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Risk Management Competencies for Medical Practitioners Working in South African Hospitals

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A research project submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master in Business Administration.

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ABSTRACT

Risk management in hospitals is an approach intended to improve the quality of services by identifying active and latent factors that put patients at risk of physical and psychological harm when in hospital, and then acting to identify, monitor and control those risks, and effectively manage their impact. The object of this report is to describe important risk management competencies for medical practitioners working in South African hospitals, these practitioners' current proficiency levels and the competencies with the biggest gaps in practice. The report is intended to present a risk management competency model for medical practitioners working in SA hospitals.

This study was conducted in two phases of which Phase 1 was a qualitative research seeking to identify the competencies using literature review and in-depth interviews with medical experts. The second phase was quantitative, characterised by a survey utilising a questionnaire comprising competencies derived from Phase 1. The sample size for Phase 2 was 90 respondents drawn from three population groups and including medical practitioners, professional nurses and members of the hospital management team.

The research identified risk management competencies that were later ranked according to their importance using weighted mean averages. A gap analysis was conducted to assess the difference between what practitioners should know and what practitioners actually do in the hospitals in relation to risk management. A new model of "risk management competencies for medical practitioners" has been developed consisting of the knowledge, skills, behaviour and attitude competency domains that have never been previously identified. This model can be used to update certification requirements for independent medical practitioners and professional development programmes for medical practitioners as well as update curricular offerings of the medical schools.

KEY WORDS: Risk management, medical practitioners, competencies, domains of competence, hospitals and patient safety.

DECLARATION

I declare that this research report is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master in Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other university. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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Brenda Kubheka
14 January 2015

DEDICATION

I dedicate this research to my late brother, Phakama, who is the inspiration behind my research topic.

Ulale ngoxolo, Khathide.

ACKNOWLEDEMENTS

To my Lord, Almighty, I am grateful for your grace and guidance. This research has expanded my understanding of risk management in hospital services. It will have a significant impact on my career and profession. I have gained tremendous support from family, friends and colleagues who allowed me to tap into their resources, knowledge and expertise.

To my family and more especially my daughter, Tumi, for your encouragement, understanding and for reminding me to smile, laugh, love and play during my hectic MBA journey.

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Table of Contents

List of figures:

List of tables

1. CHAPTER 1: Problem definition

1.1. Introduction and background information

Medical practitioners play a vital role in the delivery of health services in hospitals and they influence clinical outcomes by developing care plans for their patients . The practitioners execute these care plans in collaboration with other healthcare workers—mainly nurses—in the hospitals.

Safety and risk management (SRM) is becoming a topic of interest in various government and academic settings. In the South African health sector it will increase in interest and importance as a result of people gaining greater understanding of their human rights while at the same time the Road Accident Fund becomes more stringent in dealing with medical claims following the Amendment of the Road Accident Fund Act 56 of 1996. There is also evidence of a growing quantity of belligerent media advertisements for legal services dealing in medical malpractice (Appendix I) when compared to previous years.

Today's medicine practice is about striking a balance between patient care and other competing demands. There is a huge demand on practitioners to strike a balance between doing good, understanding the financial impact of their decisions in the presence of limited resources, ethical considerations and sometimes having to defend themselves proactively when executing their decisions.

In the US, medical errors are the third leading cause of death behind heart disease and cancer, according to statistics from the Center for Disease Control and Prevention (2013). In 2010 the US Department of Health and Human Services Office of Inspector General reported that up to 180,000 deaths annually are attributable to medical errors (Windrum, 2013). These errors are attributed to weaknesses in the interaction between the practitioner, patient, social environment, the team, medical technology and the health system.

In South Africa (SA), early in 2013, the Gauteng Department of Health announced that it was dealing with medical negligence or misconduct claims totalling R1.4 billion. In 2011, this department paid out R876 million in compensation for medical claims, a figure that had increased from R665m in 2010. It is important to note that there is no separate budget for such medical error payout and therefore funds have to be diverted from the allocation planned for the service delivery. Medical practitioners' low morale and poor working conditions were cited as the main reasons why errors occurred leading to claims, although the Health Professions Council of South Africa also recognised patients' growing understanding of their rights as one of the contributing factors (Medical Protection Society, 2013).

The Minister of Health, Dr Motsoaledi, told the Medical Chronicle in 2011: *"I want a system that will put doctors back in hospitals and lawyers in courts – not the other way around as we are now seeing. Medical litigation and the practice of defensive medicine are the main contributing factors to the outrageous cost of healthcare in the USA because, there, doctors don't just treat patients – they also have to treat the lawyer behind the patients and we can't allow this to happen in SA."*

The National Health Act No. 61 of 2003 seeks to provide guidelines about the rights and responsibilities of the National Department of Health (NDoH), health establishments, healthcare workers and users. It also seeks to promote, protect, respect and fulfil those rights. The National Health Act also emphasises that the Minister's responsibilities are limited by the available resources. There is no doubt that an integrated approach for addressing issues related to practitioners, the health system and the social environment will lead to the desired effect. National Health Insurance also requires practitioners to play an active role in ensuring its effectiveness and sustainability.

SA's public hospitals face challenges that are unique to the developing countries, for which reason the South African context becomes pivotal when reviewing studies conducted in the US and other developed countries. Inadequate training and the shortage of medical practitioners are said to be the

biggest concerns in the SA medical profession (Professional Protection Society, 2014).

In South Africa, the National Health Act, No. 61 of 2003, emphasizes the need to foster good quality health services by developing structures to monitor the compliance of health establishments and agencies with health care standards. It provides for the creation of an Office of Standards Compliance as well as an Inspectorate of Health Establishments within each province. The Act further envisages a broad role for the Office of Standards Compliance in advising on health standards, revising or setting standards, monitoring compliance, reporting non-compliance, and advising on strategies to improve quality (National Core Standards).

The scope of this research falls within the Patient Safety, Clinical Governance, and Care domains of the National Core Standards. The aim of this study is to identify the required risk management competencies for medical practitioners working in SA hospitals and also to identify the gap between the identified competencies and current proficiency levels.

1.2. Research scope

Various stakeholders play a role in risk management and patient safety in hospitals, starting from cleaners who have a significant role to play in infection control to the specialist consultants who provide complex medical interventions.

Patient care in hospitals is provided under the guidance of medical practitioners as the primary decision makers. These practitioners play a significant role in the coordination of care and make decisions regarding the level of care to be provided, investigations to be carried out, drugs to be administered and the involvement of other supporting healthcare services.

The scope of this research is limited to the identification of risk management competencies needed by medical practitioners for the delivery of safe care to patients admitted to hospitals. The research will exclude risks associated with

financial loss or property damage and will focus only on the risk exposure to patients.

1.3. Research motivation

Healthcare has sought to learn from experiences of safety-critical industries, particularly aviation. There has been criticism that solutions in one industry are unlikely to be transposed indiscriminately to another industry without taking into account a close analysis of the context into which they are brought (Tamuz & Thomas, 2006).

A number of studies have been conducted in various professions with the common aim of enhancing the quality of each profession's services through intra-professional reflection (Melaia, Abratt & Bick 2008; Nkado & Meyer, 2001; Birkhead, Sutherland & Maxwell, 2000). Studies to identify the various competencies for medical practitioners were undertaken in other countries (Cate, Snell & Carraccio, 2010 and Nissen, Angus, Miller & Silverman, 2010) but no such studies have been conducted in a South African context. The research aims to identify the competencies required by practitioners working in hospitals and the findings are expected to inform the training requirements for improving the risk management competencies underpinning patient safety. Nissen *et al.* (2010) identified risk management as an important aspect of medical education and admit that few curricula currently exist to fulfil this need.

1.4. Research problem

The study attempts to identify risk the management competencies needed by practitioners working in South African hospitals to effectively manage risks and patient safety.

Essentially this research aims to:

- Establish a list of risk management competencies relevant to the SA context; and

- Identify the gap between the identified competencies and current proficiency levels.

This research study hopes to add to the existing body of knowledge with the prospect of ultimately contributing to the improvement of risk management and patient safety through the up-skilling of practitioners.

2. CHAPTER 2: Literature review

2.1. Introduction

The literature review focused on four themes aiming at the medical practitioner and risk management. Firstly, literature reviews were conducted to examine the health system providing the context, followed by the subject of risk management in hospitals. Thirdly, the previous research done on competencies was considered, and lastly, the risk management competencies needed by medical practitioners working in SA hospitals.

Each section was researched with a view to providing the researcher with the necessary information to conduct preliminary in-depth interviews with medical experts, followed by a quantitative research.

2.2. The health system

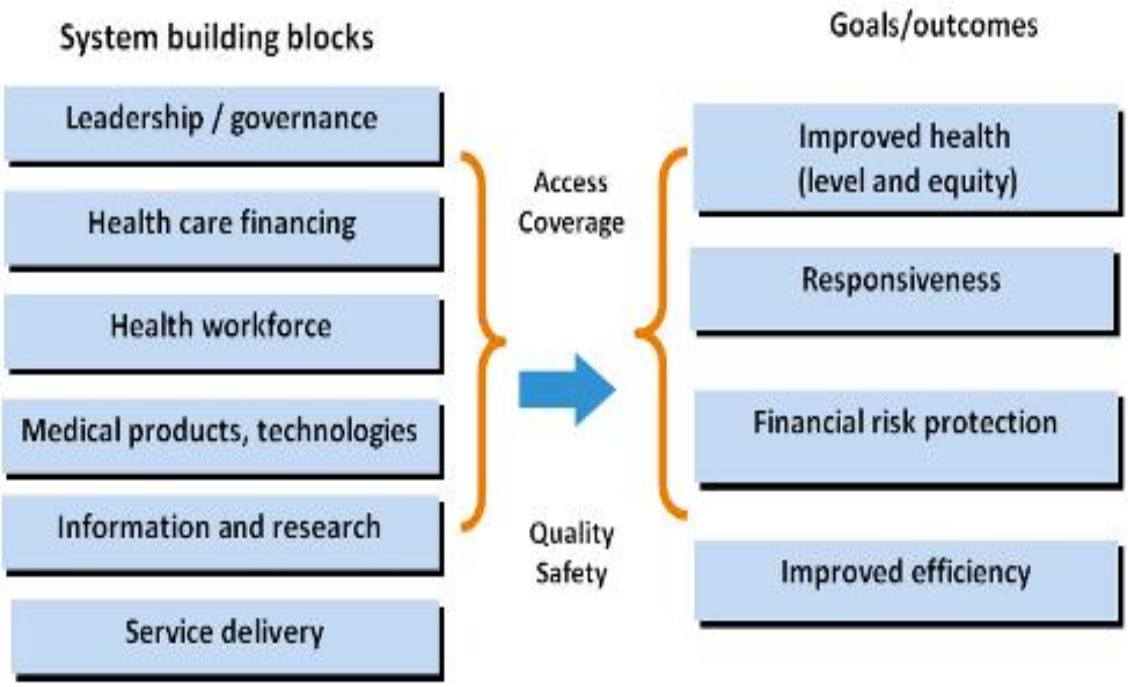
2.2.1. Defining the health system

The World Health Organisation states that a health system consists of all organisations, people and actions whose primary interest is to promote, restore and maintain health (WHO, 2007). The health system is designed to achieve specific objectives and goals. Inputs into the health system have an influence on the outcomes of the health system (Figure 1). Therefore, the weaknesses affecting any of the inputs will have a negative impact on one or more of the outcomes.

The WHO's definition of the health system is the foundation for the definition of a local health system, which is defined as all organisations, people and actions that primarily intend to promote, restore or maintain health at the level of cities or rural areas (Bhojan, Devedasan, Mishra, De Henauw, Kolsteren & Criel, 2014). Both definitions echo the dependence of the functioning health system

on its people. The human resources have to adopt and implement policies, and provide responsive and relevant health services.

Figure 1: The WHO Health System Framework



Source: World Health Organisation (WHO, 2007)

2.2.2. The health system and context

The WHO defines a properly performing workforce as one working in ways that are responsive, fair and efficient to achieve the best health outcomes possible, given available resources and circumstances (WHO, 2007). For this reason the local health system, which is the context, definitely matters when assessing health systems and outcomes as highlighted in the study conducted by Albenese, Mejicano, Mullan, Kokotailo & Gruppen (2008). Interestingly, the same study presents a view that even countries with as many similarities between them as the US and Canada (Appendix II) in terms of background and sophistication of medical systems, have separate sets of competencies that govern the practice of medicine.

In South Africa, the health system has enabling policies and funding but is failing to achieve the Millennium Development goals as stated by Sewankambo & Katamba (2009). This paper proposes that the solution for this challenge be drawn from the need for creativity and innovation in the education systems to produce appropriately trained health workers with problem-solving skills oriented to addressing local needs. Comparably, another study highlights the failure to build capacity and the existence of weak monitoring mechanisms, as causes for not achieving the Millennium Development goals (Chopra, Lawn, Sanders, Barron, Karim, Bradshaw, Jewkes, Karim, Flisher, Mayosi, Tollman, Churchyard & Coovadia, 2009).

Bohmer (2012), as cited by Clarke (2012), states that the overall health system's performance is dependent on practitioners' leadership skills and behaviour in controlling the processes and micro-systems. Therefore, the individual practitioner's clinical excellence remains necessary but is no longer sufficient to generate good patient outcomes. Contrary to this view, Chopra *et al.* (2009) placed the achievement of clinical outcomes on the shoulders of medical practitioners rather than the health system. Professional silos stifle risk management by obstructing inter-professional teamwork (Hall, 2005), a fact that highlights the need for improved coordination and teamwork for the benefit of the system.

Understandably, the future will bring new challenges for health professionals resulting from a changing healthcare environment, the globalisation of illnesses, shifting demographic, economic, and political contexts, and scientific and technological advances (Mouradian & Huebner, 2007). Similarly, Lane & Ross (1998) in their earlier study mentioned third party payers, legislators, lawyers, institutions and patients as parties that are now challenging practitioners' decisions about medical care. These findings are echoed by a study suggesting care decisions may be influenced by what is most defensible for the practitioners and not what is best for the patients (Freeman, McWilliam, Mackinnon, Deluca & Rappolt, 2009).

Risk management is influenced by, and dependent on, a number of variables affecting the health system. Some of these variables form part of the list of top factors that actually contributed to patient injury, based on expert reviews of the data (Kreimer, 2013):

- Problems with clinical judgment (38 percent);
- Technical skills (23 percent);
- Communication (22 percent);
- Patient behaviours (20 percent);
- System failures (14 percent); and
- Documentation (13 percent).

The US experienced an increase in litigation, payouts and bad publicity for hospitals in the 1980's. This prompted the addition of in-house risk managers to analyse trends, suggest interventions and mitigate hospital claims (Singh & Ghatala, 2012). The increase in claims resulted in:

1) Renewed concern about patient safety and medical errors;
2) Decreased insurance availability;
3) Increased deductibles and carve-outs on insurance which increased the financial risk; and
4) Higher insurance premiums.

A study by Carthey (2013) compared and contrasted the different models of patient safety. The Swiss cheese model of human errors attributes medical errors to the combination of active errors and latent conditions from the weaknesses in the regulatory and management fields. Dekker (2011), as cited by Carthey (2010), disagrees with this view and believes it inappropriately seeks to allocate errors to regulators and managers. To improve safety, the dynamic nature of the health system should be embraced together with the fact that changes may erode or enhance safety. Vincent, Burnett & Carthey (2013), as cited by Carthey (2013), developed the measurement framework which comprises five elements: 1) Past harm, which looks at the past physical and psychological harm on patients; 2) Reliability, which looks at the reliability of the system and procedure in the health system and the capability of people to uphold these; 3) Sensitivity to operations, which looks at the continuous

monitoring of safety;4) Anticipation and preparedness, which looks to the anticipation and preparedness for safety in the future; and 5) Integration and learning, which looks at the ability of the organisation to respond, learn and utilise the information.

2.3. Risk management in hospitals

2.3.1. Defining risk management

WHO describes risk management as a means of identifying, assessing, prioritising and controlling risks across an organisation, with a coordinated and cost-effective application of resources to minimise, monitor, and control the probability and/or impact of adverse events or to maximize the realization of opportunities. Segen's Medical Dictionary (2012) defines Risk Management in Hospitals as the constellation of activities (planning, organising, directing, evaluating and implementing) involved in reducing the risk of injury to patients and employees, as well as property damage or financial loss in a healthcare facility.

Walshe & Dineen (1998) define clinical risk management as an approach to improving quality in healthcare which places special emphasis on identifying circumstances which put patients at risk of harm, and then acting to prevent or control those risks. This study focuses on the competencies that medical practitioners should possess to facilitate the prevention, detection and effective response to physical or psychological harm to patients.

2.3.2. Risk management in hospitals

The study by Leape & Fromson (2006) postulates that the number of hospitals systematically monitoring and evaluating practitioners' performance and behaviour is small. Managers are also haphazard about managing problem practitioners. This study recommends the development of performance standards of behaviour and competence as the first step in addressing risk associated with practitioners; these performance standards should be adopted

and used to evaluate practitioners at regular intervals. The review of medical records and evaluation of staff and patient complaints might lead to the identification of medical practitioners with interpersonal problems which expose the health system to litigation. The relevant managers must have the skills to respond to gaps identified during the evaluations and the health system must have programmes in place to support practitioners with behavioural problems.

Nissan, Angus, Miller & Silverman (2010) emphasise the importance of equipping junior practitioners with risk management competencies (Table 1), as they are the first line of contact in busy hospitals to see high-risk patients. Therefore, they need to be aware that they and their decisions can expose the senior practitioners and the hospitals to liability.

Table 1: Risk Management Competencies

Accreditation Council for Graduate Medical Education (ACGME) Competency Reinforcement through Risk Management Curriculum	
ACGME Competency	How does risk management training programme address this competency
Practice-based learning and improvement	- Case-based learning challenges the residents to identify practice vulnerabilities encountered on a daily basis. Residents are challenged to examine these exposures and develop and implement best practices as they perform daily clinical activities.
Interpersonal and communication skills	- Programme stresses documentation of interactions with physicians, other clinicians, and families - Emphasises exposure that develops when written and verbal communications are inadequate.
Professionalism	- Enlightens residents as to the correlation between quality of patient-physician relationship and the likelihood of litigation following adverse outcomes - Highlights the value of fostering relationships with colleagues and others in the health system.
System-based practice	- Identifies system vulnerabilities that often lead to lawsuits - Assists residents in understanding the drivers of exposure and how to avoid these in clinical practice.

Source: Nissan *et al.* (2010)

Effective risk management in hospitals is thus a result of the interplay between the policies, the context of the local environment, the leadership capabilities, and the commitment and competencies of the health professionals. The context has an impact on the practitioner's capability to strike a balance between the

demands from the health system and the patients' needs while embracing the local circumstances and culture (Fochsen *et al.*, 2009).

2.3.3. The patient safety culture

Reason (1998) defines five interrelated attributes for a safety culture as being an informed culture, a reporting culture, a just culture, a flexible culture and a learning culture. In addition, the safety culture is facilitated by leadership commitment. The safety culture is a product of individual and group values, attitudes, competencies and patterns of behaviour that determines the commitment to, and the style and proficiency of, an organisation's health and safety programme (McCarthy & Blumenthal, 2006). This systems thinking is supported by a later study by Verbano & Turra (2010) stressing the allocation of errors to individuals as the source for the tendency to hide errors and to ignore core responsibility of the remote cause. This tendency weakens risk management strategies.

In addition, earlier studies identified certain prevailing aspects of healthcare organisational and professional culture, such as steep authority hierarchies, lack of teamwork, unwillingness to acknowledge human fallibility, and the tendency to punish rather than learn from error as barriers to patient safety and its improvement (Akins & Cole, 2005; Sexton, Thomas & Helmreich 2000; VanGeest & Cummins 2003). Patient safety culture is a function of leadership commitment and variation in the culture is expected within different units of the same organisation.

Interestingly, a study conducted by McFadden & Stock (2006) identified the following strategies as key in reducing errors in hospitals: 1) Developing partnerships with all stakeholders; 2) To discuss errors and learn from errors; 3) Develop education and training programmes for employees; 4) Collect and statistically analyse error data; and 6) Redesign the system. This attitude supports the holistic and systemic approach to addressing errors and fosters the need to move away from individual blame. This is an expansion of the views shared by Chopra *et al.* (2009) and Leape & Fromson (2006). Contrary to this

view, Carthey (2013) advocates for health systems that don't solely focus on drawing lessons from past errors but that facilitate learning from what is working well.

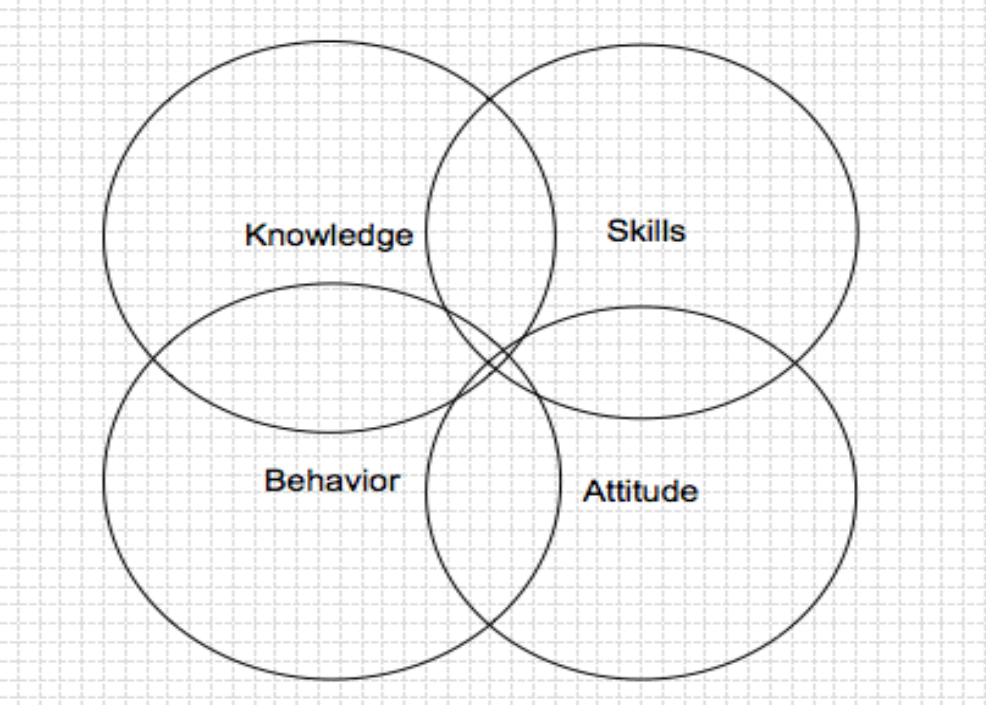
2.4. Competencies

2.4.1. Defining competencies

Competence is defined as being the desired end state for individual performance (Teodorescu & Binder, 2004). Holmes & Joyce (1993) define competence as an action, a mode of behaviour or outcome that a person should be able to demonstrate, or the ability to transfer skills and knowledge to new situations within the occupational area**.** Cate, Snell & Carrrairo (2012) expand the definition of competence by adding that it entails more than the possession of knowledge, skills and attitudes; it requires the ability to apply these skills in the clinical environment to achieve optimal results. This approach adds a new dimension of context-based outcomes that is not explicitly mentioned in a later study by Akkermans, Schaufeli, Brenninkmeijer & Blonk (2013). Recently, Akkermans *et al.* (2013) define career competencies as knowledge, skills, and abilities central to career development, which can be influenced.

Li, Yang & Wu (2009) define competency—based on the service industry—as the knowledge and technical skills, social skills and service attitude required of employees in carrying out their tasks so as to meet customer needs. This definition and the study by Lamb & Sutherland (2010) amplify the importance of social skills or SQ (social intelligence) as an important competence in a work environment. Social intelligence indirectly points to the pivotal role played by the individual's ability to process and effectively execute duties within a given context. The definition by Li *et al.* (2009) will be adopted for the purpose of this study (Figure 2).

Figure 2: Knowledge, Skills, Attitude, and Behaviour model: own model



2.4.2. Competencies in medical practice

Leung (2002) raises an argument that the UK's College of General Practitioners distinguished between clinical competence (what doctors can do) and clinical performance (what doctors actually do) and defines competency as a combination of knowledge, skills and attitudes which, when applied to a particular situation, leads to a given outcome. Competencies should be measurable and mapped to clinical indicators of outcome and performance (Arora, Ashrafian, Davis, Athanasiou, Darzi & Sevdalis, 2010).

The US and European countries have defined core competencies for medical practitioners qualifying from these countries. It has become clear that medical knowledge and clinical skills alone are inadequate to achieve the required outcomes since they cannot ensure the practitioner's competence and performance (Palsson, Kellett, Lindgren, Merino, Semple & Sereni, 2007). The study further states that core competencies must be based on the practitioner's role and clinical problems that practitioners frequently encounter. There will be

situations when the practitioner will have to apply business and managerial skills. The Accreditation Council for Graduates for Graduate Medical Education (ACGME) in the US has defined six core competencies that constitute the hallmark of graduate medical education: 1) Patient care; 2) Professionalism; 3) Systems-based practice; 4) Interpersonal and communication skills; 5) Medical knowledge; and 6) Practice-based learning and improvement. The core competencies are the foundation required for the provision of quality medical care (Palsson *et al,* 2007).

Current and future practitioners must deal with constant changes in health care, developments in science, rapid evolution in standards of care, new rules and protocols emanating from regulatory bodies, organisational and systems change, increased patient demands and increasingly well-educated and informed patients (Cate, Snell & Carraccio, 2010). The study also propose that competence be defined in a manner that accounts for the interplay between the practitioner and the clinical environment, guided by three assumptions: 1) competencies are most relevant when they are defined in the context of a clinical environment; 2) competence varies as the environment changes; and 3) it is more important to assess and predict the results of those actions within the clinical environment. Therefore the characteristics and constraints of the local environment should be taken into consideration when assessing competencies.

The competency domains of lifelong learning (Parboosingh *et al.*, 2008 as cited by Campbell, Silver, Sherbino, Cate, Ten, & Holmboe, 2010) have scanning the environment as one of these domains, thus embracing the dynamic nature of the external environment and thereby indicating that competencies should not be static. There is acknowledgement that clinical facilitators and mentors facilitate technical skills transfer and this narrow approach fails to prepare newly qualified practitioners to understand the system in which they will be operating and how to be effective in that system (Butrous, Park, Ward, Lemer, Woolcock, Bicknell & Warren, 2012). Therefore, practitioners need to have the relevant skills, knowledge, and a worldview (Figure 2) beyond what is currently observed (Melaia, Abratt & Bick 2008). Practitioners should be sensitive to cultural issues or beliefs and also guard against imposing their values and beliefs on patients

(Johnstone & Kanitsaki, 2006). Cross-cultural competency does have an impact on patient safety and quality and it is becoming more complicated to manage because of globalization and the increasing number of cultures in a given community (Koen, 2006).

Effective communication competency is as important as clinical skills and knowledge. It is purposive and allows practitioners to communicate effectively with patients, relatives, colleagues and other parties when executing their duties. Communication might involve sharing bad news or passing information where the practitioner should be mindful of medico-legal considerations. The importance of communication for building a rapport with others is mentioned in the same article. At the same time, practitioners need to be aware of the imbalance of power in the patient-practitioner relationship when communicating with patients (Von Fragstein, Silverman, Cushing, Quilligan, Salisbury & Wiskin, 2008). The practitioner must be able to communicate with all stakeholders using verbal, written and electronic media (Palsson *et al.*, 2007).

Handoffs are another form of communication defined as verbal and written communications occurring between healthcare professionals (between the medical practitioners themselves and nurses) as they transition between work shifts. The purpose of the handoffs is the transfer of primary responsibility of that care of the patient to another person (Babu, Nahed & Heary, 2012). Inversely, Babu *et al.* (2012) highlight defective handoffs as a trigger for 70 percent of litigation in hospitals. This figure is higher than that for litigation resulting from lack of technical competence. These findings somehow contradict the findings published by Medical Economics (Kreimer, 2013), which rated clinical competence and technical skills as the leading causes of patient injury. On the other hand, not all patient injuries result in litigation.

Written communication, which is the documentation of medical records, is of great importance. In addition to the uses mentioned above, it plays a significant role in hospitals for the 1) Monitoring and control of the quality of care; 2) Assessing performance of medical staff; 3) Assessing the utilisation of hospital resources; 4) Providing data for research; and 5) Using the information for

healthcare planning and resource allocation (Kumar, Kumari, Sharada & Mangala, 2011). The same study stresses the importance of accurate and up-to-date medical records that are essential for clinical, fiscal and research purposes.

2.5. Medical practitioners

Medical practitioners, referred to as practitioners, have legitimate power (Foschen, Deshpande, Ringsberg & Thorson, 2009) in the hospital environment that comes from the organisational structure, skills, knowledge and expertise. Practitioners should ensure that they do not abuse their power and should always act in the best interests of their patients (HPCSA, 2008). In addition to this legitimate power, Clark (2012) asserts that practitioners require a range of leadership and service improvement skills from the time they graduate and right through their career progression. There is no doubt that soft skills play a crucial role in medical practice with regard to inter-, intra- and extraprofessional interactions.

Baker & Denis (2011) indicate the importance of transforming healthcare organisations to improve performance by developing strategies for engaging practitioners and developing medical leadership. Similarly, Clark (2012) emphasises the fact that clinical expertise is no longer adequate for practitioners to be effective in the healthcare system.

In contrast to the above findings, Lamb & Sutherland (2010) identified necessary attributes for the external (work) environment as being knowing oneself; Emotional intelligence (IQ) and Social Intelligence (SQ); opportunism; context management and adaptability; demonstrating a flat world mentality; energy; dynamism; and a focused vision and plan for career progression. The above findings embrace the advice that the workforce must provide services that are responsive and relevant to the local challenges and constraints (WHO, 2007).

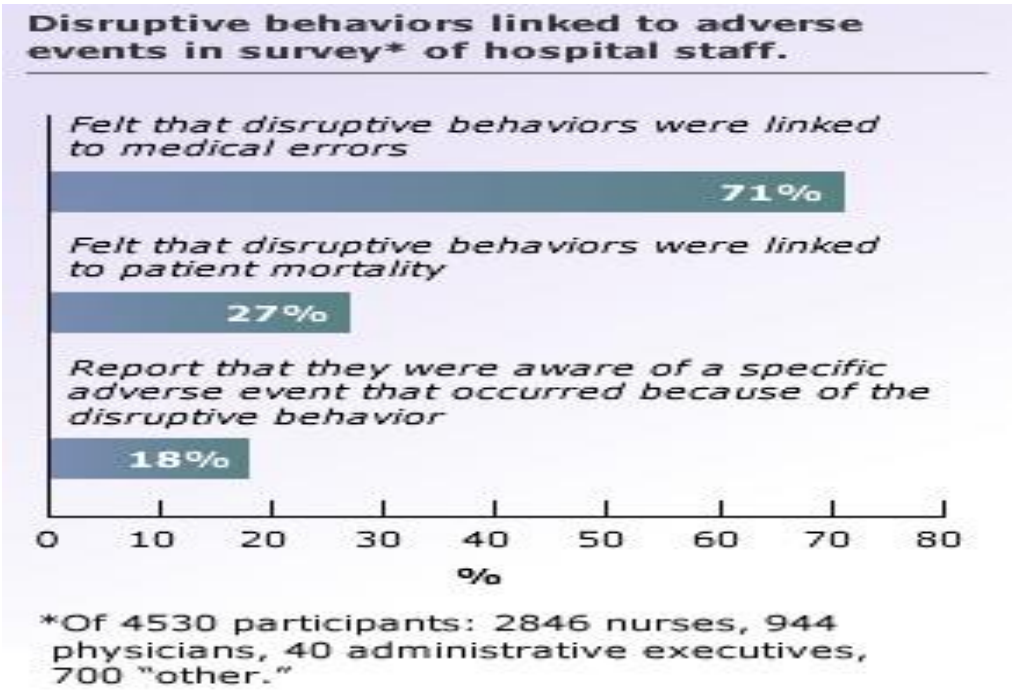
Interestingly, Arora *et al.* (2010) suggest that higher emotional intelligence (EI) is positively associated with more compassionate and empathic care (Patient Care); higher-scoring assessment (Medical Knowledge) and effective coping with organisational pressures (Practice-based learning and improvement and system-based practice). EI also contributed to improved teamwork and practitioner-patient communication (Interpersonal and Communication Skills and Professionalism). Practitioners need greater EI (Harrison, 2002) to deal with the increasing demand to protect themselves from humiliation by their consultants and external evaluations by the public resulting from increased access to the Internet. Practitioners also have to negotiate with well-informed patients who have increasingly consumerist expectations.

The study conducted by Rosenstein & O'Daniel (2005) defined disruptive behaviour as any inappropriate behaviour, confrontation, or conflict ranging from verbal abuse to physical and sexual abuse. Their study proved that disruptive behaviour undermines employee morale and job satisfaction, stimulates staff turnover and leads to adverse patient outcomes. Disruptive behaviour influences the quality of staff relationships and also affects the quality of communication between practitioners and other healthcare workers. Examples of disruptive behaviour includes disrespectful language, demeaning behaviour, sexual comments, outbursts of anger, throwing instruments and charts, criticizing hospital staff in front of patients or other staff, boundary violations with staff and patients and unethical behaviour.

Disruptive, intimidating, or abusive behaviour may increase the likelihood of errors because it causes nurses and other health professionals to avoid the disruptive practitioner, to hesitate to ask for help or clarification of orders, and to hesitate to make suggestions about patient care. Such behaviour may also deflect the practitioner's attention from the patient, thereby impairing clinical judgment and performance. When patients witness disruptive behaviour, it undermines their confidence in the practitioner and the institution, as well as their willingness to collaborate in their own care. Consequently, disruptive behaviour by practitioners not only threatens patient safety but also has a

corrosive effect on morale, making life miserable for the health professionals who work closely with these practitioners (Benzer & Miller, 1995).

Figure 3: The impact of disruptive behaviours and communication defects on patient safety



Source: Rosenstein & O'Daniel (2005)

The lack of teamwork, unwillingness to accept human fallibility, a tendency to punish rather than learn from errors, and steep authority hierarchies can act as barriers to patient safety (Akins & Cole 2005, Reeves & Lewin 2004). In support of this finding is the study confirming that teamwork facilitates positive clinical outcomes, improved patient safety and better team decision-making (Makowsky, Schindel, Rosenthal, Campbell, Tsuyuki & Madill, 2009). The other benefit of teamwork is increased awareness by team members of the role played by pharmacists, nurses, medical practitioners and others involved in the delivery of care.

The study conducted by Corbett, Travalgia & Braithwaite (2011) suggests that an important indicator of successful initiatives to improve safety is the capacity to induce change at the individual level. This study highlights the important role played by medical practitioners in the provision of safe services. Interventions

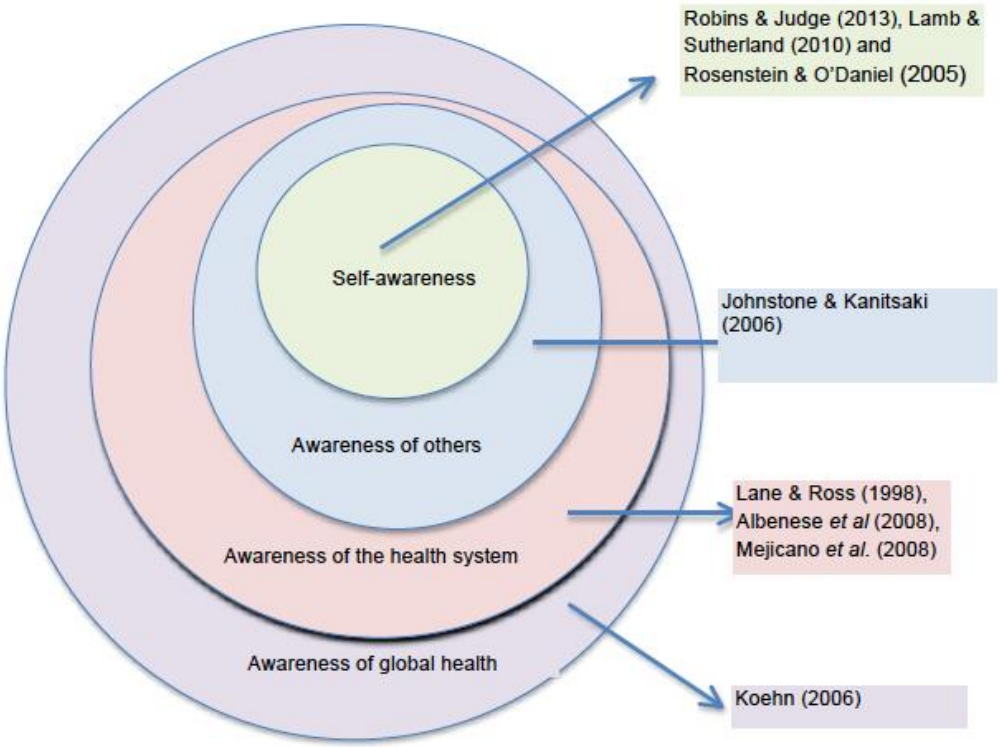
directed at practitioners are vital: they should be developed and implemented, and their effectiveness should be monitored. The study by Fochsen, Deshpande, Ringsberg & Thorson (2009) illustrates the lack of communication training for practitioners. An inability to manage conversations with patients leads to practitioners reprimanding patients or not responding to questions raised by them.

In South Africa, the Health Professions Council of South Africa (HPCSA) governs the medical professions. The HPCSA's Booklet 1 contains the general ethical guidelines for medical professions, listing 13 ethical values and standards that underpin professional and ethical practice in the medical profession (HPCSA, 2008). Practitioners must behave professionally, put the patient's wellbeing first, and exhibit a responsible attitude towards society. They must be open to constructive criticism, recognise their own limitations and be willing to consult other co-workers when needed (Palsson *et al.,* 2007). The study further recognises the importance of practitioners' understanding of the role of clinical governance, embracing professional regulations, and being open to performance assessments.

2.6. Theoretical model

The theoretical model (Figure 4) was developed from the literature review to assist with conceptualisation of the different domains of risk management competencies required for practitioners working in South African hospitals. The model illustrates the different competency indicators, these being knowledge, skills, attitude and behaviour. They cover self-awareness (personal leadership, emotional intelligence and professional development), awareness of others (interpersonal relations, teamwork and respect for others), awareness of the health system (professional and ethical practice which is responsive to the context), and awareness of global health (globalisation of diseases).

Figure 4: Risk management model for medical practitioners used in Phase 1 of the research: Own model



3. CHAPTER 3: Research

3.1. Purpose of the research

The aim of the research was to identify the relevant risk management competencies for medical practitioners working in SA hospitals. The questions were formulated from the concepts emerging out of the literature review in Chapter 2 and the problem definition in Chapter 1. The research questions were developed to identify the competencies that constitute the risk management competency domains relevant to the South African context.

3.2. Research questions

3.2.1. Research Question 1

What are the risk management competencies needed for medical practitioners working in South African hospitals within the knowledge, skills, attitude and behaviour domains?

This research question sought to understand the important risk management competencies for medical practitioners working in hospitals.

3.2.2. Research Question 2

How do risk management competencies rank by importance per domain?

This research question sought to identify the most important competencies per domain.

3.2.3. Research Question 3

What are the perceived proficiency levels for risk management competencies in SA hospitals?

This research question sought to assess the current proficiency levels against the identified competencies using a questionnaire survey as a gap analysis tool.

3.2.4. Research Question 4

What is the difference between the important risk management competencies and the perceived proficiency levels in hospitals? Where are the biggest gaps?

This research question sought to identify the critical areas of weakness in the risk management competency levels for medical practitioners working in hospitals.

4. CHAPTER 4: Methodology

4.1. Research methods and design

The research was conducted after receiving ethics clearances from both the Gordon Institute of Business Science ethics committee and the University of Pretoria's medical ethics committee. The research was carried out in two phases, the first being qualitative and designed to build the constructs of the second phase. The second phase was a quantitative survey designed to provide answers to the research questions stated in Chapter 3.

4.2. Phase 1

4.2.1. Methodology

The first phase was exploratory: "exploration is particularly useful when researchers lack a clear idea of the problem they will meet during the study" (Cooper & Schindler, 2014:129). The first phase consisted of an in-depth review of international literature and interviews with 11 industry experts from academia, the public, and the private sector. The purpose of Phase 1 was to determine a list of risk management competencies for medical practitioners working in South African hospitals. Some basic information was requested at the beginning of each interview and this included information regarding respondents' place of work. The interview was semi-structured using an interview guideline (Appendix VI) and open-ended questions were asked to elicit definitions and a list of competencies of current and future importance.

4.2.2. Population

The population of relevance for the first phase consisted of individuals who were identified as medical experts in hospital services and risk management

(Table 2). Most of these experts either work in hospitals, manage hospital services, or advise or regulate the medical profession.

4.2.3. Unit of analysis

The unit of analysis was the perception of risk management competencies in hospital services.

4.2.4. Sampling method and design

Non-probability judgement sampling was to be used. “Judgemental sampling occurs when a researcher selects sample members to conform to some criterion” (Cooper & Schindler, 2014:359). Working experience and current role influenced the choice of individuals to be interviewed. The sample size was limited to 11 individuals with nine being based in Gauteng province and two in other provinces. Ten of the medical experts have more than ten years’ industry experience and two have an uninterrupted hospital service experience of more than four years (Table 2).

Table 2: Medical experts

Medical expert	Venue for interview	Duration of the interview
Ombudsman: Health Professions Council of SA	Place of work	58 minutes
Head: Risk and Benefits, Board of Healthcare Funders of Southern Africa	Place of work	35 minutes
Dean of the Faculty of Health Sciences	Place of work	45 minutes
Mediclinic’s Patient safety expert	Place of work	35 minutes
Hospital Manager (CEO) – Pelonomi Academic hospital	Place of work	65 minutes
Medico-legal expert – Prof Magda Slabbert (UNISA)	Place of work	40 minutes
Professional Nurse 1	Place of work	45 minutes
Professional Nurse 2 (Supervisor)	Place of work	50 minutes

Medical practitioner 1	Place of work	35 minutes
Medical practitioner 2 (Clinical manager)	Skype video-conferencing	55 minutes
Medical Advisor: Hospital services in a medical scheme	Place of work	54 minutes

4.2.5. Interview guide design

The research participants' information document (IV) and theoretical model (Figure 4) were sent to the interviewees via email prior to the meeting (Cooper & Schindler, 2014:156). Open-ended questions were asked in order to obtain additional information regarding the experts' opinions on risk management competencies based on the theoretical model. The interview was conducted using an interview guide (Appendix VI) and the questions were open-ended.

4.2.6. Data-gathering process

The research data was gathered through the in-depth interviews with the 11 individuals who met the sampling criteria. Interviews were semi-structured, using an interview guide, and were recorded. The face-to face interviews took place at the place of work of the experts except for one interview that was conducted utilising Skype video conferencing facility. The interviews were booked for an hour and they lasted an average of 45 minutes (Table 2).

The concepts of risk management in hospitals and risk management concepts as a whole were shared with the medical experts to facilitate discussion, ensure a common understanding of the concepts and then obtain inputs on the definition adopted by the researcher. Inputs on the definition of risk management in hospitals were sought from participants. The interview guide was used to ensure that interviews were conducted in a standard manner as follows:

- All interviews had the same introduction and opening;

- Each interview was initiated by explaining the concept of risk management in hospitals and the definition of competence; and
- The interviews were scheduled for one hour, using an interview guideline to ensure the consistency of questions.

4.2.7. Data analysis approach

The data collected was grouped according to the four competency domains illustrated in the theoretical model (Figure 4). The output was used in the questionnaire design for Phase 2 of the research.

4.3. Phase 2

4.3.1. Methodology

The second phase of the study was a quantitative survey used to validate the qualitative findings: this is called triangulation (Cooper & Schindler, 2014:166). A questionnaire was utilised to collect data for Phase 2.

4.3.2. Population

Access to the population of relevance was authorised (Appendix III) by various hospitals located in Gauteng Province. It involved both public and private hospitals that had at least 110 beds and comprised:

- Independent medical practitioners who had completed their internship, specialist consultants, and clinical heads of departments;
- Professional nurses with at least three years of working experience in hospitals post-qualification; and
- Hospital management team members (risk or quality assurance managers, hospital managers, nursing services manager and other managers).

4.3.3. Unit of analysis

The unit of analysis was the perception of risk in hospitals, the competencies needed by practitioners working in hospitals, the ranking of these competencies by importance and the level of the current proficiency level for each competency.

4.3.4. Sampling method and size

The sampling method of non-probability quota for selecting a sample based on certain appropriate characteristics of the sample member (Cooper & Schindler, 2014) was used. The Phase 2 sample comprised 90 individuals (Practitioners x 33, members of the hospital management team x 18 and Professional nurses x 39). The sample was drawn from both the private and public sector (Table 3).

Table 3: Sample breakdown between the private and public sector hospitals

Sector	Role in hospital or research population	Total number per sector
Public sector	Medical practitioner, nurse and management	55
Private sector	Medical practitioners, nurse and management	35

4.3.5. Research questionnaire design

The research questionnaire was designed based on the competencies identified from the literature review and Phase 1 of the research. The questionnaire was designed to answer the research questions posed in Chapter 3. It was designed in line with the four competency domains illustrated in the theoretical model. The questionnaire was designed using questions drawn from the research constructs and using a five-point Likert-scale (Cooper & Schindler, 2014) to rate the importance of various competencies and also to rate the current proficiency levels (Addendum VI).

4.3.6. Pre-testing

The questionnaire was pre-tested on five individuals who met the population inclusion criteria and these individuals were then excluded from the research sample. The background of the study was provided to these respondents and feedback was requested regarding the structure of the questionnaire, grammar and the technical terminology. Respondents were encouraged to question the researcher as this exercise took place face-to-face. The questionnaire was revised to incorporate the feedback, resulting in breaking down some questions for ease of understanding and response. These include the competence of communication with co-workers (Table 9), which was broken down into communication with other doctors, and communication with other clinical and non-clinical co-workers (Appendix VII). This feedback resulted in the final Phase 2 questionnaire having 53 questions compared to the 43 competencies shown in Table 9.

4.3.7. Data-gathering process

A questionnaire developed from the results of Phase 1 was utilised to collect the research data in line with questions raised in Chapter 3. The data was gathered using a paper questionnaire (Appendix VII) distributed in focus groups in the hospitals and via one-on-one recruitment—especially for medical practitioners—at the authorised sites. The researcher did not send questionnaires electronically because of limited access to computers by a significant group of the research population and also the length of the questionnaire. The perceived challenges were likely to lead to a poor response from electronically distributed questionnaires. The approach selected yielded a high response rate of 90 percent (90 responses to the 100 questionnaires that were handed out).

The researcher arranged for groups of professional nurses, managers (and including medical practitioners where possible) to gather in a boardroom or training room within the hospitals. The researcher explained the objective of the study, the methodology and the theoretical model to set the scene. The

researcher collected the forms at the end of each session. This approach yielded a 100 percent response rate. Group sessions lasted an average of 30 minutes.

Recruitment of medical practitioners proved to be a challenge compared to the other groups and they were recruited via the clinical heads of departments. The questionnaires were physically distributed and collected on the day of distribution or up to a few days later. This approach yielded an 83 percent response rate from the doctors and managers and a 100 percent rate from the nurses.

The researcher observed during interaction with the respondents that medical practitioners, nurses and management were aware of the risk management issues in their hospitals. The researcher perceived that some of the medical professionals felt uncomfortable during completion of the questionnaire. This observation is based on the body language, comments made and explanations voluntarily provided by some medical practitioners when handing in the completed questionnaires. One survey participant said, "*We the willing led by the unknowing, are doing the impossible for the ungrateful. We have done so much, for so long, with so little. We are not capable of doing anything with nothing.*"

4.3.8. Data analysis

The individual competences were captured on IBM - SPSS Statistics software and were allocated codes for research questions 5 and 6. The data was analysed for weighted mean averages for each competence as rated by each of the three research populations. The next step was to calculate the overall weighted mean averages for the combined (overall) three research populations (n = 90).

5. CHAPTER 5: Results of the research

5.1. Results for Phase 1

This chapter discusses the results of the research. The research was conducted in two phases. Phase 1 of the research consisted of face-to-face interviews with 11 medical experts. The research was exploratory in nature and qualitative. The list of competencies identified during Phase 1 formed the basis of the questionnaire for Phase 2 of the research.

5.1.1. Demographic data

The sample of medical experts comprised people considered experts in the management of hospital services, operation of clinical services, training, medico-legal affairs and those regulating the medical profession. The table below depicts the breakdown of the places of work of the medical experts.

Table 4: Place of work for medical experts

Place of work	Actual no.	Job role
Academia	1	Dean of Health Sciences
Hospital	6	CEO of a hospital, medical professional, professional nurse, CEO of a hospital, regional manager of clinical services
Funder	2	Head of risk, Board of Healthcare Funders
		Medical advisor of a medical aid
Medico-legal	1	Professor of Law and Chairperson of the Medico-Legal Association of South Africa
Other	1	Health Professions Council of South Africa Ombudsman

The majority (six out of 11) of the medical experts worked in hospital services at the time of the research.

The table below illustrates the first exposure of the medical experts to the subject of risk management and patient safety.

Table 5: The medical experts' first exposure to the subject of risk management and patient safety:

Undergraduate	2
Postgraduate or post-qualification	9

The above table shows that only two participants, who are professional nurses, confirmed being exposed to the subject of risk management and patient safety during their undergraduate studies. The rest of the participants (nine) were exposed to the subject at a postgraduate level or when they were already working in hospital services.

The following table illustrated the group or groups that medical experts perceive to be playing an active role in risk management in hospitals.

Table 6: The group(s) currently playing an active role in risk management and patient safety in hospitals:

Professional nurses	6
Medical practitioner	1
Hospital management	1
Other	2

The above table demonstrates that six of the 11 participants said nurses were playing a more active role in risk management and patient safety in hospitals when compared to medical practitioners and others.

The following table illustrates the medical experts' opinion on the group or groups that should improve their participation in risk management and patient safety in hospitals.

Table 7: The group(s) that should improve participation in risk management and patient safety:

Professional nurses	6
Medical practitioner	1
Hospital management	1
Other (all groups)	2

Table 6 illustrates that the majority (six out of 11) thought nurses were the ones who had to improve their participation in patient safety and risk management. Two participants thought that all groups needed to be involved in risk management and patient safety.

The table below illustrates the opinion of the medical experts regarding the role that medical schools should play in managing risk and patient safety in SA hospitals.

Table 8: Medical schools' role in improving risk management and patient safety in South African hospitals:

Yes	11
No	0

The above table illustrates that all 11 participants agreed medical schools have a role to play in improving risk management and patient safety in South African hospitals.

5.1.2. The risk management competencies identified by medical experts

Face-to-face interviews were conducted to ascertain the risk management competencies required for medical practitioners working in South African hospitals. The researcher ensured that the medical experts and the researcher shared the same understanding of the concept of the risk management in hospitals.

The competencies were grouped into four competency domains, these being knowledge, skills, attitude and behaviour (Table 8). The experts were encouraged to identify at least five competencies in each domain using open-ended questions. The 43 identified competencies (Table 9) were then coded and grouped according to the four competency domains and were ranked from the one with the highest frequency to the lowest within a particular domain.

Table 9: The risk management competencies identified by medical experts

Competencies	Nurse 1	Nurse 2	Doctor 1	Doctor 2	Hospital CEO	Dean of medical school	Regulator	Patient safety expert	Medico-legal expert	Quality improvement expert	Funder	TOTAL
KNOWLEDGE												
Medical knowledge	x	x	x	x	x	x	x		x			**8**
HPCSA Professional code of conduct and ethics	x		x	x	x	x	x	x	x			**8**
Legal framework	x		x	x	x	x	x	x	x			**8**
Patient's rights	x	x	x	x		x	x		x			**7**
Patient safety	x	x	x	x	x	x		x				**7**
Professionalism		x	x	x		x	x		x			**6**
Impact of the patient's environment on their health	x	x	x									**3**
Batho Pele principles			x									**1**
Health practitioner's rights	x			x								**2**
SKILLS												
Communication (verbal and written)	x	x	x	x	x	x	x	x	x			**9**

Clinical competence (evidence-based)		x	x	x	x	x	x	x	x			**8**
Cross-cultural competence		x	x		x	x	x	x	x			**7**
Emotional intelligence	x		x	x	x	x	x	x	x			**8**
Teamwork	x		x	x	x		x	x	x			**7**
Leadership	x			x	x	x	x	x	x			**7**
History-taking	x	x	x			x	x					**5**
Patient education	x	x	x				x		x			**5**
Interpersonal skills		x			x	x	x	x				**5**
Problem-solving			x		x	x		x				**4**
Psychological competency	x	x			x							**3**
Informed consent	x	x							x			**3**
Use of language that patients can understand		x		x								**2**

ATTITUDE												
Patient-centricity	x	x	x	x	x	x	x	x				**8**
Respect for others	x	x	x	x		x	x	x	x			**8**
Fallibility / Risk-prone profession	x	x	x		x	x	x	x				**7**
Ubuntu	x	x			x	x	x		x			**6**

Holistic approach to patient care	x	x	x	x			x		x			**6**
Adaptability	x			x	x	x						**4**
Compassion	x	x		x				x				**4**
BEHAVIOUR												
Understanding the role of other co-workers	x	x		x	x	x	x	x	x			**8**
Active listening to patients	x	x	x				x	x	x			**6**
Professional humility	x	x		x	x	x			x			**6**
Truthfulness / integrity		x	x	x		x	x		x			**6**
Treating patients as partners in their own care		x	x	x	x				x			**5**
Patience	x		x						x			**3**
Friendliness	x		x					x				**3**
Compassion	x							x	x			**3**
Assertiveness			x	x					x			**3**
Proactive approach to patient care	x	x										**2**
Sympathetic	x								x			**2**
Protect the patient's privacy and rights		x	x									**2**
Dedication								x	x			**2**

5.1.3. Top five competencies per domain of competence

A total of 43 risk management competencies (Table 9) identified during the in-depth interviews of medical experts was compressed to the top five competencies per domain to make the data useful. The competencies are listed from the ones with a highest frequency and ranked in descending order.

Table 10: The top five competencies per domain of competence

Knowledge	Skills	Attitude	Behaviour
1. Medical knowledge 2. HPCSA Professional code of conduct and ethics 3. Legal framework 4. Patient's rights 5. Patient safety	1. Communication 2. Clinical competence 3. Cross-cultural competence 4. Emotional intelligence 5. Team work	1. Patient-centeredness 2. Respect for others 3. Fallibility 4. Ubuntu 5. Holistic approach to patient care	1. Understand-ing the role played by other co-workers 2. Active listening to patients 3. Professional humility 4. Integrity 5. Treating patients as partners in their care

5.2. Results for Phase 2

A questionnaire was used to collect data for Phase 2 of the research (Appendix VII). The questionnaire was distributed physically in the research site hospitals. Out of the 100 questionnaires distributed, 90 were completed and returned to the researcher (Table 11).

Table 11: Questionnaire response rate

Method of questionnaire distribution	% of respondents
Focus groups	100%
Manual handout to individuals	90%

The above table indicates that a higher response (100 percent) was achieved on questionnaires distributed in focus groups compared to those distributed on a one-to-one basis.

5.2.1. Demographic and general data

Some demographic and general data was collected and some questions were not applicable to all categories of respondents.

5.2.1.1. Respondents' current role in the hospital

The table below illustrates the different roles occupied by the respondents in research site hospitals.

Table 12: Respondent's current position at the hospital

Group	Total no.	% of total
Medical practitioner	33	39%
Professional nurse	39	50%
Manager	18	11%
Other	0%	0%
SAMPLE SIZE (n) = 90		

The above table indicates the breakdown of the research sample of 90 respondents. The professional nurses were easier to recruit in groups and thus comprise 50 percent of the research sample, followed by medical practitioners (39 percent) and lastly, the managers (11 percent).

5.2.1.2. Respondents' years of working experience in the hospitals

The following table illustrates the percentage breakdown of working experience per group of respondents. The working experience illustrated in Table 13 excluded years of training and internship.

Table 13: Years of working experience in a hospital

Years of working experience	Medical practitioners	Professional nurses	Hospital management
Less than 3	(11) 36% of the column total	(6) 15% of the column total	(0) 0% of the column total
3 to 5	(11) 36% of the column total	(6) 18% of the column total	(4) 24% of the column total
5 to 10	(6) 18% of the column total	(7) 18% of the column total	(1) 6% of the column total
Greater than 10	(2) 9% of the column total	(19) 49% of the column total	(12) 71% of the column total

The above table shows that a greater percentage of medical practitioners (72 percent) had experience of five years or less compared to the nurses (33 percent) and managers (24 percent).

5.2.2. Training

This section seeks to enumerate the risk management training received by medical practitioners. It also compares the training received as between the medical professionals, nurses and managers working in hospitals.

5.2.2.1. Previous patient safety training

The table below seeks to answer the question about previous patient safety training received by all respondents. The table also includes information on whether the hospital or an external party provided the training.

Table 14: Previous patient safety training

Frequency	Medical practitioners	Professional nurses	Hospital management	Row Total
Never	10 (67% of row total)	4 (33% of row total)	1 (7% of row total)	15
Formally during undergraduate training	13 (48% of row total)	13 (48% of row total)	1 (4% of row total)	27
Formally during postgraduate training	5 (71% of row total)	1(14% of row total)	1 (14% of raw total)	7
Continued Medical Education (CME) organised by the hospital (in-service training)	5 (16% of row total)	19 (59% of row total)	8 (25% of row total)	32
CME organised by an external party	2 (40% of row total)	1 (20% of row total)	2 (40% of row total)	5
Other	1 (33% of row total)	2 (67% of row total)	0 (0% of row total)	3
Column Total	36 (40% of row total)	40 (45% of row total)	13 (15% of row total)	**74 (Total of training received)**

The above table shows that of the category of people who never received patient safety training, most were medical practitioners (67 percent), followed by nurses (33 percent) and then managers (7 percent). An equal percentage for nurses and managers (14 percent) received formal training during postgraduate training as against the medical practitioners (71 percent). Nurses had the largest percentage (59 percent) of members who received patient safety training provided by the hospital, compared to the medical practitioners (16 percent) and managers (25 percent). The managers and medical practitioners had the same percentage (40 percent) of people who received training from an external service provider, a figure that was higher than for the nurses (20 percent). The last category constituted two or more of the above categories and was highest for nurses (67 percent), followed by practitioners (33 percent) and then managers (0 percent).

The last row indicates that of the total training received by the research population, 45 percent went to nurses, followed by medical practitioners

(40 percent) and then managers (15 percent). The total responses were 74, which shows some data was missing on this question.

5.2.2.2. Previous risk management training

The following table seeks to answer the question about risk management training received by the respondents. The table also includes information on whether the hospital or an external party provided the training.

Table 15: Previous risk management training

Frequency	Medical practitioners	Professional nurses	Hospital management	Total
Never	17 (63% row total)	9 (33% row total)	1 (4% row total)	27
Formally during undergraduate training	6 (35% row total)	10 (59% row total)	1 (6% row total)	17
Formally during postgraduate training	7 (54% row total)	4 (31% row total)	2 (15% row total)	13
CME organised by the hospital (in-service training)	1 (4% row total)	14 (61% row total)	8 (35% row total)	23
CME organised by an external party	4 (57% row total)	1 (14% row total)	2 (29% row total)	7
Other	1 (50% row total)	1 (50% row total)	0 (0% row total)	2
Column Total	19 (31% row total)	30 (48% row total)	13 (21% row total)	**62 (Total of training received)**

The above table shows indicates that medical practitioners (63 percent) had the highest percentage of people who had never received risk management training, followed by nurses (33 percent) and then management (4 percent). The highest percentage of people who had received formal training during their undergraduate time comprised nurses (59 percent) followed by medical practitioners (35 percent) and then managers (6 percent). Medical practitioners had the highest percentage of members receiving training during their postgraduate period (54 percent), followed by nurses (31 percent) and managers (15 percent). The nurses had the highest percentage (61 percent) of

people who received patient safety training provided by the hospital, compared to the medical practitioners (4 percent) and managers (35 percent). Medical practitioners had the highest percentage of people (57 percent) who received training from an external service provider, compared to the managers (29 percent) and nurses (14 percent). The other category was the combination of two more of the above options and this was the same proportion for practitioners (50 percent) and medical nurses (50 percent).

The last row indicates that of the total training received by the research sample, 48 percent were nurses, followed by medical practitioners (31 percent) and then managers (21 percent).

5.2.2.3. The ideal time for risk management and patient safety training

The following table sought to answer the question about the optimum timing of risk management and patient safety training for medical practitioners in SA.

Table 16: The ideal time for patient safety and risk management training

Time of training	Medical practitioners	Professional nurses	Hospital management	Row total	% of row total
Undergraduate level	18	4	4	26	38%
Postgraduate level	2	3	1	6	9%
During internship	6	12	3	21	30%
Other	8	4	4	16	23%

The above table indicates the opinions of the respondents, showing 38 percent supporting training at undergraduate level followed by 30 percent for training during internship, 23 percent other (combination of two or more of the other options) and lastly 9 percent for training to be done at the postgraduate level.

5.2.3. Perception of the extent of risk occurrence in SA hospitals

This section of the research questionnaire sought to assess the extent of risk management failures as perceived by medical practitioners, nurses and managers in hospitals.

5.2.3.1. Perceived extent of compromised patient safety

The following table sought to answer the question about the number of times that respondents observed or heard of a medical practitioner compromising patient safety during the past 12 months.

Table 17: The extent of compromised patient safety in the past 12 months

Frequency	Medical practitioners	Professional nurses	Hospital management	Row Total
Zero	16 (59% of row total)	10 (37% of row total)	1 (4% of row total)	27
1 to 2	9 (29% of row total)	17 (55%of row total)	5 (16% of row total)	31
Greater than 2 to 5	5 (33% 0f row total)	4 (27% of row total)	6 (40% of row total)	15
Greater than 5	5 (33% of row total)	6 (40% of row total)	4 (27% of row total)	15
Column total	19 (31% of row total)	27 (44% of row total	15 (27% of row total)	**61 (total heard about or observed**)

The above table illustrates that the practitioners had the highest percentage (59 percent) in the zero category, followed by the nurses (37 percent) and then managers (4 percent). Most of the nurses (55 percent) had heard of or observed category 1 to 2 incidents, followed by the practitioners (29 percent) and then management (16 percent). Most incidents in the category of more than two to five incidents had been heard of or observed or were noted by managers (40 percent), followed by medical practitioners (33 percent) and then nurses (27 percent). Those in the last category, which is more than five incidents heard

of or observed, were mostly perceived by nurses (40 percent), followed by medical practitioners (33 percent) and then management (27 percent).

The last row indicates that of the total cases heard of or observed, most incidents were recognised by the nurses (44 percent) followed by medical practitioners (31 percent) and then management (27 percent). The total responses were 88 out of the 90 respondents because some did not respond to this question.

5.2.3.2. Perceived extent of compromised patient's rights

The following table sought to answer the question about the number of times the respondents heard of or observed a medical practitioner compromising patient's rights in the past 12 months.

Table 18: The extent of compromised patient's rights in the past 12 months

Frequency	Medical practitioners	Professional nurses	Hospital management	Row Total
Zero	17 (63% row total)	9 (33% row total)	1 (4% row total)	27
1 to 2	8 (25% row total)	19 (59% row total)	5 (16% row total)	32
3 to 5	3 (38% row total)	1 (13% row total)	4 (50% row total)	8
Greater than 5	5 (36% row total)	6 (43% row total)	3 (21% row total)	14
Column Total	16 (30 % row total)	26 (48% row total)	12 (21% row total)	**54 (total heard about or observed)**

The above table illustrates that the zero category featured a high percentage of medical practitioners (63 percent), followed by nurses (33 percent) and then managers (4 percent). Most of the nurses (59 percent) heard about or observed category 1 to 2 incidents, followed by the practitioners (25 percent) and then managers (16 percent). Most incidents in the category of more than two to five incidents were heard of or observed by nurses (43 percent), followed by medical practitioners (36 percent) and then managers (21 percent). The nurses

had the highest percentage (43 percent) in the last category, which is that of more than five incidents, followed by the medical practitioners (36 percent) and then managers (21 percent).

The last row indicates that most incidents were heard of or observed by the nurses (48 percent), followed by medical practitioners (30 percent) and then managers (21 percent). The total responses were 81 out of the 90 respondents because some respondents did not answer this question.

5.2.4. Risk management competencies

A total of 53 risk management competencies were identified during phases 1 and 2 of the research. The competencies are listed in the table below and are grouped into the four competency domains.

Table 19: Risk management competencies

Knowledge
Medical knowledge (up-to-date)
Health Professions Council of SA ethical code of conduct
Relevant Acts – e.g. National Health Act, Consumer Protection Act, etc.
Patient's rights
Health workers' rights
Batho Pele Principles
Patient safety
Professionalism (appropriate behaviour, attitude, appearance, communication and clinical care)
The hospital system weaknesses that might lead to lawsuits
The impact of the patients' environment on their health
The role and importance of other co-workers (clinical and non-clinical)
SKILLS
Communication with other doctors
Communication with other co-workers (clinical and non-clinical)
Communication with patients
Written communication on the patient's medical records
Clinical skills
Practice evidence-based medicine
Cross-cultural competence
Emotional intelligence

Teamwork
Problem-solving
Taking charge of patient care (clinical leadership)
Patient education
History-taking
Informed consent
Use of language that patients can understand
Psychological counselling
Management of end-of-life dilemmas, i.e. no resuscitation
ATTITUDE
Patient-centeredness
Respect for other doctors
Respect for other co-workers
Respect for patients
Compassion
Ubuntu (the virtue of being human, to value the good of the community above self-interest)
Holistic approach to patient
Adaptability / flexibility
Hospitals are a risky environment
Mistakes are a learning opportunity
Doctors can make mistakes
Accountability
BEHAVIOUR
Protecting patient's privacy
Active listening to patients
Professional humility
Being open to inputs from other health professionals regarding patient care
Truthfulness
Treating patients as partners in their own care
Respect for other workers in the hospital
Respect for patients and their families
Protecting the patient's rights
Friendliness (greeting and introducing oneself to patients)
Assertiveness
Dedication
Patience

5.2.4.1. The top ten risk management competencies per domain

The following table, broken down into the domains of knowledge, skills, attitude and behaviour, demonstrates the top ten competencies per domain of competence as ranked by the medical practitioners, nurses and managers. The table was compressed into the top ten competencies per domain to make the data useful. The complete data set is shown in Appendix VIII.

Interestingly, the weighted mean averages per competence range between 4,63 and 3,79 compared to the upper limit of five. The rating scores are relatively close to each other, showing that all the identified competencies are—according to the respondents—comparable in importance.

Table 20 has the following columns:

- A – Rank based on importance;
- B – Competencies as identified in Phase 1 of the research; and
- C – The average weighted mean per competence.

Table 20: Top ten competencies per domain of competence and their ranking

A	B	C
Overall Knowledge		
1	Medical knowledge (up-to-date)	4.63
2	Patient safety	4.57
3	Health Professions Council of SA ethical code of conduct	4.41
4	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	4.38
5	Patient's rights	4.24
6	Batho Pele Principles	4.22
7	The hospital system weaknesses that might lead to lawsuits	4.20
8	Health workers' rights	4.18
9	Relevant Acts – e.g. National Health Act, Consumer Protection Act, etc.	4.16
10	The role and importance of other co-workers (clinical and non-clinical)	4.04

Skills		
1	Clinical Skills	4.57
2	Written communication on the patient's medical records	4.51
3	Informed consent	4.50
4	Practice evidence-based medicine	4.42
5	History-taking	4.39
6	Communication with patients	4.33
7	Taking charge of patient care (clinical leadership)	4.25
8	Communication with other doctors	4.25
9	Teamwork	4.24
10	Communication with other co-workers (clinical and non-clinical)	4.17

Attitude		
1	Accountability	4.48
2	Respect for patients	4.24
3	Compassion	4.10
4	Holistic approach to patient care	4.05
5	Respect for other doctors	4.05
6	Patient-centeredness	4.04
7	Respect for other co-workers	4.01
8	Hospitals are a risky environment	4.01
9	Ubuntu (the virtue of being human, to value the good of the community above self-interest)	3.92
10	Doctors can make mistakes	3.79

Behaviour		
1	Truthfulness	4.33
2	Dedication	4.25
3	Protecting patient's privacy	4.15
4	Active listening to patients	4.13
5	Protecting the patient's rights	4.12
6	Being open to inputs from other health professionals regarding patient care	4.11
7	Respect for patients and their families	4.08
8	Respect for other workers in the hospital	4.05
9	Patience	4.04
10	Professional humility	3.99

5.2.4.2. Overall weighted mean averages per domain of competence

The following table demonstrates the weighted mean averages per domain of competence and it is the compressed version of all 53 competences (Appendix VIII) identified during Phase 2 of the research.

Table 21: Overall weighted mean averages per domain of competence

Competency domain	Overall weighted mean average	Medical practitioners' weighted mean average	Professional nurses' weighted mean average	Managers' weighted mean average
Knowledge	4,28	4,23	4,28	4,45
Skills	4,08	4,05	4,06	4,23
Attitude	4,01	4,02	3,95	4,15
Behaviour	4,07	4,09	3,97	4,32

The above table suggests that the four domains of competence have high weighted mean averages, rating between 4,07 and 4,28, compared to the maximum score of 5. Knowledge has the highest overall rating of 4,28 followed by skills (4,08), behaviour (4,07) and lastly attitude (4,01).

The table below illustrates the ranking of perceived importance of the domains per groups of medical professionals, professional nurses and managers.

Table 22: Ranking of domains by importance per group of respondents

Ranking for weighted mean averages per group	Medical Practitioner	Professional nurses	Managers
1st	Knowledge	Knowledge	Knowledge
2nd	Behaviour	Skills	Skills
3rd	Skills	Behaviour	Behaviour
4th	Attitude	Attitude	Attitude

The above table illustrates the comparison between the mean averages per domain as rated by the medical practitioners, nurses, managers and the overall ratings. All respondents overwhelmingly ranked knowledge as the most important competence.

5.2.4.3. The perceived proficiency levels as observed in hospitals

The following table sought to answer the research question about the perceived proficiency levels of risk management competencies per domain as perceived by medical professionals, nurses and managers working in SA hospitals.

Table 23: Perceived risk management proficiency levels

Competency domain	Overall weighted mean average	Medical practitioners' weighted mean average	Professional nurses' weighted mean average	Managers' weighted mean average
Knowledge	3,29	3,17	3,41	3,24
Skills	3,16	3,02	3,28	4,23
Attitude	3,19	2,99	3,46	4,15
Behaviour	3,19	2,98	2,96	4,32

The above table shows that the overall weighted averages for perceived risk management proficiencies have the highest score for knowledge (3,29), followed by attitude and behaviour with the same score (3,19) and lastly, skills (3,16). Surprisingly, the medical practitioners scored themselves lowest on the knowledge, skills and attitude competency domains compared to the other respondents.

5.2.4.4. The top and bottom three competencies ranked by perceived proficiency levels

The table below is an illustration of the top three and bottom three competencies per domain as perceived by the different respondent groups. The table is an expansion of the following findings:

Top three competencies ranked by perceived proficiency levels

- Knowledge
    - Medical knowledge
    - HPCSA ethics code of conduct
    - Patient safety
- Skills
    - Clinical skills

    - History-taking
    - Communication with co-workers
- Behaviour
    - Dedication
    - Assertiveness
    - Protecting the patient's rights
- Attitude
    - Respect for other doctors
    - Patient-centeredness
    - Holistic approach to patient care

Table 24: Risk management proficiency levels per population group

Ranking by perceived risk management proficiency levels			
Ranking	**Medical professionals**	**Professional nurses**	**Managers**
Knowledge			
Top 3	Medical Knowledge (up-to-date)	Medical knowledge (up-to-date)	Medical knowledge (up-to-date)
	The role and importance of other co-workers (clinical and non-clinical)	Health Professions Council of SA ethical code of conduct	Health Professions Council of SA ethical code of conduct
	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	Patient safety	Patient safety
Bottom 3	Relevant Acts: e.g. National Health Act, Consumer Protection Act, etc.	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)
	Hospital system weaknesses that might lead to lawsuits	Hospital system weaknesses that might lead to lawsuits	Hospital system weaknesses that might lead to lawsuits
	Health workers' rights	Health workers' rights	The role and importance of other co-workers (clinical and non-clinical)
Skills			
Top 3	Patient education	Clinical Skills	History-taking
	Informed consent	Taking charge of patient care (clinical leadership)	Use of language that patients can understand
	Clinical skills	Communication with other co-workers (clinical and non-clinical)	Clinical skills
Bottom 3	Written communication on the patient's medical records	Problem-solving	Written communication on the patient's medical records

	Management of end-of-life dilemmas, i.e. no resuscitation	Use of language that patients can understand	Informed consent
	Psychological counselling	Cross-cultural competence	Psychological counselling
Attitude			
Top 3	Compassion	Holistic approach to patient	Respect for other doctors
	Respect for other doctors	Respect for other doctors	Patient-centeredness
	Doctors can make mistakes	Accountability	Hospitals are a risky environment
Bottom 3	Respect for other co-workers	Mistakes are a learning opportunity	Adaptability / flexibility
	Mistakes are a learning opportunity	Compassion	Compassion
	Adaptability / flexibility	Respect for others co-workers	Accountability
Behaviour			
Top 3	Protecting the patient's rights	Dedication	Assertiveness
	Assertiveness	Assertiveness	Protecting patient's privacy
	Dedication	Respect for patients and their families	Truthfulness
Bottom 3	Respect for patients and their families	Being open to inputs from other health professionals regarding patient care	Professional humility
	Treating patients as partners in their own care	Respect for other workers in the hospital	Friendliness (greeting and introducing oneself to patients)
	Respect for other workers in the hospital	Active listening to patients	Patience

5.2.4.5. The difference between the important competencies and the perceived proficiency levels

The following table seeks to answer the research question about the gap between the weighted mean averages of the important competencies and the perceived proficiency levels in hospitals. The table below illustrates the differences in the top ten competencies per domain for ease of data management.

The table below has the following columns:

- A – Ranking based on importance;
- B – Competencies as identified in Phase 1 of the research;
- C – The weighted mean average per domain by rank of importance;
- D – The weighted mean average for the perceived proficiency levels; and
- E – Is the result of E minus D.

The difference between D and C illustrates the gap between the competency standards and performance in the workplace. The analysis will further look at the areas with major differences as a method of identifying areas of focus for future training of medical practitioners.

Table 25: The gap analysis: The comparison between important competencies and the perceived proficiency levels

A	B	C	D	E
	Knowledge			
1	Medical ethics (up-to-date)	4,63	3,8	-0,83
2	Patient safety	4,57	3,43	-1,14
3	Health Professions Council of SA ethical code of conduct	4,41	3,58	-0,83
4	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	4,38	3,26	-1,12
5	Patient's rights	4,24	3,3	-0,94
6	Batho Pele Principles	4,22	3,22	-1,00
7	Hospital system weaknesses that might lead to lawsuits	4,20	2,94	-1,26
8	Health workers' rights	4,18	2,91	-1,27
9	Relevant Acts – e.g. National Health Act, Consumer Protection Act, etc.	4,16	3,27	-0,89

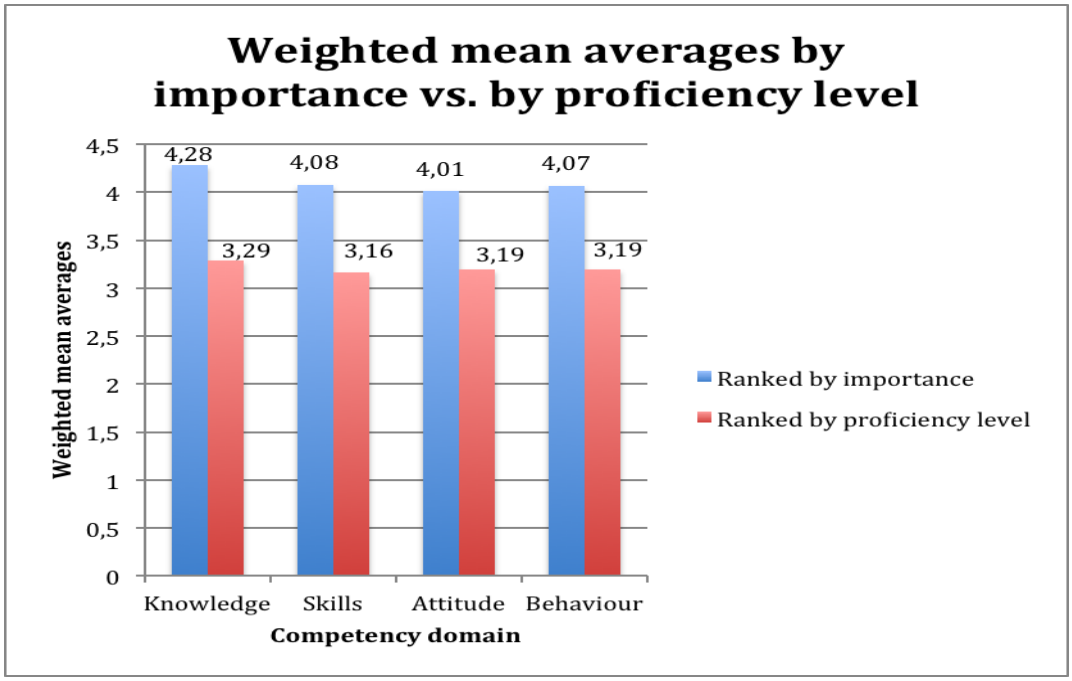
10	The role and importance of other co-workers (clinical and non-clinical)	4,04	3,35	-0,69
11	The impact of the patient's environment on their health	4,03	3,12	-0,91
	Skills			
1	Clinical skills	4,57	3,61	-0,96
2	Written communication on the patient's medical records	4,51	3,19	-1,32
3	Informed consent	4,50	3,27	-1,23
4	Practice evidence-based medicine	4,42	3,38	-1,04
5	History-taking	4,39	3,47	-0,92
6	Communication with patients	4,33	3,17	-1,16
7	Taking charge of patient care (clinical leadership)	4,25	3,44	-0,81
8	Communication with other doctors	4,25	3,33	-0,92
9	Teamwork	4,24	3,17	-1,07
10	Communication with other co-workers (clinical and non-clinical)	4,17	3,45	-0,72
11	Problem-solving	4,10	3,1	-1,00
12	Management of end-of-life dilemmas, i.e. no resuscitation	4,07	3,03	-1,04
13	Use of language that patients can understand	4,05	3,14	-0,91
14	Patient education	3,94	3,37	-0,57
15	Psychological counselling	3,80	2,84	-0,96
16	Emotional intelligence	3,77	3,14	-0,63
17	Cross-cultural competence	3,71	2,95	-0,76
	Behaviour			
1	Truthfulness	4,33	3,26	-1,07
2	Dedication	4,25	3,41	-0,84
3	Protecting patient's privacy	4,15	3,3	-0,85
4	Active listening to patients	4,13	3,12	-1,01
5	Protecting the patient's rights	4,12	3,27	-0,85
6	Being open to inputs from other health professionals regarding patient care	4,11	3,06	-1,05
7	Respect for patients and their families	4,08	3,21	-0,87
8	Respect for other workers in the hospital	4,05	3,01	-1,04
9	Patience	4,04	3,09	-0,95
10	Professional humility	3,99	3,14	-0,85
11	Treating patients as partners in their own care	3,92	3,1	-0,82
12	Assertiveness	3,92	3,4	-0,52
13	Friendliness (greeting and introducing oneself to patients)	3,81	3,15	-0,66
	Attitude			
1	Accountability	4,48	3,16	-1,32
2	Respect for patients	4,24	3,17	-1,07
3	Compassion	4,10	3,19	-0,91
4	Holistic approach to patient	4,05	3,25	-0,80
5	Respect for other doctors	4,05	3,36	-0,69
6	Patient-centeredness	4,04	3,26	-0,78
7	Respect for other co-workers	4,01	3,04	-0,97
8	Hospitals are a risky environment	4,01	3,19	-0,82
9	Ubuntu (the virtue of being human, to value the good of the community above self-interest)	3,92	3,12	-0,80
10	Doctors can make mistakes	3,79	3,23	-0,56
11	Mistakes are a learning opportunity	3,78	3,19	-0,59

12	Adaptability / flexibility	3,63	3,16	-0,47

The above table illustrates both the mean averages for the important competencies (Column C) and the perceived proficiency level mean average (Column D). The difference between the identified competencies and the perceived proficiency levels, which is the gap analysis, is illustrated in Column E. All the Column E values have a negative sign.

The following figure demonstrates the difference between the compressed weighted averages for important competencies and the perceived proficiency levels as ranked by the medical practitioners, nurses and managers. The perceived weighted mean averages for the perceived proficiency levels as observed in hospitals are lower that the ranked importance of the same competencies (Figure 5).

Figure 5:



5.2.4.6. The competencies with the biggest gaps in the perceived proficiency levels

The following table illustrates the competencies with the biggest gaps in proficiency levels. These were identified as competencies with a gap of more than one.

Table 26: The competencies with the biggest gaps in perceived proficiency levels

A	B	C	D	E	Domain of competence
2	Written communication on the patient's medical records	4,51	3,19	-1,32	Skills
1	Accountability	4,48	3,16	-1,32	Attitude
8	Health workers' rights	4,18	2,91	-1,27	Knowledge
7	Hospital system weaknesses that might lead to lawsuits	4,20	2,94	-1,26	Knowledge
3	Informed consent	4,50	3,27	-1,23	Skills
6	Communication with patients	4,33	3,17	-1,16	Skills
2	Patient safety	4,57	3,43	-1,14	Knowledge
4	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	4,38	3,26	-1,12	Knowledge
2	Respect for patients	4,24	3,17	-1,07	Attitude
1	Truthfulness	4,33	3,26	-1,07	Behaviour
9	Teamwork	4,24	3,17	-1,07	Skills
6	Being open to inputs from other health professionals regarding patient care	4,11	3,06	-1,05	Behaviour
8	Respect for other workers in the hospital	4,05	3,01	-1,04	Behaviour
12	Management of end-of-life dilemmas, i.e. no resuscitation	4,07	3,03	-1,04	Skills
4	Practice evidence-based medicine	4,42	3,38	-1,04	Skills
4	Active listening to patients	4,13	3,12	-1,01	Behaviour

The above table confirms a total of 16 (30 percent) out of 53 competencies that have big gaps in proficiency levels. The biggest gaps are in skills domain (six out of 16), followed by the knowledge and behaviour with the same number of four out of 16 and lastly, the attitude domain with two out of 16.

5.2.4.7. Phase 2 qualitative comments

These are qualitative comments collected relating to the additional comments on the role played by medical practitioners in risk management in hospitals. A significant 45 percent (49 out of 90) of respondents provided written qualitative comments (Appendix X). The comments have themes that can be grouped as self-awareness (personal leadership and emotional intelligence), awareness of others (interpersonal relations, teamwork and effective communication) and awareness of the health system (professional guidelines, ethics and contextual constraints) which overlap with the four domains of competence. The other skill mentioned in these comments, and which was not mentioned in both phases 1 and 2 of the research, is the training skills facilitating the training of junior medical practitioners in the workplace. Practitioners are thus expected to play the roles of on-the-job facilitators and mentors.

Respondents noted the challenge resulting from the limited training in risk management and patient safety received by medical practitioners. There is also acknowledgement of the health system not being conducive for practitioners to uphold risk management principles because of challenges such as overcrowding and shortage of resources. Out of the 19 comments from nurses, three indicated the importance of infection control and waste management skills for medical practitioners.

6. CHAPTER 6: Discussion of results

6.1. Introduction

The object of this chapter is to show the respondents' perception of important risk management competencies and the extent of risk management failure in South African hospitals. The interpretation will take into account the Phase 1 outputs, which are those themes that emerged in the literature review and the in-depth interviews with medical experts. The following discussion of the results is structured according to the research questions presented in Chapter 3.

Identification of competencies is vital for facilitation of the provision of quality services and these competencies should be linked to clinical indicators and outcomes (Arora *et al.,* 2010; Palsson *et al.,* 2007). They are influenced by the constraints and new developments affecting the local clinical environment (Cate *et al.,* 2010). Therefore, the practitioner's behaviour is expected to change as the context of the clinical environment changes while the practitioner maintains professionalism and upholds the interests of the patient. This is line with the WHO Health System Framework goals.

6.2. Research Question 1: What are the risk management competencies needed for medical practitioners working in South African hospitals within the knowledge, skills, attitude, and behaviour domains?

6.2.1. The competency domains and risk management competencies

The 53 competencies listed in Table 19 answer Research Question 1 and these competencies are grouped into the knowledge, skills, behaviour and attitude competency domains. Cate *et al.* (2010) state that having the required skills, knowledge and attitude is inadequate for achieving desired outcomes but it is important for the practitioner to have the ability to apply the skills in the work environment in order to achieve the required outcomes. The ability to apply knowledge and skills is viewed as a behavioural competence, which is interpreted as the ability to perform and get along with other people. Another study established that the practitioner's knowledge and clinical skills are inadequate to achieve the required clinical outcomes since they alone cannot ensure the practitioner's competence and performance (Palsson *et al.,* 2007).

The studies reviewed by the researcher identified the competency domains that spread between two to three (Cate *et al.,* 2010; Akkermans *et al.,* 2013; Leung, 2002) out of the four competency domains denoted in the researcher's own model (Figure 2). In order to meet customer needs, Li *et al.* (2009) identified knowledge, technical skills, social skills and service attitude as competencies for service industries. The research findings point at the behaviour domain as being the least important although it greatly influences how skills are applied (Blumenthal, Bernard & Bohmer, 2012). There is no doubt that the patient should be at the centre of service delivery and planning strategies, as mentioned by the medical experts during Phase 1. These competencies will play a vital role in facilitating risk management in hospitals.

6.2.1.1. Knowledge

The research findings indicate that knowledge is perceived to be the most important domain of competence for risk management, as rated by all the respondent groups. The most important themes emanating from this domain are medical and medico-legal knowledge. It is evident that medical practitioners

should be competent in the professional code of conduct, medical ethics, and the laws that regulate and have an impact on the profession and the healthcare industry. Harrison (2002) supports this view by stating that well-informed and consumerist patients now challenge practitioners. Remarkably, none of the articles in the literature reviewed mention medico-legal knowledge as an important risk management competence.

The research finding shows medical knowledge as being the most important competence in this domain. At the same time, the research shows that medical knowledge alone is inadequate to manage risks effectively in hospitals and that practitioners need to be committed to lifelong learning. This observation is supported by Mouradian & Huebner (2007) who state that medical practitioners face a future that will be challenged by the changes in their environment. This means that knowledge should not be static and that practitioners need to strive to have relevant knowledge to keep up with the changes in the economy, technology, demographics and political contexts while also being responsive to the local challenges.

Therefore, medical practitioners should be committed to life-long learning by being proactive in seeking opportunities to develop the new capabilities, skills and knowledge that are required to continually enhance their contribution to hospital service and the profession (Parboosingh *et al.* 2008 as cited by Campbell, 2010; Palsson *et al.,* 2007 and The Accreditation Council for Graduates for Graduate Medical Education). It is fundamental to mention that the research further discovered the lack of inclusion of risk management and patient safety in the practitioners' undergraduate curriculum and this finding is similar to that of Butrous *et al.* (2012) and therefore is not unique to South Africa.

Knowledge is the foundation of competence and it has to be kept up-to-date. Possessing it does not guarantee good outcomes, but correct application does.

6.2.1.2. Skills

The research findings indicate that the skill competency domain is the second most important risk management domain. Themes emerging in this domain are the importance of technical (clinical) skills and the soft (social) skills. A number of articles in the literature review support the notion that technical skills alone are not enough to facilitate the provision of safe services in hospitals. The survey results demonstrate leadership, soft skills and service improvement skills as being important skills for risk management and good clinical outcomes (Palsson *et al.*, 2007; Baker & Denis, 2011; Bohmer, 2012 as cited by Clark, 2012).

Medical practitioners work as part of multidisciplinary teams in hospitals and this accentuates the importance of coordination and teamwork (Hall, 2005; VanGeest & Cummins, 2003; Bohmer, 2012). Teamwork also emerges as a vital skill, as mentioned by numerous respondents in the qualitative comments collected during Phase 2 of the research (Appendix X). Verbal and written communication emerges as one of the most important skills to facilitate the acquisition and sharing of information between practitioners, co-workers, patients and families. Communication skills are also important for building relationships (Von Fragstein *et al.*, 2008; Nissen *et al.,* 2010). Von Fragstein *et al.* (2008) cited similar findings and specifically mentioned the communication skills required for practitioners to communicate face-to-face, on the phone, using computers, in writing and through presentations.

6.2.1.3. Behaviour

The survey results indicate that the behaviour competency domain is the third important domain in risk management. It is vital for practitioners to behave in a manner facilitating good patient-practitioner and co-worker relationships. The research findings suggest the importance of behaving in a manner that facilitates the creation of effective relationships and behaviours that acknowledge the valuable role of other stakeholders. The findings of Palsson *et al.* (2007) are supported by this research stressing the importance of

practitioners upholding confidentiality, altruism, autonomy and social justice principles. Behavioural competencies will play a dual role in setting behavioural standards and also acting as performance standards for the evaluation of practitioners against the required outcomes (Leape & Fromson, 2006).

The research findings allude to the direct impact the practitioner's behaviour has on teamwork and patient safety. The findings of the study by Rosenstein & O'Daniel (2005) support this finding by highlighting the corrosive effects of disruptive behaviour on co-workers and patients. This study falls short on the impact of disruptive behaviour on the relationship with managers and the impact it has on the community's trust on the hospital.

Holmes & Joyce (1993) define competence as the mode of behaviour that a person should be able to demonstrate to new situations within the occupational area: this points to the importance of this competency domain. For this reason, the practitioner's behaviour should be adaptable and responsive to the different challenges and constraints relevant to the clinical environment. This finding is echoed by Sewankambo & Katamba (2009) in their study on achieving the Health Millennium Development Goals for South Africa, indicating the need for practitioners who are capable of responding to local challenges.

Behaviour influences how knowledge and skills are applied in the workplace.

6.2.1.4. Attitude

The research findings show that the attitude domain of competence is vital for risk management in hospitals and it ranks as the fourth most important domain. A theme emanating from the research within this domain is need for the acknowledgement of others as important players in the delivery of safe care. This includes respecting and treating patients with compassion and involving patients in the decision-making process (De Zulueta, 2013; Palsson *et al.*, 2007).

Arora *et al.* (2010) defined competence as a combination of knowledge, skills and attitudes, which when applied to a particular situation lead to a given outcome. In a nutshell, the attitude determines how the skills and knowledge are applied to achieve the desired outcomes within the given context. Reason (1998) endorses the importance of attitude by naming it as one of the important elements in creating a patient safety culture. The research findings suggest a need for medical practitioners to adopt an attitude that hospitals are a risky environment with a potential for exposing patients to physical and psychological harm.

The survey results indicate that the practitioner's attitude has an impact on the relationship between the practitioner, co-workers and patients. This attitude influences how the practitioner interacts with the team members, patients, relatives and other stakeholders. Medical practitioners should be open to feedback and inputs from others and accept professional regulations and performance assessments (Palsson *et al*, 2007). Palsson's findings fall short on the issue of accountability, identified as an important risk management competency in this research. Accountability by practitioners will facilitate risk management in hospitals. The lack of performance appraisal skills by managers of practitioners and the programmes to address performance and behavioural weaknesses are a major concern (Leape & Fromson, 2006).

Attitude influences how skills and knowledge are applied as it influences how practitioners interact with self, others and the health system.

6.3. Research Question 2: How do risk management competencies rank by importance per domain?

The research findings presented in Table 20 demonstrate the compressed results aimed at answering Research Question 2. The following discussion will focus on the competencies, ranking the top three and lowest three per domain of competence to draw lessons from the data.

6.3.1. Knowledge

The healthcare environment is dynamic and therefore knowledge has to be relevant to the context and must be updated to keep up with change. The research findings specify the following competencies as being the top three for the knowledge competency domain (in order of importance):

- Medical knowledge;
- Patient safety; and
- HPCSA code of conduct and ethical guidelines.

The following analysis of results will focus on these three competencies.

6.3.1.1. Medical knowledge

The research findings show that medical knowledge is the most important knowledge competency (Table 20), being ranked the most important in global core competencies for medical practitioners (Appendix II). Medical knowledge must be kept up-to-date because of the challenges resulting from changes in the healthcare environment, the globalisation of illnesses due to migration of people, scientific and technological advances, and shifting demographic, economic and political contexts (Mouridian & Huebener, 2007).

Medical knowledge also includes the ability to evaluate the quality of guidelines, use clinical guidelines and protocols, while knowing the challenges and benefits of using these in practice. The practitioner should have the ability to review medical articles critically and have an understanding of research (Palsson *et al.*, 2007; Davidsoff, 2008). Li *et al.* (2009) define knowledge as being what employees in the service industry are required to know when carrying out their tasks, so as to meet customer needs.

6.3.1.2. Patient safety

Patient safety competence is not explicitly mentioned in the literature reviewed in Chapter 2 of this research study. The research findings (Table 20) point to patient safety knowledge being one of the important risk management competencies. Discussing errors and learning from them is one strategy recommended by McFadden, Stock & Gowen III (2006) as being key to reducing errors in hospitals. Medical practitioners need a deeper understanding of the subject of patient safety, yet most curricula still do not offer relevant training.

Remarkably, the research findings confirm the high number of practising medical practitioners who have never received training on risk management and patient safety (Tables 15, 16). It is not surprising that medical practitioners perceived the lowest percentage of patient safety incidents in hospitals (Table 21). Interestingly, none of the literature reviewed explicitly mentions patient safety knowledge as an important risk management competence apart from the safety competencies published by the Canadian Patient Safety Institute (2009) which focus on the knowledge, skills and attitude competency domains while excluding the behaviour domain.

Clinical facilitators and mentors facilitate the transfer and improvements of clinical skills, yet fail to prepare practitioners on how to be effective in the health system (Clarke, 2012). The practitioners are taught biomedical knowledge but not how to apply them in an affective, reliable and safe manner (Davidoff, 2008).

6.3.1.3. HPCSA code of conduct and ethical guidelines

The research findings indicate that knowledge of the HPCSA code of conduct is an important competence for medical practitioners. Nissen *et al.* (2010) highlight the importance of junior doctors having risk management

competencies, as they are the first point of contact in hospitals. These competencies should therefore be acquired before qualification and be further developed after qualifying (Palsson, 2007). The research findings are aligned with the 13 core values listed in the General Ethical Guidelines for health professions (HPCSA, 2008). These core values cut across the four competency domains of risk management for medical practitioners working in SA hospitals.

None of the literature reviewed made reference to knowledge of the professional ethical code being an important risk management competence but rather as a core competence comprising professionalism, ethical issues and legal issues. Medical practitioners face challenges due to patients' increased access to the Internet and the increasing need for practitioners to negotiate with well-informed, well-educated patients who have increasingly consumerist expectations (Cate *et al.,* 2010; Harrison, 2002). These negotiations have to be carried out within the ethical and legal frameworks.

The research finding indicates that this competency is unique to South Africa, as it was not found in any of the literature reviewed in Chapter 2.

6.3.2. Skills

The research findings indicate that the following are the top three competencies in the skills competency domain (in order of importance):

- Clinical skills;
- Written communication on the patient's medical record; and
- Informed consent.

The research findings overwhelmingly highlight the importance of communicating technical (clinical) expertise in risk management. The three competencies that will be discussed in this section are clinical skills, written communication and informed consent.

6.3.2.1. Clinical skills

The research findings elevate clinical skills as the most important risk management competence in the skills domain (Table 20). As with the medical knowledge competence, Li *et al.* (2009) state that in a service industry, employees should have the skills required when carrying out their tasks so as to meet customer needs. These skills are the assessment, diagnosis and management of medical conditions (Palsson *et al.*, 2007). Clinical performance can be influenced by context, for which reason good outcomes are not an automatic guarantee. It means that competence and clinical performance should be assessed in the context of the local clinical environment (Cate *et al.,* 2010).

The study confirmed that clinical skills alone are insufficient to facilitate risk management in hospitals (Bohmer, 2012; Leung, 2002) since safety culture is a product of individual and group values, attitudes, competencies and patterns of behaviour (Reason, 1998). Clinical skills should also be kept up-to-date to ensure relevance and to cater for current and future developments. Medical Economics (2014) rated weaknesses in clinical competence and technical skills as the leading causes of patient injury, thus elevating this competence.

6.3.2.2. Written communication on medical records

The research findings show communication as being one of the most important skills, as it facilitates the transfer of information and knowledge in healthcare. This finding is supported by the study by Babu *et al.* (2012) which confirms that 70 percent of litigation in US hospitals comes as a result of defective handoffs (verbal and written communication when transferring the care of the patient to another practitioner or nurse).

It is important for practitioners to have good written communication skills to facilitate safe patient care and for accurate record keeping. There is

evidence of increased litigation in SA against practitioners and their employers (Medical Protection Society, 2013) and defensive medical record keeping should be encouraged (American Academy of Family Physicians, 2013). Written medical records become an important tool and resource for the management of litigation challenges faced by hospitals. The principles guiding the importance of keeping up-to-date and authentic medical records are: “People forget but records remember” (Kumar *et al.,* 2011) and “What is not recorded never took place” (Unknown).

Medical records are an important tool for monitoring and controlling the quality of care provided to patients, resource utilization in hospitals, performance management of medical practitioners, and compilation of data for education and research. Finally, medical records provide information that can support government functions of budgeting and resource allocation (Kumar *et al.,* 2011).

Medical records should be legible, accurate, kept up to date, be complete, and should be produced at or about the same time as the treatment (Glasner, n.d.).

6.3.2.3. Informed consent

The research findings highlight the importance of practitioners being able to facilitate informed consent. Informed consent overlaps with patient education and medico-legal and communication competencies, since practitioners need to educate patients about the benefits and risks of planned intervention. There is evidence of concern that practitioners do not talk to patients about planned interventions and a number of patients go to the operating room without signed, informed consent. This observation was prominent in the private sector setting but not in the public sector.

Informed consent should be obtained using a language that patients understand, be documented, and carried out in a manner facilitating intelligent decision-making (AAFP, 2013). Practitioners should also be aware of the

imbalance of power when facilitating informed consent (Von Fragstein *et al.,* 2008). The principle that every person has a right to have his bodily integrity protected against invasion by others should be recognised (Mason, Laurie & Smith, 2013).

Patients have the right to accept or decline proposed interventions and their decisions should be respected. As part of the informed consent skills, practitioners should be able to manage communication, attitude and professional behaviour in instances where patients refuse consent for proposed interventions. This approach contradicts the Hippocratic Oath, which promotes a paternal approach to patient care and undermines the importance of treating patients as partners in their own care (Benzer & Miller, 1995).

6.3.3. Attitude

The research findings indicate that the following are the top three competencies in the attitude competency domain (in the order of importance):

- Accountability;
- Respect for patients; and
- Compassion.

The themes emanating from the research on this domain centre around how the practitioner interacts with the patient and with others, and how the practitioner relates to his / her job.

6.3.3.1. Accountability

The research findings elevate accountability as the most important competency within the attitude domain. Lack of accountability and poor role clarification are some of the issues raised in the qualitative comments during Phase 2 of the research. This research finding indicates a need for vigilant clinical governance and effective performance management as supported in a study by Palsson *et al.* (2007).

Medical practitioners work in a regulated environment plagued by challenges and constraints, especially in the SA public sector. Challenges arise when practitioners are expected to deliver quality services that meet the expectations of patients, managers and service controls imposed by funders and regulators, while at the same time disregarding the presence of resource constraints (Freeman *et al.,* 2009).

Practitioners are expected to account to a broader audience including peers, professional regulators and the relevant managers within hospitals. Accountability has added a new layer of complication to include the media and lawyers in line with the increase in litigation cases (Lane & Ross, 1998).

None of the reviewed literature mentions accountability as a risk management competency and therefore the researcher considers this finding to be unique to SA.

6.3.3.2. Respect for patients

The research finding alludes to some practitioners not communicating effectively with patients and not respecting patients and their rights. Benzer & Miller (1995) mention the negative effects of observed disruptive behaviour in building rapport with patients, thus compromising their participation in their own care. This view is also supported by Palsson *et al.* (2007) who advocate for the patients' views to be respected and for patients to be treated with empathy. This competency also draws its legal foundation from Section 8 of the Constitution of SA.

None of the literature reviewed mentions respect for patients as a risk management competence needed by practitioners. Therefore, this research finding is deemed unique to SA.

6.3.3.3. Compassion

The research findings highlight compassion as an important competence, this being supported by De Zulueta (2013) stating that compassion and competence should be combined. Compassion influences how skills are applied in the workplace. The medical experts also expressed the need for compassion and respect for patients as a vital ingredient for facilitating patient engagement and empowerment. The delivery of medical services requires more than technical skills alone and should be coupled with humanity and compassion: these should not be influenced by contextual constraints (Gillon, 2013).

The HPCSA (2008) listed compassion as one of the ethical values and standards that medical practitioners should have. The NHS Constitution pledges that compassion is central to the care provided and ensures a response with humanity and kindness to each individual's pain, distress, anxiety or need. The research findings support the importance of compassion as a competence for delivery of safe care in hospitals. De Zulueta (2013) raises an interesting concern about the potential risk of emotional exhaustion or burnout resulting from the practitioner's compassion.

Nowhere did the reviewed literature mention compassion as a risk management competence.

6.3.4. Behaviour

The research findings indicate that the following are the top three competencies in the behaviour competency domain (in order of importance):

- Truthfulness;
- Dedication; and
- Protection of the patient's privacy.

6.3.4.1. Truthfulness

The research finding shows that truthfulness is an important competence for risk management and the HPCSA (2008) mentioned its importance in building relationships with patients. Palsson *et al.* (2007) advocates for practitioners to act in an honest manner and to inform patients when errors have occurred. Practitioners also need to acknowledge their shortcomings and should consult one another and refer appropriately.

Truthfulness will facilitate good patient-doctor relationships and allow patients to make intelligent decisions about their care. Practitioners must act with honesty towards patients and this will allow patients to make informed decisions about their own care (Palsson, 2007). The same study mentions the importance of practitioners acknowledging their deficiencies, being open to constructive criticism and consulting other colleagues when the need arises.

This competency is not identified as a risk management competency and thus is unique to SA.

6.3.4.2. Dedication

The research findings feature dedication as an important competence. The HPCSA (2008) states that practitioners should have an overriding dedication and commitment to the interests of their fellow human beings and society. Dedication facilitates a patient-centred approach and the commitment to strive for high standards of care.

Dedication means that practitioners will present themselves on time for duty, will not take breaks lasting longer than the allocated time and will go out of their way for patients, co-workers and the community. The reviewed literature does not mention dedication as a risk management competence and thus this finding is unique to SA.

6.3.4.3. Protection of the patient's privacy

The research found that 30 percent of practitioners, 48 percent of nurses and 21 percent of the managers had witnessed at least one incident of patient's rights being compromised in the past 12 months. The protection of patient's rights also featured strongly in the qualitative comments during Phase 2 of the research. The HPCSA ethical code of conduct and the Bill of Rights stress the importance of maintaining confidentiality and protecting the patient's privacy. Palsson (2007) states that practitioners should honour the principles of confidentiality and social justice.

The practitioner should be aware of system vulnerabilities that might lead to the violation of a patient's rights. Practitioners are supposed to act in the best interest of patients at all times and therefore are expected to advocate for patients when required. Systems must be designed in a way that protects the privacy of the patient and management of medical records should also uphold the patient's privacy.

6.4. Research Question 3: What are the perceived proficiency levels of risk management competencies as observed in SA hospitals?

The following discussion analyses the research findings on perceptions of practitioners' risk management proficiency levels (Tables 24 and 25).

6.4.1. The top and bottom three ranking competencies on perceived proficiency levels

The research findings indicate the following three competencies as the ones with the overall highest proficiency scores across all four domains of competence. They are listed by ranking order:

- Medical knowledge;

- Clinical skills; and
- HPCSA ethical code of conduct.

The above are components of the core competencies for medical practitioners (Palsson, 2007; AAFP, 2013).

6.4.1.1. Knowledge

The research finding on comparison of the ranking of proficiency levels by different groups is interesting and shows that nurses and managers produced similar scorings for the top three competencies, i.e. medical knowledge, the HPCSA ethical code of conduct and patient safety. This finding differs from that of the medical practitioners who chose medical knowledge, knowing the roles and importance of other workers, and professionalism as their top three competencies. Medical knowledge is the only competency having the same ranking amongst all population groups.

Interestingly, the competencies ranked high on proficiency levels by medical practitioners are ranked the lowest by managers and nurses. These are professionalism and knowing the roles and importance of other co-workers (clinical and non-clinical).

6.4.1.2. Skill

The research findings show that three groups perceive clinical skills as having the highest proficiency level in the skills domain.

The following are the overall top three proficiencies in their ranking order:

- Clinical skills;
- History-taking; and
- Communication with other co-workers (clinical and non-clinical).

The findings show that only clinical skills feature in the top five important competencies in this domain. It shows a gap between what practitioners need

to know and what they actually do. This could be interpreted as practitioners over-delivering on competencies that are less important, at the expense of the most important competencies. The bottom three competencies are the management of end-of-life dilemmas, cross-cultural competence and psychological counselling skills.

The research findings show that both practitioners and managers agree on the low proficiency levels of written communication on the medical records skill. This competency is in the top three by importance and these groups rated it in the bottom three by perceived proficiency levels.

6.4.1.3. Attitude

The research finding presented in the table below shows that all three groups agree medical practitioners respect their colleagues as opposed to other co-workers.

The following are the overall top three, ranked by proficiency level in their ranking order:

- Respect for other doctors;
- Patient-centeredness; and
- Holistic approach to patient care.

Interestingly, two out of three of the above competencies also feature in the top five important competencies. Proficiency levels were the lowest for Ubuntu, respect for other co-workers and accountability. There is a mismatch between proficiency level and the ranking of the most important competence in this domain, which is accountability. The proficiency levels on patient-centeredness and the holistic approach to patient care were amongst the top three by proficiency level.

6.4.1.4. Behaviour

The research findings point towards the protection of patients' rights and dedication as competencies with high proficiencies in the behaviour domain.

The following are the overall top three, ranked by proficiency level in their ranking order:

- Dedication;
- Assertiveness; and
- Protecting patient's privacy

No theme emerges from the competencies with low proficiencies but the practitioners scored themselves low on respecting patients and their families, treating patients as partners in their own care and respect for other co-workers in the hospital.

6.5. Research Question 4

6.5.1. What is the difference between the identified competences and perceived proficiency levels?

The compressed research data (Table 25) shows the difference (Column E) between the ranked importance of competencies (Column C) and perceived proficiency levels (Column D). The research findings (Table 25 and Figure 5) overwhelmingly indicate a negative difference between the mean average for important competencies and the perceived proficiency levels. The interpretation of this finding is that there is a gap between what medical practitioners know or should know and what they actually do (Leung, 2002).

Figure 5 further illustrates the gap between competence standards and perceived proficiency levels per domain of competence. The findings are listed and ranked in a descending order:

- Knowledge;
- Skills;
- Behaviour; and
- Attitude.

6.5.2. Where are the biggest gaps?

The research data shows the competencies with the biggest difference, which is the difference of an absolute value of one or more as shown in Table 26. That table confirms a total of 16 (30 percent) out 53 competencies that have big gaps in proficiency levels. The biggest gaps are in the skills domain (six out of 16), followed by knowledge and behaviour with the same number of four out of 16 and lastly, the attitude domain with two out of 16.

The research finding confirms that 56 percent (nine out of 16) of the competencies with the biggest gaps (Table 26) are amongst the top five important competencies within the four domains. To make the data useful, the following discussion will focus on the top five competencies. It is fascinating to note that three out of the five competencies with the biggest gaps have already been discussed in answering Research Question 2.

6.5.2.1. Written communication on patient's medical records

This particular competency was discussed under Research Question 2. It is a critical competence because it is ranked amongst the most important, while at the same time qualifying as one of the competencies with the biggest proficiency gap. This research finding indicates that particular competency should be a focus area for future training and development of medical practitioners.

6.5.2.2. Accountability

The research findings on this competency were also discussed under Research Question 2 and it ranked as the most important competency (2) in the attitude domain. Thus it is a critical competency because it is important, yet it ranks high on the proficiency level gap. This research finding indicates that this competency should be a focus area for future training and development of medical practitioners.

6.5.2.3. Informed consent

The research findings list this competency as one with a high gap in proficiency levels. The same competency was discussed under Research Question 2 because it is third in the top five important competencies in the skills domain.

6.5.2.4. Health workers' rights

Medical professionals are entitled to protection of their rights as stipulated in the document on rights and responsibilities of doctors and patients published by the South African Medical Association (South African Medical Association, 2012). This document draws its legitimacy from the Bill of Rights and from regulations relevant to workers such as the Basic Conditions of Employment Act (1997) (ZA).

Health workers' rights emerged as a competency with a high gap in proficiency levels. This is a vital finding because practitioners have to be aware of these in order to protect themselves from emotional, physical and financial abuse in the workplace. This finding is supported by De Zulueta (2013), who showed concern about the potential risk of emotional exhaustion or burnout resulting from a practitioner's compassion.

Practitioners can benefit by knowing their rights and fighting to protect them. The following rights (South African Medical Association, 2012) are important in the context of this research:

- The right to education and further education including access to Continued Professional Development activities; and
- The right to an environment that is not harmful to health or wellbeing, including appropriate management of stressful situations and supervision of, or assistance to, junior doctors.

The research finding confirms that medical practitioners access risk management and patient safety training from external training parties: this current status should be challenged. Practitioners should get involved in developing training plans in hospitals, as this will ensure that their training needs are well covered.

6.5.2.5. Hospital system weaknesses that might lead to lawsuits

The research found a lack of acknowledgement that hospitals are risky environments with significant interdependencies. Hospitals are characterised by interactions between health workers and patients, families, co-workers, and medical technology. Weaknesses in one area can have a ripple effect in other areas within the hospital and therefore systems thinking, leadership, coordination and service improvement skills are vital competencies for medical practitioners. This finding is similar to that of Clark (2012) who asserted the requirement for practitioners to have a range of leadership and service improvement skills from the time they graduate and on through their career progression.

Systems thinking is vital, as determined by Verbano & Turra (2010) who stress the allocation of errors to individuals as the source of a tendency to hide errors and to ignore core-responsibility for the remote cause.

7. CHAPTER 7: Recommendations

7.1. A new model for risk management competencies for medical practitioners working in SA hospitals

A new model developed from the empirical research findings consolidates the research finding for Phase 1 and Phase 2, and is presented below (Table 27). The model emanated from the literature review as illustrated in figures 4 and 5. The model aims at presenting the competencies required for successful risk management by medical practitioners working in SA hospitals.

The model highlights the core competencies for medical practitioners, which have the themes of self-awareness, awareness of others and awareness of the health system. Interestingly the researcher's own model illustrated in Figure 5 had an additional theme of awareness of global health but this competence was deemed unimportant in SA, as shown by the survey results.

The core competence of self-awareness is important for the practitioner when interacting with other people and the health system. In this core competency domain there is an overlap of risk management competencies right across the four risk management domains of competence. The practitioner should be aware of current medical knowledge and should develop a plan to remain up-to-date. Emotional intelligence skills and communication skills are vital for risk management and these competencies facilitate the formation of relationships. The practitioner should be committed and dedicated to his/her duties and behave in a professional manner. It is also important for practitioners to embrace the saying "to err is human", to be open to competency and performance assessment and to treat mistakes and errors as learning opportunities.

The next core competence is awareness of others. Practitioners work with other people in a hospital environment. Therefore skills, knowledge, attitude and behaviour that foster good interpersonal relationships are paramount. The practitioner should have adequate understanding of the legal and ethical issues, and patient and risk management skills, to facilitate the protection of patients against possible harm while in hospital. The patients' rights and privacy should always be protected and patients should be treated with compassion. As a clinical leader the practitioner will have to educate other professionals and patients and their families about medical conditions and their management, making them active participants in their own care. It is important for practitioners to be aware of the responsibility and power that comes with their position in hospitals and so they should exercise professional humility, especially when obtaining consent from patients. This will allow patients to make informed decisions about their care. Professional behaviour and humility create a platform for good professional relationships with co-workers, thus creating a safe environment for learning from others.

The core competency of awareness of the health system also cuts across all four risk management competency domains. Practitioners should understand the legal and ethical issues governing the profession in order to manage risk. Despite the challenges in the SA public health system, practitioners still have to strive to treat patients with compassion and also protect their rights. The service provided should be patient-centric and practitioners should be flexible in adapting to different contexts within hospital services. The leadership, communication and service improvement competencies are vital in the management of risks in hospital services. The practitioner should be dedicated to the provision of quality services.

The model encompasses the competency domains of knowledge, skills, attitude and behaviour. It is comprehensive as most competency models have a combination of three competency domains. This model stresses the foundation of competence as being knowledge and skills. Attitude and behaviour influence how these are applied in the workplace, thereby facilitating implementation aimed at achieving the goals of the organisation. The latter are under the

control of the medical practitioner and therefore self-awareness and self-management become vital competencies in risk management. This model forces the profession to undertake introspection and then focus on the need to incorporate soft skills training in medical training, and also on its importance.

The new model aims to illustrate a comprehensive model for risk management competencies for medical practitioners. The model can be used for designing the curriculum for medical professionals, assessing training and development needs, recruitment and selection, performance management and for creating a new career path for SA medical practitioners. This model provides a foundation for an objective discussion between practitioners and their managers about risk management and it also communicates the required performance standards. This is an outcome-based competency model that can be linked to performance indicators and outcomes.

Table27: Risk management competencies for medical practitioners working in SA hospitals

		Risk Management Domains of Competence			
		Knowledge	**Skills**	**Attitude**	**Behaviour**
Core Domains of Competence	**Self-awareness**	Medical knowledge	Clinical skills Continuous learning Emotional intelligence Communication	Accountability Fallibility Errors are learning opportunities	Dedication Commitment Truthfulness Being open to assessments and inputs from others Professionalism
	Aware-ness of others	Patient safety Risk management Patient's rights Bill of Rights Consumer Protection Act	Communication Informed consent Clinical leadership Teamwork Educator	Compassion Respect for patients, co-workers and others	Professional humility Respect for patients and others Protecting patient's privacy and rights
	Aware-ness of the health system	Patient safety HPCSA ethical code of conduct Laws and regulations System vulnerabilities	Communication Service improvement Leadership	Accountability Patient-centeredness	Dedication Protection of the patient's rights Adaptability

7.2. Recommendations for the Department of Health (DoH)

The research findings show that skills and knowledge alone are insufficient to manage risks in hospitals. Medical practitioners need competencies in the knowledge, skills, behaviour and attitude domains to facilitate risk management in hospitals. It is important that the government should create an environment for practitioners conducive to applying their skills and knowledge by providing the required leadership capability, enabling regulations and resources.

The DoH should establish a committee focusing on risk management in the national structures. This committee should be tasked with formulating the guidelines for risk management, including clinical governance, and these should be coupled with capacity-building at the national, provincial and local levels. The office of Standards and Compliance should be tasked with the responsibility of developing risk management standards and capacity for monitoring compliance.

The research finding confirms that most medical practitioners—other than nurses—received risk management and patient safety training from external service providers. This finding indicates the need for the DoH to strengthen internal training capacity and capability targeted at medical practitioners and the subject of risk management. The grant for Health Professionals Training and Development (HPTD) should enforce the inclusion of ethics and clinical governance training in all provincial training plans.

7.3. Recommendations for the Health Professions Council of South Africa (HPCSA)

The research findings show that a high number of medical practitioners do not receive patient safety and risk management training at an undergraduate level.

The HPCSA should undertake a trend analysis of the complaints it receives over a 24 month period and the results of this exercise should be communicated to medical schools to close the gap between expectations, practice and risk management proficiency levels.

The HPCSA should make it compulsory for medical schools to incorporate the published ethics guidelines in undergraduate training and also make it compulsory for medical officers to attend lectures or workshops that cover all the guidelines published by the HPCSA. The HPCSA can then provide an online assessment platform, ensuring that all medical practitioners obtain a minimum pass mark as a prerequisite for the renewal of their annual registration with the HPCSA.

The HPCSA should also assist practitioners by advocating an environment that facilitates provision of safe medical services. For this reason it is recommended that the HPCSA advocate for development and implementation of minimum resource conditions that would permit professionals to provide quality health services.

7.4. Recommendations for medical schools

The researcher recommends the incorporation of the HPCSA's ethical guidelines and identified risk management competencies in the undergraduate and postgraduate training of practitioners. The training should comprise both formal classroom training, experiential and case study methodology to equip future medical practitioners with the required risk management competencies. The assessment of medical students should include assessment of important technical and soft skills and not be limited to medical knowledge and clinical skills. The training should include leadership, service improvement, communication and other soft skills.

Medical schools should engage their alumni to identify the challenges they face in the workplace related to risk management and patient safety. The outputs of those engagements should be incorporated to ensure that the training remains

relevant to the realities of the hospital environment and the expectations of other stakeholders.

7.5. Recommendations for hospitals

Hospital boards and managers should include risk management as a key performance area in the performance contracts of all clinical managers and hospital managers. Clinical managers should be assessed on the implementation of the programme and support should be provided to address any weaknesses.

A trend analysis of medical errors, incidents and litigation against hospitals should be carried out on a quarterly basis. Further analysis of the root causes should be undertaken with corrective measures being identified and implemented. These reports should be shared with all relevant groups to facilitate hospital-wide awareness and continuing education while protecting the identities of the individuals involved in the incidents to avoid blaming individuals.

Hospitals should strive to have fully representative risk management committees sending the message that risk management is everybody's responsibility, from cleaners to the hospital manager. Hospital managers and clinical managers should continuously engage medical practitioners from the bottom up to identify risks and come up with solutions that are owned by the various stakeholders within the hospital.

7.6. Recommendations for medical practitioners

Medical practitioners should take charge of their continuing education. They should also ensure the inclusion of risk management and patient safety training in the form of training plans funded by the hospitals. These training programmes can be funded from the existing HPTD grant that is allocated to all provincial health departments.

Practitioners need to understand their role in risk management within the context of resource shortages and other challenges. Important risk management competencies within the domains of knowledge, skills, behaviour and attitude should be embraced by practitioners and developed at both undergraduate and postgraduate levels. Practitioners should use the new model of risk management competencies to plan for their development, assess their competencies and request performance feedback from their supervisors and colleagues.

7.7. Research limitations

Firstly, the focus of the research is on medical practitioners working in hospitals. Secondly, medical errors can happen because of latent causes and active system failures. Thirdly, the study focuses on doctors working in hospitals, irrespective of whether they are general practitioners, or specialists.

- The research was conducted in both the private and private sector, which might dilute the realities of either context.
- Maintaining anonymity is difficult when conducting in-depth interviews with subject experts within a regulated industry.
- Phase 2 of the research was conducted in Gauteng-based hospitals and the outcome from the non-probability sampling cannot be generalised to all South African hospitals
- The use of a quantitative questionnaire might prompt respondents to tick boxes without applying their minds.

7.8. Areas for future research

Based on the research findings and the imitations of this research, further exploration into risk management competencies and the proficiency levels would be beneficial. Suggested areas of further exploration are:

- Identification of the core and risk management competencies for clinical managers.
- How do medical practitioners enact their accountability obligations? Does this differ between the public and private health sectors?

- What is the impact of risk management and patient safety training on patient safety culture in hospitals?
- What are the effective training methodologies for imparting risk management knowledge in SA?
- Is there a difference in risk management competencies for medical practitioners, managers and nurses working in South African hospitals?

7.9. Conclusion

The definition of risk management in hospitals has been expanded by the researcher as an approach to improving quality in healthcare, placing special emphasis on identifying matters which put patients at risk of physical and psychological harm when in hospital, and then acting to identify, prevent, monitor and control those risks and effectively manage their impact.

Risk management is a complex subject involving a number of internal and external stakeholders in hospitals, including the key stakeholder, the patient. No single group of employees is responsible for risk management but the capacity and capability of the hospital to manage risk depends greatly on the commitment of government and managers in creating a conducive environment. The skills and knowledge of the people, available resources, and the supporting operating procedures enable risk management. No research has been done in South Africa on risk management competencies and there are few studies looking at the non-clinical issues of medical practice in SA.

The time has come for more emphasis on risk management in SA hospitals to facilitate investment in the development of risk management capabilities in these hospitals. Taking such a step will empower people and also strengthen the system to counteract the current level of complaints while being ready for an anticipated increase in medical errors, complaints and healthcare litigation in both the private and public sectors. Medical practitioners are clinical leaders in the hospital and they should model the right attitude, behave professionally, and be committed to lifelong learning. The research findings have confirmed the

weaknesses in the training of medical practitioners in regard to both patient safety and risk management.

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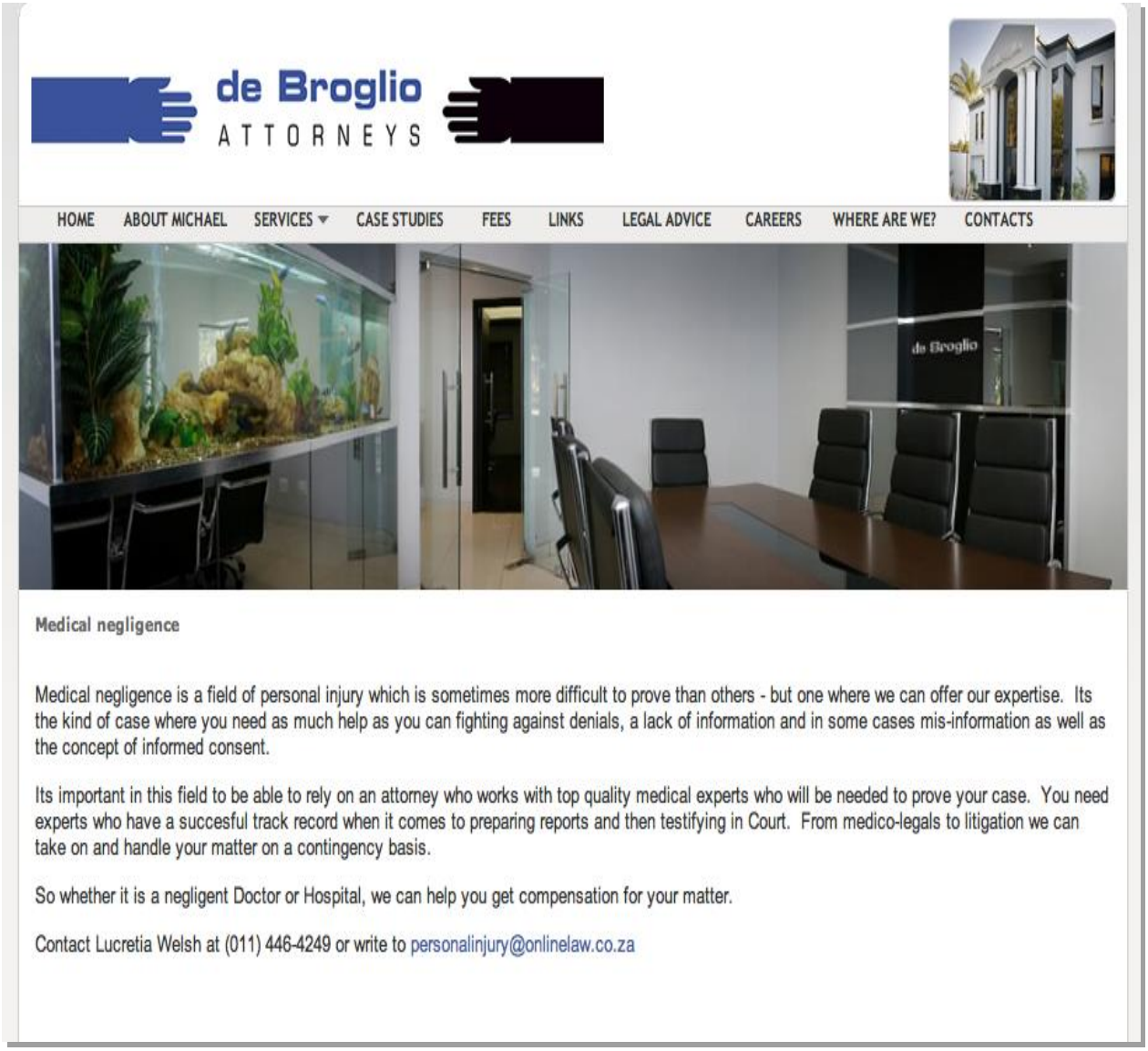
9. Appendices

9.1. Appendix I – Advert from a medico-legal firm



de Broglio
ATTORNEYS

HOME ABOUT MICHAEL SERVICES CASE STUDIES FEES LINKS LEGAL ADVICE CAREERS WHERE ARE WE? CONTACTS

Medical negligence

Medical negligence is a field of personal injury which is sometimes more difficult to prove than others - but one where we can offer our expertise. Its the kind of case where you need as much help as you can fighting against denials, a lack of information and in some cases mis-information as well as the concept of informed consent.

Its important in this field to be able to rely on an attorney who works with top quality medical experts who will be needed to prove your case. You need experts who have a succesful track record when it comes to preparing reports and then testifying in Court. From medico-legals to litigation we can take on and handle your matter on a contingency basis.

So whether it is a negligent Doctor or Hospital, we can help you get compensation for your matter.

Contact Lucretia Welsh at (011) 446-4249 or write to personalinjury@onlinelaw.co.za

9.2. Appendix II – Multinational core competencies of medical practitioners

Monograph showing core competencies of medical professionals as determined by countries, nations, organizations and other geo-political entities that have either legitimate or referent authority for policy and standards in medical education.

Table 1. Global Core Competencies

United States[1]	CanMEDS	GMC[2]	AMC[3]	MEDINE[4]	IIME - GMER[5]
Medical Knowledge	Medical Expert	Practitioner	Scientific Knowledge & Evidence Based Medicine	Medical Knowledge	Scientific foundation of medicine
Patient Care	Medical Expert Health Advocate	Practitioner	Clinical Sciences Clinical Skills; Indigenous Health	Patient Care Patient Advocate	Clinical Skills
Interpersonal Communication Skills	Communicator	Professional	Interpersonal Communications Skills	Interpersonal Communication Skills	Communication Skills
Professionalism	Professional	Professional	Medical Law & Ethics Personal & Professional Development	Professionalism	Professional values, attitudes, behaviours and ethics
Systems Based Practice	Collaborator Manager	Professional	Patient Safety Risk Assessment & Quality Assurance	Supervisior & Teacher; Responsive to the larger health care system context	**Population health & health systems
**Practice Based Learning (and Improvement[6])	**Scholar	**Scholar & Scientist	**Epidemiology & Statistics Critical Thinking & Research Methods	**Scientific Knowledge **Contributing Scholar Health Care Improvement	Information Management **Critical thinking & research

1. In the US this includes the ACGME, the LCME, the AOA, and the NBOME
2. The General Medical Council (Four countries of the United Kingdom: England, Northern Ireland, Scotland, & Wales)
3. Australian Medical Council (Australia and New Zealand)
4. Medical Education in Europe
5. Global Minimum Essential Requirements of the International Institute of Medical Education
6. In the NBOME the word "improvement" is added to this competency

**Competencies of interest in this monograph

9.3. Appendix III – Authorisation letters

Clinix
HEALTH GROUP

To Whom It May Concern:

This serves to confirm that Clinix Health Group will make available a database and people for interviews for Dr.Brenda Kubheka's Master of Business Administration (MBA) research. For any information, please do not hesitate to contact me on my email address,ndabula@clinix.co.za and on my direct line (011) 429-1132 or on my cellphone 082 820 7604.

Your assistance in this regard will be highly appreciated.

Kind Regards,

Nandi Dabula, Chief Marketing Officer, Clinix Health Group

Clinix Health Group
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P.O. Box 805, Houghton, 2041,
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OFFICE OF THE HOD
Enquiries: Maureen Motjelele
Tel: 011 355 3858
Fax: 011 355 3537
Email:Maureen.Motjelele@gauteng.gov.za

Dr. Brenda Kubheka
Health IQ Consulting

Dear Dr.Kubheka

RE: REQUEST TO CONDUCT GIBS MBA REARCH ON RISK MANAGEMENT COMPETENCIES FOR DOCTORS WORKING IN SA HOSPITALS.

This letter serves to confirm that the Gauteng Department of Health will grant Dr.Z.B.Kubheka access to the required research population at Helen Joseph and Leratong Hospitals.

Please do not hesitate to contact me should you have any queries.

DR T.E.SELEBANO
ACTING HEAD OF DEPARTMENT
DATE: 06 Oct 2014

Life Healthcare Head Office
Oxford Manor, 21 Chaplin Road, Illovo 2196
Private Bag X13, Northlands 2116, South Africa
Telephone: +27 11 219 9000
Telefax: +27 11 219 9001
www.lifehealthcare.co.za

27 October 2014

ATTENTION: BRENDA KUBHEKA

APPROVAL FOR RESEARCH STUDY

TITLE: RISK MANAGEMENT COMPETENCIES FOR MEDICAL PRACTITIONERS WORKING IN SOUTH AFRICAN HOSPITALS

Our previous correspondence refers.

The Research Committee of Life Healthcare has granted permission for your study to be conducted within the company's facilities. Please contact the Hospital Manager of each facility regarding the organising thereof.

Please be aware that medical practitioners who use Life Healthcare facilities are not employed by Life Healthcare and you would have to make your own arrangements with them.

Yours sincerely

Anne Roodt.

Anne Roodt
Education Specialist

Life College of Learning

9.4. Appendix IV: Participant's information document for medical expert interviews

PARTICIPANT'S INFORMATION DOCUMENT FOR MEDICAL EXPERT INTERVIEW

Researcher's name: Dr Zanele Brenda Kubheka
Student Number: 251481879
Department of Business Science

University of Pretoria's Gordon Institute of Business Science

Dear Participant

RE: Risk Management Competencies for Medical Practitioners Working in South African (SA) Hospitals

I am a fulltime Master of Business Science (MBA) student at the Gordon Institute of Business Science, University of Pretoria. You are invited to volunteer to participate in my research project on Risk Management Competencies for Medical Practitioners Working in SA Hospitals.

This letter gives information to help you to decide if you want to take part in this study. Before you agree you should fully understand what is involved. If you do not understand the information or have any other questions, do not hesitate to ask us. You should not agree to take part unless you are completely happy about what we expect of you.

The purpose of the study is to identify risk competencies required for medical practitioners working in SA hospital.

I would like to interview you and this may take about one (1) hour.

Your participation in this study is voluntary. You can refuse to participate or stop at any time without giving any reason. You will not be identified as a participant in any publication that comes from this study.

Note: Your participation in the interview will be supported by informed consent obtained from you. Thus any information derived from your participation (which will be totally anonymous) may be used for, e.g. publication, by the researchers.

We sincerely appreciate your help.

Yours truly,

Dr. Brenda Kubheka

9.5. Appendix V: Informed consent

Gordon Institute of Business
Science
26 Melville Road
Illovo, Johannesburg

Dear Participant

I am conducting research on the risk management competencies for medical practitioners working in South African hospitals. The aim is to identify the competencies that are relevant to the South African context to facilitate the risk management strategies.

Your participation is voluntary and you may withdraw at any time without penalty. All data will be kept confidential; no comment will be linked to an individual. If you have any concerns, please contact my supervisor or me. Our details are provided below.

Researcher
Brenda Kubheka
brenda.k@wol.co.za
083 754 3883

Supervisor
Professor Margie Sutherland
sutherlandm@gibs.co.za
011 771 4000

Signature of participant: _____
Date: _____

Signature of researcher: _____
Date: _____

9.6. Appendix VI: Interview guideline for Phase 1: Medical experts

RISK MANAGEMENT COMPETENCIES FOR MEDICAL PRACTITIONERS WORKING IN SOUTH AFRICAN HOSPITALS

Introduction and Background Information

- Welcome
- Discuss confidentiality regarding the data, anonymity and recording
- Title of research
- Explain the structure of the interview

Theoretical discussion

Use a developed theoretical model to illustrate and explain the following concepts:

- Changing attitudes and behaviour through skills and knowledge acquisition
- **Defining risk management in hospitals** – A preferred definition is from Walshe and Dineen (1998) defining clinical risk management as an approach to improving quality in healthcare which places special emphasis in identifying circumstances which put patients at risk of harm, and then acting to prevent or control those risks.
- Risk management competencies

Objective

The purpose of the research project is to define the risk management competencies that are relevant to the doctors working in SA hospitals.

1. Where are you currently working?
    a. Academia
    b. Hospital
    c. Funder
    d. Professional Association
    e. Medico-legal

f. Other (Specify)

_____

2. Do medical schools have a role to play in risk management and patient safety in South African hospitals? Explain

_____

_____

_____

3. When was your first exposure to the subject of patient safety and risk management?
    a. Undergraduate level
    b. Postgraduate level
    c. Medical Journals
    d. CME event
    e. Other (Specify): _____

4. Which group do you think currently plays an active role in risk management in SA hospitals?
    a. Medical practitioners
    b. Professional nurses
    c. Hospital management
    d. Other (specify): _____

5. In your opinion which group should improve its participation in risk management and patient safety activities in SA hospitals?
    a. Medical practitioners
    b. Professional nurses
    c. Hospital management
    d. Other (specify):

_____

6. What are the most important risk management competencies for practitioners working in SA hospitals?
    a. Skills

    _____
    _____
    _____
    _____
    _____

    b. Knowledge

    _____
    _____
    _____
    _____
    _____

    c. Attributes / attitude and behaviour should be displayed by practitioners to mitigate risk

    _____
    _____
    _____
    _____
    _____

7. Do you have other comments, questions or concerns?

_____
_____
_____
_____
_____
_____
_____
_____

9.7. Appendix VI: Questionnaire for Phase 2 of the research

Gordon Institute of Business Science
University of Pretoria

Course: Master in Business Administration (MBA)
Institution: Gordon Institute of Business Science (GIBS)
Research study tittle: Clinical risk management competencies for doctors working in South African hospitals
Researcher: Dr. Brenda Kubheka, Tel: +27 83 754 3883,
Email: brenda.k@wol.co.za
Supervisor: Prof. Margie Sutherland, Tel: +27 11 771 4362,
Email: sutherlandm@gibs.co.za

GENERAL INFORMATION

NB: Your participation in this study is voluntary. You can refuse to participate or stop at any time without giving any reason. You or your organisation will not be identified nor your names recorded. It should take no more than 30 minutes of your time. Your participation is voluntary and you can withdraw at any time without penalty. Of course, all data will be kept confidential. By completing the survey, you indicate that you voluntarily participate in this research. If you have any concerns, please contact my supervisor or me.

The purpose of the survey is to identify the risk management competencies of doctors working in SA hospitals and then assess the level of competence as observed in SA hospitals. This will allow the researcher to identify the gaps between standards, knowledge and practice in order to come up with recommendations of addressing the identified gaps. The competencies were identified using in-depth interviews with medical experts in South Africa.

Risk management is an approach to improving quality in healthcare, which places special emphasis in identifying matters which put patients at risk of physical and emotional harm when in hospital or any facility and then acting to prevent, monitor, control those risks and effectively manage their impact.

PERSONAL INFORMATION

Complete the following by circling the correct answer.

1. What is your current role in the hospital?
    a. Medical doctor (non-specialist)
    b. Medical doctor (specialist)
    c. Professional nurse
    d. Management (Clinical, nursing services, quality and risk management)
    e. Other (specify) _____

2. How long have you been working in a hospital (excluding training and internship)?
    a. Less than 3 years
    b. 3 to 5 years
    c. 5 to 10 years
    d. More than 10 years

3. Have you ever received training on healthcare risk management?
    a. Never
    b. Formally during undergraduate training
    c. Formally during postgraduate training
    d. Continued Medical Education organized by the hospital (In-services training)
    e. Continued Medical Education organized by a third party
    f. Other (specify) _____

4. Have you ever received training on patient safety?
    a. Never
    b. Formally during undergraduate training
    c. Formally during postgraduate training
    d. Continued Medical Education organized by the hospital (In-services training)
    e. Continued Medical Education organized by a third party
    f. Other (specify) _____

FACILITATION OF PATIENT SAFETY BY DOCTORS IN HOSPITALS

The following are competencies that doctors should possess in order to facilitate risk management and patient safety in hospitals.

5. Please rate the importance of the following competencies (current and future) for doctors working in SA hospitals. Mark your answer with X

NB: Please ensure that you spread out the scores, as some points are more important than others.

	Not important	Slightly important	Important	Very important	Critically important
Numeric scale	1	2	3	4	5
KNOWLEDGE					
Medical knowledge (Up-to-date)					
Health Professions Council of SA ethical code of conduct					
Relevant Acts – e.g. National Health Act, Consumer protection Act, etc.					
Patient's rights					
Health workers' rights					
Batho Pele Principles					
Patient safety					
Professionalism (Appropriate behavior, attitude, appearance, communication and clinical care)					
The hospital system weaknesses that might lead to lawsuits					
The impact of the patient's environment on their health					
The role and importance of other co-workers (clinical and non-clinical)					

SKILLS					
Communication with other doctors					
Communication with other co-workers (Clinical and non-clinical)					
Communication with patients					
Written communication on the patient's medical records					
Clinical Skills					
Practice evidence-based medicine					
Cross-cultural competence					
Emotional intelligence					
Team work					
Problem solving					
Taking charge of patient care (clinical leadership)					
Patient education					
History taking					
Informed consent					
Use of language that patients can understand					
Psychological counseling					
Management of end-of-life dilemmas i.e. no resuscitation					
ATTITUDE					
Patient centeredness					
Respect for other doctors					
Respect for other co-workers					
Respect for patients					
Compassion					
Ubuntu (The virtue of being human, to value the good of the community above self interest)					

Holistic approach to patient					
Adaptability / flexibility					
Hospitals are a risky environment					
Mistakes are a learning opportunity					
Doctors can make mistakes					
Accountability					
BEHAVIOUR					
Protecting patient's privacy					
Active listening to patients					
Professional humility					
Being open to inputs from other health professionals regarding patient care					
Truthfulness					
Treating patients as partners in their own care					
Respect for other workers in the hospital					
Respect for patients and their families					
Protecting the patient's rights					
Friendliness (Greeting and introducing one to patients)					
Assertiveness					
Dedication					
Patience					

6. Now that you have ranked the importance of the risk management competencies for doctors working in hospitals. You are now requested to rate the current level of competence as observed in the doctors working in your hospital. (Mark your answer with X).

NB: Please ensure that you spread out the scores, as some points are more important than others.

	Very poor	Poor	Fair	Good	Very good
Numeric scale	1	2	3	4	5
KNOWLEDGE					
Medical knowledge (Up-to-date)					
Health Professions Council of SA ethical code of conduct					
Relevant Acts – e.g. National Health Act, Consumer protection Act, etc.					
Patient's rights					
Health workers' rights					
Batho Pele Principles					
Patient safety					
Professionalism (Appropriate behavior, attitude, appearance, communication and clinical care)					
The hospital system weaknesses that might lead to lawsuits					
The impact of the patient's environment on their health					
The role and importance of other co-workers (clinical and non-clinical)					

SKILLS					
Communication with other doctors					
Communication with other co-workers (Clinical and non-clinical)					
Communication with patients					
Written communication on the patient's medical records					
Clinical Skills					
Practice evidence-based medicine					
Cross-cultural competence					
Emotional intelligence					
Team work					
Problem solving					
Taking charge of patient care (clinical leadership)					
Patient education					
History taking					
Informed consent					
Use of language that patients can understand					
Psychological counseling					
Management of end-of-life dilemmas i.e. no resuscitation					
ATTITUDE					
Patient centeredness					
Respect for other doctors					
Respect for other co-workers					
Respect for patients					
Compassion					
Ubuntu (The virtue of being human, to value the good of the community above self interest)					

Holistic approach to patient care					
Adaptability / flexibility					
Hospitals are a risky environment					
Mistakes are a learning opportunity					
Doctors can make mistakes					
Accountability					
BEHAVIOUR					
Protecting patient's privacy					
Active listening to patients					
Professional humility					
Being open to inputs from other health professionals regarding patient care					
Truthfulness					
Treating patients as partners in their own care					
Respect for other workers in the hospital					
Respect for patients and their families					
Protecting the patient's rights					
Friendliness (Greeting and introducing one to patients)					
Assertiveness					
Dedication					
Patience					

7. How many times did you observe or hear about a doctor working in your hospital compromising patient safety in the past 12 months?
    a. Zero
    b. 1 to 2
    c. 2 to 5
    d. Greater than 5

8. How many times did you observe or hear about a doctor working in your hospital compromising patient's rights in the past 12 months?
    a. Zero
    b. 1 to 2
    c. 2 to 5
    d. Greater than 5

9. When do you think doctors should acquire the risk management and patient safety skills?
    a. Undergraduate training
    b. Post-graduate training
    c. During internship (On-The-Job training)
    d. Other (specify) _____

10. Do you have additional comments regarding the role played by doctors in managing patient safety and risk management in hospitals?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

9.8. Appendix VIII: Complete data for the ranking of risk management competencies by importance

Rank	Competencies	Weighted mean average
	Knowledge	
1	Medical knowledge (up-to-date)	4,63
2	Patient safety	4,57
3	Health Professions Council of SA ethical code of conduct	4,41
4	Professionalism (appropriate behaviour, appearance, attitude, communication and clinical care)	4,38
5	Patient's rights	4,24
6	Batho Pele Principles	4,22
7	The hospital system weaknesses that might lead to lawsuits	4,20
8	Health workers' rights	4,18
9	Relevant acts – e.g. National Health Act, Consumer Protection Act, etc.	4,16
10	The role and importance of other co-workers (clinical and non-clinical)	4,04
11	The impact of the patient's environment on their health	4,03
	Skills	
1	Clinical Skills	4,57
2	Written communication on the patient's medical records	4,51
3	Informed consent	4,50
4	Practice evidence-based medicine	4,42
5	History-taking	4,39
6	Communication with patients	4,33
7	Taking charge of patient care (clinical leadership)	4,25
8	Communication with other doctors	4,25
9	Teamwork	4,24
10	Communication with other co-workers (clinical and non-clinical)	4,17
11	Problem-solving	4,10
12	Management of end-of-life dilemmas, i.e. no resuscitation	4,07
13	Use of language that patients can understand	4,05
14	Patient education	3,94
15	Psychological counselling	3,80
16	Emotional intelligence	3,77
17	Cross-cultural competence	3,71
	Attitude	

1	Respect for other doctors	3,36
2	Patient-centeredness	3,26
3	Holistic approach to patient	3,25
4	Doctors can make mistakes	3,23
5	Hospitals are a risky environment	3,19
6	Mistakes are a learning opportunity	3,19
7	Compassion	3,19
8	Respect for patients	3,17
9	Adaptability / flexibility	3,16
10	Accountability	3,16
11	Ubuntu (the virtue of being human, to value the good of the community above self interest)	3,12
12	Respect for other co-workers	3,04
	Behaviour	
1	Truthfulness	4,33
2	Dedication	4,25
3	Protecting patient's privacy	4,15
4	Active listening to patients	4,13
5	Protecting the patient's rights	4,12
6	Being open to inputs from other health professionals regarding patient care	4,11
7	Respect for patients and their families	4,08
8	Respect for other workers in the hospital	4,05
9	Patience	4,04
10	Professional humility	3,99
11	Treating patients as partners in their own care	3,92
12	Assertiveness	3,92
13	Friendliness (greeting and introducing oneself to patients)	3,81

9.9. Appendix IX: Signed consent form

Dear Participant

I am conducting research on the risk management competencies for medical practitioners working in South African hospitals. The aim is to identify the competencies that are relevant to the South African context to facilitate the risk management strategies.

Your participation is voluntary and you may withdraw at anytime without penalty. All data will be kept confidential; no comment will be linked to an individual. If you have any concerns, please contact my supervisor or me. Our details are provided below.

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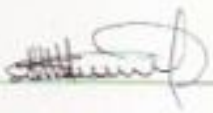
Signature of participant: 

Date: 10/11/2014

Signature of researcher: 

Date: 10/11/2014

34

9.10. Appendix X: Phase 2 qualitative comments

Drs' comments	Management comments	Nurses' comments
Doctors need to be more proactive and take time to talk to their patients and listen to them	Doctors seem to be interested only in the bottom line (private sector) and not concerned about the patient they are treating. They are very disrespectful towards people in general.	Teamwork is important and doctors must communicate with other health workers regarding patient safety and risk management in hospitals. Cooperation is very important
Doctors are only taught medical / clinical skills in university and not the human interaction / behaviour. This should be taught at university level	Doctors must be aware that we are all here to help the patient in getting well. So we are all team members. No one is better that the other and sometimes other people's opinions are better to improve the patient's condition.	Doctors need to inform patients about their conditions, treatment, and results of the bloods and x-rays, referrals and second opinions.
We still have a long way to go!	Doctors need to be informed	If they can be taught to respect junior staff
Doctors require education and training throughout their career. It is easy to weed out bad habits when education starts early. It is also disconcerting that the employer is not always willing to back up clinical decisions based on the eminent situation, not on	If the doctors and nurses could talk the same language when it comes to risk management and patient safety, most risks can be avoided. If we can all be competently aware of our professions, including responsibilities.	I think most of the time doctors depend on the nursing staff for patient safety. They don't really do it themselves. They just treat an ailment and don't worry about other things. Not worried about where the patient goes or what happens

the ideal. There are also good doctors and bad doctors. The faults lie with the younger generation doctors.		
We are seen as not playing a role but however we do take more responsibility than we are meant to	In private patient safety and risk management are pushed to the nursing staff and the rest of the hospital – there is no co-responsibility.	Doctors feel undermined by inputs from nurses and they usually ignore critical information from the nurses as a result
In our hospital we try the best to do what we can with the available resources	Doctors don't care	Good communication and good history-taking
Doctors should be educators and role models	Doctors should remember that their job is the calling and not a money-making business. They should follow guidelines, protocols, and work hand-in-hand with the hospital management. They should show commitment in their work.	Doctors need to improve their attitudes towards patients and nurses
Our patients are at risk because “doctors” are hired without qualifications and background checks are not done.	Emotional and spiritual intelligence to be introduced to the undergraduates from first year.	If the doctors can put the patients first in any situation, be it about the care, research, this will minimize risks to patient care

	Doctors do correct procedures in government hospitals and they develop their rules when they work in the private sector. At the government hospitals they will ensure that patients go to theatre with a signed informed consent and it is the opposite in private hospitals.	The medical officers to assist in developing interns. They need those skills from them
	Better ethics knowledge is required. The conduct is very poor. Respect for families and patients are very poor. Teamwork must be taught.	Doctors don't have much time with the patients. At times they miss important things regarding the diagnosis of the patient. There are too many patients and they don't have time to greet during ward rounds.
	The role of the doctors in patient safety is crucial and yet the training is minimal and neglected. More should be done to encourage doctors' learning and training in this area.	Doctors should have regular training on patient safety and risk management
		They should diagnose according to symptoms and signs. Do assessments correctly and make the relevant medication for the diagnosis. Insert intravenous therapies on patients on admission if needed. Collect blood results and check them

		Have time for patients and respect the nursing staff. Compassion is important in the profession, teamwork and not being mean with nurses. Have time for patients and respect nursing staff.
		Dispose needles for lumber puncture and sutures appropriately according to the correct waste segregation
		Not to start the patients on TB treatment without seeing the results
		Doctors are not committed. They do their work to finish, not to identify problems and get the patient better. Most of them want to be called before they do the ward rounds. They don't respond when called.
		They should be taught how to manage infection control between patients. They should respect rights of black patients as they do with the white patients
		I think the hospital or government should buy more equipment and protective clothing and this will make it easier for doctors. Everything is out of stock and doctors don't have anything to work with

		Doctors must be given continuous on-the-job training, knowledge of Batho Pele and patients' rights will help them to put the patient's life first and to do anything to prevent risks. Complaints management and quality management questionnaires should be designed for doctors.
		Doctors should not leave sharps (needles) lying around
		Some doctors play a good role in managing risk and patient safety
		Some doctors are trying to do a great job but demotivated by shortage of resources. There are others who simply do not care. They need to reminded to explain the medical problem to the patient and the family
		Some doctors complain of overcrowding and fatigue and do not do full examination of the patients. They should do a course on their attitude towards humanity.
		Patients get surprised when black doctors cannot speak an African language