



ROLES OF MEDICAL ADMINISTRATIVE, NURSING AND LABORATORY STAFF AND OPERATING ROOM TECHNICIAN IN FACILITATING MANAGEMENT OF CRITICALLY ILL PATIENTS

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Abstract:

The primary focus of medical management for critically ill patients is mostly on treating the underlying illness, such as sepsis or respiratory failure. Nevertheless, over the past ten years, the significance of starting early preventive treatment for problems resulting from care in the intensive care unit has grown more and more evident. Enhancing communication among healthcare management, nursing, clinical laboratory, and OR technicians in complex and diverse settings is an optimal intervention for a hybrid effectiveness-implementation trial. The importance of communication has been well-established, but the main challenge lies in efficiently implementing interventions that foster effective care for critically ill patients.

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Introduction:

The prevalence of critical illness is rising as a result of the aging demographic and improvements in the efficacy and accessibility of critical care. Critically ill patients and their families experience a significant amount of symptoms related to depression, anxiety, and post-traumatic stress. This is partly owing to the fragmented medical care they get, which is often not well-matched with the patients' objectives [1]. Fragmented care can occur when patients and their families go through multiple changes in healthcare providers and settings, starting from the ICU and continuing to acute care. This may involve returning to the ICU or transitioning to inpatient rehabilitation, skilled nursing facilities, or home [2]. During these transitions, patients and families frequently have challenges in understanding and managing the range of care objectives in order to align their own goals with appropriate treatments, effectively communicate their goals to healthcare providers, and make complex medical choices. Regrettably, inadequate communication exacerbates an already demanding situation and can result in intense and undesired medical attention [3]. Widespread instances of ineffective communication have been recorded in various countries, such as the United States and France, and the disparities between these nations have been elucidated.

The intricate nature of healthcare systems and the provision of services, the uncertain and unpredictable aspects of healthcare, and the occupational specialization and interdependence among healthcare professionals and systems provide challenges in accurately assessing quality. An obstacle in utilizing measures in healthcare is the inconsistency in assigning responsibility due to complex cognitive processes, discretionary decision-making, problem-solving, and experiential knowledge. Another issue in measuring is determining if a near miss could have caused injury or if an adverse event was a rare anomaly or likely to happen again [4].

Nurses, clinical laboratory personnel, and operating theater technicians, together with healthcare administrators, encounter a range of obstacles on a regular basis in the critical care setting. These issues frequently occur within the clinical scope of practice for nurses. However, nurses are also expected to continuously address national and international trends and ongoing advancements in science and medicine. Therefore, in order to maintain their professional growth, critical care nurses nowadays must consistently enhance and refresh their clinical and theoretical expertise. Nurses operate in a very intricate clinical

setting, dealing with patients who have high degrees of reliance and acuity. Furthermore, they work within a complicated macroenvironment that is continually evolving and progressing [5].

In this dynamic context, it is crucial for nurses to obtain assistance from their clinical nurse managers (CNM). Robust executive leadership and assistance are considered essential during periods of transformation. However, the research lacks extensive analysis of the specific components that make up management assistance. A recent study discovered that it is crucial for staff nurses to witness the manager demonstrating leadership abilities in action. Leadership qualities can be demonstrated in several ways, with role modeling being especially impactful. A further study discovered that the act of witnessing a highly capable role model contributed to the enhancement of individuals' professional and personal skills. Moreover, the participants discovered that when their manager provided help for their personal matters, it resulted in an enhancement of the staff's competence and confidence [6].

Review:

In the field of healthcare, the term continuous quality improvement (CQI) is sometimes used synonymously with total quality management (TQM). Continuous Quality Improvement (CQI) has been utilized as a method to enhance clinical practice. It operates on the premise that there is potential for improvement in every procedure and on every occasion. Most QA programs in hospitals primarily target concerns highlighted by regulatory or accreditation bodies. These concerns typically involve verifying documents, evaluating the performance of oversight committees, and analyzing credentialing procedures. Various alternative ways have been suggested to enhance therapeutic practice. Horn and colleagues defined clinical practice improvement (CPI) as a multidimensional outcomes methodology that may be directly applied to the clinical management of individual patients [7]. The Clinical Practice Improvement (CPI) strategy, spearheaded by clinicians, aims to achieve a thorough comprehension of the intricacies of healthcare delivery. This technique involves assembling a team, establishing a clear objective, gathering data, evaluating the findings, and subsequently implementing changes in practice based on those findings. Research has shown that the successful implementation of change relies on the crucial factors of management and physician commitment and involvement. Among other quality

improvement initiatives, there has been a specific focus on the need of management having confidence in the project, effectively communicating its objective, and empowering the team [8].

Intrahospital transfer (IHT) is often necessary for severely ill patients who need diagnostic or therapeutic operations that cannot be carried out in the intensive care unit (ICU). During transportation, patients face a heightened susceptibility to problems or bad outcomes. Hence, the choice to transport patients is determined by weighing the possible advantages for patients against the likelihood of critical incidents occurring during transportation [9]. Prior research on IHT has documented a range of complication rates, varying from 5.9% to 66%. These adverse events can range from modest occurrences, such as the displacement of a peripheral intravenous line or nasogastric tube, to more severe incidents like cardiac arrest or death. One study discovered that, on average, one patient experienced a serious cardiovascular problem or died each month undergoing intermittent hypoxic training (IHT) in a 5-bed intensive care unit (ICU) at a tertiary care hospital in Glasgow. This occurred over a period of 5 months, during which there were a total of 55 admissions. Physiological alterations, such as changes in heart rate (HR), blood pressure (BP), respiratory rate (RR), and oxygen saturation (SpO₂), are frequently seen in 10% to 68% of patients during transportation [10]. Equipment malfunction is the primary cause of adverse outcomes in 11%–34% of all transport incidents. Understanding the possible difficulties related to IHT is crucial for determining the most secure method of transporting patients, hence lowering the risk of death and illness [10].

The evolution of operating room (OR) nursing distinguishes it from other areas of practice within the nursing profession. OR nursing, one of the oldest specialties in nursing practice, has a strong connection to the advancement of technology. The earliest OR nurses were established in the late 1800s to address the need for specific rooms for surgical procedures. Their primary responsibility was to care for the tools and the theater. In 1889, at Johns Hopkins University, the field of nursing known as Operating Room (OR) nursing was officially recognized as a specialized area of nursing practice. In the 1960s, the importance of the patient in their function was officially recognized. The advancement of surgical procedures has led to an increased ability to treat disease and illness. As a result, operating room

nurses have had to adapt their practices to accommodate new instruments, anesthesia techniques, and surgical procedures, and consider how these advancements affect their patients. An adverse repercussion of OR nursing is the criticism it receives, both outside and internally within the nursing field, for being perceived as a 'technical' rather than a 'nursing' endeavor [11].

The link between nurses and patients is a fundamental relationship that exists in the operating room. The primary objective of the connection is to guarantee the secure transportation of patients while they are in the operating room suite (ORS). For numerous patients, the experience of entering the technologically advanced environment of the operating room is often accompanied by sensations of fear and worry. The patients, who are both physically and emotionally vulnerable, depend greatly on the nurses' capacity to combine the technical aspects of their profession with the compassionate elements. The body of literature pertaining to both technology and caring is vast and intricate. Technology is defined as the interconnectedness between equipment, science, culture, and beliefs that are focused on maximizing efficiency. It can also be comprehended in terms of cognition, expertise, and methodology. Sandelowski contends that technology, encompassing both physical objects and methods of operation, is inherently embedded in the formation and comprehension of nursing practices. Similarly, the concept of caring is so closely connected to nursing that it is almost interchangeable. Efforts to encapsulate the creative and human essence of nursing have proven challenging when employed as the distinguishing attribute of the profession. Several authors have recognized various caring attributes exhibited by operating room (OR) nurses. The aforementioned attributes have encompassed qualities such as empathy, benevolence, tenderness, amiability, joviality, acknowledgement of the patient's unique requirements, and a disposition that implies a willingness to go above and beyond [12].

Nurses integrate the technological and compassionate sides of their profession to deliver a gentle and empathetic approach that helps patients accept medical technology. By utilizing this human channel, a direct physical connection can be established between the patient and the machine. This observation is relevant to the Operating Room Setting (ORS), because the technological imperative that governs the OR seems to work most effectively when combined with a compassionate human approach. The act of separating the

technological and caring parts of nursing in the operating room artificially disentangles complex and intimately interconnected actions that take place in the daily work of operating room nurses [13].

Transporting patients to and from the Intensive Care Unit (ICU) carries a higher likelihood of problems or adverse outcomes. However, such transportation is essential for some therapeutic and diagnostic procedures. The biggest group of patients getting IHT in this study consisted of individuals with TBI, accounting for 50.0%. They were followed by patients with neurological illness, making up 17.5% of the total. A study has found that 32% of individuals with traumatic brain injury (TBI) had a similar incidence. Our investigation found that the patient's diagnosis did not have an impact on the occurrence of adverse events, which is consistent with previous research [14].

During intra-hospital transfers (IHT), patients are always accompanied by an anesthetic resident and a qualified operation theater technician from our institution. The resident collaborated with the ICU staff, the receiving workers, and the patient's relatives. He observes and assesses the essential physiological indicators of the patients and takes action as necessary. Another study discovered that when a competent emergency physician accompanied the patient during IHT, there were fewer instances of adverse events compared to when either a less experienced or more experienced emergency medicine resident accompanied the patient [15]. A separate study revealed that a rookie anesthesiologist experienced a decreased frequency of negative occurrences compared to junior physicians in other fields. The study [16] found no notable disparity in the occurrence of critical events between senior and junior residents.

Conclusion:

Incidents of catastrophic events frequently occur during Intensive Hemodynamic Therapy (IHT) in patients who are critically unwell in the Intensive Care Unit (ICU). Nevertheless, it is crucial to transfer intensive care unit (ICU) patients for either diagnostic or therapeutic operations. It is necessary to adhere to standard criteria for the professionals that accompany and monitor during IHT. To further reduce the risk of critical events and large adverse events, it is important to implement pretransport checklists and ensure rapid communication with the professionals at the destination. In order to enhance the management of critically sick patients, it may be beneficial to explore the implementation of small surgical procedures in the ICU as well as

improved bedside diagnostic methods. This would involve the collaboration and involvement of several healthcare professionals, including nurses, OR technicians, laboratory teams, and healthcare administrators.

The precise surveillance of glucose levels in the perioperative setting has gained significant significance in recent years. Due to rising expenses, longer processing times, and larger sample sizes, the utilization of central laboratory instruments for glucose measurement has been partially replaced by point-of-care (POC) glucose devices.

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