Patient safety and safety culture nursing essay

Health & Medicine, Nursing

Across the globe, patient safety is a major determinant of quality of care and is therefore one of priorities of any healthcare institution. It is not until 1999 after a report published by the Institute of Medicine (IOM) have the problem of patient safety been emphasis and since then its release continue. The report stated that at least 44, 000 people, and perhaps as many as 98, 000 people, die in hospitals each year as a result of medical errors that could have been prevented, according to estimates from two major studies (Kohn et al., 2000b). Adverse events are injuries not caused by the condition of the patient (Kohn, Corrigan, & Donaldson, 2000a). Several studies in various countries have shown that a substantial number of patients suffer from adverse events in hospitals (Zegers et al., 2009). It is estimated that 8% to 12% of all patients suffer from adverse events when admitted to a hospital in the member states of the EU (Council of the European Union, 2009). A survey in Dutch hospital report stated that several studies in various countries have shown that 2. 9% to 16. 6% of patients in acute care hospitals experience one or more adverse events. Approximately 50% of the adverse events are judged to be preventable. It is believed that to improve quality and safety in healthcare, hospitals have to create a patient safety culture among their staff besides making structural interventions (Smits, Christiaans-Dingelhoff, Wagner, Wal, & Groenewegen, 2008). Hospitals are becoming ever more conscious of the fact that there is much to improve in the safety of their patients, and consequently many hospitals have been implementing interventions to reduce the amount of adverse events. However, as in other high risk industries—such as Aviation, chemical process industry, and nuclear power—it is believed that to improve patient safety in

healthcare, hospitals have to create a safety culture among their staff (El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011). Reform of organisational structures, clinical training, guidelines and information technology are not sufficient when achieving good quality and patient safety. Safety Culture is defined by Health and safety Commission of Great Britain as:" Organizations with a positive safety culture are The safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies, and patterns of behavior that determine the commitment to, and the style and proficiency of, an organization's health and safety management characterized by communications founded on mutual trust, by shared perceptions of the importance of safety, and by confidence in the efficacy of preventive measures (Health Safety Commission, 1993). Safety culture is an aspect of the organisational culture. A positive safety culture guides the many discretionary behaviours of healthcare professionals toward viewing patient safety as one of their highest priorities (Nieva & Sorra, 2003). There are several instruments available to make an assessment of the safety culture in hospitals (Colla, Bracken, Kinney, & Weeks, 2005; Flin, Burns, Mearns, Yule, & Robertson, 2006). One is The Hospital Survey on Patient Safety Culture (HSOPS) (Sorra & Dyer, 2010)which aims to measure multiple dimensions of patient safety culture in hospitals. Previous research has shown that the psychometric properties of the HSOPS are good (Colla et al., 2005; Sorra & Dyer, 2010). The questionnaire is being used in several countries and has been translated into Dutch for use in The Netherlands for example (Smits et al., 2008) further studies done by Haugen et al., 2010 reveals that HSOPS have been translated to seventeen languages and used

in over thirty countries. Like many other safety culture questionnaires, the HSOPS has to be administered individually to employees at a hospital or a hospital unit. However, the aim of the questionnaire is to measure the group culture within the hospital or unit. The assumption that the HSOPS measures culture and not just individual attitudes has not been examined before. It can be tested by analysing whether individual responses cluster within units or within hospitals. By examining the clustering of individual responses by means of multilevel analysis, one can identify contextual phenomena (Leyland & Groenewegen, 2003). This is a validated instrument developed by the agency for healthcare research and quality. It has good reliability and validity (Chen & Li, 2010). The development of effective interventions are closely related to the understanding of the critical organizational and individual limits, requiring a culture that can overcome the barriers for the implementation of measures organizational behaviour and to promote the analysis of adverse events and to collect the lessons that can be derived from these. Achieving an adequate safety culture is mentioned as the first of the 30 safe practices by the National Quality Forum of the United States. It also establishes its measurement capital as a recommendation. Patient safety is then placed in the perspective of an overall higher quality and because it depends on multiple components acting in the system, must be addressed through the adoption of clinical practices that the US government that allows to focus on planning and management of health services the needs of citizens, emphasizing the while the role and responsibility of all professionals working in health care. Strengthen the skills of professionals is in fact a core value, as well as training constitutes an indispensable

instrument to ensure the delivery of safe and effective care. In recent years, many educational initiatives have been undertaken, albeit with different types and different ways. These experiences lead us to reflect on the need to reach a level homogeneous skills and knowledge which will improve the implementation of strategies for safety patients nationwide. The goal is to offer it to all health professionals, regardless of role, the professional and the care setting, an opportunity for training in specific field of patient safety and clinical risk management and the Regions, Autonomous Provinces and companies, to whom falls the task of developing further training programs, a valuable tool, the logic of improving the quality and safety of care. In addition this study seeks to assess the current patient safety culture in Belize’s Public Hospitals and make comparisons with existing data from hospitals in other countries.

Belize Demographics

Uniquely located in both the Caribbean and Central American regions, Belize is a country with rich diversity of people, languages, and cultures. Belize is the only country in Central America where English is the official language. Kriol and Spanish are more commonly spoken. With 22, 960 square kilometres (8, 860 sq mi) of land and a population of only 327, 719 inhabitants (July 2012 est.), the country's population growth rate of 2. 011% (2012 est.), however, is the highest in the region and one of the highest in the western hemisphere (Statistical Institute of Belize, 2009). Like other developing countries, it faces demographic and epidemiological transitions, and challenges in achieving health equity. There are social, economic, environmental and political determinants of health, many of which lie outside

the health sector’s responsibility and demand effective intersectoral collaboration, policies that support health in all sectors, and enhanced partnerships with local, national, and international partners. Overall health conditions in Belize compare favourably with neighbouring Central American countries, though still poor (Pan American Health Organization & World Health Organization, 2009). The Ministry of Health (MoH) is responsible for leading the health sector. The national public health system delivers services through a network of institutions at the primary, secondary, and tertiary levels. The current emphasis is on the primary and preventive care focusing on the prevalence of lifestyle and behaviour related conditions as indicated by the country’s epidemiological profile. MoH implemented the Health Sector Reform project consisting of three major components, namely, sector restructuring, services rationalization and improvement, and financing strategy. The Health Sector Reform has resulted in a number of infrastructural and managerial changes in the health care system. One of the major changes was the subdivision of the country into four health regions (Ministry of Health, 2006)Belize is experiencing a general shortage of health professionals. Over the last ten years there has been the need to recruit health professionals, especially physicians and nurses from Central America, the Caribbean, and other countries (most notably Cuba), to supplement the delivery of health care. In Belize, inadequate HRH is a core weakness of the health system. The problem in the disparity between health care delivery in urban and rural areas is not only reflected in the inequitable distribution of medical equipment and supplies favoring urban areas but also in the number and quality of HRH this is particularly acute for remote rural areas. Human

resources for 2009 reveal a total of 1279 Health Care Providers in the country of Belize of which 469 are nurses, 241 medical doctors, 158 community health workers, medical technicians 126, 112 pharmacist, 60 public health officers, 59 auxiliary nurses, 42 midwifes, and 12 dentists It is estimated that the current ratio of health care providers per 10, 000 population in Belize is 18. 9, below the WHO recommended optimal ratio of 25 (PAHO/WHO, 2009).

Problem Statement

Medical and nursing students are traditionally educated along the dictum of ‘ first, do no harm’. However, as the studies outlined above clearly demonstrate, a substantial number of patients suffer injuries due to medical interventions while in hospital. When the causes are investigated it is found that most of such injuries are due to errors and are therefore potentially preventable. In health care institution, the priority is to alleviate pain, suffering and protect patients against harm to patient which can be potentially serious or life threatening to patients. When an error or adverse event occurs, healthcare professionals may be faced with a difficult dilemma in deciding whether and what to tell about such incident. On the one hand disclosure is advocated by patients, safety experts and ethicists; yet on the other hand professionals are conscious and fearful of potential litigation. Although such fears are understandable, studies show that error disclosure reduces patients’ inclination to sue. Many patients who believe they have been the victim of incompetent care take legal action simply to find out exactly what happened to them and to prevent recurrence. International evidence shows that the vast majority of patients who are injured by medical

errors never sue. Thus to prevent and decrease the number of law suits and unsafe patient care, it is important to assess the level of culture among health care providers to create an understand so that health care institution can make necessary strategic plan to remedy such gap. A primary motivation for my research was driven by the concern for creating systems for reporting and learning from incidents to prevent medical error and adverse events and developing safety culture in these hospitals since this seems to be one way of promoting patient safety. To date, there is little research done on safety culture in Belize therefore this research in Belize health care setting is needed. The result from this research can be used for future research at investigating, testing and developing policy on patient safety. In this context, it is valuable to conduct a research study of safety culture to obtain better understanding of the mechanism and effect of culture on safety. Ideally, this assessment tool for improvement should be able to help 1.) determine the specific safety culture or climate profile of the regional hospital; including the identification of " strong" and " weak" points, 2.) raise staff awareness, 3.) measure changes when applied and repeat over time, 4.) benchmarking by evaluating the standing of the other organizations, 5.) accreditation.

Significance of the Study

Patient safety is an important component of healthcare policies worldwide and is one of the essential policies that hospitals and clinics across the globe must practice, religiously. Sadly, however, many hospitals do not adhere patient safety culture in their hospitals, even in the developed world. A good culture of patient safety (PS) is key to avoiding, where possible, the

emergence of effective adverse effects, encourage reporting and learning errors and implement strategies to avoid recurrence. In our country and within the area to promote clinical excellence, the ministry of health must create a plan to establish objectives of the strategy towards improving patient safety and to promote and develop patient safety among professional and as action project to study the perception of the professionals towards the PS. The measurement of PS allows healthcare professionals to know the situation baseline from which they can prioritize improvement actions and regular repetition. This measure also allows analyzing the effectiveness of these actions and rethinking strategies. This evaluation is in itself an intervention that displays the institution's interest in know and prioritize the patient safety practices. Since, this subject is of prime importance to the profession of medicine and nursing, it is necessary to understand the importance of patient safety. To this end, this research will be of immense importance to students and teachers of nursing and medicine, as well as, healthcare policy makers in assessing why hospitals do not adhere to the culture of patient safety, despite its necessity, in different regions of the world. Furthermore, this research will be important for future researchers to refer to and take assistance for their future researches, and make improvements to the current research, to add to the body of knowledge as well.

Research Questions

This study, attempt to answer the following questions: What is the level of current patient safety culture in among the four Regional Hospitals in Belize? How do healthcare professionals perceive patient safety issues?

Objectives of the study

The research aims to assess the current patient safety culture in Belize's hospitals from the perspective of healthcare workers with the following objectives: To assess the current practices and perception of health workers towards patient safety culture.

Definition of Terms

Adverse event: An injury related to medical management, in contrast to complicationsof disease (Brennan, Leape, et al., 1991). Error: The failure of a planned action to be completed as intended (i. e. error ofExecution) or the use of a wrong plan to achieve an aim (i. e. error of planning) (Kohn et al., 2000b). Patient safety - " the avoidance, prevention, and amelioration of adverse outcomes or injuries stemming from the processes of health care" (Kohn et al., 2000, p. 57). Preventable adverse event: An adverse event caused by an error or other type ofsystems or equipment failure (Leape, Lawthers, Brennan, & Johnson, 1993). Safety: Freedom from accidental injuries (Kohn et al., 2000a).

CHAPTER 2: LITERATURE REVIEW

This chapter will provide the literature review relates to relevant research about patient safety and key dimensions of hospital safety culture that were identified for inclusion in the survey. The content will included an overview of patient safety, and ten safety culture dimensions: Supervisor/manager expectations and actions promoting patient safety, organizational learning, teamwork within unit communication openness, feedback and communication about error, non-punitive response to error, staffing, hospital

management support for patient safety, teamwork across hospital units, hospital handoffs and transitions. Over the past 15 years patient safety initiatives have improved still it is considered to be the most important emerging cause of mortality and morbidity. Proper assessment, evaluation and management help in minimizing medical errors optimising patient satisfaction and improve patient care.

Overview of patient safety

Patient safety is a new healthcare discipline that emphasizes the reporting, analysis, and prevention of medical error that often leads to adverse healthcare events. It was not until 1990s that the frequency and magnitude of avoidable adverse events became recognized, when many countries reported overwhelming numbers of patients harmed and killed by medical errors (Kohn et al., 2000b). The measures and actions aimed at safety of care, medical procedures, and the protection of patients who undergo them, represent an integral and essential responsibility of all health professions. On this premise, the Orders of the Provincial Medical and dental surgeons and the Federation National, state auxiliary organizations, aim to address the issue of human error, and responsibilities, as part of professional practice, including in relation to the corresponding forms of compensation. The importance of security and the role of 'positive' error is it also clearly established art. 14 of the new Code of Medical Ethics (2009), requiring medical attention 'detection, reporting and evaluation of errors in order of improving the quality of care ' (Gerberich et al., 2004). Preliminary step for a peaceful approach to the problem is therefore on the principle that the error handling is a professional activity in the strict sense, and that the error

declared may be incentive to improve the professional, adopting a concept of clinical governance as an impetus to improve the organization through the most appropriate use of professional procedures. Moreover, while from the point of view seems jurisprudential set the concept of fault single professional as guilt, out of context and organizational structure in which it plays performance, becomes ever more urgent need for a mapping error in national and regional levels, possible only through statutory procedures, and they become part and essential feature of their professional function of collecting and reporting errors on the part of professionals (Findorff, 2000). Therefore, doctors and dentists, believing that the promotion of safety represents a citizen's right and duty of professionals as a factor determining the benefits paid, put to the attention of the institutions and all involved some concrete proposals, which together constitute a kind of Ten Commandments and Safety Clinical Risk Management, on three main lines of approach to the systematic complex problem: the level of organization, the level of training, the level of Responsibility the last years have been, for the nursing scene, full of changes that have changed the picture radically innovated and responsibility of nurse practitioners in the citizen and the community (Carroll & Morin, 1998). The demand for quality and personalized care services is increasingly on the rise; it thus increases the level of competence and responsibility of the nurse against of the patient, the times require trained professionals, able to compete as a team multidisciplinary and are able to give guarantees on their actions, as aware of consequences arising from their decisions and how to conduct interventions. In this logic is proposed with this training methodology FAD Blend that each nurse - in any

industry and area of the country works - can understand the root of the origins of clinical risk in all its facets, at his own modes of prevention and control, developments in the ethical component in risk management, including the value of communication and stakeholder engagement, internalize the meaning of " Respond to ...", knowing that safety in health care today has become a common priority and essential, involving the organization, workers and citizens (Duncan et al., 2001). The health system is a complex system in which multiple factors interact, and heterogeneous dynamic, including citing the plurality of health services, specialized skills and roles of professional, technical, health and economic and administrative processes and the heterogeneity of deliverables. All system components must integrate and coordinate, for meet the care needs of the patient and assuring the best possible care. As in other complex systems, such as aviation, nuclear power plants or military defense systems, also in health care can result in accidents and errors. For many years, efforts to transfer health safety procedures designed for other sectors, but on the contrary of them, characterized by a predominantly footprint " mechanistic", in the prevailing health " human factor", while resource and criticality. In fact, if on the one hand adaptability of behavior, dynamism and complexity of interpersonal relationships are basic features of human resources within the system, they are the same time, a critical factor, because the dynamics of work are complex, the " performance" individual variable and, above all, the results of the processes are not always predictable and reproducible. Should therefore be designed to control specific patterns of clinical risk, with the aim of prevent the occurrence of an error and if this happens, to contain the

consequences (Bell, 2000). Often the opportunity to experience an adverse event depends on the presence, in the scheme of " insufficiency latent " or shortcomings or mistakes in design, organization and control, which remain silent in the system until a trigger does not make it manifest in all their potential, causing damage of varying severity. Indeed, it is for the most identifiable as cause direct and immediate an adverse event, an " active failure", a human error, a procedure is not respected, a distraction or a mishap that has directly allowed the occurrence of the same. However, the error detection " active" does not exempt from trouble shooting " latent" because they are the shortcomings of the system that must be removed if you want to reach a effective risk control, or reduce the probability that an error occurred (activities prevention) and reduce the harmful consequences of errors still occurred (activities protection). The risk management policies, aimed at both prevention of avoidable errors that the containment of their possible harmful effects, and thus, ultimately, to guarantee (Amnesty International, 1997). Clinical risk is defined as the possibility that a patient will suffer " harm or discomfort involuntary, attributable to health care, which causes a prolonged period of hospitalization, a deterioration of health or death." The clinical risk and medical error when tackling the issue of clinical risk should pause to define the error and possible damage that may result for the patient. In literature one can find many definitions of " error" and " adverse event". All share certain essential features: the error is a failure of the system that affects the failure of planned actions, the error is an " unsafe actions" or " failure" with potential negative consequences on the outcome of the treatment process, the error is a behaviour that may be considered

inappropriate by " peers" of recognized experience and expertise, at the time where the event occurs, regardless of whether or not there have been negative consequences for the patient. The error may cause an adverse event, i. e. an undesirable event that involves damage to patient due to her medical condition, but related to the care process. The event against it, then, by its nature, unwanted, unintended, harmful to the patient and the event derived from error is defined against " preventable". For the purposes of identification of the measures of Prevention to be implemented, is of great importance not only the analysis of adverse events, but also that of most events or near misses. Have been proposed various classifications of the error in the health sector with the intent to define and share a vocabulary in order to identify, in a precise and unambiguous, the type of failure which occurred in the system (Bell, 2000). The majority of accidents in complex organizations are generated by the interaction between different system components: technological, human and organizational. In the early nineties a psychologist James Reason is able to explain and illustrate the problem of efficiently errors in complex systems; his model, nicknamed the " Swiss cheese" is useful for understanding of the complexity and heterogeneity inherent to the system. The holes in the cheese slices represent the latent shortcomings that are present in the processes health, and when you edit multiple factors that normally act as protective barriers, the holes can be aligned and allow the concatenation of those conditions that lead to the occurrence of the incident. In health there are two types of risk: a risk of " enterprise" intrinsic to the technologies, mechanisms of production of the health care organization and proportional to the complexity of the system

and a risk defined as " pure risk", which is not related to the complexity of the system production and depends on the concatenation of situations which favors the onset of an event adverse, it is not predictable or quantifiable (Carroll & Morin, 1998). In the health field are multiple factors that contribute to defining the " degree of risk" of system, which can be schematically grouped into the following classes: a) structural factors - technological • characteristics of the building and plant health (planning and maintenance) • security and logistics environments • equipment and instruments (including operations, maintenance, renewal) • infrastructure, networks, digitization, automation The benchmarks in relation to these factors should be considered already in the design phase and construction of buildings, according to the most recent acquisitions include building health and among others: the age of structures and equipment, the safety of the technology equipment and the degree of maintenance, the distances to be covered in the phases of movement of patients or materials, access to service facilities. Particular attention should be paid also to the evaluation, introduction and use of the sick new technologies and equipment by personnel not specifically trained (Gerberich et al., 2004). It is important to understand the relationship between these organizational characteristics and provision of care to effectively modify these organizations to improve care. Literature has shown that organizational structure and processes surrounding clinical care delivery interact with clinical treatments to influence patient outcomes (Mitchell, Ferketich, & Jennings, 1998). Understanding this interaction between organizational and clinical variables would allow designing care delivery systems that maximize positive patient outcomes. Below I will discuss how

the 10 dimension can influences patient safety culture among the health care providers and how the characteristic of hospitals may/may not be influential.

Causes of healthcare error

Some causes of healthcare error that are seen in many literatures are attributed mainly by human factors, medical complexity and system failures. In terms of human factors two studies done reported that error occurs because of the differences between healthcare provider training & experience, (Neale, Woloshynowych, & Vincent, 2001; Wu, Folkman, McPhee, & Lo, 2003) fatigue, (Barger et al., 2006; Landrigan et al., 2004)depression and burnout(Fahrenkopf et al., 2008). Furthermore due to the mass migration and growing population there is a wider diversity of patients, unfamiliar settings and time pressures. In addition many health care providers and institutions fail to acknowledge the prevalence and seriousness of medical errors (Henneman, 2007) Secondly health care error can be caused by medical complexity which included complicated technologies where in most instances there is not qualified person who are able to operate these equipment, due to powerful drugs prolonged hospital stay and Intensive care (Leape, 2002; Weingart, Wilson, Gibberd, & Harrison, 2000). Lastly medical error can be due to system failures which includes poor communication, unclear lines of authority of physicians, nurses, and other care providers (Neale et al., 2001) which poses a great threat. The worsening hospital nurse shortage and the increase as patient-to-nurse ratios increase demands an understanding of how nurse staffing levels affect patient outcomes and nurse retention in hospital (Aiken, Clarke, Sloane,

Sochalski, & Silber, 2002). There are few studies that indicate that disconnected reporting systems within a hospital and that such fragmented systems in which numerous hand-offs of patients results in lack of coordination and errors. There are many studies that identified that many medication errors are caused by look-alike and sound-alike medication names but not much is done to prevent medical error from occurring (Lambert, 1997). According to the J. Allard et al, 50% of medical equipment in developing countries is only partly usable due to lack of skilled operators or parts. As a result, diagnostic procedures or treatments cannot be performed, leading to substandard treatment (Allard, Carthey, Cope, Pitt, & Woodward, 2002)

Frequency of events reported

The primary purpose of reporting is to learn from experience. To date, most safety efforts have focused on reacting to crises rather than proactively identifying hazards and improving systems. It is important to report adverse events or near miss for monitoring process in the prevention of these errors and to allow lessons to be shared so that others can avoid the same mishaps. Current reporting practices fall short in hospitals, staff members often fail to report incidents primarily because of time pressure, fear of punishment, and lack of a perceived benefit.(Cullen et al., 1995) Among physicians, shame and fear of liability, loss of reputation, and peer disapproval are particularly strong disincentives. On the other hand, striking increases in internal reporting have been achieved recently in a few hospitals that implemented non- punitive and responsive reporting systems (Rozich & Resar, 2001). It is believed that the physicians' lack of knowledge

for reporting adverse events is also a reflection of institutional efforts, as most of the efforts to enhance reporting of medication errors have been led by nurses and pharmacists.(PJ Pronovost et al., 2003) A study conducted in Canadian hospitals reported that 36. 9% of reported adverse events were found to be " highly preventable," (Baker et al., 2004) nurse managers must create positive working conditions that reduce the likelihood of error and increase the level of patient safety in their organizations. A critical aspect of achieving a culture of safety is encouragement of error reporting. Only by knowing what we are doing can we improve; however, the literature indicates that medical errors are severely underreported. (Leape, 1994) Hospitals often view reporting as all risk and no gain and fear public disclosure of reports, with damage to their reputations, loss of business, and litigation.(Bovbjerg, 1994; Gostin, 2000)

Organizational learning—continuous improvement

Learning exists within a hospital when the organizational culture seeks to learn from mistakes and integrates performance improvement processes into the health care delivery system(Blake, Kohler, Rask, Davis, & Naylor, 2006; Farrell & Davies, 2006; PUGLIESE, 2002; Whittington & Cohen, 2004). Effective learning begins and as literature reveal from the example demonstrated by top manager. Leaders who demonstrate a willingness to learn, not only from internal sources, but from sources outside health care have developed and exhibited successful safety cultures (Whittington & Cohen, 2004). A culture of learning creates safety awareness among employees and medical staff and promotes an environment of learning through educational opportunities (Blake et al., 2006; McCarthy &

Blumenthal, 2006; Relling, 2004). Education and training should include basic understanding of the science of safety, the value of a safety culture assessment, and performance improvement process (Johnson & Maultsby, 2007; P. Pronovost et al., 2006; Yates et al., 2005). Furthermore Hospitals have opportunity to learn not only from failures but also from successes (Blake et al., 2006; Johnson & Maultsby, 2007; McCarthy & Blumenthal, 2006). In order to be successful adequate steps has to be made by the hospital such as reporting identified key safety indicators, updating and posting results on a timely manner, using root-cause analyses to investigate medical errors and near misses (Apold, Daniels, & Sonneborn, 2006; Connor, Ponte, & Conway, 2002; Farrell & Davies, 2006; Yates et al., 2005) Education process is a continuous and evolving and sharing of information and past experience is vital in prevention of the same error from happening in the future. (Apold et al., 2006; Blake et al., 2006; Farrell & Davies, 2006)

Teamwork within units

The process of providing healthcare is inherently interdisciplinary, requiring physicians, nurses, and allied health professionals from different specialties to work in teams. In the patient safety literature, it has been widely recognized that team performance is crucial to providing safe patient care. (Kohn et al., 2000b) Poor coordination among providers at various levels of the organization appears to affect the quality and safety of patient care (e. g. delays in testing or treatment, conflicting information). (Baggs, Ryan, Phelps, Richeson, & Johnson, 1992; Young et al., 1998) Therefore, teamwork has become a focus of system-based interventions to improve patient safety and of medical education standards. In general, teams are defined as two or

more individuals who work together to achieve specified and shared goals, have task-specific competencies and specialized work roles, use shared resources, and communicate to coordinate and to adapt to change. (Brannick, Salas, & Prince, 1997)

Communication openness

An important and direct contribution nurse managers can make to empower nurses is to ensure that they are in touch with staff nurses by being highly visible, listening carefully to nurses' concerns and suggestions, and consistently demonstrating support for them.(Armstrong & Laschinger, 2006) Nurse managers also have an important role to play in helping staff nurses identify and implement specific improvement suggestions and ensuring that nurses have access to, and an understanding of, indicators intended to measure the effectiveness and progress of quality improvement initiatives.

Feedback & communication about error

The culture in aviation encourages individuals to step forward and share their stories about adverse events. In addition to technical skills, pilots are now hired for their ability to coordinate activities, learn from errors, and recognize that others can contribute to problem solving. Teamwork training is nearly universal in aviation and is formally mandated by the United Nations for all carriers flying international routes.(Sexton, Thomas, & Helmreich, 2000)Survey results contrasting safety attitudes in aviation and medicine suggest that medicine generally lags behind aviation and needs improvement. (Sexton et al., 2000)

Non-punitive response to error

Following a study conducted in John Hopkins Hospital the Patient Safety Committee developed several other initiatives to improve safety. This committee has created a safety mission statement, developed a non-punitive error reporting policy, created an information sheet of safety tips for patients and families to follow to help ensure their safety while in the hospital, educated staff on the science of safety and how to disclose errors, developed a patient safety intranet site on which staff can share stories regarding patient safety, and implemented senior executive walk rounds where senior leaders ‘‘ adopt’’ a functional unit. (PJ Pronovost et al., 2003)StaffingSeveral studies have indicated that low nurse staffing in hospitals is one of the causes contributing to preventable deaths in hospitals (Page, 2004; Rogers, Hwang, Scott, Aiken, & Dinges, 2004) (Aiken et al., 2002) and is a a major impediment to providing high quality hospital care. A study conducted by Blendon et al reported that physicians in five countries reported a recent decline in quality of care and concerns with how hospitals address medical errors these physician expressed serious concerns about shortages of medical specialists and inadequate facilities. Past research has shown that hospitals with low or inadequate nurse staffing levels have poorer patient outcomes, thus compromising patient care. Decreased nurse staffing, specifically RNs had an association with patient safety and increased adverse events such as medication errors (Hall, Doran, & Pink, 2004), patient mortality (Aiken et al., 2002; Kane, Shamliyan, Mueller, Duval, & Wilt, 2007; Rothberg, Abraham, Lindenauer, & Rose, 2005), patient falls (Dunton, Gajewski, Taunton, & Moore, 2004), and longer average length of stay(P. J.

Pronovost et al., 1999). Hospital management support for patient safetyLeadership is an essential ingredient of success in the search for safety, as it is throughout the enterprise of quality improvement. (Firth-Cozens & Mowbray, 2001; White & Ketring, 2001; Wong, Helsinger, & Petry, 2002)and has also been shown to be critical in high quality care (Rantz et al., 2004). In the absence of commitment from professional and organisational leaders, efforts will be fragmentary and uncoordinated and will have only minor effects. Leadership are needed at all levels. While local " champions"—individual doctors, pharmacists, or nurses—can, by their enthusiasm, motivate others to make improvements, major systems changes require direction and support from the top—leaders who communicate their own commitment by insisting on safety as an explicit organisational goal backed by adequate resources.(Leape & Berwick, 2000) The test, as Reinertsen tells us, is that senior managers feel personally responsible for each error. (Reinertsen, 2000)

Hospital handoffs and transitions

In hospitals, handoffs are episodes in which control of, or responsibility for, a patient passes from one health professional to another, and in which important information about the patient is also exchanged (Cohen & Hilligoss, 2010). Health care institution needs to ensure that a safe care transition is a core part of their hospital medicine. These transitions include inpatient-outpatient transitions and in-hospital transitions. To ensure safe care during these transitions, clinicians should be aware of the types of transitions and the way in which these transitions can impede safe patient care. With this knowledge, strategies to ensure patient safety during care

transitions can be adopted and training directed at teaching physicians safe hands-off practices could be developed and supported (V. M. Arora et al., 2009). Miscommunication during transfer of care for hospitalized patients is common and can result in adverse events (V. Arora, Johnson, Lovinger, Humphrey, & Meltzer, 2005; Singh, Thomas, Petersen, & Studdert, 2007; Sutcliffe, Lewton, & Rosenthal, 2004).

Association between organizational characteristics and quality of care

The structure of the health care delivery system, consisting of its operating processes within the system, and the outcomes of care can greatly impact the quality of care of the institution. (Carr, Gibson, & Robinson, 2001) Quality of care as defined by IOM is " the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge".(Lohr, Donaldson, & Harris-Wehling, 1992) Quality can be measured by looking at mortality outcomes, adverse event rates, adherence to processes of care, volume threshold, performance indicators, and cost. An article written by Hearld et al relates that literature shows a relationship between the structural characteristics and organizational processes of hospitals and quality of care (Hearld, Alexander, Fraser, & Jiang, 2008). They focused on hospital organizational level and the researchers used a broad conception of quality as the outcome variable. The results of this review indicated that many studies were predominantly focused on the organizational structure–quality outcome relationship and they concluded that the association between organizational structural characteristics and quality of care showed

mixed results. Some literature shows that quality of care is associated with structural variables like hospital size (Al-Haider & Wan, 1991; Elixhauser, Steiner, & Fraser, 2003; Mukamel, Zwanziger, & Tomaszewski, 2001) and nurse staffing (Needleman, Buerhaus, Mattke, Stewart, & Zelevinsky, 2002) but inconsistently associated with other structural variables like hospital teaching status (Al-Haider & Wan, 1991; Ayanian, Weissman, Chasan-Taber, & Epstein, 1998; Elixhauser et al., 2003) hospital ownership (Bradley et al., 2001; Mukamel et al., 2001) and hospital location (Elixhauser et al., 2003; Foxman, Klemstine, & Brown, 2003). Ayanian et al found that teaching hospitals provided overall better quality of care for CHF and pneumonia whereas on the other hand, Elixhauser et al looked at the relationship between volume, mortality, and associated hospital characteristics of ten complex procedures this research showed that teaching status of the hospital had no effect on mortality.

Association between organizational characteristics and patient safety

After the Publication of ‘ To Err is Human’ (Kohn et al., 2000a) and ‘ Crossing the Quality Chasm’ (America, 2001) patient safety and medical error became in the forefront for health care institutions. Two articles which tried to address the link between organizational factors and patient safety. (Hoff, Jameson, Hannan, & Flink, 2004; Mitchell & Shortell, 1997) Hoff et al, in their research found that the most common dependent variable was teams and only four out of forty-two studies under consideration focused on structural factors which shows that there is little evidence for asserting the importance of any individual, group, or structural variable in error prevention or

enhanced patient safety. Additionally eighty-one studies examined the relation among organizational structures or processes and mortality and adverse outcomes and they concluded that organizational structural variables like size, ownership, location, teaching status, and staffing ratio had no consistent relation to mortality. Adverse events such as falls, medication errors, failure to rescue, and deficiency indices also showed a highly mixed relation when reported in multivariate analyses of structural characteristics of hospitals (Mitchell & Shortell, 1997). A study done in 2008 reported that hospital size is directly proportional to adverse event rates example larger hospitals have higher adverse event rates whereas smaller hospitals have lower adverse event rates (Smith, Cheung, Owens, Wilson, & Simpson, 2007). Other studies showed that hospital size has an opposite effect or no effect at all on adverse event rates (Carbonell et al., 2005; Rosen et al., 2006). A study done by Brennan et al found that after adjusting for patients' age, race, severity of illness, hospital's location, and ownership, patients in major teaching hospitals were more likely to experience adverse events than those in non-teaching hospitals(Brennan, Hebert, et al., 1991). Further studies done by Thomas et al determining the association between preventable adverse events and hospital ownership they found lower rates of preventable adverse events in government-owned major teaching hospitals compared with minor or non-teaching government hospitals but were not statistically different (Thomas, Orav, & Brennan, 2000). In conclusion, the relationship between organizational characteristics and patient safety is still unclear.

Summary of literature review

The necessary changes are as much cultural as technical. Creating a culture of safety requires attention not only to the design of tasks and processes, but to the conditions under which work—hours, schedules and workloads; how we interact with one another; and, perhaps most importantly, how we train every member of the healthcare team to participate in the quest for safer patient care.