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ENHANCING PATIENT CARE RESULTS VIA NURSING AND LABORATORY COOPERATION

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Abstract

The precise functions of nursing and phlebotomy are explained in this essay, along with the significance of good communication between the two professions. Each topic is presented, however there will be some blurring because of how closely related they are to one another. Nursing includes providing independent and cooperative care for people of all ages, families, groups, and communities, whether they are ill or well, and in any situation. Assessment, diagnosis, outcome identification, planning, execution, and evaluation are all part of nursing. In the health and community sectors, registered and enrolled nurses and other staff members work in a wide range of private and public settings. The procedure of obtaining a blood sample for laboratory testing includes phlebotomy alone. Laboratory tests are also utilized for diagnosis, outcome identification, planning, and evaluation. From a simple one-page request form and a single patient treatment to complex care for a patient with a chronic illness requiring years of testing and therapies, this connection between nursing and the lab can take many different forms. Patients frequently move between community and hospital settings while receiving the same care in today's healthcare system. The nurse may find it challenging to make sure the tests are performed and to monitor the outcomes in certain situations. For high priority diagnostics with a limited treatment pathway, this is especially crucial. The urgent necessity to give a level 1 platelet transfusion to a patient who has a life-threatening hemorrhage or to confirm service for a patient who has just fasted for six hours while waiting for a blood sugar test are two examples that practically any nurse can relate to.

Introduction

Collaboration is a working technique in which people work together to achieve a common goal. Collaboration is a fundamental test that rarely occurs quickly. It is a behavior that requires assistance and educational frameworks. It's a process that necessitates communicating both the intellectual and emotional aspects of a relationship. In order to collaborate successfully, those gathered here must understand the levels of
involvement in a few sporadic conversations. Recognizing that teamwork is a movement rather than a singular demonstration is essential. Whether it is between two individuals or between small or large groups working together, collaboration revolves around a choice of human communication norms. However, many people would prefer to see collaboration increased with top-level or top-level enlightening activities. Finding the right mechanisms and support for explicit intuitive behaviors is crucial after the potential for collaboration has been identified. Structures will be the

highly changeable moments that are selected as the tactics, actions, and developments in a certain situation. Over the past few decades, the costs of innovation for information transmission have skyrocketed to enormous sums of money, and the accumulation of knowledge has become a global development condition. Information is being used to create a guide that begins with individual intelligent practices and develops toward shared intelligent community practices. This is a strengthening for increased cooperation. High-stakes testing guarantees that formative assessments have been distributed in an effort to find the most effective learning structures. However, behavioral-based intelligent practices result in a wealth of knowledge on master learning tasks and exploration challenges. The ideal way to contribute to future collaborative behavior on community intelligent practices may be to reevaluate how to distribute these moments to support these intelligent practices. In addition to looking about learning as a continuous and constructive process rather than a one-time obstacle, support for intuitive techniques should be promoted. Learning has received too much attention, but recent events like the training and the ASC acoustic modified test have increased research cooperation. This may not be a profitable relationship, but it is a step in the right direction. Until a successful outcome is achieved, an effort must be made to reestablish information in these moments and reveal it. The final region of extending understanding discovery is using structure to move about a shift in noticing aggregate emphasizing program and activity focuses in order to eventually place a generosity of people to people interactive and then group to top intelligent practices. This example of teamwork in a study is ideal for illustrating how and when people perceive support and structures. To keep up with the latest, this calls for a revelation approach. Any such move should be welcomed with caution because, in any event, a long-standing residue man's emailing minutes will be wasted if they take a chance on a drive or move into an unfavorable position. [1]

The value of teamwork in healthcare

In order to provide patients with high-quality care, cooperation amongst medical experts is crucial. This is particularly true when it comes to nursing and diagnostic labs. The various methods that nursing and diagnostic labs can collaborate to give patients the best treatment possible will be covered in this essay, along with the advantages of a solid working partnership. In order to find ways to adapt for more successful care transitions and improved patient outcomes, it is crucial to examine the relationships between many sectors when health care is undergoing constant change. The laboratory is a crucial sector in today's healthcare setting that needs dependable connections and efficient care transitions. The 2010 Institute of Medicine (IOM) report on the future of nursing states that the healthcare industry is a dynamic field that need ongoing advancements in delivering high-quality patient care while prioritizing patient safety and requirements. This essay will go over how nurses and the diagnostic lab might cooperate to meet these requirements and improve patient outcomes. Nursing and the laboratory can find ways to work together more successfully if they are aware of each other's responsibilities and what each field has to offer. [2]

The importance of nursing and laboratory cooperation

Any mental action that occurs either before or after completing a discrete task can be categorized as a cognitive role. This could entail obtaining, evaluating, and tracking data or making choices

based on that data (Hoffman, Kiepek, and Di Bernardo, 2000). It may be concluded that a large number of nursing acts have direct or indirect effects on the patient's well-being due to their wide range of responsibilities and the implications of the cognitive role.

The relationship between laboratory testing and its influence on nurses' decision-making is one of the less well-known but extremely important partnerships. Since its initial introduction in 1987, this idea has drawn a lot of attention and has gained traction over time as a result of the quick growth and advancement of the diagnostic testing industry. The American Nurses Association and National Council of State Boards of Nursing's joint position statement from 2016 best captures the cognitive role of the nurse, which was first introduced by Lloyd and Victoire in 1993. It asserts that nurses play a major role in health care and are an essential component of comprehensive patient care. Its outer extent is compared to nurses' extensive assessment of patients' requirements by outlining who is an essential component of comprehensive patient care and that nurses are a wide and diverse group. This entails identifying and distinguishing between acute and chronic sickness, health education, health assessment, and the crucial factor of comprehending how their practice affects the patient's well-being (Lloyd et al., 2003).

Healthcare is a complex profession with many different disciplines working together to create a system that guarantees patients' comfortable and effective recovery. It has become more crucial for these various professions to collaborate in order to obtain the best patient outcomes, giving each person a defined role to perform in the healing process loop, or the Patient Care Continuum (Wilkinson, 2002). The services that patients receive as they transition from sickness to wellness are generally referred to as the patient care continuum. The capacity to acquire resourceful

Knowledge gained from study and policy development makes it possible to comprehend essential components for raising the bar for healthcare. Maintaining supportive services is essential for optimal patient outcomes since patient care is the primary variable for the health care system (Foley, 2003). [3]

Line 1: Introduction (Line 1) Line 2: Collaboration in healthcare is important (Line 2 + 1) Line 3: Nursing and laboratory collaboration is important (Line 3 + 1)

Advantages of Nursing and Laboratory Collaboration

By enabling nurses to speak with lab personnel directly about the testing and its potential implications for the patient, nursing consultations with laboratory medicine and the presence of laboratory personnel in wards will bridge the gap between lab results and patient-focused outcomes. This is a type of "post-analytic testing" in which the results of laboratory tests are examined along with the patient's symptoms and likely diagnoses. This would entail a variety of activities, including formal consultations and case management with the nurse and patient regarding test results and the patient's next course of action, as well as training nurses on which tests to request and the proper procedures for specimen collection so sample quality and test choice are optimal. By lowering medical errors, diagnostic times, and needless testing and treatment, this

ongoing communication and clarification of any doubts about test results will ultimately lead to better patient care. Post-analytic testing studies and the relationship between laboratory testing and patient endpoints are issues that need immediate attention because of the impact they have on patient safety and outcomes. However, changes in patient morbidity and mortality as well as "test effectiveness" outcomes can be used to gauge the overall performance of nursing-lab interactions in obtaining better patient diagnosis and treatment. [4]

Nurse participation in the laboratory process is associated with better patient diagnosis and treatment. According to an Academy Health research, laboratory results account for 76% of patient treatment. Given how crucial laboratory testing has become to patient care, it is imperative that nurses get some understanding of laboratory science and the function of laboratory services in order to evaluate results and apply them to improve patient outcomes. According to New South Wales Health (2003), "The importance of the role of nurses in turning a medical diagnosis into a patient-focused outcome has meant it is imperative that those who are working directly with the patients understand the diagnostic process and are able to make a meaningful connection between the results and the course of treatment." This implies that there isn't currently a meaningful connection between lab results and the course of treatment, and since this report was integrated into a nursing role to improve patient outcomes, any knowledge of laboratory science may have been lost.

Individual research and commentary have focused on the advantages of cooperative partnerships between nursing and laboratory personnel. greater patient diagnosis and treatment, greater information sharing and collaboration, and streamlined workflow are among the benefits noted. The literature makes reference to these concepts as the cornerstones of what can be accomplished through productive teamwork.

Better diagnosis and care for patients

Improved cooperation between nurses and laboratory specialists is crucial if nursing is to play a more significant role in patient diagnosis and care. In order to direct suitable activities that will result in better patient outcomes in the fast-paced world of healthcare, it is crucial to have a solid grasp of what can be done in practice and an awareness of the potential implications. This is particularly true when it comes to patient monitoring and diagnostic testing. Nurses can help enhance patient diagnosis and treatment by facilitating more focused and effective laboratory utilization through their role in detecting patient needs and providing nursing care. Nursing education on the delivery of testing services and development can start this.

Provides guidelines for evidence-based practice concerning the timing and indications of particular testing. Better test usage and a decrease in the number of tests requested that are inappropriate for higher quality tests will result from subsequent discussion with laboratory personnel to share patient information and discuss the best tests.

Due to misplaced specimens, request forms, samples, and tests that were never conducted, the laboratory has a reputation for postponing patient diagnosis. The conventional perception of nursing as a medical practice with its primary role in the context of diagnosis and care has changed as collaborative practice among healthcare professionals has increased and nurses are concentrating on all facets of healthcare.

Improved exchange of information and communication

It is anticipated that increased laboratory staff involvement in patient diagnosis and treatment will boost process efficiency. According to a study by Hawkins and Friedman (Hawkins and Friedman, 1999 as cited in Price et al., 2010), laboratory testing influences clinical decision making in about 70% of cases. However, there were also cases where testing was either not performed or was suboptimal for a variety of reasons, including the ordering clinician's ignorance of the appropriate test, the test's unavailability, or uncertainty about which patient the test is for. Efficiency improvements are frequently not measurable, but they are likely to increase as a result of preventative actions taken as a result of early diagnosis or avoidance of misdiagnosis.

The authors of a study by Spekowius and Sandars (2003) emphasize the significance of communication between medical experts in the patient's diagnosis and treatment. The main conclusions of this study showed that inadequate communication among members of the healthcare team was the cause of patient care problems. Furthermore, a more recent study by Sorokin et al. in 2005 found that misunderstanding among healthcare personnel accounted for 56% of the 1200 medical errors that had a negative impact on the patient (as stated in Thomas, 2009). Laboratory personnel have more opportunities to participate in the patient's initial diagnostic and treatment plan when they collaborate closely with nursing staff. This can be accomplished by attending interdisciplinary team meetings and consulting laboratory services when placing test orders. Technological improvements considerably facilitate direct or indirect contact between laboratory and nursing staff. In the present era, sending results electronically and accessing and documenting results from a centralized system like an Electronic Medical Record (EMR) is far simpler than communicating via phone, pneumatic tube, or face-to-face interaction.

Efficiency and streamlined workflow

When laboratory technicians and nurses collaborate well, patient outcomes are immediately impacted. Understanding specimen collecting standards and procedures is one of the main ways that nurses may streamline the laboratory process. Purchasing samples is typically the responsibility of nurses. Patient care is also impacted by sample inaccuracies since nurses may need to redraw samples or may not be able to treat a patient appropriately due to incorrect laboratory results. Comprehending appropriate sample collection enhances both lab productivity and patient care. According to one study, a two-phase educational intervention aimed at nurses reduced contaminated blood cultures by 61%. The hospital was able to save about $40,000 as a result. Excellent sample procurement performance provides numerous advantages. The lab can process samples more effectively when it is aware of nurse preferences and patient care

requirements regarding specimen collection. For instance, a patient may have diabetes and be at risk for hypoglycemia if their fasting laboratory results are taken early in the morning. Until the lab work is finished, a nurse might choose to postpone the patient's regular morning insulin. It may be agreed to postpone some tests until the nurse verifies the patient has not experienced any negative events if the nurse shares this information with the laboratory. Client calls and misunderstandings over test cancellations can be avoided with this kind of communication. Recently, the National Patient Safety Agency emphasized how crucial it is for everyone involved in laboratory testing to understand exactly which tests are being conducted and for what therapeutic purpose. This guarantees that the appropriate test is administered to the appropriate patient at the appropriate time. [5]

Techniques for Successful Cooperation

The most often recommended methods to improve inter-professional interactions are those that focus on enhancing communication between nursing and laboratory workers, given the limitations of the healthcare setting. These tactics include developing laboratory services on nursing care teams, promoting nurse-laboratory rounds, and fully disclosing laboratory information. Woolery et al.'s qualitative study examined the strategies used by nurses and lab technicians to handle crucial lab value reporting as well as the obstacles to efficient communication. Numerous focus groups and interviews with nurses and lab workers were used to gather data. The techniques noted by Woolery et al. are useful and applicable to all interactions, even though critical value reporting is only one facet of communication between nursing and laboratory personnel. To increase the accuracy of information shared between nurses and laboratory technicians, a multidisciplinary approach to the investigation of lab value meanings and perceived implications as well as the use of standardized tools for the communication and documentation of lab values were considered. This is in line with results from a previous study conducted by JiJi et al. with nurses and medical residents, which found that agreement on the significance and meaning of particular lab data was a factor impacting the use of this information in decision making. Woolery et al. also discussed certain contextual issues that affect how lab values are communicated, such as phone calls interfering with nursing-laboratory rounds and the lack of laboratory technicians in nursing units as a result of service centralization. Tailoring interventions to particular units or organizations may be made easier by gaining a thorough grasp of the work system in which information is shared and identifying possible areas for improvement. The aforementioned strategies for handling essential lab value reporting align with an evidence-based framework created by Estabrooks et al. for analyzing and assessing the intricate process of transferring information from one healthcare provider group to another. The knowledge to be translated, the prospective adopters of the knowledge, and the context in which the knowledge is being translated make up the final taxonomy. In order to study important lab value management and the contextual elements impacting this process, Woolery et al. conducted focus groups and interviews with nurses and

laboratory technicians, which involved the prospective adopters of knowledge. Further efforts to create interventions targeted at enhancing communication would
include taking into account the information that needs to be translated as well as the environment in which it takes place. Woolery et al.'s study illustrates some basic yet focused techniques to promote collaboration between nursing and laboratory workers by attempting to improve communication and the translation of knowledge between nurses and laboratory technicians. [6]

Creating unambiguous routes of communication

The process of communication is intricate and ever-changing. It is a technology that makes it possible for people to communicate with each other. It entails encoding information, choosing how to deliver it, sending it, decoding it, and giving the user feedback. When the message transmitted and the message received are identical, communication is successful. There are two types of communication: verbal and nonverbal. Spoken or written language can be used for verbal communication, and body language, gestures, and facial expressions can be used for non-verbal communication. Nonverbal communication accounts for the majority of communication, according to studies. Communication occurs between the sender and the recipient, who may be an organization, a group of people, or an individual. Professional-to-professional or professional-to-patient interactions are the most common forms of communication in healthcare organizations. This does not imply that management and other communication channels are insignificant. For a variety of reasons, effective communication is crucial. It facilitates the exchange of ideas, information, and emotions between people or groups, serves as a way to communicate needs, and improves service delivery. Effective communication is also linked to employment success in terms of performance and job satisfaction. Growth on both a personal and professional level is facilitated by effective communication. In clinical settings, poor interpersonal communication frequently leads to conflict and miscommunication. Many breakdowns in crucial relationships between nurses, doctors, and other healthcare professionals as well as in maintaining patient continuity of care are caused by a lack of communication. Additionally, it is the primary cause of adverse events and clinical errors that are harmful to patient care. To put it briefly, having clear communication makes it possible to share resources and information more effectively, which will ultimately result in higher-quality patient care. Considering all of these factors, it is clear that the most crucial element influencing the success of any cooperative endeavor is excellent communication. [7]

DeGroot, a laboratory manager, stated that "the two disciplines just aren't talking to each other" is the typical scenario, despite the strong suggestion that the laboratory and nursing work together. Fernandes also acknowledged that in a clinical setting, laboratory personnel operate more in parallel than as a team and rarely communicate with nurses or doctors. The results of a study conducted in Singapore, which showed that although 98.5% of nurses and 77.6% of laboratory workers were aware of the necessity of working together, there were no appreciable variations in the perceived practice of teamwork, lend credence to this claim. Collaboration is the goal, but it cannot be accomplished without open and honest communication between the two sides.

Creating common principles and protocols

Both laboratory and nursing staff must contribute equally to the creation of shared protocols and guidelines. Establishing a joint committee with representatives from each profession is one of the finest ways to begin the process. The protocols and guidelines will be drafted by this committee. To keep the committee focused and make sure that all pertinent issues are covered, it might be helpful to hire a facilitator at the beginning. To do this, it will be necessary to pinpoint the precise aspects of patient care and procedures that require protocols or recommendations and to highlight the most important areas for improvement. Subcommittees must then be appointed by the committee to draft the real procedures and guidelines, distribute them, and monitor their advancement. The committee as a whole should study and approve the preliminary document that the subcommittees have created. Following this

Initially, small-scale implementation of the protocols will be necessary to evaluate their efficacy and determine any necessary adjustments. [8]

Facilitating the best possible patient care is the second primary reason procedures and guidelines are crucial. Ideally, there will be fewer instances of ordering improper tests and providing false information when reporting patient status results when rules and guidelines are in place. As a result, more timely and accurate information will be provided, improving the quality of care. It should be mentioned that guidelines and protocols will never be completely independent and will need to be revised to reflect current practices and be supported by evidence on a regular basis.

It has been determined that shared protocols and guidelines are crucial for enhancing cooperation between laboratory personnel and nurses. There are two primary reasons why they are significant. First and foremost, it is crucial to guarantee that both professions function at a level determined by released limits. Each profession will be able to establish their scope of practice and provide understanding of constraints, etc., through the use of protocols and guidelines. Clearly defining when each profession should report results or issues can also be accomplished through protocols and guidelines. For instance, critical care nurses frequently failed to identify or investigate anomalous laboratory data, according to a recent study involving laboratory personnel and critical care nurses. This happened as a result of critical care nurses' frequent ignorance of the importance of the findings and whether the tests performed were sensitive to the patient's state. This can be prevented by having protocols established by both professions.

Holding frequent multidisciplinary gatherings

In an attempt to discuss and assess patient care by examining areas where nursing and laboratory science overlap, clinical nurses, nursing management, professional nurses, and laboratory technicians gather on a regular basis. This will make it possible to comprehend how laboratory specimens are gathered, analyzed, and directly affect patient treatment. Medical and nursing personnel are welcome to join in these open forums, ask questions, and learn more about laboratory testing. It is a chance for medical professionals to exchange information and insights that will deepen our comprehension of the best ways to treat patients. Frequent meetings can also serve as a focal point for a cooperative effort aimed at assessing how well practice changes affect patient outcomes.

Problems with Cooperation and Solutions

Both groups have identified the establishment of a lab/nurse team to address issues pertinent to the partnership and the development and maintenance of a positive professional relationship between lab and nursing staff as crucial to achieving the shared objective of improving patient outcomes. Some of the necessary changes may be achieved if this team is empowered to influence policies that impact them.

Clear communication is crucial, and overt leadership must encourage a culture where employees feel free to voice concerns about patient safety. Programs for team training have been shown to enhance team performance and communication. The creation of a common mental model of how the team will function in a given situation and an understanding of the roles and duties of other team members are important components of such programs. In the near run, if funding permits, a nurse's rotation through a number of lab shifts would significantly improve communication and understanding between the two departments.

Occupational "tribalism" can undermine effective communication. That is, professional territory reservation that results in a limited area of cooperation, avoidance of another department due to a bad past experience, ignorance of another department's role or how one's own actions or decisions may affect other departments, and a lack of precise, prompt, clear instructions and information sharing. Inadequate communication has been identified as the primary cause of unforeseen negative events, however territoriality and lack of awareness can be alleviated by educational initiatives.

Overcoming obstacles to efficient communication

If both the sender and the recipient lack the necessary skills to transmit or receive information in a certain format, the information's format—verbal, written, or visual—may constitute a barrier. A nurse attempting to communicate a crucial lab value to a patient care assistant who has not received training in interpreting lab findings is one example. A communication barrier may also arise from information that is either complicated or too simple for a particular recipient. When doctors believe that nurses are aware of the clinical importance of a lab result and nurses believe that doctors would interpret the result and seek clarification if it is aberrant, this is a frequent issue in the nursing context. In both situations, no information is shared and assumptions are formed. Interruptions are common in acute care clinical settings and can significantly impede communication. An illustration would be a lab worker collecting a specimen from a nurse while she is speaking with a doctor over the phone and the tests that need to be scheduled are not effectively communicated verbally. In this case, specimens may be mislabeled and/or the wrong tests may be ordered. Last but not least, patients are frequently treated by several specialties in various venues in the changing healthcare system. Inadequate information sharing between health care providers and venues can impede the common goal of delivering continuity of treatment for these patients. [9]

Communication problems are numerous and have a big impact on how well we can work together. Information transfer is the most fundamental aspect of communication. Errors can occur when

information is not shared efficiently. In our data-driven healthcare system, information sharing is particularly crucial. Accurate and fast information transfer is essential to providing high-quality patient care. One of the main causes of treatment errors in both inpatient and outpatient settings has been identified as missing, erroneous, or delayed information. The manner in which information is presented, its presentation, the recipient, or the setting in which it is delivered can all contribute to poor information transfer.

Resolving competing objectives and priorities

Different expectations and the kinds of activities that the two professions engage in are related to different priorities and objectives. These variations are typically the result of professional socialization and the various perspectives that the profession holds toward patient care. According to one study, the laboratory focuses on a predetermined, protocol-based clinical outcome that aims to quickly return the client to a stable medical condition, whereas the nursing focus is on individualized holistic care that aims to obtain the best clients' clinical outcome. The idea that nurses did not believe their sample requests were given priority based on the clinical urgency of the patient's situation was one of the recurring themes relating to competing priorities and objectives. As a result, acute sample requests were seen as not being fulfilled. The laboratory turnaround time was specifically cited by nurses as an example of how their sample request priority was not being fulfilled. They believed that patients' prescription sample results were not being promptly returned. When nursing tasks like specimen collection were judged to impede the patient's clinical care from a medical standpoint, the idea of aim incongruence became clear. A request to obtain a sputum sample for a patient with a non-urgent respiratory condition served as an example in the study. The doctor disapproved of the nurse's choice to postpone patient ambulation and therapy, seeing it as a deprioritization of clinical care. In this case, the idea of role conflict was also clear. It was discovered that good communication and negotiation between the two professions were essential to resolving these problems. [10]

Putting technological solutions into practice for smooth cooperation

For the sake of the patients, it is crucial to acknowledge the resources and work that have gone into developing novel ways to enhance the cooperation between nursing and laboratory personnel. This crucial issue has received more attention thanks to the quality and safety movement. To improve the efficiency of communication between these two fields, technologies are being created and put into use. The bar code drug administration system is one example of a recently developed technology. More assurance that the correct patient is getting the proper medication at the right time is made possible by this system, which requires the nurse to scan the patient's identifying band and the medication using the bar code. This technology has the potential to directly affect patient safety and results even though it is not a direct means of communication. Using the algorithms on the patient's EHR and an automated alarm ringing system, laboratory personnel have effectively conveyed to nursing staff the importance of important values through an indirect

communication strategy. The telephone tag that frequently happens when reporting vital values could be reduced with this automated solution. When nurses log into the EHR, the algorithm system will provide information regarding critical values for them to read. This approach will assist get rid of the tendency to interrupt a nurse who might be working on anything else, as well as competing priorities when handling important values. [11]

Case Studies of Effective Cooperation

Cooperation in a critical care environment A 45-year-old man with a diagnosis of a major intracerebral hemorrhage was sent from a rural hospital to the intensive care unit (ICU) of a tertiary hospital. The man had swiftly deteriorated due to the impact of the hemorrhage, and the ICU staff at the rural hospital was unable to control the patient's condition. With a GCS of 8, the patient was moved to the tertiary hospital in a critical condition. For this patient, emergency care, stopping additional bleeding, continuing evaluation and avoidance of subsequent problems, and discharge planning were the main goals of the nursing and laboratory roles. The nursing and laboratory staff's joint roles during the patient's stay in the intensive care unit were tightly linked and internationally focused on the patient's overall care. The patient's needs changed over time, necessitating regular management and reevaluation. The patient's blood pressure had to be closely monitored and controlled as part of this preventative care because any more pressure increases could result in another hemorrhage. The patient's coagulation status and blood pressure were monitored and controlled through ongoing laboratory testing. To lessen the chance of another bleed, steps were also taken to prevent Valsalva actions. There were no more issues during the patient's ICU stay, indicating that the nursing and laboratory staff's cooperation in these responsibilities was successful. [12]

Working together in a critical care environment

Deloughery and a team of nurses carried out another fruitful investigation on the administration of blood transfusions in acutely anemic patients in a critical care setting. An emergency medicine physician requested the group of nurses, who had prior experience in medical research, to look into the use of blood transfusions to help treat these patients. For many patients in the emergency room, anemia is a common and occasionally fatal condition. In the past, a lot of people had incorrect transfusions using banked red blood cells according to medical orders. In an attempt to identify a different approach that would be better for the patients, the study compared the transfusion of stored cells to the use of erythropoietin and transfusion of fresh blood. The study was published in a medical journal after receiving funding from a national organization that regulates blood products. In addition to improving patient care locally, this study made a significant policy judgment regarding the optimal way to transfuse blood to patients with chronic anemia.

Over the course of six months, Casey and a team of nurses studied how medical imaging influences decisions in a level 1 trauma hospital. Numerous favorable aspects of the trauma center under

study made it easier for the lab and nurses to work together. All members of the healthcare team had easy access to the important decision makers because to the flat organizational structure, which also made it simple to adopt policy changes. This prior scenario contrasted with earlier research that revealed hospital employees' dissatisfaction with their incapacity to offer feedback on rules that can unfairly impact them. The trauma center was not only the perfect location for the study, but by employing the ethnographic research approach, a thorough grasp of how the laboratory and nursing work together to provide high-quality patient care was also attained.

Working together at a primary care clinic

Dr. M. Michael Shabot believed it was time to implement fresh concepts on quality improvement after visiting multiple sessions of the Quality Colloquium at the University of Pittsburgh. A study project on nurse-physician teamwork in a primary care clinic was conceived and carried out with administrative support and competitive encouragement from nursing colleagues. The study is predicated on the idea that nursing practice mechanisms grounded in the social mandate of the nursing profession will promote patient-centered nurse-physician collaboration in primary care clinics. Clinical decision-making, patient outcomes, and the professional practice satisfaction of both doctors and nurses will all be improved by this kind of cooperation. The study compared the current model of physician care enhanced by the traditional model of registered nurse care with an enhanced model of nurse practitioner care based on the McGill nursing model (Artinian and Smith, 1997). Patient care outcome tracking over a two-year period, qualitative methodologies, and survey and questionnaire administration were all part of the mixed method research. The following three case studies will look at different facets of nurse-physician collaboration and how it affects patient care outcomes because of the complexity and variety of the research. Every case study offers a chance to evaluate the opposing care model and look at the interactions that influenced the final results of patient care. [13]

Cooperation inside a research organization

The cooperative connection between nurses and laboratory specialists has generally improved in a variety of contexts, according to published studies. According to these research, the cornerstones of a successful partnership are clear roles and excellent communication. Preanalytical information quality and specimen quality are directly positively correlated, according to Fischer and Walker (1995). As a result, nursing staff members were more satisfied with the laboratory service. An acute care hospital's laboratory redesign was the subject of a research by Hall, McCormack, and Merbitz (1986). Several smaller laboratories were established close to the hospital wards they catered to in order to implement the transition. The positive qualitative and quantitative results of the redesign were described by Hall et al. These included faster turnaround times, easier access to physicians, improved working relationships with nursing staff, and less need for sample recollection. A patient identification system for specimens being sent to the laboratory from a geriatric and mental facility was examined in a different study by Cote and Collin (1999). They discovered that the use of a patient ID wristband system significantly reduced the number of

specimen samples that were contaminated, inaccurate, or incomplete. Each of these studies offers proof that an existing system may be improved, and they may have an impact on whether the change is started by laboratory personnel or healthcare providers. In order to influence changes to policies and procedures—which may even entail actual rebuilding or remodeling—it is important to demonstrate the possible benefits of those changes. [14]

Collaboration's Effect on Patient Care Results

When nurses and lab workers have developed cooperative relationships and feel comfortable communicating with one another, error prevention will be most successful. Nurses and lab professionals are more likely to disclose and so reduce the possible errors in judgment that could have a detrimental effect on patient care when they communicate and actively seek to clarify any issues that may exist regarding a diagnosis, treatment, or test result.

The incidence of medical errors in healthcare and their effects on patient outcomes have come to light in a recent Institute of Medicine report. The report states that one of the main causes of death in the US is medical errors. By monitoring patient responses to pharmaceutical therapy using laboratory data, laboratorians and nurses were able to detect and avoid possible adverse events in a study on medication error prevention. This improved the patient's course of treatment and reduced the possibility of an adverse occurrence.

Collaborative practice among healthcare professionals improves patient care, according to a strong body of research. Pathologists and laboratory scientists provide crucial information that aids in diagnosing and treating a patient's illness. Positive patient outcomes result from nurses working in tandem with the clinical laboratory to maximize clinical decision-making efficacy and information delivery efficiency. When the clinical laboratory and nursing staff work together, the goal is to improve the quality of care.

decrease in adverse events and medical mistakes

Laboratory services played a direct role in error prevention in a study carried out in an acute care environment in Perth, Australia. The study's objective was to quantify how pathology services affected clinical decision-making and the ensuing patient outcomes. The nursing team received clinical consultations and feedback on appropriate test ordering from laboratory services. As a result, the pathology testing error rate decreased by 50%, from 4.2% to 2.1% of all requested tests. According to the study, there was a 55% (RR 0.45) decrease in the relative risk of a patient experiencing an adverse event linked to a pathology testing error. This showed that lowering testing errors and patient adverse events is significantly impacted by laboratory services' participation in the nursing decision-making process for test ordering. When administering medication to a patient, medication errors frequently happen. It is frequently the result of the patient not knowing the name or appearance of a drug since they have never taken it. A patient can alert a nurse if the wrong medication or dosage has been given to them if they are aware of the

medication and how it should impact them. An inpatient nurse's drug administration error rate was compared before and after the implementation of a barcode system in a study carried out in a 700-bed teaching hospital in Taiwan. The percentage of pharmaceutical errors with injury dropped from 2.5% to 0.78%, while the rate of drug administration errors dropped from 11.3% to 3.9%. According to the study, the use of the barcode system significantly decreased the percentage of drug errors. A doctor may avoid making a pharmaceutical error by altering the prescription or dosage because they are unsure of the diagnosis if a laboratory test has been properly ordered and the results are precise and quickly available. [15]

Enhanced patient experience and satisfaction

Numerous facets of care, such as identifying and addressing patient needs, promoting patient autonomy, and educating patients, have been connected to patient satisfaction. As a result, it is thought that one of the most significant and frequently evaluated measures of treatment quality is patient satisfaction. An essential component of the care process is laboratory testing. Numerous tests have an immediate effect on patient care; these effects can include the identification of a pre-clinical condition, the monitoring of a disease state, or the diagnosis or exclusion of a disease state. According to research, fast and correct test result delivery has a significant impact on patient care and management, affects the frequency of returning to or staying under a practitioner's care, and reduces iatrogenic problems. To ascertain the precise test requirements, it is essential to take into account the significance of a well-defined service with explicit test request protocols and two-way communication channels between the nursing and laboratory staff. Too frequently, mistakes in the test ordering procedure resulted in subpar results, according to an observational research examining test result delays and their effects on patient care. A prior diagnosis was invalidated when a test was administered late or not at all, and in certain situations, the patient needed to be readmitted to the hospital. Numerous research on nursing errors concur that mistakes are frequently caused by doing the right thing incorrectly rather than by failing to do the right thing. The patient bears the repercussions in each of these situations, and the nurse involved continues to experience stress and shame as a result of these unsatisfactory outcomes. The nurse can see what has or has not been done without having to search for the findings thanks to access to relevant laboratory test information. When a patient is sent to a nurse due to an abnormal test result, the nurse might not be familiar with the test's details and might give another test, which would worry the patient and result in even worse outcomes. If the nurse is aware of the tests that are available and the particular tests that have been carried out, this scenario can be avoided and a patient may not be admitted to the hospital just for a test. This happened in a patient who developed an under-skin hematoma while taking an anticoagulant. The patient was admitted each time the nurse tried to obtain the findings, even though the goal was to monitor the hematoma and repeat the blood test every few days. [16]

Improved patient outcomes and treatment quality

Crucially, there will be a correlation between the data in some areas and better patient outcomes. Patients handled in medical services with fully integrated clinical nurse specialist and nurse

practitioner roles had considerably shorter hospital stays, according to a large cohort research conducted in South Thames, UK (Hutchinson et al., 2004). Schaad et al., who examined the effectiveness of treatment for acute pediatric respiratory infections, also looked into the influence of health professional contacts on patient outcomes (Schaad et al., 2002). The new quick diagnostic test for group A streptococci was only 30% effective in standard care, but it was 90% and 100% effective in the nurse-administered and physician-administered protocols, respectively, resulting in more appropriate use of antibiotics. Recently, an evaluation and compilation of these advancements in systemic care systems was conducted. Academic institutions are urged to report on the strategies employed to improve patient outcomes by modernizing treatment for a specific illness (Wasson et al., 2002). It is likely more obvious that a successful diagnosis and treatment pathway frequently results in a correct patient outcome, as demonstrated by the following two case illustrations, even though the literature supporting its significance is compelling. [17]

In conclusion

A laboratory is a supporting service that determines a significant portion of patient treatment even though it is not directly apparent. Nursing has become more reliant on laboratory services due to the complexity of patient care. Every day, nurses evaluate test results. The patient may be at risk or benefit from the precision and dependability of those findings. By encouraging a deeper understanding of each other's various professional duties, collaboration can be promoted. In addition to improving patient care, this will make laboratory and nursing personnel feel valued for their role in patient care. This ought to establish a solid basis for upcoming cooperative endeavors. It was evident from the outset of this study how crucial it is for nursing and laboratory personnel to work together. Laboratory personnel and nurses are two occupations that rely significantly on one another. They have to interact and work together with each other in order to accomplish a shared objective improving patient care. Understanding one another's responsibilities and having well-defined objectives for the collaboration's execution are essential to achieving this goal. Nurses and laboratory personnel should have a professional interaction akin to that of a team. Healthcare specialists with shared objectives would make up this team.

An overview of the significance of teamwork

The significance of these exchanges and the collaborative practice that follows could significantly improve clinical results and patient care. Weber et al. (2007) ran a trial as an illustration. Their goal was to determine whether better patient control of the activated partial thromboplastin time (APTT), a commonly recognized metric that affects the frequency of thrombotic and hemorrhagic events, could result from collaboration between the nursing discipline and the laboratory in heparin management. Six US university medical centers participated in this investigation.

The critical care areas of healthcare are where the nursing and laboratory disciplines interact most frequently. The introduction of point-of-care testing (POCT) is one example at the macro level. It has been proposed that the setting may be more conducive to fruitful collaboration due to the

relative greater involvement of nursing in decision making at the practice and management level, the closer interaction between nurses and laboratory staff, and reciprocal lessons in clinical and laboratory practice. The main first step toward collaborative practice between the two disciplines has been determined to be POCT by nurses. A nurse calling the lab for an urgent result and further elucidating the pre-analytical prerequisites for testing are two more micro-level instances.

Introduction: Working together is crucial to determining the standard of patient care. It is observed at a clinical level in numerous areas of the healthcare industry and has been recognized as a facilitator of excellent practice in multidisciplinary treatment. Although it is not commonly acknowledged or understood, the cooperative link between the nursing profession and the laboratory has the potential to improve clinical outcomes throughout the healthcare domain. According to the analytical model of collaborative working, the contact between two professions or disciplines should lead to changes in practice, which is the ultimate goal and an improvement in patient care.

Suggestions for promoting cooperation in the medical field

Collaboration between laboratory and nursing workers can be fostered in a number of ways. Joint inservice training, cross-training, the creation of a quality improvement team, and testing process redesign are a few of these. When the nursing and laboratory staff collaborate in an educational context, they can learn a lot from one another. To better comprehend each other's tasks, joint inservice can be tailored to the needs of both groups. Disease-specific procedures, specimen collection and identification, and comprehension of laboratory tests are a few possible topics. Another useful method for each discipline to learn about the other is through cross-training. This might be as straightforward as laboratory personnel instructing nursing staff in proper phlebotomy technique, or it can be as complicated as a nurse taking classes provided by the laboratory staff to become a certified diabetic educator. When both parties are more aware of each other's objectives, they can collaborate more successfully to achieve shared objectives. [18]

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