Investigating physicians' perspectives on disclosure of medical errors in The Bahamas

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Abstract

Background — A better understanding of physicians' perspectives on barriers to reporting medical errors is needed to increase error reporting. This finding is backed by numerous researchers within developed countries who demonstrate that physicians' voices are imperative to understanding medical errors. The subject of medical errors is receiving increasing research attention, but value also exists in understanding the cultural beliefs among doctors that underlie medical errors. Arguably, research on medical errors thrives chiefly in the 'global north' where there exists a strong culture and, therefore, expectation of patient safety and error reporting. This reporting is imperfectly done even in developed countries, and developing countries may lack this cultural focus on error reporting. Since physicians commonly encounter medical errors, there is a need to understand physicians' perspectives on errors in developing countries. The Nassau Institute, a research organization in the developing country of the Bahamas, affirms the need for public concern and inquiry about the culture of medical errors. Effectively addressing the issues of error disclosure and reporting requires preliminary knowledge from Bahamian health professionals closely involved with medical errors. Therefore, this research aims to investigate Caribbean-based physicians' perspectives on disclosure and reporting of medical errors through a case study of physicians in the Bahamas

Objective — The objectives of this research were 1) to produce data that can inform the development of an error disclosure policy; 2) to identify reasons why physicians in developing countries like the Bahamas might fail to report or disclose medical errors; and 3) to obtain an understanding of the influence of culture on the error reporting and disclosure practices of physicians in the Bahamas.

Methods — This study utilized a qualitative research approach. The research employed phenomenology, a theoretical perspective most often associated with interpretative traditions in qualitative research. The method used was semi-structured interviews . This research also used the qualitative approach of inductive thematic analysis to assess information gleaned from interviews, whereby interesting features or patterns in the interview data were highlighted.

Conclusion —The development of three major themes emerged to represent physicians' perspectives: Cultural Barriers, Collegial Discord in Error Disclosure Culture, and Medical Error Minimization. Physicians identified cultural factors as barriers to reporting medical errors, points of discord in the error reporting culture, and multiple strategies for minimizing medical errors. They also identified aspects of the local error reporting and disclosure culture that require attention. For example, the patient safety culture, cultural competence in medical education, a culture of punishment, a blame culture, a 'small town gossip' culture, and a culture of perfection were identified. Physicians expressed a lingering fear that their colleagues would expose the errors of other physicians. This research also found differences in error disclosure and reporting practices across physicians, with even stronger variations between physicians in the private and public sectors. The information generated from this study is ground-breaking for scholarship globally, as it sheds new light on the influence of culture on physicians' error reporting and disclosure practices. This investigation will equip policymakers, physicians, healthcare institutions (professionals), patients, and other appropriate stakeholders with a tool to assist in drafting healthcare policies that may address cultural concerns related to medical errors.

Résumé

Contexte - Une meilleure compréhension des points de vue des médecins sur les obstacles à la déclaration des erreurs médicales est nécessaire pour augmenter les rapports d'erreur. Cette constatation est soutenue par de nombreux chercheurs dans les pays développés qui démontrent que la voix des médecins est essentielle pour comprendre les erreurs médicales. Le sujet des erreurs médicales suscite un intérêt grandissant en recherche, mais il existe aussi une valeur au fait de comprendre les croyances culturelles des médecins qui sont à l'origine de ses erreurs médicales. La recherche sur les erreurs médicales se développe principalement dans le « nord » où existe une culture forte et, par conséquent, des attentes en matière de sécurité des patients et de signalement des erreurs. Bien qu'imparfaitement exécutés dans les pays

développés, les pays en développement peuvent ne pas avoir cette culture de mettre l'accent sur le signalement des erreurs. Puisque les médecins sont généralement exposés à des erreurs médicales, il est nécessaire de comprendre les points de vue des médecins sur les erreurs dans les pays en développement. L'Institut Nassau, un organisme de recherche dans le pays en développement des Bahamas, supporte la nécessité de susciter l'intérêt public et d'enquêter sur la culture des erreurs médicales. Pour résoudre efficacement les problèmes de divulgation et de signalement des erreurs, il faut que les professionnels de la santé des Bahamas soient étroitement impliqués dans les erreurs médicales. Par conséquent, cette recherche visait à examiner les points de vue des médecins des Caraïbes sur la divulgation et la déclaration des erreurs médicales grâce à une étude de cas de médecins aux Bahamas.

Objectifs - Les objectifs de cette recherche étaient 1) de produire des données pouvant éclairer l'élaboration d'une politique de divulgation des erreurs ; 2) identifier les raisons pour lesquelles les médecins des pays en développement comme les Bahamas pourraient ne pas signaler ou divulguer les erreurs médicales ; et 3) comprendre l'influence de la culture sur le signalement des erreurs et les pratiques de divulgation des médecins aux Bahamas.

Méthodes - Cette étude a utilisé une approche de recherche qualitative. La recherche a utilisé la phénoménologie, une perspective théorique le plus souvent associée aux traditions interprétatives en recherche qualitative. La méthode utilisée était les entretiens semi-structurés. Cette recherche a utilisé l'approche qualitative de l'analyse thématique inductive pour évaluer les informations recueillies lors des entretiens, en mettant en évidence des caractéristiques ou des modèles intéressants dans les données des entretiens.

Conclusion - Le développement de trois thèmes majeurs a émergé des données recueillies pour représenter les points de vue des médecins : Obstacles culturels, discordance collégiale dans la culture de divulgation des erreurs et minimisation des erreurs médicales. Les médecins ont identifié les facteurs culturels comme des obstacles à la déclaration des erreurs médicales, des points de discorde dans la culture de signalement

des erreurs et de multiples stratégies pour minimiser les erreurs médicales. Ils ont également identifié des aspects de la culture locale de signalement des erreurs et de divulgation nécessitant une attention particulière. Par exemple, la culture de la sécurité des patients, la compétence culturelle en matière d'éducation médicale, la culture de la punition, la culture du blâme, la culture des « ragots des petites villes » et la culture de la perfection ont été identifiées. Les médecins ont exprimé une crainte persistante que leurs collègues exposent les erreurs des autres médecins. Cette recherche a également révélé des différences dans la divulgation des erreurs et les pratiques de déclaration chez les médecins, avec des variations encore plus marquées entre les médecins des secteurs privé et public. Les informations générées par cette étude sont révolutionnaires pour l'érudition au niveau mondial, car elles apportent un éclairage nouveau sur l'influence de la culture sur les pratiques de déclaration et de divulgation des erreurs des médecins. Cette enquête fournira aux législateurs et autres décideurs politiques, aux médecins, aux établissements de santé (professionnels), aux patients et aux autres parties prenantes appropriées un outil d'aide à la rédaction de politiques de santé susceptibles de répondre aux préoccupations culturelles liées aux erreurs médicales.

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Chapter 1 – Qualitative Research, Medical Errors, and Physicians' Perspectives: An Introduction

Introduction

A better understanding of physicians' perspectives on barriers to reporting medical errors is needed to increase error reporting.[1] This position is backed by Gallagher et al.'s ground-breaking study which demonstrated physicians' voices as imperative to error disclosure within developed nations.[2] As an integral part of decision making in health care, physicians' perspectives may be of great value for patient-safety advances and for improving the medical-error culture. Assessment tools capable of measuring health professionals' perceptions and performance regarding patient safety culture and medical errors necessitate inquiry by researchers.[3] Notwithstanding an increased research focus on medical errors, research undertaken to investigate cultural beliefs among physicians that underlie medical errors remains lacking.

Opinions on error disclosure suggested that while moral concerns preoccupied physicians' perceptions of medical errors, expectations of perfection and certainty in medical decision-making and performance also perplexed them. For example, Professor Mridul M. Panditrao, a Consultant Anesthesiologist at the Rand Memorial Hospital in the Bahamas, claimed that honoring the obligation of truth-telling and honest disclosure with patients is a primary duty of physicians.[4] Acknowledging physicians as imperfect and subject to error, Prof. Panditrao stated that legal and media advocates believed punishment for errors was the best approach for increasing physician accountability and resulted in "no further room for error"; however, Prof. Panditrao rejects this belief.[5] Also, Dr. Adrienne Garner, a 20-year practicing Bahamian physician, argued that although medical errors occurred unintentionally, patients deserved error disclosure, as well as an apology for medical errors, preceded by a thorough investigation into patient concerns.[6]

Scholars argue that compelling physicians to disclose errors proves counterintuitive to reducing errors and represents a regression to the harmful medical culture of the past.[7] While rejecting the

the traditional approach that links errors and physician competency, the medical culture in the "global north" primarily argues for clear communication across health professionals and conferences with patients as effective means for encouraging patient safety and reducing medical errors.[8] North American physicians' perspectives on medical errors are rooted in norms, values, and practices that frame the medical culture.[9] In this same way, researchers have found similarity in medical education in two North American countries, where cultural norms are specialty specific, and through effective communication medical errors are minimized.[10] Developing countries struggle to reduce errors because of a lack of financial and human resources; there is also a need for infrastructural implementation and cultural transformation.[11] Bahamian scholars advocate for cultural reform as an error-reduction strategy.[12]

Extensive research evidences the resourcefulness of the "global north" as partly responsible for error reduction; here, the medical culture thrives on effective communication among physicians while promoting patient safety. However, it is quite predictable that low-resource developing countries pale in comparison and lack a similar medical culture. For that reason, understanding physicians' perspectives in developing countries on medical errors and their associated impact on patient safety is important. Given that the Bahamas is a resource-strained, low-populated developing nation motivated to adopt similar cultural practices identified in First World medicine,[13] obtaining the perspectives of physicians on medical errors in the Bahamas can prove useful.

Senior health professionals in the Bahamas have suggested that a medical culture that encourages "internal reporting of errors" must be created to increase patient safety.[14] At present, hospitals in the Bahamas do not have a mandatory error disclosure policy, and physicians are only required to disclose to their patients information that patients have consented to know, or when the threat of harm exists.[15] Critics of the Bahamas' public health system raised alarm over the state of the error reporting and disclosure culture when they suggested that errors committed by local physicians were of concern, and that patients found dissatisfying the lack of information physicians provided.[16]

While "research investigating physicians' perspectives revealed a fear of disclosing errors to patients,"[17] scholarly investigation into the perspectives of physicians in relation to the links between errors and the medical culture remains wanting. To remedy this gap, the purpose of this research is to investigate physicians' perspectives on the cultural influences informing the disclosure and reporting of medical errors through a case study of physicians in the Bahamas. Because the medical culture and healthcare model of developed countries heavily influences the Bahamas,[18] understanding physicians' perspectives in the Bahamas can reveal the extent to which the error reduction strategies of developed countries are easily transferable, or whether the advances made are culturally specific to organizations and not directly applicable to resource-dependent developing countries.

Statement of the Problem

The US Institute of Medicine (IOM) defines medical errors as "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim."[19] In the 1999 pioneering publication, *To Err Is Human,* the IOM concluded that 44,000-98,000 patients die annually from avoidable medical errors in the US.[20] However, recent statistics on medical errors suggest that the IOM figures are underestimated.[21] Contemporary methods using hospital records to assess medical errors in all US hospitals between 2013 and 2015 have estimated related deaths to be over 400,000 annually.[22]

Although debate exists over whether error disclosure is the duty of physicians or of hospitals,[23] the Canadian Medical Association and the American Medical Association both regard error disclosure as an established duty for physicians.[24] Researchers have argued that medical error disclosure is a type of error reporting that requires physicians to keep patients informed about "mistakes or unanticipated outcomes."[25] While some researchers believe that physicians' perspectives on hospital deaths due to errors are largely unknown,[26] interest in research on physicians' perspectives on error disclosure increased[27] after the release of the IOM report on medical errors.[28] However, few studies sought to understand what aspects of the

culture that doctors share and that may impede the reporting of errors when one believes an error has been committed. We need to understand such shared cultural perspectives if error reporting is to improve.

The History of the Bahamas's Medical Culture

When one considers the historical impact of North American and British medical cultures on the Bahamas, the Bahamas becomes a valuable and unique research setting to understand medical errors. Particularly, while less is known about the error disclosure practices of physicians in the Bahamas, assuming similar error disclosure practices to those in the US, Canada, and Britain is well within the bounds of possibility. Although there are noticeable cultural differences between developed and developing countries, the historical links that support this assumption make it a legitimate area of inquiry.

The Westernization of healthcare systems in developing countries ignores localized cultural methods and makes inadequate efforts to understand local perspectives. The pre-independent Bahamas resisted westernized medical culture because it was too expensive, scarce, and believed to be ineffective. Nevertheless, gradual assimilation of western medical culture occurred through aggressive media penetration and direct healthcare delivery.[29] Over many years, the culture of medicine in the Bahamas has evolved with minimal tension from outside influence. While the country experienced transformational change in the healthcare system some native traditional medicine practices experienced a decline. Therefore, "prolonged culture contact and exposure to 'Western' medicine"[30] helped to transform aspects of medical culture in the Bahamas.

Through expatriate workers and educational training, the British model heavily influenced twentieth-century Bahamian medical culture. With limited resources and workforce, the need for physicians was exponential in the Bahamas; and by 1960, the colonial office commissioned a report confirming that "there would be a need to rely on expatriate doctors".[31] Expatriate physicians once accounted for 60% of the physicians employed in the Bahamas.[32] As a British colony until 1973, it was

under this model that Bahamian physicians replacing the expatriate population were "trained in surgical and medical specialties."[33] While British medical training exposed Bahamian physicians to a different medical culture, the employment of expatriate doctors also fostered medical acculturation.

Bahamian physicians eventually expressed a greater interest in the North American residency model as opposed to the British model.[34] Because of the geographical nearness to the US, its healthcare model is believed to have heavily influenced the medical culture of the Bahamas.[35] Links between the US and the Bahamas "contributed to an emphasis on high technology medicine and a culture of health consumerism," surprising some scholars.[36]

Scholars also have raised concern that a developed country's medical culture may negatively influence the way medical care is delivered in developing countries. Despite receiving specialized medical training in developed countries, the Bahamas' government assures that its "physicians also receive regional medical training that is culturally sensitive."[37]

The Importance of Physician Input

Several scholars claim that physicians occupy a space at the apex of the health system.[38] This claim suggests that physicians are likely to have insight on the pressing concerns in health and are knowledgeable of the prevalence of medical errors. Physicians are well-suited to provide insight into medical errors because of their relatively high level of technical training, relative to other occupations in the medical field. For example, in a study attempting to ascertain if a difference existed in the error reporting, disclosure, and identification practices among physicians, nurses, and emergency medical technicians, physicians were found to be more likely than nurses or emergency medical technicians to identify a medical error.[39]

Moreover, because error committal has been found to be relatively common,[40] one would expect physicians to be able to identify and report errors. Despite this criticism, 47% of physicians commonly make errors such as missed or wrong diagnoses, and 96% believe the errors they committed were

preventable.[41] According to Atul Gawande, it is acknowledged within the institution of medicine and among physicians that "all doctors make terrible mistakes."[42] Twenty years prior to this acknowledgement, Konner observed that the acculturation and training of young physicians involved acceptance of the belief that "the euphemism for error is a mistake".[43] The time gap between these two scholars shows that physicians have long grappled with the occurrence of errors. Error implication occurs at least once in the career of a physician.[44] An increasing number of complaints against physicians related to medical errors also verify the frequency of this problem.

Physicians often dispute among themselves whether medical errors are the fault of humans or systems.[45] Fewer physicians blame the institution, and instead attribute the responsibility of error occurrence to themselves.[46] This dispute not only indicates that physicians are privy to growing error concerns, but may also be the fuel driving researchers to acquire physicians' perspectives on such concerns.

Furthermore, while research increasingly indicates that physicians see medical error as a problem,[47] concerns such as fear of malpractice litigation, shame, or self-disappointment cause physicians to respond to disclosing errors with reluctance.[48] The effort to resolve errors is often sidetracked by physicians out of a desire to appear in control; this desire also results in a reluctance to disclose errors.[49] The degree to which such concerns build up among doctors, and how they come about, needs further study.

Physicians' reaction to errors appear to be common; [50] hence, they now work along with initiatives designed to mitigate medical errors. For example, "systems-based initiatives such as surgical checklists are a result of recognized patterns of errors" and "individual surgeons also learn to refine their procedural techniques and decision-making from their errors."[51] Physician familiarity with initiatives specifically designed to mitigate their medical errors makes critical the decision to seek their perspectives on the subject. As many of initiatives are procedural in nature, acquiring a greater understanding of how cultural norms lead to or minimize errors may prove useful for improving such procedures.

If interventions are expected to prompt behavior change, any solution to medical errors should utilize physicians' well-informed perspectives. An added incentive appeals to the perception of doctors as "leaders" in society by virtue of status, and high behavioral expectations.[52] Apart from describing their leadership as consequential, some scholars argue that "health care organizations need the distinctive perspective of physicians"[53]; physicians must be a part of all healthcare discussions if any improvements are expected to be accomplished.[54] Similarly, as physicians are the front line in health, scholars heavily criticize omission of physicians' perspectives.[55] Without the input of frontline healthcare professionals, an institution is unaware of errors that occur and is resultantly subject to an attitude that is "permissive to human error."[56]

Since error reporting generally relies on self-reporting,[57] the support of physicians is strategically central to reducing errors.[58] With physicians' medical training arguably the first line of defense against medical errors,[59] understanding physicians' perspectives on barriers to reporting medical errors can improve and increase error reporting.[60] While research in the US and Canada suggests that physician voices are imperative to understanding medical errors,[61] this study goes further by identifying how the ideas about being a physician are important to physicians, and how these ideas may motivate them either to report or not to report a known error.

There is value in undertaking such research in a small, close-knit professional community if there is interest in exploring how shared beliefs among physicians influence the way they perceive their work. Researchers in the Bahamas want Bahamians to express greater concern and inquiry into the frequency of local hospital deaths due to medical error.[62] Like everywhere else, preliminary knowledge of the physicians' perspectives in the Bahamas may contribute to effectively addressing the issues of medical error disclosure and reporting. The purpose of this research is to investigate the aspects of a shared medical culture that shape physicians' perspectives on disclosure and reporting of medical errors through a case study of physicians in the Bahamas. Therefore, this research will seek a better understanding of medical errors from physicians' perspectives.

Current Patient Safety Models May Not Be Applicable to The Bahamas

Resolving many of the organizational challenges caused by medical errors will require the application of an effective patient safety theory and policy. Global efforts to reduce medical errors prompted a number of theorists, and researchers in developed countries ventured to propose a generalized model of patient safety with a wide-ranging theoretical application to multiple organizations.[63] However, the idea of a universal measure of culture applicable to all organizations and the creation of a general theory of organizational culture triggered skepticism.[64] Although many of these theoretical positions contributed importantly to an effective understanding of patient safety and thus helped to minimize medical errors, their designs are not necessarily applicable to developing countries like the Bahamas. Therefore, the Bahamas sample used in this research tests the resonance of prevailing understandings of medical error and error reporting.

Some scholars contend that a correlation between culture and safety outcomes exists[65]; going further, others criticize a 'blame and shame' patient safety culture as causing medical errors.[66] Despite this criticism, a more compelling aspect of patient safety culture in this regard is its exclusivity to individual organizations. Patient safety culture refers to the common human safety practices, behavior, and attitudes within an organization, where these common practices can be used to influence patient safety.[67] The widespread agreement that an organization's patient safety culture arises from the collective safety-related principles and beliefs of the organization's associates[68] indicates that the integration or adoption of patient safety practices may not adapt easily to all organizational cultures. It is therefore problematic to assume an inherent applicability of the dominant patient safety practices and theories to the error-reporting culture in places outside conventional settings for health organizational and patient safety research.

Additional benefits of examining errors and error reporting in a developing country exist, as the strategies used by developed countries to assess patient safety culture and patient safety outcomes may not be practically applicable. For example, researchers in developed countries have used quantitative methods to assess and measure levels of staffing and workload, supervisor support, trust in management decision-

making, levels of organizational commitment and employee communication, and to determine if the organizational safety culture is 'good'.[69] This form of assessment likely disadvantages the low-staffed healthcare systems of developing countries like the Bahamas, since there already exists a dire need for nurses,[70] specialists, and family care physicians.[71] Staff shortages offer an example of the need to appreciate how constrained resources and limited access impact the degree to which developing countries can provide care and safety.

Investigations into developmental strategies for patient safety in hospital settings have focused on evaluating patients' case notes to understand medical errors better[72] and the appraised methods used to improve reporting systems in developed countries.[73] While extensive processing errors and inaccurate reporting showed up during an internal audit of a major hospital in the Bahamas,[74] determining the best patient safety model for hospitals in the country also require an understanding of the specific cultural domain.

Senior health professionals in Australia, Canada, the US, the United Kingdom, and New Zealand all agree on patient-safety strategies that would reduce error.[75] The response by developed countries promoting the dominant patient safety practices and theory arguably derives from the "weight of the patient's bill of rights." For example, New Zealand's bill of patients' rights prioritizes a patient-centered concept of quality and a duty of care grounded modern concepts of patient safety.[76] New Zealand has also implemented compensation and complaint systems focused on reducing errors and improving patient safety.[77] The country continually employs patients' rights as the platform for social and safety changes within its healthcare system.[78]

Also, because researchers and certain research settings may face difficulty identifying with the particular contexts, many studies on patient safety policy and culture in developed nations may not be generalizable to developing countries. Scholars argue that researchers must perform research within the communities of which they are also members[79] to ensure that the researcher embodies common "identity, language, and experience."[80] For example, research investigating medical errors and patient safety

concerns done with Caucasian physicians in predominantly developed countries[81] create challenges if applied to areas like the Bahamas. As previously stated, acquiring the perspectives of physicians based in developing countries contributes to a broader understanding of medical errors and patient safety issues. Undoubtedly, the Bahamas needs an effective patient safety system. Several local authors agree that a reliable patient safety culture must be one that eliminates medical errors.[82] They also believe that only by first changing the error disclosure culture can the country hope to achieve effective patient safety practices.[83]

Definition of Terms

Though a succinct meaning of the term medical error remains elusive,[84] in this thesis, the IOM's definition of medical error is used. The IOM defines errors as "the failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim."[85] According to Gallagher, a medical error is not determined by the outcome of care, but by the plan or process in which care is administered; hence, a medical error may occur whether or not harm results.[86] Additionally, Pollack et al. argue that medical errors can either be systemic, caused by healthcare information systems, or individual, "originat[ing] from practicing healthcare professionals."[87]

For the purpose of this research, "disclosure" is the acknowledgment and discussion of an outcome between the physician and the patient or patient representative.[88] The purpose of the disclosure is not to cast blame, but to offer patients "the information they need to make autonomous, informed decisions about their health care."[89] Therefore, non-disclosure is when physicians fail to inform patients about any error of omission or commission that occurred while medical care was being provided. Also, for this research, "reporting" is defined as the process of empowering, requiring, and authorizing organization members to communicate or distribute information within the organization. [90]

Rationale for the Study

Nearly all developing nations were once colonized by a developed nation,[91] and nearly all published studies on medical errors to date have emerged from developed countries.[92] Arguably, research on medical errors thrives chiefly in the 'global north' where there exists a strong culture and, therefore, expectation of patient safety and error reporting. This reporting is done imperfectly even in developed countries, and developing countries may lack this cultural focus on error reporting. Hence, there is a need to understand physicians' perspectives on errors and patient safety in developing countries. The uniqueness of the historical development of the Bahamas' medical culture can offer insightful explanations on the

nature of physicians' error disclosure and reporting practices. Therefore, attaining the perspective of physicians in a developing country such as the Bahamas should prove favorable for at least three reasons.

Firstly, even though success of research on minimizing and preventing medical errors in developed countries is considerable, less is known about how such errors initially came to be norms. For example, researchers largely ignored culture as a likely barrier to error disclosure.[93] The effects of physicians' cultural norms and medical culture on errors require further research. The central concern of Bahamian scholars to "inculcate a culture to eliminate medical errors and improve patient safety"[94] makes evident that local curiosity exists regarding the influence of culture on medical errors and patient safety.

Secondly, there is need to understand the role of medical culture in error reporting in a relatively small professional community. As a research setting, small communities can explain the degree to which personal culture or collectivist culture influences a physician's error disclosure and reporting practices. Generally, attention devoted to healthcare-related challenges in small communities is insufficient.[95] For instance, in addition to limited resources and confidentiality risks, small communities are at greater risk for errors.[96] Scholars also claim that small family communities usually have collectivist values.[97] However, little is still known about how small community culture (shared beliefs, practices, and values) affects the understanding and reporting of errors.

Lastly, a growing need exists to understand the role of medical culture in error reporting in less technically developed and resource-strained countries. It is well known that technological expansion has the potential to decrease medical errors and to resolve communication and training issues among physicians. Moreover, with limited resources in the Bahamas, there is also limited access to trained allied health professionals, thereby restricting the growth and expansion of health care.[98] In the absence of these benefits, physicians in such a medical culture can offer new insights on error disclosure and reporting practices.

Research Question

With a long-term goal of influencing the development of strategies to mitigate medical errors in the Bahamas, this study conducts preliminary work by exploring the understanding of physicians in the Bahamas on medical errors. Therefore, this study will be the first to investigate the following research question: What are physicians' perspectives with respect to medical errors in the Bahamas?

Objectives

The long-term goal of this research is to produce data that can inform interventions to increase disclosure of medical errors in developing countries like the Bahamas. In particular, it aims to identify the influence culture has on the reasons why physicians in the Bahamas might fail to report or disclose medical errors to their patients. Secondary aims of this study include understanding the impact of the threat of malpractice litigation on error disclosure, understanding the impact of medical errors on the patient safety culture, and generating data that can inform the development of an error disclosure policy. The outcome of this research will be valuable to physicians, patients, hospitals, and governments.

Chapter 2 – Literature Review and Theoretical Framework

Ethical Considerations and Justification for Error Reporting and Disclosure

Medical errors are perceived to be inevitable, and many caregivers generally accept error disclosure as a duty owed to patients.[99] In addition, talk about error is infused with moral overtones, and physicians generally believe on principle that error disclosure is ethically imperative[100] and a moral obligation.[101] Nevertheless, many physicians fail to report and/or disclose errors and instead practice defensive medicine. Defensive medicine is when fear of malpractice litigation prompts physicians to order unnecessary tests and procedures resulting in needless health services and less than efficient patient care.[102] While physicians face conflicts related to liability concerns over medical errors, perceived ethical obligations to resist the practice of defensive medicine also prove contradictory.[103] A punitive and blame culture hinders error reporting and patient safety initiatives and encourages defensive behaviors.[104]

Investigators have described two forms of defensive medicine: the first is negative defensive medicine, where physicians avoid patients who require risky treatments; the second is positive defensive medicine, which involves "extra tests or procedures"[105] (although the cost and wait times associated with extra tests and procedure are not always seen as positive). In a 2009 US nation-wide survey, the overwhelming majority of physicians (91.0%) confirmed they ordered more tests and procedures than required in order to avoid malpractice litigation.[106]

The case for error disclosure can be made using the human rights-based approach, where truth-telling is non-negotiable and morally justified. A human right is generally defined as a basic right which is intrinsic to everyone and which is stated in contracts, guidelines, principles, and other sources of law.[107] The position held within rights-based theories argues that people are autonomous moral beings with basic rights, and that violating such rights is morally wrong. The most essential dynamics of a rights-based approach plays out in the contractual relationship between physicians and patients; that is, every human being is a rights-holder and every human right has a corresponding duty-bearer.[108] Researchers have

asserted rights-based theory as a rational defense against the practice of non-disclosure of medical errors.[109] Under the rights-based approach, patients are autonomous and entitled to be treated with respect and provided with truthful information. Patient advocacy groups and bioethicists have long agreed that patients have the right to disclosure of unexpected errors during medical care.[110] According to Beauchamp, bioethics emerged because of a growing awareness that medical ethics had failed to address "concerns in bioethics about the rights of patients."[111]

Literature Review

Much of this literature review maps physicians' perspectives on the culture of error reporting and identifies numerous barriers. Investigators showed that "professional repercussions, legal liability, blame, lack of confidentiality, negative patient/family reaction, humiliation, perfectionism, guilt, lack of anonymity, and absence of a supportive forum for disclosure" were the more common barriers to error reporting by physicians.[112] While the challenges to error reporting "are multifactorial, complex and often institution-specific,"[113] understanding physicians' error-reporting practices in a specific medical culture may explain whether there are cross-cultural differences in error-reporting practices. This literature review resulted in the identification of three main areas impacting physicians reporting practices: Discord and Distrust, Malpractice Suits, and Culture.

All organizational cultures examined in this review agreed that an underlying sense of discord and distrust negatively impacted physicians' error-reporting practices. Two articles, in particular, identified organizational and professional disharmony as barriers to error reporting. Thus, mutual distrust across physicians was a trademark of a struggling organization. Hartnell and his colleagues dubbed "organizational factors" a barrier that represented distrust in the utilization of error reports and physicians' perception of the system within the organization as ineffective.[114] If a lack of communication highlights possible distrust, physicians' inability to discuss errors affects intercommunication across many health professionals and places patient safety at risk.

A study conducting a systematic review of the literature described "interpersonal barriers" as an inability to communicate between physicians and patients as well as among physicians and recommended a morally supportive and communicative environment to encourage error reporting.[115] Although practices are normally standardized, when physicians were able to talk about their disclosure practices, some differences in practice were identified. For example, a survey of US and Canadian physicians' perspectives on error disclosure exposed a divide on whether errors were the fault of humans or systems.[116] Further, Kaldjian and his colleagues identified disparities between physicians' error disclosure practices.[117] Findings across these studies suggest that the barrier factors mentioned may not simply be due to human and system factors, but may result from a broader distrust in the organizational culture. While disclosure practices may appear to be under physicians' personal control, some of the distrust and discord indicated may be influenced by the broader medical culture. For this reason, acquiring a wide-ranging understanding of diverse medical cultures can offer fresh insight into differences in disclosure practices.

There is considerable evidence that physicians' fear of malpractice suits is a barrier to error disclosure and significantly impacts physicians' reporting practices. Links between malpractice and medical errors in many studies make it a growing concern in North America.[118] Surprisingly, using cross-cultural research in North America, investigators found that the fear of litigation did not affect physicians' beliefs in the pursuit of malpractice litigation in cases of serious errors.[119] Considering a universal culture of fear and aversion towards malpractice litigation among physicians,[120] any support for litigation by physicians can be seen as both atypical and empathetic. Similar empathetic behavior was identified by Gallagher and colleagues, who found that physicians desired to apologize for errors, but widespread fear of litigation increased reluctance to report or disclose.[121] In discussing how malpractice impacted physicians' reporting practices, many of the articles reviewed placed significant emphasis on sympathetic language and word choice. Physicians either often used expressions of compassion after errors, or the fear of litigation rendered them silent. Hence, litigation fears triggered concerns about the use of language during error disclosure.[122] Additional research found that in a survey of just over three thousand physicians, 35%

believed information discussed after an error would be repeated in malpractice suits; and 23% believed that receiving counseling impacted the cost of malpractice insurance, and that the information reported regarding the error would result in a negative reputation with a permanently stained record.[123] Here, these findings also suggest that physicians are careful about language use after an error committal, since their words could be cited in the course of a malpractice trial. Investigators concluded that conversations about medical errors and the threats arising from litigation are compounded by physicians dealing with accusations from patients, lawyers, hospital-employers, insurance companies, and their own conscience.[124]

Earlier in this review, it was noted that some physicians are more inclined to support litigation than are others; such is also the case among countries. For example, examination of the literature showed that physicians in the US have a greater fear of malpractice litigation than do physicians in Canada.[125] Noting the compelling nature of culture, research showed that the way Canadians respond to medical errors is unlike that of Americans, for cultural and social reasons.[126] This finding indicates that there may be country-specific cultural factors that influence how physicians perceive malpractice and patients' response to errors.

Although hardly investigated, another significant factor negatively impacting physicians' disclosure and reporting practices is culture. In particular, organizational culture and the blame culture were culture-salient features across all the articles examined. Each feature made an important contribution to the understanding or lack of understanding regarding physicians' views on medical errors. While the reporting practices of other health professionals are less ambiguous, uncertainty about physicians' "error reporting practices affects what we can learn about the error reporting culture."[127] As it stands, uncertainty about the role of culture in understanding medical errors creates a gap with dire implications for the medical culture and with great risks for patient safety. Other researchers have suggested addressing the cultural factors that are a barrier to error disclosure, and that that culture has been a possibly ignored barrier.[128] Gallagher and colleagues found that physicians communicate cultural norms among themselves, and that the culture of medicine influences physicians' perspectives on error disclosure.[129]

Blame Culture

A common finding among investigators showed that physicians required a non-punitive medical culture that provides emotional support following error committal and disclosure. [130] However, research also indicated a shift among physicians concerning blame attribution after errors. Investigators claimed that few US physicians blamed errors on the institution, with more than 70% assigning responsibility to the physicians themselves.[131] Surprisingly, this study is among the few in which physicians promoted a punitive and a blame culture. The promotion of such a blame culture may be due to the individual error-reporting culture under which the physicians operated.

Scholars also claimed that erring physicians likely experienced personal anguish regardless of whether the culture was blame free or was one that punitively managed errors.[132] While the safety of patients is most at risk in a blame culture, physicians have expressed a lack of confidence in the benefits of a reversed blame culture. As a recommendation, patient safety officers continue to advocate for a cultural shift towards a blame-free culture, although investigators believe that such a cultural shift will not minimize physicians' distress.[133] For the most part, physicians see their personal standards/culture as distinct from the standards of the broader ~~medical~~ culture. For example, some physicians suggested that they failed "to practice medicine to their own high standards."[134] This understanding of high standards may be viewed as physicians' typically striving for perfection, which is often seen as normative behavior. By viewing perfection as normal, scholars suggest, physicians become emotionally inhibited, inflexible, obsessively obedient to rules, and restless.[135]

While fear may influence physicians to attribute fault to their colleagues, emerging data around the blame culture indicate that many physicians view errors as belonging to normal social behavior that one cannot escape. This can be seen in the statement "errors are an inescapable part of medical practice."[136] Despite this realization, the data indicates that a belief exists among physicians that errors result from

human defects and are not due to challenges within healthcare systems. Earlier researchers showed that few physicians blamed errors on the institution, and more on the physicians themselves.[137]

Although prevalent, a blame culture may also be differently related across individual physicians' reporting and disclosure practices. As an alternative to casting blame, some physicians prefer to ignore other physicians' medical errors and, instead, focus on their own professional standards. According to researchers, "a hesitancy to report someone else's error" impacted professional identity and prevented physicians from reporting errors.[138] Healthcare professionals often feel pressured to provide perfect care, with blame possibly seen as an attempt to disassociate oneself from a professionally unacceptable practice. Nonetheless, investigators acknowledged that some physicians accepted the imperfections of the medical culture and honored their professional duty to promote a culture of disclosing errors.[139] According to researchers, since malpractice fear often overshadowed the desire for transparency, physicians failed to create an error-reporting culture that is both safe and fair to their colleagues.[140] A physician's reluctance to face embarrassment in the presence of other physicians presented another barrier to error reporting and significantly influenced the medical culture.[141] Research findings concluded with recognition of the need for a fair culture around error reporting, and only leaders within healthcare organizations can make this change.

Organizational Culture

A review of the literature also showed that observational learning far more greatly impacts physicians' error reporting and disclosure practices than do organizational training initiatives. In this way, researchers suggested that it was an institution's error reporting cultural norms and noticeable practices that determined whether errors were reported, and not its training.[142] Notably, then, culture was identified as a factor that influenced organizational safety practices and a possible barrier to error reporting.[143] However, little is known about the exact ways in which culture influences error reporting. Contributions from experts in the field claim that the organizational safety culture can be distinguished from an

individual's personal safety culture.[144] This is an important finding since it indicates that cultural practices which physicians employ when dealing with medical errors can be adopted from the organization or based on personal standards. If so, this further implies that physicians' reporting and disclosure practices may at times be the result of an eclectic approach. To be clear, physicians may choose from a spectrum of cultural standards instead of a single organizational culture when confronting medical errors. Personal, organizational, and community cultures constitute a list of possible standards physicians may be using to assess errors. Therefore, research is required to determine the possible individual and collective impact of these cultural standards on physicians' error disclosure and reporting practices.

Despite their fear of litigation, investigators highlighted that physicians must overcome an organizational culture that encourages non-transparent error disclosure practices.[145] While transparency in error disclosure practices encourages personal accountability and can improve the physician-patient relationship, investigators suggested that this is an inadequate approach to changing an already complex cultural phenomenon. As a recommendation, investigators believed strategies that reward transparency by using incentives for disclosure can create a medical culture with reduced errors.[146] Further, investigators claimed that organizational culture—and not that of physicians—is mostly to blame for a lack of transparency.[147]

Research Gaps

This chapter has reviewed published literature that offers insight into physicians' perspectives on reporting and disclosing medical errors. This literature review showed that culture plays a significant role in physicians reporting and disclosure practices. To date, there is uncertainty about the role of culture in understanding medical errors. Understanding medical errors more fully requires research into physicians' cultural norms.

While it is ideally expected that physicians approach medical errors with a collective or shared standard expressed in the medical culture, the question of whether medical error-reporting and disclosure

practices are influenced by personal culture or the broader medical culture has to be addressed. Relatedly, little is known about whether physicians view their personal reporting culture as normative, and the extent to which they view non-reporting as a normative standard in the medical culture.

Cross-cultural research by Gallagher and colleagues has shed some light on the similarities and differences within physicians' reporting and disclosure practices. Nevertheless, a lack of understanding of country-specific cultural factors that impact error reporting remains a growing problem. It can be seen from the above analysis that more is understood about error-reporting practices in developed countries. This deficiency points to a recognizable research gap in health care, one that excludes important contributions from developing countries.

Generally, this research identified that little is known about the links between culture and medical errors. Of central concern, therefore, is to understand how personal, medical, organizational, and community cultures contribute to physicians' error-reporting and disclosure practices.

To address these gaps in the literature, understanding the perspectives of physicians in a developing country such as the Bahamas can be uniquely rewarding. In the context of this study, the Bahamas serves as a perfect proxy. Since numerous physicians in the Bahamas received medical training in North America, with this dual cultural exposure, such perspectives may be viewed as somewhat generalizable. In the same way, the historical development of the Bahamas' medical culture makes it a uniquely positioned developing country with potentially diverse perspectives across physicians.

Chapter 3. Methodological Considerations

Research Setting

The research setting for this study was Nassau, Bahamas, and the student investigator is based in Montreal, Canada. Nassau is the capital city of the Bahamas, where the healthcare system is mainly composed of a public sector and a private for-profit sector; a not-for-profit sector also exists but plays a minor role.[148] At the apex of the Bahamas' healthcare system stands the Ministry of Health, the Department of Public Health, and the Public Hospitals Authority. The Public Hospitals Authority is responsible for the management and development of the country's three public hospitals, the Princess Margaret Hospital (PMH), Rand Memorial Hospital, and Sandilands Rehabilitation Centre. While PMH is the largest public hospital in the Bahamas, the chief private care provider of in-patient services is Doctors Hospital.[149] Nevertheless, as much as 87% of healthcare services in the Bahamas are provided by the public healthcare system.[150] The Ministry of Health is responsible for health policy and planning.[151] The most recent statistics indicate that 875 physicians, or 2.82 physicians per 1,000 people, are registered and licensed to practice in the Bahamas.[152] The present study featured interviews with nearly two percent of that population.

Sample Size

A purposeful sampling was conducted to identify (N = 16) practicing physicians in the Bahamas. All physicians selected to participate in this study were registered by the Bahamas Medical Council and licensed to practice. Roughly 59% of licensed physicians work in the public sector, and 37% in the private sector, all of whom have direct contact with patients, except 4% of physicians who primarily do administrative work.[153] The majority of physicians with direct patient contact are located on New Providence Island in the Bahamas, where the capital city of Nassau is located.[154] This research involved

eight (8) male physicians and eight (8) female physicians; all physicians worked on New Providence Island. This research was conducted with physicians in the public and private sector. Employees from the hospital administration and pharmacy acted as gatekeepers and participated in identifying participants for the study. Ultimately, gatekeepers assisted in recruiting physicians interested in and available for this study, and they informed potential participants verbally and electronically of the primary research question under study. Gatekeepers asked participants to provide a phone contact and email address, or both. In addition to volunteer gatekeepers, snowball sampling was employed to recruit participants, whereby participants were asked to recommend others for interviewing.

Protocol 1: Materials

All potential interviewees received a standard email directly from the student investigator asking for their participation in the study (Appendix A) or were contacted by a gatekeeper who explained the research topic and objective. The gatekeeper had received an introductory letter from the student investigator that was emailed to all physicians interested in participating in the study (Appendix B).

Research Protocol

Physicians who accepted the invitation to participate received a follow-up email seeking to arrange a mutually convenient time to conduct a Skype/land-line phone or face-to-face interview. Once the date and time of the interviews were confirmed, participants received the informed consent document (Appendix C). All interviews were conducted by the student researcher. On the day of the interview, the interviewer initially greeted the interviewee. Next, the research protocol was explained to the interviewee, and the interviewee was allowed to ask any pertinent questions. The interviewer obtained written or verbal consent from participants. Participants were also informed that they could withdraw their consent at any

time. The interviewer and interviewee then proceeded with the interview. The interview consisted of sixteen (16) open-ended questions related to medical errors in the Bahamas (Appendix D).

Qualitative Approach

A qualitative research approach was carried out for this study. This research approach is recommended for exploring and understanding the meaning individuals or groups ascribe to a social phenomenon.[155] The theoretical perspective most often associated with interpretative traditions in qualitative research is phenomenology.[156] Following the phenomenological approach, researchers seek to describe the human life experiences regarding a phenomenon among a group of individuals who have all experienced the phenomenon[157] in order to understand their collective experiences.

Data Collection

All interviews were audio-recorded. Field notes were written in conjunction with the interviews both during and after the interviews. Face-to-face interviews were conducted at mutually convenient locations (e.g., the physician's office). Also, Skype or land-line phone interviews were conducted in a private room in the McLennan Library at McGill University. Interviewees were strongly encouraged to seek quiet and private locations for the interviews.

This study employed semi-structured interviews, lasting from 15 to 60 minutes. Creswell recommends long interviews with up to ten people for a phenomenological study;[158] therefore, a sample size of 16 physicians was selected. Initially, a total of 20 physicians had agreed to be interviewed. The following are the reasons why 4 physicians were not interviewed; one physician stated they could no longer find the time to do the interview, two other physicians said they would only do the interview if the head of the Physicians' Association personally gave them permission, and all efforts to reach the fourth physician by phone or email were unsuccessful. Nevertheless, the semi-structured interviews were informal and carried out in a conversational style, and the length of the interviews was flexible to accommodate physicians' schedules. Finally, interviews conducted via Skype calls used the EVAER® software. Skype recommended this app, and it can be used for voice over IP (VoIP) calls. VoIP allows

two Skype users to establish two-way audio streams with each other.[159] This software enabled the interviewer to record both audio and video conversations.[160]

Data Analysis

This research used the qualitative approach of inductive thematic analysis to assess information gleaned from the interviews, whereby interesting features or patterns in the interview data were highlighted. Thematic analysis is a widely used qualitative analytic method that offers a theoretically flexible approach to analyzing qualitative data.[161] While phenomenology focuses on subjective human experience, thematic analysis can show a broader understanding of the social and cultural phenomena.[162] Thematic analysis is generally described in six phases, and Braun and Clarke claim the process of analysis is not especially linear.[163]

The first phase, focusing on data familiarization with internalization, occurred through transcription and translation of the interviews. Interview data from the 16 physicians were interpreted verbatim by the researcher. Participants' perspectives were reported in everyday vernacular. This approach is necessary because it allows readers to reflect on participants' responses; it also allows the researcher to communicate with his supervisors the exact responses so that the supervisors could offer advice on coding and theme development. The quantity of data was minimized after reading and re-reading the transcribed data, and identified themes, patterns, repeated ideas, and perspectives that participants agreed or disagreed on were noted and recorded. Transcript data were entered into Microsoft Word and Excel files and stored in the student investigator's personal cloud file storage (Office 365- OneDrive for Business).

All interview recordings, written notes, and interview transcripts were uploaded to a password-protected computer hard drive, and documents and materials related to this study were locked in a safety cabinet or a password protected computer. The student then generated the initial codes, which were later collated into categories that reflected underlying ideas and assumptions about medical error reporting and disclosure.[164]

The third phase consisted of theme development. These categories were collated into themes, and each theme reflected an aspect of the research question under investigation. The categories were grouped

into themes in a series of cycles that moved from being generally concrete reflection of what the participants said to more abstract themes. At this stage, themes that were coded were further analyzed in Microsoft Word and Excel and broader patterns showing links or potential relationships between themes were identified.[165] At the fourth phase, each theme was evaluated for meaningful coherence,and a thematic map was created with themes that provided information on physicians' error-reporting practices. At the fifth phase, themes were defined and subthemes were generated. Also, at this stage there was continuous analysis in order to justify theme generation. Finally, after a systematic review of the data, a logical, coherent, unified, valid, and clearly written interpretation of the information was reported.

Consent

In the process of obtaining participant consent prior to interviews, participants were informed of several important matters. For instance, participants were informed that only the student investigator and the principal parties to whom he was reporting would have access to the data provided. Participants were also informed that they could withdraw their participation, including the use of their data, without penalty. The student investigator ensured participants were made knowledgeable about the purpose of this study, which was to learn more about the nature of medical errors in the Bahamas. The student investigator also reminded participants that interviews could last between 15 and 60 minutes, and that during this time, participants would be asked a variety of questions based on their perspective on medical errors in the Bahamas.

Participants were then assured that the McGill University Ethics Review Board had approved the study under research. Next, participants were informed that they had the right to ask and have answered any queries regarding this study. Lastly, the student investigator obtained verbal or written consent from all participants prior to interviews. An email address was provided to all participants to facilitate the collection of consent forms.

Risk

The student investigator communicated to participants that there was little risk and no monetary cost, deception, or compensation for physicians who participated in this study. Participants were also informed that in all research notes and field notes no individuals would be mentioned by name; their identities were kept confidential always by assigning a pseudonym. Participants were discouraged from reporting on specific patients, institutions, or incidents to avoid the risk of potentially sharing incriminating information. In addition, interview questions were designed to retrieve abstract information and not personal and specific experiences. There was no additional risk involved in this study for the research population.

Confidentiality

For all participants in this study, confidentiality was strictly protected by the use of a numbering system. Interviewees were assigned code numbers to ensure the anonymity of their identity. Temporarily, numbers assigned to interviewees were used in all written and verbal discussion of the results; this includes the presentation of data at conferences or in publication. Data gleaned from interviews did not reveal or report the names of institutions or physicians.

The Skype EVAER® software was one of the primary tools used to acquire physicians' perspectives. This software claims to encrypt all communications with 128-bit or better cryptography ciphers, making it impossible for someone other than the interviewer and interviewee to understand the contents being discussed, without intentional access.[166]

While Skype was the primary means of collecting data on physicians' perspectives, in cases where physicians preferred a landline telephone interview, this was allowed, since landline telephone interviews do not present any significant risk. Further, face-to-face interviews were also conducted. Neither of these data collection methods presented significant risk to participants.

Also, both before and after transcription, only the principal investigators and student investigator had access to the data. All written notes, interview transcripts, and recorded video transcribed interviews and notes were stored in the student investigator's personal cloud file storage (Office 365- OneDrive for Business). The data will be stored for approximately up to seven (7) years after the student investigator graduates from McGill. Immediately after this period, audio recordings will be deleted, and all written notes, including transcripts, will be shredded. In addition, OneDrive files will be moved to another storage location six months after graduation.

This research, therefore, sought to alleviate concerns about confidentiality pointed out by Wiles et al., such as: [167]

- Maintaining confidentiality of data/records: ensuring the separation of data from identifiable individuals and storing the code linking data to individuals securely;
- Ensuring those who have access to the data maintain confidentiality (e.g., the research team, the person who transcribes the data), i.e.,
    i. Not discussing the issues arising from an individual interview with others in ways that might identify an individual;
- Anonymizing individuals and/or places in the dissemination of the study to protect their identity.

Chapter 4. Data Results, Analysis, and Discussion

Analyzing Themes

While physicians are not the only health professionals responsible for curbing the occurrence of errors, they should work within healthcare systems with a responsibility to help minimize factors that contribute to the incidence of medical errors.[168] Nevertheless, scholars claim concealing information is to be expected from physicians; and many physicians have admitted that when errors occurred, they felt inadequate and became more detail-attentive.[169] Researchers also draw attention to several concerns identified by physicians about factors in the error-reporting culture that inhibited reporting and disclosure; namely, a culture of blame, punishment, and a lack of commitment to a culture of safety.[170] Therefore, the primary focus of this research is to understand physicians' perspectives on disclosing and reporting errors via the medical culture within a developing country. It is my goal to make meaning of this uncharted territory that gave rise to a vacuum in the scholarly literature and to make links between the literature and the study sample.

With a goal to design a research question that would deepen the understanding of physicians' perspectives on medical error, my efforts brought to the surface deep-rooted views on the research focus. During the recruitment period, several physicians and gatekeepers believed soliciting study participants would be difficult or nearly impossible because of the sensitive nature of the topic. Despite such difficulty, I successfully recruited a sample of sixteen physicians who effectively presented their views on medical errors. Intending to make the research as rigorous as possible, I subdued and reserved my personal views on the phenomenon of error under investigation. Exercising such restraint allowed me to ask interviewees unbiased questions, to produce accurately representative codes and themes, and to interpret and record interviewee responses without prejudice.[171]

This section highlights the possible ways physicians' error-reporting and disclosure practices may be influenced by the broader medical culture and offers possible interventions to improve error reporting.

To achieve this goal, I constructed a research question that allowed constructive access to the perspectives and sensibilities of physicians and gave rise to a representative thematic map. Physicians' statements in the coming extracts demonstrated their perspectives on medical errors and the impact of errors on reporting and disclosure practices. To meet theorized goals, this section concludes with a discussion that highlights and situates the links between culture and physicians' perspectives on error reporting and disclosure.

Thematization Process

This thesis draws on conventional thematic analysis. Thematic analysis is a method for categorizing, exploring, and reporting patterns via theme development within data.[172] Scholars describe a theme as a word or phrase that represents a pattern response while capturing important features of the data linked to the research question under investigation.[173] To select the most essential themes suitable as representative patterns of interviewee responses in this study required excluding non-representative themes from the overall dataset. Theme selection followed the identification of ideas that represented a coherent and meaningful pattern in the data and corresponded to the research question.[174] The process of determining meaningful patterns is inherently subjective, and researcher influence is unavoidable. Meaningful patterns refer to the pulling together of data into smaller and more significant units and grouping less abstract ideas under a higher-level abstraction.[175] In the process of theme development, it was important to stay close to the interviewees' perspectives when pulling the data together.

Acknowledging the process of theme development is a critical part of establishing the robustness of the research outcomes. Also, when researchers acknowledge the potential for researcher bias during thematic coding analysis, this highlights their attentiveness to possible contingencies to reduce such bias. Reducing bias can include constant comparisons across participant perspectives and highlighting outlier cases.[176] Outliers are useful when determining if all the information identified within themes has broad applicability.

As indicated above, the first stage of thematic analysis focused on the development of themes, sub-themes, and codes. Initially, interviews were analyzed to ensure sufficient acquaintance with the data. At

this stage, notes with key ideas were written down as the source of ideas for codes.[177] After several readings of the transcribed recordings, keywords and expressions (e.g., "Afraid") were gathered under umbrella concepts. At this phase of the analysis, theme identification occurred at the semantic level, where the codes generated were intended to represent explicit and patterned responses. Below are examples of comments showing a patterned response described as "a culture of fear," where multiple physicians conveyed fears that are all linked to medical errors being publicized.

(Dr.54) "Physicians most of the time are afraid that their mistakes will be known to the public as opposed to kept in-house."

(Dr.46) "Physicians do not disclose errors if they are afraid of losing their job, losing license, afraid of the consequences of the errors that were made."

The second level of analysis focused on transitioning keywords and concepts into sub-themes and themes. The development of three major themes represented physicians' perspectives on medical errors in the Bahamas: Cultural Barriers, Collegial Discord in Error Disclosure Culture, and Medical Error Minimization (Figure 1). All themes were interlinked and had numerous sub-themes supporting them. For example, under cultural barriers, physicians indicated impediments that were categorized as professional, human, or institutional. Below, I provide an account of each theme and sub-theme explaining their origin and supported by representative quotes from interviewees. Essential similarities existing between physicians' perspectives on medical errors informed theme development.

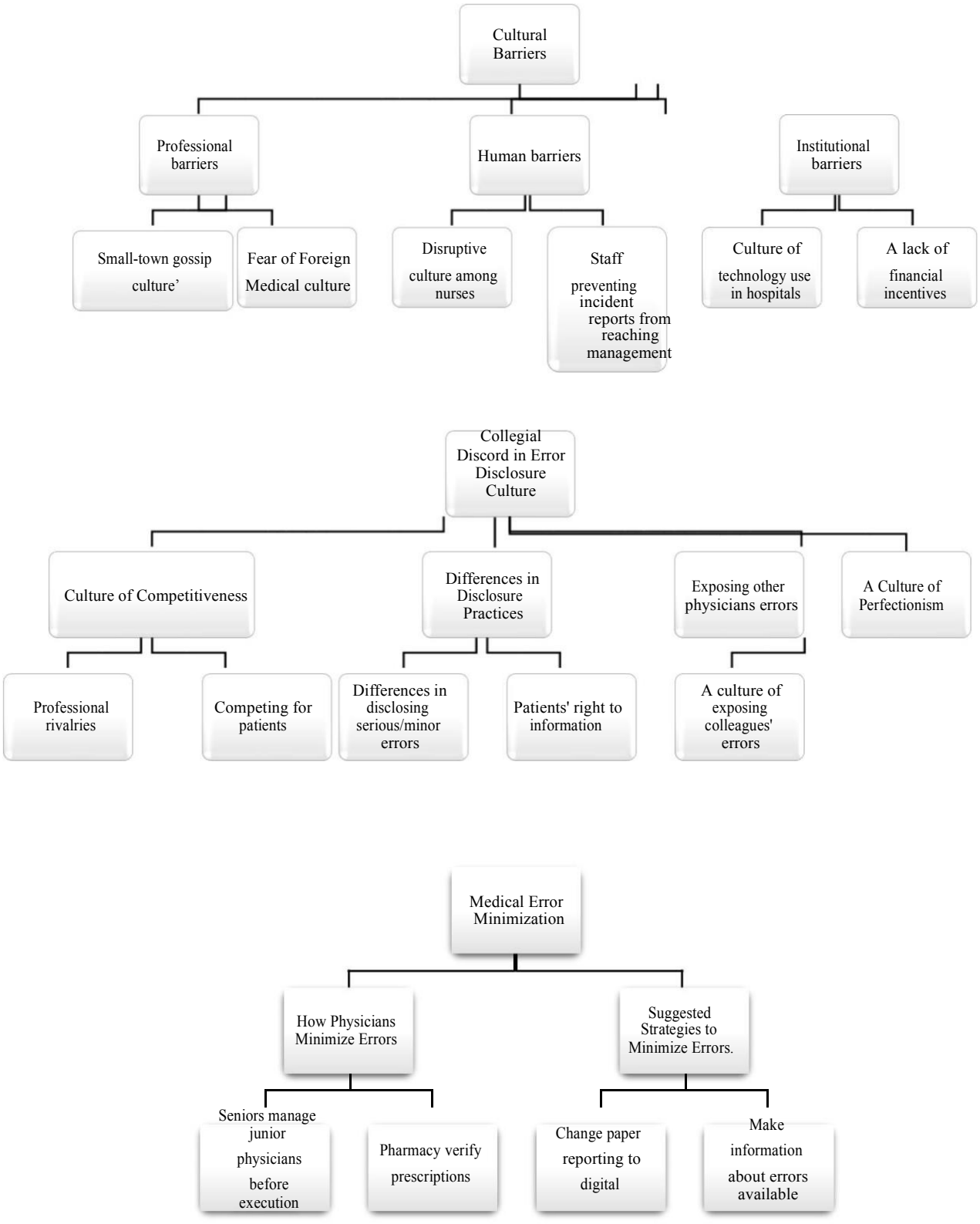

Fig. 1. Key themes, sub-themes, and codes

Themes

Theme 1: Cultural Barriers

Sub-theme:

- *Professional Barriers*
- *Human Barriers*
- *Institutional Barriers*

Theme 2: Collegial Discord in Error Disclosure

Culture Sub-theme

- *A Culture of Competitiveness*
- *Differences in Disclosure Practices*
- *Exposing Other Physicians' Errors*
- *A Culture of Perfectionism*

Theme 3: Medical Error Minimization

Sub-theme

- *How Physicians Minimize Errors*
- *Suggested Strategies to Minimize Errors*

Theme 1: Cultural Barriers

Cultural barriers described integrated patterns of behaviors understood as common among physicians. These included expected actions and behaviors regarded as customary practice among physicians. Additionally, cultural barriers represented physicians' established beliefs, values, conduct within the institution, and the process of communication. As a result of cultural barriers, it is believed that physicians choose not to disclose or report errors. Three main sub-themes relating to cultural barriers were identified from the data: Professional Barriers, Human Barriers, and Institutional Barriers. These themes were frequent within the dataset and salient across all participants.

Professional Barriers

Professional barriers represented those cultural factors closely linked to work and practice that discouraged physicians from reporting or disclosing medical errors. Some examples of professional barriers were reputational repercussions, fear of job loss, fear of losing one's medical license, facing malpractice litigation, a lack of professional confidence, fear of foreign influence, being reprimanded in the workplace, avoiding embarrassment, 'small-town gossip culture', losing respect, pride, and feeling shame. The following statements represented a range of professional barriers. A consistent professional barrier suggested in the transcripts of most participants focused on reputational repercussions. A most significant finding in this research is that participants believed that if errors were disclosed, reputation loss was not merely a possibility but a guarantee. The language used in the following statement by Dr. 54 suggested such a guarantee is a cultural and regional reality.

> (Dr. 54) Of course in any small nation, in any small Caribbean nation, that information is so easily extracted to the population outside, so the common public could know any information, at any point in time, because there is always a breakdown in that communication link.

Guaranteed loss of reputation may result from a medical culture that is the off-shoot of a sharing community culture. Importantly, Dr. 54 indicated the cultural nature of sharing information by stating "there is always a breakdown".

Many participants described how one's reputation can face ruin in a small community culture where bad news travels fairly quickly. This idea of reputational repercussions is represented in the following statements.

(Dr.27) Everyone is afraid of their reputation being ruined because word gets around very quickly here...

(Dr.50) I suppose if they feel there is going to be some kind of negative repercussion on them personally, then perhaps they may not want to. That's the only thing I can think of as to why they wouldn't.

(Dr.01) As far as disclosure barriers, well the Bahamas, and Nassau, in particular, is very small and you only have x number of physicians, and you have x number of population. Good things travel nicely, but bad things travel like wildfire; all you need is one bad [event], and that's [it], like you are ruined.

(Dr.54-) So, you find that a lot of physicians don't want to report what has happened because they fear that their colleagues will now use the information to get them bad press to ruin their professional career ... so they don't want to tell people about the error...

It can also be observed from the above statements that physicians' concern about their reputation can be attributed to their awareness of the 'small town gossip culture' that permeates Bahamian society; physicians fear resulting community scorn and collegial retribution that damage professional reputation. According to interviewees, the gossip culture has tremendously influenced the medical culture in the Bahamas, as expressed in the divided error-reporting attitudes, beliefs, and practices among physicians. Physicians expressed a reluctance to confide in other health professionals to keep errors confidential. In the following statements, physicians shared the impact that a community gossip culture has on error and disclosure practices.

(Dr.46) Physicians that try to hide or cover up any mistakes to preserve their reputation, I would make it so that it is easier for a physician to come forward with a mistake as opposed to them feeling embarrassed and have their reputation tarnished. Of course, it could also be a more confidential process. Of course, in any small nation, in any small Caribbean nation, that information is so easily extracted to the population outside, so the common public could know

> any information at any point in time because there is always a breakdown in that communication link.

> (Dr.01) You got to fight back, so it's kind of like you want to disclose and explain to the patient, but as soon as you turn your back they are going to pick up that phone and start that conversation. you want to because that's what you are supposed to do in terms of the patient, but at the end of the day, you have to worry about your reputation in a small community.… I think a lot of times physicians just settle just to let it go away and not let it hit the community… make the problem go away really fast before it hits the community, social media.

> (Dr.59) I think word of mouth is a barrier to error disclosure in the Bahamas; if you do something and it gets out you are going to lose patients and respect in the community.

Interviewees seemed to believe that the idea of reporting and disclosing errors revolved around a growing culture of fear with enormous risk to status and confidence in professional expertise.

Another interesting finding linked to reputation was a culture of reputation protection through disassociation from erring physicians. With striking similarity to the blame culture, physicians used their colleagues' errors as case-in-point. Although asked to provide their direct or first-person perspective on certain questions, a few physicians took this opportunity to respond on behalf of other physicians, with the frequent use of the third person "they, them, their." The following statements are examples of physicians using the third person "they, them, and their" or forms of language designed to distance themselves from the actual medical error.

> (Dr.54-2): So, what they do is use medical errors to make their fellow physicians look bad. So you find that a lot of physicians don't want to report what has happened because they fear that their colleagues will now use the information to get them bad press to ruin their professional career, because of that small niche market, they don't want to ruin their professional career, so they don't want to tell people about error, because they are afraid.

(Dr. 46) Certain physicians can't deal with certain reputation that can be dispersed to the community.

Another professional barrier referred to by several participants is the fear of malpractice litigation that could arise after an error occurs. Many participants believed this culture of fear often resulted in non-disclosure of errors. The following statements highlight physicians' concerns motivated by fear of malpractice litigation.

(Dr.38) I think it depends on the error ... what I might do is, I might not disclose myself if there is a potential for a lawsuit.

(Dr.15) It's just natural, anytime there is a mistake, you don't want to be reprimanded; you don't want to get into trouble per se … so, not feeling that they are going to be severely punished for their mistake, and some people may deem it unnecessary to disclose errors.

Another major finding in this research linked to malpractice litigation is a fear of foreign medical cultures, especially North American. Many physicians in this study felt that certain practices in other medical cultures had a negative influence on error reporting and disclosure practices in the Bahamas. One such practice is the prevalence of defensive medicine. Largely, interviewees were apprehensive about the impact of the malpractice culture in North America and indicated that exposure to foreign malpractice cultures had negative consequences for physicians reporting practices in the Bahamas. Physicians suggested that the medical culture of the Bahamas is bombarded by the US medical culture that is experiencing increased threats of litigation and corresponding defensive medicine practices. Therefore, interviewees pointed out that in consequence of the threat of malpractice liability, physicians in the Bahamas practiced defensive medicine to protect their reputation and did not disclose or report medical errors. Researchers argue that physicians are generally cautious about reputation loss that follows

malpractice suits and are likely to practice defensive medicine as a form of personal protection.[178] The following statements are examples of physicians' fear that the medical culture and reporting practices in North America could negatively impact reporting practices in the Bahamas.

(Dr.01) So, I think the practice of suing trickled down from North America where unfortunately the Bahamas is really small; in North America you could probably go to a different town, depending on how the situation turns out, different town, state, open up shop, in some sense try and get a fresh start. No such thing here. Once you're done, you're done. So, I think that makes a lot of physicians hesitant to disclose earlier.

(Dr.48) The other thing is we are moving towards Americanization where physicians are being sued because of malpractice or whatever. The Bahamian populace and healthcare system are so influenced by the US and its malpractice suits/cases it is having an impact on the Bahamian people and the health system.

(Dr.58) I don't think our society is as litigious as let's say the US, but we all have to pay medical insurance, we all have to pay malpractice insurance, I assume it is still going on so, but I'm not entirely familiar with it as yet. Physicians compare the prevalence of malpractice suits to US statistics, compared to those statistics malpractice suits are low. The perception of malpractice is influenced by the practice in the US.

Human Barriers

A human barrier is any person whose attitude or behavior encourages or contributes to a systemic culture pattern of non-disclosure. Consequently, physicians' error-reporting practices may be significantly hindered when contentious working relationships exist within an institution. Individuals located within the institution, such as physicians, nurses, administrators, patients, and secretaries were all categorized as human barriers. Additionally, several physicians identified the significant impact patients could have on error-reporting or disclosure practices. In the following statements, this impact is accounted for when physicians highlighted a culture of sharing knowledge of medical errors among patients, an activity that discouraged physicians from disclosing errors.

(Dr.48) So when one thing occurs the patient may spread that to other patients, and you may find the general populace of patients avoiding a particular physician because of an incident that may have occurred.

(Dr.54-2) They try to brush it under the carpet by not engaging the patient and not being transparent. They fear that the patient will reiterate this bad experience and will go and tell other patients and say, hey, don't go to that doctor because this is what happened okay, and because of that, they tend not to report a lot of errors.

In the following statements, physicians also suggested that the patient's level of understanding could be a barrier to disclosing and reporting errors.

(Dr.55) The level of education of the patient can sometimes be a barrier to disclosing because, literally, you can tell a patient in layman's terms that "this is what is happening to you, this is what happened in the procedure," and they can go away with something else.

(Dr.05) Patients just run the hell out sometimes if you tell them 'oh you missed and cut something'; that is really not a big deal, but oh they just want to freak out and call lawyers and it's just a whole … they want to take it to a level … so you have to be very careful what you tell.… If patients would just sit down and listen and understand, then you could be more open with them … so that whole patient being so extra [patient complaining about minor errors] discourages physicians from being open and honest with them.

Numerous participants also highlighted that there is a disruptive culture among nurses and other health professionals. That is, numerous allied health workers may operate as barriers to error reporting and disclosure. In the following statements, Dr.25 argues that nurses can be an obstruction to reporting errors. While Dr. 54 shared this claim about obstructing reporting, there is a further belief that secretaries place the confidentiality physicians require at risk.

(Dr.25) Nurses can be a barrier and administrators can be a barrier, from getting your report to the right persons. So now they recommend you take it yourself to the medical-legal staff instead of handing it to a nurse to pass up or another administrator to pass up; that's one barrier.

(Dr.54) A secretary may know what is wrong with you and tell her friend and that gets out. So, I would think that many medical practitioners that make a mistake would feel more comfortable if the administration would provide a more streamlined process, keeping confidentiality at its best.

Institutional Barriers

Institutional barriers are those cultural factors that commonly hinder error reporting or disclosure practices within the institution (i.e., hospitals, clinics, private practice). Such barriers often represent long-standing, persistent conditions that significantly contribute to non-disclosure. Examples of institutional barriers include: financial incentives, policies and procedures, fear of litigation connected to defensive medicine, incident forms, public-private status, compromised building structures, and communications technology.

An important aspect of institutional barriers mentioned by physicians was their unawareness of an error disclosure policy and the influence of this unawareness on the non-disclosure of medical errors. It seems there is a culture of disregard, represented by a general sense of uncertainty among participants, about whether an error disclosure policy exists. Hence, of the physicians interviewed in this study, in response to the question *Is there an error disclosure policy?* 63% of physicians said no, 19% said they were uncertain, and 19% did not respond to the question. To date, there is no publicly known error disclosure policy in the Bahamas. While most physicians in this study did not believe an error disclosure policy existed in the Bahamas, in the following statement, Dr.54-2 further suggested that because of the absence of a policy, physicians were not duty-bound to disclose medical errors.

(Dr.54-2): No, there is none [error disclosure policy]; it doesn't exist. There are error disclosure policies that are specific to institutions, so there are some practices or institutions that may have those error disclosure policies, but there is none in the Bahamas that compel you to disclose.

Another interesting finding in this study was that interviewees mentioned how the overcrowding of small spaces negatively impacted error reporting. Interviewees suggested that patients cluttered in small spaces, with their resultant close proximity to physician-patient conversations, often made disclosing errors difficult. Close proximity may raise concerns over disruption; even more so, physicians may have concerns about the privacy and confidentiality required for disclosing medical errors. In the following statement, Dr.55 implied that infrastructural conditions connected to overcrowding of patients in the hospital were a barrier to disclosing medical errors.

(Dr.55) I feel, in the public setting, the overcrowding of the hospital is a barrier to disclosing, because there is literally a curtain between you and the next person, and that's not sound proof. So, I mean, you try your best to provide quiet areas but, if this person is bedridden and we need to inform them at the time… I was in the hospital last week, and one girl came in, and she said she had this foul-smelling thing from down low, and she just went home one, two or three days ago, and she was right in the room next to me, and I could hear the doctor say 'Well it looks like a piece of your membrane's got left in'… And, so, now they are aware that Dr. so and so was the doctor who did this, you know… it increases your awareness to a medical error, and it makes you anxious about medical errors.

An additional finding and equally significant aspect of institutional barriers is the culture of technology use in hospitals and its influence on error reporting and disclosure.
The following statement by Dr.55 suggested that physicians must be mindful of the patients' customary use of technology such as cell phones in the hospital, and how such usage may

compromise error reporting and disclosure. In addition, Dr.55 showed a concern for other patients' privacy rights, as well as the physician-patient relationship that requires privacy for errors to be disclosed.

> (Dr.55) Another barrier, technology. Every patient has a cell phone, and they are bringing them into the hospital. All the time and you're continually having to monitor this … so, you have people on video chat, and in the background, there is another patient breastfeeding a baby.… They are literally videotaping.… These types of things can happen, and they can happen while you are talking to a patient about a medical error that has occurred. All of these things may not prevent you from disclosing but may delay when you decide to disclose.

In this study, a lack of financial incentives became a barrier to error reporting and disclosure. Dr.54-2lllllll discussed the use of financial incentives to influence physicians' error-reporting and disclosure practices. Also, comments by other participants implied that healthcare professionals might be inclined to report or disclose more errors if they were adequately incentivized. Researchers have concluded that "financial incentives significantly influence physicians' supply of healthcare."[179] In part, Dr.54-2 reflected on the impact of financial incentives on error-reporting practices. In the following statement, Dr.54-2 conveys a belief that medical errors can be mitigated; and because they have access to resources, physicians in private practice have more incentive to minimize errors than do physicians in public practice. Dr.54-2 shared:

> So, they don't want to tell people about errors because they are afraid that if that gets around to other people, it is now a situation where they can't get patients because they are known for these errors.… Because of that, they tend not to report a lot of errors. This has been somewhat curtailed in the private setting because their documentation by the EMR and review by the risk committee is very common. So, you can't get away with a lot of little medical errors. So, you find that a lot of people actually police their department a lot better and they would generate the risk forms and generate the medical error forms more frequent because of fear of their job and financial compensation

> through benefits and through bonuses and those sorts of things. So, it is kind of curtailed in the private environment, but publicly you have a lot of errors thrown under the table because they don't want anybody to know what they've done.

Theme 2: Collegial Discord in Error Disclosure Culture

A suggested lack of collegiality in the Bahamas' error disclosure culture refers to numerous factors that contribute to poor relational harmony and distrust among physicians. Essentially, this theme highlights the consequences of an individualistic approach by physicians when disclosing errors. Collegial Discord in Error Disclosure Culture also captures physicians' rivalry and distrust, a culture of blame, a desire to see other physicians punished for errors, differences in accountability for patient safety, challenged professional relationships, ideals of perfectionism and individualism, and professional competition.

A Culture of Competitiveness

A major finding emerging from interviewee commentaries suggested that a culture of competitiveness among physicians impacts the institution's error reporting culture. Interviewees further suggested that competition exists among private and public physicians. The sentiment expressed in the following quotation by Dr.54 (2), embodies the view that in a market where doctors compete for patients, some physicians can control the market when patients begin to evade physicians who have a tarnished reputation.

> (Dr.54-2): You find a lot of physicians actually compete, and fiercely compete with fellow physicians. So, what they do is use medical errors to make their fellow physicians look bad. So, you find that a lot of physicians don't want to report what has happened because they fear that their colleagues will now use the information to get them bad press to ruin their professional career.

This quote also suggests that factors such as professional rivalries, possible dissimilarities in error reporting practices, and differences in accountability for patient safety hinder error reporting and disclosure. As a consequence, such rivalries suggest that if an error were reported, it would be used to blemish the reputation of the apparently erring physician. Concern about competition among physicians is sustained in the following comment made by Dr.54.

> (Dr.54) There are many 'beefs' [rivalry] or discrepancies going on between certain doctors for years, certain doctors and administrators for years, and it's like nothing too, let's say, have their mistakes leaked out to the public?…

Dr. 54 indicates how competition among physicians is represented by disagreements and inconsistencies. To be clear, the competition for patients could result in a deliberate effort to expose the medical errors committed by rival physicians.

The desire to avoid the potential loss of reputation[180] incentivizes physicians to conceal errors and to engage in defensive medical practices.[181] In the following statement, Dr.54-2 appears to suggest that instead of uniting, privately and publicly employed physicians compete for patients:

> Dr.54 (2): Both in the public and in the private sector barriers to medical error are the same. What happens is that physicians see the market in the Bahamas as very small, and because of how small that market is, it is a very safe competition for patients. So rather than having a partnership with those fellow physicians in your specialty, you find a lot of physicians actually compete, and fiercely compete with fellow physicians.… So, what they do is use medical errors to make their fellow physicians look bad. So, you find that a lot of physicians don't want to report what has happened because they fear that their colleagues will now use the information to get them bad press to ruin their professional career.

It can be seen from the above statement that physicians believed that competition resulted from a small patient population, and that some physicians sought to drive other physicians out of business. For the same reason, some researchers claim that in small patient populations, healthcare providers who are competing for consumers cannot grow without driving a competitor out of business.[182]

Differences in Disclosure Practices

Findings in this study also suggested a possible divide among physicians regarding the disclosing of serious and minor errors. Of the physicians interviewed in this study, 44% reported that only serious errors should be disclosed but not minor errors. However, 56% of physicians held the belief that all errors should be disclosed. Differences in opinion can be seen in the following physicians' statements:

(Dr.27) Minor errors, I say if it doesn't cause harm, it's best if the patient does not know.

(Dr.35) I don't see why I should not tell you that I've made a mistake, bearing in mind that in the department that I work, persons do withhold some information.

(Dr.15) Well, all medical errors, in my opinion, should be reported. Errors are learning tools; so definitely if a patient is negatively impacted, it has to be reported, that's just ethical.

Additionally, this research identified differences in physicians' perspectives regarding the types of errors about which to inform patients. While 75% of physicians initially stated patients had a right to know about all errors, 44% reported that only serious errors should be disclosed but not minor/trivial errors. This point was made perfectly in the following statement by Dr.58, who gave an example of a barrier to disclosing errors.

> (Dr. 58) Hmm, I guess, if the physician feels the patient doesn't need to know, if they feel it is trivial, or they feel there is no benefit to come from it.

Exposing Other Physicians' Errors

This study also found that there existed a culture of exposing the mistakes of erring physicians. Exposing errors to the public seemed to be the repercussion most feared by physicians, and thus some physicians preferred to conceal errors. Participants who believed error disclosure should be concealed from the public were not confident their mistakes would remain in-house. That is, physicians were not assured of strict confidentiality when disclosing their errors and, therefore, concealed them. Below, Dr.05 and Dr.15 seem to imply that the reporting and disclosure culture involves concealment of medical errors among physicians.

> (Dr.05) No doctor is going to say any and everything that goes wrong in any procedure.… As a physician, I'm not going to sit down and go through and break down every 'nitty gritty'[minor information]. I don't have time for that.

Additionally, the following statement by Dr.15 appears to be arguing that greater time and effort needs to be invested in creating an efficient error-reporting culture, that is, an error-reporting culture that makes physicians' errors public knowledge. However, not all physicians shared this view. While few physicians like Dr.15 believed physicians' errors should be publicly available, most physicians in this study believed that if errors became public knowledge, it would pose a risk to physicians' reputation. As a consequence, physicians were not likely to report errors, in an effort to protect their reputation.

> (Dr.15) First of all, I don't even feel like the number of errors, the types of errors, the degree to which errors occur are properly being recorded in any event so that information becoming public knowledge in terms of physicians… that information needs to become available, so we need to truly see where our deficits lie, where our errors are most likely occurring.

In the following statement, Dr.55 acknowledges that a collective effort would be required to hide errors.

> (Dr.55) Mistakes happen but as soon as they happen, report them, don't try to hide anything. Don't try to cover-up for anyone, don't try to save face … nothing … happens in the public sector, that only one person is aware [of]. There is always a nurse there, and other doctors, so you can't cover things that easily. You know if you cover something up, it is a conspiracy because more than you are going to be involved in it.

By imploring physicians to refrain from concealing errors and, instead, to report anyone involved in a medical error, Dr.55's statement represents a possible discord among physicians on whether to conceal or report errors.

A Culture of Perfectionism

The culture of discord most frequently alluded to in the interviews can be described as the contrast between those physicians who believed some physicians preferred to conceal errors to maintain an image of perfection and those physicians who believed other physicians preferred to report all errors. Therefore, each physician's response below indicates how error concealment can be influenced by a desire to project a faultless image. For example, Dr.54 describes physicians as egotistical "know-it-alls" and uses a rhetorical phrase to argue that somehow along

their medical training journey, physicians may have convinced themselves that to be acceptable requires them to be perfect.

> (Dr.54) Like these people are not use to making mistakes, from medical school through their medical career they have been perfectionists. So, logically, they are in a place where "man, I already know this". That ego is very, very hard to break….

In the following excerpt, Dr.35 suggests some physicians believe they cannot make mistakes, and perhaps this desire to maintain a perfect image fosters a professional environment that discourages constructive criticism.

> (Dr.35) There are some persons who are very full of pride. They think they know everything. They don't think they can make a mistake, and you cannot tell them anything, because they have been there a long time or they went to elite school.

Moreover, in the following comment, Dr.25 observes that junior physicians refused to seek clarity from senior colleagues, even when they doubted their understanding of the senior colleagues' instructions. This refusal to obtain clarification may be linked to Dr.35's previous comment that physicians are convinced they cannot make mistakes.

> (Dr.25) Persons, residents, junior residents may not follow your instruction. They may have their own interpretation of your instructions. They may not understand clearly your instructions, and they may not tell you they don't understand. They just go and make their own interpretations.

While Dr.25 highlighted a discord concerning whether or not physicians asked other physicians for help, it appears to be difficult for physicians to ask for clarity on matters they believe should already be understood. According to the overall interviewee responses, physicians tended to

believe that a resistance from physicians to ask for clarity when they did not understand was due to a fear of appearing unintelligent or incompetent, that is, imperfect.

Theme 3: Medical Error Minimization

Across the dataset, participants expressed interest in changing the medical culture by placing more emphasis on minimizing or preventing medical errors. Numerous physicians suggested that systemic and cultural changes, staff adjustment, and other prevention methods are needed. There were two main sub-themes linked to error minimization and prevention evident in the data: How physicians minimize errors and suggested strategies to minimize errors.

How Physicians Minimize Errors

Interviewees suggested that the organizational culture was one that encouraged collaborative strategies and communication among physicians. Among all operational strategies mentioned to reduce errors, physicians conveyed that the strength of the relationships among health professionals was the key to minimizing errors. Half of the physicians interviewed stated that nurses verified or double-checked medications to minimize errors. Also, many physicians reported that senior physicians or consultants supervised junior physicians to minimize errors. Numerous physicians revealed that pharmacists also verified medications to minimize errors. It is important to note that physicians highlighted four approaches used to minimize errors: supervision, relationships, communication, and individual performance.

In the following statement, Dr.05 demonstrates that supervision and communication are central to an approach to error minimization between junior doctors and senior physicians.

(Dr.05) Well for junior doctors, we have to run everything we do by a senior physician, our plan is managed before we actually execute anything. They have to run it through and co-sign what we do to try to minimize errors…

Also, the following comment by Dr.15 indicates that good relationships between physicians and pharmacists and between physicians and nurses help to reduce errors.

(Dr.15) The pharmacy is pretty good at contacting physicians if something is written unclearly, which can lead to a medical error. They are pretty good at contacting physicians, so when you have medications that are pretty similar in name, they call us. So, they basically proofread prescriptions that are given, and also you have nurses that are at the frontline of the field; they have a pretty good relationship with the physicians I've come to notice.

Additionally, in the next excerpt, Dr.35 shows how individual performance in relation to time management and rest are used to minimize errors.

(Dr.35) You are given an eight-hour shift and then you go home, to minimize errors.

Moreover, physicians in this study also reported that nurses played a vital role in minimizing errors. In the same manner, scholars have found that nurses minimize medication errors and promote a safety culture by employing changes focused on reporting medication errors, by reducing distractions, and by utilizing a safe double-check medication system prior to administering medicine.[183] In the following statement, Dr.50 notes that nurses are important to error minimization since they are often the second check for physicians, ultimately ensuring patient safety.

(Dr.50) For example, in terms of giving medication, you usually, a doctor would order the medication, you would have the nurse being the one giving the medication,

> so usually they come behind and check your dosing, and what you're giving the patient, so I guess a double-checking medication.

Given the advantages of effective communication previously mentioned, it is quite predictable that physicians would find ineffective communication to be a risk to patient safety. For this reason, scholars argue that ineffective or inadequate team communication is frequently at the root of medical errors.[184] In the following statement, Dr. 25 gives an example of ineffective communication.

> (Dr.25) Persons, residents, junior residents may not follow your instruction. They may have their own interpretation of your instructions. They may not understand clearly your instructions, and they may not tell you they don't understand. They just go and make their own interpretations.

Suggested Strategies to Minimize Errors

Strategies to minimize medical errors can be significantly impacted by the state of the organization's culture. Indeed, several strategies have been shown to be effective in minimizing medical errors.[185] Across all physicians interviewed, numerous strategies were proposed to reduce medical errors. Strategies such as technological advancement, effective communication, and the use of continuing education were a few of the suggestions offered to minimize errors. Half of the physicians interviewed stated that education and training are necessary to minimize errors. Also, several physicians reported that if the outcomes of incident reports were made available, this could assist in minimizing errors since physicians would be able to learn from the outcomes. Numerous physicians also indicated that moving from a paper-based system to a digital reporting system would minimize errors. Some physicians proposed that adequate staffing would work to minimize errors. The following physician comments showed an eagerness to

employ computerized systems, proper error recording practices, and increased access to information, and the implementation of disclosure policies and procedures to minimize medical errors.

In the following statements by Dr.55 and Dr.25, there was an appeal to move away from paper-based methods of reporting and recording medical errors, hence a recommendation for a computerized or more digital form of error reporting.

> (Dr.55) Right now, if I could change anything about reporting a medical error, I would change paperwork to a more digital form. The institution itself right now is a little behind with regards to that, so filling out all these papers, papers get lost.

> (Dr.25) Physicians should not use shorthand; this will minimize medical errors.

On the other hand, Dr.15 and Dr.46 both seemed to focus on the design of policy and procedures that would guide physicians' error-reporting and disclosure practices. Dr.15 went further by demanding access to information that could be used to prevent future errors.

> (Dr.15) First of all, I don't even feel like the number of errors, the types of errors, the degree to which errors occur are properly being recorded in any event. So, that information becoming public knowledge in terms of physicians, and the nursing staff, and all the allied and healthcare professionals on every level—that information needs to become available … in order to prevent similar errors from occurring in the future.

> (Dr. 46) The role of the institution is to set up certain tasks and regulations for physicians and healthcare workers to follow, in order to minimize [errors] as much … as [possible].

As a final point, many physicians argued that adequate staffing would be an effective strategy to minimize medical errors. In the following statement by Dr.24, a clarion call was made to increase staffing to mitigate medical errors.

> (Dr.24) Provide us with adequate staffing and support staff so we can do our job properly, [and] a functioning Risk Department to mitigate the negative outcome.

The findings thus provide evidence of physicians' perspectives with respect to medical errors in a Caribbean-based developing country. Regarding theme generation, the physicians identified numerous cultural barriers to reporting medical errors, points of discord in the error-reporting culture, and multiple strategies for minimizing medical errors. This research has shown that the patient safety culture, cultural competence in medical education, a culture of punishment, a blame culture, a 'small town gossip culture', and a culture of perfection require further attention. These findings raise the question: What are possible interventions that can be used to promote a healthy error-reporting culture among physicians while improving error reporting?

Discussion: Meeting Theorized Goals

This phenomenological research investigated physicians' perspectives on medical errors in a developing country. This research was motivated to fill the gap left by the absence of influence culture might have in why physicians fail to report or disclose medical errors. As a case study, the Bahamas was the research setting employed to acquire physicians' perspectives on the reporting and disclosing of medical errors. As a consequence, a new understanding of the current error-reporting culture developed. In particular, this research showed that the medical culture in a developed country could significantly impact the error reporting and disclosure culture in a developing country. Also, this research showed that a small-town gossip culture impacted whether or not physicians disclosed errors. This research also offers insights for researchers, physicians, patients, healthcare institutions, academia, and policymakers. As stated previously, this research intended to confront numerous issues associated with medical errors, such as culture, barriers to reporting and disclosing errors, malpractice litigation, defensive medicine, and patient safety. Since past research has relied heavily on the incidence and reporting of medical errors, a newer goal of understanding the error-reporting culture can significantly impact the reporting and disclosure of medical errors.[186] Therefore, this research set out to examine what could be drawn from the relationship between past studies and this research, and the possible interventions that could be used to promote a healthy error-reporting culture among physicians.

Culture: The Invisible Barrier

If culture is a significant determinant of physicians' error reporting and disclosure practices, a finding this thesis shows, then the data emerging from the qualitative thematic analysis employed effectively answers the research question explored in this thesis.

It is difficult for leaders of organizations to implement strategic change because of "the invisible barrier of culture".[187] Leaders within health care experience a similar kind of challenge with the culture of medical errors. The kind of invisibility that the medical error-reporting and disclosure culture embodies is distinctive and can be best understood by examining diverse spaces with cultural variations. According to the literature review conducted, numerous findings in this research went undetected in research carried out in developed countries. Taking a developing country as the research setting, the following discussion explores culture as a barrier to physicians' error-reporting and disclosure practice.

Firstly, this study identified a 'small-town gossip culture' that has enormously shaped the medical culture of the Bahamas. According to interviewees, the gossip culture served as an obstacle to error reporting and disclosure among all physicians interviewed. Gossip is "the unverified news about the personal affairs of others and is shared between individuals informally."[188] Another scholar suggested choosing "professionalism over gossip" and described gossip as a "discussion of a personal or intimate nature, often about someone who is not present and with the intent of harming that person's reputation."[189] Physicians in this study claimed that the gossip culture is common in all developing Caribbean nations. Some writers of Caribbean history describe the culture of gossip as a response to and a form of resistance against capitalism and colonialism.[190] Bahamian writers have defined gossipers as "the best storytellers that the world has ever discovered."[191] This finding identifies an aspect of Bahamian culture thought only

to exist in less academic settings, unlike the practice of medicine. Apart from indicating the extent to which physicians could not control the release of information about errors, this finding showed that medical errors were not merely a personal matter in the Bahamian collectivist culture. In this way, many physicians expressed a belief that the influence of family and culture were personally rewarding intrinsic factors "due to the collectivist nature of Bahamian culture."[192] Elsewhere, and not associated with errors, gossip is believed to be common in healthcare organizations[193] and has been characterized as a manifestation of the organizational culture.[194] This finding of a gossiping culture fills an important gap. For example, previous research has confirmed that reputation loss is a barrier to disclosure; however, this research further shows links between gossip and fear of reputation loss.

Considering the community-based nature of Bahamian culture,[195] many participants in this study believed physicians' mistakes were likely to be gossiped about by healthcare professionals and within the community, resulting in a damaged reputation. Since reputation is essential to a person's functionality and role within a community, gossip acts as a method of social control and a mechanism that regulates individuals.[196] With errors widely exposed, physicians would risk losing control over their finances. The gloomier and less glamorous aspect of this finding is tied to the cultural reality that gossip is a part of Bahamian orality and cultural identity.[197] Therefore, if a small-town gossip culture discourages physicians from reporting and disclosing errors, then regardless of desires to minimize medical errors, no guarantees exist for the success of strategies employed, because of the enduring nature of culture.

Overcrowding of small spaces as a barrier to error disclosure and reporting was another interesting finding of this research. Due to the resource-stricken state of the economy and a patient population that has outgrown the current public hospital buildings, public healthcare

institutions are less likely to offer patients even reasonable privacy. Patient overcrowding results in physicians withholding confidential information from patients in the interests of the patient and of themselves. Senior health officials claim that an unprecedented level of overcrowding continues to rise,[198] and that overflow and overcrowding have been a problem for more than twenty years in the public hospital.[199] This finding suggests that physician's non-disclosure of medical errors may be an age-old problem, as the normal conditions for disclosing errors were not met because of a long history of patient overcrowding. Also, this finding highlights the need for infrastructural expansion and construction as a developmental strategy to minimize errors.

A fear of foreign medical cultures was an equally important finding in this research. Many participants suggested that the commonality of malpractice litigation in North America likely discouraged error reporting in the Bahamas. According to interviewees, patients in the Bahamas were influenced by the North American malpractice environment to seek litigation, but they lacked adequate knowledge on the details regarding such medical errors. Physicians expressed a reluctance to disclose or report errors, knowing that patients chose to adopt litigation practices on the basis of outside influence. This finding indicates that physicians viewed some malpractice suits as motivated by factors isolated from the cultural context in which the error occurred and, in these cases, chose to withhold information about errors. It could also be said that, inasmuch as the medical culture in the Bahamas is influenced by North American medical culture,[200] interviewees pointed toward features and practices within the culture they detested. Physicians in this research also suggested that spacious healthcare environments like those in the USA may encourage the reporting or disclosure of errors because physicians can easily relocate. In short, physicians believed that because of the geographical spaciousness of North America, erring physicians can move to other states or provinces and continue practicing. This finding is

important as it reveals expressions of inequity across physicians. In this way, interviewees highlighted that the reporting and disclosure practices of physicians in the Bahamas form a set within a cultural context unequal to that of North America, suggesting, perhaps, that cultural context is relevant in the decision to report or disclose medical errors.

In this study, a trend that shared similarities to a culture of blame was identified. A discussion of other physicians' errors across interviewees and not their own, whether coincidental or not, could be suggestive of a blame culture and an attempt to disassociate their reputation from the perceived imperfection of medical errors. This disassociation did not suggest interviewees committed errors, but it might point toward a blame culture that influenced physicians to discuss errors in the context of reducing the spatial distance between errors and themselves. In some of these instances, physicians accused their colleagues of being susceptible to errors. Also, as per physicians' concern about their reputation, these accusations bore similarities to a blame culture that commonly responds to errors as an individual problem and not as a systemic problem.[201] While first-person perspectives accounted for the individual's personal experience and thoughts, frequent reporting from a third-person point of view can be seen as giving an unidentified observer's perspective. However, third-person perspective can also be viewed as a process of self-evaluation and does not necessarily break from the phenomenological emphasis on the first-person perspective.[202] The purpose of mentioning interviewees' third-person language use when required to provide their first-person perspective, in one way, reveals a possible attempt to break away from behaviors deemed negative or socially undesirable. The consequence of a medical parlance that discusses errors from the perspective of erring physicians may damage physicians' confidence in the medical culture.

Another significant finding in this research is that a patient's or organization's status as 'public' or 'private' plays a significant role in physicians' error-reporting and disclosure practices. In this way, study participants implied that public-private status was a good predictor of the likelihood of whether patients experienced medical errors or whether errors were disclosed to patients. Interviewees overwhelmingly believed private patients were more likely to seek litigation after the occurrence of a medical error; and therefore, the probability of non-reporting or non-disclosure was higher among physicians working in the private sector. Interviewees also believed that an institution's status as public or private influenced the degree to which errors were mitigated. Consequently, and according to participants, an organization's error-reporting culture and the subsequent human impact may be predicated on whether the organization is public or private.

Employing incentives is an expression of a cultural difference in the way physicians in the private and public sector confront errors. Participants claimed that private patients responded to errors differently from public patients; the same was said about private and public physicians. This finding suggests that there exists a general culture within the private sector that is distinguishable from that of the public sector. For this reason, patterns of perspectives, values, and behaviors regarding medical errors were closely associated with patients' and physicians' public-private status. Public-private status was also linked to access to resources and incentives. With decreased access to resources, respondents believed that errors committed in the public health sector would either be ignored or that that strategies to minimize them would receive less focus. Minimal incentives exist to encourage public sector physicians to reduce errors. It seems that public sector physicians and their patients have come to accept the resource-stricken state of the Bahamas' healthcare system. This acceptance may have produced a kind of cultural thinking

wherein public sector users and providers perceive focusing on errors as being unappreciative of the advances made by the Bahamas' healthcare system to ensure affordable health care.

Also, cultural differences appeared regarding the role education plays in error reporting and disclosure. Put differently, the individual education interaction between physicians and patients has a cultural dimension. Interviewees claimed that private sector physicians were more likely to be sued, but were also provided with more incentives to minimize errors; this combination of factors likely encouraged error reporting and disclosure among private sector physicians. Due to unequal distributions, personal integrity and values must then be the determining factors encouraging public sector physicians to report errors, while private sector physicians are motivated by integrity and financial incentives to report errors. These cultural developments have greatly impacted the extent to which physicians report or disclose medical errors in the Bahamas.

Participants' also acknowledged a culture of competition and claimed that physicians competed for patients. Research suggests that physicians may compete narrowly for insured patients or compete more broadly for all members of a population.[203] Physicians in this study implied that a culture of competitiveness was fueled in the Bahamas by the differential access to resources across private and public physicians. Participants acknowledged that access to resources in the private sector allowed private physicians to curtail medical errors in a way public physicians could not. This finding of a culture of competition nurtured by physicians who are rivals for scarce resources is supported through documentation. Investigators have claimed that, because of differential access to resources, suspected friction exists between public and private sector physicians in the Bahamas.[204] Public sector physicians expressed concerned about "the lack of capital investment in the public sector and in the limitations of public sector

resources by establishing a private sector with the most modern diagnostic services and clinical interventions, not available in the public sector."[205] In addition, many public physicians in the Bahamas were forced to leave public patients on public wards and attend to the needs of private patients without pay.[206] In the case of hospital care, public physicians in the Bahamas are permitted to treat both public and private patients,[207] while private physicians are allowed to treat only private patients and not public patients. [208] When public sector physicians complained about these differences in services provided, health officials confirmed that "Medical by-laws stated they must care for all patients. Public physicians are not entitled to be paid; they are to provide service to all patients in the hospital."[209] This difference in services rendered may shed light on the reality of competition; as physicians compete for patients, discord ensues, and an egocentric error-reporting culture becomes visible.

This discussion shows that medical error is not a fixed concept with a universal occurrence but can take on new meanings in each culture. As the culture of the environment in which errors occur changes, barriers to error reporting and disclosure are likely to change. In this way, physicians' perception of errors is in tune with their cultural perceptions and the factors that influence those perceptions.

Chapter 5. Implications, Limitations, Recommendations and Conclusion

Implications

Contributing to the development of health and safety initiatives in the Bahamas, I responded to a research organization's mandate compelling Bahamians to inquire into concerns related to medical errors.[210] As a first step in addressing this issue, I attained the perspectives of physicians in the Bahamas.

This study presents the perspectives of physicians working across the public and private sector on the disclosing and reporting of medical errors in the Bahamas. Their perspectives establish ground-breaking knowledge through their documented attitudes and experiences on error-reporting and disclosure practices. Based on data generated from participant interviews, this section offers recommendations for practice.

This research allowed physicians to share their perspectives on a sensitive topic that has gone unchartered in the region until now. Accordingly, this study serves as a pioneer work to encourage future research on medical errors in developing countries. It has provided an entry point into the error-reporting culture of the Bahamas for those seeking to understand the phenomenon from the perspectives of frontline health professionals. The development of three major themes revealed physicians' perspectives on medical errors in the Bahamas: Cultural Barriers, Collegial Discord in Error Disclosure Culture, and Medical Error Minimization. In the process of investigating physicians' perspectives, this research highlighted a need for further investigation into possible interventions that could improve error reporting and promote a healthy error-reporting culture among physicians.

The first research implication is this study's provision of vital qualitative evidence on physicians' error-reporting and disclosure practices, a subject area generally taboo in healthcare

systems globally. The information generated is ground-breaking for public health and health care in the Bahamas, since there are no scholarly investigations of physicians' perspectives on medical errors. This investigation will provide policymakers, physicians, healthcare institutions (professionals), patients, and other appropriate stakeholders with a tool to draft healthcare policies addressing concerns related to medical errors.

Providing policymakers and healthcare institutions with firsthand knowledge of the various challenges physicians have concerning medical errors can result in multiple amendments and implementations at the legislative level that may be valuable for patients. For example, under the current Code of Professional Conduct for Physicians in the Bahamas, physicians are only required to disclose information patients consent to be known or when there is a threat of harm.[211] However, many physicians in this study suggested that patients have a right to know about harmful and serious errors. Therefore, a possible policy amendment could require mandatory reporting of all errors, even those errors that could not be foreseen by patients or physicians. On the other hand, the Bahamas does not have a "Patients' Bill of Rights, "[212] and this bill is the authority on which full disclosure of an error is demanded.[213] As stated previously, physicians in this study acknowledged that patients have a right to know all information related to their care; this acknowledgment can be the precursor to implementing an operational bill of rights for patients.

A second significant implication of this research is gleaned from the finding of collegial discord and its cultural significance among physicians. This study showed that long-standing discord may be indicated by systemic problems such as competitiveness, exposing other physicians' errors, and attitudes of perfectionism among physicians. This research also suggests that these systemic problems are affected by perceptions of competency, fear of punishment, a

blame culture, and a 'small town gossip' culture. Therefore, as a possible way to arrest these problems, the relevant stakeholders must explore interventions that can be used to promote a healthy error-reporting culture among physicians, while improving the reporting of errors. As they relate to the public-private competition, this study also discussed the role of incentives, and thus highlighted the benefit of a reward system for error minimization among public physicians.

A third implication of this study is the need to resolve uncertainties on whether or not an institutional policy exists on error disclosure. As previously stated, 63% of physicians said there was no error disclosure policy, while the remaining physicians were either uncertain or did not respond. At the same time, physicians reported signing documents that prevented employees from disclosing or reporting medical errors. This research has therefore highlighted the need for standardization and transparency regarding any instrument that serves the role of an error-disclosure policy. In the absence of such a policy, this research has also emphasized the need for policy implementation.

The fourth implication of this study focuses on the interplay between community culture and medical culture and their combined impact on physicians' error-disclosure and reporting practices. Physician responses suggested that the Bahamas' 'small town gossip' culture tremendously influenced the country's medical culture, leaving physicians in fear that their error-reporting committal will be exploited within the healthcare organization and the community. As a barrier to error reporting and disclosure, physicians expressed a deep fear of errors exposed to the public in a very small community. It can, therefore, be concluded that physicians who are fearful in their working institutions and community may prevent a culture of patient safety.

Fifth, and as an off-shoot from the fourth implication, this research shows that physicians' error-disclosure and reporting practices are heavily influenced by cultural habits. For

example, in this study, shame and blame of erring physicians were attributed to the response from physician colleagues as well as from the wider community. That is, physicians' responses to errors reflected the wider community response. Also, physicians indicated that after being exposed to behaviors like defensive medicine, they were likely to practice the same behavior. This speaks to a type of conditioning individuals within a community are often exposed to, and hence they adopt the habits of the individuals who share their location. Identifying the significance of cultural habits to error-reporting and disclosure practices contributes to a better understanding of the root of the problem and lends itself to more effective solutions.

Sixth, identifying the power dynamic tensions between physicians and other health professionals, as well as patients, is an important implication of this study. While this research highlighted that physicians are generally averse to disclosing errors, health professionals such as nurses are more likely to report errors,[214] and patients have generally advocated for mandatory error disclosure. Therefore, possible interpretations and applications of this research should not ignore the impact of non-disclosure on patients and health professionals.

Last, this study identified several strategies geared toward minimizing medical errors; these strategies also have the added benefit of being potentially employed as tools for the training and retraining of physicians and other healthcare professionals. Having considered that physicians in this research expressed a need for training on approaches to medical errors, any continuing education and patient-safety training designed for physicians will benefit from these error minimization strategies.

Limitations

The first limitation of this study is that, as a qualitative study, one must be careful about generalizing to other settings. Nevertheless, in terms of the literature, the cultural themes elaborated in this study resonate broadly—wherever errors occur in advanced bio-medicine—and have consequences.

This study to a certain extent ignores differences in the organizational structures governing private and public physicians. While differences in reward systems and services rendered were pointed out, more differences could have been addressed regarding the psychology, goals, and motivations among private and public physicians. These differences likely impact error-disclosure and reporting practices. This is a fruitful avenue for future research.

Secondly, this research highlighted that there were nuanced differences in how physicians defined medical errors. Although their understanding of the term was fairly similar, differences to any degree could impact a uniform interpretation. Nevertheless, much of the data suggest medical error remains an elusive term.[215] Indeed, the very nature of an "error" faces contestation. Sometimes errors are not clear-cut and are fluid (e.g. discrimination or lack of access). Future research opportunities exist to explore the nature of error.

Lastly, in this research, only the perspectives of physicians were collected, although I soon recognized that nurses, pharmacists, risk managers, and patients were all actively participating in a physician's error-disclosure and reporting practices. As a consequence, this research did not explore in detail the perspectives of other healthcare professionals that ultimately shape and influence the error-reporting and disclosure culture in the Bahamas. This is another avenue for further research.

Recommendations for Further Research

This research investigated the disclosure and reporting of medical errors in the Bahamas. The information gleaned can be used to inform the changes necessary to improve reporting and disclosure of medical errors. As a result of the findings in this study, the following recommendations have been suggested for future research.

Firstly, further research into culture as a barrier to error reporting and the interplay between community culture and the medical culture and their combined impact on physicians' error-disclosure and reporting practices would be valuable. While most physicians indicated the degree to which a 'small town gossip' culture works as a barrier to error disclosure and reporting, further research is needed to explore the exact process by which private errors are made public, and attempts should be made to measure the effect on community members.

Secondly, more research is required to identify the impact that differential error-reporting and disclosure practices among physicians has on organizational culture, patient safety culture, and professional relationships. While participants in this research indicated differential error-disclosure practices existed among physicians, this investigation did not go beyond description and cannot suggest causal relationships.

Thirdly, more research is needed on the effectiveness of training strategies designed to help health professionals confront medical errors. Many participants identified training strategies and error-minimizing strategies being used by their institution. However, participants felt that more should be done. In addition, research indicated that observation of peers[216] and the institutional culture[217] were more effective strategies to encourage error disclosure and to minimize errors.

Fourthly, there is a need for additional research on the value and necessity of an error disclosure policy. In this research, most participants were unaware of the existence of an error disclosure policy. While some participants stated that without the policy, nothing mandated them to report or disclose errors, others affirmed that their disclosure and reporting practices were guided by the pledge they made in the Hippocratic Oath and their personal ethics.

Fifthly, further investigation is needed on the impact that economic empowerment and knowledge can have on public patients' experiences with medical errors. Research participants strongly believed that public patients were less likely to pursue litigation after medical errors because they, unlike private patients, were not empowered with knowledge or access to resources.

Lastly, further research is needed to explore the pros and cons of voluntary versus mandatory error-reporting systems while also identifying the organizational structure and culture that works best with each reporting system.

Conclusion

A major contribution of this research is that it provides vital qualitative evidence on physicians' error-reporting and disclosure practices, a subject area, on the whole, taboo in healthcare systems globally. The information generated from this study is ground-breaking for scholarship globally as it sheds new light on the influence of culture on physicians' error reporting and disclosure practices. This investigation will equip policymakers, physicians, healthcare institutions (professionals), patients, and other appropriate stakeholders with a tool to assist in drafting healthcare policies that can address cultural concerns related to medical errors.

Appendix A: Sample Email Recruitment

Dear Participant,

My name is Jamal Archer, a Bahamian pursuing my master's degree at McGill University in Canada in the Department of Family Medicine. I am contacting to ask if you may be interested in participating in a study investigating Bahamian physicians' perspectives on medical errors.

Participation in this study involves a 40 to 60 minutes Skype interview, during which you will be asked a variety of questions related to your perspectives on medical errors in the Bahamas. The McGill Institutional Review Board have approved this research. Your contributions will remain strictly confidential at all stages of the research, and your identity will never be revealed in published work.

If you are interested in participating, or would like more information about this study, please contact me at: (438) 929-3915 or jamal.archer@mail.mcgill.ca. Thank you for your consideration, and I look forward to hearing from you soon.

Sincerely,

Jamal Archer
A.A.S., Legal Studies, Hon.BA, Psychology, CPhT
MSc. Candidate - Specialization in Biomedical Ethics
Department of Family Medicine / Biomedical Ethics Unit
McGill University
Jamal.archer@mail.mcgill.ca

Appendix B: Gatekeeper Introductory Letter

Dear Participant,

Research Topic: *"Investigating Physicians' Perspectives on Disclosure of Medical Errors in The Bahamas"*

An associate of mine, Mr Jamal Archer, a Bahamian Masters candidate at McGill University in the Department of Family Medicine in Montreal Canada, is carrying out a research study to learn more about medical errors in the Bahamas. I am writing to you and to other physicians I know to see if you would be interested in participating in this research. The research study is to investigate individual perspectives on medical errors by physicians based in Nassau Bahamas.

Participation in this study involves a 40 to 60 minutes Skype or Face-to-Face interview, during which you will be asked a variety of questions related to your perspectives on medical errors in the Bahamas. The McGill Institutional Review Board have approved this research. Your contributions will remain strictly confidential at all stages of the research, and your identity will never be revealed in published work.

If you would like to hear more about this research study, or if you are interested in taking part, you can provide your contact information in the space provided below, or you can contact Jamal Archer at (438) 929-3915 or jamal.archer@mail.mcgill.ca.

If you decide to respond by providing your information below to be contacted, or by contacting Mr. Archer more details on the study will be provided. Providing your contact information or contacting Mr. Archer does not commit you to taking part, only to finding out more about the study.

Thank you for taking the time to read the enclosed information

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I am interested in hearing more about the study: *"Investigating Physicians' Perspectives on disclosure of Medical Errors in The Bahamas"*

Name _____

Telephone _____ or Email _____

Please email your response to jamal.archer@mail.mcgill.ca.

Appendix C: Informed Consent Form

Principle Investigator: Professor Daniel Weinstock

Student Investigator: Jamal Archer

Introduction

This informed consent form is for physicians in the Bahamas inviting them to participate in the research study titled, "Investigating Physicians' Perspectives on Disclosure of Medical Errors in The Bahamas". Jamal Archer a master's candidate conducts this research study, under the supervision of **Professor Daniel Weinstock in the Department of Philosophy of McGill University.** Information will be provided to potential participants followed by an invitation to be a part of this research.

Purpose of the research

While the incidence of medical errors in the Bahamas have never been studied, few Bahamian physicians have shared anecdotal observations on medical errors and the problem of non-disclosure. A better understanding of physicians' perspectives on barriers to reporting medical errors is necessary to increase error reporting. The Nassau Institute a research organization in the Bahamas, affirms that the Bahamian public should be concerned and inquire about medical errors. Therefore, the purpose of this study is to learn more about the nature of medical errors in the Bahamas from the perspective of physicians.

Procedures

If you participate in this project, you will be asked questions during a Skype or Face-to-Face interview about your perspectives on medical errors. Also, interviews will be recorded. Interview questions are designed to retrieve abstract information and not personal and specific experiences.

Confidentiality and Risks

In this research information that can identify participants will not be collected. Participants are discouraged from reporting on specific patients, institutions, or incidents. All of the collected data will be analyzed in whole; no individual responses will be identified from the summarized results.

The data, with no personal identifiers, collected from this study will be stored on the student investigator's personal cloud file storage (Office 365- OneDrive for Business). Only the researchers will have access to the study data. The data will be electronically archived after

completion of the study and maintained for seven (7) years (as per University policy) and then erased. Immediately after this period, audio recordings will be deleted, and all written notes, including transcripts, will be shredded. The data obtained from this study may also be presented at conferences or published in an academic journal.

There are no known or anticipated risks from participating in this study.

Right to Withdraw Participation

Participation in this study is voluntary. You may decline to answer any questions that you do not wish to answer, and you can withdraw your participation at any time by having your responses withdrawn.

Who to Contact

Should you have any questions about the study, please contact the student investigator Jamal Archer at (438) 929-3915 or jamal.archer@mail.mcgill.ca. If you would like to receive a copy of the results of this study, please contact the student investigator.

This study received an ethics review from the Institutional Review Board, McGill University. If you have any comments or concerns resulting from your participation in this study, please feel free to contact Ms. Ilde Lepore at the Institutional Review Board at 514-398-8302 or ilde.lepore@mcgill.ca.

Thank you for considering participation in this study.

Consent to Participant

By participating in any of these research activities, I:

> do not give up any of my legal rights, acknowledge that the study has been explained to me and my questions have been answered to my satisfaction, and agree to participate in this study.

Signature: _____

Print Name: _____

Date: _____

Appendix D: Sample Interview Questions

Interview questions 1-9 were adapted from interview questions validated by qualitative nursing faculty experts at Texas Women's University. [1] Also, interview questions 10-13 were adapted from a pilot-tested questionnaire.[1]

Section 1: Reporting Errors

1. How long have you practiced as a physician?

2. What type of physician are you? Do you specialize?

3. What do you consider a medical error to be?

4. How do medical errors affect your day-to-day practice?

5. What procedures are in place to decrease the number of medical errors in your practice?

6. What do you feel the role of the institution is in preventing medical errors?

7. What is the process for reporting medical errors at your institution?

8. How do you decide when to report a medical error?

9. How would you change the process of reporting errors in the Bahamas today?

Section 2: Disclosing Errors

10. What types of errors should be disclosed to patients?

11. What are the barriers to error disclosure in the Bahamas?

12. What is the likelihood of a malpractice suit in the Bahamas?

13. Would the possibility of a lawsuit reduce your willingness to disclose an error?

14. In your opinion, do physicians in the Bahamas practice defensive medicine?

15. Do patients in the Bahamas have a right to know if serious or minor errors occurred during care?

16. Are you aware of the existence of an error disclosure policy at your institution in the Bahamas?

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