PATIENT SAFETY ISSUES AND CONCERNS IN BHUTAN’S HEALTHCARE SYSTEM: A QUALITATIVE STUDY

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Submitted in fulfilment of the requirements for the degree of
Doctor of Philosophy

Deakin University
April 2016
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Abstract

ABSTRACT

**Background:** Patient safety has become a global imperative. In Bhutan, which is a resource poor nation, improving patient safety in hospital contexts is a challenge. Reasons for this include: a lack of information about patient safety concerns in Bhutan together with a lack of infrastructure to be able to identify and respond appropriately to key patient safety concerns from a Bhutanese perspective.

**Research questions:** The key research question guiding this study is as follows: What do key stakeholders perceive and experience as the main patient safety concerns in Bhutan’s healthcare system?

**Aims:** The primary aims of this study were twofold: first, to explore and describe what key stakeholders (e.g., doctors, nurses, educators, managers, administrators, policy makers) perceived and experienced as the main patients safety concerns in Bhutan’s healthcare system and related services; and two, aligned with the World Health Organisation’s global patient safety agenda for developing nations, to improve understanding of patient safety concerns in Bhutan and to use this understanding to inform recommendations for the development of appropriate locally adapted solutions to the concerns identified.

**Methods:** The study was undertaken as a qualitative exploratory descriptive (QED) research inquiry. Using a criterion-based stratified purposive sample of 94 participants, data were collected via in-depth individual interviews, nominal group meetings and policy document review. Data were subsequently analysed using content and thematic analysis strategies.

**Findings:** Analysis of the data revealed that the minimum standards and guidelines available in Bhutan’s hospitals primarily had as their focus quality assurance, not patient safety. Despite this focus, most participants understood patient safety as encompassing ‘doing no harm or reducing the risk of harm or injuries to patients when receiving healthcare’, not just assuring quality care. Medication errors, healthcare associated infections, diagnostic errors, surgical errors and post-operative complications, laboratory/blood testing errors, falls, patient identification and
Abstract

Communication errors, were perceived as common patient safety concerns. The human (staff) factors (notably, a lack of knowledge, skills and ‘right attitudes’ pertaining to patient safety): system factors (which encompassed a lack of effective clinical governance, financial resources, and poor hospital design), and the influence of indigenous cultural variables were identified as contributing factors to these concerns. Instituting clinical governance, the development and/or improvement of physical infrastructure, providing adequate human resources, providing staff with patient safety training and education, promoting communication and information systems, and integrating indigenous cultural values into patient safety practices were, in turn identified as processes and strategies critical to improving patient safety in the Bhutanese healthcare system.

Conclusion: The findings of the study suggest that despite patient safety having received relatively little attention in the cultural context of Bhutan, the concerns described by participants were commensurate with those identified in other low-income and middle-income countries. In order to redress these concerns the findings of this study suggest that a ‘culturally adaptive’ ‘Bhutanised’ approach needs to be taken. This is because the conventional methods of patient safety used in high-income countries cannot always be successfully applied unless they are locally derived and adapted to take into account local needs, understandings, practices, affordability and resources.
Aims and objectives of the study

AIMS AND OBJECTIVES OF THE STUDY

A key aim of this study is to improve understanding of patient safety concerns in Bhutan and, aligned with the World Health Organisation global patient safety agenda for developing nations, inform recommendations for the development of appropriate locally adapted solutions to the concerns identified.

The related aims of the study were to explore and describe:

1. What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan;
2. What health service providers and managers know, understand and perceive to be the key patient safety issues and concerns in Bhutan’s national, regional and district hospitals;
3. What factors health service providers and managers perceive to have contributed most to patient safety concerns in Bhutan’s national, regional and district hospitals;
4. The strategies that participants believe are most needed to address the patient safety issues and concerns they have identified.
ABBREVIATIONS

ADE: adverse drug event
ADR: adverse drug reaction
AVF: arteriovenous fistula
BHU: Basic Health Unit
BMHC: Bhutan Medical and Health Council
BP: blood pressure
CME: Continuing Medical Education
CRI: central venous catheter-related infections
CRM: Clinical Risk Management
CSD: Central Sterilisation Department
CT scan: computed tomography scan
CVC: central venous catheter
DH: District Hospital
DHO: District Health Officer
DT: Diphtheria and tetanus toxoids
ECG: electrocardiogram
GDP: Gross Domestic Product
GNH: Gross National Happiness
ICU: Intensive Care Unit
IQ: intelligence quotient
IT: Information Technology
IV: intravenous
HAI: healthcare associated infection
HMIS: Health Management Information System
MBBS: Bachelor of Medicine, Bachelor of Surgery
NG: nasogastric
NGM: Nominal Group Meeting
NRH: National Referral Hospital
OECD: Organisation for Economic Cooperation and Development
OPD: out-patient department
ORC: Outreach Clinic
OT: operating theatre
Abbreviations

**PHC:** primary healthcare  
**QED:** qualitative exploratory descriptive research  
**RIHS:** Royal Institute of Health Sciences  
**RRH:** Regional Referral Hospital  
**SOP:** Standard Operating Protocol  
**UK:** United Kingdom  
**US:** United States of America  
**UTI:** urinary tract infection  
**WHO:** World Health Organisation
For the purpose of this study, the following key definitions contained in this glossary will be used. The definitions are based on key concepts and terms given in the International Classification for Patient Safety proposed by the World Alliance for Patient Safety of the World Health Organisation (Runciman, 2006; World Health Organization, 2009e) and other relevant sources/literature as cited.

**Adverse event:** “An incident in which harm resulted to a person receiving healthcare” (Runciman, 2006, p. S42).

**Adverse Drug Reaction:** An adverse drug events/effects produce by the use of medication ranging from minor effects (e.g., dry mouth) to severe anaphylaxis (World Health Organization, 2009e).

**Assistant Clinical Officer/Clinical Officer (ACO/CO):** “Health Assistant with minimum of nine months accredited education (diploma) in clinical management who are licensed to perform basic treatment and management of patient care” (Ministry of Health - Bhutan, 2014, p. 49).

**Authority gradient:** “Refers to the balance of decision-making power or the steepness of command hierarchy in a given state of affairs. For example, members of the organisation with a domineering, overbearing, or dictatorial team leader experience a steep authority gradient. Communicating concerns, questioning, or even simply clarifying instructions would require considerable determination on the part of team members who perceive their input as devalued or frankly unwelcome” (Agency for Healthcare Research and Quality, 2015, p. 8).

**Basic Health Unit (BHU):** A healthcare facility that provides preventive, promotive, curative and basic rehabilitative services at the village level (Ministry of Health - Bhutan, 2014).

**Basic Health Worker (BHW):** Primary healthcare providers with minimum of 18 months accredited course (certificate) in the field of public health (Ministry of Health - Bhutan, 2014).

**Blame:** “To hold at fault” (Runciman, 2006, p. S42).

**Bureaucracy:** Complex system of governance with systematic processes and organised hierarchies to organise healthcare activities preoccupied with rules, positions and departmental or individual turf (Westrum, 2004).
Glossary of terms

**Computerised Physician Order Entry**: A computer-based system for physicians and other prescribers to enter orders for medications and diagnostic tests (Institute for Healthcare Improvement, 2015).

**Crew Resource Management**: A range of approaches to training groups to function as teams rather than as collections of individuals. Crew Resource Management emphasises the role of ‘human factors’ such as the effects of fatigue, expected or predictable perceptual errors (such as misreading monitors or mishearing instructions), as well as the impact of different management styles and organisational cultures in high-stress, high-risk environments (Institute for Healthcare Improvement, 2015).

**Differential treatment**: Refers to the way that healthcare professionals distinguish between those patients who are entitled to high quality services and those who are not (some patients are treated with attentive kindness and respect and others are made to wait, are treated with impatience and discourtesy, give less information and accorded less time (Andersen, 2004, p. 2005).

**Disrespectful/disruptive behaviour**: “Anything a healthcare professionals does that interferes with the orderly conduct of hospital business, from patient care to committee work or the behaviour that interferes with the ability of others to effectively carry out their duties. These includes: profane or disrespectful language, demeaning behaviour such as name-calling, sexual comments or innuendo, racial or ethnic jokes, outburst of anger, throwing instruments, charts or other objects, criticising other healthcare professionals, comments that undermine other healthcare professionals’ self-confidence, intimidating behaviour that has the effect of suppressing input by other members of the healthcare team, deliberate failure to follow organisational policies and protocols, inappropriate touching and, retaliation against any member of the healthcare team” (Porto & Lauve, 2006, p. 17).

**District Hospital (DH)**: A healthcare facility that provides preventive, promotive, curative and rehabilitative services in the district level. It is the first level of referral facility for BHUs (Ministry of Health - Bhutan, 2014).

**District Health Officer (DHO)**: “Non-medical professionals with minimum of 2 years education in health service management” (Ministry of Health - Bhutan, 2014, p. 50).

**Error**: “A failure to carry out a planned action as intended or application of an incorrect plan” (World Health Organization, 2009e, p. 22). Errors can be caused by
Glossary of terms

doing wrong thing (commission) or by failing to do the right thing (omission) either during the planning or implementing phase (Runciman, 2006).

**Event:** Something that happens to or involves a patient during healthcare (World Health Organization, 2009e).

**Guidance documents:** Refers to policies, standards, protocols, guidelines, clinical pathways, clinical bundles and checklists.

**Harm:** Any deleterious effect such as disease, injury, suffering, disability, and death due to error (Runciman, 2006; World Health Organization, 2009e).

**Health Assistant (HA):** Primary healthcare providers who have completed a minimum of 18 months accredited course (diploma) work in the field of public health (Ministry of Health - Bhutan, 2014).

**Healthcare:** Services provided to individuals or communities to promote, maintain, monitor, or restore health, including self-care (not limiting to medical care) (World Health Organization, 2009e).

**High-income country:** A country with per capita income of more than $US 12,476 per person/year (compare low-income country).

**Human factors:** Refers to the study of human behaviour, abilities, limitations, and other characteristics as they affect the design and smooth operation of equipment, systems, and jobs (Institute for Healthcare Improvement, 2015).

**Incident:** “An event or circumstance which could have resulted, or did result, in unintended or unnecessary harm to a person and/or patient” (Runciman, 2006, p. S42).

**Injury:** “Damage caused to tissues or body by an agent or event” (World Health Organization, 2009e, p. 23).

**Leadership WalkRounds:** The scheduled (weekly or fortnightly) visit of a core group (which includes senior executive or managers) to different areas of the hospital to enable hospital leadership to sustain good relations with frontline healthcare providers, promote conversations to identify risks and gather information to enhance decision-making around patient safety (Frankel et al., 2003).

**Low-income country:** A country with per capita income of less than $US 1,026 per person/year (compare high-income country).

**Medical Technologists:** Healthcare professionals with minimum of two years education in medical technology, bio-medical engineering, radiology or a related field (Ministry of Health - Bhutan, 2014).
Glossary of terms

**Medication Error:** Any preventable event that may cause or lead to unintended and incorrect medication use or patient harm, while the medication is in the control of the healthcare professional or patient (Institute for Healthcare Improvement, 2015; World Health Organization, 2009e).

**National Referral Hospital (NRH):** An apex national healthcare facility in the country with tertiary level specialities and sub-specialities. It is a referral centre for the Regional Referral Hospitals. It is also a centre for training of healthcare workers and biosocial research (Ministry of Health - Bhutan, 2014).

**Outcome:** The status of an individual, a group of people or a population which is wholly or partially attributable to an action, agent or circumstance. Outcomes can be classified according to the type of harm, the degree of harm, and any social and/or economic impact (Runciman, 2006).

**Outreach clinic (ORC):** “A healthcare facility that provides monthly (on a fix date) preventive, promotive and maternal and child care services from the parent BHUs and hospitals” (Ministry of Health - Bhutan, 2014, p. 51).

**Patient safety incident:** An event or circumstance that could have resulted, or did result, in unnecessary harm to a patient during healthcare. An incident includes a reportable circumstance, near miss, no harm incident or harmful incident (adverse event). An incident can be grouped into categories according to the incident’s type and nature. For example, if a nurse calculates a sedative wrongly and delivers an overdose causing respiratory arrest, this would be allocated to the ‘medication’ incident type (World Health Organization, 2009e).

**Preventable:** A term which is accepted by the community as avoidable in the particular set of circumstances (Runciman, 2006).

**Quality assurance:** A “set of activities that are carried out to set standards and to monitor and improve performance so that the care provided is as effective and safe as possible” (Brown, Franco, Rafeh, & Hatzell, 1993, p. 12). Quality assurance activities include: the assessment or evaluation of the quality of care; identification of problems or shortcomings in the delivery of care; designing activities to overcome these deficiencies; and follow-up monitoring to ensure effectiveness of corrective steps (Brown et al., 1993).

**Quality (of) healthcare:** “The extent to which a healthcare service or product produces a desired outcome” (Runciman, 2006, p. S42).
**Regional Referral Hospital (RRH):** A healthcare facility that provides specialised diagnostic and curative as well as preventive, promotive and rehabilitative services in the region. It is also a referral hospital for the district hospitals in the region (Ministry of Health - Bhutan, 2014).

**Risk:** “The probability that an incident will occur” (World Health Organization, 2009e, p. 22).

**Risk management:** Designing and implementing program of activities to identify and avoid or minimise harm to patients in healthcare system (Runciman, 2006).

**Safety:** The reduction of risk of unnecessary harm to an acceptable minimum, where, an acceptable minimum refers to the collective notions of given current knowledge, resources available and the context in which care was delivered weighed against the risk of non-treatment or other treatment (World Health Organization, 2009e).

**Safety climate:** Refers to the culture of patient safety that promotes staff commitment to health and safety, emphasising that deviation from organisational safety goals, at whatever level, is not acceptable (Royal College of Nursing, 2015).

**Safety culture and/or culture of safety:** Terms referring to a commitment to safety that permeates all levels of an organisation, from frontline personnel to executive management. An organisation’s safety culture and/or culture of safety is characterised by a: blame free environment (where individuals are able to report errors or near misses without fear of reprimand or punishment); good communication and collaboration across all healthcare professionals and managements to find solutions related to potential patient harm; and full commitment of the organisation to direct resources for addressing safety concerns (Institute for Healthcare Improvement, 2015).

**Stakeholders:** Those people and organisations who are involved in patient care activities or decision-making (including patients) (Runciman, 2006).

**Technicians:** Healthcare professionals with minimum of two years accredited education (diploma/certificate) in any health technicians’ course (e.g., radiology, pharmacy, laboratory and ophthalmology) (Ministry of Health - Bhutan, 2014).
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1.0 Introduction
This chapter has as its focus the background to the study, the research questions the study has sought to address and the aims and purpose of addressing them, the research approach chosen to advance the inquiry, and providing a synopsis of the thesis chapters.

1.1 Background to the study
In May 2002, the Fifty-Fifth World Health Assembly (WHA), the decision-making body of the World Health Organisation (WHO), passed a resolution that set out the following four proposed areas for action to improve patient safety in the world’s healthcare organisations:

- to develop global norms, standards and guidelines for quality of care and patient safety, the definition, measurement and reporting of adverse events and near misses in healthcare […] and to provide support in developing reporting systems, taking preventive action, and implementing measures to reduce risks;
- to promote framing of evidence-based policies, including global standards that will improve patient care, with particular emphasis on product safety, safe clinical practice in compliance with appropriate guidelines and safe use of medicinal products and medical devices;
- to promote a culture of safety within healthcare organisations and to develop mechanisms, for example, through accreditation or other means […] to recognise the characteristics of healthcare providers that offer a benchmark for excellence in patient safety internationally;
- to encourage research into patient safety (World Health Organization, 2002a, 2002b).

The passage of this resolution was of particular significance internationally since, for the first time, it positioned patient safety as ‘a worldwide endeavour, seeking to bring benefits to patients in countries rich and poor, developed and developing, in all corners of the globe’ (Donaldson, 2002, p. 112). It also had the distinction of ultimately
positioning patient safety for the first time as a global priority (Donaldson & Philip, 2004).

In recognition that unsafe healthcare and related poor patient outcomes is a global problem, the WHO placed a strong emphasis on *patient safety research* (Andermann et al., 2011). A key reason for this is that patient safety research enables the nature and extent of preventable harmful events to be determined, an understanding of the underlying causes of patient harm to be gained, possible solutions for safer care to be identified, and the impact of the solutions identified, developed and implemented to be evaluated in real-life settings (World Health Organization, 2008).

Despite patient safety being positioned by WHO as a global priority for ‘rich and poor’ countries alike, the reality is that improving patient safety outcomes in resource poor nations is challenging. Underpinning the challenges involved is a lack of knowledge about patient safety and a paucity of reliable data on patient safety concerns (Harrison, Cohen, & Walton, 2015). Compounding this problem is that most of the current data on patient safety comes from developed or high-income countries, where the healthcare contexts are different and where processes for improving patient safety outcomes cannot be readily transferred to other (less resourced) settings (Jha, Prasopa-Plaizier, Larizgoitia, Bates, & Research Priority Setting Working group of the WHO World Alliance for Patient Safety, 2010; World Health Organization, 2004). Improving patient safety outcomes in low-income countries has been further complicated by a tendency in those countries to adopt imported solutions from developed countries first (solution which often fail to address local needs and local understandings), and then evaluate them only to find that they have not worked (Yoelao, Mohan, & Hamid, 2014, pp. 63-64).

The lack of reliable data pertaining to low-income countries is known to directly hamper understanding of the issues associated with patient safety in those countries (World Health Organization, 2012a, 2012b). In light of this, more knowledge and awareness is essential for understanding the nature of harm and for devising ‘appropriate solutions’ that can be adapted in the particular settings found in low-income countries (World Health Organization, 2008, 2012b).

Bhutan is a low-income donor-dependent country in which patient safety issues are not well documented or known. Despite a lack of reliable data, as with other countries in the region, Bhutan’s patient safety issues are believed to be more serious than in industrialised high-income (developed) countries. Factors contributing to this
situation include the poor state of Bhutan’s healthcare infrastructure and equipment, an unreliable supply and quality of drugs, and the poor performance of health service personnel. To remedy this situation, as noted in the World Health Organization (2009a) *Global priorities for patient safety research*, ‘understanding the magnitude of the problem and the main contributing factors that lead to patient harm is essential to devise effective and efficient solutions for different contexts and environments and to build safer health systems’ (p.3).

In 2009, the WHO World Alliance for Patient Safety published a set of research priorities for developing, transitional income, and developed countries (Bates, 2009; World Health Organization, 2009a). Included in this list of priorities was the need for a research-based approach to identifying and testing *locally adapted solutions* to patient safety issues (Bates, 2009; World Health Organization, 2009a). This approach included identifying the nature and extent of the problem of patient safety as a first step and then finding solutions that are efficient, affordable and just.

A significant difficulty faced by Bhutan as a low-income and donor-dependent country is that, unlike other more resourced nations, it has no infrastructure or resources for capturing quantifiable and independently verifiable data to provide evidence for and inform recommendations aimed at improving patient safety outcomes. Thus, at this time, the main option for informing strategies aimed at improving patient safety in Bhutan is to scope what stakeholders perceive and have personally experienced as being the most common patient safety concerns and issues. By undertaking such preliminary scoping work, a better understanding can be gained of the nature and extent of patient safety concerns in the local Bhutanese context and what needs to be done to redress these (World Health Organization, 2009c). There are also four other reasons for undertaking this preliminary scoping work. First, in recent years, Bhutan has placed a renewed emphasis on the quality of its healthcare services; second, patient safety as a process and organisational culture is neither defined nor well understood in the cultural context of Bhutan; third, as a low-income country, Bhutan has a vastly different healthcare context compared to that found in developed or high-income countries; and finally, it is not known how well, if at all, patient safety processes and strategies devised in *developed* or high-income countries will transfer reliably and have ‘fit’ in the cultural contexts of *developing* or low-income countries, such as Bhutan, where resources are limited.
Chapter One: Introduction

As noted above, patient safety issues are not well documented in Bhutan. Before devising and implementing strategies for improving patient safety in Bhutan, a working knowledge and understanding of what are seen as the key patient safety issues and concerns in Bhutanese hospitals need first to be established. To this end, a key purpose of this study, the first of its kind, is to provide a considered and comprehensive description of the key patient safety concerns and possible solutions stakeholders believe require attention in Bhutan’s hospital system.

1.2 Research questions
The key question which this study has sought to answer is: What is the nature and extent of patient safety concerns held by health service providers and managers in Bhutan? To this end, the study was guided by the following four related research questions:

1. What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan?
2. What are health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals?
3. What are the factors that health service providers’ and managers’ have identified as most contributing to patient safety concerns in Bhutan’s national, regional and district hospitals?
4. What strategies are needed to address the patient safety issues and concerns identified?

1.3 Research aim and purpose
The key aim of this study is to explore and describe what health service providers and managers perceive to be the key patient safety concerns in hospitals in Bhutan. The key purpose in achieving this aim is to improve understanding of patient safety concerns in Bhutan and, aligned with the WHO global patient safety agenda for low-income or developing nations, inform recommendations for the development of appropriate locally adapted solutions to the concerns identified.
1.4 Research method
This study was carried out as a naturalistic inquiry using a qualitative exploratory descriptive (QED) research approach. Data were collected via in-depth individual interviews, nominal group meetings, policy and guidelines documents, and patient chart review. The data were analysed using content and thematic analysis strategies. A full description of the research design is given in Chapter Three of this thesis.

1.5 Synopsis of chapters
Chapter One (this, the Introduction chapter) has had as its focus providing a background to the study, listing the research questions the study has sought to address, identifying the aims and purpose of addressing the research questions listed, and identifying the research approach used to advance the inquiry. In Chapter Two attention is given to describing the cultural context in which the study has been conducted and the particular challenges faced by Bhutan in improving the safety of patient care in its hospitals. Chapter Three has as its focus a description of the research method chosen and procedures used to conduct the study. Processes for obtaining ethics approvals, selecting and recruiting participants, ensuring the cultural integrity of the study, and collecting and analysing the data are all described. Chapter Four, in turn, has as its focus the presentation of the research findings, which are given in two parts. In Part 1, the findings as viewed through a Western-oriented cultural lens or worldview are presented; in Part 2, the findings as viewed through a Bhutanese-oriented traditional cultural lens or worldview are presented. In Chapter Five attention is given to discussing the findings of the study. Finally, in Chapter Six, the threads of the thesis are drawn together, conclusions are drawn and recommendations made for the adoption of various strategies to enhance patient safety in Bhutan’s hospitals.
2.0 Introduction

In this chapter attention is given, first, to describing the cultural context in which the study has been conducted. Discussion will begin by providing a brief portrait of Bhutan as a country. Following this attention will then shift to providing a brief account of the traditional cultural values which have currency in Bhutan, a descriptive overview of the development and current operationalisation of the Bhutanese healthcare system, and why consideration of the Bhutanese socio-geographical and cultural context is important when seeking to address patient safety concerns in Bhutan. Finally consideration will be given to the question of why addressing patient safety concerns in low-income and resource poor countries in general, and Bhutan in particular, is challenging.

2.1 Portrait of Bhutan and core cultural values

Bhutan is a tiny Himalayan Kingdom with an area of 38,394 square kilometres. It is situated in the eastern Himalayas, bordered by China in the north and India in the south. Bhutan is almost entirely mountainous with land rising from 180 metres above the sea level in the south to 7,550 metres in the Himalayas to the north (Wangchuck, 2006). It is divided into four distinct regions: eastern, western, southern and central. Administratively, it is divided into twenty districts which are further divided into 205 Gewogs (cluster of villages) (Asian Development Bank & Clean Air Initiative for Asian Cities Center, 2006; Delimitation Commission of Bhutan, 2011).

In 1907, with the enthronement of the first king Sir Ugyen Wangchuck, Bhutan shifted from theocratic republican rule to a hereditary monarchy (Phuntsho, 2013). This shift in rule paved the way for significant socio-political change aimed at modernising the country. It was not until 2008, however, that Bhutan became the Democratic Constitutional Monarchy that it is today (Kinga, 2010). Despite the enthronement of King Sir Ugyen Wangchuck in 1907, modern socio-economic development in Bhutan began only six and half decades ago under the reign of third King Jigme Dorji Wangchuck.
Chapter Two: Study context and literature review

Bhutan is a low-income donor-dependent country with a Gross Domestic Product (GDP) of 21.4 percent and per capita income of $US 2,020\(^1\) (The World Bank, 2011). About 30% of the population live below the poverty line\(^2\) (Tobgay, Dorji, Pelzom, & Gibbons, 2011). The major industries include government services, tourism, forestry, and hydro-electricity.

Though the population data of Bhutan have been reported differently, according to the National Housing Census 2005 (which is considered the most reliable) Bhutan’s population is around 672,425 people, comprising 364,482 males and 307,943 females (National Statistical Bureau - Royal Government of Bhutan, 2005). Bhutan’s people are culturally diverse and fall into three broad cultural groups: ‘Sharchops’ (the indigenous people of Bhutan, who occupy the eastern part of the country), ‘Ngalops’ (people who are believed to have originated from Tibet and occupy the western part of the country) and ‘Lhotsamps’ (people who are believed to have originated from Nepal and occupy the southern part of the country). Most of the population (about 80%) lives more than an hour’s walk from a main road point (Zhao, Nakajima, & Juzoji, 2002).

Bhutan is also characterised by language diversity with nineteen main languages and several local dialects being spoken in different parts of the country (van Driem, 1998). However, the main languages spoken (based on the three main cultural groups) include: Tshangla (language spoken by Sharchops), Dzongkha (language spoken by Ngalops, which is also a national language) and Lhotshampikha (language spoken by Lhotsamps). Other major languages include: Kurtoe, Bumthangkha, Khengkha, Mangduepka, Chalikha, Yangtsipkha, Olekha, Brokpaikha, and Lhunapkha.

The core cultural values of most of these groups (to be considered further in Section 5.4.3 of this thesis) derive from the Buddhist philosophical concepts of ‘Le Judre’, ‘Tha Damtshig’ and ‘Driglam Namzha’. Le Judre refers to the law of karmic cause and effect (Phuntsho, 2004). Tha Damtshig refers to faithfulness to one’s superiors or teachers and encompasses the moral characteristics that a person is expected to exhibit such as honesty, integrity, fidelity, coherence, affection, gratitude, and compassion (Phuntsho, 2004; Whitecross, 2010). Bhutanese people consider respect\(^3\) as the basis for Le Judre and Tha Damtshig.

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\(^1\) The average earning for each person is $US 2,020 per annum.
\(^2\) Going by the international norm of US $1.25 Purchasing Power Parity rate per capita per person.
\(^3\) Broadly defined as an attitude of esteem towards elders, superiors, friends and parents; and/or showing considerations for and treating courteously or kindly (Phuntsho, 2004; Whitecross, 2010).
Chapter Two: Study context and literature review

Driglam Namzha is considered to be an external manifestation of Tha Damtshig, which maintains and underlies the moral values of Bhutanese society. It is based on a code of etiquette practised by the Buddhist clergy and traditional elite (Phuntsho, 2004). All aspects of social life are regulated by this code of conduct. Driglam Namzha is attributed to Buddhist ethical practices and the fundamental values expected to be practiced in day-to-day life. As such, Driglam Namzha is considered to be very important in the daily life of the Bhutanese. Almost all interactions (formal and informal) between people are guided by this etiquette or code of conduct. In sum, it is a fundamental element of social interaction that guides people through life and shows them how to behave in relation to other people.

In the late 1970s, Bhutan adopted Gross National Happiness (GNH) as a development policy and philosophy. This policy and philosophy aimed to achieve a balance between economic gains, and the spiritual, cultural, and social needs of Bhutan’s people (Wangchuck, 2006). Economic growth and development, preservation and promotion of cultural heritage, preservation and sustainable use of the environment with good governance are the four major pillars of GNH. The principles of GNH are currently being used as the overall framework for Bhutan’s development programs. Health, as an aspect of GNH, consists of providing healthy lifestyles in both mental and physical spheres, as opposed to consuming an increasing level of medical care (Ura, 2010). Hence GNH, as a development philosophy, has profound implications for the healthcare sector in terms of management, upgrading competencies and quality of services, and meeting the demands of the population for care while maintaining a strong preventive healthcare framework.

2.2 Bhutanese healthcare system and demographics

Bhutan’s history of modern medicine dates back to 1906, when a British political officer from India visited eastern Bhutan to carry out smallpox vaccinations ( McKay, 2004). Bhutan’s modern healthcare system, however, was formally introduced only in 1961 with the launch of the first planned development program.

Healthcare in Bhutan is based on a primary healthcare (PHC) system, with an emphasis on preventive and promotive strategies. Healthcare services and medicines are delivered free to all citizens by the government. Today, the Bhutan Government spends a total of 3.8% GDP on its health services (Ministry of Health - Royal Government of Bhutan, 2015; World Health Organization, 2007).
Chapter Two: Study context and literature review

With the adoption of a PHC system in the country, the rural and under-privileged population has been given priority in the expansion of the healthcare services. In order to provide efficient and universal primary healthcare, Bhutan has made great efforts to develop effective healthcare strategies. Considerable attention has been given to increasing the coverage of healthcare infrastructures (e.g., by building new healthcare facilities), especially in underserved areas (Planning Commission - Royal Government of Bhutan, 2002).

Currently, healthcare services in Bhutan are delivered through a system of a four-tiered network of Outreach Clinics (ORCs), Basic Health Units (BHUs), District Hospitals (DHs) and Regional Referral Hospitals (RRHs). Today, the country has established 30 hospitals, 206 BHUs and 562 ORCs to provide healthcare services in the far flung areas of Bhutan’s sparsely distributed population (Ministry of Health - Royal Government of Bhutan, 2011b, 2015). The healthcare facilities are staffed by 244 doctors, 550 Health Assistants (HAs) and/or Assistant Clinical Officers, 118 Basic Health Workers (BHWs), 957 nurses, 14 pharmacists, 20 medical technologists, 12 physiotherapists and 884 technicians (Ministry of Health - Royal Government of Bhutan, 2015). Despite Bhutan’s extremely difficult terrain and scattered and inaccessible population, it has been estimated that over 90% of the Bhutanese population have access to basic healthcare services (World Health Organization, 2007).

The National Referral Hospital (NRH), the main hospital in Bhutan, is located in the capital Thimphu and is situated at the apex of the Bhutanese healthcare system. Established in 1972, this 500 bed hospital receives major referrals from all over the country and supplies free basic medical treatment as well as advanced surgery and emergency services to Bhutan’s citizens. The NRH is also responsible for the training of health personnel. Today, it is recognised as providing the most sophisticated health evaluation and management services in the country.

The two RRHs (one in Eastern and other in Central/Southern Bhutan) each have 100 bed occupancy with medical, surgical, paediatric, gynaecological specialties and laboratory services. These hospitals serve as a referral hospital for other DHs in their regions. The DHs, which are without any specialty services, each have 30 bed occupancy and offer only a small number of basic laboratory services. The DHs serve as first level referral services. They are staffed by at least one doctor, 10-20 nurses (all categories), and a small number of other health professionals (e.g., healthcare
assistants, pharmacy, radiology, laboratory and ophthalmology technicians) (Pelzang, 2008).

The BHUs and ORCs deliver basic promotive and preventive health services to the community. They also provide some essential drugs (e.g., antibiotics, mild analgesics, antihistamines and vaccines) to the population. The BHUs are staffed with one HA and BHW. The HA is responsible for diagnosis and treatment of the patients, health education and the general administration and leadership of the team; and the BHW in turn is responsible for environmental hygiene, communicable diseases surveillance and family planning motivation (Berkeley, 1979).

In 2002, the Bhutan Ministry of Health initiated a range of quality assurance processes. These included the development of a standard operating procedure and quality assurance manual, and the establishment of the Bhutan Medical and Health Council (BMHC) in 2003. The BMHC’s overarching responsibilities include: registering and regulating all medical, nursing and health professionals. Since 2002, the Bhutan Ministry of Health has continued to emphasise the need to improve the quality assurance of Bhutan’s healthcare services.

In 2011, the Bhutan Ministry of Health released its National Health Policy (Ministry of Health - Royal Government of Bhutan, 2011a). A key aim of this policy is to drive improvements in the quality of care delivered by Bhutan’s healthcare services. To this end, the National Health Policy aims to achieve a set of national health goals through sustained provision of quality general and public health services.

With the delivery of health services through Bhutan’s PHC system, the health status of the population has improved markedly, especially in the last decade. Life expectancy of the people has increased from 37 years (1960) to 68 years (2015); the Crude Death Rate and Birth Rate has also decreased from 9.0 (1994) to 6.2 deaths per 1000 population (2014) and 39.9 (1994) to 17.9 birth per 1000 population (2014), respectively (Health Division - Ministry of Health, 2000; Ministry of Health - Royal Government of Bhutan, 2011b, 2015). This large reduction in mortality has been achieved primarily by controlling communicable diseases such as tuberculosis, bacterial pneumonia, malaria, and dysentery (Ministry of Health - Royal Government of Bhutan, 2006).

Infant Mortality Rates in Bhutan have also dropped dramatically, notably from 203 per1000 live births in 1960, to 30 per 1000 live births in 2014 (Health Division - Ministry of Health, 2000; Ministry of Health - Royal Government of Bhutan, 2011b,
In the last decades there has also been a significant drop in Maternal Mortality Rate, i.e., from 380 per 100,000 in 1994 to 86 per 100,000 live births in 2014 (Ministry of Health - Royal Government of Bhutan, 2015). The PHC system has been at the forefront of and instrumental in improving other public health outcomes as well, such as the elimination of Leprosy (since 1997) and Iodine deficiency disorders (since 2003) (Ministry of Health - Royal Government of Bhutan, 2011b).

### 2.3 Bhutanese healthcare organisational structure

Healthcare organisations in Bhutan are hierarchical in nature with the authority, responsibilities, and relationship between departments and employees clearly defined. Within the healthcare organisations, most of the important decisions are made by senior management. Further, initiatives or directives that involve the organisation as a whole are delivered from the top of the organisation downward. For instance, as shown in Figure 2.1, in the Bhutanese Ministry of Health, the Minister of Health is at the top of the organisation, followed by department secretary. Below these entities are the Directors and Chiefs of Divisions/Departments of Health followed by personnel or organisational subordinates (e.g., Director of Medical Services and Director of Public Health). Directives are sent specifically to the superior of each department listed in the organisational chart. The department superior, in turn, delivers the initiative to his/her subordinates. In Bhutanese healthcare organisations, daily communication typically occurs between immediate superiors and his/her subordinates, with immediate superiors being directly responsible for the results delivered by his/her subordinates.

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**Figure 2.1:** Organisational chart of Ministry of Health, Bhutan
Chapter Two: Study context and literature review

2.4 Patient safety in low-income countries

Patient safety has been defined by the World Health Organization (2009a) in the following terms, notably as:

The reduction of risk of unnecessary harm associated with healthcare to an acceptable minimum. Acceptable minimum is referred to the collective notions of healthcare situation in terms of knowledge, availability of resources and the context where care was delivered weighed against the risk of non-treatment or other treatment (p.15).

To put this another way, patient safety has as its most basic concern reducing the incidence and impact of preventable harmful events in healthcare (Cooper, Gaba, Liang, Woods, & Blum, 2000; Emanuel et al., 2008; Kohn, Corrigan, & Donaldson, 2000; Wachter, 2008). Although regarded as a critical component of quality care (Runciman et al., 2010), patient safety is generally distinguished from quality care with the latter relating to and reflecting ‘the extent to which a healthcare service or product produces the desired (‘best possible’) outcome’ (Runciman, Merry, & Walton, 2007, p. 297).

Reliable statistics scoping the burden of unsafe care in low-income and transitional countries are either limited or do not exist. Even so, it is estimated that rates of adverse events in low-income countries are higher than those of high-income countries. For example, a retrospective medical review of hospitals from Jordan, Kenya, Morocco, Tunisia, Sudan, Yeman, and Egypt identified 8.2% adverse events with a range of 2.5% to 18.4% per country, of which, 83% were preventable (Wilson et al., 2012). Of these preventable adverse events, 30% were associated with patient mortality (i.e., almost a third of patients impacted by harmful incidents died). Similarly, an examination of 236 adverse events occurring in a tertiary teaching hospital in Bangkok found that almost 52% of these could have been prevented (Asavaroengchai, Sriratanaban, Hiransuthikul, & Supachutikul, 2009).

Other low-income countries have similar trends in patient safety concerns. For example, a study in Malaysia to determine the frequency and types of drug administration errors found 127 errors, of which 25.2% involved drug administration at the incorrect time, followed by incorrect technique (16.3%) (Chua, Tea, & Rahman, 2009). In terms of clinical significance, more than 10% of the drug administration
errors were found to be potentially life-threatening. Similarly, another study on medication prescribing errors in India found significant medication errors (Pote, Tiwari, & D’Cruz, 2007). Of the 304 cases reviewed, 157 (34%) of these had at least one medication error. Out of 157 errors, 12% was related to dosing interval and 9.5% to dosing errors. Medication errors were occurred when medication labels or packaging were of poor quality or damaged (Mrayyan, Shishani, & Al-Faouri, 2007).

Problems associated with surgical procedures are also well recognised in low-income countries. Research suggests that the prevalence of surgical adverse events rates in low-income countries may occur up to five times more than that in high-income countries (Hernandez, Ramos, Seas, Henostroza, & Gotuzzo, 2005). For instance, a study in Brazil found surgical procedures errors as the most frequent adverse events consisting of 35.2% of all cases (Mendes, Martins, Rozenfeld, & Travassos, 2009). Similarly, a study in Pakistan to identify anaesthesia related mortality in a university hospital reported 35 deaths in 24 hours where 28.5% deaths were considered avoidable. Of these, 18 deaths occurred during post-operative period with 11% being due to anaesthesia (Khan & Khan, 2007).

The healthcare-associated infection (HAI) has also been identified as one of the most common patient safety concerns in low-income countries. The risk of HAI in low-income countries is estimated to be 20 times higher than in high-income countries (Siddiqi et al., 2012). A systematic review and meta-analysis to assess the epidemiology of endemic HAIs in low-income countries revealed a much higher prevalence of HAI (pooled prevalence in high-quality studies, 15·5 per 100 patients) than proportions reported from high-income countries such as the US and countries located in Europe (Allegranzi et al., 2011). Surgical-site infection was the leading infection in hospitals (pooled cumulative incidence 5·6 per 100 surgical procedures), exceptionally higher than proportions recorded in high-income countries. Similarly, a study in eight countries (Argentina, Brazil, Colombia, India, Mexico, Morocco, Peru, and Turkey) in 55 intensive care units (ICUs) found 137,740 acquired device-associated infections with 22.5 infections per 1000 ICU days (Rosenthal et al., 2006). Of them ventilator-associated pneumonia case (41%) showed as a greatest risk, followed by CVC-related bloodstream infections (30%). The crude death rate for patients with device-associated infection ranged from 35.2% to 44.9% in the studied population.
Chapter Two: Study context and literature review

The main adverse events in low-income countries were found to be associated from therapeutic errors (which includes diagnostic errors, medication errors, surgical mistakes, anaesthesia and fall); inadequate training and supervision of clinical staff; a lack of availability and implementation of policies or protocols; injuries due to an inadequate use of medical devices; counterfeit and substandard drugs; lack of top management support, communication and reporting (Desai, Iyer, Panchal, Shah, & Dikshit, 2011; Inan et al., 2006; Jha et al., 2010; Oshikoya & Ojo, 2007; Raka, 2010; Upadhyaya, Seth, Moghe, Sharma, & Ahmed, 2012; Wilson et al., 2012).

2.5 Challenges in improving patient safety in low-income countries

The improvement of patient safety in healthcare has become increasingly challenging due to the nature of healthcare systems themselves. Healthcare organisations throughout the world have devoted considerable resources to implementing strategies and programs aimed at reducing the incidence and impact of preventable adverse events. Ten years on, progress in patient safety has been deemed disappointing (Pronovost & Wachter, 2014; Wachter, 2010), with flaws and failures continuing to be increasingly evident. Despite the development and introduction of patient safety policies and regulations (including error reporting systems, malpractice systems and other vehicles for accountability) and advancements in patient safety practices generally, studies continue to show that achieving improvements in patient safety remains challenging (Wachter, 2010).

In low-income countries, a lack of knowledge about patient safety and the paucity of reliable data are additional confounding factors and pose additional challenges to improving patient safety outcomes. Most of the world’s data on patient safety comes from the high-income countries, where the healthcare contexts are different (Jha et al., 2010; World Health Organization, 2004). The lack of reliable data pertaining to low-income countries directly hampers understanding of the issues associated with patient safety in those countries (World Health Organization, 2012a, 2012b). More knowledge and awareness are deemed essential for understanding the nature of harm and developing appropriate solutions that can be adapted to and in the particular settings of low-income countries (World Health Organization, 2008, 2012b).

The challenges for patient safety champions in low-income countries are further compounded by the fact that there is a wide spectrum of patient safety concerns. Adding to this is the problem that patient safety indicators are often not readily
available; healthcare systems worldwide rely on a wide range of coding schemes of
diseases, complications, and treatments or managements which are not standardised
and thus which are difficult to meaningfully compare across sites, countries and time
(Sevdalis, Hull, & Birnbach, 2012; Tsang, Palmer, Bottle, Majeed, & Aylin, 2012).

2.6 Importance of context
Studies are increasingly showing that improving patient safety involves much more
than importing solutions from one context and applying them in another (e.g., the
restructuring of an organisation, the use of prompts, the use of computer assisted
diagnostic systems, and the use of computer assisted medication administration) (Ash,
Berg, & Coiera, 2004; Han et al., 2005; Koppel et al., 2005; Yoelao et al., 2014). If
effective and sustainable change is to be achieved, due consideration must also be
given to the importance of ‘context’ as a critical factor in improving patient safety
outcomes. This is because patient safety is not simply a ‘technical issue’ (if it ever
was), but a site of organisational, cultural and political dynamics, which possess
discernible culturally relative processes that affect quality, safety and performance
(Dixon-Woods, 2010; Yoelao et al., 2014). Unless full regard is given to the socio-
cultural and political context of change it will remain questionable whether the patient
safety practices and process in a given healthcare system will improve (Lamont &
Waring, 2015).

2.7 Patient safety in Bhutan
As stated in the introduction chapter of this thesis, Bhutan is challenged by lack of data
on patient safety concerns. The Bhutanese media, however, is beginning to play a role
in highlighting concerns and raising public awareness about patient safety issues. For
example, in 2012, the Bhutanese media reported on a range of issues, including delays
in the treatment of patients due to lack of medicines, and adverse events due to use of
counterfeit and substandard drugs (Business Bhutan, 2012; Kuenselonline, 2012; The
Bhutanese, 2012). It is also known anecdotally that patients have died due to wrong
medications being given, have undergone wrong site surgery, and have been left
permanently disabled due to wrong procedures being performed. Adding to this,
Bhutan is experiencing an unprecedented increase in consumer demands and
expectations of its health services.
Although the Bhutanese government is committed to improving the quality of its healthcare services, achieving the improvements desired is proving to be difficult. A key reason for this relates to the levels of complexity involved in providing ‘good’ high quality healthcare services, which cannot be addressed without a well-structured dedicated program of patient safety also being implemented. As has become increasingly recognised internationally, in order to achieve quality healthcare services, safety must also become a priority (Brennan et al., 1991; Dastur, 2008).

It has been estimated that in Bhutan, as in other low-income countries, preventable adverse events probably occur at a significantly higher rate than in high-income countries and at a rate comparable with other low-income countries (e.g., as stated above in Section 2.4, the risk of HAI in low-income countries is 20 times higher than in developed countries (Siddiqi et al., 2012; World Health Organization, 2009b)). Moreover, although the direct (financial) costs of preventable adverse events are not known, it has nonetheless been suggested that the indirect costs, such as the loss of human productivity and lower levels of health in the population, may in fact be greater than that of high-income countries (World Health Organization, 2004). These human costs are compounded in instances where patients and families have lost trust in their treating healthcare organisations after having experienced preventable adverse events while receiving care (Clinical Excellence Commission, 2005).

Improving the safety and quality of healthcare services in Bhutan will require a careful analysis of the factors which influence the current function and status of patient safety. It will also require the development of locally adapted patient safety concepts, processes and indicators.

As indicated earlier in this chapter, there are enormous challenges to successfully improving patient safety outcomes in low-income countries. These challenges are compounded by a lack of funding, increasing economic pressure apropos the increasing costs of healthcare, workload and/or understaffing, and multiple work assignments (Aveling, Kayonga, Nega, & Dixon-Woods, 2015; Steffner, McQueen, & Gelb, 2014; Tansriprapasiri & Speedie, 2008; World Health Organization, 2015; Yoelao et al., 2014). Like other low-income nations, Bhutan is not immune to these challenges. For instance, despite the impressive improvements made in the health status of the Bhutanese population (outlined in Section 2.2 of this chapter), the Bhutan healthcare system is a system under pressure. Healthcare services in Bhutan are burdened by chronic overcrowding, understaffing, underfunding, and services being
perpetually pushed to the limit. For example, hospital admissions per year have been increasing significantly from 25,000 in 1997 to 49,831 in 2011 (Ministry of Health - Royal Government of Bhutan, 2007, 2011b). Adding to this, Bhutan is encountering an increased burden of chronic diseases such as cardiovascular diseases, diabetes mellitus, and mental illnesses (Ministry of Health - Royal Government of Bhutan, 2006), with non-communicable diseases accounting for over 60% of the total disease burden (The World Bank, 2011).

Resources for healthcare in Bhutan, compared with other more resourced nations, are extremely limited. For example, Bhutan has only 3.3 doctors and 12.8 nurses per 10,000 head of population (Ministry of Health - Royal Government of Bhutan, 2015). This compares poorly with Organisation for Economic Cooperation and Development (OECD) countries in which there are on average 3.2 doctors and 9 nurses per every 1000 head of population (Australian Institute of Health and Welfare, 2012). Moreover, due to the shortage of healthcare professionals, staff often have to role-substitute and multitask irrespective of their training, credentials, or practice speciality. For example, the HA (who has undergone only a two year diploma course in basic public healthcare) often replaces general medical practitioners in the out-patient department (OPD). Anecdotal evidence suggests that this type of personnel substitution increases the potential for, and exposes patients to, a greater risk of preventable adverse events.

Improving the safety of patient care in Bhutan will require, as it will in other low-income countries, the development and implementation of processes for improving risk management, infection control, safe use of medicines, equipment safety, and a safe environment of care (Pittet & Donaldson, 2006). Health professionals also need to be knowledgeable about human error and its management in healthcare and how to improve patient safety processes (Walton & Elliott, 2006). This, however, will be difficult in Bhutan because the nature and extent of patient safety concerns are poorly understood or even known (Jha et al., 2010). Therefore, understanding the nature and extent of patient safety concerns (frequency, causes, determinants) and effective methods for preventing them in healthcare systems – is essential to overcoming the problem (World Health Organization, 2002a, 2009d). It is a key aim of this study to advance such an understanding.
Chapter Two: Study context and literature review

2.8 Conclusion

In this chapter attention has been given to providing a brief portrait of Bhutan as a country. Following this attention then shifted to providing a brief account of the traditional cultural values which have currency in Bhutan, a descriptive overview of the development and current operationalisation of the Bhutanese healthcare system, and why a consideration of context is important when seeking to address patient safety concerns in Bhutan. Finally consideration was given to the question of why addressing patient safety concerns in developing and resource poor countries in general, and Bhutan in particular, is challenging.
3.0 Introduction
In this chapter attention is given to discussing the research approach chosen to advance this inquiry. First, the nature of the Qualitative Exploratory Descriptive (QED) research approach and the reason for its selection to advance this inquiry are considered. Then, attention is given to discussing the processes and strategies used for sample selection, data collection, data analysis, and research rigour. Processes for ensuring the cultural integrity of the study are also considered. Finally, the attention is given to discussing the strengths and weaknesses of the study.

3.1 Methodology
This study was carried out as a naturalistic inquiry using a QED research approach (Lincoln & Guba, 1985; Patton, 2002). The QED research approach was chosen for this study because it is an ideal approach to gaining an understanding of what is going on in the real world – i.e., what is working and what is not working (Patton, 2002). The QED research approach enables the researcher to obtain a detailed account of the problem of concern and retain the holistic and meaningful characteristics of real life events (Sandelowski, 2000). Most importantly QED research is particularly appropriate in situations where the problem is not known or the problem is too complex to be captured by other methods (e.g., questionnaire survey) (Patton, 2002, p. 193). In this instance, the study was designed to gain a better understanding of patient safety concerns in hospitals in Bhutan in order to inform recommendations for development of appropriate locally-adapted solutions to improve patient safety.

Apart from obtaining a detailed account of the problem of concern, the QED research approach is known to have no mandate in terms of producing anything other than a robust descriptive summary of events, organised in a way that best contains the data collected and that is most relevant to the audience for whom it is written (Sandelowski, 2000, p. 339). QED research is considered to be a highly pragmatic approach that enables the answering of concrete and practical ‘what’ kinds of question (Brink & Wood, 1998; Patton, 2002), such as those addressed in this study; i.e.:
Chapter Three: Methodology

- What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan?
- What are health service providers and manager’s knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals?
- What are the factors that health service providers and managers have identified as most contributing to patient safety concerns in Bhutan’s national, regional and district hospitals?
- What strategies are needed to address the patient safety issues and concerns identified?

The QED approach draws from the general tenets of qualitative research design (Brink & Wood, 1998; Pope & Mays, 1995) and facilitates obtaining nuanced and rich descriptions of experience enabling the robust classification, comparison and conceptualisation of the data collected and emergent themes (Patton, 2002; Sandelowski, 2000). Furthermore, QED research allows investigators to adopt a methodologically appropriate approach within a particular context and specific audience, based on the intended purposes, available resources and data obtained (Patton, 2002). The flexibility of the QED research approach to employ appropriate data collection method enables investigators to uncover comprehensive knowledge about the problem of interest (Patton, 2002). To this end, the sampling, data collection and data analysis strategies commonly used in QED were used in this study to capture a ‘slice from the life world’ (Denzin, 1983, p. 134) as it was experienced by the participants.

In sum, the QED approach enables the collection of rich data about a problem of interest, and in turn helps to facilitate a deep understanding of the real life situation being investigated. Most importantly, the QED research method offers a flexible and pragmatic yet rigorous approach to research that is practical and suitable for health services research such that undertaken in the context of this inquiry.

3.2 Method
The steps taken to advance this inquiry include sample selection, data collection, data analysis, data presentation and discussion of research findings.
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3.2.1 Sample selection
In this section attention is given to the sample type and size, and the processes used for recruiting and accessing the participants.

3.2.1.1 Sample type and size
A criterion-based stratified purposive sample was used in this study to maximise transferability of the findings (Trost, 1986). In QED research, stratified sampling encompasses taking small samples from multiple locations. Its chief advantage is that it allows a sample to be accessed that is large enough to enable valid conclusions to be drawn from a relatively small sample of well dispersed participants, without having to collect an unnecessarily large sample from other larger groups (Patton, 2002; World Health Organization and International Development Research Centre, 2003). For example, sourcing 20 participants from each of four hospitals and sourcing 60 participants from just one hospital. A sampling strategy which enables maximum variation sampling to be achieved is considered useful to obtain the broadest range of information possible in QED (Lincoln & Guba, 1985).

Three sampling units were included in this study:

- Healthcare professionals
- Policy documents
- Adverse events records.

Healthcare professionals
A criterion-based sample of 94 was purposively recruited as per the categories depicted in Table 3.1 of this thesis. The samples were recruited from six areas:

1. Managers in Ministry of Health (Director of Medical Services, Chief Program officer of Medical Services, Chief Program Officer of Quality Assurance and Standard Division, Assistant Program Officer of Quality Assurance and Standard Division);
2. Senior Managers in hospitals (Medical Director of National Referral Hospital (NRH), Medical Superintendent of NRH, Nursing Superintendents (including deputy nursing superintendent) of NRH, Medical and Nursing superintendent
Chapter Three: Methodology

of National and Regional Referral Hospital, and District Medical Officer of District Hospital);

3. Doctors in hospitals (Specialist and General Practitioners);

4. Ward managers or unit in-charges;

5. Nurses (All levels of nurses: Bachelor, Diploma, Certificate) and educators from Royal Institute of Health Sciences; and

6. Health Assistants (Including Assistant Clinical Officers).

The final number of participants interviewed and the decision to stop recruitment was determined by the point at which informational redundancy was achieved – that is, nothing new was emerging from the interview data. The final number of category of participants recruited are given in Table 3.1 below.

<table>
<thead>
<tr>
<th>Participant category</th>
<th>Nurses/educators</th>
<th>Doctors</th>
<th>Ward managers</th>
<th>Senior managers</th>
<th>Health Assistants</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital 1 (NRH)</td>
<td>27 (7 nurse educators)</td>
<td>10</td>
<td>15</td>
<td>05</td>
<td>01</td>
<td>58</td>
</tr>
<tr>
<td>Hospital 2 (RRH)</td>
<td>10</td>
<td>04</td>
<td>04</td>
<td>02</td>
<td>02</td>
<td>22</td>
</tr>
<tr>
<td>Hospital 3 (DH)</td>
<td>06</td>
<td>01</td>
<td>01</td>
<td>00</td>
<td>02</td>
<td>10</td>
</tr>
<tr>
<td>Ministry of Health</td>
<td>00</td>
<td>00</td>
<td>00</td>
<td>04</td>
<td>00</td>
<td>04</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>43</strong></td>
<td><strong>15</strong></td>
<td><strong>20</strong></td>
<td><strong>11</strong></td>
<td><strong>5</strong></td>
<td><strong>94</strong></td>
</tr>
</tbody>
</table>

Policy documents

This sample unit included a range of policy and guideline documents related to patient safety and quality care. The specific policy and guideline documents from Ministry of Health and hospitals reviewed are listed in Table 3.2.

Ministry of Health: The national health policy, quality assurance guidelines and other related documents. Documents were collected from libraries, resource centres and quality assurance office of Ministry of Health.

Hospitals: Clinical practice guidelines, infection control guidelines, emergency care protocols, pharmacy guidelines, and other standard operating procedure guidelines. Documents were collected from the wards, libraries, resource centres, and other departments of the hospitals such as pharmacy department, radiology department, and emergency department.
### Table 3.2: Policy/guideline documents reviewed

<table>
<thead>
<tr>
<th>Hospitals</th>
<th>Ministry of Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>- National guideline on ‘appropriate clinical use of blood’ for doctor, assistant clinical officers and nurses, 1st ed. (2009)</td>
<td>- Disciplinary proceedings for medical malpractice and negligence regulations (2009)</td>
</tr>
<tr>
<td>- National antibiotic guideline (2012)</td>
<td></td>
</tr>
<tr>
<td>- Technical guideline for infection control and healthcare waste management in the healthcare settings, 4th eds. (2012)</td>
<td></td>
</tr>
<tr>
<td>- Standard operating procedures for JDW/NRH (2011)</td>
<td></td>
</tr>
<tr>
<td>- National standards for Biomedical engineering professional services (2007), Dental health services (2007), Physiotherapy services (2011) and Nursing services standard (2007)</td>
<td></td>
</tr>
</tbody>
</table>

### Adverse events records

Sixty nine records were identified and analysed in the context of this study. This sample unit included the records of adverse events maintained in the hospital, wards and other reports such as patient charts, incident report book, procedure book and the ‘doctor call book’ (Table 3.3). Documents were collected from the hospitals, wards and program offices in the Ministry of Health.

### Table 3.3: Types of adverse events records reviewed

<table>
<thead>
<tr>
<th>NRH, Thimphu</th>
<th>RRH, Gelephu</th>
<th>DH, Punakha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient charts</td>
<td>Patient charts</td>
<td>Patient charts</td>
</tr>
<tr>
<td>Annual adverse drug reaction report</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Annual blood reaction report</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Doctor round books</td>
<td>Doctor round books</td>
<td>Doctor round books</td>
</tr>
</tbody>
</table>
Chapter Three: Methodology

3.2.1.2 Sample recruitment and access
Participants were recruited from three different levels of hospitals in Bhutan (the Punakha District Hospital, the Gelephu Regional Referral Hospital, and the Jigme Dorji Wangchuck National Referral Hospital, Thimphu), a training institute (Royal Institute of Health Sciences), and the Ministry of Health.

Prior to the project commencement, the researcher obtained ethics approval from the Research Ethics Board of Health, Ministry of Health, Bhutan and Deakin University, Melbourne (Appendix A, B). Once the ethics approvals were obtained from Research Ethics Board of Health, Ministry of Health, Bhutan and Deakin University, participants were recruited and accessed through two main strategies:

- Direct contact
- Information fliers.

Direct contact with individual hospital administration: In keeping with the requirements of the Bhutanese traditional code of conduct, participants such as managers in the Ministry of Health, Bhutan, were recruited by approaching them personally and providing them with a Plain Language Statement explaining the objectives and methods of the study (Appendix C). Upon obtaining their consent to participate in the study, a mutually agreeable date and venue for interviews was set.

Further, in keeping with the requirements of Research Ethics Board of Health, Bhutan, the researcher contacted individual hospital administrators to obtain permission to access the hospital and its staff via two key strategies: (1) sending copies of the Plain Language Statement and consent form to the key people of the selected hospitals, for example, the Secretary of Ministry of Health, Medical Director of Jigme Dorji Wangchuck National Referral Hospital, Medical Superintendent of Gelephu Regional Referral Hospital, District Medical Officer of Punakha District Hospital, and Royal Institute of Health Sciences prior to going to Bhutan for data collection (Appendix C, D, E, F, G, H, I); and (2) personally approaching key people (hospital administrators) and providing them with a letter explaining the objectives and methods of the study.

Information fliers and face-to-face information sessions in the wards: The participants were invited through ‘flyers’ posted on staff notice boards (Appendix J)
and an invitation letter (containing the purpose of study and contact details of the researcher) sent to the participating wards (Appendix K). The researcher also conducted information sessions in the selected facilities/wards, were further invitations to interested individuals were made. Contact details of individuals who expressed an interest in participating in the study were noted and those individuals were contacted later through e-mail or phone to confirm their participation in the study. After confirmation of their participation in the study, a mutually agreeable date and venue for interviews were set.

3.2.1.3 Sample description

Demographic data on gender, age range, length of service (in years) in current position, and professional qualifications were collected.

Gender of participants

Of the 94 participants, 38 (40.4 %) were female and 56 (59.6 %) were male. The female to male participant ratio was 19:28. The intent of the study was not to be representative or compare the concerns of the female and male participants. Rather, it was to capture a ‘slice from the life world’ (Denzin, 1983, p. 134) as it is experienced by the participants.

Age of participants

Of the 94 participants, all participants provided their age. The age range of the participants was 23 to 60 years, with the mean of 36.7 years. The age profiles for each category of participants are shown in Table 3.4 below.

<table>
<thead>
<tr>
<th>Category</th>
<th>20-29</th>
<th>30-39</th>
<th>40-49</th>
<th>50-60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>21</td>
<td>14</td>
<td>07</td>
<td>01</td>
</tr>
<tr>
<td>Doctors</td>
<td>03</td>
<td>04</td>
<td>05</td>
<td>03</td>
</tr>
<tr>
<td>Ward Managers</td>
<td>00</td>
<td>07</td>
<td>11</td>
<td>02</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>01</td>
<td>03</td>
<td>03</td>
<td>04</td>
</tr>
<tr>
<td>Health Assistants</td>
<td>00</td>
<td>02</td>
<td>03</td>
<td>00</td>
</tr>
</tbody>
</table>

Professional qualifications of participants

Of the 94 participants recruited, all participants provided details of their qualifications. Qualifications of the participants are given in Table 3.5 below.
### Table 3.5: Breakdown of participants’ professional qualifications

<table>
<thead>
<tr>
<th>Category</th>
<th>Certificate</th>
<th>Diploma</th>
<th>Bachelor</th>
<th>Master</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>04</td>
<td>21</td>
<td>11</td>
<td>07</td>
</tr>
<tr>
<td>Doctors</td>
<td>00</td>
<td>00</td>
<td>05</td>
<td>10</td>
</tr>
<tr>
<td>Ward Managers</td>
<td>00</td>
<td>08</td>
<td>05</td>
<td>07</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>00</td>
<td>01</td>
<td>02</td>
<td>08</td>
</tr>
<tr>
<td>Health Assistants</td>
<td>02</td>
<td>03</td>
<td>00</td>
<td>00</td>
</tr>
</tbody>
</table>

| Total               | 06 (06%)    | 33 (35%) | 23 (25%) | 32 (34%) |

**Length of service (in years) in current position**

Of the 94 participants, all participants provided details of their length of services in their current position. The length of service ranged from six months to 29 years with mean average years of 12.71 years. The mean average length of service (in years) in current position of each category of participants is shown in Table 3.6 below.

### Table 3.6: Mean average of the length of service in current position

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean average (in years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurses</td>
<td>08.4</td>
</tr>
<tr>
<td>Doctors</td>
<td>13.6</td>
</tr>
<tr>
<td>Ward Managers</td>
<td>16.8</td>
</tr>
<tr>
<td>Senior Managers</td>
<td>17.7</td>
</tr>
<tr>
<td>Health Assistants</td>
<td>19.4</td>
</tr>
</tbody>
</table>

#### 3.2.2 Data collection

Narrative data were collected via conversational in-depth interviews, and notes of the Nominal Group Meetings (NGM). Healthcare professionals (doctors, nurses, managers, and other allied health professionals) were interviewed individually using a semi-structured interview guideline (Appendix L) designed to facilitate the collection of data on personal feelings, knowledge, opinions, and experiences covering patient safety concerns in Bhutan. The NGMs were conducted in different groups according to criterion based characteristics such as doctors, nurses and managers. The duration of both individual interviews and NGMs ranged from 45 minutes to 120 minutes.

Data were also collected from policy documents, a review of patient charts and adverse events records (Table 3.7). The patient charts and records of adverse events were independently reviewed by using a list of patient safety indicators (Garrouste-Orgeas et al., 2012; Matsaseng & Moodley, 2005; Mendes et al., 2009; Runciman et
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al., 2006; Ursprung et al., 2005; Zhan & Miller, 2003) (Appendix M) and review form (Appendix N). In addition to the above, data were obtained from researcher field notes.

Table 3.7: Number of interviews, Nominal Group Meetings and record reviews

<table>
<thead>
<tr>
<th>Methods</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interviews</td>
<td>94</td>
</tr>
<tr>
<td>Nominal Group Meetings</td>
<td>05</td>
</tr>
<tr>
<td>Adverse Events Record Reviews</td>
<td>69</td>
</tr>
</tbody>
</table>

3.2.2.1 In-depth interview

During the course of the project, 94 interviews in total were conducted including interviews with senior managers (n=11), doctors (n=15), nurses (n=43), ward managers (n=20), and Health Assistants (n=05). The interviews were undertaken in a place that suited the participant and in their own time. Mostly, they occurred in the workplace in a room chosen by the participant that assured privacy and avoided interruptions. All interviews were audio recorded and transcribed verbatim. The transcriptions were verified and validated by repeated listening to the audio recordings.

3.2.2.2 Nominal Group Meeting (NGM)

During the course of the project five NGMs were conducted with: nurses (02), ward managers (01), and combined health professionals (02) (Table 3.8).

Table 3.8: Nominal Group Meeting participants

<table>
<thead>
<tr>
<th>Nominal Group Meetings (NGM)</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>NGM 1 (Gelephu)</td>
<td>5 doctors, 2 senior managers, 2 ward managers (total – 09)</td>
</tr>
<tr>
<td>NGM 2 (Gelephu)</td>
<td>15 nurses (total – 15)</td>
</tr>
<tr>
<td>NGM 3 (Punakha)</td>
<td>1 doctor, 1 senior manager, 1 ward manager, 2 Health Assistants, 2 nurses (total – 7)</td>
</tr>
<tr>
<td>NGM 4 (Thimphu)</td>
<td>9 ward managers (total – 9)</td>
</tr>
<tr>
<td>NGM 5 (Thimphu)</td>
<td>6 nurses (total – 6)</td>
</tr>
<tr>
<td>Total (5NGMs)</td>
<td>46 participants</td>
</tr>
</tbody>
</table>
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The NGMs were carried out using a protocol adopted by Van de Ven and Delbecq (1972), as follows:

- Introduction and explanation (welcomed the participants, introduced the project, and divided into groups – 15 minutes);
- Silent generation of ideas (each person was asked to write as many critical elements on patient safety according to the topic given in Nominal Group Task Statement Form for 15 minutes) (Appendix O);
- Sharing ideas – ‘Round Robin’ listing of ideas on flip-charts (Invited each participant to share one concern listed in his form. The researcher wrote the idea on the flip-chart, numbering each item until all the group members have finished their individual lists for 15 minutes);
- Serial discussions of ideas on flip-chart, including clarifying (After the items were recorded on the flip-chart, group discussed the ideas in order to clarify, elaborate, defend or dispute items for 30 minutes);
- Ranking problem elements (For 20 minutes, individual participants within groups ranked the items, choosing the ten most critical items from the total list on the flip-chart. 3x5 cards were used for each of the 10 items. The 10 items were listed on the tally sheet in the front by the participants);
- Discussion of ranking (after ranking the items discussions ensued in order to re-clarify, elaborate, defend or dispute, the preliminary vote for 20 minutes);
- Re-ranking or rating priorities (Following discussion of the initial ranking, participants were asked to review and change the vote as they wished. Here, each individual was invited to write a value of 10 on the lowest priority card and 100 on the most important priority card (increments of 10 in order of priority. This took 15 minutes);
- Conclusion of Nominal Group Meeting (Preliminary ranking of each group were reported to the entire audience. The researcher briefly explained how the data would be used to define the critical dimensions of the concerns under investigation. Participants were thanked, and the meeting concluded. This took 10 minutes).

4 (One of the Nominal Group Meeting protocol): going around to each participants and providing an opportunity to list an idea on flip-charts.
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To facilitate smooth NGMs, a nominal group task statement form, which specified the exploratory questions, was used to list the critical elements of the patient safety issues (Appendix O). Similarly, the ranking tally sheet was used to rank the critical elements (Appendix P). The ranking tally sheet assisted the participants to identify the most critical elements from the total list of the items (Van de Ven & Delbecq, 1972).

3.2.2.3 Review of adverse events records

A review of records of adverse events was undertaken in the context of this study. The review included any adverse events records such as the incident report book, patient charts, procedure book and other records, including the ‘doctor call book’ that is available in the hospital wards. During the course of the project, 69 adverse events records were reviewed. Incidents were categorised according to the nature of adverse events (Table 3.9).

<table>
<thead>
<tr>
<th>Categories of adverse events</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication (adverse drug reactions)</td>
<td>03</td>
</tr>
<tr>
<td>Surgical</td>
<td>N/A</td>
</tr>
<tr>
<td>Healthcare associated infections</td>
<td>N/A</td>
</tr>
<tr>
<td>Blood/Laboratory studies (failure to send blood sample/wrong blood administration)</td>
<td>04 (1/3)</td>
</tr>
<tr>
<td>Radiology studies</td>
<td>N/A</td>
</tr>
<tr>
<td>Management (post-operation checklist not completed, not removed cannula, forgot to carry out the orders)</td>
<td>05</td>
</tr>
<tr>
<td>Information transformation (not recorded pre-anaesthetic check-up reports)</td>
<td>02</td>
</tr>
<tr>
<td>Patient care equipment/medical devices</td>
<td>N/A</td>
</tr>
<tr>
<td>Others</td>
<td>N/A</td>
</tr>
</tbody>
</table>

3.2.2.4 A manual search of patient safety policies and guidelines

A manual search and content analysis of 27 policies, guidelines, protocols, standards and other documents on patient safety and quality care was undertaken. The final number examined is listed in Table 3.10 below.
Table 3.10: Patient safety policies and guidelines reviewed

<table>
<thead>
<tr>
<th>Types of patient safety policies and guidelines</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Policy</td>
<td>02</td>
</tr>
<tr>
<td>Regulation</td>
<td>01</td>
</tr>
<tr>
<td>Guidelines</td>
<td>05</td>
</tr>
<tr>
<td>Standards</td>
<td>05</td>
</tr>
<tr>
<td>Protocols</td>
<td>03</td>
</tr>
<tr>
<td>Pathways</td>
<td>02</td>
</tr>
<tr>
<td>Others (checklists and forms)</td>
<td>09</td>
</tr>
</tbody>
</table>

3.2.2.5 Field notes

Field notes were maintained throughout this study. The accounts of each step of the process were recorded in the form of a field journal to ensure that the process of the study was clearly documented in a logical and traceable manner (McBrien, 2008; Schwandt, 1996). The notes included details of the researcher’s observations, thoughts and feelings in the context of the project.

3.2.3 Data analysis

In accordance with the tenets of naturalistic inquiry, data from all sources were analysed using content and thematic analysis strategies. The steps followed are summarised in Table 3.11 below. A coding matrix and index were used to code initial categories and themes (Appendix Q, R). Whereas the coding matrix helped to identify and organise categories, the coding index helped to identify themes and categories (Smith & Firth, 2011).

The audio recordings were transcribed verbatim, read fully with salient segments of text assigned a conceptual code. Themes and categories were developed by considering each line, phrase or paragraph of the transcript. For this, the printed versions of transcript were used to highlight the key phrases. To capture exact meanings of the data, the key phrases were summarised using the participants’ own words or direct quotes from policy documents. Most importantly, the initial depictions of the data analysed were organised in and around the research questions driving the inquiry and the categories of participants interviewed.

Transcripts were reviewed and compared constantly across different settings, data sources, cases, and individuals to identify key themes and common ground (Strauss & Corbin, 1990). The line, sentence and paragraph segments of the transcribed interviews, field notes, and policy documents were reviewed to decide what codes
fitted with the concepts suggested by the data. Furthermore, data across all categories of participants were constantly scrutinised and compared for rival interpretations and depictions. Rival configurations and the organisation of themes (including rival conclusions drawn from the analysis) which were not supported by the data were eventually modified or dropped.

Table 3.11: Data analysis steps

<table>
<thead>
<tr>
<th>Stage 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Made notes after each data collection</td>
</tr>
<tr>
<td>• Transcribed the audio-recordings verbatim</td>
</tr>
<tr>
<td>• Reviewed the memos.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Read the transcripts</td>
</tr>
<tr>
<td>• Made notes on general themes.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Re-read the transcripts</td>
</tr>
<tr>
<td>• Compared transcripts with key themes and concepts</td>
</tr>
<tr>
<td>• Made categories (as many as necessary)</td>
</tr>
<tr>
<td>describing all aspects of the content</td>
</tr>
<tr>
<td>(open coding)</td>
</tr>
<tr>
<td>• Excluded unusable contents or fillers.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stage 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Re-read the transcripts alongside the</td>
</tr>
<tr>
<td>finally agreed list of categories</td>
</tr>
<tr>
<td>• Made adjustments as necessary.</td>
</tr>
</tbody>
</table>

3.3 Research rigour and validity

The rigour of the study was maintained by giving due attention to the following principles: credibility, fittingness, auditability, confirmability, and triangulation (Lincoln & Guba, 1985; Patton, 1999, 2002). In addition, due consideration was given to the approach taken to ensure cultural integrity and rigour within the context in which the study was conducted (in Section 3.4 of this chapter).

Credibility of research

Credibility, which also refers to ‘whether the findings of the study are well presented and meaningful’ (Kitto, Chesters, & Grbich, 2008, p. 243) is said to be established via the collection of high-quality data which is actively sought and analysed systematically (Im, Page, Lin, Tsai, & Cheng, 2004; Krefting, 1991; Lincoln & Guba, 1985). A field journal was maintained throughout the research processes; interviews were audio
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recorded and transcribed verbatim (to ensure the accuracy of data collection). Data were analysed rigorously using inductive methods, and the integrity of the data analysis process was maintained by providing accurate explanations (explanation of contradictions – including generating and assessing rival conclusions drawn from the analysis). Additionally, utmost care was taken to ensure that the data extrapolated were not misinterpreted to ‘suit’ the views of the researcher and/or taken out of context. Every effort was made to ensure that the findings of the study were described, interpreted and presented in a faithful manner in the final report.

Fittingness

‘Fittingness’ or ‘applicability’ or ‘transferability’ is said to have been achieved when ‘findings can “fit” contexts outside the study situation, when its audience views the findings as meaningful and applicable in terms of their own experience’, and when the findings of a study are well grounded in the experiences of participants and reflect their typical and atypical elements (Sandelowski, 1986, p. 32).

For this study, all data were subjected to fair scrutiny to establish ‘typicality’ and ‘atypicality’ of participant’s responses (Krefting, 1991, p. 221; Sandelowski, 1986, p. 32). Furthermore, counter views were identified and faithfully included in the final report after establishing ‘typicality’ and ‘atypicality’.

Fittingness and transferability of the findings have been affirmed on two separate occasions during the course of this study, notably when the preliminary and later more substantive findings of the study were presented at the Deakin School of Nursing and Midwifery Annual Research School seminars held during 2014 and 2015. These seminars were attended by more than 70 participants (consisting of international PhD and Master/honours students from low-income countries and faculty members of the School of Nursing and Midwifery). Feedback from these audiences has indicated a strong degree of fit insofar as the findings of the study resonated deeply with their own experiences. Many of the international PhD students indicated that the findings of this study were strongly applicable to and in the healthcare contexts of their own countries of origin.

Auditability

Auditability refers to the strategy which allows other researchers to follow the decision trail used by the investigator in the study (Krefting, 1991). The credibility and
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confirmability of the study depends on the auditability of the process which is ensured by stepwise replication and inquiry audit (Lincoln & Guba, 1985; Polit & Hungler, 1999).

For this study, a clear decision trail of the research was recorded and maintained (in the form of the researcher’s daily journal and computer records). All materials (field notes, audiotape, and others) used during the course of the project will be retained and stored securely for five years.

Confirmability

Confirmability is specifically related to procedural and interpretative rigour of the study (Kitto et al., 2008). Confirmability is said to be achieved when the ‘end product of study’ (i.e., data, findings, interpretations, and recommendations) is internally coherent and supported by data which is acceptable to others (external auditors or audiences) (Lincoln & Guba, 1985, p. 318). The ‘audit’ and triangulation is considered an important technique for establishing confirmability. In keeping with the requirements of confirmability, all raw data (field notes, transcripts of interviews, audiotape records); data reduction and analysis products (condensed notes); data synthesis products (thematic categories, interpretations); literature searches, and so forth, have been carefully maintained, recorded and referenced in this final report to enable an independent audit of the relevance, appropriateness and accuracy of their inclusion and citation.

Triangulation

Triangulation is a strategy for making meaningful comparisons in different ways to enhance the rigour of the study, particularly credibility (Krefting, 1991). The main idea of triangulation is to achieve more ‘grist for the research mill’ by adequately solving the problem of rival explanations, which is not possible by a single approach (Patton, 1999, p. 1192).

To ensure the rigour of the study, two kinds of data triangulation (source triangulation and researcher triangulation) were used in this study. To achieve source triangulation, data obtained from five categories of participants, recruited from five different organisational sites were constantly compared for similarities and differences to identify divergences or similarities. Subsequently, comparisons of information gained by a review of relevant documents and literature with the data obtained from
interviews were carried out to further test the findings. To achieve analyst (researcher) triangulation, the researcher’s two PhD supervisors analysed data from a critical mass (12-15) of randomly selected interviews.

In sum, to achieve rigour, every effort was made to obtain high-quality data by using purposeful sampling and source triangulation. To ensure the accuracy of data collection, interviews were audio recorded and transcribed verbatim. The data collected were rigorously analysed using an inductive approach by means of thematic codes. Moreover, utmost care was given to reduce the possibility of misinterpretation of the data and remaining true to participants’ description by carefully developing and linking the codes, categories and themes. This was achieved by forward and backward movement between data (Smith & Firth, 2011), making adjustments as necessary, and reporting in a faithful manner.

3.4 Cultural integrity

Demonstrating the rigour and trustworthiness of a qualitative study investigating an issue that has a cross-cultural dimension requires more than showing that the conventional criteria of credibility, fittingness, auditability, confirmability, and triangulation, as considered above, have been met (Im et al., 2004; Liamputtong, 2010a, 2010b). Attention also needs to be given to articulating the cultural positioning of the researcher and to demonstrating that additional evaluation criteria for assessing the cultural integrity of a study have likewise been upheld. This is because research that has ‘culture’ as a central consideration involves immeasurable concepts and phenomena, religious issues, socio-cultural issues, socio-political issues, historical issues and practical issues in particular research settings and that requires in-depth knowledge and understanding of those settings (Im et al., 2004; Tillman, 2006). Accordingly, this section has as its focus a description of the motivation for and conceptualisation of the study, the cultural positioning of the researcher, and the application of Im and colleagues (2004) five evaluation criteria (i.e., cultural relevance, contextuality, appropriateness, mutual respect, and flexibility), which were

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5 For the purposes of this study ‘culture’ is defined as ‘a group’s individual and collective ways of thinking, believing and knowing, which includes their shared experiences, consciousness, skills, values, forms of expression, social institutions, and behaviours’ (Tillman, 2002, p. 4; 2006, p. 266). According to Tillman (2006) a culturally informed and sensitive approach to research places culture as central to the research process and can be used to investigate and capture a holistic contextualised picture of the social, political, economic and educational factors that affects the everyday existence of the community.
used to help guide a culturally nuanced approach to this study. These considerations are each discussed under separate subheadings below:

**Conceptualisation of the study**

I was born, educated and have spent all of my working life in the Royal Kingdom of Bhutan. Since completing my nursing studies in Bhutan and qualifying as a registered nurse I have worked for more than 17 years in Bhutan’s hospital system. During this period I gained first-hand experience of the shortfalls in Bhutan’s healthcare system and began to question how the quality of patient care could be improved – a questioning that later lead me to ‘discover’ the global patient safety movement and ultimately inspired the conceptualisation of this study. While working in Bhutan’s hospital system I encountered and had the opportunity to directly observe the hierarchical system that operates. Of particular note was that positions of authority in the hospital system were always dominated by physicians, who make all decisions within the healthcare system. Observing this and other processes characteristic of Bhutan’s hospital system I wanted to understand more about the factors which may have contributed to the shortfalls I had observed in providing quality care to patients. I was particularly interested to find out what, if any, influence Bhutanese traditional cultural values (described in Chapter Two, Section 2.1 of this thesis) may have had on the hospital practices I had observed during my years as a nurse. It is in this context that the opportunity to undertake a PhD study to explore patient safety concerns and contributing factors was contemplated. I was particularly interested in having the opportunity not only to explore patient safety concerns in Bhutan but also to establish a basis upon which culturally adapted solutions to the concerns identified could be developed.

**Cultural positioning of the researcher**

The self-identities or representation of the researcher is considered important in research that involves different cultural perspectives. It is believed that the identities or status of the researcher and their associated power relations influences the fieldwork (e.g., data collection) and interpretation processes (Mullings, 1999; Subedi, 2006). It

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6 My view that the healthcare system is dominated by members of the medical professions (doctors) in Bhutan is based on my own anecdotal observations made over a period of 17 years while working as a nurse under the Ministry of Health, Bhutan. Doctors are regarded as highly educated and the most authentic figures in decision-making in healthcare services.
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is also contended that how individuals represent themselves can make a difference to whether or not requests for interviews to be conducted will be granted (Mullings, 1999).

My position and status in this research was primarily that of an *indigenous-insider* and an *indigenous-outsider* (Banks, 1998; Subedi, 2006). According to Banks (1998) an *indigenous-insider* is an individual who:

Endorses the unique values, perspectives, behaviours, beliefs, and knowledge of his or her indigenous community and culture and is perceived by people within the community as a legitimate community member who can speak with authority about it (p.8).

An *indigenous-outsider* in turn is an individual who:

Was socialised within his or her indigenous community but has experienced high levels of cultural assimilation into an outside or oppositional culture. The values, beliefs, perspectives, and knowledge of this individual are identical to those of the outside community. The indigenous-outsider is perceived by indigenous people in the community as an outsider (Banks, 1998, p. 8).

My status as an *indigenous-insider* was derived from my being born, raised, and educated in Bhutan, from living in Bhutan for all my life, and working as a nurse in the Bhutanese healthcare system. My status as an *indigenous-outsider* derives from my privileged position as researcher and a doctoral student in Australia. It is also linked to the fact that, in order to undertake this study, I resigned from my position as a nurse in the Bhutanese healthcare system.

According to Subedi (2006), despite sharing the same racial, ethnic or cultural background, both *indigenous insider* and *indigenous outsider* researchers – whom he calls ‘halfies’ – can face a number of challenges. For example, halfie researchers may fail to prove or convince participants of their identity as being ‘legitimate researchers’. Such a situation can be daunting due to a lack of prescribed methods of research to fall back on.

During this study I experienced first-hand the disadvantages and challenges of being an indigenous insider and indigenous outsider (‘halfie’) researcher. One notable
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challenge involved the recruitment of participants. Being a nurse researcher, and given the particularly patriarchal relationships that have traditionally existed between doctors and nurses in Bhutan, attempts to recruit and interview participants, especially from the doctors and health assistant/clinical officer categories, were frequently met with distrust and rejection, with very few willing to participate. Most doctors were reluctant to participate in the study citing a lack of time (‘I have no time to participate in the interview’) or a lack of knowledge of the subject area as the main reasons (Reflective journal, 25/03/2013). Some just flatly refused to participate, making comments like ‘What is this for?’ (Reflective journal, 8/03/2013). Others would simply cancel their scheduled interview at the very last minute, even though the dates and times had been agreed upon days or weeks in advance (Reflective journal, 6/03/2013). Then there were some for whom I had to wait for hours for them to arrive (Reflective journal, 25/02/2013; 19/02/2013). As a result of this I could not access the requisite number of participants from these groups (doctors and health assistants/clinical officers). As it was the prerogative of these prospective participants’ not to agree to participate in the study, I did not pursue them to participate.

Although my status as an indigenous outsider enabled me to overcome traditional boundaries that in the past have separated nurses from doctors and managers, my legitimacy as a researcher was at stake at certain points during the fieldwork. My indigenous outsider status became evident on at least two occasions: first, when I was not allowed to get access to a participant in one clinical site from where recruitment was occurring (i.e., I was denied entry by the person in-charge of the unit to access the potential participant who had agreed to be interviewed. The attitude of the unit in-charge suggested that she saw me as a ‘total outsider’. I felt unsupported and rejected) (Reflective journal, 26/03/2013). On a second occasion, during the initial stages of my study (in September, 2012), the manager of an institution from where participants were to be recruited refused to sign the organisational consent to access participants. On this occasion I was looked upon and viewed by the managers/participants as being ‘no longer part of the medical community’ and as having ‘no right to gain access to the research settings or participants’ (see also Banks, 1998). The exact reasons for such hesitation in allowing me to access potential participants, however, are not known. What I do know and recall is that I was not welcomed or made to feel like an insider. Instead I was treated with suspicion, further making me aware of the power that gatekeepers have to withhold any access to information. In keeping with the
observations made by Mullings (1999), I was consistently symbolically reminded of my status merely as a ‘seeker of information’, wholly dependent upon the gatekeepers for information and subsequent access to participants. Despite being challenging, this experience was valuable as it enabled me to gain insight into how negotiating access to participants can be a complicated process and one that ought to be carefully considered at the very beginning and planning stage of a study – whether qualitative or quantitative in design (Subedi, 2007).

Another challenge I faced was getting participants to sign the consent forms. Despite my clear explanation about the study and processes (including privacy, confidentiality and the security of the data) most of the participants were reluctant to sign the consent form. I had to explain to them that it was a University formality and that the forms will remain in the safety of the University (not in the Ministry of Health, Bhutan). Despite their initial reservations all participants accepted my explanation and signed the consent forms. This situation was a potent reminder of how institutional procedures, such as requiring participants to sign consent forms, can disrupt participant-researcher trust and relationships (Subedi, 2007).

Related to the above was the additional challenge of making audio-recordings of the interviews which was essential to ensuring the accuracy of the narrative data collection (Subedi, 2007). Participants became suspicious of my motives when I explained that the interviews would be audio-recorded. This was particularly evident when some of the participants asked me ‘whether it is necessary to record the interview’. On one occasion a participant frantically said ‘She may not speak if I record the interview’. Through this experience I came to recognise that our attempts to audio-record interviews may prevent a researcher from obtaining in-depth information about the subject since the participants may simply provide limited information. Thus, as Tillman (2006) has noted, even while my status as an indigenous insider afforded me same-race and cultural affiliation, my research privilege was nonetheless challenged by some participants who were conscious of my previous professional position (as a nurse) and who may have been suspicious of my motives. I also learned that participant resistance to having their interviews audio-recorded should not be seen in isolation, but placed in context. As Subedi (2007) has noted, participants may, in fact, have legitimate concerns about their data being misused or, more simply, just ‘not like’ having their interviews recorded.
There were, however, also benefits to being a ‘halfie’. My status as an indigenous insider also invoked support among some managers and allowed me to negotiate initial entry into the research settings. This was particularly evident with the many nurses who came forward to participate in the study. Nurses treated me as a member of ‘their group’. On many occasions, during our conversations, nurses (including ward managers) would tell me that ‘nurses need to support fellow nurse researchers’ and that ‘they are encouraging each other to participate in the study’. Other participants (nurses and non-nurses alike) felt obliged to participate in this study because of our pre-existing relationship. On one occasion, one of the non-nurse participants clarified his decision to participate in the study by stating after the interview ‘I did participate in this interview because we know each other for so long as a friend’. He went on to say that ‘He wouldn’t have participated in the study if we were not known to each other’. This familiarity perhaps helps to explain why the participants in this study opened up so much and shared their experiences of patient safety concerns and their views on how Bhutanese traditional cultural values effect patient safety practices in the Bhutanese healthcare system. Perhaps, because of being an indigenous insider, I was not perceived as a threat to them. Thus, because I was perceived as belonging to the group being studied I had an advantage that ‘outsiders’ might not have had in terms of gaining more knowledge from the participants. This positioning enabled me to collect highly sensitive and possibly more accurate information than had I been an outsider (Merton, 1972; Mullings, 1999; Papadopoulos & Lees, 2002).

Adding to my status as an indigenous insider was being a nurse doctoral candidate. This appeared to confer recognition of my social status having increased. I was being perceived as one of the ‘elites’ and what Im and colleagues (2004, p. 897) call an ‘authority figure’ in the healthcare system. It seemed to me that many of the participants felt and believed that upon the completion of this study I would be in a position to bring about much needed change in the Bhutanese healthcare system. This was particularly evident in interviews with the nurse participants, many of whom shared concerns about the hierarchical system and its effects on healthcare practices and patient safety. Participants’ perspectives surfaced quite often during interviews and conversations, with some of the nurses explicitly expressing the view that perhaps my research could assist in making patient safety issues more prominent in the Bhutanese healthcare system. It was evident that this was a key reason why many of the nurse participants came forward to participate in this study.
Despite having faced many challenges (as briefly considered above), the cultural integrity of this study was maintained by giving due attention to the following principles: cultural relevance, contextuality, appropriateness, mutual respect and flexibility (Im et al., 2004).

**Cultural relevance**

Im et al. (2004) contend that, before commencing a study and beginning the data collection stage, the cultural relevance of a study being proposed must first be evaluated. 'Cultural relevance’ in this instance refers to ‘whether the research question can serve a specific cultural group’s issues and interests in improving their lives’ (Im et al., 2004, p. 894). The cultural relevance of this study derives from its key aims to identify patient safety concerns in the cultural context of Bhutan, to improve understanding of the processes contributing to the patient safety issues and concerns identified, and to develop a basis upon which culturally adapted solutions can be found to help redress the concerns identified. In summary, this study had as its underlying objective serving the interests and well-being of Bhutanese people in regard to receiving safe healthcare.

In an attempt to assure the cultural relevance of this study, I followed a number of carefully considered processes. First, the research proposal itself was shaped and developed on the basis on my cultural knowledge acquired through a formal examination of the literature on Bhutanese culture (discussed in Chapter Two, Section 2.1 of this thesis) as well as my own lived experience of being a Bhutanese person and nurse. This knowledge also informed my decision to include questions that related specifically to Bhutanese cultural values and the influences (both positive and negative) these might have had on participants’ knowledge, beliefs, values and attitudes concerning patient safety in Bhutan’s hospitals.

Second, although a conventional patient safety framework was used to set the parameters of the study, the Bhutanese culture and context were placed at the centre of the inquiry. Accordingly, the research and interview questions and the study’s overall approach were carefully framed around the profile of core Bhutanese traditional cultural values, namely: *Le Judre, Tha Damtshig, Driglam Namzha, GNH and Thuenpa Punzhi (the Four Harmonious Friends)* (these are explained in Chapters Two and Five, pages 7 and 161 of this thesis). This enabled a culturally nuanced approach to be taken. These core values also guided my approach when contacting and
interviewing participants to obtain their perspectives on patient safety issues and concerns as viewed through a Bhutanese-oriented cultural lens/worldview.

Third, this study was carried out using a qualitative research approach. This enabled me to capture a rich set of data and ‘slice of the life world’ pertinent to understanding the Bhutanese hospital system and the patient safety concerns held by the people working within it. It has also enabled valuable insights to be gained that would not otherwise have been possible (e.g., using a survey tool) particularly concerning the influence that Bhutanese traditional cultural values might have on patient safety issues and concerns and how these might best be addressed.

Finally, as described in this chapter in Section 3.2.1.1, this study has used a broad range of participants (including different categories of nurses, health assistants/clinical officers, mid-level and senior-level managers/policy makers). The decision to include senior-level managers, mid-level managers and various categories of other healthcare professionals has enabled a more comprehensive picture of the perceived causes and consequences of patient safety issues in Bhutan’s hospital system.

Contextuality

‘Contextuality’ concerns the ‘sensitivity to structural conditions that contribute to participants’ responses and to the interpretations of situations informed by experiences, by validation of perceptions, and by a careful review of existing knowledge’ (Im et al., 2004, p. 894). Contextuality is said to be achieved when the researcher has the requisite knowledge and understanding of the research setting to access samples and collect more sensitive and accurate information.

Being Bhutanese (as considered above) I had the requisite knowledge and understanding of the Bhutanese research setting to access participants and collect the information necessary for the successful completion of this study. As previously discussed in Chapter Two, Section 2.1 of this thesis, a highly refined system of etiquette called Driglam Namzha exists in Bhutan. This traditional system encompasses a code of conduct that prescribes respect for authority and how to talk and approach people with authority. For instance, when a Bhutanese person approaches a person with higher authority they need to initially approach them personally in their office. Contacting them by telephone or email in the first instance is not allowed, and is considered to be unethical and disrespectful. With this in mind, the participants in this study were recruited in a manner that was consistent with this
value in Bhutanese culture. As described in the Section 3.2.1.2 of this chapter, participants such as managers in the Ministry of Health, were recruited by approaching them personally and providing them with a Plain Language Statement explaining the objectives and methods of the study.

Also in keeping with the requirements of Research Ethics Board of Health, Bhutan, and to ensure that the research was conducted ethically (taking into account cultural integrity), as stated in Section 3.2.1.2 of this chapter, permission to access the hospitals and their staff was obtained by providing a Plain Language Statement and consent form to the key people in the selected hospitals. My in-depth knowledge and understanding of Driglam Namsha enabled me to approach participants with respect.

**Appropriateness**

Appropriateness refers to ‘whether the study uses appropriate communication styles, conceptualisations, and translation process’ (Im et al., 2004, p. 894). This involves the use of congruent languages with participants and careful translation. Language, apart from being a tool or technical level for conveying concepts, is considered to be an essential part of conceptualisation, incorporating values and beliefs that carry accumulated and particular cultural, social, and political meanings that cannot be read off through the process of translation (Temple & Edwards, 2002). Translation can be a source of threat to the accuracy of cross-cultural, cross-language qualitative research. This is because concepts that may be expressed in one language or have currency in a given culture do not always exist in another language or culture and thus cannot be meaningfully translated from one language to another (Tsai et al., 2004). It is also argued that the epistemological difficulties in identifying similarities and differences can occur when different cultures and languages are used (Chen & Boore, 2010). Thus, as argued by Chen and Boore (2010), it is considered important for the researcher and translators to be fluent in both source language and target language, and are knowledgeable about both cultures.

While the use of the local languages are generally encouraged in cross-cultural studies (Im et al., 2004; Papadopoulos & Lees, 2002), most interviews in this study were conducted in English by a bilingual researcher (me). Only three out of 94 participants chose to speak in Tshangla (an eastern Bhutanese dialect which is also my mother tongue). The main reason the interviews were conducted in English was because the participants chose English as the preferred language for the purposes of
Chapter Three: Methodology

being interviewed. There is a threefold explanation for this preference: first, English is the language of instruction in Bhutanese schools and training institutes; healthcare professionals are also taught in English in their professional training programs. Second, English is also an official language in Bhutan and is used in Bhutanese offices/institutions (e.g., English is the main language used in all office orders/communications). Third, native languages in Bhutan do not have set terms for most English words (e.g., Bhutanese native languages do not have a clear term for ‘safety’) and thus cannot be translated to English or vice versa. Although using English as the language for interview, participants were nonetheless able to express their perspectives on patient safety and also to comment on how traditional cultural values might either impede or enhance change in regard to improving patient safety in Bhutan’s hospitals.

As described in Section 3.2.3 of this chapter, I transcribed all the audio-recordings verbatim. Being bilingual I was able to bring a culturally nuanced approach to this transcription and to capture words and concepts used by participants that could not be readily translated into English. Data were subsequently analysed using a Bhutanese cultural framework with every effort made to ensure that the renditions and interpretations made were done faithfully. The cultural metaphors used by participants were also carefully considered during the transcription and data analysis stages of the study. As a point of clarification, of the three interviews that were not conducted in English, transcription of the interviews was not possible. This is because the language used, Tshangla, is only a spoken language – i.e., there is no written script for this language. This meant that I had to make a direct translation of these interviews into English for transcribing. Also I did not have the capacity to obtain corroboration of my translation for reasons of confidentiality. This process may have allowed some inaccuracies to slip through; however, I have confidence in my translations as the views expressed by the participants were consistent with interviews conducted in English. To redress the risk of mistranslation, in addition to the data analysis steps shown in this chapter, Section 3.2.3 (Table 3.11), the accuracy and credibility of the interview translation and data analysis were ensured by the strategy outlined below being followed:

- Translating the Tshangla narrative into English text by using a bilingual translator (the researcher). By being a truly bilingual person with a related
Chapter Three: Methodology

cultural background the adequacy of the translations was ensured (Chen & Boore, 2010);

- Comparison of transcripts with other transcripts (transcriptions of English interviews) were done to gain conceptual equivalence and credibility;
- Thematic and content analysis were carried out by a bilingual researcher (me) who is knowledgeable about the Bhutanese culture;
- External-outsider (PhD supervisors) performed co-assessment of a critical mass of randomly selected interviews to triangulate and strengthen the credibility of the findings from a patient safety framework perspective; and
- The researchers (including supervisors) discussed and refined themes as these emerged from the data analysis and until the most credible interpretation of the data was reached.

Mutual respect

‘Mutual respect’ involves respecting and mutually esteeming the cultures of both researcher and participants alike (Im et al., 2004). Mutual respect is said to be achieved when researchers are cognisant of power differentials (i.e., between themselves and the research participants recruited to their studies), respect the views, beliefs, and values of research participants, and work to overcome traditional boundaries that separate researchers from participants (Im et al., 2004). In keeping with the view of mutual respect, as stated above, the sample of participants in this study was carefully recruited in a manner that was consistent with the core values of Bhutanese culture. Participants were given the opportunity to refuse to participate in or to withdraw from the study at any time. Participants also had an opportunity to choose a preferred time and place for their interviews. Further, as described in Section 3.6.2 of this chapter, the process of minimising the risk to participants (privacy and confidentiality) was carefully planned and maintained.

For the purposes of this study, my two PhD supervisors served as external-outsiders that is, individuals who socialise within the community different from the one in which he/she is doing research (Banks, 1998). Being external-outsiders, my supervisors were thus able to provide analyst triangulation to help strengthen the study.
Finally, based on the Bhutanese concepts of Le Judre, Tha Damtshig, GNH and Thuenpa Puenzhi, all interviews were conducted with profound respect, with attention given to empathic listening to and understanding the participants. As a further measure of respect, an executive summary of the findings of this study will be distributed to participants. An executive summary will also be provided to the Ministry of Health. Lastly direct feedback will be given to participating institutions via seminars and meetings.

**Flexibility**

‘Flexibility’ is described by (Im et al., 2004, p. 894) as referring to whether ‘the researcher was flexible in usage of languages and time for data collection’. For this study, as already stated above, participants were invited to select the language in which they preferred their interviews to be conducted. Moreover, as stated in Section 3.2.2.1 of this chapter, the interviews were conducted in a place that suited the participants and according to their own time and availability.

Flexibility is also taken to mean whether the participants feel comfortable and are able to answer the question(s) put to them by the researcher. As discussed in this chapter (in Section 3.6.1) all participants had the option of declining questions they felt unable or uncomfortable answering and the option to withdraw from the study. Significantly, no participants declined to answer any of the interview questions and no one withdrew from the study.

**3.5 Presentation, discussion and dissemination of research findings**

The data collected and analysed are reported and discussed in aggregate in this final report (thesis). The findings are also to be published in international peer reviewed journals and presented at professional conferences and seminars.

**3.6 Ethics approval process**

In conducting this study, a number of ethical issues were considered and addressed. Formal ethics approval from the Ministry of Health, Royal Government of Bhutan was obtained to carry out the study in the hospitals in Bhutan. Formal ethics approval was also obtained from Human Research Ethics Committee, Deakin University, as the study is being conducted in fulfilment of the requirements of a PhD program.
The process for obtaining ethics approval took approximately six months.

3.6.1 Informed consent
Informed consent was obtained from each participant. This was achieved by participants being provided with a plain language statement explaining the study and process of obtaining consent (Appendix C, S). Each participant’s level of involvement such as their requirement to answer the open-ended questions on patient safety issues during interview and NGM (including the time requirement of 45 to 120 minutes, and the processes of disclosing the event) were explained clearly to ensure that they understood what was required of them and the risks and benefits entailed in their participation. The voluntary nature of their participation and their right to withdraw from the study at any time (withdrawal consent form – Appendix T) was also explained. All participants were advised that, with their consent, the interviews would be audio recorded to ensure the accuracy of data collection. They were also informed about the security of the data and the processes of maintaining their anonymity i.e. by the use of codes and pseudonyms on the transcription and final report.

3.6.2 Privacy and confidentiality
To ensure the privacy and confidentiality of participants, all interviews were de-identified using alphanumeric codes. The data collected were archived using a password protector or stored securely in a locked cabinet. Only the researchers (self and supervisors) had access to the collected materials. Data were ultimately presented as composite depictions in the field report, further protecting the identity of individual participants.

3.6.3 Risk assessment and harm minimisation
Participants were not asked questions that would require them to disclose information of a nature over and above what they would normally disclose in the course of their everyday work. In the case of ‘case exemplars’ being given, these were de-identified in accordance with standard incident reporting processes and research ethics standards. Participants in the NGMs were made aware about the requirement to uphold the principles of confidentiality before commencing the meetings and in the enduring period after the project had been completed. Participants were also reminded that the
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confidentiality agreement is binding, even when with fellow NGM participants if/when encountered outside of the research context.

If participants did disclose details of an event or incident that required follow-up, depending on the nature and seriousness of the incident, in accordance with the accepted principles and practices of clinical risk management, participants were advised on the following processes to get their concerns remedied:

1. Contact the area supervisor/clinical risk manager/quality manager/senior manager/Chief Executive Officer (whichever was appropriate) at the hospital where the alleged incident occurred, and formally reported the matter; and
2. Contact the Ministry of Health for information and advice on incident reporting.

3.6.4 Contingency planning

No participants required debriefing over and above that which might sometimes be required in the course of their normal day-to-day lives. Most importantly, none of the participants withdrew from the study due to unforeseen events. Nonetheless, in order to avoid unforeseen events during the interview process, the following strategies were planned during the initial phase of this study.

1. In the case of participants becoming distressed during the course of the interviews, the interview would be temporarily suspended to allow participants to regain their composure; and
2. The participant(s) would be given an opportunity to reschedule the interview for another time, or to withdraw from the project altogether.

3.6.5 Security of data

All data or materials collected and processed were archived and stored in accordance with Deakin University policies and procedures. All data processed and encrypted by computer or saved in hard disk or thumb drives were protected by passwords. All field notes and transcriptions were de-identified using codes and pseudonyms. The data will be destroyed five years after completion of the study in the following ways:
Chapter Three: Methodology

1. Transcripts, field notes and others will be shredded by a secure document shredder

2. Information stored on computer Hard and Thumb drives will be permanently deleted.

3.7 Strengths and weaknesses of the study

The study and its findings may be limited on a number of accounts, which need to be taken into consideration. The first of these concerns is the limitation of the sample selected. For reasons of time and resources it was not possible to recruit participants from all hospitals in Bhutan. The sample is also the poorer for not being able to recruit all the participants (particularly doctors and healthcare assistants/clinical officers) initially proposed for the study. However, in keeping with the tenets of naturalistic inquiry it was not necessary to recruit a ‘total’ sample. By carefully selecting a criterion-based purposive sample and following the QED research method scrupulously, the ultimate findings of this study are highly credible, and have strong ‘fit’ and transferability to the contexts of the other hospitals not included in the study.

The second limitation of the study relates to the patient safety frame used to guide the research and which relied heavily on concepts and theories that have been developed and applied in resource-rich nations. This, however, is also a strength of the study, since one of its aims was to explore the ‘fit’ or otherwise of such a frame in under-resourced and data-poor nations, and to make meaningful comparisons. On the basis of the comparisons made, establishing a basis for informing a locally adapted program to address patient safety problems/issues identified in Bhutan has been rendered possible.

The third limitation of the study relates to the researcher. The research was carried out by a student researcher who is a health professional in Bhutan. This could have led to prejudgement of and over identification with the context. This, however, was also a strength of the study as the researcher had an intimate understanding of the culture of the Bhutanese healthcare system and thus was able to bring a highly nuanced approach to the recruitment of participants, the collection and analysis of the data that someone unfamiliar with the local context would have had difficulty doing.

The fourth and final limitation of the study relates to the amount of data generated. The study has generated a large amount of data. Decision about inclusion and exclusion of data were informed by the consistency of findings across the disparate
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participant groups and the themes and/or issues that were pertinent to informing the patient safety concerns in the healthcare context of Bhutan. In this process it is possible that some material got lost. The amount of data is, however, also a strength since it has enabled the researcher to capture a rich description of the lived world and addresses the question which this study has sought to answer. The data collected in this study contain a ‘thick’ and faithful description of participants’ understanding, perception and experiences of patient safety concerns in the Bhutanese healthcare system.

3.8 Conclusion

In this chapter attention was given to discussing on the research approach chosen to advance this inquiry. First, the nature of the QED research approach and the reason for its selection to advance this inquiry were considered. Then, attention was given to discussing the processes and strategies used for sample selection, data collection, data analysis, and research rigour. Ethical issues associated with the study were also considered. Finally, the attention was given to discussing the strengths and weaknesses of the study.
4.0 Introduction
In this chapter, findings from analysing 94 individual interviews; five Nominal Group Meetings; data extracted from 55 patient file/chart; and review of three policies/ regulations documents, five guidelines, five standards, three protocols, two clinical pathways and nine other forms (checklist, laboratory requisition forms, blood transfusion reaction form and others) from three different levels of hospitals are presented in an aggregate summary. To recap, the main aim of the study was to improve understanding regarding:

- Health service providers’ and managers’ knowledge, understanding, perceptions and experiences of patient safety concerns in Bhutan’s hospitals;
- Patient safety policies and guidelines developed and operationalised in Bhutan;
- Factors contributing patient safety concerns; and
- Strategies needed to address the patient safety concerns identified.

As discussed in the Methodology and Method chapter of this report (Chapter three), data were analysed using content and thematic analysis strategies, and their presentation is organised around the four key research questions. The four research questions which this study sought to address are:

- What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan?
- What are health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals?
- What are the factors that health service providers and managers have identified as most contributing to patient safety issues in Bhutan’s national, regional and district hospitals?
- What strategies are needed to address the patient safety issues and concerns identified?
Chapter Four: Findings

The findings from analysis of the data are presented in two parts – Findings: Part 1 and Part 2. Part 1 presents the key themes identified from a conventional western ‘mainstream’ cultural perspective (i.e., viewed through a western-oriented cultural lens/worldview). Part 2 presents the key themes identified from a Bhutanese cultural perspective (i.e., viewed through a Bhutanese-oriented cultural lens/worldview).

For the purposes of this chapter participant categories have been de-identified. Due to some categories of participants being comparatively small (e.g., those recruited from the Ministry of Health, the medical practitioner category, and lecturers), there was a risk that identifying the occupation or category of the participants could risk their being individually identified. Were this to happen, the study would contravene the ethical requirements regarding the de-identification and confidentiality of the study’s participants. Maintaining the confidentiality of the participant categories has not undermined the study’s success in capturing a ‘composite description’ of patient safety issues and concerns in Bhutan. For audit purposes, however, a confidential record of the list of participants together with their allocated coded chronological number code, alphanumeric codes and professional background has been maintained and, in keeping with the ethics approval granted, will be retained for a period of five years from the completion of the study.

PART 1

4.1.0 Introduction

In keeping with the aims of this thesis and the questions it sought to answer, Part 1 has its focus the presentation of research findings generated from an analysis of the data using conventional (western) patient safety framework. To this end, the key themes identified – and which are keyed to the research questions are presented under the following subheadings:

4.1.1 Patient safety policies and guidelines available in the Royal Kingdom of Bhutan

One of the key research questions driving this study was what patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan. Overall, the data analysis revealed three key policies/regulations, five guidelines, five standards, three protocols, two pathways, and nine other forms
Despite the availability and dissemination of the several policies, guidelines and protocols listed (Table 4.1), participants were not always aware of their existence.
Chapter Four: Findings

(PN24:P3; PN87:P1), with some holding that separate policies and guidelines for patient safety did not exist at all (PN43:P1; PN85:P1; PN67:P1; PN42:P1; PN66:P1; PN65:P1). Participants were also unsure about whether the national health policy addressed patient safety. As one participant responded:

I have not really heard of policy from the Government on patient safety issues, I don’t think there is one actually. I don’t even know whether the health policy addresses that. You will have to check it (PN89:P1).

Some participants believed that SOPs for guiding practice were available only at the NRH. This was in contrast to other individual healthcare facilities who have yet to develop their own SOPs for the coming eleventh Five Year Plan\(^8\) (refer to on page 51-52 of this chapter):

We are starting with JDWNRH [Jigme Dorji Wangchuck National Referral Hospital]. Once it [SOP] is functioning well in JDWNRH, actually we want to develop for all the hospitals. So the individual health facilities they have to develop their own SOPs. We are going to standardise the services provided at various health facilities. So these standards are going to develop during the coming eleventh five year plan (PN25:P2-3).

Of those who were aware of existing guidelines and protocols (e.g., the infection control and waste management guidelines and surgical checklists), many perceived that they were not being used effectively. In their view, implementation of the guidelines was poor, specifically in the NRH (compared to other Regional Referral Hospitals), even after repeated meetings and the implementation of an awareness raising program. Specialists in particular were perceived as being reluctant to use the checklists and guidelines (PN23:P8):

The implementation level of the surgical checklist was very poor. Since it was initially launched for the first time in the country, the specialists were very reluctant to follow the checklist and we saw a very poor implementation rate especially in National Referral Hospital. We did the

\(^8\) Refers to a series of national (economic) developmental plans created by the Royal Government of Bhutan.
Chapter Four: Findings

assessment and we found out that the National Referral Hospital has the poorest rate of implementation as compared to two other Regional Referral Hospitals. Again like we had a proper meeting with other doctors and then we again tried to sensitize them ‘why it was important?’ […] And then we launched it again in 2011 somewhere in February and still we did the assessment and the usage of the checklist was still very poor (PN23:P1-2).

One participant was especially concerned about lack of use of infection control guidelines during patient care (PN19:P3), stating:

Yes, only few use it [infection control guidelines]. I would say may-be 10% use it and 90% do not use it (PN19:P3).

When asked why they thought compliance was low, time constraint was viewed as one of the primary factors contributing to this situation. Time constraints, in turn, were perceived to be a result of staff shortages and poor staff-patient ratios (‘too many patients’) (PN23:P3; PN24:P3):

Firstly, it is the issue of time matters with less number of staff working – may be they don’t even have time to deliver their services for patient care. So they may not have adequate time to go by all revised protocols or waste management or any type of care delivery protocols (PN24:P3).

Owing to the patient load and things like that they [surgeons] claimed that it is very difficult and time consuming for them to follow. One of the doctors said that if they could do around ten operations a day, by following the safety checklist they will only be able to do five operations in a day. So these were the issues they have raised (PN23:P3).

4.1.2 Knowledge, understanding and perceptions of patient safety

None of the participants had formally studied patient safety in either their professional first level entry courses or as part of a staff development program. Despite this, most had developed an experiential understanding of patient safety as fundamentally concerning ‘doing no harm’ or ‘reducing the risk of harm or injuries’ to patients:
Chapter Four: Findings

As per my understanding the word patient safety means preventing from the accidental injuries and any other harm (PN29:P1).

It means there should be no harm to the patient during any medical intervention where it be investigation, treatment or any operation. So there should be no harm and then the outcome should be good to the patient. There should be no or minimal side effects to the patient (PN60:P1).

‘Harm or injury’ in this instance was understood to include any process that caused negative effects to the patient during the process of treatment. Specific examples included medication errors, procedure lapses, wrong blood transfusion, wrong investigations, wrong surgery and infections which resulted in patients being in a worse condition than when admitted to hospital (e.g., suffering a permanent disability or even death that could have been prevented):

Patient safety is a procedure that we as a healthcare worker should follow whenever you are giving care to the patient. It could be giving medication or doing procedures starting from [wound] dressings, giving injections, doing an invasive procedures. All these things that you provide should be safely provided and not end up with complications such as doing wrong procedures not following sterilisation techniques […] for example, giving wrong injections and bringing complications like deformities or leading to disability (PN73:P1).

Any process that causes [a matter of] damage to the patient during the process of treatment for his problem is actually patient safety (PN92:P1).

While most participants understood patient safety as ‘doing no harm’ or ‘reducing the risk of harm or injuries’, some participants, especially those from the Healthcare Assistant/Clinical Officers and Senior Managers groups, understood patient safety differently. They understood patient safety as involving having a strong infrastructure and keeping the patient and equipment ‘secure’ in the hospital during public health emergencies, for example, during natural disasters such as earthquakes or floods, and epidemics:

To me, I feel that patient should be secure in hospital (PN20:P1).
Chapter Four: Findings

But now, more concern on patient safety is during the time of disasters, epidemic outbreak or earthquake or flood or like these situations. Health facilities are more important than any other activity because we are to give care. Now during the time of these disasters if the healthcare facility infrastructure is affected badly then how can we give the care? That is why safety in the form of infrastructure which can withstand earthquake of various magnitude that is one. Another, during the earthquake the expensive equipment and facilities in the hospital will not be damaged - it will be protected so that we can give care (PN25:P1-2).

Some participants, however, appeared to confuse patient safety with quality of care and patient rights. For example, patient safety for them included providing good quality care to patients by taking account of their privacy, dignity and rights:

According to me, patient safety is a good quality care and good nursing management (PN6:P1).

Their [patients’] rights, their privacy all that is counted for me (PN19:P1).

I think patient safety has to do with providing safe medical or any invasive procedures with full understanding and respect for the patients’ rights, as well as respect for his dignity as human being (PN82:P1).

In investigating what participants knew and understood about patient safety concerns, it became evident that some participants were completely unaware of or had no sense of patient safety concerns in the hospital:

In my observation I have not come across any safety issues. […] So far we have not encountered any such issues (PN17:P1).

So far I have not come across any kind of major disaster against the patient safety (PN85:P1).

One of the participants conceded that patient safety was ‘not in their mind’ until being invited to participate in this PhD study. All they thought about was treatment of the patient and discharging them home:
Chapter Four: Findings

Until you came along […] patient safety was not in our mind. All we think about is treating and then send the patient home or do all that. But I think it is important – when we treat, we have to make sure that patient is safe too (PN9:P5).

Some participants had concerns about patient safety but were reluctant to discuss them. Of these participants, some thought patient safety was poor and expressed frustration and a degree of helplessness about not being able to do anything about it (PN89:P3; PN8:P2; PN84:P3). For example, in one case, there was an incident where a child died. The participant disclosed that they really did not know what had happened, and there was no process for staff to find out what had happened and to learn from what had happened so that it could be prevented from happening again:

Just before last year, one child – 11 years old child in surgical ward had circumcision. It was done in the day time and at 1.00 am in the night the patient expired. […]. So I don’t know what they gave (PN50:P8-9).

Others, however, considered patient safety in their hospitals to be ‘good’ but at risk of slipping back to ‘bad’ (PN59:P6):

Honestly, it is [patient safety] ‘good’. Compare to my first two years in the district, maybe because I am here [National Referral Hospital] now, I feel patient safety is ‘good’ now. It has improved […] especially the infection control procedures was not strictly followed. Simple thing – the hand washing practice was not seriously taken. But I think now it has improved. Even the ward, Intensive Care Unit, you can see the differences – the labelled dustbins and proper charts how to wash hands, when to use gloves and all. I think now it has improved (PN85:P7).

The [patient safety] system is not there and the awareness is not there at the moment. And there are so much room for improvement. If we do not bring in these programs, this awareness, then it is going to slip from good to bad definitely or the other way round (PN82:P14).

Of those who were aware and were prepared to discuss patient safety concerns, medication/drug errors, HAIs, surgical errors, diagnostic errors, laboratory/blood
testing errors, fall injuries, information transmission/communication errors, and misidentification of patients were commonly identified as being their major patient safety concerns. These concerns are considered further under separate subheadings below.

4.1.2.1 Medication/drug errors
There was strong consensus that medication errors are the most common patient safety concern in the Bhutanese healthcare system. Common errors included issuing and administering the wrong drugs to the wrong patient, administering drugs that had passed their expiry date, giving the wrong dose (including wrong injections dosage and overloading of intravenous fluids), the continuation of multiple antibiotics and other drugs for unjustified periods, and drug omissions (failure to administer prescribed drugs) (PN46:P1; PN7:P2; PN47:P1; PN14:P1-2; PN4:P2; PN74:P1-2; PN38:P3; PN88:P4; PN74:P1-2). Some stand out examples involved staff issuing diabetic drugs instead of antihypertensive drugs to a patient with hypertension; administering intravenous fluids without proper calculation of flow rates; and failing to update the patient’s medication orders (including omitting drugs which patients were supposed to receive):

I think the most common is errors in drug doses and medications. […] medication error includes errors in giving IV fluids like sometimes wrong IV fluids, wrong rate of administration – improper calculation of the drop rates (PN14:P1-2).

So in medication, I think it has happened. It was in 2012 one patient (I won’t name), one old lady came for hypertension treatment out here. While issuing the drugs they have given diabetes medicines. So we had a problem (PN30:P2).

There have been cases like even in cases of orals it happens [forgets] when we are updating this medications for every shift. So especially if somebody forgets to update it then it is never seen by other shift and then the patient is without the injection or oral medication for one day (PN74:P1-2).

‘Irrational’ use of drugs by the clinicians also emerged as a concern. What the participants meant by the term ‘irrational’ was that drugs were being prescribed
without a clear rationale. This was manifested by over prescribing high quantities of drugs, the prescription of high doses that could not be justified or were outside recommended doses, and using the drugs (antibiotics) to treat non-bacterial infections or viral conditions (PN33:P1; PN82:P4; PN85:P2; PN84:P2):

[... ] misuse of antibiotics – sometimes you continue antibiotics even for cough and cold where it is not required. They [doctors] use high dosage of different antibiotics for organisms that are not sensitive (PN83:P1).

Of course the medication part. Little bit of some errors in that – over prescriptions. For example, over prescriptions of drugs [antibiotics] for simple cases such as cough and cold – adding lot of medicines (PN85:P2).

A review of annual adverse drug reactions report compiled by the pharmacy department, and accessed in the course of this study, revealed that adverse drug reactions also appeared to be an issue. These are summarised in Table 4.2.

### Table 4.2: Adverse drug reactions

<table>
<thead>
<tr>
<th>Brief description of the incidents (as per the annual adverse drug reactions report)</th>
<th>No. of incidents (categories)</th>
<th>Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 - Patient developed rashes with rigor right after intravenous administration of Ceftriaxone</td>
<td>2 cases (other drug adverse events)</td>
<td>Medications/adverse drug reaction</td>
</tr>
<tr>
<td>2011 - Patient developed rashes with rigor right after intravenous administration of Ceftriaxone</td>
<td>1 case (other drug adverse events)</td>
<td>Medications/adverse drug reaction</td>
</tr>
<tr>
<td>2010 - Patient developed rashes with high fever right after intravenous administration of Ampicillin</td>
<td>2 cases (other drug adverse events)</td>
<td>Medications/adverse drug reaction</td>
</tr>
</tbody>
</table>

#### 4.1.2.2 Healthcare Associated Infections (HAIs)

Post-surgery wound infections and urinary tract infections were identified as the two main HAIs in Bhutanese hospitals. As participants responded:

Infection is definitely an issue. Previously where I used to work, [...] in a small district hospital, usually patient with small surgery – minor surgery was getting post-surgery wound infection. Wound not healing faster (PN19:P1-2).
Chapter Four: Findings

We do come across hospital acquired infections – people especially with long term hospitalisation tend to get urinary tract infections. I don’t know how people [healthcare providers] are handling the catheterisation process (PN84:P2).

Also associated with HAIs were poor hospital sanitation (hygiene) and the hygiene care of surgical patients (i.e., how well the patients were cleaned before, during and after surgical procedures). Participants believed that cleanliness and safety measures were not upheld by healthcare providers. As participants commented:

One of the most common is hygiene firstly. Secondly, sanitation around the hospital and the ward. Thirdly the procedures that we take. I think we should be taken care to make sure that the patient had the safety measures (PN49:P1).

Procedures – surgical procedures, how well the patients are cleaned, how good the procedures, how well the post-operative care are done that are also concern to us (PN89:P3).

I have seen patients’ venepuncture, phlebotomy, [the staff] are supposed to use gloves and swabbing. But here we do swab and with hand they will palpate the vein. When it comes to blood culture it is same. They will swab with the spirit swab and then they will feel for the vein by hands, then after this without gloves, everything they do like that (PN54:P11).

4.1.2.3 Surgical errors and post-operative complications
Surgical-related patient safety concerns were also identified. Notable among cases identified was the retention of foreign objects (e.g., gauze or instruments):

In OT, actually these are not that common but it does not mean that we don’t have. In 2009 we had one foreign body retention inside the abdomen – gauze. So we had one case of that. So we had few incidents in the past (PN93:P2).

We always hear from the operation theatre that some gauze pieces or some instrument has been left inside (PN45:P1).
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In some instances surgical errors resulted in mortality. For example, in one case a child died within a few hours after circumcision (refer quote number one by PN50:P8-9 in page 57).

4.1.2.4 Diagnostic errors
Making mistakes in patient diagnoses was also perceived as a common patient safety concern:

I think there has been few cases of misdiagnosis (PN36:P2).
There may be few diagnostic error (PN61:P1).

… They [doctors] misdiagnose and then sometimes they give wrong medication which I have seen in one case that the patient really had adverse effect (PN39:P1).

4.1.2.5 Laboratory/blood testing errors
Blood and laboratory errors were another concern. Common errors included doing wrong or unnecessary blood investigations, and issuing wrong laboratory reports:

Another is about wrong investigations done which are not really necessary for the treatment of the patient (PN36:P2).

Sometimes there are few laboratory mistakes. I don’t know whether it is the printing mistakes, sometimes we send two samples almost within 2 to 3 hours gap and the report come completely different. May be because staff are giving wrong sample for the other patient or is the printing mistake from the lab […]. We have cases like same patient having done the same investigations in few hour showed vast difference in the reading (PN41:P1-2).

Mixing up the report is one which has serious consequences to the patient management because wrong patient get wrong information and they undergo mental trauma and sometime even go to the extent of getting the wrong surgery, wrong treatment for them (PN94:P1).
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A review of annual blood transfusion reactions report compiled by the blood bank, and accessed for the purpose of this study, revealed that wrong blood transfusion (e.g., transfusing ‘B’ group blood to ‘O’ group patients) was also a concern (Table 4.3).

Table 4.3: Wrong blood transfusion

<table>
<thead>
<tr>
<th>Brief description of the incidents (as per the annual blood transfusion reactions report)</th>
<th>No. of incidents (categories)</th>
<th>Errors</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 – Wrong blood transfusion by staff</td>
<td>1 case (wrong blood transfusion)</td>
<td>Blood/laboratory</td>
</tr>
<tr>
<td>2011 - 3rd year student nurse transfused ‘B’ group blood (which was meant for another patient) to ‘O’ group patient. -Staff transfused group ‘A’ to Group ‘O’ patient</td>
<td>2 cases (wrong blood transfusion)</td>
<td>Blood/laboratory</td>
</tr>
</tbody>
</table>

4.1.2.6 Fall injuries

Patients falling from beds and trolleys (e.g., during patient transfer) was perceived to be a problem:

[…] few cases what I have seen in my setting was fall from bed (PN80:P2).

Since I work in paediatric I have seen the fall injury. So during the night times, during my periods I have seen many a times, almost every night baby falling from the bed (PN50:P1).

While patient is transferred in the trolley there was one incident where the patient went off the trolley. And then few times we have heard patient falling from the bed. So fall is common (PN68:P1).

4.1.2.7 Information transmission/communication errors

Failure to provide an explanation or communicate with the patient about their care and treatment (e.g., what healthcare professionals are doing and are supposed to be doing, and what risks and complications can arise during healthcare process) and informing patients of ‘dos and don’ts’ were seen as posing particular challenges:

I would like to say that most of the time the misunderstanding that happens between the patient and the staff is due to lack of adequate communication.

Many a times what we have done is for example probably not spend
enough time on that part - explaining the diagnosis, where is the problem, what medicine you are prescribing, how you need to take that medicine, what are the side effects of the medicines, all these things, you know (NGM1:P1).

I think we probably have taken as granted that the procedure which is to be done or medications or any investigations to be done to the patient is good for the patient. So it is in the good faith they think that I am not going to anyways harm the patient. So this is the procedure that is being ordered or this has to be done. So it is not done [explained] and taken as granted that it is safe (PN60:P2).

Poor communication (including verbal abuse and rude behaviour of healthcare professionals towards patients) was also perceived to have a detrimental effect and as discouraging people from seeking treatment:

May be rude behaviour. The rude behaviour of nurses and other health workers are harming the patient. That may be actually the major one. I think not physical aspect, must be the psychological aspect of the patient where people fear to approach the doctor, people fear to come to the hospital. So I think that is the highest now. The psychological damage which we are doing to the patient. […] because we are not treating them humanly - talking, handling humanly (PN75:P4).

I think one complaint we hear is that of verbal abuse by the health professionals to patients and their relatives (PN36:P2).

4.1.2.8 Misidentification of patients
Participants disclosed that a notable characteristic of the Bhutanese healthcare system is the lack of a formal patient identification system. This was particularly problematic since people often have the same or similar names. A major consequences of this was the risk and incidence of wrong procedures being performed on the wrong patient:

I think one pertinent one is for lack of patient identification marks. Our Bhutanese have similar names and then that can lead to, during procedures in rush hours, doing procedures in a wrong patient (PN90:P3).
Commonly it is most of the time we have similar name because of the common name everywhere. Men have similar name. So because of name we have some time problem (PN34:P2).

In my unit because we don’t have the patient identification tag – we have not started that one (PN93:P2).

**4.1.3 Factors contributing to patient safety concerns**

Participants identified a range of issues they believed were the most common contributing factors to patient safety concerns, notably, a lack of: competency, resources, policies and guidelines, communication and collaboration, management and governance, patient safety reporting system, and patient education on patient safety, as considered below.

**4.1.3.1 Lack of patient safety competency**

The most commonly cited factor contributing to patient safety concerns was healthcare professionals’ lack of patient safety competencies. The specific competencies identified included knowledge, skills and attitudes as described under separate subheadings below.

**4.1.3.1.1 Knowledge**

A lack of knowledge about quality improvement and patient management processes were identified as a major contributing factor to patient safety concerns (PN23:P5; PN53:P1; PN54:P4; PN82:P2; PN88:P5; PN3:P3; PN78:P1). For example, concern was expressed that healthcare professionals ‘do not know what patient safety is’ and they were not aware of how healthcare processes could put patients at risk. As a consequence, healthcare professionals often fail to follow the principles and steps of procedures during the delivery of healthcare:

I think we have to see the awareness of patient safety. Now most of the people – the nurses and staff don’t know what patient safety is. For them carrying out the orders and doing things is important but how a patient can undergo so many complications, that awareness is not there. […] If they are not aware of patient safety, they will not take care of the importance of SOPs. They will do whatever they want. They will not care about the steps
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[principles and techniques of procedures], and when that step is not followed then the patient is at risk (PN92:P3).

Participants were of the view that medication errors and HAIs were linked to healthcare professionals lacking requisite knowledge about medicines/drugs (e.g., how to prepare and administer injections) and infection control (e.g., how to prevent cross infection):

Sometimes the medication errors usually happens because they aren’t aware of the right method to be given. For example, there are some medications like imipramine and Cloxacillin which are really painful and then it should not be given direct bolus, but it should rather be given as infusion. So there are some nurses who are maybe it could be lack of knowledge or their awareness. So, it so happens that they are given bolus and then we have to be facing a problem and solving it (NGM5:P2).

And sometimes when preparing injection solutions, they [staff] don’t follow the right amount of solvent, like distilled water – how much, they never look at the manufacturers’ instructions. Sometime they add more or less. I think these are some of the areas – this one is a common safety issue that I have found (PN88:P4).

Like our third party workers such as sweepers, cleaners and ward boys they are not trained on infection control (PN40:P2).

Also implicated was a lack of knowledge among nurses about how to anticipate and recognise problems related to surgery, and about post-operative management were identified as key factors in poor post-operative management. As one Nominal Group member commented:

And then other problems like a lack of knowledge and awareness. For example, if a child is having a NG [nasogastric] tube or NG aspiration that needs to be replaced but they never do it, why because they have no idea that needs to be replaced with the right kind of amount of fluid. Those are the things that are currently happening (NGM5:P4).
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The lack of knowledge about patient safety was attributed to the professional qualification levels and training in patient safety that healthcare professionals had (or had not) received. For example, most healthcare professionals in Bhutan have only a basic first level entry qualification education (PN2:P4; PN52:P1; PN80:P3; PN78:P1). Even those with higher levels of qualification and education (including physicians) did not have any specific training in patient safety either as part of a staff development program or in their professional first level entry courses. Moreover, most of them were trained in a region where patient safety was not a top priority:

There are no training at all for the care givers as I said. I am one of the senior most physicians in the system and I have not yet got exposure to even a single meeting of either way of this kind [patient safety] (PN82:P5).

I think most of the doctors are trained in the region. They are not coming from the advanced country where these things [patient safety and risk management] are very much in place and they are aware of these things. Our people [doctors] are coming from Bangladesh, India, and Sri Lanka - those places. So I think awareness [on patient safety] in these region is not as high as the developed world. So therefore they are not being made aware. I mean, they come to us from the place where they trained without where this [patient safety] was not a big issue and come to work in a place where this is again not a big issue (PN82:P5).

4.1.3.1.2 Skills
Clinicians not carrying out complete patient assessment (e.g., not checking vital signs and not taking detailed history or reviewing the patient history) was also perceived as contributing to wrong patient diagnoses and treatment (PN13:P2-3; PN61:P1). The following case is an instructive example of a patient safety incident that resulted from failure to perform a comprehensive patient assessment:

So actually one issue is usually the patients are seen in […] OPD [Outpatient Department] and they are sent here [to the ward]. So they [clinicians] did not monitor the vital signs and then we had some incidents. I got two cases. When they came here they came walking but then they did not have this vital signs monitored and the patient did not have BP [Blood Pressure checked] - actually the patient was ‘walking dead’. So then we
have to manage [the patient] here in the ward and then ultimately we have to send to ICU. So we had few incidents of such cases (PN52:P1).

4.1.3.1.3 Attitudes

Poor staff attitudes towards patient safety practices was noted to be an issue. The most prominent issues identified by participants were staff ignoring the requirement to cross-check blood group before administering blood transfusions; staff failing to update patients’ medication orders and/or drug charts; and staff administering medications without consulting the drug chart:

Sometimes especially for the student nurse there is a tendency of carelessness. They don’t read the label; they don’t read the drug chart properly and then they don’t consult senior nurses. And those nurses coming from the district hospitals, sometimes they have ego and they don’t consult with the junior nurse or some old nurses. [...] Just casually they give the medicines. [...] I think in related to senior nurses this is the main problem that they don’t want to consult junior nurses (PN50:P2).

Other problem is the medications are never updated - in order to prevent this errors we have a drug chart but what happens is that when some nurses, when they go for round they forget to update it, which means the patient is receiving a dose less or not receiving at all. These are medication errors that are currently happening (NGM5:P2).

And also it is the attitude [of healthcare providers] sometimes (PN16:P3).

Other could be giving wrong blood transfusions. For example, instead of blood group ‘B’, people [healthcare providers] might overlook it and give ‘A’ positive to patients. So these are the incidences I could remember few (PN4:P2).

Taking ‘shortcuts’ when performing procedures was also identified as an attitudinal issue (PN73:P4). In this instance, healthcare professionals did not accord sufficient importance to the Standard Operating Protocols (SOPs) and guidelines. Procedures such as hand washing, intravenous cannulation and dressings were not carried out according to the protocols (PN90:P3; PN54:P4; PN79:P1; PN66:P2):
If I have to say, I think certain procedures are just let to be done by people who are not very cautious about taking precautions. For example, as I know, as a medical student we knew that we have to take lots of precaution even to insert a catheter but now I see that it is being done very casually. I don’t think people are really taking care of the proper sterile techniques and all. So that could be the reason (PN84:P2).

Yeah, actually IV [Intravenous] set should be changed. [...] I think it should be changed within 48 hours or 72 hours. So what we usually practice out here is like we keep that as long as patients don’t get discharged. So somewhere the infection is there. And when we prick the IV cannula, we don’t usually clean with the spirit [alcohol] swab, so again there is infection. And while administering the IV fluids also we don’t clean them anyway. Just we unplug the cannula tip and just push. So I think, in that way there is infection [risk]. And while pushing [medicine] also most of the time what I find is, they push like immediate gush. What I heard from others is that to administer IV injection it should be trained in separate way. So we don’t know how many minutes that particular injection has to be pushed. So we push. So there I think patient safety is in question (PN37:P2-3).

While we are giving the treatment we are not practicing and not doing the dressing and all in a safe way and also not giving good care to the patient. That also contributes to patient safety concern (PN5:P1-2).

A complacent attitude among healthcare professionals was identified as another concern. Examples included healthcare professionals not putting their knowledge into practice even if they knew about patient safety measures. For instance, healthcare professionals did not always follow infection control guidelines and would throw infectious waste into common waste bins despite knowing that they should not do so:

I think various categories of health workers are actually taught but not practicing. They have the knowledge; they have everything except not practicing – like in infection control and waste management. They know they should not throw the infectious waste into common waste bin but it becomes their habit to throw there rather than spending another one or two seconds and throw in the proper bins (PN25:P8-9).
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To be very frank, let me be very frank, giving an example of hand washing.
I give this because this is very simple thing and nothing is wrong doing that and you just have to practice but still the situation is not very good. Some are practicing, some are not practicing. Most of the time it is the doctors. Let me mention doctors – they don’t follow the simple practices that they are supposed to follow (PN66:P4).

Some participants believed that the ‘free healthcare’ service provided by the government and the lack of a patient rights charter contributed to a ‘laid back situation’ that in turn contributed to an attitude of complacency among some healthcare professionals and patients alike (PN82:P3; PN81:P3; PN80:P3). This, it was suggested, has resulted in perceptions by patients and healthcare professionals that patients ‘do not have a right to demand for quality care’.

Right now, the people are very complacent about patient safety even if it [healthcare] leads to the worst kind of situation, like certain death. They [patient and families] don’t sue the doctors (PN23:P3).

Free [healthcare] services means the patient sometimes do not have much right to demand quality or demand the providers. That is a weakness of our system. Patients feel that because somebody is giving free you are not supposed to ask questions. You are not supposed to demand your rights and that is one reason why some of our health workers become very complacent because people are not demanding. So they become complacent (PN89:P4).

In Bhutanese context, you hardly see a patient suing doctors, which is why the situation is little bit laid back. We had an incidents where certain gauze and needles were left inside. Still then people were complacent. Most of the Bhutanese don’t complain (PN23:P2).

Over confidence was another attitudinal issue identified by participants who believed this was caused by the cultural demand to respect authority. A cogent example of this can be found in the description of a situation where a senior nurse failed to check the standard guidelines for ventilator management and connected the ventilator filter incorrectly:
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Over confidence in [one’s] seniority is a big problem. They [the senior staff] take things for granted and they don’t follow the checklist or the SOPs. For example, in the paediatric ICU, because we have the checklist how to connect all the [ventilator] filter, all the accessories, so one of our staff didn’t check the standard guidelines and simply connected and both the filter they have connected in the same side. Sometimes they feel that they know everything (NGM5:P9).

4.1.3.2 Lack of resources

There was strong congruence across all categories of participants that a shortage of staff (poor skill mix and staff-patient ratio) and infrastructure were key contributing factors to patient safety concerns (PN16:P3; PN91:P2). The shortage of staff contributed to multi-tasking, time pressure and staff fatigue (NGM3:P1; PN76:P6; PN30:P2). For instance, two nurses look after 36 inpatients, as well as outpatients coming to hospital during the evening and night shifts, potentially compromising the safety of patients in the process (PN55:P2; PN67:P2; PN74:P2; PN78:P1). As noted earlier (pp. 57-61) poor staff-patient ratios were also seen as a key contributors to medication and diagnostic errors (PN4:P4; PN83:P4):

In this medication error which I have seen till date, basically in district situation we have very less number of staff. We have very acute shortage of staff. So during evening and night shifts, especially that is the hour when you tend to make mistake. So you are alone and you not only see the indoor patients, the outdoor patient comes in – like simple headache, for blood pressure checking. So everything have to be looked and if there is serious patient in the ward and that is the time where that one staff gets to run here and there. In that process there is always a chance that she or he can give a wrong medication (PN19:P4).

Contribution for medication error may be due to the shortage of nursing staff where while they are preparing the medicine, they have to go and attend the other critical cases, if any (PN61:P1).

In emergency department because of the shortage of doctors and skilled person, simple suture are done by our nursing staff. So this could be an
issue sometimes. It can have high risk of infection of the patient (PN87:P2).

A lack of specialised personnel in respective areas of patient care was also perceived to be an issue leading to patient safety concerns. For instance, due to the absence of a physician or anaesthetist in the ICU, nurses were left to manage all patient care in isolation:

For the patient safety side we cannot contact physicians at right time. In Intensive Care Unit till now we don’t have appointed physicians or anaesthetist like that and when in emergency it is very difficult to contact physician and we have to manage ourselves. Sometimes after resuscitation only physician will arrive (PN64:P1).

We don’t have doctors to see patients. So we nurses have to manage most of the time giving medicines or writing prescriptions and all. Nurses have to do other procedures like suturing and all. Conducting deliveries and monitoring everything (PN32:P1).

Beside human resources, the lack of a proper infrastructure was perceived to contribute to patient safety concerns. The infrastructure was considered not to be user friendly – in particular, for disabled patients (PN33:P5; PN83:P5). Slippery flooring in toilet areas with small rigid doors, falling ceilings and leaking sewage exposed patients to risk of harm, including cross infection (PN77:P2; PN68:P1; PN31:P1). Further, lack of wheelchair/trolley pathways and a functioning elevator compromised safety, possibly contributing to patient mortality (PN58:P1):

I think our hospitals are not really disabled patient friendly hospitals. So that also needs to be looked at because when we look at the safety we have to also look at the other aspect because many of hospitals cannot be approached by wheelchair. So, half the time the lift and elevators do not work. Some people have even died trapped in the lift. So these are not good actually. So our construction industry is not yet matured. Our quality of construction is not good. Now the new hospital, I have seen ceilings falling off which is bad, it can hit on somebody’s head. The sewage can leak
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the ceiling on people’s room even in our operation room I saw one of the ceiling falling off. So that is not safe (PN84:P7).

Actually the foremost I want to say is the infrastructure itself is not very convenient for us to take care of the patient. Suppose see the toilet. When patient goes for the toilet, the wheelchair cannot be wheeled in the toilet. The patients, sometimes, they have to go walking which may fall and sustain injury. The infrastructure itself is not very good at first. Then this is not good for our patient because they are not aware of the hygiene, they don’t know how to use the toilet and in between, sometimes, there is block and some infection…this is how it causes (PN91:P7).

Poor equipment such as beds and trolleys without side rails was seen to be a key contributor to patient falls (PN80:P2; PN68:P1; PN58:P1; PN31:P1):

[…] few cases what I have seen in my setting was fall from bed. And then I think that too is not the carelessness of healthcare providers but I think the facilities that we have. Our beds are very plain and then nurses on duties are very limited (PN80:P2).

While patient is transferred in the trolley - there was one incident where the patient went off the trolley. […] There is no railing on trolley. And then few times we have heard patient falling from the bed. So fall is common. I think that is one issue which we have. Though we have huge infrastructure but the safety aspect is not included (PN68:P1).

A lack of rooms to isolate patients with infectious diseases, to store clinical items (e.g., sterilised packs), and to carry out procedures without disruption and contamination were perceived to be the main factors contributing to HAIs (PN70:P3; PN84:P2; PN28:P1-2; PN6:P2). Also associated with HAIs was the lack of basic materials and equipment for infection control such as disinfectants, soaps and plastic bags, steriliser and wound dressing articles/sets. Additionally, the dusty hospital surroundings and the absence of proper systems to monitor the rate of infections in the hospitals further fuelled healthcare associated infections (PN13:P2; PN63:P2; PN70:P3; PN84:P2; PN73:P4; PN75:P5):
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Infection is definitely an issue. [...] since we don’t have system to see the force of infection in a small district hospital, so usually patient with small surgery – minor surgery is getting post-surgery wound infection. Wound not healing faster and looking at the ward scenario, the external environment is so dusty, cannot maintain the cleanliness of the ward. Infection is there all the time, and we only have one reagent – chlorine, which we use to mob or clean. [...] And another thing is the sterilisation, in the district I have seen and experienced myself, to sterilise, we have vertical steriliser. So it has a socket and a seal that is broken and it takes months and months to reach to the hospital. So in that period we don’t have any other choice rather to go on sterilising on that steriliser to sterilise. So we don’t know actually whether it’s been fully sterilised or not. There is no other way of checking (PN19:P2).

Similarly, diagnostic errors were believed to be related to lack of adequate investigative resources (e.g., required laboratory reagents) and functional and reliable diagnostic equipment (e.g., ultrasound and electrocardiogram (ECG) machines):

I think the most common patient safety issues is establishing diagnosis. I find it as a major issue because patients are not properly followed up and then adequate investigating facilities are not available and we lose patient in between (PN13:P2-3).

For example, just now ultrasound. We have ultrasound but the machine is not working. We get so many patients, now we have to send them back. Even if we do [use ultrasound machine] it is not safe, especially in pregnancy because there is a leakage of current or something like that (NGM3:P1).

Even ECG machines we do not have. BP instrument, it is not functioning (NGM3:P1).

Frequent shortages of prescription medicines was also a concern:

I feel that this [patient safety concerns] is happening due to frequent shortage of medicine (PN22:P2).
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So prescribing medicines out here. But medicines are out of stock (PN30:P5).

Besides a shortage of human resources, inadequate infrastructure, a lack of drugs, and the lack of up-to-date health information technology were considered to have contributed to human error:

In the age of IT [Information Technology], we are still in olden days where all our staff and nurses have to write down everything. So, what happens is, copying one drug list from another, human error. So if it is computerised and something like that it will be much better (PN8:P2).

4.1.3.3 Lack of policies, guidelines and protocols on patient safety
The lack of proper policies, guidelines, standard protocols and checklists was perceived to contribute to patient safety concerns (PN67:P2; PN93:P2). As a consequence of these deficiencies, there was a perceived variation in the management of patients across different hospitals and/or wards (PN33:P2), with treating specialists and nurses not agreeing on treatment matters, and patients ‘being thrown like a table tennis ball’ from ward to ward:

One is the standard management of patient. That depends on individual specialists and individual doctors. A major crux of the thing is how to come to a proper diagnosis and what line of treatment. So, individual – a highly qualified specialists have their own line of management which some specialists don’t agree – a lot of controversies. Suppose a patient was seen by one specialist then another specialist either hesitates or refuses to see this patient or he cancels all the treatment of that specialist and starts on new treatment (PN25:P3-4).

And another thing what I have recently heard is that the patient is being thrown like a table tennis ball from OT to the ICU [Intensive Care Unit] and then from there they don’t accept the patients saying that ‘patient does not need an ICU right now. The patient is a surgical patient. The patient should be transferred there’. So I think there should be a standard protocol saying straight away from OT where the patient should be going because last time we recently had a meeting where from the emergency departments
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directly the patient goes to ICU, ICU they say we don’t have bed right now or something like that. The patient lands up roaming all in the wards and I think ultimately this is very difficult and this is not good for the patient. I don’t think we should be playing around with the patient’s life throwing him here and there saying we don’t have so and so equipment, and so and so doctors don’t attend the call (PN45:P4).

The lack of a patient identification system (referred to under Section 4.1.2.8 in this chapter) further compounded patient safety concerns. For instance, patients being transfused with wrong blood, undergoing wrong procedures, and receiving wrong blood reports was reported to be caused by lack of patient identification and bar coding systems:

Next one would be especially during blood transfusion, in Bhutan we have same names and sometime coincidently it happens with the same ages. So what happen is we do have incidents where though the patients have names and ages, they do have a different group and we have so many like the reported cases where almost like patient was given the wrong group of blood. That we do have (PN65:P1).

We have been unable to start bar coding system in histology and microbiology to prevent patient mixed up – preventing report mixed up and all those (PN94:P2).

I think one is for lack of patient identification marks [system]. Our Bhutanese have similar names and then that can lead to doing wrong procedures on a wrong patients during rush hours (PN90:P3).

4.1.3.4 Poor communication and collaboration
Healthcare professionals failing to communicate with each other and not documenting patient care clearly or thoroughly were also identified as contributing to patient safety concerns (PN54:P2; PN14:P2; PN94:P2; PN71:P2; PN6:P2; PN14:P1-2). For example, the continuation of medications for unreasonable periods (e.g., for twenty to thirty days) unnecessarily resulted from poor communication between doctors and nurses. In the words of one participant, physicians do not write the ‘specific days’ (e.g.,
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how many days the particular antibiotics are supposed to be given) when they prescribe the drugs:

When I talk about the patient safety one thing is that there is a gap in between doctors and nurses because they prescribe antibiotics and it goes more than 20 to 30 days. I don’t really understand whether the doctors are not noticing it or they are giving nurses to see the case. And sometimes one patient will be getting 3 to 4 antibiotics together. I feel this is one of the patient safety issues which will lead to drug resistance. Doctors when they prescribe the drugs in ward, most of the doctors they use Ceftriaxone which is a 3rd generation antibiotic and they do not write the specific days, like for this many days. They just start the drugs and sometimes it goes to 20 to 30 days (PN38:P3).

Some participants thought handing over and receiving handover at shift transition was not done properly. Most of the time patients were described as ‘stable’ during handover. As a consequence, important changes in a patient’s condition were overlooked and patients left at risk of suffering from catastrophic incidents, including death:

Maybe that [handing and taking over] is also one of the contributing factors. It should be a more concern because we do as a casual handing and taking most of the time – not a professional handing and taking. For instance, if we trans-in one patient from another ward the receiving party also receives casually. So this will lead to a misidentification of patient and sometimes we take that patient as stable one. So in between patient happens to go into arrest or death – it is happening sometimes. So I think handing taking is the concern (NGM5:P2-3).

Some participants also thought that lack of proper communication and provision of information to patients about their disease and treatment led to poor compliance with treatment:

Many a times what we have done is for example probably not spend enough time on that part, say explaining the diagnosis, where is the problem, what medicine you are prescribing, how you need to take that
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medicine and what are the side effects of the medicines, all these things. The patient will know only when we give enough time explaining to them. But I know it is not possible in every case because of overloading or because of time but as far as possible I think the patient will be more compliant if they know the diagnosis, why he is taking the drugs and why the drugs he is getting (NGM1:P1).

A lack of teamwork and collaboration among departments and clinicians in the hospitals were perceived to be problematic. Participants perceived there were internal conflicts and ‘tribal fights’ among different clinicians and departments, with stakeholders trying to ‘blame and pull each other’s legs’ (which in Bhutan is taken to mean ‘belittling’), disrupting the harmony, respect and cooperation in the workplace (PN84:P5-6; PN93:P6; PN19:P7):

Yes definitely, we are not working as a team. For example, last time there was a burn case and then this burn case was neither accepted in paediatric ward nor accepted in surgical ward. So which means we are neglecting the patient (PN74:P6).

Yeah it is like that. I have joined this hospital since 2007. So I think this is my 7th year working here. So what I have seen is – I won’t mention the name of doctor, he was a medical doctor, so there was DHO (District Health Officer). DHO is always involved in the activities. […] so they have a very ego system. So when it comes to review meeting, getting together, so one will tell another thing and another will tell another thing. So there is nothing coming into the paper. Always both of their talk becomes parallel (PN30:P7).

Healthcare professionals who were unwilling to take shared responsibility for any issues was also seen as a concern. Participants indicated that it was very difficult to bring all members of the departments together to get things done in time, and that this was due to a lack of cooperation:

I know, may be our background is different with the medical background and nursing background. So maybe we do face some problems like when we ask for something which is required for the patient we do not get in
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time. So out here I think we are lacking cooperation among the different units and blocks (PN52:P3).

As of now we have little bit problem in getting all department together to get a good care of the patient. For example, in the emergency we see lot of cases and then we see some cases which needs to be consulted with different departments – interdepartmental consultation. So when a pregnant woman with a trauma comes in emergency we need to consult with the gynaecology, we need to consult with the trauma surgeon, then we need to consult with the orthopaedic. If she has got a medical problem we need to have a medical person consulted. But at the moment what things are happening is, it is very difficult to have an interdepartmental consultation (PN67:P6-7).

It was further suggested that poor coordination and collaboration between the Institute and the teaching hospital created a ‘gap’ between theory (teaching) and practice. Participants believed a gap exists between teaching (in the Institute) and practice (in the field) because the procedures carried out in the field (clinical settings) were undertaken in different ways to what student were taught in the Institute. In theory, students were taught a systematic way of approaching or conducting procedures, where as in practice, it was claimed, healthcare professionals take ‘short cuts’:

In theory we are teaching all the principles and then the systematic way of approaching, but sometimes dealing with the real life patients, they [healthcare providers and students] go in shorter way. For example, like doing a wound dressing, in the clinical, they may not follow the systematic approach. So some minor things they get omitted during the procedure. There is of course some gap there. So the practice and the people, mostly our students or the new nurses follows what seniors are doing in the ward (PN76:P7).

There is a gap. From my experience of teaching, in nursing there is a big gap because what we teach here [Nursing Institute], we teach everything in ideal situation but when we go to practice – actual place, it is done differently because most of the things we found out like, they do it in a
very ‘shortcut’. They want to finish the job fast and the skills they apply is not ideal. They try to bend around and do it fast. So there is a huge gap. All the staff have passed out from RIHS [Royal Institute of Health Sciences], they know, they have learned this one but when they reach the clinical I don’t know what happens, that it has all like changed. They don’t practice ideally and it really compromises patient safety there (PN69:P4).

Another process contributing to the perceived gap between theory and practice was an unwillingness on the part of doctors to undertake a teaching role:

It is all other category who are having problem - like the doctors refuses to teach nurses. There is one chamber [doctor’s suite] where the Health Assistants are going and they refused to take [teach] the students. So about nursing we never had problem. It is other category who is not trying to cooperate (PN75:P4).

Overall, participants believed that a top-down relationship with closed authority (boss giving directions to subordinates) existed among healthcare professionals. For instance, nurses were always at the ‘mercy’ of managers’ and doctors’ directions, and if doctors and managers did not like their work, nurses were sometimes subjected to harassment:

At the present situation I think it is ‘top down approach’ in which the boss always gives direction – ‘you do this, you do that, you don’t do that, and why are you not doing’ and sometimes there is closed authority, for example, nurses are always at the mercy of the doctors’ directions and doctors always give order to the nurses ‘you do this, you don’t do this’. And if the work is not liked they [nurses] are subjected to even harassment sometimes, but I should say not always but at some point of time. ‘Why didn’t you carry out this, why the samples are not taken and why this medication is omitted or why not done?’ These are whole lot of things (PN76:P6).

I think which we lack in our management right now is that there is always an order from somewhere else. And without even having worked out that this system will work or not it is coming from top to bottom. […] It is
never been discussed among the lower level whether cleaning with wet mop or cleaning with dry mop is easy or feasible (PN90:P6).

4.1.3.5 Lack of management support and governance

While some nurse participants indicated that healthcare professionals were ‘doing their best’ to provide safe care to patients, e.g., using the knowledge they had obtained from the Institute during their nursing course (PN82:P1; PN42:P1; PN35:P1; PN71:P1), others believed that patient safety in Bhutan had been neglected (PN90:P1). Patient safety and risk management have not yet really permeated into the Bhutanese healthcare system (PN82:P1), and management is perceived to be not ready to accept change. Those in management or administration positions were perceived as not being serious about instituting patient safety and risk management (PN90:P9-10; PN83:P8; PN82:P5). The patient safety system, which has been initiated by visiting professors and volunteers from oversea, was perceived to be ‘ailing’ and not working. In the words of one participant, the healthcare system, until now, has been totally focused on the development of infrastructure, such as ‘getting drugs, how many beds are required, and how many staff to recruit’, rather than focusing on patient safety:

Patient safety in Bhutan in my honest opinion there isn’t anything happening. There might be one or two but this is only because we have some visiting professors and we have some health volunteers, they come in and they try to suggest and our staff, one or two may be, try to take initiatives or people who have seen other hospital they think we need to do something. But it is ailing, it is not working only, it is not because they are not trying, it is because the system itself is not ready to accept anything. Right now the health system is only considered about getting drugs and how many beds we can put and how many staff we can recruit but there is no check on how safe are the patients (PN42:P8).

The perception that those in management and administration positions were not giving priority to patient safety and risk management was not the only issue; the lack of ‘good’ hospital management/leadership in general – i.e., involving monitoring, supervision and follow up also emerged as an issue of patient safety concern:
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We don’t have proper monitoring system in this hospital. Of course every one of us including myself are taught about the infection control. The thing is we don’t have constant supervision (PN87:P2).

It is all the same with the nurses and doctors because personally what I feel is like there is weakness in our administration. There is no follow up, no proper monitoring and they don’t know what is going on actually on the floor. They will be just sitting there in the office and they will be dealing with paper works and I don’t think there is proper management and all from administration and management side (PN71:P3-4).

4.1.3.6 Poorly developed patient safety incident reporting

Data analysis revealed that incident reporting processes in the healthcare system were poorly developed. For instance, there were no robust systems to record and report incidents that occurred during day-to-day patient care activities (PN78:P4; PN81:P5; PN67:P5) and there was a perception that, because of this, the majority of incidents that occur go unreported:

So far as I know I think we are not doing much in recording and reporting of the incidents (PN52:P4).

I think that [incident reporting] is the weakest in the health system here. Keeping the data and then recording and reporting is very, very poor in the healthcare system- be it in National Referral Hospital or District Hospitals (PN85:P6).

We are very poor in recording and reporting. That is the biggest drawback that we as a nurse have (PN19:P9).

According to participants, patient safety incidents were not reported by healthcare professionals for the following reasons:

- lack of clear guidelines on incident recording and reporting (reporting of incidents is not compulsory);
- lack of support from management for reporting incidents;
- lack of knowledge on the importance of reporting incidents;
lack of time to report incidents;  
- negative attitudes towards reporting of incidents;  
- fear of litigation or punishment (blaming and shaming) for incidents; and  
- there are minimal or no cases of patient safety incidents to report.

### 4.1.3.6.1 Lack of clear guidelines on incident recording and reporting (reporting of incidents is not compulsory)

Data analysis revealed that there are no clear guidelines from the Health Ministry on incident recording and reporting:

> There is no clear guidelines saying you should record all those things [incidents] like wrong medication. We don’t have (PN27:P9).

Participant further pointed out that recording and reporting patient safety incidents are not compulsory:

> Just now that recording is not compulsory. We are not doing that (PN64:P3).

Participants suggested that there should be certain guidelines or regulations on incident recording and reporting:

> I think government have to make certain regulations on recording and reporting [incidents] (PN35:P5).

### 4.1.3.6.2 Lack of support from management for reporting incidents

A perceived lack of support from management also emerged as a reason why staff did not report patient safety incidents. For participants, those in management positions, seemed ‘least bothered’ about patient safety concerns and that reported incidents were not dealt with in a serious manner (i.e., not analysed and used to improve the system):

> I think we have so many records and reports to be submitted but I don’t think anyone really analysed it. And I think reports are never published. These [reports] are never taken for the future planning processes (PN36:P8).
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There has been some documentation, but I don’t think it is ever analysed or ever looked at. Incidents are reported to the administration not because it has anything to do with but half the time it is because the administration made mandatory that they [healthcare providers] have to report certain incidents. So people are doing for the sake of doing. And the person who is receiving the complaint probably is just filing the thing [report] and neither is he addressing the issue nor is he doing analysis to see how we can improve it. So, I think there is serious lack of it (PN84:P7).

Cooperation and support from management personnel (immediate supervisors) and colleagues were considered essential to improving incident reporting. To improve reporting, participants suggested there must be someone responsible for overseeing incident reporting and documentation:

Most important is the support from their co-workers and immediate in-charge. If she [supervisors] consider small thing as a big matter and if she takes to the administration, definitely other nurses who make bigger mistake is going to hide it. Because the statement is going to be in personal file which will affect their future career life (PN41:P6).

If the head [manager] is so strict, I will not record or report because they are not accepting our mistake and all. However, If they accept our mistake and if they do understand, then I can easily record and report. Further, if they support, we will also do the same. But I don’t think the head is so supportive. Instead of correcting our mistake they will only give the punishment and all. But if they do correct our mistake and support us, we will record and report (PN5:P7).

I think we need to designate someone to take up the role, to take up the initiative. And I think there needs to be support from administration, there needs to be support from management team (PN42:P6).

4.1.3.6.3 Lack of knowledge of the importance of reporting incidents

Participants also had a notion that healthcare professionals are not reporting incidents due to lack of knowledge of the importance of incident reporting:
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I personally feel that it is mainly because of the lack of knowledge. For example, if I am pricked by needle – infected needle and then ‘oh I am pricked’ and then they don’t have idea to think of others ‘oh this similar thing can happen to anyone so we should have bigger number – data and what will be the benefit’. So, it is basically like sort of individuals’ lack of knowledge and then nobody thought of having a system in place. So that is mainly contributing to not reporting the incidents (PN67:P8).

I think that they [healthcare providers] are thinking that it [incident reporting] is not that important. Might be because they have lack of knowledge, sometimes. They think ‘oh I did this one, I think it is not important’ (PN77:P7).

Participants perceived that that the reporting of patient safety incidents was more concerned with ‘finding somebody’s fault’ rather than improving the system:

In this kind of auditing there is always inadequately understood – the perception that you are doing this things to find out somebody’s fault. […] People start thinking that you are finding their fault and people don’t accept it. So people may not report (PN14:P8).

Participants also believed that healthcare professionals do not know where to report, and how to report the incidents:

Firstly, because people are not aware where to report and how to report. So they were not aware where to report, whom to report, so this system I think we need to put in place (PN93:P7).

4.1.3.6.4 Lack of time to report incidents
Time constraints were identified as a factor that prevented healthcare professionals from reporting patient safety incidents. High workload (many patients and paperwork) and shortage of healthcare professionals were viewed to be the main causes of time constraints:

Our hospitals are basically under staffed, and people are bogged down with lot of works. So, there is particularly nobody who is responsible to do this
kind of record keeping. [...] But with the existing staffing being overburdened, especially doctors and specialists, I think maybe we can’t do or keep track of recording and reporting of our short comings (PN14:P8).

So, one could be time constraint. [...] Even the doctors they just say verbally and then they are not writing in the charts. May be these are due to time constraint (PN72:P4).

4.1.3.6.5 Negative attitudes towards reporting of incidents
Some healthcare professionals were believed to have negative attitude towards incident reporting. For example, some believed it was ‘not their job’ to record and report incidents, and also did not have the ‘will’ to report their mistakes:

I think firstly it is a lack of attitude to report – reporting system (PN90:P8).

Probably one would feel that it is not their job as such. My job is to take care of patients. My job is not to report mistakes or incidents (PN60:P8).

Bhutanese people in general, maybe they lack the will. They don’t want to [report incidents] because they feel like it does not concern. They have feeling, like even if someone has done something wrong, if that action does not affect them, I believe they will just let it go because they don’t have mind to think in general. They don’t have mind to think about the society as large. They don’t want to think about the country as large. In a way they might be self-centred. Maybe care free attitude. Only when something happens which affects them, then they want to report and record. That is my point of view (PN12:P6-7).

4.1.3.6.6 Fear of litigation/punishment/blaming and shaming for incidents
There was strong convergence in views that healthcare professionals are not reporting incidents due to fear – i.e., fear of negative repercussions for their actions, such as litigation or punishment. Possible censure by patients’ families and the Ministry of Health was the biggest fear that healthcare professionals had about reporting and recording patient safety incidents:
They may charge us. Patient plus the Ministry of Health will charge us – why it is happened? So, if we have no explanation and all, there is chances that we might be chucked out of job (PN31:P4).

I feel it will be better if we do not record and report the incidents because when we write and if the patient attendants are educated, they sometimes read the files when we are busy with other works. For this, even if the issue is not major or serious, the patient attendants make it serious and charge the hospital staff (PN11:P4).

Nobody records and reports the patient safety incidents. I think they are afraid to do that because they think that they will be in trouble if patient and their attendants come to know about such incidents (PN58:P2-3).

Uncertainty about what support from management they would get, and not knowing what the legal and ethical implications of reporting incidents would be, were identified by participants as cause for fear and anxiety:

They [staff] are afraid that if they report they may be in problem because they don’t know that there are people who can support them. They don’t know what are the system and all these things. So the ethical issues, the legal issues that we need to discuss. Otherwise people get afraid that if they report they may be in problem (PN93:P7).

Fear of punishment in particular was cited as a key reason for not recording and reporting patient safety incidents:

We are not free to actually record and report. So before recording anything we have to think thousand times – personal benefit, professional benefit that comes into account because if there is any mistake, until and unless that same person doesn’t record and report, I think we as subordinate staff cannot record and report to anyone. That is kept as confidential internally. That is out of fear (PN19:P9).

I think even if there is recording and reporting system if nobody has witnessed it [incidents], I don’t think you will try to show your weakness, right? So, I don’t think this free thing [recording] will come. […] But I
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don’t know, giving in writing and just verbally reporting; verbally reporting is easy, right? Because it is not black and white, and if you give in writing in black and white, if in my name, every week I report three mistakes and if my Medical Superintendent sees it, I don’t think I will get promotion also. So basically we scared of punishment (PN7:P12).

Complicating the situation, healthcare professionals who had honestly reported their mistakes were, in some instances, subjected to disciplinary action. Such action was on keeping with the Bhutan Medical and Health Council (BMHC) Act rules and regulations. Depending upon the severity of the incidents, disciplinary action could include: written warning; reprimand of the healthcare professional; and suspension of registration:

We go by the Act, we go by the regulations depending on the degree of negligence or malpractice or whatever. On the findings of the team [investigation team] we sometimes warn the health worker. Or maybe sometimes we suspend their registration, and sometimes we also reprimand the health worker. And sometimes if the case is not really genuine, we just don’t take the action (PN36:P3).

We sometimes warn the health worker or maybe sometimes we suspend their registration. And sometimes we reprimand the health worker (PN36:P3).

It is a health Assistant of X hospital. I won’t mention his name. I think he mistakenly gave DT injection in place of Hepatitis. And I think now he is in suspense (PN30:P8).

Healthcare professionals who had honestly reported their mistakes were also blamed, named, shamed, and/or demoted from their position. They were also vulnerable to being labelled ‘careless or negligent staff’ or ‘a bad nurse’ by management staff and co-workers:

I have seen a lot of incidents where the management is very quick to blame. It is like as if they are waiting for nurse or healthcare worker to make the mistake. So given the chance they [managers] will jump upon that and try
to punish that person by demoting them or sending them to remote hospital which I think is not a good way of solving the problem (PN43:P5).

So like punishment and all that, I myself was one of the victim. When I was in the district hospital, X hospital, so I was transferred to this hospital within two weeks (PN70:P7).

I didn’t see anybody being punished, but I have heard that the staff labelling them that they are being careless. They are being negligent with the patient (PN53:P3).

4.1.3.6.7 There are minimal or no cases of patient safety incidents to report

Some participants believed there were minimal or no cases of patient safety incidents to record and report:

I have not felt much for this recording and reporting system, may be because I never encountered any unsafety or patient safety being compromised. […] So, if you somehow encounter such thing may be then you will feel, your insight will be awaken and you will have a feeling towards that [incident reporting] (PN7:P11).

We are not doing that [report incidents]. Those incidents are very minimal. Till date I haven’t seen any careless case like that (PN64:P3).

4.1.3.7 Lack of patient education on patient safety

Lack of patient education on patient safety emerged as a key factor contributing to patient safety concerns. Participants believed that patients should be able to point out mistakes or near misses (particularly with regard to medicines):

And even the patients, staff should educate the patient. Sometime as you already know the present scenario of our hospital, like there are shortage of staff and we have to finish lot of work in a short span of time. So we have to educate patient also so that patient can also point out the mistake. …because sometime the patient would know that at that particular time he is supposed to get that type of medication. Sometime the staff with their very busy work, they take different medication, so that time patient inform
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the staff ‘this was not in my regime, is this new medicine?’ So we have to educate the patient (PN65:P3).

And second is the education – the knowledge and education among the common people on patient safety concerns (PN85:P2).

Participants contended that patients are not educated about infection control and they are not aware of how to take care of their own body secretions (sputum, urine and blood), increasing the risk of cross infections in healthcare settings:

I think in the hospital settings when we talk about safety of the patient and the factors, basically patients were not educated on infection control so thereby they are not able to take care of their own secretions like sputum or urine or even blood. So that is one factor that we are likely to have infections (PN51:P2).

I think mainly almost every person, every patient they come here they should be educated as to where to spit, what not to spit, to cough at while you are and to wash their hands (PN49:P2).

Participants indicated that staff are also not educating patients on patient safety measures that could prevent incidents during healthcare processes. In some instances, failure to inform and educate patients and the public about certain hospital functions and procedures, such as specific hospital settings (e.g., location of the emergency department), times of operation (e.g., OPD opening and closing times), where to go in the event of emergencies after OPD are closed (e.g., emergency department), and signs and symptoms of emergencies (e.g., five danger signs of paediatric emergency) were perceived to have also contributed to patient mortality:

I will give one example, recently what happened was in the paediatric OPD. One mother came to paediatric OPD with the child not sucking well just for one day back. And then the child was not breathing well also. So she came to the OPD at around 8 o’clock. So usually our OPD opens at 9 o’clock. And she was waiting for doctor to come there with such a distressed child. Then she didn’t know where to go. When the OPD was opened, that time also she was carrying that distressed child and they were
in the queue. Then when passing by, a hospital cleaner saw and informed to nearby staff and they did whatever necessary things. But if that mother would have known where to go and had health education then we could have saved that child. The child was taken to ICU and after two days expired. So just because of simple health education like in the paediatrics we call it the ‘five danger signs’ – not sucking well like that. So if we could have improved little bit communication then such incident could have prevented (NGM5:P3).

4.1.4 Strategies to improve patient safety

One of the key research questions driving this study was to identify the strategies required to improve patient safety practices. Participants identified a range of changes in practices, processes, structures and systems they believed would help improve patient safety in the Bhutanese healthcare system. Notable among these were:

- Instituting governance for patient safety;
- Development/improvement of physical infrastructure/environment;
- Providing adequate resources (including trained personnel and equipment);
- Providing patient safety training and education for healthcare professionals and the general public;
- Promoting communication and information systems; and
- Changing the attitudes and behaviours of healthcare professionals.

4.1.4.1 Instituting governance for patient safety

There was strong convergence in the data indicating that critical to improving patient safety processes and practices in the healthcare system is the institution of proper patient safety governance. Important requirements for governance were instituting patient safety committees, developing clear patient safety policies and guidelines, developing clear job descriptions, providing good management and leadership, involvement of all stakeholders in decision-making, and putting patients at the centre of healthcare. These requirements are described in the following sections.
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4.1.4.1.1 Instituting patient safety programs including quality committees (patient safety team)

Participants believed that having a patient safety program with relevant committees (e.g., a patient safety committee, a mortality committee, and a clinical governance committee) in hospitals reporting through the Ministry of Health would advance patient safety:

One thing is to constitute committees, especially relevant committees like clinical governance committees. We have mortality committee but this is actually not really working – functional. It died down three or four years ago then it surfaced last year – one two meetings we had, and then after that it again is fizzling out. So we have to have regular updates, discussions. So, certain bodies like quality control, mortality committee and clinical governance is very important (PN54:P7).

In addition to a patient safety program, nurse participants believed that having a separate professional nursing body (e.g., nursing council or association) in the healthcare system would empower nurses to make their own decisions about nursing care, which in turn, would facilitate nurses to produce their own standard or curricula to improve patient safety processes and practices. According to participants, having a professional nursing body would provide nurses with the authority to take responsibility for improving patient safety with sustainable resource management:

In nursing, we need some bodies [nursing council] and we don’t have associations now. So, why do we want a council? Because decision level, because if we have resources, resources management is very important. So managing of the time, resources, manpower and whatever, but to do that if we have only the responsibility without authority, sometimes it will not work. […] So when we have separate [nursing body] it will be easy to make some standard, curricula. So the responsibility, authority and budget are interlinked. So that we can facilitate our service and work in proper manner (PN70:P5).

If we have nursing body like the nursing council, nursing association, whatever, it will help in decision-making. It will help in making our standards, it will help in making our curricular. At present, it is a medical
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(doctor) dominance. Whatever nursing decides, it should pass through the medical superintendent. So, because their understanding is totally different from the nursing, sometimes they are not so supportive (NGM5:P12-13).

4.1.4.1.2 Developing proper patient safety policies and guidelines

Participants regarded patient safety as safe healthcare processes and described these as processes based on proper safety guidelines and protocols and managing patients safely by following the guidelines (PN86:P1; PN25:P1). For participants, the risk of harm to patients could be prevented by formulating and implementing proper policies, guidelines and protocols (PN36:P6; PN81:P3; PN47:P2; PN69:P4; PN20:P2; PN44:P3; PN84:P4; PN87:P3). Safety guidelines could relate to medication or any procedures such as infection control, patient identification, and other SOPs, and are required to be carried out systematically to avoid exposing patients to risks of harm (PN67:P1; PN93:P1; PN56:P1; PN9:P3).

Safe healthcare was also described as making correct diagnoses and providing the correct treatment and management to patients using the right method. Correct treatment or management in this instance was described as giving the right drugs and following the correct procedures, such as following aseptic techniques to prevent cross infections, and carrying out procedures according to the standard protocols and guidelines (PN4:P1; PN11:P1; PN27:P1; PN43:P1; PN73:P1; PN49:P1; PN55:P1; PN62:P1; PN41:P1; PN38:P1; PN75:P1). For participants, it is important to carry out procedures with minimum risk:

Patient safety for me is to give the right treatment as per the doctors’ advice and to follow the sterile techniques when performing some procedures (PN11:P1).

Participants believed that the healthcare system needs to be more responsibility and accountability driven. Healthcare professionals are obliged to make healthcare decisions based on policies, guidelines and protocols, and be accountable for the errors that have been made (PN90:P5). There was strong consensus among all categories of participants that the Ministry of Health should produce clear patient safety policies and guidelines. For participants, to improve patient safety, everyone should speak the ‘same language’ and every healthcare facility should be equipped with the SOPs
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(PN53:P2). The healthcare professionals should not follow their own ‘whims and fancies’ in the treatment of patients:

There should be a policy on patient safety and everyone should speak the same language. There should be a policy saying that ‘yes these are the patient safety guidelines’. Every department or every facilities needs to be equipped with the Standard Operating Protocols (PN83:P3).

During the process of giving care to the patient, how we manage patient safely during all these – the cleanliness, infection control and waste managements would be one important component of patient safety. Another, nursing care and at the level of doctors – Standard Operating Protocols to make a diagnoses and how to manage patients so they cannot leave to individual doctors to follow their own whims and fancies to make diagnosis and give correct proper line of treatment (PN25:P1).

Participants recommended that hospitals have proper procedure manuals and protocols for every procedure and/or treatment, including patient admissions to different units, patient visitor control, instrument counting in OT, and a patient identification system to prevent accidents and complications during healthcare processes:

I think, first of all there should be proper policies regarding visitor control and updating on infection control so that all the nurses who has just joined in the organisation can update (PN43:P3).

Patient safety for me it covers a wide range. If I talk about my unit, there should be patient identification system to prevent wrong site operations and any retention of foreign object or instruments inside (PN93:P1).

Participants also recommended there be realistic and sustainable goals for patient safety, both at the policy making and practice level. It was considered essential that policies and guidelines be implemented and adhered to by all levels of staff to improve patient safety:
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It is not just developing guidelines, not just taking money and buying new equipment. So, there should be sustainable and realistic goals both at the policy making level as well as towards the implementation level. This includes all strata of work force in the healthcare system. Be it simple ward boy cleaning corridor twice or thrice a day to maintain clean hospital, and it goes back to minister side for the approval of CT scan, for simple example (PN12:P4).

Additionally, the safety of staff emerged as an issue in the Bhutanese healthcare system. Participants maintained that the development of staff safety policies and guidelines are essential to improving both patient and staff safety:

Of course we are talking about patient safety in this but we face lot of staff safety problem in this department (laughs) there is not much talk about this also (PN87:P3).

A program to raise awareness on Standard Operating Procedures, protocols and guidelines for all levels of healthcare professionals (PN5:P4; PN56:P3; PN77:P4) was also considered crucial to improving patient safety processes and practices. Participants believed that about half the hospital staff were not aware of the existence of infection control guidelines in their hospitals:

Also like having so many guidelines and if staff are not aware of its existence then I feel it is useless. At present there are some guidelines, for example, infection control guideline. But to be frank enough, 50% of the hospital staff is not aware of that (PN1:P8).

4.1.4.1.3 Developing job descriptions

Having clearly defined job descriptions and a work delegation system was deemed essential to an effective working system, and to improve patient safety processes and practices:

I think we should have the job description I think. Job description is not there because even the Assistant Nurse and all the categories do the same work. This is one problem I find. If you have the job description I think we will have the effective working system (PN91:P7).
I really feel that we should assign one person in a shift, only to do medication. So I think that will address the issues [medication error concern] (PN2:P4).

4.1.4.1.4 Providing good management and leadership

There was a strong view among participants that critical to improving patient safety processes and practices in the healthcare system was a structured supervision and monitoring system, with good and strong management and leadership. Some participants were adamant that managers and leaders currently do not provide proper supervision and monitoring regarding patient safety processes and practices (PN53:P2; PN5:P4; PN84:P4; PN87:P3):

The manager should also strictly monitor the concerned ward so that everybody follows the guidelines strictly. For example, the infection control measures and the hand washing technique so that the cross infection prevented (PN16:P3).

I think we need to start doing clinical supervision to see if the staff are performing procedures - like catheterisation is done properly (PN16:P5).

We need to have a good management, we need to have a good manager or administrator who is very much strong enough to bring people together and make them follow what the administration wanted. As of now from my observation, administration cannot handle clinicians. So that is the main problem what I see here in this hospital. If the administration is quite strong enough and then they lay down some sort of guidelines then implement it. As of now everybody in the clinical, they are functioning like isolated type. So this is what the current situation is and the patient care is not maximised (PN67:P7).

Data analysis revealed that involvement and support of hospital managers and administrators is important to improving patient safety. Some participants believed that hospital managers and administrators were as much in need of education in patient safety as other staff so that they understood the importance of patient safety and could participate in the development and initiation of patient safety activities:
Well, of course first of all I think it is very important to have the administrative support. If we do not have administrative support, but all the rest are well aware and educated – the healthcare givers and all the people at lower rungs in the hospital are educated and made aware through different trainings or awareness programs and whatever. But if the administration, people who are in administration are not properly primed and [patient safety] is not a top priority in their mind then it is going to be a failure. Therefore, to start with, I think the top guys – top management in the hospitals they are the ones who have to be really ‘brain washed’ properly or educated properly about this [patient safety], and if they are convinced, the director of hospital, then superintendent and then all the head of departments and everybody, if they are properly primed, if they are made aware then I think it will have great success of sipping down to the system. But of course, I think it is very important as time goes on that everybody from the highest to lowest have to also be brought in board. Initially, the most important people needs to be brought in board, all the top management level, within the system and hopefully then the chance of success are much better. I think this is where we have to begin in Bhutan (PN82:P9-10).

Most importantly, having positive support for patient safety from the Ministry of Health was considered critical to improving patient safety processes and practices. As one participant responded: ‘Most importantly we need political wills’ (PN12:P4).

4.1.4.1.5 Involvement of all stakeholders in decision-making

Participants indicated that the involvement of all stakeholders in patient care decision-making would improve patient safety processes and practices in the healthcare system:

I think the most important one is to make decision together because most of the time when there are coordination meetings and all, only in-charges are involved. Of course some of the in-charges discuss with their subordinates but in our case it is not happening like that. Even if there is training workshops they just go themselves without informing other staff. Because of this we cannot take proper decisions in patient care (PN38:P2).

Another thing is involving other people and colleagues from the field in decision-making (PN81:P3).
Participants also believed that conducting regular meetings would help improve patient safety process and practices. A regular meeting on patient safety would enable healthcare professionals to identify the issues and solutions related to patient safety:

Other thing is to have meeting and discussions about patient safety issues (PN58:P2).

Second thing is meeting in their own unit, like what are some of the challenges, some of the issues that has posed in terms of patient safety. For example, like every Monday morning if I am in-charge. If I am working in the clinical I may convene a meeting – so look at and reflect back for one week, what was wrong and what are some of the issues in terms of patient safety. Then find out what are the root causes for that and then like discuss what should have done on the spot itself. So these are some of the methods that we may have to think of (PN80:P7).

4.1.4.1.6 Developing a safety framework that puts patients at the centre of healthcare

One participant who had done some preliminary reading on patient safety indicated that patient safety could be improved by putting patients at the centre of healthcare. This includes working towards providing best possible care through proper healthcare systems encompassing teamwork, positive attitudes, adequate resources, strong leadership, a positive work environment, and trust and communication:

I have the ‘STARLET’….S…T…A…R…L…E…T (spells). The model is ‘P’, ultimate thing is a ‘patient’ – that is patient safety. STARLET – System, Team, Attitude, Resource, Leadership, Environment, and Trust and communication. And all these things are equally important, ultimately these lead to the patient safety. STARLET is a car, it will take patient to safety. And how does that take, by system building, teamwork, good attitude - awareness of the care giver, then resource – we need adequate quality resources, then we need to have good leadership from all aspects, and then environment, and then trust and communication between all. So these are all parts of the car. System is an engine, Teamwork is the tyre, Attitude is the fuel, Resource is the money to buy that car and maintain, Leadership is the steering, Environment is the comfort inside, and trust and
communication is the Mobil. This is how we should work towards the patient safety. In fact when you talk about giving care to patient that is patient safety because just giving care is not enough. Giving care with adequate safety is important because these days patient die out of complications of our interventions that should not have happened. Minimal acceptable complications should be accepted (PN92:P4-5).

4.1.4.2 Development/improvement of physical infrastructure/environment

There was a strong view among participants that patient safety is about having safe physical infrastructure and providing a safe environment for patients. Safe infrastructure was characterised as involving strong buildings with adequate ‘space’ (e.g., rooms for different healthcare services such as wards, toilets, OTs and laboratories); good navigation systems (e.g., signage, so people and visitors do not get confused or lost); an inbuilt oxygen system, ramps, electric elevators, a ventilation system and good natural lighting (PN25:P1-2; PN89:P7; PN8:P4; PN28:P4; PN6:P2; PN18:P3; PN11:P2; PN91:P7; PN7:P7; PN50:P4-5; PN31:P2). Safe infrastructure/environment was also characterised as one which promoted patients’ physical safety such as providing patients with an orientation on admission and maintaining cleanliness (PN1:P1; PN38:P1). The provision of wheel chairs, beds with side rails, and trolleys were also deemed to be core elements of patient safety (PN61:P3; PN83:P1; PN93:P1; PN67:P1):

Patient safety is usually about giving safety to patients. For a patient those who are having a problem – those who can’t stand are given a side rail to protect the patient. For patient who cannot move or walk is given the facilities like wheel chair and trolley. We can take patient from OPD to ward with the help of trolley (PN10:P1).

About the patient safety we need some trolleys, trolley should be there, the oxygen and everything should be there and IV stands. We have the lift [elevator] here and last time what happened was that one of the lift was not working. So whenever we have the patient sometimes we get locked inside the lift. So, we need good electricity. Then the trolley path which we have should be smoother because sometimes there is chances of patient falling from the trolley (PN77:P7-8).
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Even the toilets and all, actually it has to be developed in such a way that people should have all railing. They should have all very safe railings and where old people and even all these kind of handicapped people can walk around by holding these things, they can go to the toilet, come up independently. Even beds, all the beds has to be with the railings. Where we need we can use it. Here we cannot use; we have to keep extra people. We are already having [staff] shortage sometimes when we receive a patient without attendant, we have to keep a ward boy or someone or another attendant to be with patient thinking that patient will fall down or injure. Other thing, even trolley pathways, wheel chair pathways has to be thought. It should be accessible for in all the areas for the patients' comfort and safety. And the […] Operating Theatres, as per the guideline, OT should not be in the ground level. It has to be somewhere in the middle floor along with the ward where it is clean and safe. Actually all the hospitals, all the upcoming hospitals, they should really think in to that. […] Now in every policy guidelines or any hospital building or thing like that, they should think on these issues and develop (PN33:P6).

Other physical infrastructure, such as well-designed and functional Central Sterilisation Department (CSD) to sterilise and store the instruments, and specific hospital visitor entry points were felt necessary to prevent HAIs:

We need to have proper CSD, as we do not have good CSD in our hospital at present (PN11:P2).

I think we need to have proper gate to control patient visitors. At present we have so many entrances where we cannot control the visitors. I think it will be better if we can make only one gate to control visitors. We have no problem of cleanliness of the hospital as the cleaners clean the hospital by following infection control guidelines but it is not helping due to so many visitors (PN11:P2).

4.1.4.3 Providing adequate resources (including trained personnel and equipment)

Having adequate resources – including skilled and educated healthcare professionals, equipment and drugs – was considered critical to improving patient safety processes and practices. Participants suggested that the healthcare system should have adequate
numbers of well trained, efficient and motivated doctors and nurses to provide safe
dquality care (PN45:P4; PN31:P3; PN89:P7). Participants also suggested that the
healthcare system should have functional equipment and a constant supply of drugs in
order to enable provision of the right treatment at the right time (PN21:P4; PN32:P2):

To improve patient safety in district hospital like ours, I think the first and
foremost things we should have is enough staff. We should have enough
equipment (PN35:P3).

There shouldn’t be shortage of drugs and all. At times especially during
the incidents like accidents and all, we face lot of problem when we don’t
have certain things [drugs] in place (PN32:P2).

Firstly, we should have quality service providers, enough resources and
even enough drugs (PN30:P5).

Access to laboratory facilities was also considered necessary to facilitate correct
patient diagnoses, treatment and management:

To start patient safety, we need to have laboratory technologies. We need
to see drug levels – blood level of drugs to see toxicity and all. We don’t
have these. We don’t have toxicology lab that is one area we could see
(PN89:P7).

To have adequate resources to improve patient safety, participants argued the
Supply Division and hospital administration needed to work cooperatively with
frontline staff:

I think to have a change or have a new something else, I think we have to
cooperate from the supply division and administration; the working
environment should be maintained. I said supply and equipment division
because the present beds - especially beds and the patient environment is
not that sound. Because we don’t have the bed with the railings and all.
Bed is quite high and the equipment are not in a good shape (PN47:P4).

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4.1.4.4 Providing patient safety training and education for healthcare professionals and the general public

As discussed previously, participants believed that healthcare professionals (including doctors) do not have adequate knowledge about the concept of patient safety. Despite having infection control guidelines in hospitals, staff do not know how to prevent cross infection in the hospital (PN28:P4; PN51:P4; PN94:P5). Participants believed that most healthcare professionals did not realise that patients spend additional days in the hospital (e.g., up to 10 days instead of the 3 days normally required for their condition) as a consequence of HAIs resulting from poor hand hygiene (PN94:P5). Developing clear guidelines, protocols and programs to train and educate healthcare professionals about patient safety before they join the service was, therefore, considered essential to improving patient safety processes and practices:

I feel the level of education of all staff on patient safety is not adequate. They need to be educated on the importance of patient safety (PN53:P4).

I think first and foremost most of the health workers don’t have the concept of patient safety. Even doctors we are trained in different countries. So our Ministry should have clear guidelines whereby all the health workers before joining the service, they are given some awareness about the patient safety which we don’t have right now (PN27:P6).

Some participants were adamant that every healthcare professional, whether it be doctors, nurses or technicians, requires training on patient safety through a continuing education program to update and reinforce their clinical skills. Inclusion of core subjects on patient safety in training curricula prior to students entering the practice setting was also thought to be necessary:

Like among the staff, we can have CMEs [Continuing Medical Educations], workshops and trainings where we can develop our knowledge (PN46:P3).

Yes, every health workers whether it is doctors or nurses or technicians, whoever it may be, one has to have the skills of taking care of the patient so that the patient will not fall into injury. So they will require special
training I think. They will require training from time to time so that they are reinforced and strengthened their skills (PN76:P2).

I think one is the education, even for the pre training, like training here in the RIHS […] I think we should think of the patient safety – we should really remind our students in terms of patient safety. Then for those who have already graduated or working in the services, there must be a continuing education program in terms of patient safety. Day to day, they must be reminded, they must be educated (PN80:P3).

Assertions about the need to ‘close the gap’ between theory and practice emerged. According to participants, the theory and practice gap can be closed by appointing ‘adjunct lecturers’ or preceptors from the teaching hospital to teach students in the clinical settings, and by providing in-service education to clinical staff:

Ok, one thing is since we are already using their hospital as a teaching hospital so we could involve some of the people [nurses] who are experienced with the qualification, they can give us feedback and use them as our adjunct lecturers and work together. Or maybe we can use them as a preceptor for our students or supervisor for our students - particularly as supervisor not like just now what we are doing, we just hand over our students whether they look after them or not (PN69:P5).

So we need to close that gap may be either by updating their [clinical staff’s] knowledge and skills. But from my side, I as being an educator, I feel we need to keep them [clinical staff] updating on what is happening because once they pass out from here [Royal Institute of Health Sciences] they end up just doing the work. They don’t have any updated knowledge and skills. That is what I feel, and this becomes like a habit to them and they pass it on to the next person who passes out from here and they pick up the same thing from the senior staff. Even right now our students pick up the same. What we teach here they completely forget after they reach there [clinical settings], they pick up what is being practiced there. So we really need to work together with the hospital and the people who are providing education. So that might close the gap little bit if they have better understanding and knowledge (PN69:P4).
Participants considered that patient safety education should focus on specific skills such as interpersonal communication, infection control (hand washing), ICU, laboratory and emergency management skills (PN84:P4-5; PN82:P6; PN94:P6; PN79:P2; PN77:P4; PN86:P9). Participants further emphasised that education should focus on medical ethics as in their views medical ethics and patient safety go ‘hand in hand’:

I think it has to start initially from the curriculum and if we do have a medical school here and be it undergraduate or post graduate, I think we have to make this ethic. But I think patient safety and medical ethics they go hand and hand. So this value has to be strongly inculcated in our trainees (PN82:P6).

Nonetheless, participants recognised the importance of patients also taking responsibility for maintaining safety during healthcare process:

I think it is not only health professionals’ responsibilities. I think responsibilities should be there from the patients and their relative – patient attendants (PN36:P6).

Participants suggested that patients and their families be educated in patient safety to enable them to protect and promote their safety during the process of receiving treatment in the hospital. Participants further believed that patients and families should be informed and educated about their illness, personal hygiene, medications and other safety measures to improve patient safety (PN15:P3; PN18:P3; PN29:P3). With this, participants felt that hospital managers and administrators needed to organise a mass awareness campaign on patient safety concerns, hospital visiting times, and HAIs through television or the radio broadcasting services, to create awareness among the general public and healthcare professionals:

For patient safety especially for HAIs, the manager and the hospital administration should advertise the education on the Television or the Broadcasting services on how to prevent the HAIs and minimise the attendant coming to the hospital. The [visiting] timing should be followed strictly and what consequence could be if they don’t follow and if many visitors come to the hospital. And for patient and in the ward on hand
washing. Hand washing should be improved and the education should be given to all the attendants, patients and staff working in the respective ward (PN78:P3).

4.1.4.5 Promoting communication and information systems

Promoting communication and information systems in the healthcare system was seen as important to improving patient safety processes and practices. Accordingly, participants indicated that patient safety in Bhutan could be improved by improving teamwork and interpersonal relationships among healthcare professionals, and by instituting mechanisms to monitor patient safety and/or information systems. These views are discussed below.

4.1.4.5.1 Improving teamwork and interpersonal relationship in the organisation

There was strong consensus among participants that critical to the provision of safe, quality care to patients is good teamwork and the ability to communicate with those in positions of authority. Participants were also adamant that healthcare professionals and patients needed to have good interpersonal relationships, communication and cooperation to improve patient safety processes and practices:

I think as a healthcare worker whether it be a doctor, technician, nurse, anyone. We all should work together and as a team (PN73:P7).

There should be proper communication between patient and the visitors and patient themselves, and also among healthcare workers because often a time there is a lot of miscommunication. So this could ultimately pose threat to patient safety. So, I feel like communication should also be there (PN43:P3).

Firstly, like its cooperation, I will say that we need cooperation, because it’s a teamwork in the hospital. Working in the hospital is teamwork; we need cooperation from every one of us those who are working. We need cooperation because we are working round the clock (PN2:P8).

Being able to comfortably communicate with those in higher levels of the hierarchy also emerged as a theme. Making communication easy and accessible in the organisation was considered important to patient safety:
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In our hospital, we have to think beyond the hierarchy system. [...] Hierarchy may work in other organisations where we have a set job but in medical situation it is all about collaboration, it is all about cooperating each other, it is all about sharing, and the gap shouldn’t be there. The communication has to be easy and the accessibility should be there. So if we put aside the hierarchy systems, if they [management] open up door for even like the people working in the grassroots, I think something can be worked out. But the thing is, when a new person is part of the hospital, we should listen to him, he might have some ideas. So, if all of these can be collaborated and the management or the administration opens up to these ideas and if they can be worked out. I think this should be the process. I think the hierarchy should be put aside. They [healthcare providers and managers] should put aside all differences not just you are new or old but even your professions, whether you are a doctor or whether you are a nurse or whether you are technicians, everyone has to be given the voice. Everyone has to come together and each one has to listen to each other (PN42:P4).

Yeah, we have to work as health team member. Everybody works together. So I think that should be there. We should not think doctor is superior to nurse or nurse is superior to technicians or something like that. Everybody has a role and everybody plays equal role in the patients’ recovery and the safety. So everybody has to understand each other’s role and try to work with each other (PN69:P9).

4.1.4.5.2 Improving existing quality assurance processes

Participants across all categories were of the view that existing quality assurance processes (i.e., surveillance, monitoring and evaluation) need to be improved. This would enable better quality data to be obtained and to inform changes in practice aimed at improving patient safety outcomes:

I think the first and foremost thing is we need to have data – the baseline data, I think you are doing a good job in that. We need to have a reliable first hand data, good reliable baseline data and from then I think we can study that and improve on patient safety, infection control assessment and all those things. The problem in our setting is we do not have a good baseline data for anything. So I think it is difficult to say that ‘you have
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brought improvement’ or whether somebody coming as a new medical
director has brought improvement or things have become worst. So we
have no baseline data. So that is why it is difficult to measure things and
we need to establish baseline in that (PN94:P10).

A lack of quality data on patient care and incidents was identified as a key barrier
to improving patient safety (PN54:P7; PN27:P8-9). Of particular concern was the lack
of systemic surveillance, monitoring and evaluation of safety lapses, incidents and
solutions, which is essential for improving patient safety. For example, in the case of
HAIs, performing swab tests surveillance (culture) to determine if there are bacteria in
the wards would provide tangible information on healthcare associated infections.
Participants also believed the study of surgery success rates and number of patient days
in hospital would be an effective way to measure patient safety and outcomes:

Obviously, first of all we have to find out how safe or how unsafe we are.
Unless we do a baseline study it will be very difficult. So for example, I
have mentioned few incidents of healthcare associated infections. Is it
ture? If it is true, then there are tools to measure that. People take swab
from the room and they do culture and find out whether there is a growth
or not. So first of all we have to find out what sort of safety lapses we have
in our thing [hospital]. That should be the baseline. And then subsequently
we design our intervention in such a way that we want to see some tangible
measureable outcomes in the end. So […] at the end of the year you do an
evaluation and find out how safe you have made your hospital. So I think
that is the best way to go about (PN84:P6).

We can measure by any standards. There are so many laboratory
techniques to measure the patient outcome in terms of infection rate.
Infection rate in patient and infection rate in the ward, you can do swabs
and all that. Also outcomes in operation [surgery] success rates – post
operative days – the number of patient stays in the hospital. Those are also
measures to see if there is safety or not (PN89:P8).

Participants identified six key methods of data collections and measurement they
believed would improve the status quo. These are discussed under the following
subheadings:
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- Patient outcome, turnover and recovery;
- Clinical auditing;
- Resources and program activities;
- Measurement of patient satisfaction levels; and
- Patient safety incidents reporting.

4.1.4.5.2.1 Patient outcome, turnover and recovery

Patient outcomes (e.g., mortality and morbidity), turnover (admission and readmission) and recovery were identified as good measures of patient safety concerns/outcomes (PN32:P4; PN45:P6; PN20:P3; PN70:P6; PN79:P3). Repeated admission of patients for the same problem would be one indication of quality of care (PN45:P6), and the mortality report would provide some clues as to the cause of patient death which would indicate possible patient safety concerns that arose during patient care (PN67:P7). Terms and concepts commonly described by participants as useful in patient outcome measurement include: number of patient days (PN75:P9; PN37:P6), sound recovery (PN24:P5), patient turnover (PN10:P6; PN3:P10), and patient recovery path (PN18:P5; PN7:P11).

Most importantly, keeping track of medication errors and mistakes such as patient falls, number of HAIs, wrong blood transfusions, retention of foreign bodies in patients, and other safety errors that happened in day to day practice was considered the best way to measure patient safety concerns. Recording and analysing patient outcome data every month would provide a good indication of the patterns of incidents occurring in the hospitals (PN37:P6; PN40:P4):

I think the best way is to keep a track on medication errors, mistakes that happened in day to day practice. That way we can have some kind of measurements or some kind of statistics, tools (PN14:P7).

If we have recorded the incidents in one of the file, we can find out from there. How many are medicine errors, then how many are fall injuries, how many are fall from toilets, how many are fall from bed. So we can see from our records. So that is what we can do (PN31:P3).

To measure patient safety outcomes, we could maintain data – data every month and update it like fall injury and all, we could record it. In each and
every ward we can record it and then update it every month by submitting it – one specific person. That is one of the methods to maintain the record – I feel (PN40:P4).

4.1.4.5.2.2 Clinical auditing

Clinical audit was perceived to be an appropriate method for measuring patient safety and to identify issues of concern (PN43:P4; PN54:P10; PN90:P7). Regular auditing of infection control practices (e.g., use of different buckets to segregate wastes and hand washing practices); retrospective or prospective auditing of medication practices (medication errors including commission and omissions); and implementation of standards, SOPs, guidelines and checklist were identified as good indicators of the level of patient safety:

Well patient safety factor - you should have […] some measures like for infectious disease we have those red buckets and green buckets where you throw those [hospital wastes]. And you have to see that whether this is there or not. And then number two, to provide hand washing for doctors or health staff in each ward and how are they throwing the needles, is there SOPs, is it being followed, and in OT, is the gas cylinder full, is the Ambu bag working. So I think these are the measures that you will be able to put it (PN83:P6).

I think we can do some auditing in terms of injection errors, medication errors and dosing errors, IV fluid errors or omissions and commissions – some commissions and omissions in patient care. So I think we can do an audit or it can be a retrospective or it can be a continuous prospective auditing process that can be done (PN14:P7).

There should have regular auditing […] by the management, and may be from infection control [program] or quality assurance – physical auditing and clinical auditing (PN13:P8).

Participants further suggested that patient safety information could be obtained through procedure safety checklists. In their view, checklist can verify whether the required patient safety processes are available and practiced on the ground (PN68:P4-5). A monitoring system (checklists) to evaluate whether procedures were being
carried out safely by healthcare professionals in the hospitals was perceived to be necessary (PN88:P8; PN28:P5). Further, written SOPs or guidelines to undertake audit were considered essential:

Yeah, there is no auditing at all. First we have to have written procedures, documents, Standard Operating Protocols, guidelines and everything in place. Then train all health workers about infection control, safety and all these things. Then they should be implemented. Then the committee or whoever is responsible for auditing will come and then periodically check and see whether the level of implementation, compliance and all are present. Then of course interview patients about the thing [patient care]. But that is lacking (PN54:P10).

4.1.4.5.2.3 Resources and program activities

Participants also indicated that patient safety information can be obtained by monitoring resources (e.g., by checking whether individual departments in the hospital have the required number of staff and equipment to provide safe quality care) and program activities (e.g., number of patient safety training sessions conducted and the nature of resources or materials used):

Going by the equipment – if you see whether individual departments have equipment for their patients and do they have resources like manpower required for looking after these many patients. For example, in the medical ward if 18 patients are looked after by one nurse, is it acceptable? Compare with the regional hospital or some international standard. Then in Intensive Care Unit, four patients are being looked after by one nurse – is it acceptable? Do they have enough staff to look after? So these are – I am not very sure, but I personally feel that this can be used as an indicator to see the outcome of safety of the patient (PN67:P7-8).

[…] Even resource utilisation is indirect means of measuring this thing [patient safety]. And then number of trainings conducted, for example, awareness creation or IEC [Information Education and Communication] materials distributed – like hand washing and all these things [posters and pamphlets] (PN92:P10).
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4.1.4.5.2.4 Measurement of patient satisfaction levels

Patient satisfaction levels were also identified as a good way to obtain information on patient safety outcomes and contributing factors (PN73:P7; PN64:P3; PN80:P11). Patient interviews (PN75:P9; PN55:P5; PN41:P6), surveys (PN9:P4; PN13:P9; PN67:P8), observation of patient’s behaviours on discharge (for evidence that they are well enough to leave the hospital) (PN7:P11), and keeping track of all complaints lodged by patients and relatives during their stay in the hospital, were identified as important methods to obtain patient satisfaction information (PN14:P7; PN25:P9; PN54:P10):

Maybe we can measure it in terms of how satisfied they [patients] are with the quality of care given by nurses. If they [patients] have experienced some sort of unhappiness in the ward, what could be those things? Whether it is the attitude of staff or whether it is the tone in which the nurses were directing them or whether it is like the nurse being more empathetic or […] [when] the child was having a problem and then whether […] the nurses or any healthcare [workers] have come and given them immediate care – the time lapse between their complain and the attending of the complaint. So that could be the indicators – maybe we can measure like their satisfaction level, the happiness measures and what could be the short comings (PN74:P6).

On the basis of participants’ understanding, institution of proper systems, whereby patients from all departments provide honest feedback about their experience, was considered essential. In participants’ views, feedback provided by patients should be properly analysed and utilised to improve the system:

I think we should have system where patients from all the department - exiting from all the department, who have availed our services from all the different departments, be it from OT, be it in OPD if we have proper tool which we can get the honest feedbacks, and then those feedbacks are properly analysed and utilised. So, that kind of feedback system is put in place and consider as an important tool by the system, not just by survey or something like that. After the survey is finished, nobody bothers about it, you know. I think those kind of feedback system has to be designed

9 How happy the patients are with the healthcare services
properly or properly validated things should be introduced time to time by the administration as a tool to monitor safety issues (PN82:P12).

4.1.4.5.2.5 Patient safety incidents reporting

Having a robust incident reporting system was viewed as an important element to obtain information on patient safety outcomes and contributing factors (PN25:P9; PN36:P7-8; PN4:P11; PN61:P4; PN88:P9). For participants, the recording and reporting system of patient safety concerns would serve as evidence to inform future changes and improvements (PN64:P3; PN72:P4; PN74:P7; PN87:P4; PN47:P3; PN6:P6). The recording and reporting system was recognised as an important surveillance tool to improve patient safety in healthcare organisations:

It is very important. It is a key actually. That is data which we will be based in. So as long as the data is entered honestly, accurately, people who are entering these things [safety incidents] are doing conscientiously, then I think it will be one of the main surveillance tools. Otherwise, how are we going to say that after ten years on the line, things have improved or things have worsened? These I think, are crucial I feel. To have these incident reporting – proper incident reporting things done in a way that is done elsewhere, is done and suitable for our system is important. These are all new things for us but what I intuitively say is, it would be the most important surveillance tool for this safety program. I think it is crucial (PN82:P13).

Recording and reporting of patient safety incidents were considered a part of safe patient care (PN21:P6). Participants believed that recording and reporting patient safety concerns are underpinned by the values of medical ethics. They maintained that any patient safety concerns arising during healthcare delivery processes, either intentionally or unintentionally, needed to be recorded and reported (PN65:P9):

I think no health person would really want to bring harm to patient anyway. But having said that, I believe that to record and to report is really important be it whether it’s your own colleagues or your subordinates or even your superiors if the gross mistake has been happened, it is within the values of medical ethics that you should record and report the matters if it really affects the patient (PN12:P6).
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Recording and reporting patient safety incidents were also considered an important process for learning and improving the healthcare system. These processes, it was argued, were important in raising awareness and knowledge to prevent healthcare professionals from making the same mistakes in future (PN21:P6; PN17:P3; PN37:P6; PN49:P3; PN87:P4):

It is really important to really record and report such incidents because we learn from our mistakes. Actually no one is perfect and we can learn from our mistake and we can improve patient care (PN4:P11).

Apart from learning and improving patient safety, recording and reporting patient safety incidents were noted to be important for legal reasons – i.e., in case of litigation (PN63:P6; PN66:P5). For participants, recording and reporting patient safety incidents would serve as a source of proof and protect healthcare professionals from legal liabilities:

I think documentation is very important if you are to face legal charge or something like that. I think it is a proof and then it provides protection for the staff. It shows what exactly has been done, what incidents has occurred. So I think it is very important (PN63:P6).

Many participants noted the importance of recording incidents of HAIs in the hospital (PN92:P10; PN94:P7). In particular, they highlighted the importance of maintaining post-operative wound infection records, and performing frequent hospital swab tests (PN93:P6; PN19:P8):

I think by keeping census of how many patients came with what disease and left. Whether they got any additional infection, which I think we can keep a record through blood cultures and may be by doing culture and sensitivity tests. So if a patient previously didn’t have that infection and he later developed that (PN43:P4).

One would be measured by the post-operation infections to see whether it is because of hospital infection or was the infection there before the patient was hospitalised. That could be one indicator. Then you can also see the number of wrong medications being given. Also you can see […] blood
transfusion – wrong blood transfusions given. So these are few things which we can measure (PN60:P6).

For the above reasons, participants conceded that hospital management should educate healthcare professionals on the importance of incident reporting, including ‘how’ and ‘where’ to report (recording book or format):

We should be educated by the management. Like if such things [incidents] do happened they [healthcare providers] shouldn’t be so negative. I think they [management] should encourage so that more people will come out openly about the mistakes they have made (PN43:P5).

Even I have not written [reported] about [incident]. Once I guess, it was penicillin – penicillin 5 lakhs, I injected 500 lakhs and then there was no incident books and I had no knowledge about incident books and all those, and it was not written [reported] (PN46:P4).

Furthermore, participants thought that those in management should create a system which encourages incident reporting (PN42:P7). It was acknowledged that the reporting system should be used for the purpose of learning and finding solutions, not for blaming and punishing healthcare professionals:

Recording and reporting of such incidents is very important. Because of that report and record management should not penalised individual healthcare providers (PN25:P9).

I think recording and reporting is good but when you do that, it has to be done in such a way that you do not blame the practitioner for making mistake. In fact it should be done in such a way that ‘ok, there was an error and may be the error was this due this factor and maybe we can implement certain things so that we do not have such errors in future’. […] We can actually look at – like there is something wrong and point out where is that (PN9:P4).
4.1.4.6 Changing the attitudes and behaviours of healthcare professionals

As previously identified, changing healthcare professionals’ attitudes was considered critical to improving patient safety processes. Participants indicated that healthcare professionals should change their behaviour and take responsibility for providing safe care to patients, without having to be instructed by managers or superiors:

To improve patient safety, one has to have a really good attitude to help patient (PN17:P2).

First and foremost is the notion that keeping patient safety is not the responsibility of the managers or the leaders. Every individual should take each and every service or an activity in line with patient safety. It is not that you require somebody else to tell you or instruct to do something else, it just should be ingrained in every step and every action that you take or every probably anything that has got to do as long as you are in the hospital and trying to serve your patient. I think it has to be on your finger tips that this is for patient safety. It is the change of attitude which means that don’t leave it to your seniors or your in-charges or your bosses to tell you or that it has to be whether it is high level or the new one has to be made to understand patient safety and it has to be on our mind all the time (PN90:P4).

Formulation and introduction of a patient safety curriculum in the training centre was seen as essential to changing the attitude of individual healthcare professionals. Most importantly, provision of education on patient safety in pre-service courses, from day one until they leave the organisation, were considered essential in shaping the attitudes of healthcare professionals:

It is not easy to change the attitude of people but maybe through our education system or through the training centre curriculum from day one till they leave the institute might have role in changing the attitude and providing better safety to patient (PN25:P7).

So I think first if all it has to start from the curriculum in the medical school itself, and because it is one of the important components of the attitude, how our attitude is developed towards patients, where doctor don’t act up
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playing ‘god’, that you are just a normal human being trained in certain field and you have to respect the individual who is receiving care from you has to be treated with dignity and respect, and you follow your ethical guidelines and rules. So I think it has to start initially from the curriculum (PN82:P6).

4.1.5 Participants’ role in promoting concepts and practice of patient safety

Participants’ awareness of their role in promoting patient safety was evident. Nonetheless, their perceived role varied depending upon the participants’ designation and responsibilities. Perceptions about the role ranged from responsibility for policy formulation to advocacy for patient care. Specific aspects of the role were described as: formulating and implementing patient safety policies, guidelines and protocols; management of relevant department/hospital; providing training/education/guidance to other staff; informing and educating patients on patient safety; initiating or conducting research; implementing or help implement policies and guidelines; patient assessment and management; advocacy for patient care; role modelling good patient care practices; and providing patient care with mindfulness as discussed below:

4.1.5.1 Formulating and implementing patient safety policies, guidelines and protocols

Senior managers, ward managers and doctors believed that critical to their role in improvement of patient safety was ‘formulating policies, guidelines and protocols’:

As a nurse manager, I think we have to develop SOPs or guidelines for patient safety (PN61:P3).

My role basically would be policy formulation (PN25:P8).

I have to make the book – guideline book and SOP (PN77:P5).

Formulating policies and guidelines was however considered insufficient. Implementing or facilitating the implementation of policies and guidelines were considered important to promoting the notion and practice of patient safety in the healthcare system. Participants responded:
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Just formulating policy is not enough but we would be facilitating or implementing the policies (PN25:P8).

Of course I think there are rules and regulations, guidelines prepared I think which is not really not implemented properly. So other thing is I think implementation of these guidelines are important (PN36:P7).

Participants were also conscious of ensuring that a sustainable system was adopted for incident reporting and for the implementation of standard protocols for specific procedures. As one participant commented:

I would try to develop a system in place in a sustainable manner where the safety of the patient is ensured. If I give you a simple example, we have recently initiated the incident reporting system and then as I said we have also started developing a protocol – we haven’t got all but we are trying to develop a protocol. So put a protocol in place like we have an incidents reporting system – put incident reporting system in place, and then we are developing some guidelines for specific procedures. So when you have all these system in place, it is my responsibility to gather all these things and put into place (PN67:P6).

4.1.5.2 Management of relevant department/hospital

Management of the hospital and department was considered an essential part of the managers’ role. This role was described as creating a safe and blame free environment with strong leadership. Tasks in creating a safe and blame free environment were considered to include responsibility for safe storage of equipment (e.g., ensuring large equipment such as fridges are anchored to the wall in such a way that equipment does not block exit and entry points), and conducting regular meetings to discuss patient safety issues and solutions:

Other role could be observation. We have to go for round and see if patients are at risk. If patients and staff are at risk, for example, fridge during the earthquake – if we keep the fridge near the door during the earthquake what happens is fridge might fall down and block the passage for the patients and staff. So we have to make sure the fridge is not there near the door step. Similarly, bigger equipment could be anchored on the wall, or any
heavy equipment with wheels should be anchored on the wall so these things do not fall down and injure patients and staff (PN4:P9).

I think we should at least have regular meetings with all the staff and talk on patient safety, and talk on what has happened previously and what can be brought in for changes not blaming ‘who was that, who did that’, rather in such a way that we discuss and bring improvements so that we don’t commit mistake in future (PN19:P7).

Making hospitals user friendly was also identified to be one of their roles. The main tasks in this instance were considered to include: providing a good environment for patients to relax (e.g., ensuring the availability of neat gardens around the hospital and a canteen); ensuring resources for safe, good quality care were available (e.g., laboratory resources, staff, drugs, soaps, and towels); and being polite to patients:

My main role is to make the hospital user friendly and to provide the service without any problem. User friendly means, in our Bhutanese context, being polite to patient. And then there should be a good place in the hospital for patients to relax. We cannot let the entire patients stand for whole day. So, there should be good gardens, good area to hang around and even some canteen where patient can go there and have some tea like that. So, these are general part. But when it comes to professional, ok user friendly means, facilities are available. We cannot say I can’t do sugar [Blood Sugar Level], I can’t do urine [test] like that. So, we have all the reagents, manpower, at the same time we should have enough drugs, so patient don’t have hesitation of coming to hospital next time to avail services. Usually when we have drug shortages and all, patient from Punakha they leave to other district hospital with the view that drugs are not available, which means we are not user friendly. These are my concept of user friendly. The main thing is being polite and even if you are not able to provide the services, we should be able to explain to the user in a good way, justified way so that he doesn’t feel let down (PN27:P7).

Next is resource allocation. We have to have resources. If you don’t have soap, you can’t say ‘wash your hand’. What is the use? So proper resource allocation will be an important aspect of the administrative role – provide soap, hand towels and all these things (PN92:P8).
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Monitoring the functioning of the units or hospitals to ensure they were operating efficiently was also identified as one of their key roles. Critical to this role was monitoring healthcare professionals’ behaviour (e.g., for punctual attendance and working according to the hospital rules and regulations), monitoring patient care (e.g., for safe, appropriate care), supervising staff, and ensuring visitors adhere to visiting times:

My role is to manage ward efficiently. To see everything – staff are working well, doctors are coming in time, patient getting treatment at time, and ward is functioning well. We have to follow infection control and we have to follow the rules and regulations of the [hospital] administration (PN64:P2).

My role is to supervise […] and to correct those people [staff] who are not following that [protocols] (PN90:P5).

I always come in the morning and as per my role I go round and see there are not many visitors surrounding patients. Suppose, if earlier operation is going on, no visitors to prevent the infection, I have to tell them. And I always tell my staff to tell this whether they like it or not we have to tell properly ‘please go out’ – only one attendant at a time. Visiting time has to be strictly followed, I ensure that one (PN33:P4).

4.1.5.3 Patient assessment and management

Carrying out patient assessment and management was identified as another fundamental role of healthcare professionals. This role was described as taking a comprehensive history, making accurate diagnoses, planning and managing care, and evaluating the effectiveness of patient treatment and management:

I make sure to evaluate patient before going home or before going back to doctor. I will do assessment, will do re-evaluation, and do re-assessment. […] Another thing is I will make sure that I do all the things that doctor has advised and then assess and re-assess (PN50:P5-6).

Our duty as Clinical Officer is to screen patients before they reaches to the specialists (PN17:P2).
4.1.5.4 Providing training/education/guidance to other healthcare professionals

Many participants believed that healthcare professionals must be educated about patient safety and risk management; and managers and educators had a crucial role to play in ensuring healthcare professionals were aware of their roles and responsibilities in promoting patient safety:

As a lecturer, I think to educate my own students, not only my own students, even co-workers, the hospital staff. I think education is the most important. I think understanding and making all healthcare providers how important the patient is, is important’ (PN80:P12).

Yeah, definitely, from the administrative point of view we can play a great role. So conducting time to time workshops and awareness creation to improve the attitude of staff and patient (PN92:P8).

4.1.5.5 Informing and educating patients about patient safety

Participants were acutely aware that provision of information and education about patient safety to patients and families was one of their main roles. Informing and educating patients about infection control measures, patients’ illness and treatment was considered essential to improving patient safety:

Giving health educations to patients regarding their cleanliness and regarding their health. So health educations comes to promotive and preventive measures (PN30:P5).

In my profession as a treating physician in OPD, it would be to tell patients about the diseases, and then tell them about the medication (PN9:P3).

As I am looking after the Kidney failure patients those who are undergoing dialysis […], my actual role is to, as their disease is permanent and there is only one method to recover – only to recover is by transplant. […] So I have to educate them, and I have to tell them about their diet and then infection – mainly infection, and then taking care of the access – AVF and then catheter (temporary access) through which the dialysis is being done (PN79:P3).
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4.1.5.6 Advocate/patient advocacy
Informing, liaising and mediating with other healthcare professionals and management personnel on behalf of patients was described as an essential role. For nurses, it was their responsibility to assess the situation (patients’ immediate needs) and communicate with relevant officials (hospital managers and doctors) to facilitate care and ensure the patients’ wellbeing:

I think as a nurse it is a first person to contact with patient. They [patients] directly come to ward. So, we have to be well observant of the patient and should not delay to inform concerned doctors and concerned care givers (PN21:P4).

As a nurse working for the benefit of patients, my roles and responsibilities or my ultimate aim should be the wellbeing of patients. To improve the wellbeing of patients, I should find out the basic needs of patients and check which we can do – we can afford, and can be done to the patients. And the things which cannot be done by ourselves can be noted and discussed with the higher authority [hospital management and doctors] to make patients more comfortable in the hospital. So I can say that if we discuss with patients, more than the role of nurses can be to interpret with the higher authorities to improve patient safety and quality care to the patients (PN6:P4).

4.1.5.7 Role modelling good patient care practices
Leading other staff by ‘good example’ was also viewed as a central role. Participants believed that all actions performed in relation to patient care must be done in a way that exemplifies, embodies or symbolise patient safety:

For me, I think the most important thing is ‘leading by example’. So I think as a senior physician and head of department whatever actions that we perform in relation to patient care, I think we have to do it in a way that exemplifies, embodies or symbolises patient safety. So therefore, we have the responsibility to be setting examples as senior people who are respected or regarded in the system. Setting example and leading by example and being role models is the single most important thing to take patient safety forward, I feel (PN82:P13).
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I think my role is permanent importance because first of all, we should be role model and then we should make sure that what I do is doing with the maximum output with less error (PN76:P9).

4.1.5.8 Providing patient care with mindfulness

Participants placed high value on healthcare professionals promoting mindfulness in their practice. It was argued that healthcare professionals should be particularly vigilant when segregating wastes, administering medication and undertaking procedures:

Being in the health and being a nurse we are dealing with human beings, everything should be done with mindfulness. We should be doing everything carefully with mindfulness. I think if we do everything, every procedures with our mindfulness, with the holistic approach to patients then I think that is the way to give quality care and to decrease from risk of patient safety (PN35:P3-4).

Like by virtue of being a nurse I think one should be extra careful while doing medications and segregating the waste and waste management (PN15:P3).

4.1.6 Conclusion

In this section (Part 1), data obtained and analysed from individual interviews, NGMs, review of patient chart and records of adverse events, review of policies and guidelines, and field notes have been presented. A composite depiction of participants’ knowledge, understanding, perceptions and experiences regarding the polices and guidelines, common patient safety concerns, contributing factors, strategies to improve patient safety, and healthcare professionals’ roles in improving patient safety processes and practices has also been presented. In the next section (Part 2), the key themes identified from a Bhutanese cultural perspective (i.e., viewed through a Bhutanese oriented cultural lens/worldview) will be presented.
PART 2

4.2.0 Introduction
This part has as its focus the findings generated from an analysis of the data as viewed through the lens of a Bhutanese cultural perspective (i.e., viewed through a Bhutanese-oriented cultural lens/worldview). To this end the key themes identified and which are keyed to the research questions are aligned with are presented under the following subheadings:

4.2.1. Negative influence of traditional cultural values on delivery of safe and quality healthcare
Analysis of data revealed that Bhutanese traditional cultural values have a formative influence on staff and patient attitudes towards healthcare delivery and the processes that need to be in place to ensure that the care delivered is safe. Of particular note was the influence of cultural values on such things ‘taken for granted’ processes as:

- The hierarchical and authoritative styles of management;
- The style of unilateral decision-making in the system;
- Legitimating karmic beliefs;
- The differential treatment of patients;
- The need for an effective integration of healthcare services; and
- Preferences for traditional healing practices and rituals.

The above dimensions relating to the influence of traditional cultural values on patient safety are discussed under separate subheadings, below.

4.2.1.1 Hierarchical and authoritative styles of management
Elders, seniors and superiors are respected unconditionally in the Bhutanese healthcare system. Participants indicated people were hesitant to retaliate or challenge ‘the boss’s decisions’ even if the decisions were not ideal:

Most of the cases in the Ministry, if we look at the schedule of the Secretary and Director General, they are in this meeting, they are in that meeting, they are the chairman for this, they are the chairman for that. So, yes, it
does have impact because as a Bhutanese I would hesitate to retaliate about these ideas, though I might have different ideas and if I were given the choice, I would have taken it differently but we tend to respect someone who is an elder, someone who has more power and someone who is more experience. We tend to respect their ideas and try to implement their ideas (PN23:P6).

We have a system that we cannot approach to the higher level directly. For example, if I wanted to go and approach the King, I have to go through the King’s Chamberlain and then only we are able to reach to the highest level to get the consultation. And even in the office setting, we cannot go across with the high authority. We have to always seek advice or counselling from superior especially on administrative issues. So that is why when you talk about this Driglam Namzha – the respect, we have strong respects to the superiors, to the immediate boss or even the bureaucrats or the Ministers (PN51:P3).

So if the senior says you have to do that, you end up doing that one only. You do not question why the senior is saying you should not, and why you have to do that even if it is wrong. So we have to respect their opinion (PN69:P6).

Participant believed that traditional cultural values encouraged hierarchical and authoritative styles of management:

I have been working in the Health Ministry over the past 24 years and I have a feeling that we have strong Driglam Namzha which we need to respect, and we always regard as one of the best norms of controlling each other as an authoritative sort of hierarchy (PN51:P3).

I think in terms of that one, ours is a hierarchical type (PN69:P6).

Yes, we do have that kind of hierarchy (PN85:P4).
4.2.1.2 Unilateral decision-making

Traditional cultural values were regarded by participants as leading to seniority dependency in the healthcare system, i.e., favouring superiors or seniors in making major decisions about patient care:

Being a Bhutanese we respect elders, we respect what seniors do and me being less than one year in this hospital, first of all I have to get adjusted to this hospital and I follow what seniors do most of the time because if I don’t know how to manage the OPD cases and some inpatients, I ask seniors and I do what seniors do which may be wrong. That is the negative thing. We follow what seniors are doing according to our tradition, according to our Bhutanese way (PN35:P2).

Here I think the [ward] in-charge plays a major role. She should be the one who should be talking between these things and we respect our seniors, we also respect their experience and then we always ask for their advice provided that they are there. But if they are not there and if we are only there, immediate person must think that we have to discuss with other staff that are available, so here we have to respect our in-charge. She has to take major decision which involves whole thing (PN41:P3).

In one case, it was evident that the medical fraternity is respected more than other healthcare professionals (in Bhutan, doctors are considered more qualified and superior compared to other healthcare professionals):

The doctors of course they have their upper hand but it is their job, it is their responsibilities and nurses have their own responsibilities. Of course we need to again respect them because the final decisions and the commands come from doctors regarding patients’ prognosis, even for the management and all. But I don’t think doctors alone, whatever they do can make patient better because even side by side nursing care is also required. But in Bhutanese healthcare system, I think it is a norm that doctors enjoy the upper hand and nurses they feel very inferior because what they have, what the job they are doing is not that importance comparing to doctors’ job. This is the feelings they [doctors] have (PN88:P6).
Participants also maintained that healthcare professionals have to accept the directives of those in senior and superior positions, whether these were wrong or right. For instance, nurses have to follow the orders of doctors and cannot make decisions about the management of patients on their own:

Basically here in the hierarchy, we have doctors, nurses and then we have the tertiary workers like cleaners and all those. Regarding patient safety, may be sometimes as a nurse we always tend to follow what is being written by doctors and all those. And then sometimes we don’t even keep our own knowledge behind to check back and sometimes we forget to realise that we are in the same team. Because of the hierarchy which had been there because of the nursing status which had been bit low, so we tend to follow what has been written and if doctor says ‘you stop this medication’, I think even if the patient is going to die then it is on the nurses part to do. Regarding patient safety, I think there is issues in these (PN46:P2).

Yes, we have some issues because in the hospital for anything we know that this is wrong but we have to wait for doctor. Even parents [patients’ parents] they don’t want to give injections or medications unless doctor comes. For these we have to respect them, we can’t go against their ideas and sometimes even doctors they don’t let us give basic management. And sometimes they [doctors] tell nurses to observe patients and do whatever required when doctor is there in the ward. I don’t know whether it will be called hierarchy; actually we are not authorised to give medications during emergency. Basically for nurses we have no support from management and other sources. We know we are doing right thing but sometimes there is an objection from patients’ side and as well sometimes from the doctors’ side. So it really hampers patient safety or patient management. It delays with minutes which make lot of difference to patient management. So when we think about in-patient we have such problem (PN50:P3).

Organisations are also dominated by patriarchal attitudes. Staff who are junior are not involved in decision-making and have no authority to make decisions, even if they are capable. Decisions made by seniors’ and superiors’ are presumed to be right, even if perceived as not necessarily being in the patient’s best interest:
Yes, we do have that kind of hierarchy. Respect should be always there with the seniors (PN85:P4).

It is true, I mean people who are at higher position it mainly depends on their attitudes. As being Bhutanese and having that patriarchal attitude towards work like having superiority complex it’s never too good, that is never too good because even as junior person, intellectually by qualifications that person might be better than the superior but because of the status or because of the position he would not have that authority. […]

But that all depends on individual, I think individuals. But in general this has the larger paradigm of thought in which that is also depends on the society where we have been brought up - always respecting our seniors, our elders, and whatever they say we presume it to be right (PN12:P2).

I think even the lower people like sweepers, ward boys, they have their own contributions. So I think in my experience in working with the wards and also in the institute, given the chance to participate that will make effective decisions for the organisations but most of the time lower people [staff] are not included [in decision-making] (PN76:P4).

Apart from not being involved in decision-making, subordinates are not permitted to challenge superiors. If they choose to challenge superiors they risk being labelled as ‘difficult’:

The grass root people they are not so outspoken in our country. Decisions are usually made by the people who are at higher rank. Our people they cannot say anything because if they speak something, if it is like not so pleasant, people usually tends to mark that person. So it is happening like that I think (PN32:P2).

For one participant, ‘in the Asian context, “the boss” is a giant and everybody succumbs to his decision’ (PN23:P6).

Cultural values also enabled some unspoken norms to be operationalised. For example, one ‘does not dare’ to point out to a colleague or superior that they are ‘doing something wrong’:
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Regarding respecting the elders and all that I think in our culture it is still there. If a staff is senior to you in age and all that, you give her respect. Among your friends there is some untold kind of norm. If that person does something wrong to patient you can’t straight away point to your friend who is working with you that this is wrong or to your senior that this is wrong, unless it is life threatening procedure that she is doing wrong then you would really pull her out and may be take her to the duty room [nurses’ station] and then tell her that - ‘friend, probably what you are doing is not right’. But most of the staff I feel that, even if they sometimes scold patient or doing some procedures that is not really correct then you can’t [say] because they are senior to you and in our culture we respect senior – person who are like age wise or service wise who are senior to you. You can’t exactly tell them what they are doing is wrong. I think it impacts patient safety due to that. And the doctors, I think doctors are highly educated, they are to be respected. Sometimes if we feel that whatever the doctor has prescribed, for example, wound is really infected and the doctor has not done the dressing or has not advised, you can’t really point out the mistake. For some doctors who are very senior, who do not communicate well with staff is difficult and I think it may cause harm to patient (PN63:P3).

Yeah, here in our set up there are some kinds of thing, like seniors and all even if it is wrong or right when they say, we have to do. So I feel Driglam Namzha is playing a part in healthcare system in patient safety (PN55:P3).

4.2.1.3 Legitimating karmic belief

Karma\textsuperscript{10} is a core belief in Bhutanese culture. Because of their belief in ‘karma’, people hold that whatever happens to the patient is 

\textit{destined to happen}. Accordingly, eventualities or outcomes are taken for granted. This sometimes increases the risk of patient harm:

I think more than \textit{Le Judre} and \textit{Tha damtsig}, I think it is the belief in ‘karma’. It is the belief in ‘karma’ that goes beyond this \textit{Le Judre} because in ‘karma’ you believe that what is destined to happen will happen any

\textsuperscript{10} In Buddhism, karma refers to the law of cause and effect. Buddhist believe that everything is conditioned by a past good or bad actions/deeds and determines our own fate and controls our life’s course. For example, owing to previous actions, words and deeds person may suffer from unavoidable circumstances. In Bhutan, people view karma as an infallible law of virtuous actions leading to happiness and non-virtuous actions leading to suffering (Phuntsho, 2004).
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time. We cannot change it [...]. So more than Le Judre I think it is the belief in ‘karma’ that you are destined to have this and supposing if you have allergic reaction to Penicillin you believe that it is the ‘karma’. In fact you know that you can test it and you know it is because of your genes that you are bound to have anaphylaxis but it doesn’t mean it is the ‘karma’ that is causing this (PN83:P2).

Traditional cultural values were also seen as a contributing factor to healthcare providers failing to ask questions. For example, in one case nobody questioned why a man admitted with diabetes died of pneumonia:

I think because of our traditional values we are very gentle society. So what happens is that the patient party always has a tendency to respect healthcare providers and they take for granted that these people do best for you. And as a result, because of that, in our culture, we don’t have a culture of questioning the person on the other side. So if patient comes to me and I write a prescription they usually don’t ask to me why you are writing this, what is the benefit for my patient, like that. So most patients are so sober. They may not question the healthcare providers. Then the healthcare provider thinks that what he is doing is always correct, and of course the patient party thinks that they [healthcare professionals] may be always correct. So, I think there is lack of questioning and cross-checking what the health worker is doing, whether it is all the time correct or not. So, I think that is one – that is because of our values (PN14:P3).

At the moment our patients don’t bother. Say, if my father is admitted for diabetes, after ten days if he dies of pneumonia still the patient and patient party thinks that ‘oh it must be his karma and it is time for him to die’. Nobody questions why a man admitted with diabetes should die of pneumonia. That is in fact, if it is investigated it is hospital acquired pneumonia and it might have been due to carelessness of the staff and lack of facilities in the hospital – poor ventilation all those things have caused his pneumonia. But in Bhutanese setting we just take for granted that ‘ok, my father died because of his karma or something – nothing to do’ (PN94:P6).
4.2.1.4 Differential treatment of patients
Cultural values were also known to influence bias in service provision. It was believed that as a consequence of the hierarchical system of respect, healthcare professionals would provide good care to patients who were very rich and powerful, and neglect the poor:

In terms of *Driglam Namzha*, we tend to respect the high profile people, and those who are poor are not provided care properly. I think we should not differentiate among patients, whether he/she is poor or rich. But we tend to respect the rich and neglect the poor (PN48:P2).

Well, *Le Judre* means that you have to respect someone who respects you, isn’t it? And you have to do good for someone who is very good [to staff]. Therefore, you can be biased (PN83:P2).

4.2.1.5 Lack of effective integration of healthcare services
Participants also believed that because of the hierarchical system, communication between disciplinary groups to promote effective and safe care was not happening:

I think it has a major impact on the healthcare system because I think to solve the issues like patient safety, there must be integration of all the staff – from sanitary workers up until the director of the hospital. So because of the hierarchical system there is disconnect, the communication is not there – communication flow is not happening. So, most of our sanitary workers or even our juniors are not able to express to seniors because of the hierarchical system. The opinions are not really shared. So there is disconnecting (PN42:P2-3).

Equal opportunity to express views did not exist and most voices were not heard by those in positions of authority:

Actually to me since I have only experience of one year in nursing and it is really like fencing. A new nurse cannot put their ideas to improve nursing because mostly in Bhutanese context we have to respect elders in terms of supremacy. I feel that there is no equal opportunity for everybody to express their views or to improve in terms of nursing field (PN56:P3).
Of course not everyone are happy because whatever they have been saying is not heard but then we are satisfied with how we are working right now but at the same time, sometimes we are not happy because we are the one immediately dealing with the crowd [patients] here and we know what is happening. We are the one who have to be running around when things happen. And people who are involved in decision-making they don’t see this coming. So even if we tell them they say ‘ok this happens’ but for them, experiencing and hearing from others and talking from the ward is different […]. Right now I think most of the things are still being unsaid. It is still among the staff here, so we are the ones because even if we do something good they will never acknowledge, they will never say ‘ok you have done this, this was the right decision’. They will never say that but if we make one small mistake then everyone keeps shouting. Everywhere you go it’s being blamed […]. But there is nothing much more we can do also (PN41:P3).

I think there is an effect due to the respect system. Due to this even if we raise the voice – if there is five voices only one or two, at the most they will pick up only one voice. I think this is the problem (PN38:P2).

4.2.1.6 Preference for traditional healing practices and rituals

Participants also noted that patients prefer to seek help from local traditional healers due to their strong belief in traditional health promotion and healing practices:

Very frequently we see that people have more faith on traditional practices than on modern medicine. But it [resorting to traditional practices] has done nothing good to them. They will be worsened their condition and come to hospital (PN13:P4).

Definitely before coming to hospitals, before getting treatment especially villagers, they are performing certain pujas, rituals and after that only if astrologer tell them to take patient to hospital, they bring patient to hospital (PN32:P2).

People do not want to bring their family members to hospital and instead resorted to the local healing and treatment systems. Participants believed, however, that the
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traditional healing practices of making incisions with unsterile blades and sucking out blood posed a significant risks of transmitting disease:

The other thing again, this is very pertinent in terms of safety because of our age old customs patients go to village level to consult traditional practitioners. And of course people go there because of strong belief but sometimes when we look at it from the allopathic – modern medicine point of view there are certain things that are harmful for patients. For example, if you go to eastern side, you will get lot of patients cut by razor or something like that as a local measure to remove poison and all. So, I think that is also based on customs (PN14:P3).

Some of the things which we do based on customs are bit risky for our health like using needles – unsterile needles, using unsterile blades to cut and sucking blood for instance. It has every risk of transmitting transmittable diseases. So those are the things which are based on customs but which is preferably harmful (PN14:P3).

I think these traditional healers’ practises are scientifically not proven. Therefore, it will depend on whether they [traditional healers] do an incision to suck out poison or blood if someone has a stomach or headache. If they continue to do this without sterilisation techniques, it will bring a risk of infection into the area. There is a risk of transmission of one disease to another and this trend is not very healthy to our traditional healers (PN73:P5).

It was suggested that due to their karmic belief people often came to hospital very late; because of this delay, patients died of complications as soon as they reached the hospitals:

Many of our Bhutanese believe in ‘karma’. And some of them don’t want to bring their patients to hospital and they don’t want to stay in the hospital. Firstly they try with local healing and treatment system. If the local healing do not help then only they come to hospital – they come very late, they will be delayed. Some of them die of septicaemia as soon as they reach in hospital (PN18:P2).
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Certain people will not bring patient immediately to hospital. They will first do puja and if it is a case of cerebral haemorrhage, by the time they bring patient to hospital it is too late because they were performing rituals (PN43:P1-2).

Participants maintained that even after bringing patients to hospital, patients and/or family members might refuse treatment because the astrologers or shamans advise them not to take any medicines or undergo invasive procedures:

Even after bringing patient to hospital if they (astrologer or shaman) have said that he [patient] is not allowed to get poked by needle or anything, they [patient and patient party] usually deny injections (PN32:P2).

Some go to astrologers and create some problem, because they always believe in astrology and they do not come to hospital. They also believe that if the person receive injection, it will become worst for one’s disease. This thing creates problem to patient safety and quality care (PN1:P5).

And then they [people] go to spiritual leaders and that leaders tell them not to do any invasive procedures like blood transfusion or injections. So in case of emergency we cannot do [anything] because they [patient relatives] do not allow us to do because that is what their Lama has told them not to do. […] So I think there is an influence – the traditional culture has influence (PN43:P1-2).

It was noted that even if patients come to hospital, family members still often take the patient home to perform religious rituals, further risking the safety of the patients:

Actually I believe in these Bhutanese cultures and traditions and I do really respect that but there are the impacts on patient safety. From my opinion I think that effects on patient safety, like they take patient home. They take patient home to do some religious thing and impacts patient if patient is getting antibiotic (PN37:P3).

Participants also expressed concern that the traditional system of patients’ relatives visiting patients in the hospital increased the risk of cross infections to
individuals because most often several people come in together in the hospital and stay for a while using the patient’s toilets, and sitting and eating together with the patient:

And culture like visiting patient in the hospital is very harmful. Our Bhutanese tend to – they like to visit patient in the hospital but it rather brings in and takes out infection and so many things and disturbs patient and others also (PN13:P4).

Disadvantage [of traditional cultural values] is mainly, when the person is sick, lot of attendants come [to hospital]. They can bring infections from outside, spread to their patient and the neighbouring patients. That is the risk (PN25:P5).

4.2.2 Positive influence of traditional cultural values on delivery of safe and quality healthcare

While appearing to have contradictory influences (contradiction between cultural values that have reinforced risk as well as safety), embedding and integrating the traditional cultural values of Le Judre, Tha Damtshig and Driglam Namzha in the healthcare system were still seen to be important in improving patient safety processes and practices:

I think the culture is very important. If you interrelate or correlate with culture I think it [healthcare] becomes effective. But this should not have negative effect and as long as you use it in a proper way for the positive benefit of the patients, I think is good (PN36:P4).

If I relate patient safety with the custom, that (traditional cultural values) should be there actually. Because there are some incidents whereby medicines could not cure patient but that rituals, pujas and those thing which they do could help the patient to recover. There are some facts, I believe. Maybe that is superstition or that thing happened, like some patients who are not getting well in the hospital; they get well after doing such rituals. So what I feel is may be culture has a great impact on healthcare system – lie patient safety. Culture should not be kept aside. I feel patient safety will come along with medicine and culture – custom (PN55:P3).
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There was a strong convergence in views among participants that adoption of the traditional cultural values of *Le Judre*, *Tha Damtshig* and *Driglam Namzha* would help change the attitudes and behaviour of healthcare professionals:

*Driglam Namzha, Le Judre* and *Tha Damtshig* are attitude – individual mentality or way of thinking. Therefore it is necessary to have a good attitude. I think even the *Driglam Namzha* is for correcting our attitude and behaviour. Therefore, I think it will be good to use the concept of *Le Judre, Tha Damtshig* and *Driglam Namzha* to improve patient safety culture in the hospitals (PN1:P7).

Culture and traditional values like *Tha Damtshig, Le Judre* and all those, on that basis if we can improve our attitudes towards patients. Based on those cultural values, as a Buddhist we believe in ‘karmic’ effect – the cause and effect principles. So with those values we can have better attitude then it will contribute towards patient safety (PN46:P2).

Overall, the potential for several positive benefits of traditional cultural values for patient care (safety of patients), if integrated and used properly, were noted by participants. These potential positive benefits are presented under separate subheadings below.

4.2.2.1 Traditional cultural values ensure smooth flow of work

Participants believed that culture is important to maintaining respect among individuals in society, and regarded respect for the boss and seniors as an important element in maintaining authority to improve patient safety practices. Maintaining respect towards superiors would help healthcare professionals follow, implement and adhere to protocols and guidelines without deviating from them (PN9:P2; PN27:P4). Implementing and adhering to protocols and guidelines would, in turn, help ensure patient safety:

[…] *Driglam Namzha, Le Judre* and *Tha Damtsig*, all these are mandatory as culturally accepted in the society. And I am sure that if we have respect then it can really help to prevent the infections in the hospital settings be it anywhere - be it in any parts of Bhutan because we have one policy, we have one Minister, we have one order which we carry. So, that is the good
point that we can make lot of impacts on controlling the infections in the society, as well as in the community. So through the Driglam Namzha and Le Judre, Tha Damtsig, dedication to Tsa Wa Sum [king, country and people] all that makes us to devote our own heart to contribute more service to patients especially to take care of safety measures. So that is very important in the sets of controlling and preventive measures of safety of patient and health workers (PN51:P3).

I think in a way when there are some orders to be carried out and we have to do it. So the impact on these respects – Driglam Namzha we have really good response to prevent infections because we are always taking order of superiors. If doctor advice or orders to do this and that, we have to follow them in order to prevent infections. So in a way, I feel that it has lot of impacts - especially the positive impacts (PN51:P3).

If we use these [traditional cultural values] to our advantage I think people who are below them – subordinates will definitely listen to them (PN69:P7).

4.2.2.2 Traditional cultural values serve as ethics for healthcare professionals

Traditional cultural values were also seen to be important to guiding harm-preventing behaviours during healthcare delivery processes. Participants believed traditional cultural values are about spiritual intelligence and treating patients ethically as human beings. Traditional cultural values in their view could help guide healthcare professionals to be more ethical and to treat patients with respect:

*Le Judre, Tha Damtsig,* they are timeless values. It is actually touching more on the spiritual aspects - the spiritual intelligence. To be a doctor, you need to be a good optimal blend of, mix of many intelligences. It is not just IQ. I think doctor has to have good physical intelligence, has to have good emotion or emotional intelligence, has to have good cognitive intelligence, should have also conceptual intelligence. This is a value that have been taught to us from the time immemorial in our country. *Le Judre* and *Tha Damtsig* gives you a perspective that you are healthcare giver, be it whatever, when you just give care to somebody – someone comes with the high, low, whether monarch comes or whether pope comes, whoever or anybody in between comes, first of all, they teaches us that we are all
human beings. […] I think it tells us that the best offering you can give is your service to this person or individual before you, who is actually the same as you, because we have same common humanity and then it gives us the sense of offering - the value of offering. I think these are awakening of spiritual intelligence (PN82:P7).

From my point of view it [traditional cultural values] are ethics actually – etiquettes. I remember the chapter well on the ethics and etiquettes where we have to be honest, not discriminating anybody and then so many things are there under the ethics and etiquettes actually (PN75:P7).

Participants also thought traditional cultural values would help healthcare professionals be more disciplined, careful and positive in patient care delivery (PN7:P5; PN15:P2):

To improve patient safety and quality care, first of all Driglam Namzha is dress code, timing and everything we should follow. […] And everything should be done on time, which is Driglam Namzha and this will definitely adapt to quality care and decrease the patient risk. And Tha Damtshig, Le Judre and this also has a very important role to play in patient safety because for example, if we treat patient without having any positive attitude and without thinking of doing, we are not doing right thing (PN35:P2-3).

This is very important because for any profession first thing is etiquettes, ethics, it is very important. And because of our values and all, it helps to be more disciplined (PN70:P3-4).

To me, I think this concepts helps to maintain patient safety because like Tha Damtshig means, if we do good to others than good will come to us. If we think about the patient as our own relatives, we take extra precautions and we treat them, we care for them and we don’t do this medication errors, or we can prevent them from the nosocomial infections (PN39:P2).

Overall, participants believed that traditional cultural values were related to medical ethics and were centred around ‘doing no harm’ to patients:
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*Tha Damtsig* and *Le Judre*, I think is very important. And these could play very vital role. Actually it is related, if we look at the health ethics – medical ethics. So it is all centred on doing good to patients – ‘doing no harm’. So, harm includes infection control and everything, and doing good that benefits patients – to cure, expedite the healing process, to preserve life, to prevent deaths or killings. So, *Tha Damtsig* and *Le Judre*, I think is very important. That will dictate how the person will actually know – is personal perception about his everyday life. If he is a very good practitioner of *Tha Damtsig* and *Le Judre* then he will, whenever he touches patient, make sure things are done properly according to the SOPs and all (PN54:P4).

### 4.2.2.3 Traditional cultural values promote health professionals’ compassion and courtesy

Participants held that, when applied correctly, traditional cultural values can guide healthcare professionals to be compassionate and polite (PN17:P2; PN23:P6; PN84:P3). The following statements indicated that belief in ‘karma’ can also help healthcare professionals to be compassionate and polite in dealing with patients:

Of course from my point of view, *Le Judre*, like we know that if we do good to patients it will have a benefit for you, as well as for your future. So from that perspective I believe that patient safety is improving. Like we become more compassionate (PN87:P2).

Well, compassion is universal attribute that is required in all healthcare providers whether you are Buddhist or non-Buddhist. But especially in our setting with strong Buddhist spiritual influence, I believe that we should have more compassion - I mean more caring attitude to patients (PN89:P4).

For me, yes, I am always guarded with this karmic thing [belief] because if I do wrong, I am going to suffer the consequences of that negative thoughts I have done. Yeah, it has great impact to the way we deal with patients and how we speak with patients or anyone (PN74:P3).
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4.2.2.4 Traditional cultural values help healthcare professionals to be more loyal, honest and dedicated to their patients

There was strong consensus among participants that the traditional cultural values would help promote patient safety by promoting healthcare professionals’ sense of loyalty and dedication towards their work and patients:

*Tha Damtshig* and *Driglam Namzha* has got greater role in the Bhutanese context because the *Tha Damtshig*, which means loyalty, suppose I got an example here; if the patient is a father or mother, by the matter of fact or whatever it could be, the children will be loyal and will be there caring and looking after the parent for 24 hours (PN47:P2).

I think we have to take care of patients as if they are our own family members. *Tha Damtsig* means, feeling loyal to your patients. For instance, just taking care of patient as if that patient is my father (PN63:P3).

*Tha Damtshig* means dedication and loyalty. It doesn’t mean dedication or loyalty to the authority figure. I think it also tells us, it is important to have dedication and loyalty to your own profession or to the profession that you have chosen. If you can dedicate yourself, day in and day out, year after year then I think these could be a very positive influence on your way of conduct. And that contributes to developing good profession, I feel. So, I think these values, we have to somehow preserve and think about how best to transfer these kind of knowledge and skills to healthcare givers. There has to be thought of in our set up when we develop curriculum (PN82:P8).

It was noted that the value of *Tha Damtshig* would guide healthcare professionals to be honest about patient care – helping them to be honest about reporting mistakes:

As a nurse, whatever we do – such as patient care, we need to do with utmost honesty. In positive side, I think we have to be sincere and provide good care to patients timely by listening and doing whatever patient needs or says – responding well and providing with good management (PN48:P2).

*Tha Dhamtsig* is nothing than working with full heart to solve, to get solved the problems of the other people. It is like Karmic way of doing the things
or helping. It is giving helping hands to others, so if we implement *Tha Dhamtshig* full heartedly, basically it is honesty, means when something is gone wrong, we have to be honest and report it and then to make correction and maintaining patient safety (PN3:P5).

Some participants maintained that belief in ‘karma’ or ‘cause and effect’ makes Bhutanese healthcare professionals work harder, even if they do not get any extra perks and rewards. Participants indicated that adoption of the traditional cultural values is the sole factor that keeps healthcare professionals motivated to provide safe, quality care to patients:

> Whether it is patient safety or patient care, if we look after patient well, of course the safety is taking care of. *So Tha Damtsig, Le Judre* and karma - ‘cause and effect’ and the result actually is very scientific. I don’t think this is something to do with even spiritual. It is really scientific, the ‘cause and effect’. Science is all about cause and effect. You do this, the result is there, and that is as good as science. So if you do ‘good’, the result is good. What is the effect? Effect is, patient feels good, you feel good and you get better satisfaction in your work even if you are not well paid or even if you don’t get allowances or awards or you don’t get promotions. That is one good reason why I think most doctors and health workers in Bhutan work as much as they are doing now. That is one good reason why I feel people are doing that. Because of Buddhist believes and all spiritual heritance and heritage and because we believe in ‘karma’ the cause and effect I think, that is probably one of the sole reason why our health services are doing good, as good as it has been so far (PN89:P5).

I think as a health professional, as a doctor in the first place and as a head of the department in the second place, but whatever I am here first and foremost, I am a human being. Then next, I am a Bhutanese and I think we should be proud that we have inborn Bhutanese mentality, inborn Buddhist philosophy and all those. And I agree that it [traditional cultural values] have big role to play in our daily work. I think at the present moment every health worker is overworked, everybody complains of less incentive, overwork and staff shortage everywhere. And I think our *Le Judre, Tha Damtsig* and our idea of good ‘karma’, is the only thing that keep them [healthcare providers] to do the hard work every day because people have
been complaining that the pay is not enough, there is no accommodation for them, the staff are overworked, but still we continue working hard. I think our Le Judre, Tha Damtsig and Karma and our belief in good work, believe in good karma is a strong motive to keep people continue working hard, continue doing the best what they can. I think it has big role to play (PN94:P2).

4.2.2.5 Traditional cultural values promote trusting and respectful relationships

Participants believed that traditional cultural values would help promote patient safety by ensuring trust and a positive relationship between patients and healthcare professionals through mutual respect. It was suggested that active listening and understanding among patients and healthcare professionals would have a positive impact on patient safety processes and practices:

So Le Judre, Tha Damtsig means specially like giving a full trust to all patient, and patient have trust on us. So we give the treatment according to patients’ desire and our findings. So we keep touch with patient. So we always respect patient. We always try to be friend with them. So listen to what they say. The main reason of coming to hospital is because they are sick. They need help. So we are the people who have to take care of them, provide help, and give necessary treatment. Always try to help but never to harm patient (PN30:P4).

I think for me that is one contributing factor that enhance patient safety because people here really talk about the Le Judre and Tha Damtsig and then as a healthcare provider, you are treated almost like something near to god. So in that way I think, they respect healthcare providers and they listen to what healthcare providers says. And then, if healthcare provider gives a right information and right education on right time then I don’t think patient will land up in posing a risk to themselves. That is one thing that we as a Bhutanese are fortunate of, you know, like they [patients] listen to us because of all these Le Judre, Tha Damtsig and Driglam Namzha where there is respect. But at the same time it is also equally important for a healthcare provider to think of all these things – issues in terms of like Driglam Namzha – respect patients. If they have that I think it is going to enhance patient safety practices (PN80:P7).
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4.2.2.6 Traditional cultural values help in involving patients’ families ensuring a holistic approach to patient care

Participants believed that appealing to traditional cultural values could help guide families to be involved in patient care. It was believed that the system of patient’s families coming into the hospital, specifically during times of staff shortages, would help maintain patient safety:

[…] We have that tradition where our relatives – no matter how poor we are, but that small thing of caring patient is there. And then in our setting when our nurses are very less in number we sometime depend on patient visitors to take care of patients. And then how that helps in patient safety? It helps in a way because they are there if nurses and other allied health professionals are not there. These people [patient visitors] are there to help. And if there are many things about to happen, we totally rely on them [patient visitors] and then they tell us something is about to happen or this is happening. And then even if they [patients] go to toilet and they [patients] are about to fall, they [patient visitors] take help, and then we have prevented such incidents many a time in my ward with the help of patient’s attendants [visitors]. So it is a good system we have (PN68:P2).

Yes, like, maybe in the west, if the wife is admitted and if the husband is working somewhere, he will continue his work and all. But here, based on the Le Judre and Tha Damtshig, if you are a strict follower, if you have your loved ones admitted, you will be always at the beside. So, which means you will be observing patient, you will be having vigilance over the patient. So, every move you know. In fact, when you know every move, I think there is no chance for the patient to have any risk (PN7:P5).

Participants further indicated that patient management goes beyond making accurate diagnoses and giving the right treatment. There was a strong belief that certain traditional or social systems, in particular, the system of support provided by patient attendants11 (patient relatives/families) coming into the hospital helps to ensure a holistic approach to patient care:

11 Referred to as visitors in Australia
These [traditional cultural values] actually contributes a lot in patient safety because that will cover patient in a holistic approach and patient they become friendlier and then they [healthcare providers] consider patient as their own family member. So, I think this is quite important (PN86:P6).

If we see holistic care, it is not only the disease centred. We are looking patient as a whole and the individual. The main ideas to care patient as a holistic, means we have to meet their physiological needs, we have to meet their social needs, and then we have to meet their spiritual needs. So we should not be too scientific, and we should not be too superstitious also. We should balance because in patient care we cannot go against [patients’] values. If somebody wants prayer we should help them how to get, but we should act professionally (PN70:P4).

4.2.3 Improving safety and quality healthcare delivery by incorporating the philosophy of Gross National Happiness (GNH)

There was strong convergence in views among participants that critical to improving patient safety processes and practices was the incorporation of the concept of GNH in healthcare (PN27:P3; PN55:P3; PN27:P4):

It is a government policy that everybody should be happy. […]. In this context, since health and patient safety is one of the indicators [of GNH], or government has taken priority on that. I think if GNH, health, and patient safety are linked together, I think it will be very useful to the people (PN8:P3).

Common across all categories of participants was the view that patient safety is important for achieving GNH. Participants believed that patient safety is important for achieving the happiness of both patients and healthcare professionals, and that GNH would be achieved if patients received good care, delivered in a polite manner (PN35:P3). Participants also believed that patients would be happy if ‘no harm’ had been done during healthcare delivery processes:

Patient safety is directly proportionate to happiness. If patients are safe then we are safe. If we are safe, we are happy. Then overall happiness comes through that (PN13:P6).
In sense of patient safety, if we provide good care to patient and if patient is managed without any medication error, then naturally they will be happy. Even the care provider gets satisfaction, patient and patient party also gets satisfaction. So it helps to achieve happiness (PN48:P2).

I think that is very essential actually – patient safety. If patient has been admitted in the ward and some harm has been done to patient while being under our care then happiness factor is out of the picture. So, if patient is cared well in the hospital and no harm has been done; has been provided full comprehensive care; and done everything from our side and then patient has been got better; I think it will probably contribute to GNH (PN63:P3-4).

Several participants also expressed the opinion that conceptualisation of the GNH philosophy in the healthcare system would have a positive impact on patient safety processes and practices. Participants suggested the GNH pillars, such as ‘good governance’ and ‘protection and conservation of environment’, needed to be incorporated in healthcare practices (PN25:P6; PN36:P6; PN82:P9).

For participants, incorporation of the pillar of ‘good governance’ would help hospitals to produce appropriate and sustainable guidelines to improve patient safety through good leadership, while incorporation of the pillar of ‘protection and conservation of environment’ would help promote cleanliness and hygiene of the hospital and surroundings through a cleaning programme and a proper waste management system:

GNH has four pillars. From that I think ‘good governance’ would make a big difference in patient safety because if the leaders are good then the patient will be benefited through the nurses because if the leaders are good they will treat the nurses and doctors well and they will discuss with them, they will bring up issues and guidelines which can be applicable not theoretically but we can apply and that will help a patients a lot (PN39:P2).

We talk about environment – preservation of environment so that is, if we look from the hospital perspective it means we need clean air and less pollution. So these are some of the factors that are directly related to
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infection control. I think this we can incorporate in the hospitals (PN93:P3).

Related to GNH domains I think one of the domains we can apply is like infection control. I think, for the public we should have proper segregation of waste. With this proper segregation of waste it will cut the cost of the government (PN91:P3).

It was further recommended that patient care plans, guidelines and protocols be developed in conjunction with GNH values and indicators (PN24:P4). Participants also believed that the healthcare system should adopt the values whereby everyone believes that ‘someone’ s happiness would be our happiness’. Healthcare professionals needed to think of patients as their ‘own’ (Bhutanese people) and have the responsibility to make them happy. In this instance, participants noted that the value of happiness would help individual healthcare professionals to be very compassionate in dealing with patients. It was considered crucial to also use the value of GNH as a motivator:

The idea of GNH is basically to be like self-fulfilling and be self-contained. If this idea can be translated into medical situation in medical scenario, I think we can adopt values whereby we believe that someone’s happiness would be our happiness. And to do that patient safety is like the foundation, whereby it can be a major constructing block for patient treatment – of a patient well-being when they visit the hospital. I think the values of GNH even though it will be very difficult to translate all the GNH philosophy into a healthcare situation but the basic thing is, I believe in principle of happiness and to help someone else and if you are completely being very compassionate, very helpful to others, these are the values of GNH. And being like the altruism if we put in philosophy in altruism, we can really give a lot (PN42:P3).

I think the basic idea is the concern, like the concern that it is not just their patient, patients are ours and it is our Bhutanese people and we have to take care of them and to at least they have to seek help from the hospital and when they leave, they should feel happy that they received something. So in that way that will be the motivating factor. That will motivate us [healthcare providers] to have like weekly meetings on how we improve
patient safety, what can be done, what needs to be progressed, and what needs to be changed. So, the crucial value of GNH is to motivate. The most important thing that we lack in our system is the motivation. People don’t take up the initiative; they don’t want to take the lead. So, to motivate, I think GNH will be the crucial factor and once we have that then it is a process because patient safety is like a side effect thing because everything is based on side effect. […] So if we apply the GNH principles, if we are motivated enough then I think we can learn a lot from these (PN42:P3).

Consistent with the notion of incorporating the concept of GNH into the healthcare system, participants felt that healthcare professionals needed to be educated on GNH. They believed that the *Gross National Happiness Commission* should provide education on and promote awareness of GNH, at least quarterly or biannually, to all healthcare professionals:

I think those technical personals who has direct contact with patients has to train basically beyond patient safety issues in line with our National Policy – be it GNH (PN24:P4).

I think the *Gross National Happiness Commission* should have some sort of education or awareness program regularly – at least quarterly or biannually to healthcare professionals on GNH. Then I think people may do better in patient safety (PN19:P6).

Inclusion of the GNH principles in the training curriculum of all categories of healthcare professionals (i.e., to produce ‘Bhutanised’ healthcare professionals) was also considered essential:

I think you must be aware that we have a plan to start Medical College – we are going to start MBBS. We have a nursing college and we are producing so many nurses, so many technicians. Now the concept is that, in the training curriculum we should include some GNH principles where they acquire the hardware we inculcate some software inside them. […]. So we have been discussing the concept of producing a ‘Bhutanised doctor’. I think we should include the concept of GNH in all our training […]. So there should be a GNH philosophy incorporated at all levels of training (PN94:P4).
4.2.4 Improving safety and quality healthcare delivery by incorporating the concept of Four Harmonious Friends (*Thuenpa Puenzhi*)

Participants held that the concept of *Four Harmonious Friends* (discussed in detail in Section 5.5.11 of Chapter Five on pages 186 to 188 of this thesis) was a meaningful source of inspiration for healthcare professionals to understand the nature of co-existence and cooperation in the healthcare system in order to provide safe quality care to patients. They believed that the concept of *Four Harmonious Friends* is about working as a team and respecting and accepting each other’s opinions and ideas in the organisation (PN18:P4; PN24:P5; PN66:P4; PN67:P6; PN73:P6). In summary, it was considered a useful metaphor to help motivate in staff the will to work together (PN7:P9-10; PN35:P4; PN47:P2; PN40:P4; PN71:P3):

The *Thuenpa Puenzhi*, we know them as *Four Harmonious Friends* is ultimately to achieve a goal. They (four friends) come together and they try to get what they want (PN45:P5).

In *Four Harmonious Friends*, everyone is somehow, someway or other depending on someone to get the success. So when patient is admitted, our main objective and aim will be how well they are going back home – how good or what will be the health status compared to when he was admitted. That is the goal actually, like how *Four Harmonious Friends* are getting the fruit. Actually their aim is to get the fruit, but if we compare, our aim is to have an optimum level of health of a patient who comes (PN55:P5).

It is a source of inspiration and understanding of co-existence, you know. So if you work harmoniously at all different levels, the result or the fruit will be good. [...] and it is a very good stimulation to do teamwork. This is an inspiration for teamwork actually (PN92:P9).

Participants believed the concept of *Four Harmonious Friends* would particularly help improve patient safety processes and practices by: promoting mutual understanding and respect among healthcare professionals; improving teamwork, cooperation and coordination by creating the sense of belongingness; improving interpersonal relationships and communication; improving collaborative decision-making; and creating openness in the healthcare system:
Chapter Four: Findings

I think this *Thuenpa Puenzhi* and all are about the concept of teamwork. I think then we need to have the cooperation even right from the class ‘D’ workers up to the doctor level and managerial levels. And then we need to have one common goal. We need to work hand in hand (PN88:P8).

Like as I said before, this *Thuenpa Puenzhi* framework could be applied in our work setting which will enable every member or different levels come together, join together, and help each other and working together. So that means we need to have good communication at different levels, like between the managers and the lower level workers, between the nurses, doctors, technicians and other paramedical workers (PN76:P5).

I think we should all see each other as friends. We should be professional but we should be friends in the sense that one should be open to opinions to what a junior is saying and what a senior is saying and also the opinions of patient. They might have the opinion of their own in which might not have taken into consideration before. So basically the *Thuenpa Puenzhi* to my understanding is friendship, friendship means openness. So when there is openness then more ideas will come on how we can improve the patient safety (PN43:P4).

4.2.5 Conclusion

In this section (Part 2), data obtained and analysed from individual interviews have been presented. A composite depiction of participants’ knowledge, understanding, perceptions and experiences regarding the influence of Bhutanese traditional cultural values and philosophies on delivery of safe quality healthcare to patients has been presented. In the next chapter attention is given to discussing these findings.
CHAPTER FIVE
DISCUSSION

5.0 Introduction
In this chapter attention is given to discussing the research findings presented in Chapter Four of this thesis. The significance and implications of the findings are discussed critically, conclusions are drawn, and recommendations are foreshadowed for further consideration in the final chapter. Finally the threads of the discussion are drawn together and an indication given of the practical action that will ultimately need to be taken if patient safety in the Bhutanese healthcare system is to be improved.

5.1 Aims and objective of the study
To recap, the key objective of this study was to obtain baseline data on patient safety concerns in hospitals in Bhutan. The related aims of the study were to explore and describe:

1. what patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan;
2. health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals;
3. factors which health service providers and managers have identified as most contributing to patient safety concerns in Bhutan’s national, regional and district hospitals; and
4. possible strategies for addressing the patient safety issues and concerns identified.

The findings made in response to each of these aims and their emergent themes have been categorised and considered under the following separate subheadings:

- Patient safety policies and guidelines available in the Royal Kingdom of Bhutan;
- Health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety;
Chapter Five: Discussion

- Factors contributing to patient safety concerns;
- Possible strategies for improving patient safety in Bhutan.

5.2 Patient safety policies and guidelines available in the Royal Kingdom of Bhutan

The review of policies, guidelines, standards, protocols and other documents undertaken in the context of this study confirmed that a number of formal policies for assuring quality care have been developed for use in the Bhutanese healthcare system (referred to herein as ‘guidance documents’). Their primary focus, however, was (and remains) the minimum standards for quality assurance, not those of patient safety as such. Moreover, these documents are principally located in only one hospital – the National Referral Hospital in Thimphu, the capital of Bhutan. At first glance, the focus and organisational location of the guidance documents could be construed as being limited on two accounts: first, the minimum standards of quality assurance do not equate to the minimum standards of patient safety; and second, for as long as these documents are available only at one hospital, the system as a whole will be deprived of the opportunity to improve its standards of care and patient safety outcomes. Such an interpretation is not necessarily correct, however. When considered in relation to local contextual factors, a different interpretation and construal of the situation soon emerges. These considerations are examined under separate subheadings below.

5.2.1 Quality assurance versus patient safety

As stated above, the guidance documents examined in the context of this study have as their focus the minimum standards of quality assurance and the provision of quality care, not patient safety per se. As a point of clarification it is important to note that patient safety is generally distinguished from quality care in the following terms: whereas patient safety relates to avoiding or reducing actual or potential harm from healthcare management or the environment of care, quality care relates to the extent to which a healthcare service or product produces the desired (best possible) outcomes (Australian Institute of Health and Welfare, 2015; Runciman, 2006; Runciman et al., 2009).

It is acknowledged that the current emphasis on quality in the Bhutanese healthcare context could be construed as retrograde. However, such an interpretation is not necessarily correct since it fails to take into account the socio-cultural context of
the Bhutanese healthcare system and the history of developments in the field of patient safety itself. For instance, in reality, Bhutan is trending through a trajectory of development that other more resourced nations have similarly traversed in the past. As discussed in the background chapter to this thesis, the hospital system of care was only introduced into Bhutan in the 1960s. Quality assurance programs were initiated only in 2002. In 2013, however, attention began to shift as health service providers and managers became aware of the ‘new’ patient safety paradigm, notably through their participation in the PhD study being reported here. Informal feedback from participants suggested that my fieldwork created in them an awareness of patient safety processes and concerns that previously they did not have. Significantly this new awareness prompted local healthcare managers to draft and publish the first patient safety guideline in late 2013 (Ministry of Health - Royal Government of Bhutan, 2013). As will be suggested later, what this trajectory of development perhaps suggests is not that the Bhutanese situation is retrograde, but that Bhutan is in the middle of a paradigm shift - shifting from a conventional approach of quality assurance to a new paradigm of patient safety – similar to that experienced in and by other high-income and better resourced nations.

5.2.2 Location

As noted earlier, the guidance documents have only been made available for implementation at Bhutan’s National Referral Hospital. There is a strong rationale for this. Being a low-income country, Bhutan has only limited financial and human resources. Thus, while the Bhutanese government is committed to improving the safety and quality of care of its healthcare services, it is also mindful that implementing quality assurance and patient safety programs is a resource intensive enterprise. Being a donor-dependent country, Bhutan cannot afford to implement programs until it can be assured that such programs will be effective. The decision to limit the implementation of the guidance documents to the NRH means that the guidance documents can be ‘tried and tested’ before being rolled out to other hospitals, thus ensuring that precious resources are not squandered, for example, if the guidance documents are found to be inappropriate or inadequate and ineffective. By taking such an approach, the Bhutan Ministry of Health aims ultimately to be able to determine what can be implemented, what is being implemented, and what needs to be implemented as well as the ways and extent to which the implementation of the
Chapter Five: Discussion

guidance documents contribute to patient safety. Evidence of this approach is suggested by ongoing initiatives by the Bhutan Ministry of Health according a high priority to patient safety. This has included directives from the Ministry of Health for the development and implementation of the guidance documents to occur more widely throughout the Bhutanese healthcare system (Ministry of Health - Bhutan, 2007; Ministry of Health - Royal Government of Bhutan, 2009, 2010).

Despite this stance, as suggested by the data, the guidance documents are not being implemented in a systematic way. It will be recalled that reasons for this were threefold: either clinical staff were not aware of them, or, if they were aware of them they did not have confidence in them, or if they did have confidence in them – they nonetheless deemed them to be either irrelevant or disruptive to their practice and so ignored them. This situation is not unique to the cultural context of Bhutan. International studies have similarly found poor uptake of guidance documents by clinical staff due to these factors. For example, studies conducted in low, middle and high-income countries alike, such as India, Thailand, UK and US, have similarly found that clinical staff can sometimes be hostile to and mistrustful of guidance documents developed to improve quality assurance and patient safety outcomes. These studies have likewise implicated the following processes in the apparent resistance by clinical staff to follow patient safety guidelines: a lack of knowledge, awareness and familiarity with the guidance documents; a lack of top management support; and poor compliance. These factors have all been identified as contributing to the poor uptake of guidance documents. Other reasons identified include: a lack of interest by clinical staff in guidance documents and a lack of time to follow them. Studies have also identified the inappropriateness of guidance documents and inadequate resources (including supplies) as factors undermining compliance.

12 Braithwaite, Westbrook, and Travaglia (2008); Cabana et al. (1999); Coyle, Mercer, Murphy-Cullen, Schneider, and Hynan (2005); Danchaivijitr, Supchutikul, Waitayapiches, and Kachintorn (2005); Desai et al. (2011); Gluyas (2015); Juntaradee, Yimyaem, Soparat, Jariyasethpong, and Danchaivijitr (2005); McFadden, Stock, and Gowen (2006b); Muralidhar, Taneja, and Ramesh (2012); Nuntawimit, Wongkhomthong, Luangnamrert, and Chomson (2009); Palanisamy, Arul Kumaran, and Rajasekaran (2013); Schectman and Plews-Ogan (2006); Upadhyaya et al. (2012); Vats et al. (2010); Vincent, Stanhope, and Crowley-Murphy (1999); Wigder, Arai, Narasimhan, and Cohan (1996).

13 Parker and Lawton (2000); McDonald, Waring, Harrison, Walshe, and Boaden (2005); Mathai, George, and Abraham (2011); Khan, Goyal, Chandel, and Rafi (2013); Kamtane and Jayawardhani (2012); Danchaivijitr et al. (2005).

14 Crosby (2013); Danchaivijitr et al. (2005); Ducharme (2005); Juntaradee et al. (2005); Kamtane and Jayawardhani (2012); Unhasuta (2012); Wilson et al. (2012).
Unlike other studies, however, the findings of this study nonetheless suggest that clinical staff in Bhutan are not necessarily adverse to guidance documents concerned with improving the safety and quality of patient care. As the data revealed, many of the participants believed that if they had reliable guidance documents on how to practice, patient safety and quality care would be improved. Some further believed that a lack of guidance documents risked contributing to a ‘laid back’ attitude among staff within the healthcare system, exposing patients to the risk of preventable injury or harm.

5.3 Health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety

Unlike other more resourced nations, one of the difficulties and challenges faced by Bhutan is the lack of infrastructure for capturing quantifiable and independently verifiable data on patient safety outcomes in the healthcare system and that could be used to inform recommendations for improvement. Despite this, the participants interviewed for this study nonetheless identified problems and patient safety outcomes that were commensurate with those identified in high-income countries that do have mechanisms for obtaining quantifiable and independently verifiable data. Hence, the mainstream patient safety issues such as medication errors, HAIs, surgical errors and post-operative complications, diagnostic errors, laboratory/blood testing errors, fall injuries, errors in patient identification, and communication errors identified in this study were commensurate with those found in the US, UK, Australia, Denmark, Latin American countries, Thailand, India, Philippines, Vietnam, Indonesia, Africa and Laos15. For the purposes of this section, these issues are briefly considered below.

Medication errors: The most notable medication errors reported by participants in this study were the administration of wrong drugs to the wrong patient; administering drugs that had passed their expiry date; administering the wrong drug concentration or

15 Agrawal, Sachan, Singla, and Jain (2012); Aranaz-Andres et al. (2012); Asavaroengchais et al. (2009); Bagheri Nejad, Allegranzzi, Syed, Ellis, and Pittet (2011); Beckmann, Baldwin, Hart, and Runciman (1996); Brooks (2005); Datta, Rani, Chauhan, Gombar, and Chander (2014); Harrison et al. (2015); Khetan, Pandey, and Chaudhary (2008); Kohn et al. (2000); Kumar and Chaudhary (2009); Muralidhar et al. (2012); Neale, Wioskynwych, and Vincent (2001); Rattanarojsakul and Thawesaengskulthai (2013); Reddy, Modi, Chaudhary, Modi, and Patel (2009); Roughhead and Semple (2009); Runciman et al. (2000); Sarma, Bhattacharya, Kalita, and Rajbangshi (2011); Sharma, Awasthi, Dixit, and Sharma (2011); Valentin et al. (2009); Wilson, Harrison, Gibberd, and Hamilton (1999); Zegers et al. (2009); Safety and Quality Council (2002).
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dosage (including wrong injection dosages and overloading of IV fluids); administration of drugs at the wrong time; administration of drugs through the wrong route (e.g., drugs which are supposed to be administered intravenously given orally); continuation of multiple antibiotics and other drugs for unjustified periods; unreasonable use of drugs (prescription errors and the unjustified use of medicines – including under prescription, over prescription and inappropriate prescription); adverse drug reactions (ADRs), and omission of drugs (failing to update medication charts and forgetting to administer drugs). These reported errors and flaws are comparable with those identified in studies conducted in India, Thailand, Brazil, Spain, UK, US, and Australia16.

Hospital Associated Infections (HAI): The HAIs identified by participants, such as post-surgery wound infections and urinary tract infections, were comparable to those found in studies undertaken in India, Thailand and the US17. For example, prospective observational studies in India, Thailand and the US identified surgical-site infections and urinary tract infections as a main cause of morbidity and mortality in their hospitals18.

Surgical errors and post-operative complications: Due to a lack of quantifiable data it is not possible in the context of this study to profile the incidence and impact of surgical errors and post-operative complications in the Bhutanese context. Nonetheless, participants in this study identified the retention of foreign object (e.g., surgical sponges, needles, and other instruments) as the main surgical errors in their experience. There is scope to suggest that this observation entails an underestimation of the type and incidence of surgical error and post-operative complications occurring in Bhutan’s hospitals and which are known to be common in other countries (e.g., Australia, the US). Examples include: technique-related complications; deep vein

16 Benner et al. (2002); Bohomol, Ramos, and D’Innocenzo (2009); Charuluxananan, Sriraj, Lapisatepun, Kusumaphanyo, and Itichaikuthol (2012); Herout and Erstad (2004); Jain, Basu, and Parmar (2009); Jiménez Muñioz et al. (2010); Jirapaet, Jirapaet, and Sopajaree (2006); Pote et al. (2007); Reddy et al. (2009); Sangtawesin, Kanjanapattanakul, Srisan, Nawasiri, and Ingcharconsunthorn (2003); Solanki and Shah (2013); Safety and Quality Council (2002).
17 Agarwal, Gupta, Ray, Aggarwal, and Jindal (2006); Danchaivijitrmd, Dhiraputra, Santiprasitkul, and Judaeng (2005); Datta et al. (2014); Klevens et al. (2007); Smyth et al. (2008).
thrombosis; pulmonary embolism; pneumonia; post-operative bleeding; musculoskeletal injuries; and bowel, bladder and other visceral injuries (Gawande, Thomas, Zinner, & Brennan, 1999; Gawande, Zinner, Studdert, & Brennan, 2003; Kable, Gibberd, & Spigelman, 2002). Studies in other countries have suggested that one half to two thirds of patient safety concerns are attributable to surgical care with more than half of these involving preventable surgical errors (Gawande et al., 1999; Thomas et al., 2000; Thomas et al., 1999).

Diagnostic errors: Diagnostic errors described by participants in this study included clinicians making a wrong diagnosis (e.g., wrongly diagnosing a patient as having tuberculosis, when they had cancer, and vice versa). This finding is comparable in scope and kind to diagnostic errors identified in other countries – e.g., India and the US.

Laboratory/blood testing errors: Laboratory or ‘blood testing’ errors described by participants included: undertaking wrong or unnecessary blood investigations, issuing wrong blood reports, and administering wrong blood transfusions (i.e., administering blood that was incompatible with the patient’s blood type). These errors are similar to those known to occur in other countries. Studies in India, Thailand, UK and US, for example, have revealed that many diagnostic errors are associated with inappropriate laboratory testing, in particular due to inappropriate test requests and/or result interpretation and utilisation (Joshi, Sundaram, & Kamble, 2005; Wiwanitkit, 2000).

Falls: Participants in this study described falls as being a significant patient safety concern. Of particular note were patients falling from beds and trolleys. This observation reveals a problem that is not unique to the cultural context of Bhutan. A study of 151 patients conducted in Thailand, for example, found that at least 24 (16%) patients experienced a fall (Chaiwanichsiri, Jiamworakul, & Kitisomprayoonkul, 2006). Overseas studies suggest that patient fall rates range from 1.3 to 8.9 falls per 1000 occupied bed days (Healey et al., 2008; Schwendimann, Bühler, De Geest, & Milisen, 2006; Tan et al., 2005).

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19 Prashanth, Taly, Sinha, Arunodaya, and Swamy (2004); Kumar and Chaudhary (2009); Joshi, Colford, Reingold, and Kalantri (2008); Ely, Kaldjan, and D’Alessandro (2012).
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**Patient identification:** Participants revealed that patient identification is a major patient safety issue in Bhutan. This is primarily due to the lack of a formal patient identification system in Bhutan’s hospitals. Errors in patient identification are not unique to the cultural context of Bhutan. Studies conducted in India, Thailand and the US have implicated patient identification errors in a number of adverse incidents including: medication errors (e.g., administration of the wrong drug), performance of wrong procedures (e.g., wrong site surgery), wrong diagnosis and treatment, and wrong blood transfusion administration (Linden, Paul, & Dressler, 1992; Linden, Wagner, Voytovich, & Sheehan, 2000; Rattanarojsakul & Thawesaengskulthai, 2013; Wenz & Burns, 1991).

**Communication errors:** Information transmission and communication errors, verbal abuse and/or rude behaviour toward patients in the form of inhuman treatment (not talking politely, shouting, and general rudeness) and the failure to provide clear explanations and communication to patients about their disease and treatment were all identified by participants as being a significant patient safety issue. These findings are consistent with the findings of research conducted in India, US, Australia and South Africa. For instance, studies conducted in these countries found that communication breakdown and information loss posed serious threats to patient safety (Christian et al., 2006; Nichols, Copeland, Craib, Hopkins, & Bruce, 2008). Studies in South and West Africa also found that violations of patient rights (including physical and verbal abuse, neglect, discrimination, and disrespect for patients’ dignity) and professional lapses constituted a significant threat to patient safety (Jewkes, Abrahams, & Mvo, 1998; Kruger & Schoombee, 2010; Moyer, Adongo, Abarigo, Hodgson, & Engmann, 2013; Vivian, Naidu, Keikelame, & Irlam, 2011).

5.4 **Factors contributing to patient safety concerns**

This study suggests that human (staff) factors, system factors, and indigenous cultural values are the main contributing factors to patient safety issues and concerns in the Bhutanese healthcare system. These contributing factors are considered under the following separate subheadings:

- Human (staff) factors
- System factors
5.4.1 Human (staff) factors

Human (staff) factors have been strongly implicated in the incidence and impact of preventable adverse events worldwide. Human factors include slips, lapses, violations and mistakes made by healthcare professionals (such as nurse, physicians, surgeons, pharmacists, anaesthetists) due to aberrant mental processes such as inattention, forgetfulness, carelessness, negligence, recklessness, poor motivation and lack of knowledge or competency (Reason, 2005; Reason, 1990; Reason, 1995, 2004). While slips and lapses are associated with attentional failures (e.g., failures of memory), violations occur when healthcare professionals consciously deviate from safe operating practices, procedures, standards, or rules (Reason, 2005; Reason, 1990; Reason, 1995). Mistakes occur due to either the misapplication or non-application of good rules available in the system or when an understanding of a given situation is incomplete or flawed. In either case, this can be due to a lack of knowledge and competencies on the part of the health professional (Mattox, 2012; Reason, 2005; Reason, 1990; Reason, 1995).

The findings of this study highlighted human factor considerations, most notably, a lack of knowledge, skills and ‘right attitudes’ pertaining to patient safety (‘patient safety competency’) otherwise necessary for the delivery of safe patient care and to promote a culture of patient safety in the hospital context. The lack of patient safety competencies identified by participants encompassed a lack of knowledge and skills pertinent to: correctly prescribing medication (i.e., right drug, for the right reasons), the correct preparation and administration of injections, the prevention of cross infection, accurately checking vital signs, and taking a full patient history. These findings concur with the findings made in other studies. For instance, studies conducted in India, Thailand and UK have implicated healthcare professionals’ inadequate knowledge in relation to medicines, undertaking accurate patient assessments and compiling complete medication histories for patients, infection control, preparation for and the administration of therapeutic procedures, and the safe use of complex equipment in preventable medical errors and related adverse events (Charuluxanananan et al., 2012; Jirapaet et al., 2006; Muralidhar et al., 2012; Tam et al., 2005; Taxis & Barber, 2003).
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The perceived lack of competencies in this study was mainly attributed to healthcare professionals’ lack of education on patient safety and the poor skill mix of credentialed (qualified) staff. While patient safety competencies involve a range of knowledge, skills and attitudes that are necessary to minimise risk of harm to patients, having an appropriate skill mix of qualified staff is considered also to be critical (Alexander, Runciman, & International Council of Nurses, 2003; Charuluxanananan et al., 2012; Cronenwett et al., 2007; Hwang, 2015).

Despite a paucity of literature on the possible impact that a healthcare professional’s educational level, credentials/qualification, and experience might have on patient safety outcomes and quality care (positively or negatively), research is beginning to show a link between the ratio of appropriately qualified staff and improved patient safety outcomes. For example, comparative international studies evaluating the performance differences between baccalaureate, associate degree and diploma nurses have suggested that significant performance differences exist between baccalaureate and technical (associate degree and diploma) nurses in terms of communication skills, knowledge, problem-solving and professional roles. Studies in the US and Canada have also suggested that years and level of nursing education (including speciality education) have a significant impact on job effectiveness (Doran, Sidani, Keatings, & Doidge, 2002; Gillespie, Chaboyer, Wallis, & Werder, 2011; McCloskey, 1983). A study in China likewise revealed that the higher qualification level of physicians was associated with a better patient safety climate in healthcare settings (Nie et al., 2013).

Another human factor problem described in this study encompassed ‘slips and lapses’ and violations of rules. Participants linked this problem to the ‘botherless’ (complacent) attitude among some healthcare providers, and, on account of this, a lack of attention and concentration while delivering patient care. Notable among the slips and lapses reported by participants were healthcare professionals forgetting to update medication orders, failing to follow protocols, and taking ‘shortcuts’ when performing procedures. Healthcare professionals administering medications without referring to

20 In Bhutan a majority of healthcare professionals have only a basic education level of Certificate and Diploma in Nursing. Due to a shortage of staff, these personnel are often required to be ‘multi-tasked’ and to carry out jobs and responsibilities which are beyond their capacity, thus exposing patients to the risk of harm.

21 Thungjaroenkul, Kunaviktikul, Jacobs, Cummings, and Akkadechanunt (2008); Needleman, Buerhaus, Mattke, Stewart, and Zelevinsky (2002); Johnson (1988); Blegen, Goode, Park, Vaughn, and Spetz (2013); Aiken, Clarke, Cheung, Sloane, and Silber (2003); Australian Commission on Safety and Quality in Healthcare (2011); Estabrooks, Midodzi, Cummings, Ricker, and Giovannetti (2005).
medication orders (charts) was also reported by participants to be common. These findings are similar to the findings of studies conducted in India and UK. For instance, nurses not reviewing a new order or nurses not following existing doctors’ orders, and/or failure to follow protocols; lapses in performance; not being aware of proper procedures, and/or guessing, have been identified as factors contributing to medication errors in India and UK (Nichols et al., 2008; Reddy et al., 2009; Sanghera, Franklin, & Dhillon, 2007; Suksompong et al., 2008).

In light of the above, it would be easy to suggest that a key strategy for improving patient safety in Bhutan’s hospitals would be simply to improve the levels of healthcare professional education and qualifications. This, however, would not be sufficient on its own to achieve the patient safety outcomes desired. The sole introduction of healthcare professional education would not be enough to resolve the ‘botherless’ (complacent) attitude of healthcare professionals. As discussed in section 5.2.2 of this chapter, the development of adjunct guidance documents by the Bhutan Ministry of Health (with explicit process maps and decision trees detailing what healthcare professionals should do during the course of patient care) is also necessary. Most importantly, however, as will be discussed under subsection 5.5.9 of this chapter, what is also required is the development and implementation of a ‘Bhutanised’ patient safety agenda.

### 5.4.2 System factors

System factors relate to the conditions under which individuals work and can be used to build defences to avert errors or mitigate their effects (Reason, 2000, p. 768). System factors arise from decisions made by top management, procedure developers, designers and builders (Reason, 2000). They are often the triggering event for an incident that results from several causal streams such as organisational processes either human or mechanical breaching a system’s ‘defences in depth’ (Reason, 1995).

Three key system factors were identified by participants in this study: a lack of effective patient safety and clinical governance, a lack of financial resources, and poor hospital design. These factors are considered below:

- **A lack of effective clinical governance:** Clinical Governance is a framework which aims to produce within every health organisation a structure and system to assure and improve safety and quality of clinical services through the
placement of clear accountability on the leaders and managers of the health organisation, underpinned by a statutory duty of safety and quality on provider organisations (Vincent, 2001).

A lack of management and leadership support and effective clinical governance were identified by participants in this study as a barrier to improving patient safety in Bhutan’s hospitals. Participants were emphatic that poor communication and coordination, a lack of cooperation, and the lack of an effective monitoring (incident reporting) system combined to undermine the development of a culture of safety in Bhutan’s healthcare organisations. These processes in turn were implicated by participants in what they perceived as the perpetuation of a ‘name, blame and shame’ culture in the hospital environment. These findings correspond with the findings of studies conducted in other countries. For example, studies conducted in India, Thailand, Taiwan, US, UK, Canada and African countries have identified a lack of communication and collaboration as critical contributing factors to patient safety concerns (Charuluxanananan et al., 2012; Charuluxananana et al., 2010; Jirapaet et al., 2006; Muralidhar et al., 2012). Studies in Thailand and within the Ministries of Health of Egypt, Jordan, Kenya, Morocco, Tunisia, Sudan, South Africa and Yemen, have similarly revealed a lack of administrative/manager support and supervision as one of the major factors contributing to the poor quality of care and patient safety in their respective health services (Charuluxananana et al., 2010; Juntaradee et al., 2005). Studies in India, meanwhile, have identified the lack of a monitoring system (reporting forms) and/or centre in the hospitals as a major hindrance to improving patient safety (Khan et al., 2013). These and other studies conducted in Taiwan, UK and US investigating the barriers to reporting patient safety incidents revealed that many errors in healthcare go unreported because of a fear of humiliation and the presence of a blame or punitive culture (Mayo & Duncan, 2004; Muralidhar et al., 2012; VanGeest & Cummins, 2003).

Expressions of discontentment and criticism of management and the lack of clinical governance have been significant in this study. This finding highlights that if management and leadership support for patient safety is lacking, it is likely that patient safety will not improve in the Bhutanese healthcare system. This is because, as has been contended elsewhere, strong
leadership support is critical to the success of patient safety programs (Denham, 2005; El-Jardali, Dimassi, Jamal, Jaafar, & Hemadeh, 2011; Frankel et al., 2003; Walston, Al-Omar, & Al-Mutari, 2010). In light of this, to improve patient safety in the Bhutanese healthcare system strong leadership support for patient safety programs and clinical governance will be necessary.

- *A lack of financial resources:* Another significant system factor identified by participants in this study was a lack of resources, which encompassed financial, infrastructure (including buildings, rooms, equipment and materials) and human resources (workforces/staff mix). These findings are commensurate with those resulting from studies conducted in India, Thailand, US, UK, Africa, Canada and the Netherland (Alp, Leblebicioglu, Doganay, & Voss, 2011; Pronovost, Thompson, Holzmueller, Lubomski, & Morlock, 2005; Taylor et al., 2011; van Beuzekom, Boer, Akerboom, & Hudson, 2010). For example, studies in the US and UK to evaluate factors that impede hospitals making progress in improving patient safety processes identified a lack of financial resources as posing a substantial barrier to improving patient safety (Devers, Pham, & Liu, 2004).

- *Poor hospital design:* Poor architectural design and infrastructure of the hospitals were also identified as major impediments to improving patient safety in Bhutan’s hospitals. Particular issues identified included: poor lighting, a high level of noise in the hospital environment, poor air quality, poor room layout and a lack of room space altogether (e.g., a lack of space for the isolation of patients with communicable diseases), a poor state of environmental hygiene (including a lack of hand washing basins and facilities), a lack of information technology (such as automated information and decision-making systems), and a general lack of essential medical equipment (e.g., quality medicines, biomedical products). These findings are similar to those found in India, Thailand, US and UK.\(^\text{22}\)

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22 Allegranzi et al. (2011); Allegranzi et al. (2010); Brandis (1999); Buchanan, Barker, Gibson, Jiang, and Pearson (1991); Devnani, Kumar, Sharma, and Gupta (2011); Dornheim (2000); Flynn et al. (1996); Fox et al. (2009); Jirapaet et al. (2006); Johnson (2011); Joseph and Rashid (2007); Juntaradee et al. (2005); Kaakeh et al. (2011); Kasatpibal et al. (2012); Kesavan, Barodawala, and Mulley (1998); Mahmood, Chaudhury, and Valente (2011); Muralidhar et al. (2012); Rubin (1998); Walsh-Sukys, Reitenbach, Hudson-Barr, and DePompei (2001); Ulrich, Quan, Zimring, Joseph, and Choudhary (2004); World Health Organization (2008); Ventola (2011); Issakov (1994).
5.4.3 Indigenous cultural factors

The national culture of Bhutan had a significant influence on patient safety concerns. In making this observation it is worthwhile considering, as some organisational theorists have claimed, that the national culture, by definition, is a higher enduring characteristic of an organisation and operates at a deeper level pre-consciously, subconsciously, and unconsciously than organisational culture (Burke, Chan-Serafin, Salvador, Smith, & Sarpy, 2008; Kopelman, Brief, & Guzzo, 1989). For example, in a comparative study of the national and organisational cultures in India, Brazil and the US, which sought to uncover the complex relationship of national and organisational cultures (corporate values), it was revealed that the perceptions, cognitive processes, values, attitudes, and beliefs of individuals have been heavily influenced by their native cultures (Nelson & Gopalan, 2003).

As discussed in Chapter Two of this thesis, Bhutan has its unique cultural etiquette and set of values, notably: Le Judre (infallible law of virtuous actions, which emphasises good action), Tha Damtshig (principle of virtuous being, which emphasises a wide range of referents including honesty, fidelity, moral integrity, moral rectitude, reciprocal affection and gratitude) and Driglam Namzha (which emphasises good actions and morality, such as showing respect, being obedient, disciplined, loyal, and honest, acting in accordance with justice, duty and obligation, showing respect and dedication to seniors and elders) (Phuntsho, 2004). These values are predominantly based on Buddhist doctrine. However, in hospital context in Bhutan, these seem also to have become secularised, dampened and distorted (Phuntsho, 2004). This can be demonstrated by their secular association with organisational loyalty and submission to senior, elder, superior and more powerful co-workers in the healthcare sector. Thus the cultural influence of these values in Bhutan is paradoxical since they both conform and conflict with the processes and practices of patient safety.

While the Bhutanese cultural values of Le Judre and Tha Damtshig have been considered as a means to guide healthcare professionals to provide healthcare to patients with compassion and dedication, they seem also to have inadvertently contributed to the development of complacency in the system. The notion and belief of karmic cause and effect (which is related to the culture of Le Judre) has led to an assumption that whatever happens to patients (whether good or bad) is bound to happen because of karma. It will be recalled that this notion and associated beliefs were perceived by participants as encouraging a sense of complacency and contributed
to a ‘taken for granted’ situation (described by participants in this study as a ‘laid back situation’), and one that compromised patient safety practices in the hospitals.

As stated above, the system of respect seems to conflate traditional cultural values with loyalty to seniors, superiors, elders, and more powerful co-workers (e.g., doctors), and to the state, leading to an unwavering hierarchical and authoritative system in the healthcare organisation. The Bhutanese traditional values and code of conduct (Le Judre, Tha Damtshig and Driglam Namzha) hold respect as a fundamental element of social harmony, support respect for authority, and prescribe many kinds of behaviour such as how to talk, eat, walk and approach a person with authority (Phuntsho, 2004). It has become a tradition and culture that assumes seniors and superiors are wiser and better than their juniors, and that whatever a superior or senior does is correct and acceptable leading to an attitude of ‘taken for grantedness’. As noted by the participants in Section 4.2.1.5 of Chapter Four, the mode of communication in Bhutan is top-down, hierarchical, and opaque rather than transparent. For instance, nobody would dare sit next to a superior or leader and talk freely about patient safety issues and solutions.

The concept of Driglam Namzha further facilitates the development of a culture of unquestioning respect and reverence towards seniors, superiors, elders and the powerful in the organisation (e.g., nurses respecting doctors’ decisions in patient care), creating and enforcing bureaucracy and authority gradients in the system, which in turn encourages unilateral decision-making in the healthcare organisations, encourages conflicting roles and complacency. As such, the organisational culture in Bhutan’s hospitals appears to be characterised by what (Hofstede, 1980; van Oudenhoven, 2001) have identified as power distance, masculinity-femininity gender divide, and uncertainty avoidance. Hence, there is scope to suggest that a substantial barrier to progress in patient safety and quality of care in the Bhutanese healthcare system is rooted in the widespread distorted and politicised societal beliefs, norms and culture rather than the healthcare delivery structures or healthcare professionals’ knowledge on how to prevent harm to patients.

While there is a paucity of empirical literature on how bureaucracy and authority gradients in the system affect patient care, theories from organisational studies contend that the bureaucracy and authority gradients have direct effects on relationships between different categories of healthcare professionals (Justice, 1987; McCue & Beach, 1994; Speroff et al., 2010). Bureaucracy and authority gradients are attributed
to the creation of a dominant system of roles among different categories of healthcare professionals and are believed to encourage individual or single professional group decision-making leading to the fragmentation of patient care and systematic biases leading to patient safety concerns (Mannion & Thompson, 2014). For example, in the US, a fundamental lack of respect among healthcare professionals and the presence of differing levels of professional stature and seniority, expertise or experience in the system, have each been identified as a problem that affects every aspect of their job including interpersonal relationships and communication, staff morale and patient safety (Cosby & Croskerry, 2004; Johnson, 2009).

As indicated by the findings of this study, effective communication and collaboration among healthcare professionals, which involves encouragement for devising and practicing safe healthcare delivery, and reporting and speaking up about errors, were influenced by the traditional and cultural values system, in particular, the lack of freedom to express opinions and perceptions to superiors. This finding is comparable with the findings of a study conducted in Malaysia and other countries. For example, lack of freedom to express opinions was revealed to hinder positive changes in the healthcare system to improve patient safety in Malaysia (Nabilah et al., 2014). Likewise a study conducted in non-healthcare organisations in Belgium, Canada, Denmark, Germany, UK, Greece, Spain, US, France and The Netherlands with 817 advanced students of business administration, management, industrial economics, and related disciplines found that a national culture in which persons in power (such as managers or administrators) and who are highly respected and deferred to, have led to a form of organisational communication in which subordinates hesitate to express disagreement with their bosses (van Oudenhoven, 2001). Failures in coordination and communication flow have likewise been implicated in major adverse events and accidents in the healthcare system (Risser et al., 1999; Westrum, 2004; White et al., 2004).

In the Bhutanese healthcare system, as stated in the Methodology Chapter (Section 3.4, page 34) of this thesis and as was noted by participants (see Section 4.2.1.2 of Chapter Four, page 124), positions of authority are dominated by members of the medical profession, who make all decisions within the healthcare system. Most of the managers in the healthcare system are medical professionals (doctors). Collaborative relationships between healthcare professionals of different specialities are at a minimum in the hospital sector. At present there are no consensus decision-making
systems and the integrated nature of medical management is not recognised or valued. Importantly, there are situations in which doctors will not cooperate with subordinates.

It will be recalled that the attitude of medical professionals was reported as being generally paternalistic and most coordination meetings, which are conducted to improve healthcare services in the hospitals, were often characterised by ‘tribal fighting for territory’, disagreement among different specialities, and name, blame and shame games.

In sum, Bhutanese healthcare organisations suffer from the effects of poor relations between clinical groups and low levels of morale among staff. Stress and burn-out among staff are prominent in the Bhutanese healthcare system (Pelzang, Wood, & Black, 2010). Most notably, the system is plagued by chronic problems of co-ordination (culture of tribalism); problems of accountability (culture of individualism); and problems of innovation and change (culture of conservation) which negatively affects the delivery of safe quality care to patients (Bate, 2000).

The disrespectful/disruptive behaviour among healthcare professionals in the Bhutanese healthcare system was identified as a patient safety issue. In the patient safety literature, an unequal distribution of power, influence or status and associated disrespectful/disruptive behaviour are considered to be major impediments to the creation of a just and safe culture in the healthcare system (Blouin & McDonagh, 2011). Typically, these behaviours create ‘holes’ or ‘weaknesses’ in the system, mainly due to a lack of communication and coordination among healthcare professionals within the system, exposing it to risk of preventable patient safety incidents (Reason, 2000).

Likewise, in relation to the findings of this study, there is scope to suggest that the secularised or politicised culture and traditions of Bhutan has influenced patient safety practices in several ways, such as by fostering complacency at both individual and organisational level, autocratic and authoritarian styles of leadership, inefficient

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23 As tribal relations among different healthcare professionals exist, the consensus on the best way to provide safe quality care to patients are affected by the lack of accountability among different groups of healthcare professionals. The lack of healthcare providers’ accountability in Bhutanese healthcare system has become an issue: each group of healthcare professionals go over their own way of doing; they ignore directives or policy/ procedure they do not like. There is no coordination among the professionals. Professional groups take decisions primarily from their profession rather than organisational procedure, so that accountability is indirect and external, bypassing the organisational norms. Hence, the culture of not mixing with other group of professionals is most prevalent in the Bhutanese healthcare system.

24 A distinctive feature of latent failures depicted in James Reason’s famous ‘Swiss cheese’ model of ‘Trajectory of accident opportunity’.
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communication, and taking all these processes together the development of a ‘name, blame and shame’ culture.

Significantly, differential treatment of patients (the way that a healthcare professional distinguishes between those patients who are entitled to high quality services and those who are not) was also identified as an issue related to Bhutanese traditional cultural values. For instance, some patients were treated with attentive kindness and respect while others were allegedly treated with impatience and rudeness (‘ordering around’ and ‘yelling at’), and provided with less information and accorded less time. This finding is comparable with the findings of a study conducted in another low-income country – i.e., Ghana in West Africa (Andersen, 2004). Anderson attributed differential treatment of hospitalised patients to the Ghanaian culture and maintained that such treatment in Ghana is an integral part of social interaction in Ghanaian society in general. Similar to the Bhutanese context, social interaction in the Ghanaian society was found to be based on negotiations of social status and personal relations which are embedded in the bureaucratic organisation contributing to the legitimisation of differential treatment of elite and non-elite patients. For example, staff in the Ghanaian healthcare system generally favoured those patients who were well educated, rich and influential, and paid less attention to poor, uneducated patients and who were considered as having low social status. Villagers, who were considered to be a low-status category, were likely to be made to wait, to be addressed rudely, and to receive treatment that was below accepted standards of care compared to patients who were educated and perceived as ‘big men’ of high status (Andersen, 2004, p. 2008).

As the research being reported here reveals, the organisational culture of Bhutanese hospitals in many ways reflects a fossilised culture25 notably of the British establishment (i.e., the British hierarchical model that legitimated medical dominance) of 1960s. There is scope to suggest that the Bhutanese law of ‘virtuous actions’ and the principle of ‘virtuous being’, which normally emphasises good actions, integrity, morality, justice, duty and obligation, and respect, became misinterpreted during this period, notably, in a way that served to benefit only certain people (i.e., those at the

25 Fossilised culture (which is also called as ‘frozen culture’) in this thesis refers to the antiquated or inflexible values and beliefs that has been preserved and persisted (Vermeer, 1992) within the Bhutanese healthcare system. For example, the British hierarchical model that legitimated medical dominance is a long overall context of fossilised or frozen culture that have been persisted in the wider framework of the Bhutanese healthcare practices (Pelzang, 2008).
top of the hierarchy). Personnel in the Bhutanese healthcare organisations seem to have picked the ‘bad apples’ of this fossilised culture, which was reinforced by an inappropriate and politicised use of the principles and values of Le Judre, Tha Damtshig and Driglam Namzha.

Other notable influences of traditional cultural values are evident in the way that people or patients prefer to access traditional healing practices that have potential to harm patients. The risks and benefits associated with using traditional healing practices has not been systematically investigated in Bhutan. Thus the possible implications of the use for patient safety outcomes is not known and stands as a fertile area for future inquiry.

5.5 Possible strategies for improving patient safety in Bhutan

The strategies recommended by participants in this study are comparable to what has already been tried and tested in other countries. A positive system comprised of good clinical governance, good management and leadership, communication and information, a vision for patient safety, infrastructure and human resources, and an environment founded on mutual trust is known to be effective in improving patient safety in the healthcare system (Charles, McKee, & McCann, 2011; Firth-Cozens, 2004; Sanders & Cook, 2007). However, as stated in Sections 2.5 and 2.6 of Chapter Two, there should be a note of caution because many patient safety advocates in recent years have realised that the adoption of techniques and strategies from high-risk industries (e.g., from the aviation industry such as installing technologies and designing tasks and process) are not always appropriate for improving patient safety (Leape, 2009; Nolan, 2000; Pronovost, Miller, & Wachter, 2006; Pronovost & Wachter, 2014; Reason, 2000). Moreover, their adoption in low-income countries might not be appropriate, at least not without cultural adaptation or what Yoelao and colleagues (2014) term ‘indigenisation’, for reasons briefly considered below.

The indigenisation of patient safety programs and research is being increasingly recognised as fundamental to the development of successful patient safety programs in low-income countries and in which cultural worldviews differ from those found in better resourced western countries like the US, UK, Canada, Australia and elsewhere. In their landmark review of patient safety in Thailand and Malaysia, Yoelao and colleagues (2014), for example, make the important point that in devout societies, peoples religious beliefs will influence how they perceive, what they believe about,
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and how they behave in regard to patient safety. Local culture and communication preferences also profoundly influence the way healthcare providers will interact and talk with each other as well as to patients and families. They contend, however, that these factors are often overlooked, leading to a tendency by poorer nations to adopt ‘imported solutions first’ and ‘evaluate later’ (Yoelao et. al., 2014). What this has meant in practice is that the ‘solutions’ which have been adopted have often failed to address *local* needs and address *local* understandings. To redress this problem, Yoelao and colleagues (2014, p. 65) contend that if patient care and safety are to improve in low-income countries, patient safety champions need to give much greater attention to and to focus on the ‘characteristics of diseases, the healthcare systems and the people involved that are unique to [the countries involved]’.

Yoelao and colleague’s (2014) views are relevant to Bhutan which, like its neighbours, is a devout society. As previously explained, Bhutan’s core cultural values and belief systems derive from Buddhist philosophy and teachings. As this study has demonstrated, Bhutanese cultural values and beliefs have influenced how participants in this study perceived patient safety – what they believed about it and how they behaved in regard to it.

One of the most significant examples of how a Bhutanese belief system has influenced perceptions and responses to patient safety can be found in the karmic belief system. As discussed previously, the law of karmic cause and effect is central to Bhutanese religious and cultural beliefs. It will be recalled that, in some instances, adverse events in healthcare were ‘justified’ or explained simply as ‘this is karma’.

Karmic beliefs can, however, also be appealed to in order to motivate positive change in Bhutan’s healthcare professionals in terms of influencing their behaviour, perceptions and understanding of patient safety. It will be recalled that in keeping with Bhutanese cultural values doing or causing harm to others is regarded as non-virtuous actions. Avoiding harm (in action or speech) is one of the core principles indoctrinated in the concept of karmic cause and effect. The concept of karmic cause has the capacity to both consciously and subconsciously cultivate a positive mental intention in healthcare providers, such as having constant awareness and mindfulness, while providing patient care.

According to the Buddhist teachings there can be no control over the actions of body and speech, without control over one’s mind (Whitecross, 2010). Thus, using Bhutanese religious and cultural beliefs to frame patient safety initiatives would help
to enhance what Weick, Sutcliffe, and Obstfeld (1999) call *collective mindfulness* in the healthcare organisation. Weick and colleagues (1999) describe mindfulness as the quality of attention given to the task by the person involving interpretative work directed at potential hazards. Through mindfulness processes, organisations can better anticipate and become more aware of the unexpected and provide alternatives for preventing and reducing the unexpected (Weick & Sutcliffe, 2006).

Despite the growing acceptance among patient safety researchers that ‘a safety solution from one setting [cannot be imported] to another without allowing for context in terms of professional and organisational “ways of seeing”’ (Lamont & Waring, 2015, pp. 5-6), patient safety models are still falling short of taking an indigenised approach – i.e., to devising strategies that will address *local needs*, improve *local understanding of patient safety*, and that will lead to the development of effective and efficient *locally adapted solutions*. They are also failing to take into account that working to improve patient safety and the healthcare organisational culture must be considered through an indigenised cultural lens if it is to be successful. For example, the nature of complexity, identity, boundaries, power, and the ambiguity of an organisation must all be considered from a local cultural perspective (Dixon-Woods, 2010; Leape & Berwick, 2000). These considerations are discussed in further detail below under the respective subheadings:

- Instituting clinical governance;
- Development/improvement of physical infrastructure/environment;
- Providing adequate human resources;
- Patient safety training and education for healthcare professionals;
- Providing safety education to patients;
- Promoting communication among healthcare professionals;
- Involving patients and families in patient care;
- Making healthcare system resilient to public health emergencies;
- Integrating indigenous cultural values in healthcare process;
- Incorporating the concept of Gross National Happiness (GNH) in healthcare system; and
- Incorporating the concept of Four Harmonious Friends in healthcare system.
5.5.1 Instituting clinical governance

One of the key recommendation made by participants in this study was to develop ‘good’ clinical governance. This recommendation is broadly comparable to the recommendations made by the Institute of Medicine (IOM) in ‘To err is human: building a safer health system’ (Kohn et al., 2000). Key requirements for clinical governance recommended by participants included: instituting patient safety monitoring committees, providing good management and leadership, developing clear patient safety guidance documents, involvement of all healthcare professionals in decision-making (making patient safety everyone’s responsibility) and developing patient-centred care, each of which is discussed under separate headings below.

5.5.1.1 Instituting patient safety (monitoring) committee

The theoretical literature suggests that the institution of patient safety committees (including the establishment of national patient safety foundations and in-hospital patient safety committees) is imperative to enhance patient safety in healthcare (Adibi, Khalesi, Ravaghi, Jafari, & Jeddian, 2012; Clinical Excellence Commission, 2005; Kohn et al., 2000). The essential functions that patient safety committees can serve include: overseeing patient safety programs, developing expertise and managing resources (Boddington, Arthur, Cummings, Mellor, & Salter, 2006; Sage et al., 2014; Scott, 2009).

As stated in Chapter Two (Section 2.7, page 15) of this thesis, one of the key problems facing the Bhutanese healthcare system is that it does not have patient safety committees or programs in place. To make significant improvements in patient safety, a highly visible and functional patient safety committee is needed with secure and adequate funding. As indicated by the participants in this study, such a safety program needs to develop clear goals for safety; define prototype safety and risk management systems (including developing tools for identifying and analysing adverse events, and evaluating approaches taken to solve issues); and develop and operationalise the tools and methods needed for educating healthcare professionals and patients about patient safety (Kohn et al., 2000). To have cultural authority, however, the patient safety committee will need to be situated within Bhutan’s Ministry of Health.
5.5.1.2 Providing good management and leadership

As recommended by participants in this study, if patient safety is to improve in Bhutan, patient safety governance will also need to improve. This will involve creating new leadership positions including the establishment of a chief patient safety officer position with the incumbent having an established budget and clear lines of accountability (Classen & Kilbridge, 2002; Frush, 2008). This recommendation is consistent with the recommendation made by other patient safety advocates (Etchells & Bernstein, 2001; Kohn et al., 2000). It is contended that good leadership promotes desired organisational culture change through deliberate role-modelling and coaching, modifying and improving organisational design and structure, developing organisational systems and procedures, paying attention to measures and control, and operationalising criteria for the recruitment, selection and promotion of healthcare personnel (Schein, 1990). Chief executive officers, together with medical and nursing leaders, can turn barriers to the domains of awareness, accountability, ability, and action into accelerators of patient safety practice adoption (Denham, 2005).

Accordingly, creating alignment among healthcare leaders such as physician leaders, nursing leaders and the board of directors is considered an optimal way to improve safety in the healthcare system because these entities are ultimately responsible for policy and strategic decisions (Krause & Hidley, 2009; Nieva & Sorra, 2003).

As was indicated by the participants, however, the challenge in Bhutan is for the senior leadership to be able to galvanise healthcare professionals to engage in trustworthy processes aimed at improving safety and quality care in the Bhutanese healthcare system. This finding suggests that the hospital leaders need to become aware of patient safety concerns and be accountable. Patient safety initiatives and change meanwhile has to be supported by the senior managers and/or leaders. This is because supportive leadership plays an important role in creating and empowering professional practice environments that foster safe quality care and job satisfaction (Spence Laschinger & Fida, 2015).

The importance of leadership in enabling change is well documented and studies have shown a direct correlation between leadership support and patient safety. For example, the US and UK studies have found a strong association between high level leadership support for patient safety and improving the safety culture of the organisation, including improving safety communication and learning in the
healthcare system\textsuperscript{26}. Even the introduction of ‘leadership WalkRounds’, where senior executives conduct weekly or biweekly visits to different areas of hospitals, have been reported to have had a positive association with cultural change, manifesting in more open discussion of medical errors and solutions (Campbell & Thompson, 2007; Frankel et al., 2003; Sexton et al., 2014). In summary, good leadership support creates comfortable venues for dialogue between leaders and frontline healthcare professionals to identify opportunities for improving patient care processes leading to better patient safety outcomes (Budrevics & O’Neil, 2005; Schwendimann et al., 2013).

These observations have not been confined to the western cultural contexts of the US or UK. A study to assess the culture of safety in Lebanese hospitals has similarly revealed that the higher the level of support from hospital management for patient safety, the greater the frequency of patient safety incident reporting (El-Jardali et al., 2011). Conversely, studies have shown that an authoritarian, unsupportive and defensive stance of leaders is directly associated with low rates of adverse events reporting by staff, primarily due to fear of punishment (Edmondson, 1996; Osborne, Blais, & Hayes, 1999; Tyler & Lind, 1992). Extrapolated to the cultural context of Bhutan, these findings underscore the importance of senior leaders and managers being committed to creating a culture of patient safety and/or improving patient safety in the Bhutanese healthcare system.

5.5.1.3 Developing clear patient safety guidance documents

The recommendation to develop clear patient safety guidance documents is consistent with the recommendation made by WHO and the Agency for Healthcare Research and Quality, U.S (Ducharme, 2005; Scott, 2009; Shekelle et al., 2013; World Health Organization, 2009b). Development of clear patient safety guidance documents establishes minimum levels of performance, maintains consistency or uniformity across multiple individuals and organisations, and sets expectations about what is to be achieved (Adibi et al., 2012; Classen & Kilbridge, 2002; Institute of Medicine, 2001; Kohn et al., 2000; Nolan, 2000). It has also been suggested that guidance documents work by fostering a shared set of beliefs, attitudes and norms and prevent

\textsuperscript{26} Auer, Schwendimann, Koch, De Geest, and Ausserhofer (2014); Benn et al. (2009); Charles et al. (2011); Thompson et al. (2011); Wong and Cummings (2007); Zaheer, Ginsburg, Chuang, and Grace (2015).
variation in clinical practice (McDonald et al., 2005; Szymanska, Ryan, & Murphy, 2011; Ursprung et al., 2005). For example, the introduction of a surgical safety checklist (including the WHO surgical safety checklist) has resulted in a significant and demonstrable reduction in morbidity and mortality in hospitals around the world (Bergs et al., 2014; de Vries et al., 2010; Haynes et al., 2009; Schlack & Boermeester, 2010; van Klei et al., 2012).

The findings of this study suggest that the development of high quality guidance documents is required to improve patient safety in the Bhutanese healthcare system. A guidance document with weak scientific and clinical quality is considered not suitable for enforcement in the healthcare system (Woolf, 1993). ‘Scientific and clinical quality’ according to Woolf (1993, p. 2652) refers to the quality of the review of scientific evidence and expert opinion, the scientific appropriateness of the recommendations, and the feasibility of the guidance documents in practice. As discussed in Section 5.2.2 of this chapter, Bhutan is a low-income country. Thus, developing guidance documents would be an expensive affair and needs to proceed cautiously. This is because the development of guidance documents requires operationalisation and enforcement in the healthcare system only after they have been methodically and scientifically validated. A particular concern in this case relates to the financial resource, needed to develop effective patient safety guidance documents. The development of trustworthy and effective guidance documents requires the development and use of rigorous processes, including obtaining the conscientious input from knowledgeable experts such as those who sit on a multidisciplinary panel of experts (Crosby, 2013). Since such processes tend to be resource intensive, Bhutan may not be able to initiate them, at least not without sustainable donor support. However, guidance documents of weak quality, which lack scientific support, could interfere with the delivery of safe quality patient care, result in preventable harm to patients, and increase the costs of safe healthcare rather than ensuring positive patient safety outcomes (Woolf, 1993).

5.5.1.4 Involving all healthcare professionals in healthcare decision-making through teamwork

Participants in this study strongly recommended the development of a safety framework that involves all categories of healthcare professionals in healthcare decision-making to help improve patient safety processes and practices. Taking such
an approach would involve creating an integrated care platform that enhances professional empowerment, accountability and inter-professional collaboration and/or teamwork by involving all levels of healthcare professionals in decision-making and risk management processes. As recommended by the Institute of Medicine, this requires making patient safety everyone’s responsibility (Kohn et al., 2000). To this end, the creation of a value system that fosters mutual respect among stakeholders in the organisation is required. This would entail a policy drive to counter the entrenched interests within the hospitals by encouraging healthcare professionals to move away from ‘silo’ or ‘tribal’ behaviours towards ‘joined-up’ thinking and collaborating across boundaries (Dixon-Woods, McNicol, & Martin, 2012). In addition, a collaborative approach to decision-making generates a broader knowledge base and in the process increases the ability of the healthcare professionals as well as patients to successfully achieve the task of improving patient safety outcomes (Collighan, Macdonald, Herzberg, Philpot, & Lindesay, 1993; Firth-Cozens, 2001).

To date, there is increasing agreement among those in the field that involving all healthcare professionals in healthcare decision-making will empower them and maximise efficiency, safety and reliability of patient care in the healthcare settings27. An instructive example of this can be found in a study by Berenholtz et al. (2004) in the US. By empowering nurses to ‘speak up’ (specifically to call a halt to central venous catheter insertion if standard precautions were observed to be being breached by the doctor performing the procedure) the infection rate associated with this procedure was reduced from 11.3/1,000 catheter days in the first quarter of 1998 to 0/1,000 catheter days in the fourth quarter of 2002 (Berenholtz et al., 2004).

5.5.2 Development/improvement of physical infrastructure/environment
Another recommendation made by the participants concerned the need to develop new or to improve the existing physical infrastructure and environment of the hospitals, encompassing building architecture, hospital lighting, signage, oxygen supply, ramps, elevators, central sterilisation unit, rooms, ventilation system and equipment and biomedical supplies. This recommendation is comparable to recommendations made by other patient safety advocates in the US and UK. Standardised rooms with the

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27 Armstrong and Laschinger (2006); Armstrong, Laschinger, and Wong (2009); Laschinger, Finegan, Shamian, and Casier (2000); Leape (2009); Leape et al. (2009); McPherson, Headrick, and Moss (2001); Nygren et al. (2013).
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space, dimensions and features to accommodate a wide variety of patient conditions and equipment have been recommended (Berry et al., 2004; Datton, 2000; Hendrich, Fay, & Sorrells, 2004; Hignett & Lu, 2010; Reiling, Breckbill, Murphy, McCullough, & Chernos, 2003). The dimension and configuration of rooms include a patient area, family area (including light, oxygen system, signage, elevators, and ventilation system), care giver and hygiene areas (Berry et al., 2004; Reiling et al., 2003).

As discussed in Section 5.4.2 of this chapter, the lack of and/or poorly organised physical infrastructure or environment can have a significant impact on patient safety – including cross infections and falls. Further, availability of adequate drugs and functional equipment have been found to have a significant adverse effect on patient safety (Walston et al., 2010). In response to drug shortages, as was noted in the US (De Oliveira, Theilken, & McCarthy, 2011; Fox et al., 2009; Kaakeh et al., 2011; Ventola, 2011), it is necessary for the healthcare system to have sound strategies in place to avoid disruption to patient care and to provide uninterrupted, therapeutically equivalent, safe drug therapy, preferably at comparable costs. It will be recalled that participants identified a lack of information technology (automated information and decision-making systems) as a factor contributing to patient safety concerns in the Bhutanese healthcare system. Redressing this problem would entail instituting information technologies in the healthcare system.

Information technology provides patient safety benefits by enhancing communication and decision support (Van de Castle et al., 2004). Information technology has been credited with enabling the delivery of care to be transformed, by streamlining processes, making procedures more accurate and efficient, and reducing the risk of human error (Ball, Weaver, & Abbott, 2003). For example, the introduction of a computerised clinical decision support system (e.g., computerised physician order entry, medication alert system, computerised prescribing critiquing system, bar coding, decision support systems for antibiotic prescribing, and automated dispensing units integrated with information about a patient’s medication profile) have all been reported as having effectively reduced HAIs and medication errors and/or ADEs, as well as hasten the recognition of serious laboratory abnormalities.

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28 Flynn et al. (1996); Hignett and Lu (2010); Mahmood et al. (2011); Muto et al. (2003); Reiling et al. (2004); Rubin (1998); Walsh-Sukys et al. (2001).

29 Balas, Boren, and Griffing (1998); Balas et al. (2000); Borel and Rascati (1995); Classen et al. (1992); Evans et al. (1998); Kuperman, Sittig, Shabot, and Teich (1999); Leape et al. (1995); Nightingale, Adu, Richards, and Peters (2000); Raschke et al. (1998); Rind et al. (1994).
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The introduction of such computerised support systems is also believed to reduce reliance on memory, facilitate increased access to information, and increase compliance with ‘best practice’ procedures (Bates, 2000; Garg et al., 2005; Kawamoto, Houlihan, Balas, & Lobach, 2005; VanDenKerkhof, Goldstein, Lane, Rimmer, & Van Dijk, 2003). For example, a US study have found that electronic prescribing systems resulted in seven times less prescribing errors compared to those where prescription have been written by hand (Kaushal, Kern, Barrón, Quaresimo, & Abramson, 2010).

Despite the merits of technology assisted decision-making and drugs prescribing, the introduction of information technologies into the Bhutanese healthcare system needs to be considered carefully. There are two reasons for this: first, the introduction of information technology is resource intensive; and second, the adoption of information technologies does not guarantee total patient safety because the use of such technologies can lead to unintended and undesired consequences. The elimination of informal interactions and redundant checks that catch errors, undermining informal patient care decision-making, wrong entry of data, fragmentation of information, decision support overload/alert fatigue (healthcare professionals ignoring warnings and reminders), losing communication (missing orders/urgent requests) and never ending demands are just some of the most common unintended consequences associated with using information technologies.

5.5.3 Providing adequate human resources

Managing human resources – including a skilled and educated healthcare workforce – are considered to be a key step to improving patient safety. Human resource management includes recruiting adequate numbers of qualified healthcare professionals and assigning healthcare professionals to roles commensurate with their training and expertise. This recommendation corresponds with the recommendation made by the Institute of Medicine in To err is human: building a safer health system (Kohn et al., 2000). The Institute of Medicine has identified the employment of well skilled and educated healthcare professionals as one of the essential requirements to improving patient safety in healthcare organisations.

Aarts, Ash, and Berg (2007); Ash et al. (2004); Campbell, Sittig, Ash, Guappone, and Dykstra (2006); Han et al. (2005); Harrison, Koppel, and Bar–Lev (2007); Koppel et al. (2005); Rosenbloom et al. (2006); Wachter (2006).
Research suggests that there is a positive relationship between the availability of human resources (including an appropriate skill mix of healthcare professionals) and patient safety outcomes. For example, studies conducted in the US, Canada, Switzerland and Thailand examining the association between skill mix, staff intensity and outcomes indicative of the quality of hospital care, have revealed that the higher the ratio of qualified healthcare professionals to patients the better the patient safety outcomes. A study conducted in 19 teaching hospitals in Ontario, Canada, have found that a higher proportion of professional nurses in the staff mix (nurses with Bachelor’s degree and Diploma) were associated with lower rates of medication errors and wound infections (McGillis, Doran, & Pink, 2004).

The lesson here for Bhutan is that, to be effective, it is suggested that human resource constraints are addressed within a larger policy environment. It also suggests that clear organisational definitions, indicators, and procedures for matching staff mix and numbers with task/patient demands need to be developed and implemented in the Bhutanese healthcare system to improve patient safety.

5.5.4 Patient safety training and education for healthcare professionals
Participants recognised that patient safety can be improved by providing patient safety education and training for healthcare professionals (with robust patient safety curricula for first level entry and on staff development on-the-job-training programs). This recommendation is similar to the recommendation made by other patient safety theorists, who have recommended that a well-designed patient safety training and education program that covers all levels and types of formal, informal, and continuing medical education programs would help bring improvements in patient safety in the hospitals (Elkin & Gorman, 2002; Milligan, 2007).

Education and training programs on patient safety have been found to be effective in creating a culture of safety and accountability as well. A systematic review published in the Cochrane Library, for example, found that 62% of education interventions had a positive effect on changing healthcare professionals’ behaviour (Davis, Thomson, Oxman, & Haynes, 1995). Apart from change in healthcare professionals’ behaviour, training programs have been shown to increase the ability of

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31 Archibald, Manning, Bell, Banerjee, and Jarvis (1997); Hugonnet, Chevrolet, and Pittet (2007); Lichtig, Knauf, and Milholland (1999); Nantsupawat, Nantsupawat, Kulnaviktikul, and McHugh (2014); Nantsupawat et al. (2011); Needleman et al. (2002); Robertson and Hassan (1999); Stegenga, Bell, and Matlow (2002).
healthcare professionals to analyse and solve patient safety problems (Chopra et al., 1994; Straight, 2008). For instance, an education program on adverse events (how to predict and mitigate errors) carried out in the UK resulted in improved medical students’ knowledge on patient safety concerns and management (Patey et al., 2007).

### 5.5.5 Providing safety education to patients

In addition to providing healthcare professionals with education on patient safety, educating patients about patient safety concerns was also identified by participants in this study. Educating patients on disease processes and treatments is a basic element to enhance health literacy, and is regarded as fundamental in engaging patients in their own or their family’s clinical care (Coulter & Ellins, 2007). People with low health literacy are less likely to adhere to prescribed treatment and management, and to experience more drug and treatment errors (Institute of Medicine, 2004).

Recent studies suggest that interventions designed to increase patient knowledge such as oral and written information can improve patient literacy on the management of their illness and treatment (McGuckin, Taylor, Martin, Porten, & Salcido, 2004; McGuckin et al., 1999). Strategies such as targeted mass media campaigns and website information have also been found to be effective in promoting specific knowledge and health behaviour or patterns of service use – e.g., reduce inappropriate use of certain drugs, procedures, or services (Coulter & Ellins, 2007). These findings suggest that it would be appropriate for patient educational strategies to be designed and implemented in the Bhutanese healthcare system. The strategies can be an integral part of any progressive healthcare program (services), contributing to both educating and supporting patients and family in the field of patient safety – i.e., infection control, medication, and the reporting of adverse events.

### 5.5.6 Promoting communication among healthcare professionals

Clear communication among healthcare professionals is considered important to patient safety in the Bhutanese healthcare system. The findings of this study suggest that current communication processes in Bhutanese healthcare system are inadequate.

As indicated in Section 5.4.2 of this chapter, poor communication among frontline staff and between the leadership and management in the healthcare organisation has
been implicated in preventable adverse events. One reason for this is that healthcare involves complex activities which need accurate and timely communication. Healthcare activities involve the ‘handoff’ of patient care from one healthcare professional to another (Pham et al., 2012). The main objective of the handoff is to transfer accurate information about patient care, prevailing condition, treatments, and anticipated changes among attending healthcare professionals (Olvera & Bliss, 2010). Failure to provide proper handoffs or inconsistencies in the handoff process have been associated with medical errors (Cheung et al., 2010; Holloway, Tuttle, Baird, & Skelton, 2007; Pham et al., 2012). For example, in one Danish study, of the 52% of verbal communication errors recorded, handoff communication errors were found to be the highest (86%) (Rabol et al., 2011). Similarly, a study conducted in the US found that of 24% of the adverse events attributed to mistakes, the most common reason for making mistakes was a failure in handoff communication (15%) (Jagsi et al., 2005). These findings suggest reducing communication breakdown among multiple agents, including physicians, surgeons, anaesthesiologists, house staff, nurses, and ancillary staff, can substantially reduce errors and improve patient safety outcomes.

Key communication elements to be promoted (as per the participants of this study) include: improving teamwork and interpersonal relationship in the organisation, and instituting a patient safety information system as discussed below.

5.5.6.1 Improving teamwork and interpersonal relationships in the organisation

Good teamwork and interpersonal relationships are the characteristics that appear most frequently in the literature on improving patient communication and patient safety in clinical settings. Teamwork refers to strategies where a multidisciplinary team of leaders and staff with expertise, credibility and motivation work collaboratively using effective communication to enhance performance and patient safety in the healthcare system (El-Jardali et al., 2011; Firth-Cozens, 2004). Teamwork and communication errors include passing on incomplete or incorrect information, delay or failure in initiating treatment, improper or delayed diagnoses, failure to consult, faulty medications or treatment, and wrong site surgery (Firth-Cozens, 2004). An insufficient discussion of cases at shift change or the failure of staff in different units and

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32 Greenberg et al. (2007); Lingard et al. (2004); Nadzam (2009); Sheps and Cardiff (2011); Sutcliffe, Lewton, and Rosenthal (2004); Wilson et al. (1995); Sanders and Cook (2007).
departments to coordinate clinical care leads to poor teamwork and communication issues in the system (Baker et al., 2001).

Healthcare teamwork that improves communication in clinical settings is important to preventing errors and harm from reaching patients (El-Jardali et al., 2011; Firth-Cozens, 2004). Good teamwork with effective communication provides healthcare providers with increased control over complex healthcare environments and creates a work environment that is conducive to good internal and external dialogue and trust building (Firth-Cozens, 2004; Risser et al., 1999). Effective teamwork in the system also helps to reduce stress among healthcare professionals and thus enables the provision of better healthcare to patients (Firth-Cozens, 2001). Effective teamwork with good communication also enhances healthcare decisions and patient care outcomes – i.e., patient safety33.

Working effectively as a team is a skill that requires training and practice. Moreover, providing formal teamwork training has been found to be effective in reducing clinical errors (Barrett, Gifford, Morey, Risser, & Salisbury, 2001; Harris, Treanor, & Salisbury, 2006; Vincent, 2001). Some of the approaches which have been found to enhance teamwork include cross training, teamwork skills training, Crew Resource Management, simulation and team building activities34. Teamwork training, incorporating Crew Resource Management principles and healthcare simulations, were found to be effective in developing a greater degree of cognitive and interpersonal skills needed to effectively manage team-based high-risk activities – all the while creating a fulfilling work environment potentially decreasing medical errors (Shapiro et al., 2004; Ziv, Ben-David, & Ziv, 2005). Such training can also provide an opportunity for staff to improve both their technical and non-technical skills – i.e., in the case of the former, their medical and procedural knowledge; and in the case of the latter, their behavioural-based skills which include task management, situation awareness, communication, decision-making and leadership skills (Naik & Brien, 2013; Pratt et al., 2007). The main advantage of this kind of teamwork training is that it can be adapted to different healthcare disciplines (Lindquist, 2009).

33 Firth-Cozens (2001); Gristwood (2004); Kaissi, Johnson, and Kirschbaum (2003); Kalisch, Curley, and Stefanov (2007); Leppa (1996); Miller, Miginsky, and Connelly (2012); Morey et al. (2002); Silén-Lipponen, Tossavainen, Turunen, and Smith (2005).
34 Beaubien and Baker (2004); Blum et al. (2004); Cannon-Bowers, Salas, Blickensderfer, and Bowers (1998); Horak, Pauig, Keidan, and Kerns (2004); Salas, Burke, Bowers, and Wilson (2001); Salas, Fowlkes, Stout, Milanovich, and Prince (1999); Shapiro et al. (2004); Stoller, Rose, Lee, Dolgan, and Hoogwerf (2004); Volpe, Cannon-Bowers, Salas, and Spector (1996).
5.5.6.2 Instituting a patient safety monitoring system

Patient safety in healthcare systems involves much more than the prevention of tragic, but rare events. Addressing patient management issues, adverse drug events, healthcare associated infections, complications and harm from surgery, falls and pressure ulcers as well as rare and less predictable incidents is complex and costly. Adding to the complexity is a lack of standardised definitions for patient safety and invalid or unreliable reporting systems. However, with the introduction of clinical risk management in healthcare systems worldwide, the imperatives of detecting and monitoring quality care have become universally recognised. Participants in this study were of the opinion that patient safety concerns could be addressed by adopting six key methods of data collection and measurement, encompassing: patient outcome measurements (mortality and morbidity statistics), clinical auditing, resources and program activities, patient safety research, patient satisfaction level, and patient safety recording and reporting. These processes would help in detecting and monitoring a broad range of medical errors and solutions (Garrouste-Orgeas et al., 2012; Jarernsiripornkul, Krska, Capps, Richards, & Lee, 2002; Piotrowski & Hinshaw, 2002; Ursprung et al., 2005; Wolff & Bourke, 2000). Clinical incident monitoring systems are known to be effective in reducing a wide range of both actual and potential medical adverse events, and risk factors in hospital settings (Wolff & Bourke, 2000). Moreover, incident monitoring systems help healthcare professionals to learn from their mistakes (Leape, 2002). Providing complete and appropriate feedback to the reporter or healthcare professionals based on incident monitoring systems promotes patient safety awareness, promotes future reporting, and improves clinical processes (Benn et al., 2009).

The recommendations made by the participants in this study suggest, that a system of communication that facilitates the communication of audits results (e.g., via interdisciplinary assessment forms, medical order forms and progress notes) needs to be developed and implemented to successfully improve the process and practice of patient safety in the Bhutanese healthcare system. As participants have recommended, this would entail implementing information technology or decision support systems that are easily accessible by all healthcare professionals throughout the healthcare facilities to enhance proper management of data.

Apart from reducing the incidence and negative impact of preventable adverse events the implementation of information technology or decision support systems such
as computerised physician order entry, which are designed to assist healthcare professionals in applying new information to patient care through the analysis of patient specific variables, are believed to improve communication on all levels (Bates, Kuperman, & Teich, 1994; Bates et al., 1997; Koppel et al., 2005; Wong & Beglaryan, 2004). For instance, computerised devices like Personal Digital Assistant, which provide useful and accurate clinical practice guidelines and an alert system has been found to be more efficient than its paper-based counterparts (VanDenKerkhof et al., 2003).

Accurate monitoring and management of data would also entail implementing a systematic method of patient safety reporting to capture information about patient safety concerns, including the subset of critical adverse events. Systematic patient safety reporting helps to produce a wide range of data on actual and potential medical adverse events and risk factors in the hospital (Wolff & Bourke, 2000). The adoption of a formal reporting system improves recording and analysis of patient safety concerns (Lin, Shih, Liao, & Wung, 2012; Pagnamenta et al., 2012). Clear and consistent reporting policies and mechanisms assist healthcare organisations, and the healthcare professionals working within them, to respond quickly and effectively to an event (Canadian Patient Safety Institute - Institute for Safety Medication Practices Canada & Saskatchewan Health, 2006). The adoption of an incident reporting system and policies would help to enable the collection of relevant and reliable information regarding the interaction of organisational factors, local circumstances and active failures (errors) in producing potential adverse event (Meurier, 2000). Most essentially, the adoption of an incident reporting system in the Bhutanese healthcare system would help promote a safety culture, multidisciplinary collaboration, and strong managerial leadership resulting in system oriented improvement (Nakajima, Kurata, & Takeda, 2005).

5.5.7 Involving patients and families in patient care

Participants in this study also recommended the development of a safety framework that involves patients and their families in patient care to help improve patient safety. This is consistent with the increasing recognition that is being given in the patient
safety literature to the role that patients and their families have in improving patient safety outcomes.\footnote{Hernan et al. (2015); Johnstone and Kanitsaki (2009); Koutantji, Davis, Vincent, and Coulter (2005); Longtin et al. (2010); Lyons (2007); Ward et al. (2011); Weingart et al. (2005).}

Patient and family involvement can encompass making informed choices about providers, helping to reach an accurate diagnosis, contributing to the safe use of medications, participating in infection control initiatives, checking the accuracy of medical records, observing and checking care processes, identifying and reporting treatment complications and adverse events, and practising effective self-management and treatment monitoring (Coulter & Ellins, 2007, p. 26). The involvement of patients and families in patient care can also help in recognising and rescuing medical errors and adverse events during the process of healthcare (Sang, 2004; Weingart et al., 2005). There is also evidence that involvement of patients and families in patient care helps to modify the behaviour of healthcare professionals (e.g., in hand washing, obtaining patient referrals, and treatment prescriptions), and reduce adverse events (Hinkin, 2002; Kravitz et al., 2003; Kravitz et al., 2005).

While some participants in this study suggested the development of a patient safety framework that involves patients and families in patient care, whether it could be effectively implemented in the Bhutanese healthcare context remains questionable. In keeping with concerns expressed in the patient safety literature (Davis, Jacklin, Sevdalis, & Vincent, 2007; Entwistle, 2004; Entwistle, Mello, & Brennan, 2005; Lyons, 2007), of concern in the Bhutanese context is the possible risk that healthcare providers might shift their responsibility for patient safety onto patients and their families (Entwistle, 2004; Johnstone & Kanitsaki, 2009). Thus, if such a framework is to be adopted, consideration must first be given to the capacity of patients and families to be involved (noting that patients and families without education or who are illiterate may not be able to understand and follow a hospital’s safety program). Attention also needs to be given to ensuring that appropriate infrastructure supports are in place, i.e., to help improve the health literacy of patients and their families and to enable patients and families to engage effectively and meaningfully in a hospital’s patient safety program (Entwistle et al., 2005; Johnstone & Kanitsaki, 2009).
5.5.8 Making healthcare system resilient to public health emergencies

Public health emergencies are not a conventional patient safety concern in high-income countries. Nevertheless, ‘altered standards of care’ have been devised in recognition of the ethical responsibilities of healthcare professionals to provide safe care to patients during disasters (Johnstone & Turale, 2014). A well planned ethical medical response is an important component of a successful strategy for providing safe and quality patient care and reducing mortality during a disaster or public health emergency (Johnstone & Turale, 2014; Schultz, Koenig, & Noji, 1996). Significantly, despite being an earthquake prone country, there is no such plan in Bhutan.

The recent major earthquake in Nepal demonstrated that high magnitude earthquakes stand to substantially affect the healthcare infrastructure. As noted by participants in this study, a large number of hospitals in Bhutan are very old and are poorly designed. The hospitals were built with a minimum level of disaster resilience, and the healthcare professionals were not provided with any training or education on disaster and emergency management. The most notable example (expressed by participants) is the lack of: infection control equipment, alternative emergency exits, fire alarms and disaster drills. Therefore, taking steps to make the hospitals safer and more resilient to public health emergencies appears to be important in the Bhutanese healthcare context.

Public health emergencies, be it a natural disaster, pandemic or a major infectious disease outbreak, can strike anytime, anywhere and can hit with or without warning. In a large scale public health emergency there will be multiple patient safety concerns and risks of medical catastrophes. Medical catastrophes can be of any scale, involving a single patient who receives a wrong medication or mass casualties (Farmer & Carlton, 2006). Healthcare professionals face working in a chaotic environment without a clear emergency management plan or equipment. Lack of preparation for such emergencies risks undermining the safety and well-being of patients.

Hospitals have to continue to function and provide safe medical services to patients during a disaster. The most important role of healthcare professionals is to plan and implement a comprehensive public health emergency response plan to keep patients safe in the hospital. Recent experience with tropical storm ‘Allison’ in Houston, US, has highlighted the deficiency of hospital preparedness and emphasised the inseparable role that emergency management plays in the overall safety and quality of healthcare delivery (Sebastian et al., 2003). Although patient safety and disaster
management are fundamentally different in scope, in terms of magnitude and cause, the inclusion of patient safety and risk management strategies related to public health emergencies are nonetheless essential in the healthcare system (Farmer & Carlton, 2006).

Also essential is establishing an institutional framework that enhances and supports safe functioning during public health emergencies (O’Boyle, Robertson, & Secor-Turner, 2006). This includes the development of a public health emergency plan with quick reference guides, providing additional and accessible equipment (e.g., personal protective equipment in case of infectious disease outbreak), and conducting frequent disaster drills and training (at least annually) in the hospitals. The integration of patient safety programs and emergency preparedness resources in hospital settings would yield a combined effect that is greater than the sum of their individual efforts to ensure patient safety and enhance healthcare quality. Thus, if it is to succeed in its aim (including those pertinent to providing safe quality care to patients), healthcare management personnel need to recognise the synergies that exist between patient safety and disaster response preparedness, and how to effectively provide safe quality healthcare to patients in these situations. Healthcare professionals meanwhile need to be provided with periodic drills on fire safety, earthquake management, emergency evacuation, and hospital surges (Miller et al., 2012).

5.5.9 Integrating indigenous cultural values in healthcare process
Participants perceived that the Bhutanese indigenous cultural values, if used properly, could bring a positive benefit to patient safety processes. The operationalisation of these values could be particularly effective in transforming the attitudes and behaviour of healthcare professionals in regard to patient care. Participants believed that the revitalisation and integration of cultural values stood to make healthcare professionals more compassionate, loyal, honest and dedicated towards their work and patients.

Most Bhutanese traditional cultural values are about ethical behaviour. Values that are emphasised include: honesty, integrity, fidelity, coherence, affection, gratitude, and compassion of a person towards the King, people and the country. The cultural values could have a positive impact in terms of influencing the development of a patient safety culture in healthcare organisation – i.e., performance oriented organisation versus an organisation with a sense of belongingness, responsibility and accountability (Westrum, 2004).
The findings of this study indicate that healthcare professionals were aware of the positive influence that the Bhutanese culture could have on improving patient safety processes and practices. Given the findings of this study, there are strong bases for suggesting that patient safety could be ‘Bhutanised’ to suit the cultural context of Bhutan. This would involve integration of and education on the positive moral components of Bhutanese cultural values in the healthcare system.

Every culture has strengths that can be drawn upon and reframed to be supportive of the desired changes (Schein, 2004). Thus, ‘new’ patient safety values and behaviour can be tied to existing cultural values to create a culture that is conducive to patient safety improvement (Carroll & Quijada, 2004). Maintaining respect towards superiors and seniors, being compassionate, and having a cultural sense of loyalty and dedication were identified by participants as some of the deep cultural strengths that can be built upon to support and reinforce change – i.e., to create a patient safety culture. The above cited cultural elements are believed to be instrumental in cultural change. For example, in trying to create a learning culture through open disclosure of patient safety concerns, even in the face of a hierarchical system, we could draw on cultural elements of compassion, honesty, loyalty and dedication. The doctrine of ‘karma’ (positive belief in cause and effect) that enforces positive interpretation (if we do good to others, we will gain good merit for good action) could be appealed to in order to improve the attitudes and safety practices of healthcare professionals. An individual’s understanding of ‘karma’ could provide the basis for establishing a culture of patient safety by allowing the healthcare professional to reflect on their own sense of moral responsibility and accountability. To this end, the concepts of Le Judre and Tha Damtshig could be used in a positive way – i.e., to maintain professional integrity towards reporting and recording of patient safety incidents in order to improve patient safety practices in the Bhutanese healthcare system.

The findings of this study also highlight the need for a considered program of systematic research on the influences of traditional cultural values on patient safety culture. Much of the current research on patient safety culture reflects primarily the organisational or system culture that can be categorised in terms of safe/unsafe, and engineered. For instance, most of the patient safety research to date has focused on teamwork, communication and coordination, human resources management and technologies. The effect of traditional cultural values, however, have not been studied. Thus, the tacit assumptions that are integral to the construction of meaning that
underpin attitudes, and inform customary, ritualistic and symbolic practices in patient safety contexts are not known (Finn & Waring, 2005; Waring, Harrison, & McDonald, 2007). Exploration of how traditional indigenous cultural values, norms and rituals can have potentially latent consequences for patient safety, thus stood as a fruitful area for future research (Finn & Waring, 2005).

5.5.10 Incorporating the concept of Gross National Happiness (GNH) in the healthcare system

Embedding the philosophy of GNH (country’s developmental philosophy) was also identified as a critical factor for improving patient safety in this study. Participants identified that patient safety is important to achieving GNH, and the GNH concepts would have a positive impact on patient safety. This is because the GNH principles emphasise good governance, which would aid in the development of good leadership and a patient safety culture. Participants also had a notion that the incorporation of the principles of GNH would bring positive benefit – specifically to transform the attitudes and behaviours of healthcare professionals towards patient care.

As suggested by the findings of this study, GNH, being a developmental philosophy of the country, has a role to play in improving patient safety. However, the challenge is to find a way to incorporate the ideology of GNH into the system. Despite the principles of good governance being advocated in different levels of policy making, the crux of its metaphor has not been absorbed in the healthcare system very well. For example, the value of the happiness of patients has not yet been emphasised in the Bhutanese healthcare system.

Happiness is the result of good health and GNH encompasses healthy individuals and people (Dukpa & Wangchuk, 2010). Symbiotically, individuals cannot be happy without the safety of healthcare processes. Individuals cannot be happy with disability caused by poor healthcare or adverse events. Hence, it is not only pertinent that healthcare delivery is of high quality but it should also be safe. We cannot imagine achieving GNH if people do not have access to safe quality healthcare.

As good governance is one of the main pillars of GNH it is important to strengthen governance in healthcare delivery. As already suggested, notable initiatives could include the establishment of patient safety governance encompassing the effective management of human resources, the formulation of patient safety plans, and the implementation of monitoring and supervision processes. As participants suggested,
the harmonisation of healthcare reforms within the concept of GNH would not only have a positive impact on the development of patient safety, it would also help to produce a ‘Bhutanised doctor and healthcare professional’.

5.5.11 Incorporating the concept of Four Harmonious Friends in the healthcare system

As discussed above, positive teamwork and inter-professional relationships were perceived in this study to be important to patient safety. As Bhutan embarks on providing safe and quality care to its citizens, efforts need to be intensified to achieve a new direction, one that ensures all workers (not just supervisors and managers) have responsibility and accountability for decision-making and all staff have a duty to report and learn from adverse events. This, in turn should simultaneously aim to close the gap in communication between superiors and subordinates. The emphasis on quality care requires some form of resolution, a resolution that will find institutional and cultural expression in the formulation of patient safety practices, policies and guidelines aimed at achieving the goals of patient safety.

Bhutanese traditional cultural values embody practices that demand full awareness of one’s own social status and the actions of body, speech and mind, thereby linking these with good manners. As stated in Section 5.5.9 of this chapter, at the core of these values is a deep sense of social obligation, autonomy, responsibility and reciprocity or mutual respect. One dimension of improving patient safety in the Bhutanese healthcare system, as indicated by this study, is involving all stakeholders in team decisions (refer Section 5.5.1.4 of this chapter). Involvement of all stakeholders in decision-making would enhance team cohesiveness, productiveness, and satisfaction in the organisation. With this, it is essential to have moral cooperation among policy makers, managers and frontline healthcare professionals to improve quality of care. It is important to work with mutual respect and open communication, most preferably a two-way approach in order to improve patient safety practices.

Nonetheless, how best to achieve a new system (a system in which the existence of risk is acknowledged and injury prevention is recognised as everyone’s responsibility) and overcome the traditional values that so strongly influence the modus operandi of existing healthcare services remains an open question. However, it can be achieved. How to achieve this can be illustrated by a popular Bhutanese folk story – the four harmonious friends (Thuenpa Puenzhi), in which four friends: an
Chapter Five: Discussion

elephant, a monkey, a rabbit and a bird work together using their individual skills and talents to be able to enjoy the fruits of the tree (Figure 5.1). The bird finds a seed and plants it in a secure location. The rabbit waters the plant while the monkey fertilises it. Once the seed sprouts and begins to grow, the elephant protects the tree. After few years, the small plant grows to a beautiful tree giving lots of healthy fruits which the four friends enjoy together.

![Image of the Four Harmonious Friends](Thedailyenglightenment.com, 2010)

Figure 5.1: The Four Harmonious Friends (Thedailyenglightenment.com, 2010)

Although the story has different meanings in different situations, fundamentally it depicts the virtues of Buddhist morals. The story emphasises the importance of mutual respect and teamwork in order to work harmoniously together and achieve a common goal. This story presents great truths on the importance of interdependent cooperation, despite differences in size, strengths and types. This is a story about working harmoniously and helping each other for the greater good. To this end, it is generally accepted that the concept of the Four Harmonious Friends epitomises friendship, interdependence, cooperation and good relationships and that considerations of power and hierarchy stand to undermine these processes.

This story and the moral lessons it provides have ready application in healthcare and the emerging field of patient safety in Bhutan. By applying the concept of the Four Harmonious Friends, the importance of developing teamwork and fostering collaboration between the different levels of staff and specialities in the healthcare
organisation can be emphasised. Notably, the parable can be used to remind healthcare professionals how each one of them is responsible for leading the other into virtue; how each one of them at a different level is important to accomplishing even the smallest tasks; how each of them must cherish others more than oneself; and how each of them can ask for help, receive help and offer help. When applied to and in a healthcare organisational context, the four animals can be compared to different categories of healthcare professionals (e.g., managers, doctors, nurses and other allied healthcare professionals) in the healthcare system.

The *Four Harmonious Friends* concept can also be used as an effective teaching model in medical/nursing training and education to help develop a positive attitude towards effective teamwork as Buddha did in his teaching. The concept can be interpreted as a basis of teamwork training by using it as an example or metaphor to explain the nature of teamwork and its approach. The ‘fruit’ (which is in the story) can represent ‘patient safety’ – the ultimate goal of healthcare organisations and which all healthcare professionals work to achieve.

### 5.6 Role of participants in promoting the concepts and practice of patient safety

The role that healthcare professionals play in improving patient safety may take many forms and will be unique to the respective contexts in which they work. Just as healthcare professionals understand the complexity of the healthcare system in improving patient safety, healthcare professionals need also to understand that they have an important role in making the healthcare system safer. The findings of this study suggest that Bhutanese healthcare professionals are well aware of their roles in improving patient safety processes and practices. Their perceived role ranges from formulating patient safety policies, guidelines and protocols to advocacy for safe patient care (Table 5.1).
Patient safety is considered as an essential and vital component of quality healthcare. A variety of healthcare professionals are considered responsible for ensuring the delivery of safe care to patients. Coordinating and integrating the multiple aspects of quality and safety in the healthcare organisation has been identified as a critical role of healthcare professionals in improving patient safety outcomes (Mitchell, 2008). Maintaining professional relationships (professional-patient relationships) and teamwork (i.e., serving as a competent team leader and providing appropriate levels of direction and supervision to subordinates); following laws, rules and standards; maintaining teaching and learning (help develop the critical thinking skills of subordinates and students that are essential for patient safety); providing information and education to patients about their diseases, treatment and management; assessing and identifying potential risks in the healthcare system; developing policies and procedures; and fostering an environment for safe care have all been identified as an important roles that healthcare professionals have in improving patient safety outcomes (Ballard, 2003). Healthcare professional role modelling (specifically the peer-modelling behaviours) has also been identified as an important role for healthcare professionals in improving patient safety (Wakefield, McLaws, Whitby, & Patton, 2010).

Providing good safe care is the combined responsibility of all categories of healthcare professionals. It is also the responsibility of all healthcare professionals to promote patient safety and co-participate in the development of a non-punitive accountable culture. While being eager to promote a patient safety culture in the organisation, healthcare professionals can be inhibited in their actions by concerns...
about crossing the boundaries of other healthcare professionals and managers
(including their own). For example, as this study has found in Bhutan, the roles and
responsibilities of different categories of healthcare professionals are categorised
according to their perceived value within the system leading to role division. This
could undermine the application of their roles in patient safety improvements. Framing
the job descriptions of personnel thus needs to include efforts to change healthcare
policy and culture. This would entail the provision of training on the roles and
responsibilities of healthcare professionals in specific patient safety issues.

5.7 Conclusion
In this chapter, attention has been given to discussing the findings of the study. The
findings have been compared with the findings of other studies in low-income
developing countries, middle income countries and high income developed countries.
The significance and implications of the findings are discussed in depth, conclusions
are drawn and recommendations in regard to the practical action that will need to be
taken in the future foreshadowed. It now remains the task to draw the final conclusions
of this study and to make recommendations, which are the focus of the next and final
chapter (Chapter Six) of this thesis.
6.0 Introduction
In this chapter attention is given to summarising the findings and discussions presented in chapters four and five of this thesis. The threads of the thesis are drawn together, conclusions are drawn and recommendations made in regard to the ‘practical action’ that needs to be taken with a view to improving patient safety practices and processes in the Bhutanese healthcare system.

6.1 Summary of the findings
This study, which is the first of its kind in Bhutan, was carried out in keeping with the WHO’s patient safety global research program, which states ‘understanding the magnitude of the problem and the main contributing factors is essential in order to devise appropriate solutions’. It was carried out as a naturalistic inquiry using a qualitative exploratory descriptive research approach to obtain baseline data on the nature and extent of patient safety concerns within Bhutan’s healthcare system.

As noted in the introduction to this thesis, being a donor-dependent country, Bhutan has no infrastructure for capturing quantifiable and independently verifiable data in the healthcare system that can be used to inform improvements in patient safety. Thus, to date, patient safety concerns in Bhutan have not been well documented, defined, or well understood. In order to redress this problem, the Bhutan Ministry of Health needs information about what the key patient safety concerns are. Accordingly, this exploratory descriptive study has sought to identify patient safety issues and concerns in Bhutan’s healthcare system.

An initial search for policy and guidance documents for patient safety revealed that standards for quality assurance only (not those of patient safety) had been developed and implemented. A lack of policy guidance documents on patient safety, according to participants, was revealed to be one of the factors contributing to patient safety concerns in the Bhutanese healthcare system.

Analysis of healthcare service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety concerns in Bhutan revealed that the concept of patient safety is understood in different ways. While most healthcare professionals understood patient safety as ‘doing no harm’ or ‘reducing the risk of
harm or injuries’ to patients, which is consistent with the definition of WHO ['reducing
the risk of unnecessary harm to patient’ (World Health Organization, 2009a)], some
participants understood patient safety as simply having a sturdy infrastructure
(building) with sufficient space for the time of public health emergencies such as
earthquake or flood, and epidemics. Some participants also confused patient safety
with patient rights and quality of care.

In the context of this study, patient safety (both as a notion and a process) has
emerged as having two critical components, notably those concerning:

- ‘Doing no harm or reducing the risk of harm or injuries’ to patients during
healthcare (i.e., reducing: medication errors, procedure lapses, wrong blood
transfusion, wrong investigations, wrong surgery or infections); and

- Strong infrastructure (i.e., keeping patient and equipment ‘secure’ and/or
reducing casualties and damage to equipment in the hospital during public
health emergencies).

Based on participants’ perceptions, there is scope to include the above two
components of patient safety in the WHO definition. In keeping with the two
components, an adapted definition of patient safety would be:

The reduction of risk of unnecessary harm associated with healthcare
provided during routine healthcare provision and public health
emergencies to an acceptable minimum. Acceptable minimum is referred
to the collective notions of healthcare in terms of knowledge, availability
of resources, availability of public health emergency response
plan/framework and the context where care was delivered weighed against
the risk of non-treatment or other treatment, including emergency
evacuation and management\(^{36}\). [Italicised adaptations added].

This study also revealed the following two key issues that would hinder the
improvement of patient safety processes and practices:

\(^{36}\) This [operational] definition is adapted from the WHO patient safety definition (World Health
Organisation, 2009a, p.15) by the author to make the definition more inclusive and suitable to
the Bhutanese context and findings that emerged from this study.
Chapter Six: Conclusion and recommendation

- Lack of awareness of patient safety concerns (i.e., healthcare professionals not having a sense of patient safety concerns in the hospital); and
- Healthcare professionals’ confusion of patient safety with quality of care (i.e., providing good quality care to patients by taking account of their privacy, dignity and rights).

Participants in this study identified medication errors, HAIs, surgical errors and post-operative complications, diagnostic errors, laboratory/blood errors, fall injuries, information/communication errors and patient identification errors as key patient safety concerns in the Bhutanese healthcare system. Factors contributing to these concerns were identified to include: factors related to the system (latent failures) as well as human (staff) factors (slips, lapses and violations).

In relation to the contributing factors, analysis of the strategies recommended by participants indicated that a system to mitigate risks caused by both human and organisational factors is required to improve patient safety in the Bhutanese healthcare system. To this end participants recommended: instituting clinical governance, developing/improving physical infrastructure (including equipment), providing adequate human resources, providing patient safety education to healthcare professionals and patients, and promoting communication and information systems.

The most important insights provided by this study however, relate to the significant influence that Bhutanese national cultural values have (both positive and negative) on patient safety concerns. The findings suggest that the negative influences of these values have outweighed the positive influence as a result of the cultural etiquette and/or values emphasising good action and morality having become secularised, dampened and distorted. The most notable influence of the Bhutanese national cultural values concerns the development of organisational or individual complacency and a hierarchical system in the organisations that affects workplace interpersonal relationships and communication. This finding suggests that strategies to improve patient safety in the Bhutanese healthcare system need to be targeted beyond the conventional methods of patient safety and to include an indigenisation of patient safety processes.

Taking into account all of the above, the key substantive finding of this study recognised that the institution of ‘indigenised’ or ‘Bhutanised’ patient safety information systems (mainly the patient safety research and reporting system) will be
critical for improving patient safety in the Bhutanese healthcare system. The process of ‘indigenising’ or ‘Bhutanising’ patient safety research and information systems would create more scope to understand local patient safety concerns and solutions, including religious and cultural concepts and domains of patient safety.

In general, this study has provided a strong basis upon which future strategies can be identified and developed. The study points to the need to identify not just what needs to be done, but the kind of infrastructure that needs to be put in place. Fundamentally, it emerged that improving patient safety in Bhutan needs to be addressed on the basis of a broad assessment of the cultural context of the healthcare system, taking into account the influence of national cultural and socio-political variables. The recognition of the influence of the socio-cultural and political context on Bhutan’s healthcare organisations is timely when considering the situation of Bhutan. Failing to recognise the influence of the socio-cultural and political context on Bhutan’s healthcare organisations (e.g., indigenous cultural dynamics and workplace hierarchies present in the Bhutanese healthcare organisation) risks undermining initiatives to improve patient safety outcomes.

As indicated by the findings of this study, interventions may need to be targeted at several points in the hierarchy, starting from policy development to assessment and management of risk, to reducing the incidence and impact of disruptive behaviour (Rosenstein & O'Daniel, 2005; Vincent, Taylor-Adams, & Stanhope, 1998). Specifically, the improvement of patient safety in the Bhutanese healthcare system needs to focus on organisational factors. Addressing the organisational factors identified in this study would help to improve the overall safety by preventing adverse events.

An immediate strategy, based on the findings of this study, would be to reconceptualise and position patient safety as a process of healthcare outcomes. Patient safety needs to be a priority for the healthcare organisation and its leaders. To improve patient safety in Bhutan, investing in patient safety processes and practices both at the government (Ministry) and hospital level emerged as important. This is because, as with any area of patient care, a critical (though, not the only) component of quality care are patient safety processes. This would also help empower healthcare professionals in the process of identifying and managing patient safety concerns effectively as they occur.
Another strategy to improve patient safety, based on the findings obtained from this study, would be to provide patient safety training and education for healthcare professionals and patients. In support of the claim that the provision of patient safety training and education to healthcare professionals and patients may be of benefit to patient safety, the responses of the participants indicated that increased patient safety training and education resulting in a greater understanding of patient safety and risk management processes would facilitate the goal of providing better quality healthcare. Patient safety training and education needs to be focussed on:

- core patient safety knowledge, skills and attitudes;
- teamwork;
- communication;
- risk management;
- human and environment management; and
- recording and reporting of adverse events (Canadian Patient Safety Institute, 2012).

The institution of patient safety strategies, nevertheless, must be incorporated not only with clear policy and goals for assessing and managing the risk of patient harm, but also create a system culture of respect for each other. The creation of a culture of respect for each other will involve negotiating changing patterns of power relationships from one of previous dominance and obedience to a cooperative interdependent relationship that respects the autonomy of all the stakeholders by:

- Removing pre-existing hierarchies and professional norms. Hierarchical cultures are known to have a negative effect on patient safety culture (Singer et al., 2009; Speroff et al., 2010);
- Fostering a sense of belongingness among healthcare professionals, promoting freedom to participate in decision-making in the practice area which values everyone’s input, and by exhibiting a sense of responsibility towards the organisational goals. A sense of belongingness in this instance refers to mutual support among professionals to enhance teamwork. This means creating mutual trust by enhancing a sense of individual partnership and ownership in the organisation;
Chapter Six: Conclusion and recommendation

- Providing freedom for all healthcare professionals to participate in decision-making. Freedom to participate in decision-making in this instance refers to empowerment of staff in decision-making to improve patient safety. This means respecting individual knowledge, providing support when needed, letting other members speak up and think ‘outside the box’, and acting as fully conscious participants in the decision-making process (Firth-Cozens, 2004). Freedom to participate in decision-making can be enhanced through flattened organisational hierarchies to create less bureaucracy, providing more decision-making opportunity to frontline workers and due recognition of the staff contribution through reduced distance between frontline workers and senior managements (Firth-Cozens, 2004; Leape et al., 1998); and

- Creating a sense of responsibility of all healthcare professionals. A sense of responsibility in this instance refers to commitment and dedication towards the goals of the organisation. This involves every healthcare professional taking the organisational objectives seriously. For example, taking responsibility for recording and reporting patient safety issues and developing solutions through consensus decision-making among the healthcare professionals. A sense of responsibility can be achieved by enhancing accountability and development of shared values, beliefs and behavioural norms towards patient safety in the organisation. This in turn requires managerial commitment, staff autonomy, strong communication, dedicated organisational resources and mutual trust shared by organisational members (Fleming, 2005; Singer et al., 2003).

An example of what such a system would look like is depicted in Figure 6.1. The circle in the Figure represents the traditional cultural values which shape the organisational culture, while the triangle represents the organisation and important elements that are critical to achieving harmony between traditional cultural values and organisational values in order to improve patient safety and quality healthcare. It is not, therefore, a means of doing away with the national traditional cultural values, but a means of finding sensible and realistic ways of incorporating them and improving mutual trust and communication in striving to improve patient safety and quality healthcare. For instance, the model offers the prospect of more responsibility, more freedom, and both individuality and collectiveness in the organisation. The focus is on the co-operative nature of functioning in the organisation to achieve patient safety,
which is in sharp contrast to the controlling and dominance-oriented stances of the traditional bureaucratic and hierarchical nature of Bhutan’s healthcare organisations.

Figure 6.1: Indigenised model of creating mutual respect in the organisation to improve patient safety

Overall, this study suggests that the Bhutanese healthcare system is not only required to do the right thing, but also to be seen to do the right things to improve patient safety. The patient safety strategies which are effective in other countries and industries may not be feasible and effective in the Bhutanese context. Even so, the following recommendations are suggested.

6.2 Recommendations
On the basis of the data described, analysed, and discussed in this thesis, and in response to the stated aims of this project, and in keeping with the immediate priorities for national action on matters of patient safety, it is recommended that:
Chapter Six: Conclusion and recommendation

Cornerstone for a comprehensive strategy for change

**Recommendation 1:** Establish a national focus on patient safety

- Set national goals for patient safety;
- Develop a national strategic framework for patient safety;
- Establish a national patient safety program;
- Institute a patient safety committee;
- Establish well trained and supported patient safety consultation teams (groups with specific responsibility for patient safety); and
- Develop national policies on patient safety (service policy that attempts to establish resource allocation; practice policy that depicts minimum level of safety management and treatments; governance policy; sentinel event policy which offers clear responses to such situations; educational policy; and patient/staff abuse policy).

**Recommendation 2:** Establish and create leadership, research, tools and protocols to enhance the knowledge base about safety.

- Launch patient safety initiatives in hospitals;
- Establish secure and adequate funding for patient safety by allocating separate budget;
- Initiate change management programs to build support for patient safety by the leaders of various health programs;
- Develop research agendas (to understand the nature and extent of patient safety concerns, effective strategies to improve patient safety, and research focused on teaching and learning of patient safety concerns and solutions); and
- Establish measures of performance (e.g., developing and disseminating tools for identifying and analysing patient safety concerns and evaluate correction measures).

**Recommendation 3:** Institute patient safety governance

- Develop patient safety policy;
- Develop and implement practice guidelines and standards focusing on different clinical practices and procedures;
Chapter Six: Conclusion and recommendation

- Develop and implement clinical bundles, pathways and protocols related to specific medical conditions and practices;
- Develop and implement checklists for different clinical practices, procedures and technologies/equipment;
- Roll out existing guidelines, standards, checklists and protocols to other hospitals;
- Improve existing quality assurance processes; and
- Develop clear job descriptions.

**Recommendation 4:** Integrate and provide patient safety training and education to all categories of healthcare professionals (including cleaners and ward aides)

- Develop educational curricula on patient safety in all levels of training in institutes, universities and hospitals (for all categories of healthcare professionals undertaking certificate, diploma, higher degrees, and continuing medical education);
- Develop and implement standard protocols and guidelines for supervision and monitoring of students and junior clinicians; and
- Promote dissemination of information on best practices and provide healthcare professionals with training in risk management.

**Recommendation 5:** Provide patient education on patient safety

- Conduct mass media campaigns;
- Provide printed leaflets and health information packages;
- Provide computer based (internet) health information;
- Provide self-management education;
- Teach and encourage patient involvement in infection control;
- Provide education and information on illness and treatment; and
- Teach and encourage patients to report adverse events.
**Recommendation 6:** Improve reporting systems (to help identify and learn from errors)

- Establish a nationwide mandatory reporting system (for errors and near misses) in hospitals and BHUs (to facilitate collection of standardised information by the Ministry of Health about adverse events);
- Set a defined list of adverse events (including a nomenclature and taxonomy for reporting) to help hospitals to report standardised information;
- Make safety incident and error reporting an institutional policy of importance;
- Designate a panel or a program for promulgating and maintaining (receiving and analysing reports and identifying best practices) the reports and information from hospitals and BHUs;
- Provide leadership support at all levels;
- Encourage a non-punitive system;
- Establish a system to carry out prompt and thorough analysis of errors to identify the root causes; and
- Provide timely and constructive feedback.

**Recommendation 7:** Adopt a system of accountability

Raise the standards for improvement in safety through oversight of organisation and professional regulations and accountability systems (e.g., the BMHC as a regulatory body of the Bhutanese healthcare system should monitor and evaluate the standard of patient safety practice in the healthcare settings).

- Make sure all hospitals have standard protocols for patient safety in all healthcare settings;
- BMHC, monitor and evaluate healthcare professionals’ compliance with patient safety protocols and standards in hospitals;
- BMHC, identify and facilitate the use of best practices and specific strategies that would make healthcare settings safer for patients;
- BMHC, ensure that healthcare settings are implementing meaningful patient safety programs with defined responsibilities; and
- BMHC, implement periodic re-examination and re-licensing of healthcare professionals (doctors, nurses, and other key healthcare providers) based on both competence and knowledge of safety practices.
Chapter Six: Conclusion and recommendation

Recommendation 8: Improve resources

- Develop and establish a set of procedures, guidelines and standard protocols that specify behaviours that improve patient safety practices (e.g., practice guidelines, protocols and standards focusing on different clinical practices and procedures; clinical pathways and protocols related to specific medical conditions and practices; and checklists for different clinical practices, procedures and technologies/equipment);

- Develop and establish a set of guidelines and standard protocols on human resource allocation (following international standards for staff per patient ratios); and

- Develop and establish standards for equipment, supplies and processes.

Recommendation 9: Create a safety culture

- Develop a policy on open reporting to encourage incident reporting in the healthcare system;

- Refrain from assigning fault to individuals and foster an attitude that encourages reporting of errors and incidents and learning;

- Develop legislation to protect healthcare professionals who report errors and incidents;

- Develop a system to involve all levels of healthcare professionals in decision-making by reinforcing lean bureaucracy and removing pre-existing hierarchical systems; and

- Encourage a bottom-up approach to decision-making in healthcare planning.

Recommendation 10: Implement a public health emergency (PHE) resilient program

- Give priority in PHE (setting policies and regulations on PHE);

- Establish a PHE plan with a quick reference guide (identifying and locating emergency exit points and road maps for patient evacuation);

- Provide additional and accessible equipment (e.g., personal protective equipment in case of infectious disease outbreak);

- Incorporate and conduct frequent disaster drills and training (including training on cardiopulmonary resuscitation and equipment use on an annual basis); and

- Incorporate disaster resilient infrastructures (hospital buildings).
Chapter Six: Conclusion and recommendation

Recommendation 11: Integrate indigenous cultural values in healthcare processes
- Provide an educational program on cultural values such as *Le Judre* and *Tha Damtshig* to improve healthcare professionals’ ethical and moral understanding of ‘good conduct’ (to improve moral responsibility and accountability).

Recommendation 12: Incorporate the concept of GNH in the healthcare system
- Develop a patient safety plan and objectives consistent with the principles and philosophy of GNH (specifically keeping in line with the principle of ‘good governance’); and
- Incorporate and teach GNH principles to healthcare professionals.

Recommendation 13: Grow an interdisciplinary program of patient safety research
- Conduct epidemiological research on the nature and extent of patient safety concerns to establish national and international benchmarks;
- Conduct research (experimental or implementation) in best practices and strategies which can be translated into tools and templates to use in clinical settings;
- Conduct intervention and knowledge translation studies;
- Conduct research on technologies to prevent or intercept adverse events;
- Conduct research on national cultural values and organisational systems in order to observe and modify the system to improve patient safety and quality of care; and
- Conduct research on investments and cost effectiveness to inform allocation of hospital resources.

Patient safety concerns specific recommendations

Recommendation 14: Medication safety
- Strengthen the existing national drugs policy and Essential Drugs Program (developing standard treatment guidelines, developing or reviewing essential drug lists, establishing pharmacy and therapeutic committees, problem-based basic professional training, and targeted in-service education);
Chapter Six: Conclusion and recommendation

- Develop and enforce standards for drug storage and prescription to optimise drug safety (including the standardisation of abbreviations, acronyms and symbols used throughout the healthcare system);
- Provide education to healthcare professionals and patients on medication safety;
- Use clinical pharmacists in the inpatient setting;
- Introduce computerised support systems such as computerised physician order entry, prescribing critiquing system, bar coding and antibiotic prescribing and automated dispensing system (if feasible);
- Introduce incident reporting to improve recording and analysis of medication errors; and
- Develop and implement effective regulatory system and market control to stop the flow of spurious counterfeit drugs.

Recommendation 15: Healthcare associated infections (including those related to surgical procedures)

- Strengthen the existing infection control program, policy and guidelines (including the universal precaution policy and guidelines);
- Strengthen hand hygiene practices by developing standard protocols on hand hygiene and providing education;
- Conduct comprehensive studies on the extent and nature of HAIs (including information on pathogens);
- Provide education to healthcare professionals and patients on infection control;
- Provide adequate materials and infrastructure (including hand rub, soap, handtowels, washing basins, water, medical devices [dedicated medical equipment, preferably disposable, when possible], rooms to isolate infectious patients and waste management facilities);
- Develop and adopt safe injection practice standards;
- Develop and implement a visitor policy and guidelines;
- Develop and implement an antibiotic (prophylactic) prescription policy and guidelines to prevent post-operative HAIs; and
- Conduct environmental surface cleaning, following appropriate procedures.
Chapter Six: Conclusion and recommendation

Recommendation 16: Surgical errors
- Implement the (WHO) Surgical Safety Checklist and/or site verification protocols;
- Develop and implement (if available, strengthen) swab (sponge) or instrument counting before and after surgery; and
- Improve staff communication.

Recommendation 17: Diagnostic error
- Develop and implement standard protocols and guidelines for diagnosis;
- Develop and implement standard protocols and guidelines for patient investigation and diagnosis;
- Provide adequate training and education to healthcare professionals on diseases and clinical symptoms;
- Improve diagnostic infrastructure, facilities and equipment (such as laboratory technologies, computer assistive diagnostic aids and decision-support algorithms); and
- Develop and implement diagnostic checklists.

Recommendation 18: Laboratory/blood products
- Develop and implement comprehensive protocols and guidelines for blood investigation orders, testing and dissemination of reports;
- Reinforce existing blood transfusion policy, protocols and guidelines;
- Introduce patient identification bracelets and a bar coding system;
- Introduce automated technology such as smart fluid pumps;
- Provide appropriate training for all healthcare professionals on sample collection, labelling, storing and transport; and
- Provide comprehensive training on blood administration and test practices.

Recommendation 19: Identification error
- Develop and implement patient identification policy;
- Standardise approaches to patient identification among different healthcare facilities (e.g., introduce identification wristbands with or without bar codes);
Chapter Six: Conclusion and recommendation

- Introduce protocols for identifying patients by at least two or three prescribed patient identifiers before any procedures (identification information must be actively obtained from patients and verified by matching with the identification information on the patient wristband or medical record, as well as confirming the nature of procedures prescribed); and
- Introduce a system to promote patient involvement in the process of patient identification.

**Recommendation 20:** Fall injuries

- Develop and implement a universal falls prevention policy and guidelines. Universal falls prevention involves keeping the patient’s environment safe and comfortable by: providing an orientation to patients during admission to familiarise the patients with the hospital (ward) environment, keeping the patient call light within reach, placing hospital beds in the low position, keeping hospital floors clean and dry, following safe patient handling practices, keeping patient rooms clean and uncluttered, and providing good functional equipment (such as wheel-chairs and patient walker frames) (Agency for Healthcare Research and Quality, 2013);
- Develop and implement standardised patient fall assessment (including pain) protocols to identify personal needs and fall risks, which will help in implementation of effective interventions;
- Develop safe infrastructure (like strong hand railing, signage, ramps and trolley pathways); and
- Provide training and education on patient fall prevention to all stakeholders (healthcare professionals, patients and patient families).

**Recommendation 21:** Information and communication errors (including verbal abuse)

- Develop formal strategies for including new members into the team (developing an induction package with staff members’ information, ward policies and practices);
- Develop and implement policies, procedures and processes that address ‘zero tolerance’ for disruptive behaviours;
Chapter Six: Conclusion and recommendation

- Devise interdisciplinary interventions focusing on improving collaborative practices;
- Establish formal processes for communication and information sharing;
- Develop and provide teamwork processes and training;
- Develop clear roles and responsibilities;
- Establish formal processes for sharing concerns and decision-making;
- Develop and implement a standardised approach to patient handoff in hospital units and departments; and
- Develop and implement structured communication tools like ‘read back’ and/or standardised collaborative communication techniques such as Situation, Background, Assessment, and Recommendation (SBAR) in hospitals and wards.

6.3 Conclusion

In this chapter attention has been given to summarising the research findings of chapters four and five of this thesis. In addition, conclusions have been drawn and recommendations made in regard to the ‘practical action’ that needs to be taken with a view toward improving patient safety in the Bhutanese healthcare system.
REFERENCES


References


References


References


References


References


References

A retrospective analysis of 12 months of patient safety incident reports. *Quality and Safety in Health Care, 17*(6), 424-430.


References


References


References


**Ministry of Health - Bhutan.** (2014). Human Resources for Health: Country Profile, Bhutan. Retrieved from [https://www.google.com.au/?gfe_rd=cr&ei=vqjVVeCkDq3u8weh1pSgBA&gws_rd=ssl#q=glossary+and+terms+of+bhutanese+healthcare+facilities](https://www.google.com.au/?gfe_rd=cr&ei=vqjVVeCkDq3u8weh1pSgBA&gws_rd=ssl#q=glossary+and+terms+of+bhutanese+healthcare+facilities).


References


References


papers on Bhutanese Society (pp. 565-580). Thimphu: Centre of Bhutan Studies.


References


References


References


References


References


References


References


References


estimation of scale and nature of harm to patients in hospital. *British Medical Journal, 344*, e832.


World Health Organization. (2002b). ‘Outcome of the Fifty-Fifth World Health Assembly’, Executive Board. EB 110/2. 110th Session, Provisional agenda item 3. 18 May 2002. Retrieved from [https://www.google.com.au/?gfe_rd=cr&ei=z7nRVbGKHapu8wf6nJ_IBQ&gws_rd=ssl&q=%E2%80%98Outcome+of+the+Fifty-Fifth+World+Health+Assembly%E2%80%99+of+the+Fifty-Fifth+World+Health+Assembly%2C+Executive+Board+110th+Session%2C+Provisional+agenda+item+3+%28EB110%2F2%29](https://www.google.com.au/?gfe_rd=cr&ei=z7nRVbGKHapu8wf6nJ_IBQ&gws_rd=ssl&q=%E2%80%98Outcome+of+the+Fifty-Fifth+World+Health+Assembly%E2%80%99+of+the+Fifty-Fifth+World+Health+Assembly%2C+Executive+Board+110th+Session%2C+Provisional+agenda+item+3+%28EB110%2F2%29)


References


References


APPENDICES

Appendix A

Ethics approval letter, Research Ethics Board of Health, Ministry of Health, Bhutan

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**REBH Approval Letter**

**Date:** 17th September, 2012

**PI:** Mr. Rinchen Pelzang  
**Address:**  
Deakin University  
School of Nursing and Midwifery  
Centre for Patient Safety and Quality Care Research  
221 Burwood Highway  
Burwood  
Victoria 3125  
Australia

**Study Title:** Exploring patient safety issues and risk management strategies in hospitals in Bhutan

<table>
<thead>
<tr>
<th>REBH's Decision:</th>
<th>Protocol Version No. 2</th>
<th>Informed Consent Version No. 2</th>
</tr>
</thead>
</table>

**Made of Review:**  
- Full Board Review  
- Meeting No. 3/2012 (12th)  
- Expedited Review

**Conditions for Approval**

1. Final report of the study both in soft and hard copy must be submitted to REBH at the end of the study before publishing.
2. Any changes to the proposal or to the attachments (informed consent and research tools such as forms) should be approved by REBH before implementation.
3. The approval for this proposal is valid till 16th September, 2013.

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**Signature Redacted by Library**

(Dr. Phurb Dorji)  
Chairperson-REBH

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For further information please contact: mongal56@health.gov.bt; REBH Member Secretary

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PABX: + 975-2322602, 322351, 328091, 328092, 328093  
Minister: 323973 Fax: 323113 Secretary 326527  
Fax: 324049 HRD: Tel/Fax: 323953 Extension 142
Appendices

Appendix B

Ethics approval letter, Deakin University, Melbourne

Memorandum

To: Prof Megan-Jane Johnstone
School of Nursing & Midwifery

B

cc: Mr Rinchen Pelzang

From: Deakin University Human Research Ethics Committee (DUHREC)

Date: 14 September, 2012

Subject: Exploring patient safety issues and risk management strategies in hospitals in Bhutan

Please quote this project number in all future communications

The application for this project was considered at the DU-HREC meeting held on 03/09/2012.

Approval has been given for Mr Rinchen Pelzang, under the supervision of Prof Megan-Jane Johnstone, School of Nursing & Midwifery, to undertake this project from 13/09/2012 to 13/09/2016.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants.
- Any proposed changes in the protocol, including extensions of time.
- Any events which might affect the continuing ethical acceptability of the project.
- The project is discontinued before the expected date of completion.
- Modifications are requested by other HRECs.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

DUHREC may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007).

Human Research Ethics Unit
research-ethics@deakin.edu.au
Telephone: 03 9251 7123
Appendices

Appendix C

Plain language statement and consent form for organisations

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Secretary, Ministry of Health; Medical Director, Jigme Dorji Wangchuck National Referral Hospital; Medical Superintendent, Gelephu Regional Referral Hospital; District Medical Officer, Punakha District Hospital.

Date: 3rd September, 2012

Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan

Principal Researcher: Prof Megan-Jane Johnstone, A/Prof Alison Hutchinson

Student Researcher: Rinchen Pelzang

Associate Researcher(s): Rinchen Pelzang

1. Consent
This Plain Language Statement contains detailed information about the research project. The purpose of Plain Language Statement is to explain to you as openly and clearly as possible all the procedures involved in this project so that you can make a fully informed decision about whether to allow the researcher to access staff and relevant organisational documents for this project.

Please read this Plain Language Statement carefully. Feel free to ask questions about any information in the document.

Once you understand what the research is about and if you agree to take part in it, you will be required to sign the Consent Form. By signing the Consent Form, you indicate that you understand the information and that you give your consent for the researcher to access staff and relevant organisational documents.

You will be given a copy of the Plain Language Statement and Consent Form to keep as a record.

2. Purpose and Background
This qualitative exploratory descriptive study will investigate the nature and extent of patient safety issues within Bhutan’s health care system. Policy processes, which influence the current function, status and strengths of patient safety and quality care within Bhutan’s healthcare system will also be explored. As Bhutan is a low-income country, patient safety issues are not well documented or known. Nonetheless, as with other countries in the region, Bhutan’s patient safety issues are believed to be more
serious than in industrialised high income countries. Factors contributing to this situation include the poor state of health care infrastructure and equipment, the unreliable supply and quality of drugs, and poor performance of health service personnel. In keeping with the World Health Organisation Patient Safety global research program, ‘understanding the magnitude of the issue and the main contributing factors is essential in order to devise appropriate solutions’. A key aim of this study is to improve understanding of patient safety issues in Bhutan and, aligned with the WHO global patient safety agenda for developing nations, inform recommendation for the development of appropriate locally adapted solutions to the issues identified.

The key objective of the study is to obtain baseline data on patient safety issues in hospitals in Bhutan.

The key research question which this study aims to address is: What is the nature and extent of patient safety issues in Bhutan?

Related questions to be addressed include:
1. What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan?
2. What are health service providers’ and managers’ knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals?
3. What are the factors that health service providers and managers have identified as most contributing to patient safety issues in Bhutan’s national, regional and district hospitals?
4. What strategies are needed to address the patient safety issues and concerns identified?

3. Funding
This study is being conducted as a part of PhD Thesis. The PhD is sponsored by Austraining Endeavour Award Post Graduate Scholarship for four years.

4. Procedures
For this project, data will be collected through staff interviews, Nominal Group Meetings, policy/guidelines documents, and records of adverse events:
- Individual interviews with (i) key Ministry of Health (MOH) personnel with responsibility for quality and patient safety initiatives in Bhutan’s healthcare system, and (ii) health service providers and managers recruited from Bhutan’s national, regional and district hospitals;
- Nominal Group Meetings with (i) key MOH personnel with responsibility for quality and patient safety initiatives in Bhutan’s healthcare system, and (ii) health service providers and managers from Bhutan’s national, regional and district hospitals;
- Policy/guidelines from (i) MOH and (ii) participating hospitals;
- Records of adverse events from (i) MOH and (ii) participating hospitals.

Identification of potential participants will be made as follow:
- Employees of the organisations will be invited to attend an open information session at the facilities/wards. The details of the project will be provided during the information sessions together with an invitation to participate. Attendees
will be provided with the name and contact details of the researcher, who may be contacted by those interested in participating in the project.

- The participants will be invited by using ‘fliers’ posted on staff notice boards and sending an invitation letter (containing the purpose of study and contact details of the researcher) to the selected wards.

- For the Nominal Group Meetings, the researcher will consult the hospital managers to decide on the number of meetings to take place. Subsequently, the researcher and hospital managers will invite between six and twelve staff to participate. To invite the participants, a letter explaining the purpose, meeting venue and time required will be sent to wards and individuals. Willingness to participate in the meeting will be confirmed by e-mail or telephone.

- For policy/guideline reviews, the researcher will go to selected wards, offices, library, and information centres of hospitals and Ministry of Health and review them.

- For record review of adverse events, the researcher will go to selected wards and review the records with the assistance of the ward manager.

5. Information that will be collected from participants
The purpose of this project is to improve understanding of patient safety issues in Bhutan’s main hospitals. To this end, narrative data will be collected from participants via in-depth interviews (questions attached) and Nominal Group Meetings.

In general, data will include information on the participants’ perceptions, understanding, knowledge and experiences of the issues and concerns of patient safety in the hospitals in Bhutan. This specifically will include their knowledge and experience relevant to: everyday clinical practices, routines, protocols/guidelines, human resources, patient safety culture, and any specific patient safety issues they may have observed.

6. Possible benefit
We do not anticipate any immediate benefits for participants. However, this study will result in a comprehensive description of patient safety and quality care issues in Bhutan. The findings of this research may be beneficial in the future because the results will be used to inform recommendations for the development of model/framework for improving safety and quality in Bhutanese hospitals. It is further anticipated that the study as a whole will (1) contribute to improved understanding of the healthcare systems of low-income countries and processes for tailoring approaches to addressing quality care and patient safety shortcomings; and (2) identify areas for future research.

7. Possible Risk
There are no anticipated risks of participating in this study. While some participants may experience inconvenience or discomfort, this in itself is not a significant moral harm. Should participants become distressed during the course of the interviews, the interview can be stopped at any time. If a participant decides to withdraw from the study, they are free to do so at any time without any penalty. Participation in the study is voluntary.

8. Privacy, Confidentiality and Disclosure of information
Any information obtained in connection with this project will remain confidential. To ensure the privacy and confidentiality of participants, all interviews will be de-identified using codes and pseudonyms. All data or materials will be archived and
stored in accordance with Deakin University policies and procedure. All raw materials such as transcripts, field notes and audio-recordings will be locked in a secure cabinet. Other soft materials will be stored on a secure password protected Deakin server. All materials will be destroyed five years after completion of the study in the following ways (1) transcripts, field notes and others will be shredded by secure document shredder, (2) information stored on computer hard and thumb drives will be permanently deleted.

In the final report of the research, participants will not be named but instead assigned alphanumeric codes, the allocation of which will be known only to the researcher. Data will ultimately be presented as composite depictions, further protecting the identity of individual participants.

We plan to publish the results of this study in relevant journals and to present the results at conferences. No information that could identify participants will be used in these papers or presentation.

9. Results of the project
The findings of the study will be presented in the final PhD thesis and submitted to School of Nursing and Midwifery, Faculty of Health Sciences in Deakin University by Rinchen Pelzang. It will also be published in relevant international journals and presented at conferences. In addition (1) an executive summary report will be provided to the Ministry of Health, Bhutan and participating hospitals, and (2) seminar presentations will be made to staff at the hospitals in Bhutan.

10. Participation is voluntary
Participation in this study is voluntary. If staff do not wish to participate they are not obliged to. If they decide to participate and later want to withdraw, they are free to do so at any stage without any penalty. Their decision to withdraw from the study at any stage will not jeopardise their relationship with Deakin University, hospital administration or the Ministry of Health. Once they have decided to withdraw, they will be asked to sign the withdrawal of consent form.

11. Ethical Guidelines
This project will be carried out according to the Research Code of Conduct of Research Ethics Board of Health, Bhutan, and the National Statement of Ethical Conduct (2007) produced by the National Health and Medical Research Council of Australia. This statement has been developed to protect the interests of people who agree to participate in human research studies. The ethics aspects of this project have been approved by the Research Ethics Board of Health, Bhutan and the Human Research Ethics Committee of Deakin University.

12. Complaints
If participants have any complaints about any aspect of the project, the way it is conducted or any questions or issues about their right as a research participant, they may contact:

1. The chairman, Research and Ethics Board of Health, Ministry of Health, Bhutan, Tel 02 322602, Ext 333; email: phurbd@yahoo.com
Appendices

2. The Manager, Research Integrity, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, Facsimile: 9244 6581; research-ethics@deakin.edu.au

13. Reimbursement for participants costs
Participants will not be paid for their participation in this project

14. Further Information
If participants require further information, wish to withdraw their participation or if they have any problems concerning this project, they can contact the principal researcher or the researcher responsible for the project:

Prof Megan-Jane Johnstone
School of Nursing and Midwifery
Deakin University – Burwood Campus
221 Burwood Highway
Burwood
Melbourne VIC 3125
Email: megan.johnstone@deakin.edu.au
Phone: (Bus) +61-3-9244 6120;
Fax: +61-3-9244 6159

A/Prof Alison Hutchinson
School of Nursing and Midwifery
Deakin University – Burwood Campus
221 Burwood Highway
Burwood
Melbourne VIC 3125
Email: alison.hutchinson@deakin.edu.au
Phone: (Bus) +61-3- 9508 1905; Fax: +61-3- 9244 6159

Mr Rinchen Pelzang
School of Nursing and Midwifery
Deakin University – Burwood Campus
221 Burwood Highway
Burwood
Melbourne VIC 3125
Email: rpelzang@deakin.edu.au
Phone: (mob) +61-3- 0421854735
Fax: +61-3-9244 6159
Appendices

Appendix D
Organisational consent form

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: ………………………………………………………………………………………

Organisational Consent Form
(To be used by organisational Heads providing consent for staff/members/patrons to be involved in research)

Date: 3rd September, 2012

Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan

Reference Number:

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organisational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants’ identities and personal details if information about this project is published or presented in any public form.

I agree that
1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I / We DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I / We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent (printed) …………………………………………………

Signature ……………………………………………… Date ……………………
Appendix E
Organisational consent, Secretary, Ministry of Health

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Secretary, Ministry of Health, Thimphu, Bhutan.

Date: 1st September, 2012
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number: 12.2.2.2.

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organisational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants' identities and personal details if information about this project is published or presented in any public form.

I agree that
1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I / We DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I / We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent (printed) Dr. Dorji Wangchuk

Signature [Signature redacted by library]

Secretary
Ministry of Health
Thimphu, Bhutan
Appendix F

Organisational consent, Medical Director, Jigme Dorji Wangchuck National Referral Hospital

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Medical Director, Jigme Dorji Wangchuck National Referral Hospital.

Organisational Consent Form
(To be used by organizational Heads providing consent for staff/members/patrons to be involved in research)

Date: 30th August, 2012
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number:

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organizational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants’ identities and personal details if information about this project is published or presented in any public form.

I agree that
1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I / We DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I / We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent (printed)  DR KINZANG P TSHERING

Signature

Date 03/09/12
Appendices

Appendix G

Organisational consent, Medical Superintendent, Central Regional Referral Hospital, Gelephu

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Medical Superintendent, Central Regional Referral Hospital (Gelephu).

Organisational Consent Form

(To be used by organizational Heads providing consent for staff/members/patrons to be involved in research)

Date: 30 August, 2012
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number: CRIMAPU | 1 | 2 | 20 | 20

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organizational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants’ identities and personal details if information about this project is published or presented in any public form.

I agree that

1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I/We DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I/We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent (printed) TAPAS GURUNG

Signature

Date 3/9/2012
Appendices

Appendix H

Organisational consent, District Medical Officer, District Hospital, Punakha

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: District Medical Officer, District Hospital, Punakha.

Organisational Consent Form

(To be used by organisational heads providing consent for staff/members/patients to be involved in research)

Date: 30 August, 2012
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number:

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organisational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants' identities and personal details if information about this project is published or presented in any public form.

I agree that:
1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I / We DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I / We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent

... Dr. Chandu Gyaltshen, Chief Medical Officer, Punakha district hospital.

Signature

Date 30/08/12

Chief Medical Officer
Punakha Hospital
Punakha

Tel: 1411 2200 200
Fax: 1411 2200 200
Signed: ON file
SOX Certified: Yes

Signature Relationship Library
Appendix I

Organisational consent, Director, Royal Institute of Health Sciences

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Director, Royal Institute of Health Sciences.

Organisational Consent Form

(To be used by organizational Heads providing consent for staff/members/patrons to be involved in research)

Date: 17th September, 2012
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number:

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

In accordance with the conditions in the Plain Language Statement, I give my permission for the researcher to access staff and relevant organizational documents to conduct the research project.

I have been given a copy of Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal the participants’ identities and personal details if information about this project is published or presented in any public form.

I agree that
1. The institution/organisation MAY / MAY NOT be named in research publications or other publicity without prior agreement.
2. I / We DO / DO NOT require an opportunity to check the factual accuracy of the research findings related to the institution/organisation.
3. I / We EXPECT / DO NOT EXPECT to receive a copy of the research findings or publications.

Name of person giving consent (printed) DR. CHENCHO DORJE

Signature [Signature Redacted by Library] Date 5th OCTOBER 2012
EXPLORING PATIENT SAFETY ISSUES AND RISK MANAGEMENT STRATEGIES IN HOSPITALS IN BHUTAN

I am seeking staff who are interested in volunteering to assist me in exploring patient safety issues and risk management strategies in hospitals in Bhutan. I am particularly interested in your views on the nature and extent of patient safety issues in Bhutan’s main hospitals.

Volunteers may be:

- Senior Managers in JDWNRH, Gelephu Regional Referral Hospital (GRRH) and Punakha District Hospital (PDH),
- Doctors in hospitals (Specialist and General Practitioners)
- Ward managers or unit in-charges
- Nurses (all levels of nurses: Bachelor, Diploma, Certificate, and areas of practice, including education)
- Health Assistants (including Assistant Clinical Officers)
- Nurse educators/lecturers in RIHS

If I agree to participate, what will I be required to do?
If you agree to participate, depending on which of the above categories of respondents you belong to, you will be required to participate in either an individual interview or a group meeting of approximately one hour duration. During this interview or meeting you will be asked about your views and thoughts on patient safety issues and risk management strategies in hospitals in Bhutan.

When and where?
From 11th March to 30th April 2013 at JDWNRH.

Who should I contact for further information?
The best person to contact is Rinchen Pelzang. Rinchen is a PhD student at Deakin University. He can be contacted on: 17479934 (Bhutan) or E-mail: rpelzang@deakin.edu.au.

29th January 2013
Appendices

Appendix K

Invitation letter for participation in the study

To: Participants

Date:

Full Project Title: ‘Exploring patient safety issues and risk management strategies in hospitals in Bhutan’

Principal Researcher: Prof Megan-Jane Johnstone, A/Prof Alison Hutchinson

Student Researcher: Rinchen Pelzang

I would like to invite you to participate in a research project I am conducting, which aims to explore patient safety issues in hospitals in Bhutan. The project will result in a comprehensive overview of patient safety and quality care issues in Bhutan.

The project is based at JDWN RH, Gelephu Regional Referral Hospital (GRRH) and Punakha District Hospital (PDH), and involves a critical involvement between clinicians, managers, nurses and educators. Using a qualitative research approach to capture staff views, the project aims to improve understanding of patient safety issues in Bhutan and inform the development of appropriate locally adapted solutions to the issues identified. In pursuing these aims, attention will be given to exploring the related questions:

1. What patient safety policies and guidelines have been developed and operationalised in the Royal Kingdom of Bhutan?
2. What are health service providers and manager’s knowledge, perceptions, understanding, and experiences of patient safety in Bhutan’s national, regional and district hospitals?
3. What are the factors that health service providers and managers have identified as most contributing to patient safety concerns in Bhutan’s national, regional and district hospitals?
4. What strategies are needed to address the patient safety issues and concerns identified?

Prior to your decision to accept this invitation, it is essential that you understand the general purpose of the study and what is required of you. Information about these things is provided below. I invite you to read this information. If there is anything that is not clear, or if you would like more information, please contact me.

WHAT IS THE GENERAL PURPOSE OF THE PROJECT?
The principal aim of the project is to explore the nature and extent of patient safety issues in Bhutan’s main hospitals. Its related objective is to get baseline data on patient
Appendices

safety and inform the development of processes for improving safety and quality in Bhutanese hospitals.

DO I HAVE TO TAKE PART?
Your decision to participate is entirely voluntary and you are under no obligation to participate in this project. Should you decide not to participate, you are free to do so without giving a reason. Your decision to participate in the project will not, in any way, prejudice your role or position at JDWNRH, GRRH and PDH.

AM I ELIGIBLE TO PARTICIPATE?
You are eligible to participate if you belong to any of the following categories of staff:

- Managers in MOH
- Senior Managers in hospitals
- Doctors in hospitals (Specialist and General Practitioners)
- Ward managers or unit in-charges
- Nurses (all levels of nurses: Bachelor, Diploma, Certificate, and areas of practice, including education/nurse educators)
- Health Assistants (including Assistant Clinical Officers)

WHAT IS REQUIRED OF ME IF I DECIDE TO PARTICIPATE?
If you decide to participate, you will be asked to:

- Give consent to be interviewed and to have your interview audio recorded
- Participate in either an individual interview or a group meetings (whichever is indicated) for approximately one hour (60 to 90 minutes); during this interview or meeting you will be asked about your views and thoughts on patient safety issues and risk management strategies in hospitals in Bhutan.

WHAT ARE THE POSSIBLE COSTS, RISKS AND BENEFITS TO ME OF PARTICIPATING?
There are no financial costs to you. There are also no readily foreseeable risks associated with participation in this project. Data obtained from this project will be strictly used only for this project. Should any critical incidents arises during the project, these will be dealt with by established processes internal to JDWNRH, GRRH, and PDH.

There are a number of benefits. Most important of these is: participants will have a unique opportunity to participate actively in the development of a plan for improving safety and quality in Bhutanese hospitals and contribute to identifying areas for future research.

WILL MY RESPONSES BE KEPT CONFIDENTIAL?
Your responses will be kept strictly confidential. The information collected will be presented in a manner that nobody will identify the participants by maintaining strict anonymity. The materials used in the project will have no identifiable information. This means, the identification will be protected by using a number or ‘false name’.

The findings of the study will be presented in a thesis and will also be made available through publication of articles in peer-reviewed journals. Neither of these works will contain any personal identifying information.
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WHAT DO I DO IF I KNOW OF OTHERS WHO MAY BE INTERESTED IN PARTICIPATING IN THIS STUDY
If you know other healthcare professionals/workers who you think might be interested in sharing their views with us, you may contact them provided you agree to maintain strict confidentiality about their identity. If you agree to keep this information private and confidential you can provide to the prospective participant(s) a copy of this letter and advise them that they can contact me if they are interested in participating in the project.

WHO SHOULD I CONTACT IF I HAVE ANY FURTHER QUERIES?
The person to contact is Rinchen Pelzang. Rinchen is a PhD student at Deakin University. He can be contacted on: 17625859 (Bhutan) or E-mail: rpelzang@deakin.edu.au.

Thank you for your time

Yours sincerely

Rinchen Pelzang
PhD CANDIDATE
DEAKIN UNIVERSITY

Any complaints about your participation in this project may be directed to:
1. The chairman, Research and Ethics Board of Health, Ministry of Health, Bhutan, Tel 02 322602, Ext 333; email: phurbd@yahoo.com
2. The Manager, Research Integrity, Deakin University, 221 Burwood Highway, Burwood Victoria 3125, Telephone: 9251 7129, Facsimile: 9244 6581; research-ethics@deakin.edu.au
Appendices

Appendix L

Semi-structured interview guide (questions)

Opening prompts
1. Tell me what you understand by the idea of ‘patient safety’.

2. Tell me about what policies and procedures you have in place for ensuring patient safety in your hospital/ward/Unit.

Prompting questions
1. What do you think are the most common patient safety issues in your hospital?

2. What do you think are the factors that most contribute to patient safety issues in your hospital?

3. What do you feel about the issues you have identified?

4. What processes do you believe are best suited to improving and promoting patient safety in your hospital?

5. What do you see as your role in promoting idea and practice patient safety in your hospital and profession?

6. Describe for me how you would measure patient safety outcomes in your hospital?

7. Any other comments?

8. Can I return to you at a later date if I have any further queries?
Appendix M

Adverse events indicators

Adverse events indicators list (adapted from Ursprung et al., 2005; Matsaseng & Moodley, 2005; Mendes et al., 2009; Garrouste-Orgeas et al., 2012; Runciman et al., 2006; Zhan & Miller, 2003).

**Medication:**
- wrong administration,
- wrong prescription,
- wrong preparation
- other adverse drug events

**Surgical:**
- wrong procedure,
- wrong site,
- foreign body left during procedure,
- postoperative haemorrhage/haematoma,
- accidental puncture or laceration,
- postoperative septicaemia,
- others

**Health-care associated Infections:**
- infection following infusion, injection, or transfusion;
- catheter related infections,
- Ventilator-associated pneumonia,
- postoperative infections,
- pressure ulcer,
- others

**Blood/laboratory studies:**
- blood test ordered and not sent,
- repetition of test due to procedural problem,
- blood test done but report is missing,
- delayed in taking blood test,
- transfusion reaction,
- wrong transfusion

**Radiology studies:**
- delay of procedure,
- order not carried out,
- repetition of procedure due to procedural problem,
- mislabelled or done in wrong site

**Management:**
- delays in patient service,
- consultation ordered but not carried out,
- delay in reporting laboratory report,
- delay in consulting required doctors,
- pain not managed according to the unit protocol.

**Information transformation:**
- important information about the patient not transferred verbally or in written
Appendices

Patient care equipment/medical devices:
- malfunction,
- accidents/falls

Others:
- anaesthesia complications and reactions,
- failure to rescue,
- obstetric trauma (with or without instrument),
- improper diagnosis,
Appendices

Appendix N

Review form for record review of adverse events

CONFIDENTIAL

<table>
<thead>
<tr>
<th>Patient hospital ID number: ………………….</th>
<th>Review case number: …………..</th>
</tr>
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<tbody>
<tr>
<td>Reviewer: ……………………………………</td>
<td>Date of review: ………………….</td>
</tr>
<tr>
<td>Hospital number: …………………………..</td>
<td>Information sources: …………</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Brief description of the incidents (as described by health professional in the record)</th>
<th>Incidents (categories)</th>
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</thead>
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<tr>
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</table>
Appendix O

Nominal Group Task Statement form
(adapted from Van de Ven & Delbecq, 1972)

<table>
<thead>
<tr>
<th>Most significant patient safety issues in your hospital</th>
<th>Contributing factors</th>
<th>Strategies needed to address the patient safety issues</th>
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Appendix P

Ranking tally sheet
(adapted from Van de Ven & Delbecq, 1972)

<table>
<thead>
<tr>
<th>Item Number</th>
<th>Ranks assigned to items by participants</th>
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<tbody>
<tr>
<td>1</td>
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<td>2</td>
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<td>10</td>
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</tbody>
</table>
Appendix Q
Coding matrix to identify codes and categories
(adapted from Smith & Firth, 2011)

<table>
<thead>
<tr>
<th>Interview transcript</th>
<th>Description (in-vivo codes)</th>
<th>Preliminary thoughts (what is this about)</th>
<th>Initial categories</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
Appendix R

Coding index to organise themes and categories
(adapted from Smith & Firth, 2011)

<table>
<thead>
<tr>
<th>Initial themes</th>
<th>Initial categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>
To: Participant

Consent Form for participant

Date:

Full Project Title: ‘Exploring patient safety issues and risk management strategies in hospitals in Bhutan’

I have read, or have had read to me in the language I understand, and I understand the attached Plain Language Statement.

I freely agree to participate in this project according to the conditions in the Plain Language Statement.

I have been given a copy of the Plain Language Statement and Consent Form to keep.

The researcher has agreed not to reveal my identity and personal details, including where information about this project is published, or presented in any public form.

The voluntary nature of participation and my right to withdraw from the study at any time, without repercussions, has been clearly explained.

I have been clearly explained about the storage of data.

I have been clearly explained about the audio-recording of the interview.

Participant’s Name (printed) .................................................................

Signature ............................................................. Date ......................
Appendices

Appendix T
Withdrawal Consent Form

PLAIN LANGUAGE STATEMENT AND CONSENT FORM

TO: Principal Investigator

Withdrawal of Consent Form
(To be used by participants who wish to withdraw from the project)

Date:
Full Project Title: Exploring patient safety issues and risk management strategies in hospitals in Bhutan
Reference Number:

I hereby wish to WITHDRAW my consent to participate in the above research project and understand that such withdrawal WILL NOT jeopardise my relationship with Jigme Dorji Wangchuck National Referral Hospital; Gelephu Regional Referral Hospital; Punakha District Hospital; Ministry of Health, Bhutan; and Deakin University.

Participant’s Name (printed) ………………………………………………………………………

Signature …………………………………………………………………….. Date ……………

Please mail or fax this form to:

Rinchen Pelzang
Deakin University, 221 Burwood Highway, Burwood Victoria 3125,
Telephone: 0421854735, International: +61-3-0421854735; Facsimile: +61-3-9244 6159, International: +61-3-9244 6159; Email: rpelzang@deakin.edu.au