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Review

Adverse Patient Outcomes: Nurses at the Crossroad

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Abstract

Patients are always at the receiving end of all medical/nursing care, their safety is a rising concern in health care today. People enter the healthcare system trusting that the system will not harm them. However, increasing evidence suggests that this may not always be true. There is an increase in the prevalence of adverse patients' outcomes which is associated to several factors. Though the goal of every nursing care is to see that patients come out of the disease process without adverse effect but there are cases where this goal is not achieved due to factors ranging from nurses' malpractices and negligence, lack of team work, long shifts, to understaffing or unfavorable working environment. Most of the causes have been found to be nursing based or health organization based. Attempt is made in this paper to review adverse patient's outcomes sensitive to nursing care, the causes as well as the roles of nurses to prevent it. Nurses, as the only healthcare providers who are with patients 24 hours a day, 7 days a week, can play important roles in preventing adverse patient outcomes such as patient falls, pressure ulcers, nosocomial infections, and medication error. By being accountable for care provided, quality outcome can be enhanced.

Keywords: Adverse patients' outcome, Nursing care, Nurses, Cross roads.

INTRODUCTION

Adverse patients' outcome can be defined as unintended injuries or complications that are caused by health care management, rather than by the patient's underlying disease and that lead to disability at the time of discharge, prolonged hospital stay, pressure ulcers, nosocomial infections, preventable readmission and mortality (Baker, 2014). Nursing care generally refers to procedures which are solely or primarily aimed at providing support to patients or alleviating a person's pain, symptoms or distress.

Though the goal of every nursing care is to see that patients come out of the disease process without adverse effect but there are cases where this goal is not achieved due to factors ranging from nurses' malpractices and negligence, lack of team work, long shifts, to understaffing or unfavorable working environment. Patients are always at the receiving end of all medical/ nursing care, their safety is a rising concern in health care today. People enter the healthcare system trusting that the system will not harm them.

However, increasing evidence suggests that this may not always be true. There is an increase in the prevalence of adverse patients' outcomes sensitive to nursing care (Cummings, 2013).

As a result of restructuring and increasing attention to cost, many hospitals have chosen to decrease their overall labor pool including the number of full time nursing positions (Cummings, 2013), leading to documented significant negative effect to nurses' health, wellbeing and ability to provide quality nursing care. Increased care giver work load threaten the quality of patient care and safety (Cummings, 2013). There are significant relationships between nursing education levels and patient outcomes; nurse staffing and patient outcomes; nursing workload and patient outcomes; nurses' work environment and patient outcomes; and between the skill mix of nurses providing care and patient outcomes. The provision of quality nursing care can avoid many adverse patient outcomes, such as hospital acquired infections, pressure ulcers, increased length of

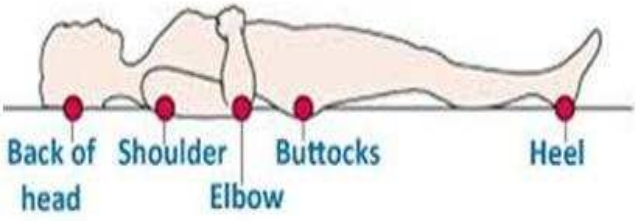

Figure 1: Figure showing areas where ulcer can develop

stay, preventable readmission etc.

Adverse patient outcomes

Pressure ulcer

This is also known as decubitus ulcers or bedsores. They are localized injuries to the skin and or underlying tissue that usually occur over a bony prominence as a result of pressure or pressure in combination with friction (Fry, 2008). Pressure ulcers develop when capillaries supplying the skin and subcutaneous tissues are compressed enough to impede perfusion, leading ultimately to tissue necrosis. Florence Nightingale in 1859 wrote, “If he has a bedsore, it’s generally not the fault of the disease, but of the nursing”. Others view pressure ulcers as a “visible mark of caregiver sin”, associated with poor or nonexistent nursing care. Many clinicians believe that pressure ulcer development is not simply the fault of the nursing care, but rather a failure of the entire heath care system; hence, a breakdown in the cooperation and skill of the entire health care team (nurses, physicians, physical therapists, dietitians, etc.). The incidence rates of pressure ulcers vary greatly with the health care settings. The National Pressure Ulcer Advisory Panel (NPUAP) says the incidence ranges from 0.4% to 38% in hospitals, from 2.2% to 23.9% in skilled nursing facilities, and from 0% to 17% for home health agencies. People most at risk of bedsores are those with medical condition that limits their ability to change positions, requires them to use a wheelchair or confines them to a bed for a long time. Bedsores can develop quickly and are often difficult to treat. The figure above shows areas where ulcer can develop

Preventive measures/nurses’ roles

Preventing pressure ulcers has been a nursing concern for many years**.** Nurses have a very important role to play in preventing pressure ulcer. It has been estimated that the cost of treating pressure ulcers is 2.5 times the cost of preventing them. Thus, preventing pressure ulcers should be the goal of all nurses. The key to preventing pressure ulcers is to accurately identify individuals at risk quickly that is, risk assessment, so that preventive measures may be implemented. Research also suggests that when the health care providers are functioning as a team, the incidence rates of pressure ulcers can decrease. Thus, prevention of pressure ulcers should be considered patients’ safety goal. Other preventive measures include; constant changing of patient’s bed linen, taking good care of the skin, maintaining good nutrition, patient and staff education, two hour patient’s repositioning and heel elevation off mattress by using a pillow or heel lift boot

Hospital acquired infections

Hospital acquired infections (HAIs) is a major safety concern for both health care providers and the patients. Considering morbidity, mortality, increased length of stay and the cost, efforts should be made to make the hospitals as safe as possible by preventing such infections. HAI is also known as nosocomial infections, it is an infection whose development is favored by a hospital environment, such as one acquired by a patient during a hospital visit or one developing among hospital staffs. In 2010, the center for disease control and prevention (CDC) and the National Healthcare Safety Network (NHSN) concluded by saying hospital acquired infections are localized or systemic condition resulting from an infectious agent or its toxin (Horan and Dudeck, 2010). These infections may not be evident or incubating at the time of admission to the care setting. They are often caused by breaches of infection control practices and procedures, unclean and non-sterile environmental surfaces and poor hygienic practices. Since health care staffs move from patient to patient, the staffs themselves serve as a means for spreading pathogens. In 2012, the CDC reported 417,946 hospital acquired infections and 99,000 fatalities in the US among critically ill adults and children in an intensive care unit (ICU). The major hospital acquired infections include catheter-associated urinary tract infections (40%), ventilator associated pneumonia (25%), catheter-associated bloodstream infections (10%), and surgical site infections (Klevens, 2013). Hospital-acquired infections can be transmitted by

direct contact, inhalations of aerosolized droplets or air-borne pathogens, and/or vehicle-based inoculation.

Preventive measures/nurses' roles

There are numerous preventive measures ranging from the obvious to high-tech. Measures of infection control include identifying patients at risk of nosocomial infections and identifying patient that requires isolation. Standard (universal) precautions are recommended for all nurses and other health care personnel which consist of hand hygiene, perhaps the most effective method for infection control which can be done with 60-95% alcohol-based hand rub or soap (WHO, 2014). Hand hygiene is recommended before clean/ aseptic procedures, before and after touching a patient or patient surroundings, between attending different patients and after body fluid exposure (Boyce, 2012). Other preventive measures include;

I. Various sterilization measures are helpful ranging from simple acts like sterilizing ventilators to complete sterilization of medical equipment and then full scale air filtering systems in the hospital.

II. Providing a clean sanitary environment in the health care facilities.

III. Changing gloves every time health practitioners move from one patient to another

IV. Hospital staff education

V. Daily care of the urinary catheter

VI. Barrier nursing

VII. Proper ward arrangement

VIII. Discouragement of ill visitors

Fall and fall related injuries

Fall and fall injuries in the hospitals are the most frequently reported adverse event among adults in the inpatient setting. They are high risk and high cost problem. An estimated 30% of hospital based falls result in serious injury (Oliver, 2010). A fall is defined as unintentionally coming to rest on the floor or other lower level, but not as a result of syncope or overwhelming external force (Baker, 2014). Falls in the hospital can turn a short visit into a long stay. Factors that can increase the risk of fall include nurses' shortages, early unassisted ambulation, and poor ward arrangement. (Currie, 2008). Falls can be categorized as anticipated, accidental and physiological (Morse, 2007).

Regardless of the type of fall, injuries can occur in all types of falls. Falls continue to be an adverse event with approximately 3-20% of inpatients falling at least once during their hospitalization, of those, 6 to 44% experience some forms of injury, e.g. fracture, subdural hematomas, or excessive bleeding that may lead to death (Oliver, 2010).

Preventive measures/nurses' roles

Many interventions to prevent falls and fall related injuries have been tested, however they require multidisciplinary support for program adoption and reliable implementation for specific at-risk and vulnerable populations such as the frail elderly and those at risk for injury (Oliver, 2010). The American Nurses Association (ANA) has asserted nurses' responsibilities to assess patients' risk for falls and injury, design and implement risk reduction care plans and evaluate effectiveness of clinical fall prevention programs. Modifications and improvement to environmental conditions that reduce the risk of falls may include the following; proper lighting, ensuring proper flooring**,** handrails to assist with ambulation**,** provision of bed side rails and assisting patients in applying them**,** patients' education**,** staff education**,** footwear advice**,** scheduled and supervised toileting and medication review

Increased length of hospital stay

Decreased nursing staff, increase workload and unstable nursing unit environment are linked to inability to detect complications early, patient acquiring nosocomial infections and pressure ulcers, all tend to increase patient length of stay in the hospital. High registered nurses to patient ratio reduce length of hospital stay and intensive care unit stay as well as adverse events. Adequate qualified staffing provides better patient monitoring and surveillance as nurses are prepared to detect and treat complications (Rafferty, 2010).

Preventable re-admission

So many patients are re-admitted to the ward due to nurses' faults such as lack of proper discharge planning, lack of proper education on discharge, lack of proper documentation and lots of negligence in nurses' duties.

Causes of adverse patient outcomes

Medical error

Medical errors occur when a health care provider chooses an inappropriate method of care or improperly executes an appropriate method of care (Zhang, 2012). It is often described as human error in health care. Medical errors are associated with inexperienced physicians and nurses, improper documentation, illegible handwriting, inadequate nurse to patient ratios. Patient actions may also contribute significantly to medical errors. Medical errors increase expenses in additional patient care and in litigation (Rodney, 2010).

Serious medical errors are devastating to the patients, it could result into prolong hospital stay. Examples of medical errors commonly carried out by nurses include administration of the wrong drug to the wrong patient or in the wrong way, giving overdose or under dose to patients, wrong route of drug administration. Medical errors caused by nurses can be prevented by ensuring that only licensed and qualified nurses are allowed to practice, proper documentation and delegation, adequate nurse to patient ratio and reducing the length of time nurses work in the hospital.

Nurses malpractices and negligence

The Joint Commission on Accreditation of Healthcare Organizations (JCAHO) defines negligence as failure to use such care as a reasonably prudent and careful person would use under similar circumstances and malpractice as improper or unethical conduct, breach of duty or unreasonable lack of skill by a professional those results in injury or damage to a patient. Nursing malpractice occurs when a nurse fails to competently perform his or her medical duties and that failure harms the patient. In most cases, it includes failure to meet a standard of care or failure to deliver care that a reasonable prudent nurse would deliver in a similar situation. There are a variety of ways that a nurse can harm a patient, from administering the wrong drug to failing to notify a physician when something is really wrong. Nurses are often at the frontline for a patient, therefore if the patient has a sudden emergency, a nurse may be liable, if he or she doesn't take appropriate and immediate steps. This may involve actions like administering medication, carrying out actions necessary to help a patient, or calling for help. Common malpractices claims against nurses include

I. Inappropriate delegation of duty; As a result of cost-containment efforts in hospitals and HMOs, nurses are delegating more of their tasks to unlicensed assistive personnel. Delegation of some of these tasks may be considered negligence according to a given facility's standards of care or a state's nurse practice act.

II. Failure to follow standard of care; this include failure to perform a complete admission assessment or design a plan of care, to adhere to standardized protocols or institutional policies and procedures (for example, giving medications, inserting a nasogastric tube, using an improper injection site).

III. Failure to communicate; this includes failure to listen to a patient's complaints and act on them and failure to communicate effectively with a patient for example, inadequate or ineffective communication on relevant discharge information to patients.

IV. Failure to document; including failure to note in the patient's medical record a patient's progress and response to treatment, a patient's injuries, pertinent nursing assessment information (for example, drug allergies), and actions taken on a patient. Lack of documentation can result in a nursing intervention being done twice

V. Failure to assess and monitor; including failure to complete a necessary assessment, to implement a plan of care, to observe a patient's ongoing progress, to interpret a patient's signs and symptoms.

VI. Failure to act as a patient advocate; including failure to question discharge orders when a patient's condition does not warrants it, to question incomplete or illegible medical orders and failure to provide a safe environment.

Long shifts

It's been well documented that longer shift may be harmful to the patient, nurses feel the negative effect of prolonged hours of work as well. Not only do 12hours nursing shift increase the risk of medical errors it may be linked to poor patients' outcome. Delivering great patient care starts with a strong nurse's performance and productivity but nurses who work such long hours often express feelings of fatigue and their patients report less satisfaction with their hospital stay. According to Medscape, the study noted a direct relationship between shift length and negative outcomes for both nurses and patients. It is more productive to hire additional nurses and shorten shift length than increase hours for a small group of nurses. A recent study based on a survey of 22,275 registered nurses in the four U S states found that those who worked shifts of 12 hours or longer were significantly more likely to report poor quality of care, adverse patient outcomes and poor patient safety compared with nurses working shifts of eight to nine hours (Aiken, 2013).

Understaffing

When nurses are forced to work with high nurse to patient ratios, patient died, get infections, get injured, and get sent home soon without adequate education about how to take care of their illness or injury so they return right back to the hospital, often sicker than before. A nurse patient ratio can be defined as how many patients one nurse provides care for at a time. The nurse patient ratio depends on many factors. One of those factors is the severity of the patients that the nurse is providing care for e.g. if a nurse works in an ICU, the nurse patient ratio may be 1nurse to 1 patient or 2 patients. If a nurse works in another unit where the patient are not as sick, the nurse patient ratio may be 1 nurse caring for up to 4 or 5 patients. Many hospital unit have criteria that dictates the amount of patients one nurse can care for at one time (Debcordes, 2013).

When nurses have fewer patients they can take better care of them, patients are more likely to understand how to manage their conditions, take care of themselves and further illness and deterioration are prevented. Understaffing of nurses can result into medical errors, pressure ulcer development. prolong hospital stay and preventable readmission. Adequate hospital nurse staffing is of major concern to positive patient outcomes.

Lack of team work

The increase emphasis on patient safety in hospitals has brought an increased understanding of the importance of team work in healthcare. Multi research studies have confirmed that group teamwork among health care professional leads to higher job satisfaction, increased patients safety and greater patient satisfaction (Aiken, 2010). Unfortunately, many nursing teams are still a collection of individuals working independently who do not engage in effective teamwork behaviors such as monitoring one another's performance, backing each other up and engaging in communication and conflict resolution (Clancy, 2010). Poor inter professional communication has been linked to decrease quality of patient care, and increased numbers of medical errors. Effective nursing team work has been linked to higher job satisfaction, less nurse turnover, better patient satisfaction and better patient outcomes (Salas, 2007).

Unfavorable working condition

The work place is an important operational tool that influences the way care is provided. There is now widespread consensus that a hospital's physical environment can have a big effect on patient outcomes. Factors such as noise level, lightening, space, smells, availability of necessary hospital equipment can all have an impact on wellbeing and mood of the individual. Perfect hospital environment will not only promote rest and healing but can also aid in preventing patient falls, hospital acquired infections and certain kinds of medical errors. Lack of necessary resources can also bring about adverse outcomes in nursing care of patients.

RECOMMENDATION

In order to ensure reduction in the incidence of adverse patients' outcomes sensitive to nursing care, the following are recommended;

- Hospitals should measure their staff levels and how it relates to the national guide lines, from here the institution can determine if more nurses are needed or if there is need for better job or unit deployment.
- Nursing institutions should ensure standard of nursing care training for students.
- There should be provision for continuing education, workshops, and seminars for nursing staff in all settings.
- Leadership support and recognition to assure an appropriate number and skill mix of registered nurses who are able to deliver safe quality patient care should be implemented and hospital policies that favor efficiencies and effectiveness of workers such as increase nurse to patient ratio, favorable working conditions and environment, tea breaks, annual leave should be considered.

CONCLUSION

Nurses have an integral role in the health care system. To many of us, the point of nursing is to care for others. This may seem a simple objective but as nurses we need to consider what the point of our practice is, what the goal is, and how to achieve it without adverse effects to patients. Nurses, as the only healthcare providers who are with patients 24 hours a day, 7 days a week, can play important roles in preventing adverse patient outcomes such as patient falls, pressure ulcers, nosocomial infections, and medication error. By being accountable for care provided, quality outcome can be enhanced. We need to develop a greater focus on the promotion of patients' wellbeing and all fundamental aspects of nursing practice need to be undertaken in a dignified, safe and caring manner.

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