Improving Patient Safety and Reducing Medical Errors
in Saudi Healthcare Organizations

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Abstract: This paper aims to identify the critical areas that need improvement within the health care institutions' systems in Saudi Arabia to enhance patient safety and reduce medical errors.

Methodology: A systematic literature review was conducted to explore the moral issue of medical error and patient safety in the Saudi healthcare organizations system. Database yielded more than 4,000 candidate articles, of which 45 studies randomly selected after they fulfilled the inclusion criteria in this study.

Results: The outcome of the research study was more than 45 articles that met the inclusion criteria and appeared to be highly relevant to the subject under investigation. The lack of the ethical responsibility to continuously improve the healthcare system, the lack of proper safety culture and active reporting system, and the lack of patient-centered care were documented as critical areas in Saudi healthcare organizations' system in need of improvement to enhance patients' safety and to reduce medical errors .

Practical implication: the researcher made several recommendations based on what has been done in the United States' healthcare system that systemically addresses improving patient safety and reducing medical errors. For instance, healthcare organizations devoted to improve patient safety and reduce medical error should abandon the routine assignment of individual blame and shift toward a system thinking approach. The devotion to enhancing patient safety stems from ethical responsibility and accountability of healthcare organizations toward the patients they serve. Also, healthcare organizations that lack a strong culture of safety will consequently not achieve a high level of patient safety. Finally, Healthcare organizations should pay attention to the essential role that patient involvement play in improving safety and reducing medical errors.

Keywords: Patient safety, Quality, Saudi healthcare, safety culture, medical error, ethics.

Introduction

People strive for perfection in every aspect of their lives, especially when it comes to their health. There is no absolute way to avoid medical error, yet healthcare organizations must prioritize patient safety as an ethical responsibility in every context of healthcare. Medical error and patient safety have been extensively discussed in bioethics developed in the United States, especially since the Institute of Medicine (IOM) published its report 'To Err is Human,' in 1999. The report has revealed that up to 98,000 patients die each year as a result of preventable, adverse events (Landrigan et al., 2010). The report has faulted the United States' healthcare system for producing preventable errors. As a result, it has provided a blueprint for reducing

medical errors by indicating the obligations that rest upon healthcare organizations to create a safety culture, to establish an active reporting system, and to create a learning environment. The ethics of safety help to assure the public that healthcare organizations are living up to their moral responsibilities by taking patients' lives seriously. The moral obligation of healthcare organizations to improve patient safety is tantamount to organizational moral agency.

Organizational moral agency, by analogy to individual moral agency, means that healthcare organizations have an ethical responsibility to improve the quality of care by reducing medical errors and improving patient safety. Consequently, healthcare organizations in the United States have shifted their thinking from blaming individuals toward targeting the healthcare systems. As a result of the IOM report and the shift toward the system, hospitals in the United States are making significant improvements in reducing medical errors. According to a recent billing data analysis completed by federal health officials, these improvements have spared 50,000 lives and saved $12 billion in health spending (Cohn, 2014). Unfortunately, there have been few systemic efforts to evaluate the safety culture in healthcare organizations in Saudi Arabia. Until now, healthcare organizations have tried to improve patient safety by using accreditation or by blaming and punishing healthcare professionals who encounter medical errors while performing their services. This punitive approach does not acknowledge that most errors originate from systemic problems within the healthcare system itself. As a function of continuous quality improvement, organizational ethics in healthcare deals with systems and processes to address practical issues, such as medical error and patient safety. Researcher aims to evaluate the Saudi healthcare system regarding medical errors and patient safety, to identify where things go wrong, and suggest ways through which healthcare organizations can improve. The researcher is focusing on improving patient safety by recommending that Saudi healthcare organizations adopt the American method and shift their focus from blaming individuals to thinking systemically.

Methodology and Search Strategy

The researcher conducted a systematic literature search. Two methods were used as search strategies. The first was the truncated search for "patient safety" or "medical error" with the text word "Saudi." Second, the researcher used all the reference lists of all retrieved articles to search manually for additional relevant references regarding the functions of continuous quality improvement in the Saudi healthcare environment. The databases utilized were Google Scholar, Pub-Med, ProQuest, and Science Direct, while the main keywords used were: "patient safety", "the culture of safety", "medical error", "organizational moral agency", "error reporting", and "Saudi healthcare organization". The researcher chose only full-text publications, and then all of them checked again to meet the following criteria: Studies should that been published within the

last 15 years, qualitative or quantitative studies that relate directly to the concept of the research, and studies written in English only were selected. Last but not least, the researcher chose randomly 25 articles related directly to Saudi Health Organizations, and select randomly another 20 articles that discuss issues of medical error, patient safety, and organizational moral agency in healthcare. All studies were presented in this search.

Results

This paper identified critical areas in need of improvement within Saudi Arabian healthcare organizations. First, the researcher found that there is a lack of organizational moral accountability and social responsibility in Saudi healthcare organizations toward the people they serve jeopardizes the quality of healthcare delivery. Improving patient safety and reducing medical errors in Saudi Health institutions are mainly the responsibility of healthcare practitioners (as in the study of Aboshaigah, 2010; Al-saleh and Ramadan, 2012; Bawazir, 2006). Second, in several studies, the researcher has found that there is a lack of a strong safety culture. Studies have shown that there is a lack of awareness regarding reporting policies, a lack of non-punitive systems, a heavy workload that does not allow timely reporting, a lack of hospital staff knowledge about the importance of reporting, a lack of training, and a lack of anonymous reporting systems in most healthcare organizations in Saudi Arabia (as in the study of Tobaiqy and Stewart, 2013; AlJadhey et al., 2015; Al-Arifi et al., 2015). In 2006, a study by S.A. Bawazir conducted in Riyadh found that the majority (87%) of community pharmacists surveyed were not aware of the ADR reporting program in Saudi Arabia (Bawazir, 2006). Another study conducted by M. Abdel-Latif and B.A. Abdel-Wahab in several hospitals in Al-Madinah Al-Munawwarah has found that the participating hospitals do not have electronic reporting systems (Abdel-Latif and Abdel-Wahab, 2015). A survey made in Makkah city found that 88% of pharmacists do not have reporting systems at their workplaces and were not aware of the ADR reporting systems (Al-Hazmi and Naylor, 2013). Last but not least, none of the selected studies have mentioned the role of patient involvement in improving patient safety or reducing medical error in Saudi healthcare organizations.

Discussion

Saudi Healthcare Organizations

Saudi Arabia is the largest country in the Middle East, with a 2018 population estimate of approximately 33 million. The development of Saudi Arabia's healthcare system began, in 1926, when a Public Health Department was established by a Royal decree (Khaliq, 2012). The Ministry of Health (MOH) is the governmental department responsible for making regulations about healthcare. Hospitals in Saudi Arabia are categorized as being either governmental or private. The MOH is responsible for 60% of healthcare

services, and the remaining 40% are managed by other semipublic services and the private sector (Khalil et al., 2018). Health care services provided for citizens and pilgrims are free of charge in governmental hospitals. In 1993, the Saudi Government established the Saudi Commission for Health Specialists to supervise all health-related programs, and regulate and improve the health professions, including the codes of ethics (SCHS, 2018). As part of its 2030 vision, Saudi Arabia is witnessing a healthcare transformation. In recent years, there has been a move toward restructuring the healthcare system to privatize public hospitals and introduce insurance coverage for both foreign workers and citizens (Khalil et al., 2018). The healthcare system in Saudi Arabia began as therapeutic services that only treated existing diseases, but eventually evolved to become both curative and preventive. Saudi Arabia has focused on improving the population's health by improving the healthcare system's quality, which is especially noticeable in the remarkable reduction of Saudi Arabian mortality and morbidity rates. In the MOH's 2016 annual report, the Saudi mortality rate is 2.9 per 1000 people, which is less than half of the world mortality rate (Ministry of Health, 2016). The government is making significant efforts to improve its healthcare system; yet, medical errors still appear and continue to increase in number.

Quality Improvement in Saudi Arabia

The government in Saudi Arabia has made a notable effort to improve the quality of provided services by using standardized operating procedures. Quality, according to the IOM report, has been defined as the degree to which health services for individuals and populations increase the desired health outcomes and reach patients' satisfaction (Almoajel, 2012). Quality improvement in Saudi Arabia is most often attributed to professional - rather than organizational - responsibility. The MOH has mandated that all healthcare organizations should be accredited through the Central Board for Accreditation of Healthcare Institutions (CBAHI), a national accreditation agency meant to improve the quality of care provided. The MOH in Saudi Arabia has used accreditation as a tool to improve patient safety and, more broadly, increase the quality of healthcare services. Sadly, some healthcare organizations are using accreditation as an end itself, and not as a means, to improve quality and enhance patient safety. Hospital accreditation, however, does not always produce improved outcomes; some studies found no significant relationships between accredited hospitals and patient satisfaction (Alonazi and Thomas, 2014). A Saudi study found that organizational factors that can impede quality achievement include using a poorly designed system, lacking a national information system, not having sufficient management training, having a stressful workload, and not encouraging communication and coordination between healthcare facilities (Al-Ahmadi and Roland, 2005). Lacking a national information system may present a threat to patient safety because patients may be given different treatments or even a different diagnosis.

"Blaming and shaming" is the dominant school of thought that is still applied within the Saudi healthcare system. This method is a significant barrier to achieving a high quality of care because the problem's root is not identified or modified. If any adverse events occur within the Saudi healthcare system, it is always healthcare professionals who receive the blame. Healthcare organizations may deny responsibility for any medical errors caused by the system's failure or for harmed patients since they may face litigation or may be forced to shut down their organization during the investigation process. As a result, it is easier for health organizations to blame health professionals for any mistakes, even if they were not due to negligence or did not occur intentionally. Healthcare organizations, as insisted upon by the American bioethics discourse, have a moral obligation to improve patient safety and reduce medical error (Agich, 2007). As an analogy, healthcare organizations are moral agents, just like any individual, with a critical role meant to provide good quality, enhance patient safety, and further patient and community interests. Organizational moral agency is essential because it forces health organizations to continually improve processes based on changing markets, environments, and customer expectations. Ethics and moral agency in healthcare organizations pose a moral responsibility to continuously improve the quality of the healthcare system's structure and processes, while simultaneously being held liable for mistakes that have occurred. In this regard, adverse events, and not due negligence, that result in patient harm will be the liability of the health organization that did not prevent such an error from occurring. If leaders are committed to including ethics within their organization, then ethics and values should be integral to the strategic planning process (Callaghan et al., 2012). A reciprocal relationship exists between organizational moral agency and CQI within the organization because corporate moral agency imposes CQI responsibility, and vice versa; CQI also depends on healthcare organizations' ethical commitment toward improvements in quality of care. Organizational moral agency as a driver to CQI will help health organizations' leaders to rebuild the trust that has been lost owing to negative reputations based on low-quality and malpractices.

High-quality healthcare should be characterized as safe, effective, patient-centered, timely, equitable and efficient (Lynn et al., 2007). A quality problem (a failure in the care process) may lead to a safety problem. Using quality improvement models and tools can enhance care while simultaneously improving patient safety. Using the lean model, for instance, minimizes waste and error while also eliminating delays or other inefficient procedures that take away time from patient care. Healthcare organizations can use several techniques to reach the best quality system, such as root cause analysis and flow charts, to understand the current healthcare system and identify opportunities for improvement. The Veterans Administration (VA) system is an excellent model to represent a health organization that recognizes multiple systemic factors as reasons why things may go wrong within healthcare. Additionally, the VA has used the root cause analysis

approach to investigate serious adverse events that have occurred within its system (Runciman et al., 2007). When an organization is willing to change and improve, the acts of leaders and individuals are transformed into ones that represent the organization's corporate values and moral character. Quality improvement is only useful when healthcare organizations' leaders show their commitment to development by providing a suitable environment for employees to expand their knowledge that allows them to play their roles efficiently. To improve the quality of care, leaders of healthcare organizations should focus on improving patient safety and reducing medical errors through systemic amendments and evaluation to determine its efficiency.

Patient Safety as a QI Function in Saudi Arabia

Patient safety means having an environment that is free from adverse events and errors that harm patients. Patient safety is considered one of the major ethical issues facing the public and healthcare providers in Saudi Arabia (Alkabba et al., 2012). The MOH has used a variety of strategies to increase the safety levels. For instance, the MOH is developing appropriate referral systems, improving training for healthcare providers, and promoting evidence-based practice in healthcare organizations (Khaliq, 2012). Also, many medical colleges in Saudi Arabia are working to incorporate patient safety content into their curricula (AlMaramhy et al., 2011). As an initiative to improve patient safety by using reporting systems, the Saudi Food and Drug Authority has launched the Saudi Adverse Event Reporting System for monitoring the safety of post-marketed medications (Alshammari et al., 2015). In 2016, CBAHI mandated all accredited hospitals to report all severe accidents by filling forms on the CBAHI website within 5 working days from the internal notice of the severe accident, and then follow it with Root Cause Analysis and a work plan to eliminate risks within 30 days from the reporting date (CBAHI, 2018). In 2017, The MOH has launched 'The Saudi Patient Safety Center' as a health initiative to improve health care and to be the national reference for all matters related to patient safety.

In most cases, healthcare organizations do not devote resources to rectifying their patient safety system as long as they perceive their existing processes to be adequate (Chen et al., 2010). Unfortunately, The researcher found that, in most healthcare organizations in Saudi Arabia, management interest is often only triggered after an adverse event occurs. The IOM report indicates that most errors in healthcare that jeopardize patient safety result from hidden mistakes that are deeply rooted in the structure and function of organizations' systems.

To have an ambiance with a high level of patient safety, management of healthcare organizations must have a strong culture of safety. Patient safety pioneers have identified a positive safety culture as a setting that has mutual trust and open communication, a non-punitive system, and ameliorate reporting systems that provide opportunities to analyze and learn from adverse events. Medical errors are merely

human mistakes committed within a rational system that has been inadequately designed to catch and neutralize those mistakes in time (Nance, 2009). Therefore, a learning environment will help redesign the system by allowing it to detect errors and correct them before people are harmed. Learning systems are designed to foster continuous improvements in care delivery by identifying themes, reducing variation, sharing best practices, and stimulating system-wide improvements (Aboshaigah, 2010). The healthcare organization should focus on what can be learned from errors, and not on where to find fault or place blame (Aboshaigah, 2010).

Almost all publications that have examined the culture of safety within Saudi Arabian healthcare organizations have found that there is no strong culture of safety. The absence of safety culture can harm patients, and consequently, lead to deterioration of patient safety (Walston, 2010). A widely used tool for evaluating patient safety culture is the Hospital Survey on Patient Safety Culture, which measures 12 patient safety culture composites representing several patient safety culture predictors (El-Jardali et al., 2014). The healthcare system in Saudi Arabia is hierarchical, meaning that it lacks interdisciplinary collaboration and communication. Effective communication among healthcare providers will improve information flow, enhance employee morale, and increase patient satisfaction (O'Daniel and Rosenstein, 2008).

It has been said that ineffective leadership was a contributing factor in 50% of the sentinel events reported to the Joint Commission in 2006 (Ericksen, 2010). Therefore, creating a safety culture requires the commitment of top management and leaders to improve quality. Once these organizations accept their moral responsibility toward improving the quality of the system, they will be willing to commit to providing strategies that will improve the system. In conclusion, the ethical perspective of organizational moral agency does not exist; as a result, organizations have been protected by the system. Usually, Moral duty and accountability to prevent harm and increase patient safety rests upon healthcare professionals.

Most Saudi healthcare organizations do not have practical or active reporting systems. Hence, healthcare organizations should make stronger efforts to train healthcare providers on the topics of reporting errors, making clear guidelines for filing reports, and encouraging error reporting. It is important to note that adverse events reports are not a new phenomenon in the healthcare system in Saudi Arabia and that many healthcare organizations, either in the private or the public sector, have their voluntary reporting systems. A study made on "Incident Reporting at a Tertiary Care Hospital in Saudi Arabia," indicates that incident reports occur at a rate of 5.8 per 1000 patient days, which falls in the low range when compared with internationally reported rates (Arabi et al., 2012). The low rates of reporting errors are due to the fear of punishment and legal ramification. Blame culture is an unhealthy environment for reporting or learning from mistakes because it will lead to under-reporting when it comes to safety issues.

Also, there is no public reporting center between the Saudi health organizations that they can share information and learn from about medical errors and how to prevent them. Texas and Pennsylvania currently provide public reporting databases that serve as resources to healthcare organizations and aim to improve patient safety by understanding and targeting system factors (Hughes, 2008). This shared reporting database allows healthcare employees to apply new knowledge to their work to prevent errors' recurrence.

Furthermore, engaging patients in their treatment plan can improve a healthcare system's quality. Physician-patient communication has been widely recognized as a significant source that leads to patient satisfaction and compliance (Buller and Buller, 1987). The highest ranked medical ethical challenge within the public in Saudi healthcare system was patients' rights (Alkabba et al., 2012). Those rights include the right to choose treatment, the right to health, and the right to quality of care. In most Saudi health organizations, patients still play a passive role in their care. The patient is a valuable information resource because s/he is the only observer who witnesses the entire care process (Vincent, 2010). Patients have a vital role in improving patient safety by having the responsibility to ensure their own safety and follow treatment regimens, by partnering with health professionals and health organizations to improve safety, providing feedback to improve the system, and by advocating as citizens for public reporting and accountability of hospital and health system performance (Mitchell, 2008).

Medical Error in Saudi Arabia

Medical error is a global concern. Mistakes happen every day in every hospital, but many are not caught by healthcare providers or are caught but not made public. The medical error refers to any preventable adverse events that may or may not lead to hurting patients. Although the rate of medical errors in Saudi Arabia has increased during the last ten years, the exact number is unknown. Between 2001 and 2006, medical errors in Saudi Arabia numbered approximately 25,920 (Aboshaigah, 2010). An accurate number regarding medical errors that occur in Saudi Arabia is still unknown as a result of inadequate data collecting and reporting systems, fear of litigations, and punishment. Researcher focused on medical errors in Saudi Arabia that are not due to negligence. In 2012, the Saudi press and social media were filled with heartbreaking news regarding an eight-year-old boy (S.J.) who had accidentally been given a fatal dose of nitrogen instead of oxygen during an operation at a private hospital. The Ministry of Health shut down the hospital during its investigation, but it has since been reopened. The healthcare professionals involved with the patient now face imprisonment charges and other penalties, and the hospital manager has been forced to resign. Unfortunately, when a medical error occurs, the healthcare system tends to blame the health practitioner - even if it is not due to negligence. Individual healthcare professionals are almost always held solely responsible for any medical errors that are apparent during or after a patient's treatment. In this particular case, healthcare professionals

should not have been held accountable for that error. There was no negligence, and the professionals involved with his treatment did not know that the oxygen source had been mixed up with the source for nitrogen oxide. The system was deficient because no one had tested the site's vents after maintenance. Such tests would have ensured that conditions were acceptable before any operations were conducted. In this situation, the organization's healthcare system should be solely responsible for the incident, and blame should not have been placed on the physicians or nurses. In Saudi Arabia, a third of medical practitioners are banned from travel as a result of medical error complaints, and 80% of those complaints end without conviction (Al-Saleh and Ramadan, 2012). There are many different types of medical errors, such as medication, surgical, and communication errors. The researcher focuses on medication error – a common adverse event that harms patients and even threatens their lives. In several studies recently completed in the United States, adverse drug events for hospitalized patients was estimated to range between six and fifteen per 100 patient admissions. In Saudi Arabia, two recent studies approximated that the prescribing errors in hospital inpatient range between 13 and 56 per 100 medication orders (AlJadhey et al., 2013). These statistics indicate a significant risk to patients and their safety. The following part will discuss briefly one type of medical errors.

Medication Errors in Saudi Arabia

Medication errors can result from faulty prescriptions, wrong patients, inaccurate medication history, wrong dosage, route errors, order clarity, and dose frequency. In Saudi Arabia, it is common for medical professionals to receive an inaccurate medication history when a patient is admitted to the hospital. As a result, it is important to have a unified health information system that links patients' health information, including prescribed medications, from various healthcare systems rather than relying solely on hospital health information (AbuYassin et al., 2011). The lack of adequate training or knowledge and bad handwriting are the most important factors that lead to prescribing errors. Most Saudi health institutions still use paper prescriptions, where a physician or nurse handwrites the prescription for the patients. The majority of Saudi health organizations (more than 60%) do not have computerized provider order entry (CPOE) systems in their infrastructure. This technology has been supported by many organizations in the United States, such as the Institute for Safe Medication Practices, the American Medical Association, and the American Hospital Association. CPOE is a prescription ordering system that allows healthcare providers to order, review, and dispense medication electronically to eliminate prescribing medication errors. Moreover, CPOE will lead to process improvement in medication reconciliation, which provides information on the current medication (such as administration time) and provides an area to define whether the drug should be renewed or discontinued (Paoletti et al., 2007).

Non-adherence to labeling protocols is reported as another significant cause of medication errors in Saudi Arabia (Alkhan et al., 2013). Saudi Healthcare Organizations have no regulation by the Ministry of Health or other authority that establishes specific labeling requirements while dispensing medication. However, some of them making their strategies like using Tallman letter system in writing medication names that will minimize errors with LASA medication names; e.g., 'predniSONE' and 'prednisoLONE' (Alkhani et al., 2014). A study in King Saud Medical City has recommended several strategies to minimize dispensing errors such as standardizing all crash cart lists in all patient settings by using a mapping system, reducing telephone and verbal orders except in emergencies, following international patient safety goals, and improving the safety of high alerted medications (Al-Zaagi1 et al., 2015).

Unfortunately, such errors continue to recur, even after healthcare practitioners involved with each event are punished. This proves that the punitive approach is not an ideal way to resolve such issues. Therefore, to prevent medication errors, healthcare organizations should look for strategic changes in healthcare delivery. The IOM report stated that more than 90% of deaths result from failed systems and procedures, and not from physicians' negligence (Clinton and Obama, 2006).

Conclusion

Most Saudi health organizations prefer to operate under the assumption that individuals cause preventable errors and that systems are faultless. To improve patient safety and to minimize medical errors that harm patients' lives or may lead to their deaths, healthcare organizations in Saudi Arabia should shift their attention from blaming health practitioners to the system of healthcare itself and focus on identifying the root causes behind these preventable adverse events. The study revealed that the most important initiatives to improve patient safety should focus on the following domains: organizational moral agency and ethical responsibility toward patients, positive safety culture, reporting systems, patient involvement, and available ethics committee. The researcher concluded that Most Saudi Healthcare organizations do not have a positive safety culture; there is a lack of open communication and a lack of a non-punitive system. The researcher acknowledges that many reporting systems exist in the Saudi healthcare organizations; however, most are inactive, so the researcher suggested mandated error reporting to the national reporting center. The Researcher tried to improve the existing Saudi healthcare system and reduce the recurrence of preventable adverse events, rather than changing the Saudi healthcare system into an entirely new one. Therefore, The researcher will provide in the following section several recommendations based on the proposal by the IOM report and what has been done in the American healthcare system to improve its quality.

Recommendations for Saudi Healthcare Organizations

This section addresses the weaknesses in the Saudi healthcare organizations' system by providing recommendations based on the best practices observed in American healthcare organizations.

1- Inducing the Meaning of Organizational Moral Agency to the Saudi Healthcare System

The researcher recommends that healthcare organizations declare their organizational moral agency by analogy to individual moral agency in Saudi healthcare organizations, which constitutes the moral obligation to improve the system by reducing variations continuously. When this occurs, the focus will shift from individual responsibility to systemic accountability. Infusing organizational moral agency as part of the "DNA" of the Saudi healthcare systems will allow healthcare organizations to acknowledge their ethical responsibilities and accountability toward their customers; hence, health organizations will be willing to adopt new knowledge, analyze their structure, redesign their care process, incorporate CQI approaches into their processes, and enhance their outcome. Removing deficiencies and variations from the system by using quality improvement methods such as lean thinking and six-sigma, will help with cost reduction, error reduction, and improved patient safety. Consequently, healthcare organizations will have a system that is capable of detecting, preventing, and correcting errors when they are found within that same system.

2- Creating a Safety Culture in Saudi Healthcare Organizations

The researcher recommends that Saudi health organizations create a positive safety culture as part of their ethical responsibility toward the patients they serve. To create a safety culture, leaders of the Saudi Healthcare organizations should encourage health professionals, regardless of their ranking or hierarchy within the organization, to speak up and discuss situations on a regular basis so that they are prepared when patient safety issues arise. Open discussion is a crucial factor in improving quality and enhancing patient safety. Therefore, Saudi health organizations can implement strategies or programs such as Crew Resource Management to improve communication effectiveness among health professionals.

Besides, Saudi healthcare organizations should create an active and effective reporting system while also establishing a blame-free environment meant to encourage healthcare providers to report errors or near misses without fear of legal ramifications or guilt. As a moral agent, a healthcare organization has the responsibilities to provide an incidental reporting system for all employees. Also, Saudi healthcare organizations should conduct workshops to teach health practitioners the error reporting mechanism, standardize reporting systems used throughout the organization, provide clear guidelines for filing reports, and encourage error reporting. Other topics that should be addressed by the healthcare organizations include: reducing healthcare providers' workload so that they have time to report, providing financial support to

import electronic reporting and data analysis systems, and giving timely feedback and recommendations to prevent these incidents from recurring.

The researcher insists on creating a safety culture characterized by the learning environment. The researcher also recommends creating a Saudi national reporting database so that employees can share the adverse events that occur within the system, while also using it as a resource from which to learn. Health policy makers in Saudi Arabia should enact a policy that mandates the use of a suitable web-based, confidential/anonymous reporting system intended to detect weaknesses in that system that might create incidents or harm people. This should be done with the intent to encourage all organizations to have a voluntary reporting system to improve quality and patient safety, which would allow people to resolve issues during the development of strategic planning process or by redesigning the system's operations. However, Saudi healthcare organizations should not rely on reporting systems as the only means to find weaknesses in the system because not all errors can be detected or reported.

3- Involving Patient in the care plan and initiating ethics committee

Saudi healthcare organizations should shift their attention toward patients because they play a vital role in improving patient safety. The research suggests that Saudi health organizations should encourage healthcare providers to partner with patients in making decisions and adopt the strategy of patient-centered care. The patient is a valuable resource of information because they are the only observer who witnesses the entire process of care. So, they not only help improve the quality of care, but patients can also help organizations by providing feedback regarding a redesign of the process of care or using their expectations to suggest improvements to the system.

Moreover, the Researcher recommends that healthcare organizations promote error disclosure and acknowledge the patients' rights to be told the truth. The researcher recommends that each Saudi healthcare organization should have an ethics committee with a conflict resolution department that uses mediation strategies when revealing an incident or event to the injured patient or his/her family. It is the ethical responsibility of an organization to disclose error with compassion to the patients, explain the error's causes, and give an apology.

4- Shifting Toward the System of Healthcare to Reduce Medication Errors in Saudi Arabia

If Saudi healthcare organizations declare their ethical responsibility toward their patients, then they will work to redesign the system in a way that eliminates errors even before they occur. They will implement continuous quality plans that repeat steps multiple times to identify and analyze problems, redesign the system, implement change(s), and evaluate outcomes. Healthcare organizations should use tools and

methods (such as Six-Sigma, fishbone diagram, or root cause analysis) to continuously improve the quality of care provided to their customers, rather than doing so by punishing individuals in a manner that does not benefit the system. Also, implementing a standardized policy for utilizing the Tallman letter system in writing medication names will minimize errors with LASA medication names. As illegible handwriting may lead to a medication error, it is essential to focus on improving the system by implementing technology in all Saudi healthcare institutions, such as CPOE. However, recommendations are not enough; healthcare organizations must be willing to make the necessary changes. Continued research aimed at the organizational moral agency in Saudi health organizations is needed, particularly

regarding enhancing patient safety and reducing medical error.

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تحسين سلامة المرضى والحد من الأخطاء الطبية في مؤسسات الرعاة الصحية السعودية

الملخص: هدفت هذه الدراسة إلى تحديد المجالات الحرجة والمهمة في أنظمة الرعاية الصحية والتي تحتاج إلى تحسينات للحد من الأخطاء الطبية وتعزيز سلامة المرضى. وأما المنهجية: فتم إجراء مراجعة علمية منهجية لاستكشاف المشكلة الأخلاقية المتعلقة بالخطأ الطبي وسلامة المرضى في نظام مؤسسات الرعاية الصحية السعودية. أسفر هذا البحث الإلكتروني في قاعدة البيانات عن أكثر من 4000 مقالة مرشحة، تم اختيار 45 منها عشوائياً بعد أن استوفت معايير شمولها في هذه الدراسة.

النتائج: كانت نتائج الدراسة البحثية أكثر من 45 مقالة ذات صلة وثيقة بالموضوع قيد التحقيق وتنطبق عليها معايير هذا البحث المنهجي. وقد كان الافتقار إلى المسؤولية الأخلاقية للتحسين المستمر لنظام الرعاية الصحية، وعدم وجود ثقافة سلامة مناسبة ونظام إبلاغ فعال، ونقص وجود الرعاية الصحية التي تركز على المريض من أهم المجالات في نظام مؤسسات الرعاية الصحية السعودية التي تحتاج إلى تحسين لتعزيز سلامة المرضى والحد من الأخطاء الطبية.

الآثار العملية: قدم الباحث عدة توصيات على أساس ما تم عمله في نظام الرعاية الصحية في الولايات المتحدة والذي يتناول بشكل منهجي تحسين سلامة المرضى والحد من الأخطاء الطبية. على سبيل المثال، يجب على منظمات الرعاية الصحية التي تسعى لتعزيز سلامة المرضى والحد من الأخطاء الطبية التخلي عن النظام الروتيني الذي يقوم على إلقاء اللوم على الممارس الصحي والتركيز على تحسين نظام الرعاية الصحية بدلا من ذلك. كما أنه لابد أن ينبع التفاني في تعزيز سلامة المرضى من المسؤولية الأخلاقية لمنظمات الرعاية الصحية تجاه المرضى الذين تخدمهم. أيضا، يجب على مؤسسات الرعاية الصحية خلق ثقافة قوية للسلامة. وأخيرًا، يجب أن تهتم مؤسسات الرعاية الصحية بالدور الأساسي والمهم الذي يقوم به إشراك المرضى في العملية الصحية في تحسين السلامة والحد من الأخطاء الطبية.

الكلمات المفتاحية: سلامة المرضى، الرعاية الصحية السعودية، الجودة، الاخلاقيات الطبية، الأخطاء الطبية، ثقافة السلامة.