients, plan and resource preparation in advance, two-way real-time communication, dynamic linkage, and close cooperation. We shall, by focusing on the overall treatment objectives of patients, cooperate, support each other and make concerted efforts to form a first aid and nursing cooperation mode featuring pre-hospital leading judgment, in-hospital continuity guarantee and two-way close linkage and comprehensively improve the comprehensive effect of joint treatment.

5. Perfecting and constructing the coordinated mechanism of pre-hospital and in-hospital integrated emergency nursing

5.1. Build an interconnected first-aid information sharing and communication mechanism

Build an integrated digital first aid information sharing platform, open the information transmission channel in pre-hospital hospitals, and realize real-time online synchronous transmission of patients' basic information, condition assessment, vital signs, on-site disposal measures, medication records and medical history data. The pre-hospital nurses can upload the information about the changes and monitoring of the patients' conditions at any time, and the in-hospital nurses can check and judge the patients' conditions online and in advance, and prepare the corresponding first-aid plan, materials, drugs and nursing manpower in advance, to solve the problems of asymmetric information and delayed delivery from the source.

Establish a normalized two-way communication and liaison mechanism, and standardize the communication system for real-time notification during pre-hospital transit, real-time communication of emergencies, and comprehensive verification of handover information. Improve the management of information handover ledgers, unify the contents and standards of information submission, and eliminate the omissions and deviations caused by oral and random handover. We shall, by relying on the combination of online information platform and offline two-way communication, build an all-directional, all-weather and uninterrupted information exchange system, ensure the timely, accurate and complete delivery of first-aid information and build a solid foundation for collaborative work information.

5.2. Optimize the connection process of standardized pre-hospital and in-hospital first-aid nursing

We shall formulate unified and perfect rules and standard processes for handover of pre-hospital first-aid nursing, clarify handover items, handover contents, handover sequence, handover responsibilities and handover requirements, covering all core contents such as disease information, disposal operation, risk hazards, nursing priorities and special attention matters. Unify the hierarchical handover process for critical patients and ordinary emergency patients, simplify unnecessary and cumbersome links, optimize the handover order, make all connections work have rules to follow and bases to be relied on, and improve the standardization and smoothness of handover.

Establish a seamless connection process system by grade and category, and develop a special connection process for different diseases such as trauma, cardiovascular and cerebrovascular emergencies, sudden coma and multiple injuries, and implement handover, triage, treatment and nursing by category [4]. Improve the green channel direct connection process for patients with critical illnesses, realize the pre-hospital pre-notification, in-hospital one-button opening of channels, priority in receiving patients and priority in handling, continuously compress the waiting time for handover, and open a quick channel for the whole first-aid nursing process to achieve seamless and smooth docking in the pre-hospital.

5.3. Strengthen the construction of coordination ability and comprehensive quality of first-aid nursing talents

Establish a normalized integrated special first-aid nursing training system, regularly organize pre-hospital and in-hospital nurses to carry out systematic training contents such as coordination, joint first-aid, disease prediction, and standardized handover, and unify emergency operation standards, coordination requirements and communication and docking specifications. Emphasis shall be placed on strengthening the nurses' overall first aid thinking and the concept of overall cooperation, changing the inherent concept of independent work, and comprehensively enhancing the cross-post coordination ability and comprehensive professional quality of first aid.

Regular in-hospital joint first aid drills and simulated training on coordinated disposal shall be carried out to develop nurses' practical ability of two-way cooperation, rapid docking and joint disposal, and enhance the tacit understanding among nurses at different posts. Improve the post assessment and evaluation mechanism, including the synergistic effect, standardized handover quality and linkage work performance into the daily assessment, and guide nurses to actively cooperate and actively link, to comprehensively build a contingent of first-aid nursing talents with strong professional

ability, excellent awareness of synergy and high comprehensive quality, and provide stable human resources support for the long-term operation of the synergistic mechanism.

6. Conclusion

Integration of pre-hospital and in-hospital emergency nursing coordination mechanisms is the key to improving the efficiency of emergency treatment and improving the modern emergency nursing system. At present, there are still many problems in pre-hospital emergency nursing, such as poor information communication, an irregular connection process and weak coordination of personnel. To establish and improve the coordination mechanism, it is necessary to strictly follow the basic principles of efficient connection, standardization and unification, and division of labor and linkage, open up information sharing channels, optimize the standardized connection process, strengthen the comprehensive ability of nursing talents to cooperate, and comprehensively promote the in-depth integration and efficient linkage of pre-hospital and in-hospital first-aid nursing.

Disclosure statement

The author declares no conflict of interest.

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