**UNIVERSITY OF KWAZULU-NATAL**

# MANAGEMENT OF ADVERSE EVENTS IN PRIMARY HEALTH CARE CLINICS IN UMGUNGUNDLOVU HEALTH DISTRICT: NURSES' PERSPECTIVE

**By**

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## DECLARATION

I, **Thembekile Maureen Khoza**, declare that

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**ABSTRACT**

The study was conducted in Pietermaritzburg within uMgungundlovu Health District. The main aim of the study was to explore the reasons why nurses fail to implement the available laid down procedures of dealing with adverse events. This was to be achieved by firstly investigating the reasons for poor adverse events, secondly, by investigating whether the available reporting tools are being used, thirdly by identifying the nature of the current management system in place, fourthly by investigating whether the environment within which nurses operate is conducive to effective adverse events management, and lastly by investigating the quality of the existing management plan for dealing with adverse events. The quantitative research approach was used and the research instrument employed was a structured questionnaire comprising forty questions arranged in a Liekert Scale format. The sample size was 213 participants out of a total population of 461.

The study found that as much as nurses are orientated on the policy of adverse events management, there is no ongoing training on the management of adverse events. Furthermore the study found that staff is not included in the planning on the management of adverse events and the adverse events management committees are not fully representative of all categories of staff. The findings showed that there is lack of reporting on adverse events and further that the reporting tools are not primary health care orientated. The findings further revealed that there is poor data and information management. The findings also revealed that as much as there is complains mechanism that is in place, the clinics fail to involve the community through the clinic committees on matters of adverse events management

Findings also revealed a lack of supervision and oversight role. The staff performance management is not aligned to managing adverse events. Another element is the fact that there is no improvement plan in plan following audits of quality care. The staff members are not even involved to discuss audit results.

The study recommends that user-friendly tools that are relevant to primary health care activities be developed to ensure proper reporting. The study further recommends that adverse events should be incorporated in the nurse training programs, especially the

Primary Health Care program as well as the in-service training programs. The study also recommends the training of the clinic managers to equip them with skills to be able to conduct monitoring and evaluation, coordination of programs and how to do strategic planning. The study further recommends that the staff performance management on adverse events be not limited to the focal person, but should be part of all healthcare workers. The study also recommends that the International Patient Safety day should be celebrated on a yearly basis and that this should be a key responsibility area of the district quality manager.

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# CHAPTER 1
# INTRODUCTION AND OVERVIEW OF STUDY

## 1.1 INTRODUCTION

This study is about adverse events management within the primary health care clinics of the KwaZulu-Natal Department of Health. It was conducted within uMgungundlovu Health District. The researcher saw the need to conduct the study after having been employed by the provincial Department of Health and noticed that reporting procedures that are in place were not followed in the management of adverse events. This chapter provides an overview of the entire study on adverse events management. This is done by providing the background of the study. The background of the study involves providing the definition of adverse events and also identifies the different categories of adverse events. It goes on to state the aim of the study as well as giving indication as to what motivated the researcher to embark on such a study. The chapter also states the significance of the study as well as provides a brief overview of the research design. Towards the end of the chapter the researcher provides a brief outline of the chapters of the dissertation.

## 1.2 BACKGROUND

According to the KwaZulu-Natal Strategic Plan (2015-2019:66), the functions of The KwaZulu-Natal Department of Health are structured in the form of eight programs namely, Administration, District Health Services, Emergency Medical Services, Regional and Specialized Hospitals, Tertiary Central Hospitals, Health Sciences and Training, Health Care Support Services and Health Facilities Management. The Primary health clinics fall under Program two, which is the District Health Services. These primary health care clinics are divided into three categories, namely Category A, B and C. These categories are based on the size of the population being serviced and hours of operations. Category A, offers healthcare services to a population of about 8 000 people, eight hours a day for five days a week. Category B clinics renders health care services to a population of 12 000 people for 12 hours, seven days a week. Category C offers services to a population of 20 000 people, 24 hours a day for seven days a week.

The Constitution of 1996, Section 24(a) advocates for the right to a harm free environment for the benefit of the citizens' health and wellbeing. Section 195 of the Constitution, requires a public administration that maintains high standards of professional ethics, delivers services that are fair, impartial and responsive to people's needs, and furthermore the public administration should provide the public with accurate information regarding accountability. According to the KZN Department of Health Annual Performance Plan (2014/15-2016/17:21), 38,7% of the mortality rate of children under the age of five occurred outside health facilities, 56,5% occurred in the district hospitals. 2.6 % died on arrival, 31,5% occur within 24 hours of admission and further 25,7% occur between first and second day, overall 57,2% die within 72 hours of admission most causes being pneumonia and diarrhea. Different authors such as Bartlett, Blais, Tamblyn and others (2008:1555), argue that up to 50% of these adverse events are preventable and that up to 17% of hospitalized patients are experience adverse events.

### 1.2.1 Definition of Adverse Events

According to Bartlett *et al.* (2008:1555), "an adverse event is an unintended injury or complication caused by delivery of clinical care rather than by the patient's condition". World Health Organization (WHO) Conceptual Framework for the International Classification for Patient Safety (2009:106) highlights different definitions of adverse events. The document describes an adverse event as an injury that resulted in harm following medical care that would lead to the patient being hospitalized for a longer period or being subjected to some form of disability. Furthermore the document describes an adverse event as an act or omission that result in physical or psychological trauma to the patient.

### 1.2.2 Types of adverse events

According to the World Health Organization Conceptual Framework for the International Classification for Patient Safety (2009:32-46), incidents that are viewed as adverse events can be classified into thirteen types and these are briefly discussed below.

#### 1.2.2.1 Clinical administration

Clinical administration incident occurs when processes can cause harm to patient, for example a long wait before a patient being attended to.

#### 1.2.2.2 Clinical Procedures

This type of incident occurs as a result of incorrect diagnosis or a wrong procedure being performed or not performed at all.

#### 1.2.2.3 Documentation

It is important to always ensure that patients' documents are kept safely because missing documents can result in delayed delivery of health care. Furthermore patients' documents need to be written legibly for the next health care worker to continue with care. The document should contain all records that are about the patient's medical care, whether it is a checklist or a report on patient health status.

#### 1.2.2.4 Healthcare Associated Infections

Healthcare associated infections occur as a result of patient acquiring bacteria or virus, causing infection other than the problem that the patient came to be treated for. For example, a diabetic patient who acquires pneumonia whilst being admitted in the hospital for stabilization of diabetes mellitus will be a typical case of an adverse event that is associated with healthcare infections. Other infections can be as a result of bacteria gaining entry through intravenous therapy when infection control protocols, like hand washing, are not followed.

#### 1.2.2.5 Medication

Administering a wrong medicine to a patient or failure to do so can result in a patient prolonging hospital stay due to complications of the act or omission.

#### 1.2.2.6 Blood and Blood products

It is critical that patient requiring transfusion of blood products be matched correctly according blood group to avoid administering a wrong blood product to a patient. An incidence can occur when administering a blood product that has lost potency due to improper storage.

#### 1.2.2.7 Nutrition

Patients are ordered diet according to their illnesses. It is therefore critical to ascertain the diagnosis of a patient against ordered diet to ensure that patient is given the correct food, in the correct amount at correct intervals. For example a diabetic patient is supposed to be on a low salt, fat free and a sugar free diet.

#### 1.2.2.8 Oxygen or Gas

All health facilities should have oxygen available at all times. For example, in the case of a newborn child, oxygen should be given at the correct amount to prevent complications like blindness.

#### 1.2.2.9 Medical equipment

Essential medical equipment should always be available and be fully functional. An incident can occur if the equipment malfunctions, where it displays a wrong reading, for example a diabetic client may have the blood sugar level incorrectly displayed as normal whereas the levels are low and the patient might fall into a coma state.

#### 1.2.2.10 Behaviour

Behaviours that can attribute to adverse events are because of the patient or a staff member. A patient may be uncooperative during a procedure causing harm to occur. For example, a patient refusing to be transfused with blood product to save a life. Staff members as well can contribute to harm when they subject patient to verbal or physical abuse.

#### 1.2.2.11 Patient Accidents

Patients when in hospitals are under the care of health workers and therefore are not supposed to be subjected to any form of physical harm. For example, patients must not be exposed to situations where they could be electrocuted, injured by fire, or drown in bathtubs.

#### 1.2.2.12 Infrastructure

The buildings need to be maintained to prevent harm that can result from collapse, or the infrastructure is not available to put highly infectious patients away from other

vulnerable patients. When the infrastructure is a challenge, the highly infectious patients suffering from tuberculosis, for example, are put together with an immuno-suppressed Diabetes Mellitus patient, who is likely to contract the infection and this can result in prolonged hospitalization on the part of the diabetes mellitus patient and unnecessary costs.

#### 1.2.2.13 Resources or Organizational Management

Organizational behaviour can result in adverse events in such that, when there are inadequate human resources to cope with high demand from large number of patients, other patients are left unattended and these patients can be exposed to complications or even worse, death. For example, when two women arrive in labor and there is one nurse to attend to them, the patient that is left unattended could be subjected to complications that could result in the death of both mother and child.

### 1.2.3 Adverse Events Management

Having discussed the adverse events by definition and types, the researcher will briefly discuss the concept adverse events management. According to Cronjé, Du Toit, Marais and Motlatla (20006:122), management is a process, carried out through tasks planning, organizing, leading and controlling to achieve organizational goals. Furthermore the authors state that the process is about utilization of resources, whether human, financial, information or physical to achieve an organizational goal. It can therefore be deduced that with adverse events management, the goal is to reduce harm to patients caused by adverse events through the tasks of management. According to the uMgungundlovu Health District Adverse Events Policy and Reporting System (2012:2), it is clear that adverse events management is about investigating, analyzing and reporting on the adverse events according to the prescribed format.

## 1.3 IMPORTANT TERMS IN ADVERSE EVENTS MANAGEMENT

The concept of adverse event management can be better understood when some of the terms that are frequently used in event management are understood. These terms include, among others, patient safety, incident, near misses, hazard, and harm. The description of these terms that is provided below is based on the World Health

Organization Conceptual Framework for the International Classification for Patient Safety (2009).

### 1.3.1 Patient safety

According to the WHO Conceptual Framework for the International Classification for Patient Safety (2009:133), patient safety is described as a situation in which the patient is subjected to little or no harm during the process of service delivery. Patients may be subjected to a number of possible harmful situations which health workers are expected to ensure that they are prevented. These among others include fall, misdiagnosis or administration of a wrong drug and so forth.

### 1.3.2 Near misses

The WHO Conceptual Framework for the International Classification for Patient Safety (2009:130) describes a near miss as an incident that nearly occurred but was unreported since the health worker committing it only knew it or that incident was intercepted before it occurred.

### 1.3.3 Error

According to the WHO Conceptual Framework for the International Classification for Patient Safety (2009:113) an error is described as a failure to execute planned activities to produce intended outcome or it is merely execution of an incorrect plan.

### 1.3.4 Harm

According to the WHO Conceptual Framework for the International Classification for Patient Safety (2009**:**118), harm is described as an impairment of the normal physical, psychological or emotional body structure that needs intervention.

### 1.3.5 Hazard

The WHO Conceptual Framework for the International Classification for Patient Safety (2009:118) describes a hazard as a potential cause for harm or a threat to the safety of patients.

### 1.3.6 Incident

The WHO Conceptual Framework for the International Classification for Patient Safety (2009**:**121) describes an incident as an event or circumstance that causes an injury or poses a risk or harm to the patient. In actual fact all the above terms are classified as incidents.

## 1.4 AIM OF THE STUDY

The main aim of the study is to explore what makes the clinics fail to manage adverse events as per expected practices. Furthermore the study aims to create awareness amongst nurses as to the benefits of reporting adverse events.

## 1.5 MOTIVATION OF THE STUDY

The researcher has been employed as operations manager by the Department of Health based at one of the Primary Health Clinics. Almost all the adverse events the researcher came to be aware of were reported by the patients in the form of complains. This then made the researcher wonder why the nurses were not proactive enough in reporting such adverse events. Over the past five years there has been an increase in the number of cases where the Department of Health in KwaZulu-Natal has been ordered to pay million of rands to patients who have suffered harm as a result of poor adverse events management. For example, in February 2015, the MEC for Health conceded 100% liability for the proven damages to Memoria Mdletshe whose child became quadriplegic following neglect at birth (Regchand: 2015).

## 1.6 SIGNIFICANCE OF THE STUDY

The study will benefit nurses and managers with knowledge and skills to deal with adverse events management. The knowledge will contribute to the management of adverse events through improved reporting thereby reducing associated financial costs. Furthermore the study will show the importance of focussing on both hospitals and primary health care facilities in the management of adverse events as opposed to the current one-sided approach that focuses mainly on hospitals. The study will also benefit researchers in public administration by providing baseline information on the status of management of adverse events in the primary health care clinics.

Furthermore the researchers will be able to conduct further comparative studies based on the topic and conduct them on a bigger scale.

## 1.7 PROBLEM STATEMENT

Each Government Departments has a Strategic Plan document in which it states its current situation and proposes ways and means of how current challenges are to be dealt with going forward. Within the KwaZulu-Natal Department of Health, the Strategic Plan document has been able to provide information and statistics about adverse events (AE) that took place within the Government hospitals, however, no information has been provided about the same issues happening within the clinics of the same Department. The only available information is mainly found in the National Core Standards External Assessment Report published in 2013, which states that nurses seem not to be aware of a variety of issues around adverse events management. The extent to which they lack awareness on such issues is not clearly articulated and no clarity is provided on issues relating to training of nurses, familiarizing them with the policies and guidelines set by the department to report such adverse events. The result is that there is no clear picture of the extent to which adverse events are managed within Primary Health clinics, with particular reference to the uMgungundlovu Health District.

## 1.8 RESEARCH OBJECTIVES

The study has a main research objective and five research sub-objectives to help find solution to the research problem.

### 1.8.1 Main research objective

To explore reasons for not implementing available adverse events management procedures.

### 1.8.2 Research sub-objectives

- To investigate reasons for failure to identify, report and manage adverse events.
- To interrogate the available documents' ability to assist in adverse events management.

- To evaluate existing information management systems in the management of adverse events management.
- To investigate the work environment in the management of adverse events.
- To evaluate existing improvement plan in place on adverse events management.

## 1.9 RESEARCH QUESTIONS

The study has the main research question and five sub-research questions. The researcher will use the research questions to provide direction towards solving research problem.

### 1.9.1 Main research question

Why health workers are unable to implement adverse events management procedures that are in place?

### 1.9.2 Research sub-questions

- What are the reasons for poor adverse event management?
- Are available documents followed in the management of adverse events?
- What is the current information management system in place?
- Does the environment allow for effective adverse events management?
- What quality improvement plan is in place for the management of adverse events?

## 1.10 LOCATION OF THE STUDY

The study was conducted within the 51 Primary Health Care (PHC) fixed clinics in the uMgungundlovu Health District. UMgungundlovu Health District is situated in Pietermaritzburg, the Capital City of KwaZulu-Natal Province.

## 1.11 POPULATION OF THE STUDY

The population of this study comprised of all the nurses working in the 51 Primary Health Care fixed clinics and was estimated to be 461 in size.

## 1.12 RESEARCH METHODOLOGY

The researcher considered all the three research methods before choosing the most appropriate one and quantitative research methodology was deemed to be the most appropriate for the purposes of the study especially taking into account the size of both the population and the sample.

## 1.13 DATA COLLECTION

In the collection of data, firstly the researcher had to obtain the sample of the study and then look at the different types of data collection tools. Secondly the researcher looked at the construction and administration of the research instrument.

### 1.13.1 Sample of the Study

The sample of the study comprised of 213 nurses and the method that was used to obtain this sample was simple random sampling.

### 1.13.2 Data Collection Tools

The researcher considered different types of data collection tools such as the interview, questionnaire, observation, document analysis and others. The researcher chose to use a structured questionnaire comprising of 40 closed questions presented in the form of a Likert scale. The questionnaire was written in English.

### 1.13.3 Administration of the Research Instrument

The researcher considered different methods for the administration of research instrument. Firstly the researcher considered that questions be answered telephonically. This method was deemed by the researcher to be costly and another challenge was that the researcher did not have all the telephone details of the respondents. This method was then discarded. Secondly the researcher considered the use of fieldworkers, and due to budgetary constraints this method was also discarded. Eventually the researcher came to a conclusion that the best option was to physically deliver the questionnaire to respondents for self-administration, as this method was deemed to be cost effective.

## 1.14 DATA ANALYSIS

The researcher used the Statistical Package for Social Sciences (SPSS) software to conduct data analysis. The researcher used descriptive data analysis in the form of frequency tables, bar graphs and pie charts.

## 1.15 LIMITATIONS OF THE STUDY

Time constraints prevented the researcher from reaching the targeted sample size of at least 300 respondents. The mere fact that participation in the study was voluntary, limited the size of the sample. Some of the questionnaires were not answered.

## 1.16 CHAPTER OUTLINE

**Chapter 1:** This chapter provides a brief explanation of how the research was conducted. The chapter covers introduction of the study, the background, aims, research objectives as well as questions that answer research objectives.

**Chapter 2:** This chapter provides literature review based on books and journals.

**Chapter 3:** Provides the design of the research, the methodology implemented, how the study was conducted, and how the data was collected.

**Chapter 4:** The data that was collected is presented and analyzed in this chapter.

**Chapter 5:** In this chapter the researcher discusses the findings and highlights gaps and areas of future research. The chapter also provides recommendations.

## 1.17 CONCLUSION

The chapter has been able to provide the background that informed conducting this study. Furthermore the chapter has been able to provide a clear picture as to who is the population and the sample of the study comprised of. The chapter went on to clearly state the research questions and the aim and objectives of the study. The research methodology was clearly indicated and the researcher was able to provide a clear picture of what the research instrument was and how it was administered. In conclusion the chapter provides a clear outline of the entire dissertation report. The next chapter interrogates literature that is relevant to the management of adverse events.

# CHAPTER 2
# LITERATURE REVIEW

## 2.1 INTRODUCTION

This chapter provides an overview of the Primary Health Care concept and the role that can be played by the primary health care strategy in ensuring quality health care with particular reference to adverse events management within uMgungundlovu district. A brief discussion of global trends in the primary health level of care will be provided. The chapter aims to explore the theoretical framework with particular attention to the organizational culture as well as coordinated services, how these through the activities of planning, organizing, directing, staffing and budgeting can assist in the improvement of adverse events management. The chapter also interrogates legislative framework surrounding quality health care. The chapter further looks at issues surrounding the management adverse events, such as patient safety, communication, quality health care, reporting, technology, patient involvement, taxonomy, contributing factors, budget and environmental issues. Finally the chapter investigates whether or not there is any literature gap in the management of adverse events in the primary health level of care.

## 2.2 PRIMARY HEALTH CARE

Authors, Dookie and Singh (2012:2) and Muldoon, Hogg, and Levitt (2006:409) are of the view that the concepts primary care and primary health care have been used interchangeably such that there has been a gap to distinctly separate the two. Kelly and Tazbir (2013:42) cite Starfield (1998) who stated that primary care is a type of health offered at first contact with the patient, which should be continuous, comprehensive, coordinated, family centered, community oriented and culturally competent. Dookie and Singh (2012:2) and Muldoon, Hogg, and Levitt (2006:409) further agree that primary care is health care services that are rendered at first level of care, aimed at preventative approach whereas primary health care is a strategy used by the government to ensure that primary care is effective, taking into consideration the community needs. Dookie and Singh (2012:2) argue that primary health care needs re-engineering so that the emphasis is on health promotion and preventive approach, and for this to happen a district health system with strong leadership is required that will commit to working with all stakeholders and ensure community

involvement. According to Crooks and Andrews (2009:1), to understand the concept primary health care, it is important to reflect on the Alma-Ata Declaration of 1978, which was a basis for discussing a strategy to achieve health for every citizen. Furthermore Crooks and Andrews (2009:3) state that the Alma-Ata Declaration of 1978 advocated that health and access to health care be recognized as a fundamental human right. According to Dennill and Rendall-Mkosi (2012:2-24), the concept of primary health care developed globally between the 1940 and 1950s when countries were expected to expand the service provision and improve citizens' health. Furthermore the authors state that in South Africa, Dr Sidney Kark and Dr Emily Kark initiated the Community-Oriented Primary Health Care in Pholela, in the 1940s. According to the authors this concept was about knowing the population, the needs of the community, developing intervention strategies together with the community and ensuring that those interventions were monitored.

According to Dennill and Rendall-Mkosi (2012:2-24), primary health care must conform to the Alma-Ata Declaration that defines primary health care as a health care that should be accepted, affordable and accessible to individuals and their families. Furthermore the authors state that the primary health care should encourage full community participation, as it is the first level of care whereby the state brings healthcare closer to the people. The authors argue that for primary health care to succeed in its goal there is a need to implement a comprehensive approach of all available strategies that aim at improving lives of the communities. According to the authors, there are strategies for implementing the primary health care approach. The authors state that primary health care must be based on principles that require that health services rendered must be adequate and available to all communities, the communities must afford to use these services and the services must be offered according to what the community needs, using the available resources. Furthermore the authors mention that the other strategies for implementing primary health care is through the community participation, involvement of all government departments and a re-engineering of the primary health care through the district health system. According to the authors, the World health Organization (WHO) made a declaration in 2008, that primary health care will be the adopted approach for health service delivery. Furthermore the authors state that the WHO declaration was based on a

1997 progress report that was submitted by the countries that despite challenges faced, the primary health was being adopted even in the developing countries.

The primary health care approach has been the underlying philosophy of our health system, yet the health system remains focused largely on curative care, rather than on the promotion of health and prevention of illness. According to the National Service Delivery Agreement (2010-2014 :12-13), the public health system has been under funded for several years and this has contributed to the inability of the public health system to deliver a health service that is accessible and is of high quality. Furthermore, the document states that another contributory factor to the inefficiencies of the health care system is the shift in the training of nurses whereby training shifted from being offered exclusively by hospitals to being offered by colleges and universities. According to the document, this has resulted in the non-responsiveness by the Department of Health to service delivery needs.

### 2.2.1 Supervision in the Primary Health Care

According to Dookie and Singh (2012: 3), there is a need for an effective leadership to ensure that formulated policies are translated into effective interventions. The authors argue that there is a need for political commitment towards primary health care delivery by ensuring that there are policies that talk to integrating primary health care to community-based development. Furthermore the authors argue that capacity building and skills development particularly communication and problem-solving skills are needed. According to the KwaZulu-Natal Department of Health Annual Performance Plan (2014/15-2016/17:55), the delivery of Primary Health Care service is dependent on the District Health System to facilitate its implementation. The document states that although the District Health System's definition is limited to primary health care and district hospital services, the KwaZulu-Natal Department of Health has broadened it to include all primary health care clinics, all hospitals and emergency medical and rescue services. According to the Primary Health Care (PHC) Supervision Manual (2009:4), for the best provision of primary health care in facilities there should be a an appointed supervisor who will be responsible for monitoring and maintaining good performance, information systems, communication strategies, in comparison to the Performance Management and Development System

and The Primary Health Care Package for South Africa. The aim of the PHC Supervision Manual is to provide a structured, evidence-based supervision that can be implemented and measured for the provision of quality primary health care. According to the Manual, the primary health care facility supervisor is responsible for conducting periodic visits to the clinics and offer support whilst reviewing the clinics performance and is expected to report to the District Manager. According to the KwaZulu-Natal Department of Health Strategic Plan (2015-2019:42) all primary health clinics are under the administration of the provincial government, with the exception of those within eThekwini Metro.

According to Dennill and Rendall-Mkosi (2012:26), the district health system is marred by lack of expertise, the goals are not clearly defined and there is a lack of information management system. The authors argue that autonomy is needed to overcome these weaknesses. According to the National Development Plan 2030(2011: 301) there is lack of adherence to the policies, the values of Primary Health Care are not being prioritized, there is less concern about responsibility to patients than personal benefits like pay and working conditions and furthermore there is no oversight role. The document agrees to the fact that there is too little emphasis on preventive primary health care and quality care.

Dennill and Rendall-Mkosi (2012:35-37) state that developed countries have made a remarkable progress with the implementation of the primary health care approach as marked by their improved life expectancy, evidenced by their ageing communities, compared to developing countries who are struggling with infant and maternal mortality rates. According to the authors, Brazil and Thailand have had a successful implementation of primary health care approach as developing countries. The authors state that Brazil managed to move from a hospital centered care to primary health care approach, and has managed to offer quality health care to its citizens, amid the challenges of health professional shortages. Furthermore the authors state that Thailand had a shortage of healthcare professionals and in order to deal with this challenge the country recruited and trained community volunteers to render health promotion, a strategy that had assisted to raise awareness on issues of maternal and child programs.

### 2.2.2 Legal and Regulatory Framework

In dealing with the legal and regulatory framework that govern the health care system performance in the context of patient safety and adverse events, a number of prescripts were looked at and these are the Constitution of South Africa (1996), the Policy On Quality Health for South Africa (2007), the National Health Act (2003), Occupational Health and Safety Act (1993), Labour Relations Act (1995), and the norms and standards applicable to Primary Health Care.

According to Fischbacher-Smith and Fischbacher-Smith (2009:455), leadership is responsible for holding healthcare workers accountable in the available policies on clinical performance and patient safety. The Constitution of 1996, Section 24(a), advocates for a right to a harm free environment for the benefit of the citizens' health and wellbeing. Section 195 requires a public administration that maintains high standards of professional ethics, delivers services that are fair, impartial and responsive to people's needs, and provides public with accurate information with accountability. According to the Policy on Quality Health Care for South Africa (2007:17), the District Health Team is required to appoint a manager who will be responsible for quality assurance and quality improvement activities within its district. The document further outlines standards for monitoring quality in health service delivery. Firstly it is the monitoring of quality by the service users, through the conduction of patient satisfaction surveys and implementation of complains mechanism. Secondly it is the monitoring by the governance structures through the Office of Standards Compliance at National level of Health Department, the Inspectorate for Health Establishments at provincial level of Health Department and the clinics and hospital boards at the operational level. Thirdly it is the monitoring by the providers of service, which is done through the conduction of staff satisfaction surveys, doing clinical audits on programs performance, supervisory visits and self-assessment through the facility based quality teams. Lastly it is the monitoring by the professional bodies for professional conduct to maintain professional standards of health care professionals.

The objective of the National Health Act (no.61 of 2003) is to formulate uniform standards for healthcare services across the country to ensure that there is equity in

rendering of services and the citizens are fully protected from harm, prioritizing the vulnerable groups which are the women, children, the elderly and people living with disabilities. According to the Act, health care workers are obliged to inform health care users of any risks involved with accepting or refusal of care. The Act states that the health care users have a responsibility to treat healthcare workers with respect and to sign a release of liability should they refuse to be treated. The Act makes provision for establishment of the district health system, the classification of health establishments according to population size being served and for the developments of the quality monitoring bodies namely, the Office of Standards compliance and the Inspectorate for Health Establishments to monitor quality. Occupational Health and Safety Act (no.85 of 1993) makes provision for a safe work environment even for persons other than workers against any potential hazards. The Act provides for the appointment of health safety officers, whose responsibilities are to oversee that safety measures are in place, through identifying potential hazards, also to review the effectiveness of the safety measures and keep records. The Labour Relations Act (no.66 of 1995) promotes fair labour practices, allows for staff participation in decision-making, and promotes effective resolution of disputes. In the process of performance management, the managers need to be wary of labour relations act should a labour dispute arise. The Primary Health Care for South Africa-Norms and Standards (2000:4) sets standards for care, staff competency, equipment needs, leadership competencies, and information management, on all health programs offered in the clinic or at community level.

### 2.2.3 The role of Primary Health Care in National Health Insurance

According to Dookie and Singh (2012:2), the district health system is a vehicle to ensure that primary health care service is delivered. The authors argue that there are challenges facing the district health system due to inadequate distribution of resources against the ever-increasing burden of diseases. According to Dennill and Rendall-Mkosi (2012:224), the National Health Insurance concept was advocated for in the Gluckman report of 1949. Furthermore the authors state that the concept was re-introduced by the new South African government in 1995, and it was until 1999 that a task team for National Health Insurance was formed. The National Health Insurance (NHI) Progress Report in UMgungundlovu Health District (2014) highlights the

progress made by the District so far. In line with the PHC principle of accessibility, the NHI Progress Report (2014:2) states that health care services have been brought closer to people through the new clinic that was recently completed and functional, which is to service a community of about 10 000 people in Impendle Local Municipality. According to the report, prior to the establishment of the center, especially during the days when the mobile services were unavailable, people would travel over 50 kilometers to reach health service. Furthermore in the document, it is highlighted that ambulance delays were reduced around the area of Impendle, as there would be an ambulance stationed at a central point, in Gomane clinic, for access in case of emergencies. According to the KwaZulu-Natal Annual Report (2013-14:45), the National norm for ambulance coverage should be at least one ambulance per 10 000 population, currently the Province is at one ambulance per 49 558. It can therefore be deduced that people in the area are at risk of harm due to ambulance delays before getting the next level of care in a hospital.

The NHI Progress Report in uMgungundlovu Health District (2014:7) highlights the services that are rendered by the Department at a community level, namely the family health service, community involvement and the school health services. The family health teams bring health care services to homes, by screening patients in their homes for diseases like hypertension, diabetes and tuberculosis to mention a few. The community involvement through the Operation Sukuma Sakhe (OSS), an integrated approach that includes all governments departments, to tackle household issues collectively, for a better life for all. The school health service is offering services to schools that operate in the poor socio-economic background offering preventive care. The document also states that currently there are two clinics in the District that are being used as a pilot for National Health Insurance implementation which means that when all the improvement process is done, these two clinics will present what a typical clinic should look like. Emanating from the NHI Progress Report, it can be deduced that primary health care have a bigger role to play as first contacts with communities, in ensuring that health care users get the best quality health care that is equitable, effective and efficient. Furthermore it can be said that there is a need for financial resources to ensure that this objective of quality health care is achieved, looking at the gap in the norm for the ambulance availability.

## 2.3 THEORETICAL REVIEW

In this study the researcher used the Organizational Theory by Luther Gullick. According to Shafritz and Hyde (2007:77-85), the Organisational Theory is used to study the organizational patterns, division of work, and coordinated work activities. In this study, the theory will seek to explain the functions of an executive manager, namely planning, organizing, directing, coordinating, reporting and budgeting (PODSCORB), to explain whether coordinated services can improve adverse events management. According to the authors, the PODSCORB acronym is designed to call for attention to the managerial function or activities. The authors argue that division of work should be facilitated by a formal structure of authority.

### 2.3.1 Organizational Culture

Mullins (2005: 891-894) describes organizational culture as a collection of values beliefs, attitudes, traditions that are linked to an individual such that they constitute behaviors and thinking in an organization. Furthermore the author states that employees that have adopted a culture of an organization are identified by their eagerness to achieve organizational goals and go as far as internalizing organizational values they believe are right. The author mentions three levels of culture as described by Schein (1998), namely the artefacts that have to do with the language the organization use, the values that justify behaviors in an organization and the basic underlying assumptions, which guide perceptions of the groups in an organization. According to the author, there are factors that influence organizational culture and these include the history of the organization, the primary functions rendered by the organization, the goals of the organization, the size of the organization and management and staffing. The author argues that in a big organization there is a formal structure that makes communication not to be easy, even the coordination of services becomes a bit of a challenge. Furthermore the author argues that management can influence culture through policies, and in turn the staff can influence culture as well by accepting or ignoring the policies. According to Schein (1988:15), a formal organization is made up of the coordination of all the organizational activities by the people towards the achievement of common goal and is done through work division following a hierarchy of authority and responsibility. Schein (2010:30) argues that at

times, due to cultural socialization, subordinates are afraid to tell the manager that such a proposed plan might not work.

According to Mills, Mills, Foreshaw and Bratton (2007: 37), organizational behavior is the study of impact of behavior in an organization on organizational, individual and social outcomes. The authors relate to the September 11, 2001 terror attack in the United States of America that the bureaucracies were the cause to the inability to prevent the event. The bureaucracies that played a role were the reporting and communication among the agencies. The authors further mention that there were positive organizational behavior that were observed on that day, like ensuring that all planes land immediately to prevent further hijackings and ability to take care of all those that were redirected in terms of shelter and food. Furthermore, the authors note that this crisis resulted in a change on how activities were managed. This scenario, according to authors reflects how to deal with organizational crisis, and dealing with a crisis is done better when the organizational behavior is well understood. Furthermore, the authors argue that the study of organizational behavior help in understanding when a behavior is effective or not and is useful in making informed decisions.

According to Mills *et al.* (2008:18-37), users expect service that meet high quality standards, in other words users expects a certain type of behavior from the organizations offering service. The authors argue that organizational behavior is shaped by rules and regulations that control practices. The authors state that organizational decision-making can have a detrimental outcome. For example in the hiring, training and monitoring of employees, the inability to recognize gaps like a learning disability that might affect service delivery or failure to delegate duties as a leader in case of an emergency can result in an adverse event. The authors cite an incidence of a burning plane where it was discovered that the pilot was dyslexic and had failed a training program but was reinstated regardless. This resulted in loss of lives from the inadequacies of the organization decision-making. According to the authors, outcomes of organizational behavior are dependent on the structure, character and the control of an organization, if the employees have good relations, then the organization is likely to achieve its goals. The authors argue that change can have a

positive impact on how people behave at work, for example, changing from a bureaucratic to a more open type of leadership style. The authors cite Frederick Taylor's scientific approach to management, where the scientific approach to management was introduced to modify inefficiencies like the workers attitudes, work methods and management control system. The authors state that Frederick Taylor argued that workers had a tendency to control their output, were in control of work methods and that there was lack of management control. The authors mentions different approaches to study organizational behavior and that these behaviors have different meaning depending on the manager's concern. These approaches are the managerialist and actionalist approaches to mention a few. For example if the manager is concerned about how behavior can contribute to organizational improvement, a managerialist approach is adopted, or when a manager is concerned with how behavior influences development and maintenance of a sense of an organization, the actionalist approach is adopted.

Curry, Linnander, Brewster and others (2015:1-9) conducted a study in the United States Hospitals to assess a link between organizational culture and hospital performance in their management of myocardial infarction, which is a high risk medical condition. The authors argued that the top performing hospitals possessed key elements of organizational culture. These elements were the senior management support for quality improvement initiatives, effective data usage, good communication and coordination, problem solving that supports learning and resilience to setbacks. The authors state that literature suggests that organizational culture influences institutional performance, although there is little empirical evidence on how to develop and maintain an organizational culture for excellence performance in health care.

Cunningham and Geller (2008:1-6) in their study reviewed the relationship between organizational behavior management and reduction of medical errors. The authors argue that the more accurate definition of an error is "a problem in the process of care itself or failure of a planned action to be completed as intended or the use of a wrong plan to achieve an aim". Furthermore the authors describe organizational behavior management as a way of analyzing people behavior with the intention to offer

interventions that can improve behavior. According to the authors, the organizational behavior change can assist in reducing medical errors. For example, recruiting more human resources when there is staff shortage to address delays in patients receiving treatment. Furthermore the authors argue that giving feedback about a behavior decrease an at risk behavior, but further argue that behavior need to be maintained through training, inclusive participation in decision-making, having a monitoring and strategy and offering support. According to the authors, providing feedback can reinforce positive behavior, for example, a staff that was regularly informed on their performance on the hand washing as an infection control procedure, increased their hand washing behavior.

According to Gebauer (2012:204-205), managers can learn from the experiences of those who work in high risk-prone areas, like the aviation industry, through the principles of Mindful Organizing. The author describes the concept of Mindful Organizing as an approach that provides managers with a mindset of being proactive enough to identify events and unwanted crises before they can occur. Furthermore Mindful Organizing avoid putting blame on individuals' behavior, rather it focuses on systems and treat individuals as a source of perception as individuals are encouraged to share what they observe.

### 2.3.2 Work Division

Sapru (2013:149) states that division of work is one of the ten principles of organization suggested by Luther Gullick (1937). According to Sapru (2013:156), in the process of division of work, each employee is expected to perform a single function. According to Mullins (2005: 606), in a formal structure of an organization, work should be divided. Authors like Sapru (2013:156) and Mullins (2005: 606), state that work can be divided according to the objectives of the organization, services rendered by the organization, the type of clients receiving service or the work division should be based on experiences and expertise of workers. Mullins (2005:608) argues that management should decide on determinants of work division ensuring that methods used are able to link activities to the ever-changing circumstances in an organization. Shafritz and Hyde (2007:77) argue that the division of work is important to build a good foundation in an organization. Resulting from the authors' arguments,

it can be deduced that in an organization where work division is done such that each employee is not allocated more than a single task, there would be an improved adverse events management.

### 2.3.3 Coordinated Work Activities.

According to Mullins (2005:116), the main objective of coordination is to coordinate activities and not people. Fitzgerald, Farrow, Scicluna, Murray and others (2008:1-3) conducted a study to describe challenges in designing and developing of a decision support system to be used to reduce errors in a trauma patient. The authors argue that coordinating of activities is as important and crucial for patient safety as making a correct diagnosis. The authors further argue that the use of algorithms can bring uniformity in the procedures and as a result reduces errors during an emergency, more especially where there are high staff turnovers. The authors cited Morey (2002) in a study that proved that improved teamwork behaviours could have an influence in preventing occurrence of adverse events and litigation in 43 percent of cases. The authors argue that use of algorithms together with decision-making and teamwork are all coordinated efforts that are aimed for better outcomes.

### 2.3.4 PODSCORB

According to authors like Sapru (2013:148), and Parashar (1997:116), Luther Gullick (1937) emphasized the seven universal administrative functions namely, Planning, Organizing, Staffing, Directing, Coordinating, Reporting and Budgeting, through the acronym PODSCORB. The authors state that Gulick (1937) is of the opinion that an authority structure and a coordinating strategy are needed to produce integrated organization, an opinion supported by Shafritz and Hyde (2007:85). According to Sapru (2013:148), Luther Gullick (1937) was of the opinion that negotiations rather than precipitate action are the best strategy to solve problems.

Parashar (1997:116) describes the various functions of management. The author describes planning as preparation for things to be done and finding methods of achieving the organizational goals. Organizing involves forming a structure of authority that will ensure that division of work is coordinated. Kelly and Tazbir (2013:15) describe organizing as assigning work to an employee that has the authority

and capability to complete that task. Staffing is about all the processes of recruiting and development of the human resources. Kerfoot and Barnum (1995:269) describe human resource development as a process of improving employees' knowledge through training in order for the employees to be able to perform their roles or to advance in their job positions. Coordinating involves maintaining of the interrelationship of all activities in an organization. Reporting function has a responsibility to inform people through records. And lastly budgeting involves all financial activities in the form of planning, accounting and control.

Naidu (2005:7) argues that the acronym PODSCORB, fails to provide insight on various activities and techniques applied to management, but does provide systematic approach to public administration. Furthermore the author argues that PODSCORB is limited to public administration, does not offer reference to policy formulation and the implementation thereof. Kerfoot and Barnum (1995:317) support the view of Naidu (2005) that PODSCORB is an old model that dictates to the manager on how to implement the managerial activities. The authors argue that there is a need for a shift from the logical decision-making and rationality orientated approach to a new transformational leadership, which is concerned with relationship between leader and the group, a leadership that advocates mutuality and growing together. Kelly and Tazbir (2013:15) argue that the acronym PODSCORB is still relevant to the contemporary management process.

Liebler and McConnell (2012:54) describe the various management functions. Planning is described as the process where objectives and goals are established to determine the expected outcomes of the organization. Decision-making is described as part of a planning process whereby commitment to alternative decision is taken. Other employees can be involved in the decision-making, but the manager is accountable for all decisions made in an organization. Organizing involves assigning of roles and determining of responsibilities through the organizational chart and job description. Staffing is described as all the processes involved in recruiting, selection, orientation, training and evaluation of human resources. Directing is about providing guidance and leadership through coaching, teaching and motivation so that organizational performance is goal oriented. Controlling is the process of determining

what is to be achieved, it includes the total quality management and the assessment of performance as it relates to the accomplishment of an organizational goals.

According to Koontz and Weihrich (2008:26), planning involves selecting missions and objectives as well as actions on how to achieve these missions and objectives. Furthermore, the authors state that planning requires decision-making, which is choosing a future course of action from the available alternatives. Organizing involves establishing the structure of roles for people to fill in an organization. These roles should be designed in such a way that abilities and motivation are taken into account. Controlling is concerned with monitoring the performance of both the individual and organization to ensure that events conform to plans so that gaps are corrected. Coordination ensures that there is harmony among individual efforts towards accomplishment of organizational goals. According to the South African Health Systems Trust Review (2013-14:83), the management activities are ineffective, the District Management Teams are unable to translate national policies into specific strategies that are supported by action plans linked to reliable information system that can enable a regular progress review. Furthermore the document states that these action plans should be supported by well-structured budgets and dedicated human resources.

## 2.4 QUALITY HEALTH CARE

Whittaker, Shaw, Spieker and Linegar (2011:60-64) describe quality in health care, as an institutions' ability to meet patients' needs and expectations measured against certain predetermined standards. According the authors a not-for-profit organization, the Council for Health Service Accreditation of Southern Africa (COHSASA) was registered in 1993, to implement quality improvement and do accreditation to those South African hospitals that were found to be compliant to set of standards. The authors further state that the commitment by the public sector to improve quality of health care saw the development and piloting of the National Core Standards in 2008. Furthermore authors state that these standards are integrated with the existing policies, and are aimed at ensuring safe quality health care. According to the authors, the National Core Standards are divided into seven domains, namely the Patient Rights, the Patient Safety, the Clinical Governance and Care, the Clinical Support

Services, the Public Health, the Leadership and Corporate Governance, the Operational Management and lastly the Facilities and Infrastructure. Furthermore these domains are further divided into sub-domains. The adverse events are a sub-domain of domain two which is the Patient Safety, Clinical Governance and Care. According to the authors, the South African Department of Health established the Office of Health Standards Compliance in 2011, which is responsible for monitoring quality and to ensure that facilities and healthcare workers were compliant with the National Core Standards. The authors argue that since quality improvement is a long-term goal, the Department of Health developed a plan to fast track quality improvement based on six areas that were identified from patients concerns when reporting quality inefficiencies. According to the authors, these areas are staff attitudes, waiting times, cleanliness of health facilities, patient safety, infection control and availability of medicines. According to the KwaZulu-Natal department of Health Annual Report (2013-14:51), only 37 out of 435 facilities in the Province were compliant to the six quality fast track priorities, a clear indication of a long way to go towards achieving quality health care.

Taylor, Marcantonio, Pagovich, Carbo and others (2008:224-226) conducted a study to assess if patients were at risk of adverse events due to quality service deficiencies. The authors, for the purpose of their study, based their definition of poor quality service deficiencies on the patients' perspectives, using six categories of deficiencies. Those categories were the waiting times, communication challenges, environmental problems, challenges of coordinated care, poor interpersonal skills and lack of respect for patient needs. According to the authors, the main service deficiencies identified by the study were the delays prior to treatment, poor communication and environmental issues. Furthermore, the authors found that out of the 52 patient charts that were reviewed, 34 adverse events were identified, one was a life threatening adverse event, eleven were near misses and thirteen being low risk. Furthermore the authors state that the study found that patient reports on poor service quality were associated with risk of adverse events. Furthermore the study found that the reasons for the occurrence of adverse events were poor coordination of care, poor interpersonal relations and lack of professionalism among the staff.

Murrillo-Zamorano and Petraglia (2011:115-116) ague that primary health care services have received less attention on measuring technical efficiency as majority of studies were hospital based because the hospitals have clearly defined boundaries, patients are admitted and discharged, compared to the primary health care setting where boundaries are unclear. The authors argue that the lack of adequate information has made measuring primary care output against impact on patient health of services rendered difficult, leading to adoption of using number of visits as measure. The authors state that the use of this quantitative measure is criticized as number of visits is influenced by various factors, like healthcare worker scheduling a visit for the patient. According to the authors, the study made contributions to the literature focusing on technical efficiency measurement in three ways. Firstly, by defining the appropriate measures for primary care output through the combination of activity and quality indicators. Secondly, the results were delivered using multivariate data techniques and generating a set of indices for quality and primary care output. Lastly, by using the stochastic frontier production model to measure technical efficiency.

## 2.5 PATIENT SAFETY

According to Emmanuel, Walton, Hatlie, Lau and others (2008:2-10), as much as the developed countries have prioritized patient safety, adopting the safety practices universally, like learning from the adverse events and standardization of tools, has seen a very slow progress. The authors argue that there are challenges that are causing the slow progress, which are the lack of knowledge on patient safety, the failure to put knowledge into practice by not following prescribed protocols, the lack of reporting to offer knowledge and there is lack of coordination of systems within healthcare. According to the authors, United States and Australia developed a Patient Safety Education Project (PSEP) to address the aforementioned challenges. This Patient Safety Education Project aimed at training health care workers into integrating safety practices into day-to-day practices, like how to use tools on hand washing and medication safety and how to implement patient safety improvement methods like the plan-do-study-act-cycle or how to use a guideline. The authors argue that the PSEP strategy need to involve a large number of staff members in an organization until a desired organizational culture is achieved.

According to Gallego, Magrabi, Concha, Wang and Coiera (2015:5), patients expect a high level of care and safety when visiting hospitals. McCulloch, Kreckler, New, Sheena and others (2010: 1043) argue that redesigning systems of care will assist to reduce harm on patients. The authors mention a redesigning strategy known as 'Lean' that is commonly used in industrial setting, and rarely used in the healthcare setting. The authors simply describe the Lean strategy as eliminating waste through continuous improvement. According to the authors, adopting Lean strategy will be beneficial in the sense that there will be reduced costs associated with adverse events and there will be a satisfied patient. The authors mention the five principles of the Lean strategy. Firstly the rearranging of an environment such that less time is consumed looking for supplies. Secondly is identifying problem areas. Thirdly is by displaying audit results for problem areas to be clearly visible for all. Fourth principle is labeling and reorganizing items for easy reach. Lastly it is the using the quality cycle of improvement, the Plan, Do, Check, Act (PDCA), for all interventions. The authors concluded though that the study did not provide evidence in reduction of adverse events.

Gallego *et al.* (2015:2-4) in their study reviewed the role of data sources in detection and analysis of temporal patterns in hospital patient safety. The authors used data sources such as the administrative data sets, registries, surveillance systems and electronic health records to mention a few. The authors identified two important basic aspects in the delivery of health services that are related to patient safety. The authors state that one of the two aspects is whether changes after adoption of new policies or technologies are sustainable. According to the authors, there is limited information on the impact of change in policies and clinical practices have impact on patient safety. The authors further state that this is due to poor surveillance systems and lack of quality in the data collection. The second aspect as stated by the authors is the variations in the workforce patterns. The authors claim that the patterns maybe related to changes of availability of staff during weekends or after hours or as a result of allocation of newly trained staff without the necessary experience.

### 2.5.1 Data Sources

According to Gallego *et al*. (2015:3), institutions have not moved away from reporting using the review of medical records, which is done manually and is a labour-intensive exercise that is costly as expects are used. The authors advocate for the capturing of data electronically since it is cost effective. According to the authors, the electronic data capturing is being slowly adopted. The authors further argue if this method will improve the data quality. According to Classen, Resar, Griffin, Federico and others (2011:582), the use of medical records for detecting adverse events is labour-intensive and the United Sates Institute for Healthcare Improvement developed the Global Trigger Tool as an alternative measure.

According to Gallego *et al.* (2015:3), National registries are other source for patient safety events, whereby standard protocols are used to collect data that is classified by wards, devices used or clinical procedures. Furthermore the other sources are the voluntary and confidential reporting by personnel. Authors argue that the data from personnel represents a small sample of errors and patient safety, since it provides complimentary information on near misses and contributing factors leading to patient harm. Authors are of the opinion that incidences reported by patients are most reliable, although it is a resource consuming activity.

According to Gallego *et al.* (2015:7), the use of electronic hospital records could help in personnel training and offering improvement in patient safety. The authors further state that assessing impact of patient safety intervention is poorly done, as there is lack of monitoring for sustainability of acquired change. Furthermore, the authors are of the opinion that the use of information technology can help provide valuable information, for example the junior doctors can access protocols and procedures when senior staff is not present.

### 2.5.2 Measures Used in Patient Safety

According to Gallego *et al.* (2015:2), there are measures that are used to measure patient safety namely, the mortality rate, hospitalization period, and readmissions related to drug adverse events. Authors like Gallego *et al.* (2015) and Classen *et al.* (2011), agree that the use of mortality rates as a measure for patient safety does not

give the true picture of the situation. According to Gallego *et al.* (2015:2), the use of mortality as safety measure has been widely criticized due to inability to provide a true reflection of the situation. For example it is unpredictable whether death was preventable or when patient was at the end of natural life. Classen *et al.* (2011:582) argue that the use of mortality rates tend to give a picture on the severity of medical conditions programs as the mortality rate measure tend to concentrate on the extreme events and therefore is not suitable for evaluating the effectiveness of patient safety programs. Gallego *et al.* (2015:3), argue that the hospitalization period and readmissions that are due to adverse events can provide data for patient safety and this information can be collected from the administrative data sets, the medical records. According to Classen *et al*. (2011:584), older patients tend to stay for longer in hospital and are at higher risk of being exposed to adverse events. McCulloch *et al.* (2010:1046) support the idea that length of stay whilst there was a pending decision to perform surgery on a patient was a risk factor to patient safety.

Classen *et al.* (2011:582) conducted a study in the United States to compare the effectiveness of the methods that were currently used in detecting adverse events. These methods are the voluntary reporting done by institutional staff, the Agency for Healthcare Research, the Quality's Patient Safety Indicators and The Global Trigger Tool. The authors state that the Global Trigger Tool by the Institute for Healthcare Improvement had the ability to detect serious events ten times better than the three methods that the authors compared. The Global Trigger Tool uses specific methods to identify a trigger, which can be any occurrence that needs to be further investigated for severity. The authors argue that the methods that are in current use do not manage to effectively detect adverse events. The study concluded that of the 795 records reviewed, the Global Trigger Tool managed to detect 90% adverse events, compared to the local reporting system that detected 4%, and the Patient Safety Indicators that detected about 9%.

### 2.5.3 Effect of Change in Workforce

According to Gallego *et al.* (2015:5), several studies have demonstrated existence of higher risk of deaths and adverse events at specific times of the day, days of the week, and months of the year. The authors attribute these to the excessive work hours,

inadequate supervision, the absence of specialized care outside normal working hours due to changes in staff numbers and lack of access to specialized clinical facilities. The authors further state that studies have found that high mortalities occur in emergency care areas during weekends, compared to patients admitted during weekdays a view supported by Fitzgerald, Farrow, Scicluna and others (2008). Fitzgerald *et al.* (2008:2) argue that during emergency as a result of decision-making done under stressful conditions, especially in emergency, time is of essence to save life. Thornlow and Stukenborg (2006:268) conducted a study to assess whether hospital characteristics, like ownership and teaching, have an influence on the patient risks to adverse events. The study found that risks of infections are increased in teaching hospitals than privately owned hospitals due to the fact the teaching hospitals are populated by students, interns and staff and as a result, there is high risk of cross-infection due to increase contacts with patients. Furthermore the study found that the teaching hospitals have lower risk of failure to rescue patients from adverse events or complications compared to other types of hospitals because of increased monitoring as there are in-house specialists at all times.

### 2.5.4 Strategies Employed to Improve Patient Safety

Authors, Kaprielian, Østbye, Wartburton and others (2008:1) argue that much focus has been on patient safety in hospital setting and less focus on primary care. The authors further argue that focusing on reducing harm in primary health care could prevent unplanned hospitalization, reduce costs associated with malpractice claims and improve health outcomes. The authors reported on how the Duke University Medical Centre Department of Community and Family Medicine developed an error reporting and classification system with a view to encourage a culture of reporting and quality improvement. According to the authors, most studies found that errors occurring in primary care were preventable. The authors mention that in a study by Bhasale (1998), out of 805 incidents reported, 76% were preventable, and in a study by Fischer (1997), 83% of reported events were preventable. The authors stated that there has been a shift in reporting, where initially in the 1990s, when quality improvement was introduced, reporting focused on system analysis and on improving processes and care, to a point of understanding that health staff needed support by being encouraged to report near misses, through a confidential reporting system.

According to Kaprielian *et al.* (2008:5-6), there are barriers to error reporting, namely time, fear of betraying colleagues and lack of benefit to the reporter. Time, as a barrier can be overcome through establishing a reporting system that allows for both paper and electronic formats, and not judging the reporter if the report is brief. The fear of betraying a colleague can be corrected by reporting anonymously and educate reporters that reporting is a means of identifying what is not working with systems. The perception of lack of benefit from reporting can be addressed by giving feedback that is constructive. According to the authors, the reporting system described by the authors is simple and user friendly for use in a primary care level of care to encourage reporting.

According to Henriksen *et al*. (2008:1-10), visions shape our patterns of behavior by helping us to respond to change. Furthermore, the authors engaged participants in an exercise of envisioning patient safety by year 2025. According to the authors, the participants' ideas were about safe environment where patients are tracked from entry to hospital to the time of exit or discharge from hospital. Furthermore the participants were envisioning surfaces that are lined with antimicrobial surfaces preventing infection. The participants' perceptions were that of having a technology driven patient safety practices where technology prescribes and calculate correct dosage of medication for a patient, an environment where patient will be at the center of decision-making. Furthermore the participants' perceptions were that health facilities would have traceable devices so that there is less harm caused by instruments retained inside patients' bodies during surgical procedures. Lastly participants envisioned a health system change where there is universal coverage healthcare for all.

**2.6 RISK MANAGEMENT**

Kavaler and Alexander (2014:5-11) describes risk management as a program that aim to identify, assess and reduce risks to the health care users as well as assets of an institution. Furthermore risk management aim at reducing preventable accidents and injuries that can result in financial burden to the institution. According to the authors, there are five steps in the risk management process, namely the risk identification, risk analysis, risk control, risk treatment and risk financing. The authors argue that the risk manager should be exposed to at least eight hours of continuous training every

year to ensure development. The authors mention sources of data that can assist to identify risks, namely the medical records, inspections, conducting surveys and from financial statements. Furthermore the authors argue that there are situations, other than the above-mentioned sources of data that should alert the healthcare providers of possible risks that need remedial action. For example poor treatment outcomes, an equipment malfunction, a dissatisfied patient, poor staff-patient relationship, poorly maintained medical records, poor doctor-staff relationship, and lack of qualified supervision.

According to Kavaler and Alexander (2014:14-25), risk management and quality control must be interlinked, since quality control is about ensuring that the standards are met resulting in zero defects, and risk control is about preventing loss that occurs as a result of injuries. According to the authors, risk management must be part of orientation as well as the in-service training programs for all employees and should include the objectives of risk management, patient's bill of rights, patient complains program, incident reporting, reporting responsibilities for professional misconduct and safety practices. The authors hold the view that technology plays a role in risk management process as tracking events is easier with the use of computerized record keeping. The authors argue that technology assist with the analysis of trends of adverse events' occurrence, tracking the financial loss due to adverse events, tracking the rate of litigation against staff and identifying the trends of near misses or potential adverse events like a missing patient file. Youngberg (2011:20-27) argue that litigation can be avoided through establishment of good relationship with the patient through sharing of data, and allowing avenues for patient complains. The author is of the opinion that risk management education does not guarantee that knowledge learnt would be put to practice. The author suggests that risk manager should measure success by change in practice patterns rather than number of educations sessions the risk manager conducted.

According to Youngberg (2011:33), planning in risk management should be aligned with organizational values, missions, goals and objectives. Furthermore the author states that the risk manager must be able to possess values and strengths, like risk assessment, risk finance and risk control in order to be efficient. Firstly the risk

manager must have the ability to identify situations that pose threat to patients, visitors and staff and find cause and use data collected to minimize risks. Secondly with the risk finance, the risk manager must have the skill to quantify the value of risk management and analyze organizational financial risks. Lastly with the risk, the risk manager must have the ability to assist the organization to design risk reduction strategies.

Krause (2000:1-35) describes risk management as tasks aimed at reducing unplanned financial loss in an organization. The author, unlike Kavaler and Alexander (2014:6) and Carroll (2009:5), mentions four steps in the risk management process, namely the identification of exposure, the risk measurement, risk handling and the risk control, which the researcher will briefly describe. Firstly the author describes risk identification is an ongoing process that aims to identify and analyze risks within the health facilities. Furthermore the author argues that it is critical for the risk manager to be skilled and have knowledge of health care delivery system to be able to identify exposure areas accurately as this will assist the organization from using outside expects that can be costly. According to the author, there are several techniques used in risk identification, the most commonly used are the flowchart and the questionnaire. Secondly, risk measurement is described by the author as a process that involves measuring, analyzing and evaluating the collected data for decision-making on mitigating strategies that would deal with risk and probable future loss. Thirdly the author describes risk handling or risk treatment as deciding on corrective interventions to implement on the identified and measured risks. Furthermore the author mentions that with risk handling it is important to perform risk financing, whereby analysis is done to establish whether the organization is able to handle and finance its own risk or will the organization transfer the risk to be managed by outside expects. Lastly the author simply describes risk control as all the risk prevention activities like the infection control program. Furthermore that risk control can be performed prior to the occurrence of an adverse event through education programs as well as the implementation of policies and procedures.

Carroll (2009:20) describes risk management process as a process consisting of five steps, namely identifying the risk, considering alternative technique, selecting the best

technique, implementing the selected strategy and last step is that of monitoring to improve the risk management program. Authors like Carroll (2009:2) and Krause (2000:3) argue that risk management program in health care was formed when there was an increase in claims for malpractices. Carroll (2009:5-12) states five key elements in the development of a risk management program, namely, authority, visibility, communication, coordination and accountability. The personnel tasked with risk management should be ranked high in the organizational structure to be able to command authority on personnel. Furthermore the risk management personnel should be visible by interacting with employees and governing bodies through trainings and communicating risk management practices and policies. According the author, the risk management professional must be well informed of all changes in an organization so as to be able to advise senior management on risks involved with such change. Furthermore the risk management program must be coordinated with other departmental functions, like that of the chief executive officer, the chief financial officer, the infection control practitioner, the safety officer, medical, human resource and nursing managers, as well as the trainers. Lastly the author state that risk management personnel should be held accountable for performance on all assigned functions and these functions should be well spelt in their job descriptions. The author argues that a comprehensive risk management program should involve the patient, medical staff, employee, financial and property related to address risks that stem from these categories.

## 2.7 ADVERSE EVENTS

According to Wetzels, Wolters, van Weel and Wensing (2009:323-325) adverse events has been associated with hospital care so much that it is unclear as to what extent does adverse events in primary care cause harm. The authors did a study in the Netherlands to determine actual or potential harm of adverse events in primary health care. The authors used categories like errors in office administration, errors in diagnosis, treatment errors and communication errors. According the authors, errors that were found to be common in administration were the absence of recorded diagnosis, patient sharing the same name not clearly identified and a home visit made to the wrong patient, as well as failure to refer patient to hospital. The authors further stated that errors in diagnosis identified were administering antibiotics without patient

being thoroughly examined. With regards to treatment errors, a patient was given penicillin when penicillin allergy was recorded on the patient record, in another case a patient could not be followed up because of the doctor was on holiday. The authors state that in terms of communication errors, gaps were identified between doctors and other institution, and between doctors and patients. For example the doctor's failure to communicate to the patient to report to hospital in two days for continuity of care resulted on the patient losing the unborn baby. The authors argue that the fact that doctors are the ones doing self-registration of adverse events, the results were subjective, hence the medical records did not provide all relevant information on events. The authors further argue that methods employed in hospitals to manage adverse events cannot be transferrable to the primary care setting. Furthermore the authors argue that adverse events in primary care are frequent and pose low risk for serious harm to patients therefore a conservative approach to patient safety in primary care is recommended to handle low risk. The authors are of the opinion that the initiatives implemented to improve patient safety in primary care should not focus on harm, as actual harm is not useful to measure effectiveness of patent safety interventions. The authors recommend a comprehensive approach whereby unnecessary lengthening or worsening of clinical symptoms is prevented.

Morimoto, Gandhi, Seger and others (2015: 312-323) state that according to Baker *et al.* (2002), the most reliable method of detecting medical errors in the in-patient, especially with errors due to medication, is through direct observation. The authors suggested using the three methods of collecting data on drug related events to complement each other, namely the practice data, the self report by health professional and the patient surveys. The authors state that a third to half of adverse drug events are associated with medication errors. According to Fischbacher-Smith and Fischbacher-Smith (2009: 465), organizations should use the reports on near misses as a learning experience and to prevent future occurrence of adverse events. Furthermore the authors argue that identifying the root cause in the occurrence of adverse events can assist in drawing lessons from that.

Mattox (2012:53-55) states that an error occurs when planned activities produce unintended results. Furthermore the author state that it is either the plan was not

executed as intended or the plan was inadequate. The author argues that patients can be subjected to harm not because there was an error in execution of duties, citing an example of a patient developing a lung injury following blood transfusion from an appropriately matched blood product. The author notes that harm due to negligence, reckless or criminal activities should not be termed an error resulting from health care. According to the author, there are different types of errors, namely, the skills-based, the rule-based and the knowledge based. The author mentions the skills based errors as slips and lapses, the former being resultant of attention deficit and the latter due to memory failure. The author argues that prevention of the skill-based errors are difficult, since retraining on skills based tasks seem to show little impact. The author further argues that other contributing factors should be taken into consideration like the environment surroundings or individual distractions like stressors. According to the author, mistakes occur when the proposed plan is inadequate to achieve intended goal. The author categorizes the rule-based and the knowledge based errors as mistakes. The author argues that the rule-based error involves application of rules or protocols based on practical experience but with adverse consequences, citing an example of giving a drug according to protocol not knowing that the drug has already been given to the patient since there was no recording of such activity, resulting in complications or even death of a patient. According to the author, the knowledge-based error refers to behavior that occurs when the healthcare worker is in a situation where the rule-based and the skill-based action seem not to be applicable. The healthcare worker develops his or her own mental model how to solve the problem at hand resulting in harming the patient.

According to Mattox (2012:56-59), an error management strategy is described as a measure that is instituted to reduce or contain errors. The author states that with the error reduction strategy, there are different approaches that can be implemented, like empowering of patients with necessary knowledge on their safety, inculcating a culture of safety amongst health care workers as well as use of standardized processes, which can be in the form of checklists that can reduce skill- based errors. The author states that the error containment strategy is about using previous errors and developing plans to reduce future errors, which can be done by developing algorithms for the management of clinical conditions. According to McCulloch *et al.*

(2010:1046), in their study to assess risks involved with surgical patients, the most common causes of adverse events are the delays in investigating and offering management care to the patient's presenting problem followed by the readmissions due to inappropriate management.

According to Kelly (2010:35), Florence Nightingale discovered that lack of cleanliness and hand washing was linked to patient adverse outcomes. The author further cited a report by Jarvis (2006) who stated that the lack of adherence to hand washing by health care providers resulted in 2 million hospital acquired infections, 90 000 deaths, and burden the cost of health care went up to $29 billion annually.

### 2.7.1 Reporting Adverse Events

WHO Conceptual Framework for the International Classification for Patient Safety (2009: 121) describes incident reporting as the documentation of occurrences on a patient under the health care professional. Furthermore, the document describes incident reporting as a system for collecting and reporting adverse events due to medication and equipment failures. The document states that the reporting offers limited information because the individual reporting fears punitive actions. According to Heideveld-Chevalking, Calsbeek, Damen and others (2014:13), incident reporting is not happening, an opinion supported by Wetzels *et al.* (2009:324), whose study found that doctors managed to report 20 out of 31 incidents, 11 being detected by the study. The authors then concluded that this poor reporting attitude put patients at risk of harm as the study revealed that six out of ten were likely to be exposed to harm, eight out of ten will have their medical condition worsened due to adverse events. According to Richter, McAlearney and Pennell (2014:1), in studies that were conducted in the United States and the United Kingdom, 96% of errors are unreported. The study found that in hospitals that have adopted electronic incident reporting, only 10% is captured. Based on the above figures it can be deduced that electronic incident reporting requires staff commitment for it to succeed. Heideveld-Chevalking *et al.* (2014:13) mention several reasons for failure to report incidents, namely clinical factors, time constraints and policies to mention just a few. The clinical factors can interfere with reporting as the priority of the healthcare worker is to save life, for example in an emergency situation before reporting on the incident

the healthcare worker may be required to attend to another emergency. The authors argue further that in busy clinical areas time constraints could be one of the reasons. The author argues further that staff members at times are unfamiliar with the reporting system and that too could be one of the reasons for not reporting the incidents. Furthermore the author state that the other reason for not reporting adverse events is the lack of a policy that promotes reporting and prevents staff from looking at it in a punitive sense thus encouraging them to report adverse events. The authors argue that due to lack of reporting, the incident reporting cannot be used as a monitoring and evaluating strategy, but can be useful to identify areas requiring priority attention.

According to Fischbacher-Smith and Fischbacher-Smith (2009:454-456), the United Kingdom Department of Health, in 1998, started to publish mortality rates as a strategy to alleviate public concerns against the medical mistakes and the performance of institutions. The authors are of the opinion that concentrating on the underlying causes of the adverse events will decrease burden on cost and improve the trust the public has on healthcare. The authors further argue that there are several ways of generating errors. Firstly, it is the problem solving and the disclosure of diagnosis by doctors, which can be a source of error if the information does not make sense to the patient. Secondly, the ambiguity of information provided to the patient can result in an error if the doctor is not careful that the nature of the information that is conveyed to the patient can be damaging. Lastly, the way the doctor communicates a diagnosis to the patient, for example a case where the patient is denied a two-way communication to ensure that the message in the information is well received and the patient understands the decision made. This can happen in cases where there are time constraints to discuss the case and in cases where symptoms are described to patients or family members in a misleading manner. According to Provonost, Morlock, Sexton, Marlene and others (2008:2-6), to improve the value of reporting, the collected data should be used to identify hazards, identify areas that need priority focus, develop mitigating strategies and monitor the effectiveness of those intervention in reducing harm to the patient. The authors highlight other contributing factors to poor reporting, like lack of clarity on which events are reportable events. For example, a nurse may find an error in the standardized medicine dosage schedule and fail to report it because he or she is unaware whether or not if this is a reportable

event. Furthermore the other contributing factor is the uncertainty whether to report any event or the events that are specified in the reporting systems. The authors are of the opinion that eliminating harm is the most effective intervention as compared to the weak strategy of developing a policy to eliminate harm. For example if there is a problem with over dosage with the potassium drug, the best intervention is to remove the drug from the care area and control its usage, rather than formulate policy to educate staff.

### 2.7.2 Factors Contributing to Poor Adverse Events Management

The World Health Organization Conceptual Framework for the International Classification for Patient Safety (2009: 90) mentions several contributing factors to the occurrence of adverse events. The document states these as staff related, patient related, work environment related, organizational or service factors and external factors. The document further highlights each of these categories of contributing factors. The staff related factors can be due to cognitive abilities like knowledge based, or due to performance like rule based, or due to behavior like fatigue or recklessness, or due to communication errors where language, health literacy plays a role, or due to pathophysiological where there is wrong classification of diseases, or can be social or emotional. The environmental factors have the infrastructure lacking safety evaluation or inaccessibility of the facility. The organizational factors that play a role are due to policies and protocols, organizational resources and decision-making. External factors that are contributing to the occurrence of adverse events are the natural environment as well as policies and systems. The researcher will briefly discuss the organizational factors, staff related, patient related, taxonomy and communication.

According to Emmanuel, Berwick, Conway, Combes and others (2008:2-3), the approach and assumptions to patient safety has shifted into understanding why errors occur. Authors argue that errors were now attributed to system failures rather than putting blame on individuals. Furthermore authors argue that finding the cause of errors was a priority. The authors argue that redesigning the system can have impact in reducing errors, for example, moving from paper based medicine prescription to a

computerized system can reduce medicine dosage errors. Authors emphasize information sharing as an important way to learn from errors.

#### 2.7.2.1 Organizational Factors

The KZN Department of Health Annual Performance Plan (2014/15-2016/17:83) cited Dr McKerrow in his proposal for Paediatric Services for KwaZulu-Natal, that experience from developed countries have shown that centralization of specialized services for neonatal and a pediatrics service is efficient and effective in terms of cost and health outcomes. The document states that there need to be an appropriate transport system of transferring critically ill newborn babies and children, there is evidence that there is reduced incidences of morbidity and adverse events with the availability of inter-facility transport that is equipped with specialized team, where 29.6% incidents occur where there was no special team compared to the 2.8% that occurred where there is a specialized team. It can therefore be argued that availability of effective protocols can have an impact in reducing the occurrence of adverse events.

Richter, McAlearney, and Pennell (2014:1-8) conducted a study to identify organizational factors that are contributing to error reporting. According to the authors, there are three actions that impact safety culture, namely the enabling, enacting and elaborating actions. The authors describe enabling actions as creating an environment that allows easy communication when faced with threats to safety. Secondly, enacting actions entail staff's ability to implement the threat reduction efforts. Lastly, the elaborating action involves feedback on errors and allowing learning opportunities from errors to improve on safety practices. According to the authors, the study found that staff was of the view that managers were not taking reporting seriously because out of the recommendations the staff suggested, only few were adopted, of which managers cited financial constraints as a reason for not implementing those recommendations. Authors recommended that in order to improve error reporting, managers should provide error feedback, demonstrate that safety is a priority program and allow for an environment that promotes learning.

#### 2.7.2.2 Staff Related Factors

According to Fitzgerald *et al*. (2008: 2), errors of omission and commission occur in situations where healthcare workers have to function under pressure, for example in an emergency patient care. The authors argue that the solution would be the standardization of procedures using algorithm to ensure that there is consistency, resulting in less errors and reduced time to save patient life.

#### 2.7.2.3 Patient Related Factors

According to Lanzillotti (2015:939-944), with the neonates, the adverse events that are common among this cohort are omissions to administer medicine, skin conditions, use of ventilators and intravascular catheters, unlike with the adult patients, the errors are related to surgery or are associated with medications. With neonates, medications are calculated per weight and weight fluctuates daily, meaning careful attention to detail is required. The most vulnerable are the premature babies and the babies with low birth weight. According to the authors, since most errors are due to human factors, training is vital especially on the computerized system of care. Matsaseng and Moodley (2005:680) argue that accurate clinical assessment will identify high-risk patients on admission that need special attention thus reducing adverse events. According to the authors, the elderly patients are at increased risk of being exposed to adverse events due to their degenerative body status. Furthermore the authors argue that an existing illness puts that patient at risk to being exposed to adverse events, for example, a patient suffering from AIDS will not cope well to clinical procedures than would a patient who is suffering from asthma.

#### 2.7.2.4 Taxonomy

WHO Conceptual Framework for the International Classification for Patient Safety (2009:3) is a document that aims to give a framework to categorize the patient safety information such that standardized concepts and definition of terms are internationally adopted to allow for monitoring and interpretation of information to improve patient care. According to Classen, Resar, Griffin, Federico and others (2011:586), their study detected more adverse events than any other studies because the definition that was used in the study was not limited to preventable adverse events and those leading to major disability. Clarke, Johnston, Davis, Augustine and others (2008:2-9)

conducted a study in Pennsylvania to evaluate a newly endorsed reporting system, the Patient Safety Event Taxonomy (PSET), if it would be able to be integrated with existing healthcare information technology, Pennsylvania Patient Safety Reporting System (PA-PSRS), without leaving out useful information. According to the authors, the existing reporting system had nine categories, namely medical error, errors related to adverse drug reaction, errors due to equipment/supplies/devices, patient fall, error related to procedure, treatment or test, complications related to procedure, errors associated with transfusion, skin integrity and other. the authors are of the opinion that integrating is costly and time consuming, and will need the modification of paper based reporting to ensure that correct data is fed on the PSET system. Furthermore the authors state that to change an existing reporting system it should be justified by the value the system will add to patient safety. The authors found that the PSET have weaknesses and strengths compared to existing reporting systems and would be appropriate where no reporting system existed, or alternatively be used in a situation where there will be no burden, on a small-scale project.

According to Provonost, Morlock, Sexton, Marlene and others (2008:3), interpreting adverse events as rates is difficult, given the fact that definitions of adverse events vary. For example to calculate the rate, an accurate data on the denominator and the numerator is required, denominator being the population at risk and denominator being the event. This opinion is supported by Scanlon, Karsh and Saran (2008:4), who argue that the challenge of interpreting error data as rates does exist. The authors further argue that there is no reliable method of for converting error data to rates in the health care, and institutions that do present error rates are operating on data that is flawed.

#### 2.7.2.5 Communication Related Factors

According to Bartlett, Blais, Tamblyn, Clermont and MacGibbon (2008:1555-1558), between three to 17% of hospital admissions result in an adverse event of which 50% is preventable. The authors state that the most affected are the patients with communication and mental disorder challenges than patients without these challenges. The authors furthermore state that presence of communication problem in patients is associated with increased risk of exposure to preventable adverse events, citing in

their study that, patients with communication problem were three times more likely to experience a preventable adverse event. According to the authors, these events were drug related or were a result of poor clinical management, emphasizing the importance of providing additional resources for these patients. The authors cited a study by Azoulay *et al.* (2000) about communication between physicians and families of patients in ICU, which found that relatives of patients who were most affected were those from foreign countries and due to unfamiliar language, ended with poor comprehension of the diagnosis, the prognosis and the treatment.

Dingley, Daugherty, Derieg and Persing (2008:2) conducted a study to develop, implement and evaluate communication strategy. The study found that the presence of a communication strategy is beneficial to an organization and can prevent patient harm and adverse events, but requires the support from management. Leaders need to demonstrate that teamwork and communication can contribute positively to patient safety and staff satisfaction. According to Cunningham and Geller (2008:10), communication error like fatigue, which is caused by staff shortages, and these, occur at change of shift during the handover of patient report. Krause (2000:50) argue that a risk manager must be accessible around the clock since adverse events can occur at any time, suggesting that a paging system should be provided to serve this purpose.

## 2.8 MITIGATING STRATEGIES USED IN REDUCING ADVERSE EVENTS OCCURRENCE

Provonost *et al.* (2008:3) argue that current mitigating strategies are not effective enough in reducing adverse events occurrence. For example when there are adverse events involving a device, the interventions are re-educating staff instead of redesigning the device to be user friendly. According to Mattox (2012:56), there are error management approaches, which are error reduction and error containment. The author describes error reduction as an approach that aims at limiting future occurrence of an error while error containment is an approach that deals with detection and recovery thereby reducing effect of harm caused by adverse events. The author advocates for standardization of processes in clinical care as a mechanism to reduce errors, like developing a checklist for critical procedures like hand washing.

Furthermore the author argues that formulating algorithms for managing medical conditions is an error containment strategy to detect the presence of an error.

Khoo, Lee, Sararaks, and Samad (2012:1-2) argue that there is lack of studies on medical errors in the primary care setting and therefore conducted a study in Malaysia to determine the extent of diagnostic inaccuracies in the management of medical errors in the primary health clinics. According to the authors, the lack of published studies on medical errors in primary health is attributed to lack of standardization in reporting methods as well as the definition and the classification used. The authors cited a study that was conducted by Fischer *et al.* (1997) in United States, which revealed that there was an adverse events prevalence of 3,7 per 100 000 clinic visits, of which83% was preventable adverse events. Furthermore the authors stated that the most common adverse events in the primary health care were the delayed or missed diagnosis and treatment errors.

In their study, Khoo *et al.* (2012:4) found that most errors, 98% were with documentation where vital information was not documented, 41.1% were investigation errors, 14.5% were to do with decision-making and 3.6% were diagnostic errors. According to the authors, the use of electronic documentation has impact on errors, where in developed country like United States documentation error was at 13.6% compared to the Malaysian 98%. The researcher will briefly highlight how use of technology and performance management can assist in reduction of adverse events.

### 2.8.1 Use of Technology

Fitzgerald, Farrow, Scicluna and others (2008:3) call for the use of electronic algorithm in emergency care, to ensure consistency and reduction of errors, but argue that the plan would need to be tested for accuracy, if it can be effective as the manually registered data and if it will reduce errors associated with emergency patient care. According to Devine, Wilson-Norton, Nathan, Hansen and others (2008:3-9), technology can help to improve patient safety, more especially with the drug related errors. The authors argue that with the implementation of the computerized order entry, the medical prescriptions are electronically generated thus eliminating the

dosage errors. The authors further argue that the success to the adoption of the electronic system rely on good organizational culture of coordinated efforts, as well as management support, training and control. According to Fricton and Davies (2008:2-7), there are barriers in the sharing of patient information through the electronic medical records, like security and confidentiality. The authors conducted a study to determine how participants would find the electronic personal health record useful to them. Target population was caregivers, health users who were suffering from the congestive heart failure and health care providers. According to the authors, there was interest in the implementation of personal health records and sharing of information through this system, but the authors are of the opinion that further studies need to be done to measure the impact this system might have on improving health behaviors.

### 2.8.2 Performance Management

Layde, Meurer, Guse, Yang and others (2008: 2-8) conducted a study to evaluate if feedback reporting and organizational capacity building can be effective strategies in in the improvement of patient safety in hospitals. According to the authors, there was no evidence that performance feedback and organizational capacity building can reduce the adverse events occurrence. Furthermore the authors argue that the reason for the study to be unable to identify impact may have been due to the fact that the performance feedback and organizational capacity-building interventions instituted by the study were ineffective. Scanlon *et al.* (2008:4) argue that focusing on individual performance without looking at the system where care is provided is a mistake. Furthermore the authors argue that the health care systems has five elements, namely the providers, the tasks performed, the tools in use, the environment, and the whole organization, therefore should an error occur, the performance and interaction among the five elements should be evaluated.

## 2.9 CURRENT TRENDS IN ADVERSE EVENTS

This paper will briefly look at how adverse events management is approached, globally, in Africa and in depth, look at the South African Approach.

### 2.9.1 Management of Adverse Events Globally

According to Classen *et al*. (2011:581), in a study that was done in Hospitals in North Carolina, there were no improvements in adverse events despite the initiatives by the state to ensure improvement in patient safety for in-hospital patients. The authors argued that the challenge was due to relying on voluntary reporting to detect adverse events. According to Bhise and Singh (2015:1-2), the report by the Unites States Department of Health and Human Services highlighted a reduction in hospitalization acquired infections, stating further that this quality improvement has been due to the Partnership for Patient initiative led by Centre for Medicare and Medicaid services in the USA. This partnership has identified critical patient safety areas in an effort to make hospitals safer and reduce readmissions. The authors argue that this initiative though does not address the issues of diagnostic errors. The authors further argue that hospitals need to integrate diagnostic error into existing patient safety programs, also the hospitals need good tools and strategies to measure diagnostic error for inpatients. According to Royal, Smeaton, Avery and others (2006:23-29), the most common cause of morbidity is the medication-related adverse events. The authors state that following the rising costs of claims and the drug related morbidity, countries like the United Kingdom and the United States had to prioritize patient safety. The authors further state that there has been little research though to help inform interventions for safe prescribing. The authors found that in as much as the information technology was well developed, there were no reports on the role that is played by technology to improve patient safety. Furthermore the authors found that in cases where there were pharmacist-led interventions, hospital admissions due to medicine related adverse events were reduced. The authors further found that there was no evidence on the nurse led interventions to reduce adverse events especially in the elderly in reducing drug-related morbidity.

According to Sohail (2005:67-71), in Bangladesh government has been committed to high quality care by creating patient rights awareness initiatives. According to the author, the patient rights charter is being displayed in the health care facilities and patients are educated on their rights to privacy safety and efficacy. The author states that there has been an effort to redress harm caused by health care workers' negligent behavior. The author states that the primary health care services have been

challenged in the principle of accessibility due to the fact that there have been limited nurses and doctors to cope with the increasing population, patients travel long distances to reach facilities and have to wait for some time before being attended to. The author cited a report on a patient satisfaction survey, where 41% of public health facility users were dissatisfied due to staff attitudes, lack of proper medication and staff shortages. Furthermore the author cited a report on a study by World Bank in 2005, which stated that health care workers lacked courtesy, couldn't explain the diagnosis clearly and that the facilities were not clean, patients were not examined and there was poor record keeping. According to the authors, patient satisfaction survey is largely used to measure quality of care.

### 2.9.2 Management of Adverse Events in African Countries

Mbabazi (2007: 73), conducted a study in Rwanda to find relationship between nurse staffing and patient outcomes, using indicators of adverse events as urinary tract infections, pressure ulcers, wound infections, phlebitis, pneumonia, missed doses, staffing variables were the workload and expertise. According to Mbabazi (2007: 74), the study found that where there were more patients than nurses, there was high rate of pressure ulcers amongst the patients and that the high rate of adverse events was related to allocation of nurses with lower qualifications. In a study that was conducted by Sagwa, Mantel-Teewisse, Ruswa, Musasa and others (2012:11) in Namibia among Tuberculosis patients, ten percent patients suffered serious adverse drug events with a possible permanent disability. Furthermore the authors state that there were missing patient data and medical records. Emanating from this report it can be deduced that adverse events go beyond drugs related events, even the missing records are considered adverse events as they delay patient care (WHO Conceptual Framework for the International Classification for Patient Safety, 2009:35).

Nwokike (2008:11) conducted a study in Nigeria to establish reporting status on drug related adverse events, specifically tuberculosis medicine adverse drug events. The study found many gaps. For example, the lack of policy and governance, as existing legislation did not clarify roles and responsibilities of stakeholders involved in monitoring. Furthermore the study found that there was lack of infrastructure and

resources as basic as the Internet to allow for access on information on prescription as well as ensuring proper data management.

According to Nwokike (2008:12-13), respondents stated a number of reasons for poor reporting. The respondents stated that the reporting forms were not user friendly as they were lengthy. Furthermore the respondents stated that filling of the forms interfered with duties. According to the author, the study also revealed that there was lack of collaborative efforts between stakeholders responsible for drug control and monitoring. The author cited a study that was conducted in Ibadan, Nigeria by Enwere and Fawole (2008) on adverse drug events. The study found that out of approximately 90% of the physicians that were surveyed all of them had observed at least at least one adverse drug event but only 32% of them had reported the events. Furthermore the study found that the majority of healthcare professional were ignorant of reporting procedures.

According to Nwokike (2008:14-17), three out of four patients had reported adverse events to a health worker, which is a good reporting rate by patients. This serves as evidence that healthcare workers do not report on these events. The author recommends simplifying the forms, creating reporting awareness and considering the use of technology such as mobile phones that can be used by patients to send text messages on adverse events and increasing access to Internet.

### 2.9.3 Management of Adverse Events in South Africa

The researcher will look at studies conducted in South Africa in relation to the management of adverse events in health care setting, with particular interest to primary health level of care. The researcher will seek to establish reporting practices, available policies, available support from senior management and the use of technology in adverse events management. Furthermore the researcher will identify available quality improvement strategies.

#### 2.9.3.1 Reporting

According to Mehta, Durrheim, Blockman, Kredo and others (2007:397-403), with the high incidence of HIV/AIDS and Tuberculosis in South Africa and the introduction of antiretroviral drugs increased the likelihood of adverse drug events as

both these diseases are managed on a long-term basis. The authors conducted a study to describe community and hospital-acquired adverse drug reactions. Of note from the study was that there were eight patient files that were missing, missing files are categorized as a type of adverse events (WHO Conceptual Framework for the International Classification for Patient Safety, 2009:35). According to the authors, of the 14% adverse drug reactions that were detected, about 8% occurred before admission and about 6% occurred during admission, of the 8%, about 6.3% led to hospitalization and 2% did not. According to the authors, adverse drug events contribute to patient morbidity and hospitalization in South Africa, more so to antiretroviral drugs than any other drugs treating chronic disease conditions. Furthermore the HIV infected patients were likely to acquire adverse drug event, and those adverse drug reactions were ten times less likely to be preventable compared to the HIV negative. The authors argue that reporting of adverse drug events has been ineffective in identifying drug related injuries in hospitals.

#### 2.9.3.2 Policies

In this section a brief discussion of the Policy on Quality in Health care for South Africa (2007), uMgungundlovu Primary Health Care Clinical Risk Management Policy (2012) and the uMgungundlovu Health Adverse Events Policy and Reporting System (2012) is provided. The Policy on Quality in Health care for South Africa (2007: 2-10) applies to both the public and private health care and aims at addressing the challenges that are facing health care in South Africa. The policy provides six ways in which these challenges facing the health care in South Africa can be addressed and these are stated below:

- Improving accesses to patient quality health care by empowering the patients with information and include them in decision-making involving their care.
- Reducing underlying causes of illness, injury and disability by implementing preventive programs.
- Promoting research to improve on treatments that work for South Africa.
- Designing health care services that benefit the community.
- Improving patient safety culture with the aim to reduce errors.
- Designing interventions for health professionals, patients, community and systems in the form of monitoring and evaluation.

The Policy advocates for public/private partnership through collaborative efforts that aim at identifying and reducing errors as well as the monitoring of standards for the public sector. Furthermore the policy has a provision for the appointment of a district quality manager who has an oversight role in the improvement of patient safety in district hospitals and primary health care clinics. UMgungundlovu Primary Health Care Clinical Risk Management Policy (2012: 1) aims at protecting patients from risks that can occur during their care by providing framework for risk identification, risk reporting, risk prevention and developing quality improvement strategies. UMgungundlovu Health Adverse Events Policy and Reporting System (2012: 1) have a provision for the adverse events reporting procedures and ensuring that adverse events are analyzed so that their future occurrence is prevented.

#### 2.9.3.3 Most Common Adverse Events

Matsaseng and Moodley (2005:676-680) conducted a study to determine incidence and nature of adverse gynaecological events. The authors argue that there has not been much focus on adverse events occurring in gynaecology in South Africa. The authors cited a study conducted by Lombaard and Pattinson (2004), where 8% of adverse events occurred in gynaecology units in Kalafong Hospital in Pretoria. According to the authors, adverse events are not confined to surgical procedures, but there are adverse events associated with non-surgical procedures. Furthermore the authors stated that there are adverse events that are unpredictable, like the drug reactions, and those that are predictable but cannot be avoided, like the use of chemotherapy to cure cancer. According to the authors, the most common type of adverse events found by their study was failure to timely initiate treatment due to lack of communication resulting in lengthy hospitalization.

#### 2.9.3.4 Improvement Strategies

The Standard Treatment Guidelines and Essential Medicines List (2008) provides the correct prescription of medication to avoid risks associated with wrong treatment, dosage and follow-up care. It ensures that primary health care users are managed in a standardized manner across the country. The Primary Care 101 Guideline (2013-14) is another treatment guideline aimed at helping healthcare professionals at the primary health care level to manage patients using an algorithm approach. The health care

professionals are guided in a step-by-step algorithm approach to reach to a correct diagnosis and treatment of a patient. This guideline is aligned to the Standard Treatment Guidelines and Essential Medicine List for Primary Health Care (2008).

The Primary health Care Package for South Africa set of Norms and Standards (2000) provides requirements in terms of standards for care, staff competency, equipment needs, leadership competencies, and information management, on all health programs offered in the clinic or at community level.

Towards ensuring quality health care the National Department of Health developed the standards against which facilities can be assessed. These standards are the National Core Standards (2011) and these standards are structured to ensure that patient rights are respected, patients' safety is improved, the infrastructure is of expected standards and leadership is able to be proactive planners and risk managers. Furthermore the South African Government launched the project called Operation Phakisa in 2014. This project aims at accelerating the National Development Plan 2030. One of the two priorities is the scaling up of an ideal clinic. The ideal clinic is an initiative that will ensure that public health clinics improve quality of care. According to the KwaZulu-Natal Department of Health Strategic Plan (2015-2019:43), a preliminary assessment of the implementation of Ideal Clinic Realization and Maintenance project was done in 2014/15 period. Of the 288 clinics that were assessed for compliance, 70 clinics attained 70-100%, 149 attained 50-69% and 68 attained 0-49%.

**2.9.3.5 Information and Technology**

Ramharuk (2010:6-181) conducted a study to assess perceptions and preparedness for using technology in healthcare. According to the author, the study was done in one private hospital. South Africa has a dual system of care, the private and public health care, the former being advanced in terms of infrastructure and resources. The study found that 63.72% of healthcare workers were not comfortable with the change to computerized health care, 50.98% resisted the use of computerized prescriptions, and 51.96% were familiar with the computer applications. According to the author, when implementing new changes, the compatibility of the new system with the old as well

as staff capabilities must be taken into consideration. Chimanzi (2011:9) mentioned challenges that are faced by KwaZulu-Natal Department of Health, namely, that about 600 clinics were not on network, the staff's computer illiteracy and bandwidth limitations, to mention a few. It can therefore be said that using information technology as a strategy to reduce adverse events is far-fetched, addressing these challenges will be a priority and is a long-term effort.

## 2.10 IMPLICATIONS OF POOR ADVERSE EVENTS MANAGEMENT

The KwaZulu-Natal Department of Health had higher than expected litigation costs in the district health program (KwaZulu-Natal Annual Report, 2013-2014:120). Adler, Yi, Li, McBroom and others (2015:1-6) conducted a study to determine financial and patient outcomes impact due to injuries in hospitals. According to the authors, the United States have a challenge to improve patient safety as marked by the 400 000 preventable deaths that occur annually. Authors agree that there is underreporting, hence identifying causes to harm remains a challenge. The study found that harm increases readmission risk and has the potential to increase other health services consumption, hence the adverse clinical and financial outcomes. According to the authors, harm reduction reduces length of hospital stay, mortality and readmission rates, consequently reducing the costs.

According to Pepper and Slabbert (2011: 29), most claims from malpractice are from obstetrics and gynaecology and orthopedic surgery, citing a similar situation in countries like United States of America, where studies done have indicated that 42% medical practitioners had been sued, 22,4% sued twice or more and 70% claims were against obstetrics and gynaecology. The authors argue that in an ideal world litigation may directly improve quality of health by putting more resources unlike in under-resourced countries like South Africa. According to Pepper and Slabbert (2011:32), there has been a shift by medical doctors to practice defensive medicine, which increase patient risk, a view shared by Dietrich (2005:28), that following a litigation rise, doctors practiced defensive medicine, performing unnecessary tests and surgical procedures in anticipation of litigation.

## 2.11 CONCLUSION

This chapter has managed to show how adverse events are managed and the common challenges that are shared globally. Furthermore, the chapter highlighted the fact that risk management is critical to patient safety. The chapter also showed that that changes in workforce contributes to the occurrence of adverse events. The chapter managed to display that patient safety is dependent on availability of resources like human resources, technological and financial resources. Furthermore, the chapter showed that management functions are essential to ensure that there is enough staff that is well trained and monitored on implementation of policies. The chapter mentioned a few mitigating strategies that can be implemented to improve patient safety and prevent or minimize occurrence of adverse events. The chapter also managed to look at how adverse events are managed in South Africa and challenges faced towards achieving patient safety. Poor adverse events' reporting is a global challenge even in the developed countries that have the capacity to provide resources, which can improve patient safety. The chapter has also been able to provide the reasons for poor reporting. The next chapter will discuss research methodology used in conducting the research.

# CHAPTER 3
# RESEARCH METHODOLOGY

## 3.1 INTRODUCTION

This chapter discusses how the research was designed and conducted. The chapter states the aim and objectives of the study. It goes further to clearly state the location of the study and who the population and sample of the study was. This is followed by a clear indication of how research design was constructed. This was done stating the research methods that were considered taking into account each methodology' advantages and disadvantages. The chapter also provides a clear indication of how the research instrument was constructed and administered. The chapter goes further to provide a clear picture of how data was collected and analyzed. Towards the end of the chapter the researcher states the research ethics that were observed as well as the general hallmarks of conducting a scientific research.

## 3.2 THE AIM AND OBJECTIVES OF THE STUDY

The researcher had a purpose to explore certain issues of practices within the Department of Health.

### 3.2.1 Aim of the Study

The main aim of the study was to explore what makes the clinics fail to manage adverse events as per expected practices. Furthermore the study aimed to create awareness amongst nurses as to the benefits of reporting adverse events.

### 3.2.2 Research Objectives

The main objective of this study was to explore reasons for not implementing available adverse events management procedures that set down. By doing this study the researcher's objectives were to;

- Investigate reasons for failure to identify, report and manage adverse events.
- Interrogate the available documents' ability to assist in adverse events management.
- Evaluate existing information management systems in the management of adverse events management.

- Investigate the work environment in the management of adverse events.
- Evaluate the existing improvement plan in place on adverse events management.

### 3.3. RESEARCH HYPOTHESES

- HO: Nurses within the uMgungundlovu primary health care clinics have not been formally orientated/trained on policy on adverse events management.

- HO: The structure and components of reporting tools are hospital oriented and therefore makes it difficult for nurses in the uMgungundlovu primary health care clinics to report adverse events.

- HO: Nurses performance on adverse events management is not part of their Employee Performance Management and Development assessment.

- HO: There are proper communication systems in the uMgungundlovu primary health care clinics on adverse events management.

- HO: The clinics within uMgungundlovu Health District inform their communities on patient safety.

### 3.4 RESEARCH DESIGN

Different authors, such as Creswell (2014), Creswell and Plano Clark (2007) and Kumar (2008), have come up with different definitions of what research design is. Creswell (2014:11) defines the research designs as "types of inquiry within qualitative, quantitative and mixed method approaches to provide specific direction for procedures in a research design". Kumar (2008:30) defines research design as "a logic and systematic plan for conducting research". The author further states that research design communicates the intentions of the researcher, the purpose of the study and the plan for conducting it. Furthermore the author states that the research design should be in respect of research methods to be used, how data will be collected and analyzed, population to be studied, the sampling of population and sampling size, the study site, research instruments, and how the study will be piloted. Creswell and

Plano Clark (2007:58) simply define research designs as "procedures for collecting, analyzing, interpreting and reporting data in research studies". From the definitions by these authors, it can be stated that research design is a plan of inquiry that provides a direction the research will take. Furthermore the authors argue that this plan has to be systematic, that is, has to follow scientific steps in the data collection, analysis, interpreting and reporting.

### 3.4.1. Types of Research Designs

Creswell (2014:12-13) mentions two main research designs, the quantitative and qualitative research designs, a view shared by Dixon, Singleton and Straits (2015:82). Different authors such as Bryman and Bell (2007:44), Kumar (2005:10) and Babbie and Mouton (2001:79-82) provide three different classifications of research designs, namely exploratory, descriptive and explanatory research designs. According to Kumar (2005:10), exploratory research study is undertaken to "explore an area where little is known or to investigate the possibilities of undertaking a particular research study". Fox and Bayat (2007:8) argue that descriptive research study is used to shed light on current issues or problems and is suitable where researchers believe there is no information available to solve a problem. According to Fox and Bayat (2007:8), sometimes researchers are faced with situations where there is lack of information to solve current problems. In such cases, the authors argue researchers collect data, evaluate and compare it. The authors further argue that descriptive research is the most suitable of the three categories.

According to Collis and Hussey (2014:5), explanatory research is described as "attempts to clarify why and how there is a relationship between two aspects of a situation or phenomenon". Collis and Hussey (2014:5) argue that explanatory research is a continuation of descriptive research as the researcher goes beyond describing to analyze and explain why the phenomenon being studied is happening.
The researcher adopted the descriptive research design for this study, considering the research objectives, this research design will be able to answer the research questions about the phenomenon and probably reach a satisfactory solution.

## 3.5 STUDY LOCATION

The study was conducted within all the Primary Health Care (PHC) fixed clinics in the uMgungundlovu Health District. UMgungundlovu Health District is situated in Pietermaritzburg, the Capital City of KwaZulu-Natal, with a population of 1 017 763 (STATSSA: 2011). These clinics are distributed amongst seven municipal districts to which are responsible for offering health care services, namely, uMsunduzi, Impendle, Richmond, uMkhambathini, uMshwathi, uMngeni and Mpofana. PHC clinics are run by Professional Nurses (PNs), bearing a title of Operational Manager (OM).

## 3.6 POPULATION OF THE STUDY

According to Kumar (2005:211), and Brink, van der Walt and van Rensburg (2012:131) population of the study is individuals or groups that suits the criteria the researcher is interested in, in order to understand a phenomenon. In this study the researcher targeted all the nurses working in the 51 fixed clinics with an estimated population size of 461. The nurses are divided into three categories. Firstly the professional nurses, who have a three to four years of study. The professional nurses after having done a specialty in Primary Health Care are legible to be managers who run these clinics. Secondly it is the staff nurses who are trained for two years of basic nursing training and work under supervision of a professional nurse. Lastly it is the nursing assistants, who undergo a one-year training into basic nursing care and have a limited scope of practice; hence they work under supervision of a professional nurse. The researcher managed to get 213 participants distributed among these categories of nurses.

### 3.6.1 Sample of the Study

According to Fox and Bayat (2010:54), it is not always possible for the researcher to obtain information from all the members of the population. The authors argue that due to constraints such as financial resources and time limitations it becomes almost impossible to reach all members of the population. Fox and Bayat (2010:54) and Denscombe (2007:23), argue that in such situations it becomes necessary to make use of a sample. Fox and Bayat (2010:54) and Brink *et al.* (2012:132) define a sample "as a sub-set selected by the researcher from defined population to participate in the

study". The authors Fox and Bayat (2010:54) and Brink *et al*. (2012:132) go further to define sampling as "the process of selecting the sample from the population to represent the interest of the population on understanding the phenomenon". If one looks at the above definition of a sample, one can conclude that sampling as a process provides a degree of efficiency and some precision, a view that is supported by Fink (2003:3). The researcher had a sample of 213 participants out of the total population of 416 nurses.

According to Fox and Bayat (2010:54), and de Vos, Strydom, Fouché and Delport (2005:198), there are two categories of sampling procedures, namely probability and non-probability sampling. According Creswell and Plano Clark (2007:113), in probability sampling a sample is drawn from the population using a systematic procedure. On the other hand, as argued by Edmonds and Kennedy (2013:16), non-probability sampling tries to ensure that the sample chosen is representative of the entire population.

In this study the researcher had to decide whether the sampling procedure to be used was going to be non-probability or probability sampling. This required the researcher to look at the type of sampling procedures that fall under each of the two categories and these are briefly discussed below.

### 3.6.2 Non-Probability Sampling

A number of non-probability sampling procedures were looked at. Different authors such as Edmonds and Kennedy (2013:16), Mitchel and Jolley (2007:236-238) agree that non-probability sampling mainly has two types namely, convenience and purposive sampling.

#### 3.6.2.1 Convenience

In some cases as argued by, Edmonds and Kennedy (2013:16), and Mitchel and Jolley (2007:236-238), this type of sampling procedure is also referred to as haphazard. It is so called because the sample is accidental, the researcher make use of members of the population that are convenient to obtain, hence the name convenience sampling. That kind of sampling sometimes creates problems because some members of the

population may not be represented. To work around that problem researcher would then try to make sample as representative as possible by using what is called quota sampling. As argued by Mitchel and Jolley (2007:236-238), quota sampling tries to ensure that certain characteristics of a certain population are found in a sample, for example the researcher could ensure that a certain percentage of a certain age group is present in the sample.

#### 3.6.2.2 Purposive

According to Edmonds and Kennedy (2013:17), purposive sampling is commonly used in qualitative researches and it is based on the objectives, the design as well as target population. According to de Vos *et al.* (2005:201-203), there are a number of purposive sampling types, for example, snowballing, expert sampling and heterogeneity sampling.

### 3.6.3 Probability Sampling

A number of probability sampling procedures are provided by different authors such as Dunn (2010:205-206), Edmonds and Kennedy (2013:16) and de Vos *et al.* (2005:198-201). According to the authors these include simple random sampling, systematic sampling, stratified random sampling, cluster sampling, just a few to mention. These sampling types were looked at taking into account their disadvantages and advantages. There were a few that were of particular interest to the researcher due to their characteristics and these are briefly discussed below.

#### 3.6.3.1 Systematic Random Sampling

According to de Vos *et al.* (2005:200), when applying a systematic random sampling techniques, the researcher start off by randomly choosing the first case and thereafter subsequent cases are chosen using a particular system of intervals. For example the researcher can decide from the beginning that every fifth case or unit of analysis as they are sometimes called, would be chosen to represent a sample. Salkind (2010:1212) argues that systematic sampling provides representative of the population without under-or over-representation.

### 3.6.3.2 Stratified Random Sampling

According to Babbie (1992:317) and Oliver (2010:77), in stratified random sampling, the population is broken down into different structure using certain characteristics. From these different strata a random sample is then selected. For example, let us assume that a population is made up of three groups, namely group A, B and C, assume further that each group has got 100 members and they differ on certain characteristics, in such a scenario using stratified random sampling technique, each group is called a stratum, and a random sample from group A random sample from group B and C will be selected. All these representatives from each group collectively they would form the sample of the study.

### 3.6.3.3 Simple Random Sampling

According to Oliver (20101:77), de Vos (2005:200), Edmonds and Kennedy (2013:16), when applying simple random sampling the researcher is effectively giving each member of the population an equal chance of participating in the study. All the above authors argue that simple random sampling presupposes that all members of the population have an equal chance of being chosen as part of sample. The authors argue further that simple random sampling is the most popular random sampling procedure when conducting a quantitative study.

### 3.6.3.4 Chosen Sampling Method

Looking at the above sampling procedures and taking into account that the researcher wanted all members of the population to participate in the study and also that it was not going to be difficult to get to the envisaged sample, it became clear to the researcher that probability sampling was the most suitable of the two sampling categories. The next question was then, which of the types of probability sampling techniques was the most appropriate. Taking into account the advantages and disadvantages of each probability sampling technique and also bearing in mind the size of the population as well as the size of the envisaged sample, the researcher decided that simple random sampling was the most appropriate. For example stratified random sampling, was also considered given the fact that nurses themselves, that is now, participants belong to different categories, but due to limited information as to the size of each stratum as well as time and financial constraints, it would have

been difficult to use this type of technique and therefore was discarded. According to Zondi (2012:73), simple random sampling is most relevant in quantitative research studies.

## 3.7 RESEARCH METHODS

Authors, Kothari (2004:5) and Neale (2009:20) agree that there are two basic research methods. The authors state that research methods are either quantitative or qualitative. This view of Kothari and Neale is arguably limited in the sense that some researchers prefer to use a combination of the two methods. This is evidenced by, Neale (2009:20) who argued that many researchers have benefited from adopting a mixed method approach in one study. The researcher will briefly discuss these three method approaches.

### 3.7.1 Quantitative Research Method

Bryman (2007:35) states that quantitative research is a strategy that emphasizes quantification in the collection and analysis of data. Furthermore that quantitative research entails a deductive approach to the relationship between theory and research, in which accent is placed on testing theories. Harding (2013:8) is of opinion that the quantitative studies involve large number of participants of the study.

### 3.7.2 Qualitative Research Method

Qualitative research by Bryman (2012:36) emphasizes words rather than quantification in the collection and analysis of data, and that it entails an inductive approach to the relationship between theory and research, which the emphasis is generating theories. According to Harding (2013:8), qualitative research involves collection of more detailed data from a smaller number of participants of the study.

### 3.7.3 Mixed Research Method

According to Bryman (2012:37) mixed method research refers to research that combines both quantitative and qualitative research. Harding (2013:10) states that in mixed methods, one method checks the other.

### 3.7.4 Chosen Research Method

Having considered all the methods mentioned above, the researcher chose to use mainly the quantitative research method.

## 3.8 TIME DIMENSION

Authors such as Kumar (2005:93), Flick (2011:67-68) and Brink, van der Walt and van Rensburg (2012:101) state that there are cases where the research is conducted once where the researcher is interested to know what is happening with a phenomenon, in other words the researcher meets with the participants of the study once. The authors argue further that there are cases where the researcher wants to obtain information about a phenomenon over a period of time. The authors argue that in such a case the researcher meets with the participants of the study more than once. According to the authors, the first scenario is referred to as cross-sectional research design and the second scenario is referred to as longitudinal research design. This study was conducted once, in other words the researcher met with the participants only once, meaning the research took the cross sectional time dimension.

## 3.9 DATA COLLECTION

Kumar (2005:118) and Brink *et al*. (2012:74) states two approaches of data collection, the primary and secondary data collection approaches. According to Kumar (2005:118), the secondary approach is used for collecting data from already available database, like the census or the hospital records. Brink *et al.* (2012:74) reiterates that secondary data is interpreted work of other researchers, hence the author advocates for the use of primary sources by researchers when conducting studies to avoid bias. According to Winstanley (2010:86), primary data is actual data the researcher collets using the research instrument. It is not information from other sources like the secondary data. In this study the researcher mainly used the primary data approach. There are various ways of collecting primary data, the interview, the questionnaire and observation.

### 3.9.1 Construction of the Research Instrument

When designing the questionnaire the researcher attempted to ensure that participants of the study were clear about what the study was trying to find out and why. First of

all the researcher had to clearly define the population as well as the sample of the study, a clear definition of the population and the sample provides the researcher a clear picture of the characteristics of the participants of the study. This enables the researcher to decide which language to use in the questionnaire. In this study all the participants have minimum qualification of matric, and their day-to-day function require them to converse in both English and Zulu. In view of that consideration, researcher decided that the questionnaire would be in English. The researcher also ensured that the questionnaire was written in an attractive and professional manner to give it a clean and uncluttered look.

The questionnaire had 44 questions and all of them were about primary health care clinics. The questionnaire comprised of two sections. The first section had four questions, and these were demographic questions such as age group, work experience and so forth. The second section comprises of 40 questions that were organized in a form of a Likert Scale. In other words, the participants of the study were required to indicate the degree to which they agree or disagree with the statement of the researcher. The researcher made sure that double-barreled questions were avoided so that there could be one answer per question asked. All questions in sections in section two were closed questions, so that there could only be one specific answer to a question. While 44 questions can be looked at as a lot questions, the pilot study indicated that the questionnaire could be completed well within 30 minutes.

#### 3.9.1.1 Validity

According to Elliot (2005:204), validity refers to "the ability of research to reflect external reality or to measure the concept of interest". This definition by the author,suggests that the extent to which the study has validity depends on the type of questions asked in relation to the concept of interest. For example in this study, if the questions that were asked related mainly to the general hospitals as opposed to clinics which are the actual concepts of interests, then one could argue that the study lacked validity. All the questions that were asked in this study related specifically to primary health care clinics and therefore the study was deemed to have satisfied the concept of validity. It is important to bear in mind that there are two types of validity, internal validity and external validity. Perri6 and Bellamy (2012:22) state that internal

validity applies within a study, regardless of whether we want to generalize to others or not. It concerns the warrant we have for inferring that an outcome can be explained by a particular causal factor. External validity concerns the warrant we have for inferring that our findings would hold in other situations or studies that were similar in relevant ways.

#### 3.9.1.2 Reliability

Elliot (2005:203) defines reliability as the " replicability or stability of research findings over a short space of time". In other words reliability means the ability of the research instrument to provide similar results if a similar study were to be conducted using the same participants and environment. If for example a question in the questionnaire suggested that 90% of the participants agreed with the statement in the question and when another research is conducted on the same participants and same environment and similar stimulus and answered is now changed from 90% to say 45%, then it could be argued that, that research instrument lacked reliability.

#### 3.9.1.3 Transferability

According to Winstanley (2010:143), transferability means the ability of the principles guiding the study to be transferred to a different context. The principles that were followed in this research could be followed and transferred to a different context, thus it could be said that it possesses transferability.

#### 3.9.1.4 Generalization

According to Winstanley (2010:144), generalizability indicates an ability to draw general principles from a specific investigation. In this study the researcher ensured that the sampling procedure used drew participants that are representative of the entire population of the study as a result the results obtained from the study can be generalized to the entire population.

### 3.9.2 Pilot Study

Fox and Bayat (2007:102) define a pilot study, as "a trial run of an investigation on a small scale to determine whether the research design and methodology are relative and effective". Furthermore the authors state that pre-testing is essential to determine

whether the research instrument is well designed and areas of misunderstandings are corrected. With this study a pilot study was done to test if questions were understood as well as reliability and validity of the research instrument. Two clinics were selected, outside uMgungundlovu district with the researcher leaving the questionnaires with the participants to be collected in two days. There were no reported difficulties in answering the questionnaires. These clinics were not included in the sample population.

### 3.9.3 Administration of the Questionnaires

In deciding how the instrument will be administered, the researcher considered several methods for example, the researcher considered field workers, but deemed expensive. Also considered using telephones. Eventually the researcher decided that it would be better if questionnaire was self-administered. That would allow participants to be able tom complete questionnaire during their spare time

## 3.10 DATA ANALYSIS

Perri6 and Bellamy (2012:10) define data analysis methods as, "procedures for manipulating data so that research questions can be answered, usually by identifying important patterns". In this study data that was collected and was analyzed using the Statistical Package for Social Sciences software (SPSS). The data was presented in the form of frequency tables, pie charts and bar graphs.

## 3.11 ETHICAL ISSUES

In line with the rules as stipulated in the University of KwaZulu-Natal (UKZN) ethics research policy, the researcher ensured that all the rules were observed. The participants of the study were made aware of who the researcher was and what the study was all about. The participants were informed that participation in the study was voluntary. They were further informed that they could withdraw from the study at anytime if they so wished. The participants were also informed that anonymity and confidentiality would be maintained at all times. They were also informed that they would not be given any financial reward for participating in the study. Furthermore participants were informed about how the data would be stored and eventually

destroyed. All other ethical considerations that generally apply in research studies were critically observed.

## 3.12 CONCLUSION

The chapter was able to provide a broad overview of the entire research. The location and population of the study were clearly indicated and the research design was also clearly stated. The research method used in the study was clearly indicated. The type of the research instrument used and its administration were adequately stated. The chapter indicated how the research instrument was piloted. It went further to sow how data was collected and analyzed. Furthermore, the chapter showed that the research ethics as indicated in the UKZN ethics policy were clearly stated. The next chapter provided the presentation of collected data and its analysis.

# CHAPTER 4

# DATA PRESENTATION

## 4.1 INTRODUCTION

This chapter present results from the survey conducted to investigate why nurses fail to implement available procedures that are in place to deal with adverse events management in the primary health care clinics. The researcher distributed 213 questionnaires and 148 (69%) participated. All questionnaires were fully answered by the participants. The questionnaire had two sections. Section one of the questionnaire comprised of four questions on demographic data of the participants. The demographic data, which sought information about several data of the participants. Firstly the participants' lengths of service in the primary health care clinics. Secondly the area that the participant is allocated at. Furthermore the role that is played by the participants in the clinics. Lastly the role played by the participants in the clinics. Section two had forty questions, which were in the Likert Scale format, that sought to obtain participants' opinions and to provide answers to the research questions the objectives of the study. The data was captured and analysed using the SPSS software.

## 4.2 OVERVIEW OF THE STATISTICS

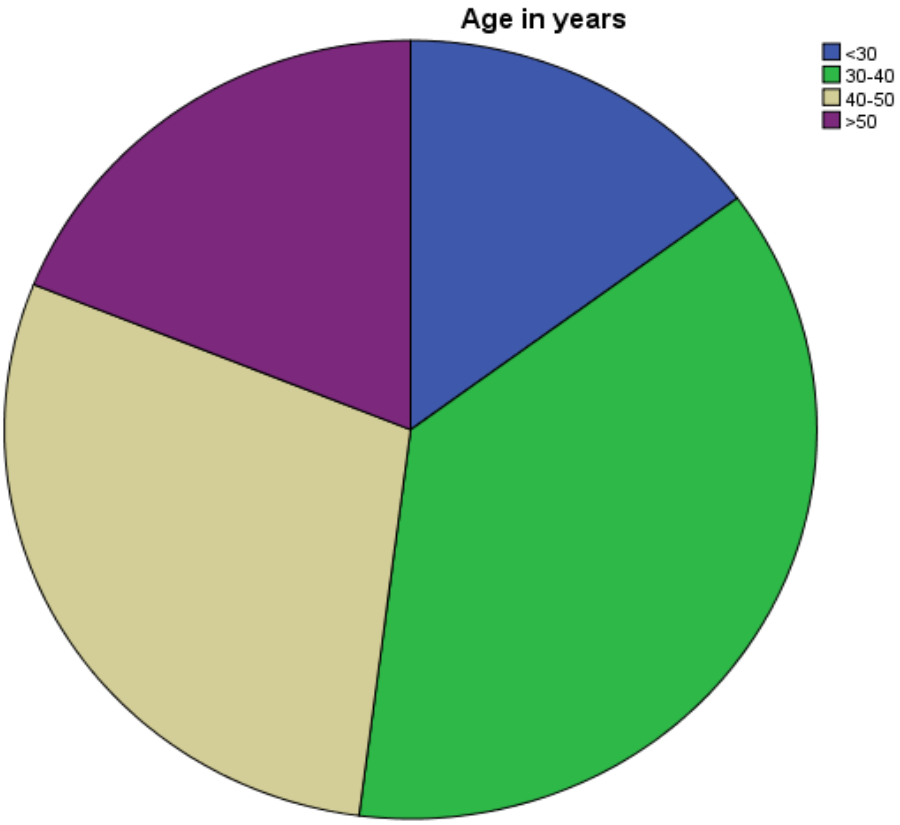
The interpretation of data was enhanced by use of frequency tables and pie charts to depict demographic profile and furthermore the data was interpreted in the form of frequency tables and bar graphs to depict the opinions of the participants. The questions on the section two of the questionnaire sought to provide information on the objectives of the study. Next in discussion is the summary of the results of the study.

### 4.2.1 Demographic Profile of the Participants

**Table 4.1. Frequency table indicating the age of the participants**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | <30 | 22 | 14.9 | 14.9 | 14.9 |
| | 30-40 | 55 | 37.2 | 37.2 | 52.0 |
| | 40-50 | 43 | 29.1 | 29.1 | 81.1 |
| | >50 | 28 | 18.9 | 18.9 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.1. Pie chart indicating the age of the participants.**



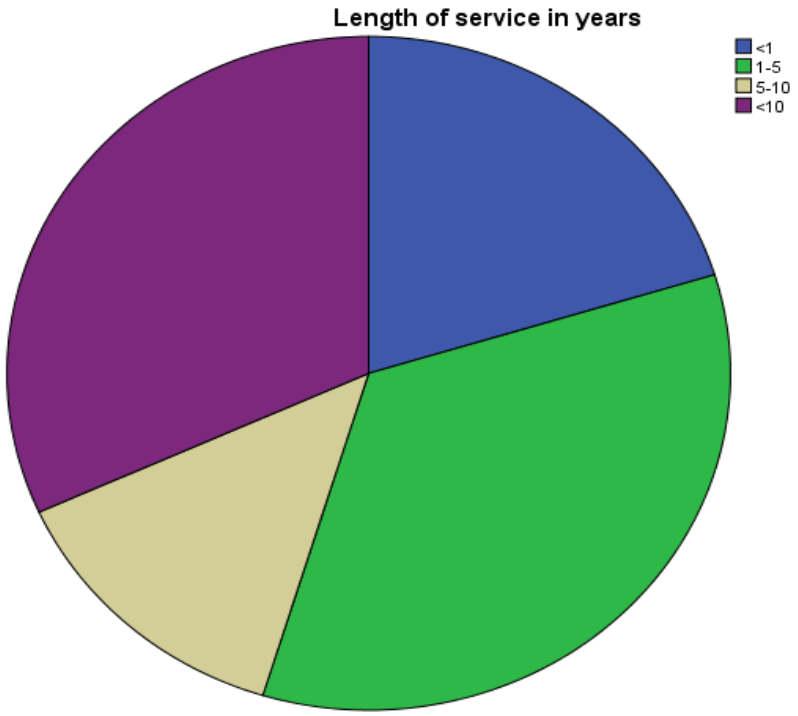

The frequency table and pie chart above indicate age distribution of participants. Out of 148 participants, 22(14.9%) are below age of 30, 55(37%) are aged between 30 to 40 years, 43 (29.1%) are between 40 to 50 and 28 (18.9%) are above 50 years of age.

**Table 4.2. Frequency table indicating the length of service of the participants in years**

**Length of service in years**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | <1 | 30 | 20.3 | 20.3 | 20.3 |
| | 1-5 | 51 | 34.5 | 34.5 | 54.7 |
| | 5-10 | 20 | 13.5 | 13.5 | 68.2 |
| | <10 | 47 | 31.8 | 31.8 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.2. Pie chart indicating the length of service of the participants**



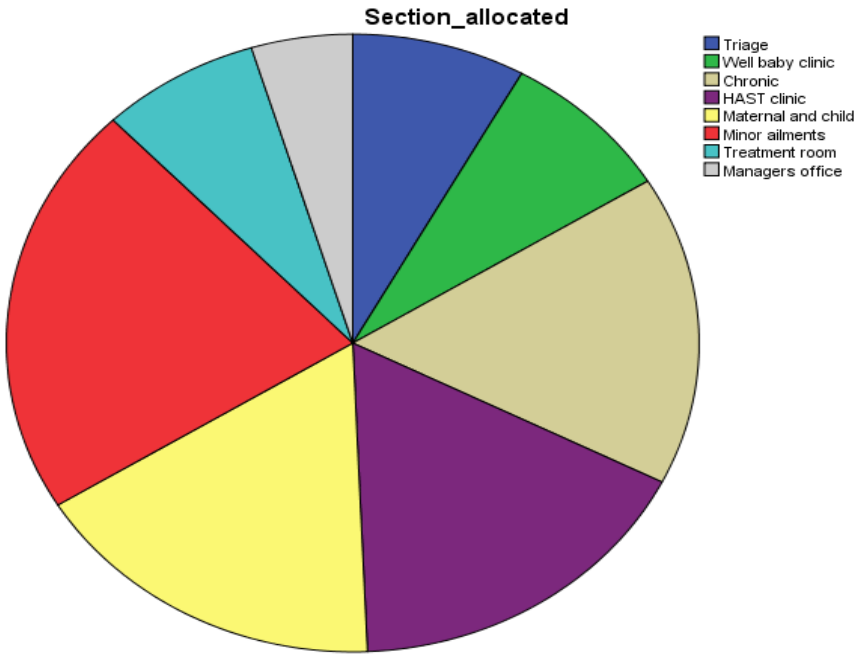

The frequency table and pie chart shows length of service among the participants. 30 (20.3%) participants have worked for less than a year, 51 (34.5%) have worked between one and five years, 20 (13.5%) have worked for five to ten years and 47 (31.8%) have worked more than ten years.

**Table 4.3 Frequency table indicating section where participants are allocated**

**Section allocated**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Triage | 12 | 8.1 | 8.1 | 8.1 |
| | Well baby clinic | 12 | 8.1 | 8.1 | 16.2 |
| | Chronic | 24 | 16.2 | 16.2 | 32.4 |
| | HAST clinic | 25 | 16.9 | 16.9 | 49.3 |
| | Maternal and child | 25 | 16.9 | 16.9 | 66.2 |
| | Minor ailments | 32 | 21.6 | 21.6 | 87.8 |
| | Treatment room | 11 | 7.4 | 7.4 | 95.3 |
| | Managers office | 7 | 4.7 | 4.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.3 Pie chart indicating section where participants are allocated**



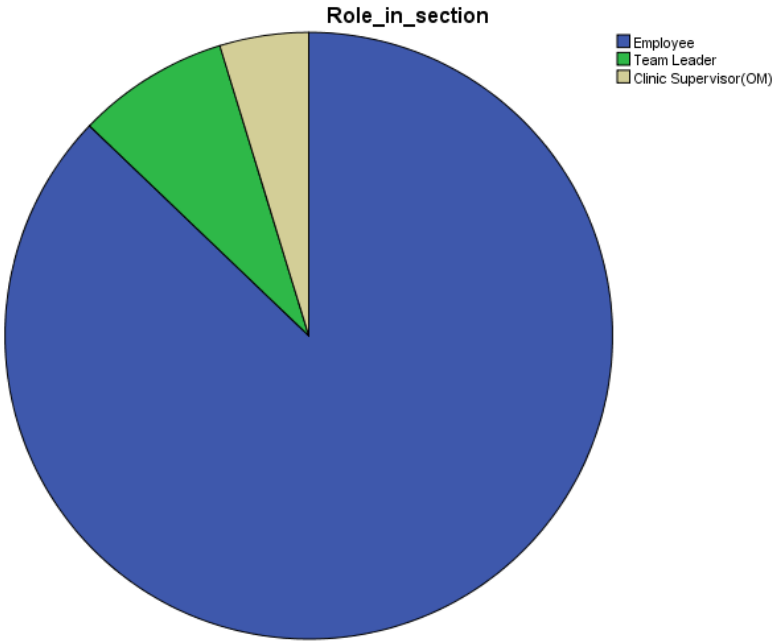

The frequency table and pie chart show the distribution of the 148 participants in different sections. 12(8.1%) are working at triage area, 12(8.1%) are allocated in the well baby clinic, 24(16.2%) are working at the chronic area, 25 (16.9%) are working at the HIV/AIDS/Sexually Transmitted infection and Tuberculosis (HAST) section, 25 (16.9%) are working at the Maternal and child section, 32 (21.6%) are working at the Minor ailments section, 11(7.4%) are allocated at the treatment room and 7 (4.7%) are in Manager's office.

**Table 4.4. Frequency table indicating the role of participants in their sections**

**Role in section**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Employee | 129 | 87.2 | 87.2 | 87.2 |
| | Team Leader | 12 | 8.1 | 8.1 | 95.3 |
| | Clinic Supervisor(OM) | 7 | 4.7 | 4.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.4. Pie chart indicating the role of participants in their sections**




The frequency table and pie chart show role played by each of the 148 participants. 7 (4.7%) are operational managers, 12(8.1%) are team leaders and 129(87.2%) are employees under supervision.

### 4.2.2 Participants' Opinions

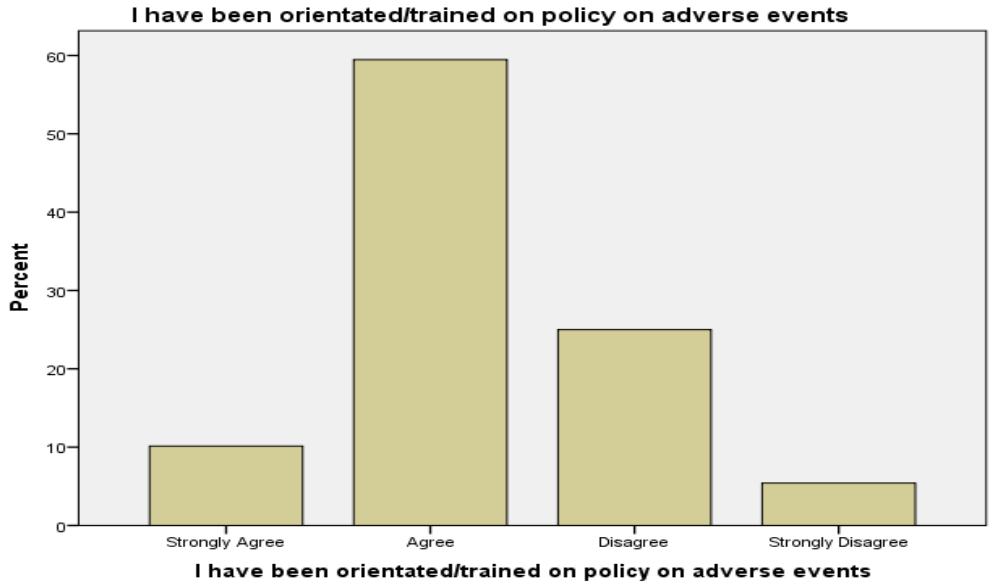
The participant's views are depicted in the form of frequency tables and bar graphs. These frequency tables and bar graphs shows participants' views on the forty questions in section two of questionnaire.

**Table 4.5. Frequency table showing whether or not participants have been orientated or trained on policy on adverse events**

**I have been orientated/trained on policy on adverse events**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 15 | 10.1 | 10.1 | 10.1 |
| | Agree | 88 | 59.5 | 59.5 | 69.6 |
| | Disagree | 37 | 25.0 | 25.0 | 94.6 |
| | Strongly Disagree | 8 | 5.4 | 5.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.5. Bar graph showing whether or not participants have been orientated or trained on policy on adverse events.**




The majority of nurses have been orientated or trained on adverse events management policy as illustrated by the above frequency table and bar graph. 103(15+88) participants i.e. 69.6% ((10.1%+59.5%) have been orientated or trained on the policy on adverse events as stated in the table, and 46 (37+8) participants, i.e. 30.4% (25%+5.4%) have not.

**Table 4.6 Frequency table showing whether or not participants have been trained on adverse events in the past six months.**

I have been trained on adverse events in the past six months.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 6 | 4.1 | 4.1 | 4.1 |
| | Agree | 21 | 14.2 | 14.2 | 18.2 |
| | Disagree | 105 | 70.9 | 70.9 | 89.2 |
| | Strongly Disagree | 16 | 10.8 | 10.8 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.6 Bar graph showing whether or not participants have been trained on adverse events in the past six months.**

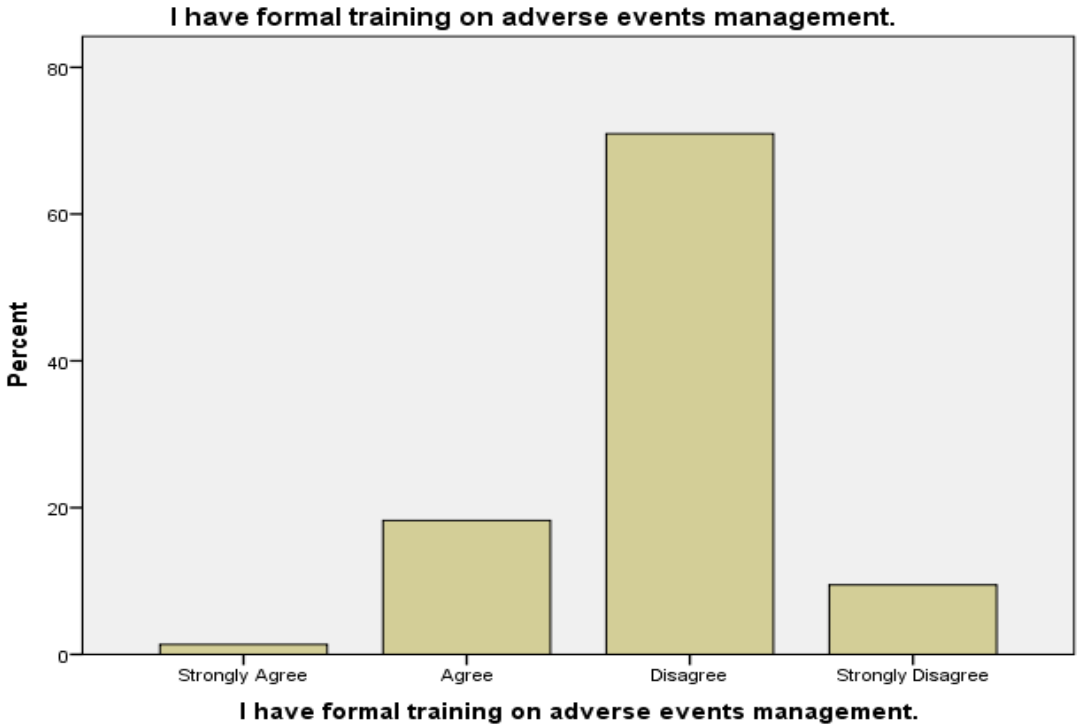

The frequency table and graph show that of the 148 participants, the majority, 121(105+16) i.e.81.7% (70.9%+10.8%) have not been trained on adverse events and only 27(6+21) participants i.e.18.3% (4.1%+14.2%) have been trained on adverse events in the past six months.

**Table 4.7 Frequency table showing whether or not participants have formal training on adverse events management.**

**I have formal training on adverse events management.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 2 | 1.4 | 1.4 | 1.4 |
| | Agree | 27 | 18.2 | 18.2 | 19.6 |
| | Disagree | 105 | 70.9 | 70.9 | 90.5 |
| | Strongly Disagree | 14 | 9.5 | 9.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.7 Bar graph showing whether or not participants have formal training on adverse events management.**



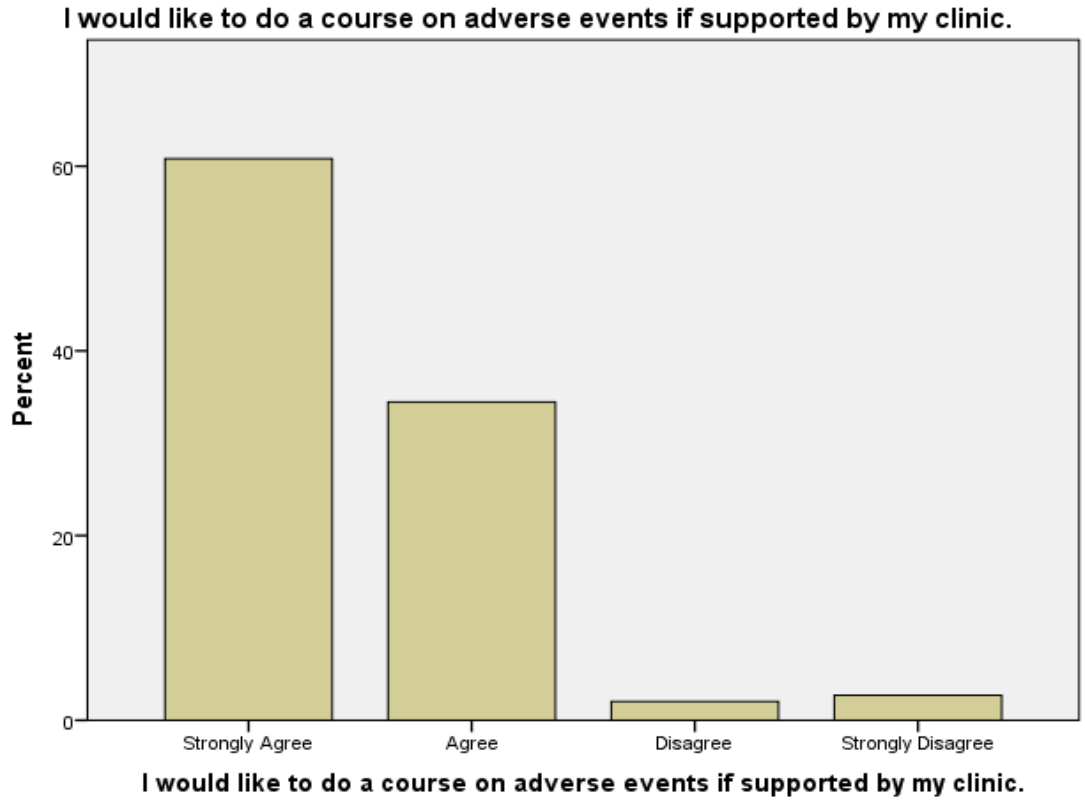

Most nurses are not formally trained on adverse events management as illustrated by the above frequency table and bar graph. 119 (105+14) participants i.e. 80.4% (70.9%+9.5%) disagreed to the statement and only 29(2+27) participants i.e. 19.6% (1.4% +18.2) agreed to have formal training.

**Table 4.8 Frequency table showing whether or not participants would like to do a course on adverse events if supported by my clinic.**

I would like to do a course on adverse events if supported by my clinic.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 90 | 60.8 | 60.8 | 60.8 |
| | Agree | 51 | 34.5 | 34.5 | 95.3 |
| | Disagree | 3 | 2.0 | 2.0 | 97.3 |
| | Strongly Disagree | 4 | 2.7 | 2.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.8 Bar graph showing whether or not participants would like to do a course on adverse events if supported by my clinic.**



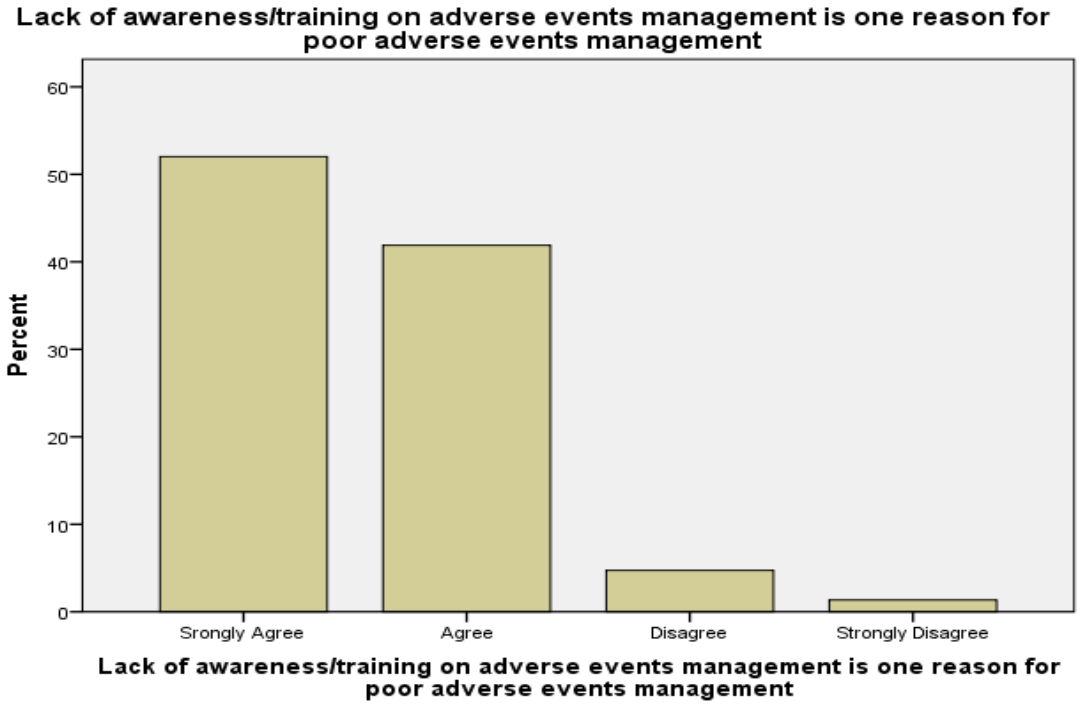

The frequency table and bar graph show how participants felt about doing a course on adverse events. The majority of the participants, 141(90 +51) i.e. 95.3% (60.8% +43.5%) agreed that they would like to do a course on adverse events and only 7(3+4) participants i.e. 4.7% (2.0%+2.7%) was not interested.

**Table 4.9 Frequency table showing participants' opinion that lack of awareness/training on adverse events management is one reason for poor adverse events management.**

**Lack of awareness/training on adverse events management is one reason for poor adverse events management**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 77 | 52.0 | 52.0 | 52.0 |
| | Agree | 62 | 41.9 | 41.9 | 93.9 |
| | Disagree | 7 | 4.7 | 4.7 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.9 Bar graph showing participants' opinion that lack of awareness/training on adverse events management is one reason for poor adverse events management.**



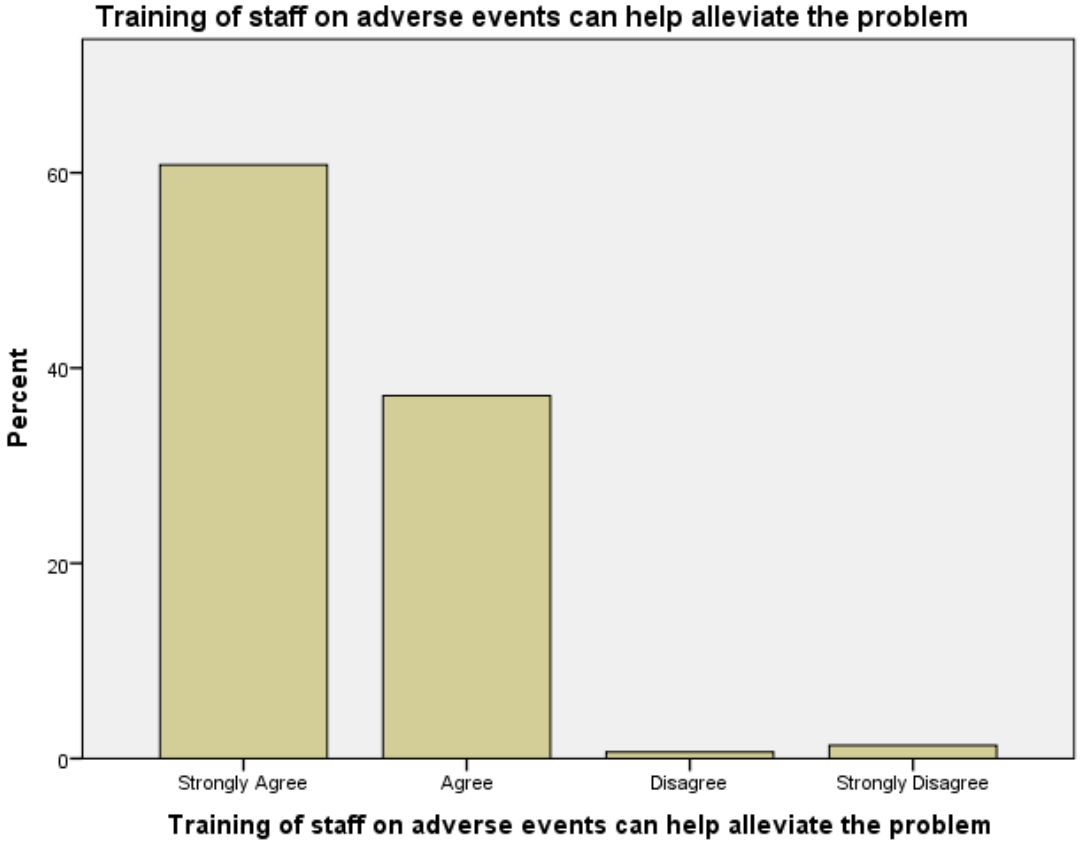

Lack of awareness/training on adverse events is one reason for poor adverse events management. The above frequency table and bar graph illustrate this. The majority of participants139 (77+62) i.e. 93.9% (52%+41.9%)) agreed to the statement and 9(7+2) participants i.e.6.1% (4.7%+1.4%) disagreed.

**Table 4.10 Frequency table showing whether or not participants believe that training of staff on adverse events can help alleviate the problem.**

**Training of staff on adverse events can help alleviate the problem**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 90 | 60.8 | 60.8 | 60.8 |
| | Agree | 55 | 37.2 | 37.2 | 98.0 |
| | Disagree | 1 | .7 | .7 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.10 Bar graph showing whether or not participants believe that training of staff on adverse events can help alleviate the problem.**



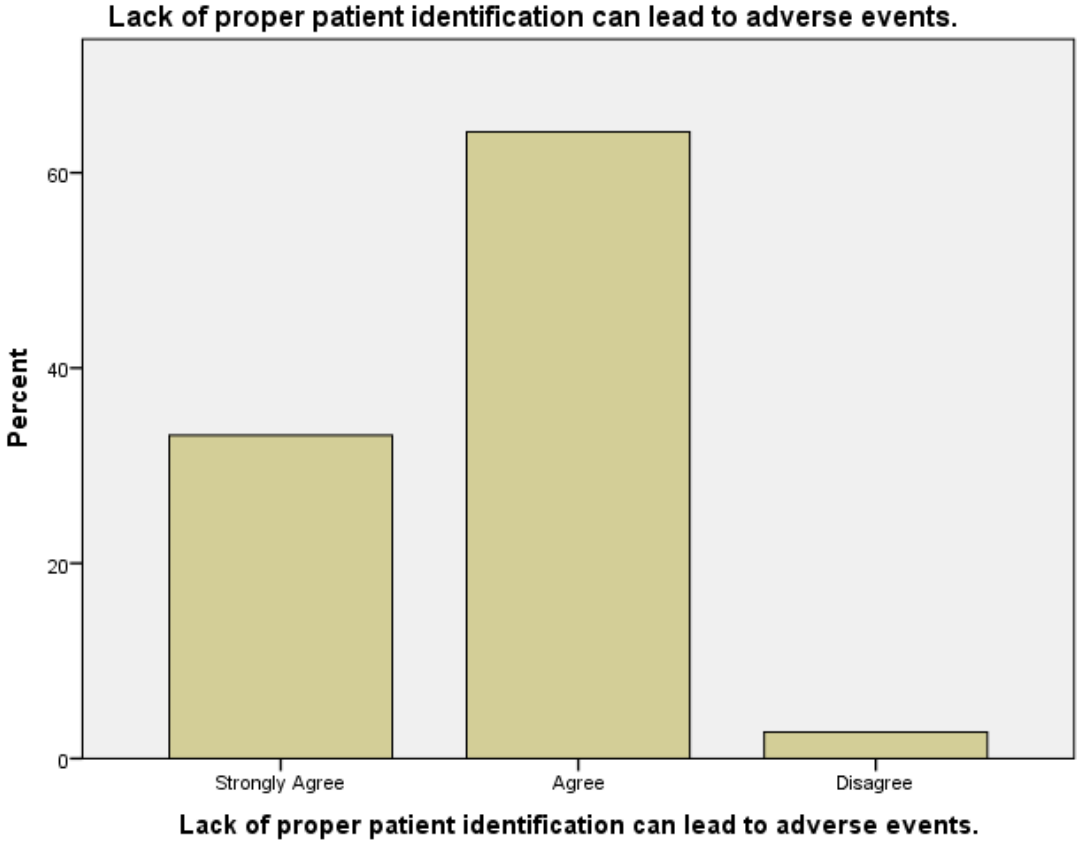

The general opinion was that training staff could help alleviate the problem of poor adverse events management. The above frequency table and the bar graph illustrate that the majority of participants, 135 (90+55) i.e. 98% (60.8%+37.2%) agreed to the statement and only3 (1+2) participants i.e.2.1% (0.7%+1.4%) disagreed.

**Table 4.11 Frequency table showing whether or not participants believe that lack of proper patient identification can lead to adverse events.**

**Lack of proper patient identification can lead to adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 49 | 33.1 | 33.1 | 33.1 |
| | Agree | 95 | 64.2 | 64.2 | 97.3 |
| | Disagree | 4 | 2.7 | 2.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.11 Bar graph showing whether or not participants believe that lack of proper patient identification can lead to adverse events.**




The greater majority of participants, 144(49+95) i.e. 97.3% (33.1%+64.2%), were of the opinion that lack of proper identification can lead to an occurrence of adverse events and only 4 (2.7%) disagreed to that statement, as illustrated by the above frequency table and bar graph.

**Table 4.12 Frequency table showing whether or not participants are fully aware of reporting procedure on adverse events.**

**I am fully aware on reporting procedure on adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 8 | 5.4 | 5.4 | 5.4 |
| | Agree | 106 | 71.6 | 71.6 | 77.0 |
| | Disagree | 32 | 21.6 | 21.6 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.12 Bar graph showing whether or not participants are fully aware of reporting procedure on adverse events.**

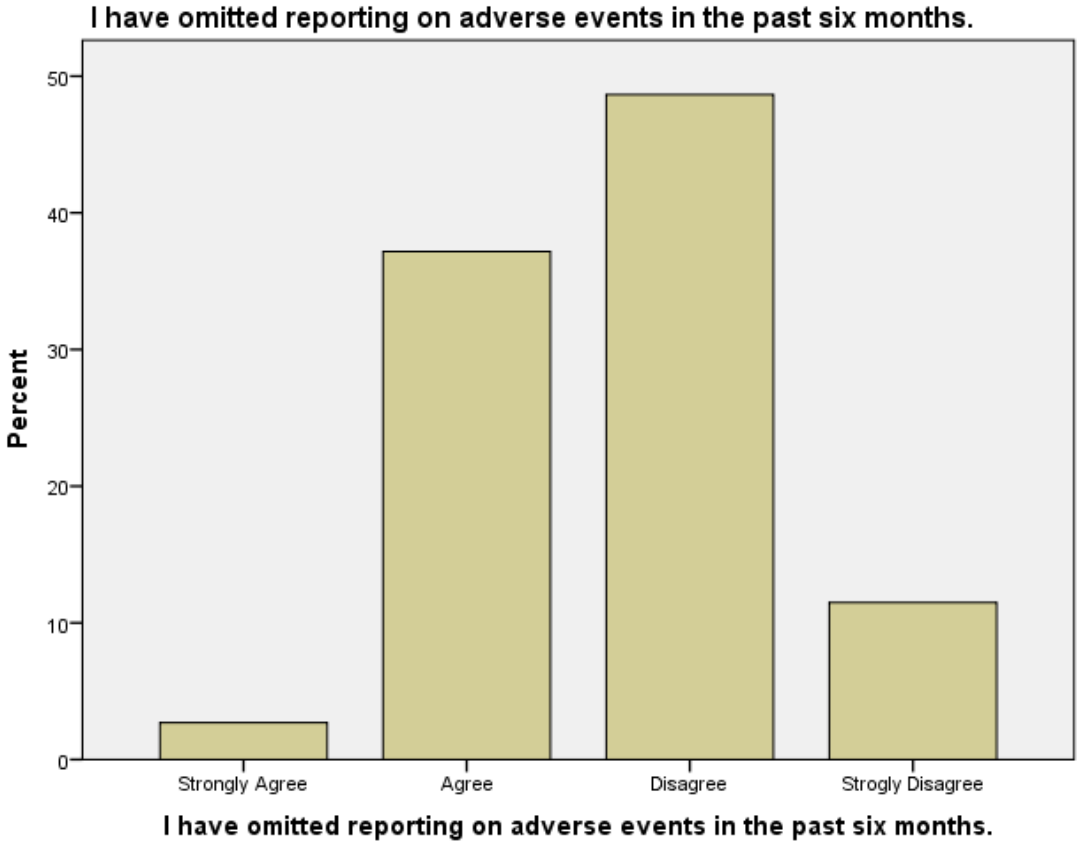

The nurses in clinics were aware of reporting procedure on adverse events. The frequency table and the bar graph reveal that 114(106+8) participants, i.e.77% (71.6%+5.4%) agreed to be aware of the reporting procedures on adverse events and 34 (32+2), i.e.23% (21.6%+1.4%) disagreed to that statement.

**Table 4.13 Frequency table showing whether or not participants have omitted reporting on adverse events in the past six months.**

**I have omitted reporting on adverse events in the past six months.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 4 | 2.7 | 2.7 | 2.7 |
| | Agree | 55 | 37.2 | 37.2 | 39.9 |
| | Disagree | 72 | 48.6 | 48.6 | 88.5 |
| | Strongly Disagree | 17 | 11.5 | 11.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.13 Bar graph showing whether or not participants have omitted reporting on adverse events in the past six months.**



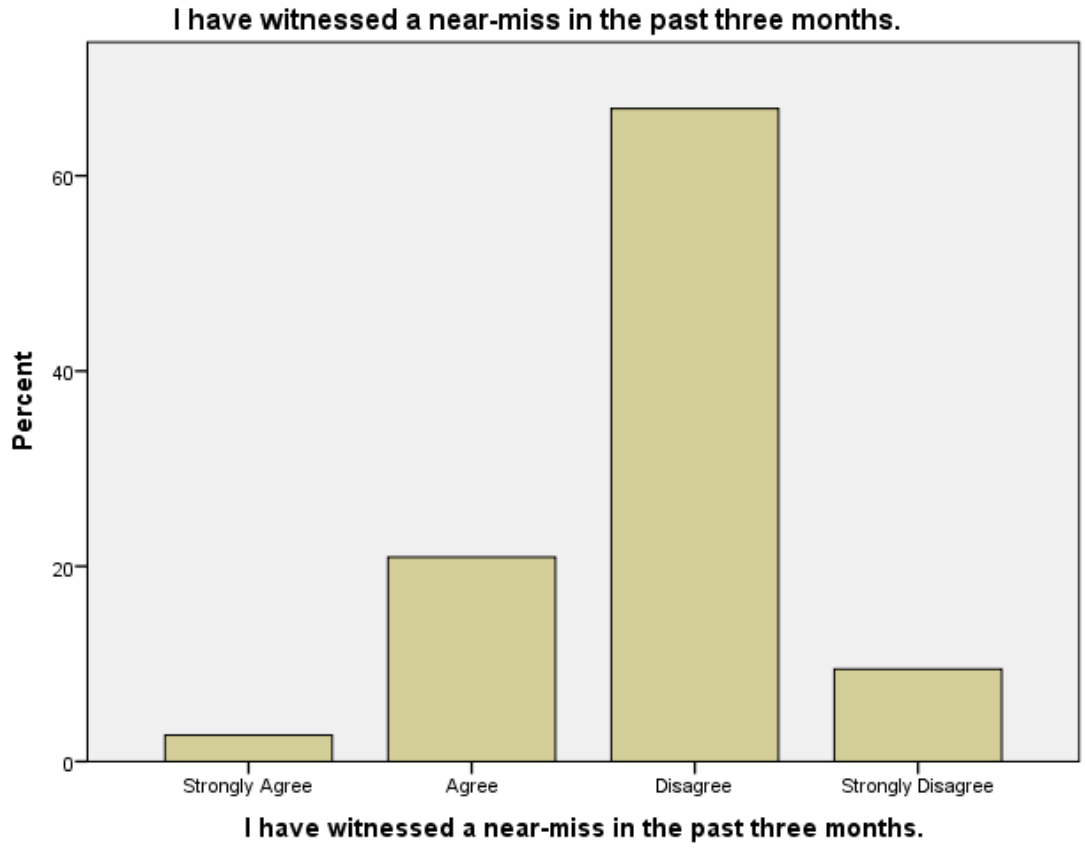

The clinics are reporting the adverse events, but need to improve. The frequency table and the bar graph above show that 59(55+4) participants, i.e.39.9% (37.2%+2.7%) agreed to have omitted reporting on adverse events in the past six and the majority, 89(72+17), i.e. 60.1% (48.6%+11.5%) disagreed to that statement.

**Table 4.14 Frequency table depicting whether or not participants have witnessed a near miss in the past three months.**

**I have witnessed a near-miss in the past three months.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 4 | 2.7 | 2.7 | 2.7 |
| | Agree | 31 | 20.9 | 20.9 | 23.6 |
| | Disagree | 99 | 66.9 | 66.9 | 90.5 |
| | Strongly Disagree | 14 | 9.5 | 9.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.14 Bar graph depicting whether or not participants have witnessed a near miss in the past three months.**



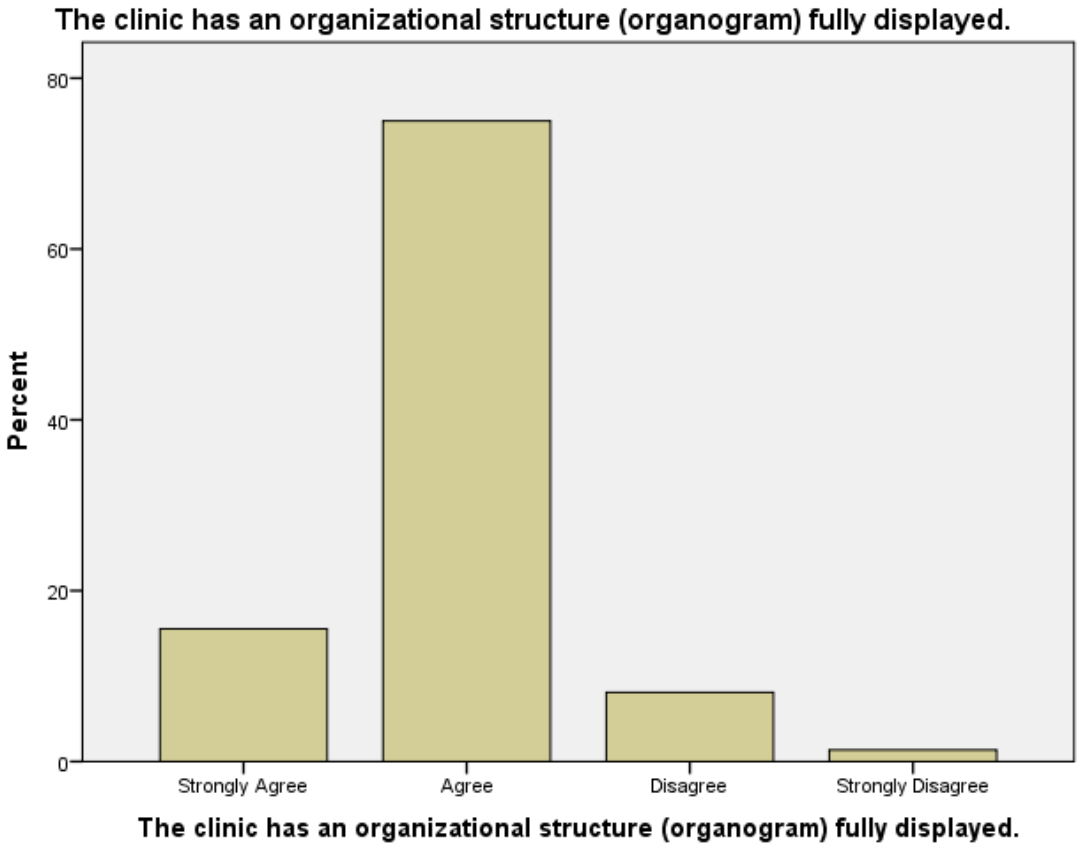

The frequency table and the bar graph show that near misses do occur in the clinics. 35(31+4) participants, i.e.23.6% (20.9%+2.7%) agreed to have witnessed a near miss. The majority participants though, 113(99+14), i.e.76.4% (66.9%+9.5%) did not witness a near miss in the past three months.

**Table 4.15 Frequency table depicting whether or not the participants agree that the clinic has an organizational structure (organogram) fully displayed.**

**The clinic has an organizational structure (organogram) fully displayed.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 23 | 15.5 | 15.5 | 15.5 |
| | Agree | 111 | 75.0 | 75.0 | 90.5 |
| | Disagree | 12 | 8.1 | 8.1 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.15 Bar graph depicting whether or not the participants agree that the clinic has an organizational structure (organogram) fully displayed.**



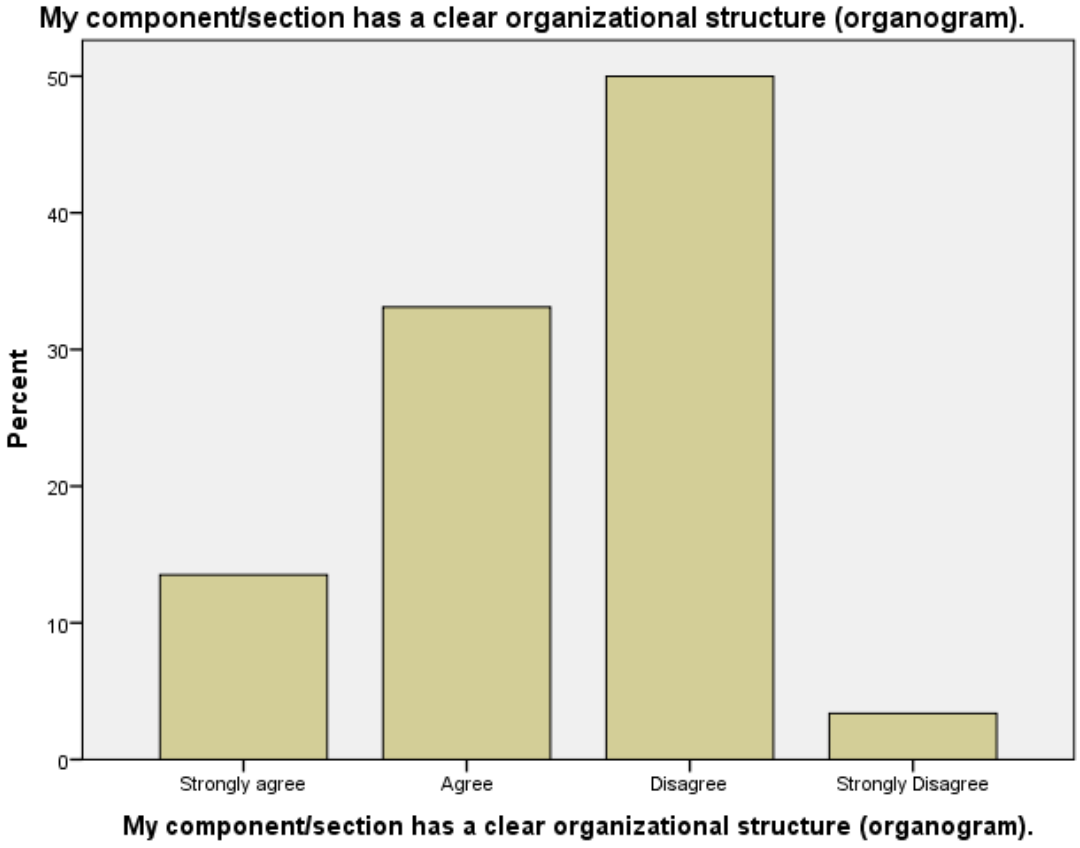

The frequency table and the bar graph show that there is an organizational structure in most clinics. The majority of participants, 134(111+23), i.e.90.5% (75%+15.5%) agreed to the statement and only 14(12+2), i.e.9.5% (8.1%+1.4%) disagreed to that statement.

**Table 4.16 Frequency table depicting whether or not the participants' component or section has a clear organizational structure (organogram).**

**My component/section has a clear organizational structure (organogram).**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly agree | 20 | 13.5 | 13.5 | 13.5 |
| | Agree | 49 | 33.1 | 33.1 | 46.6 |
| | Disagree | 74 | 50.0 | 50.0 | 96.6 |
| | Strongly Disagree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.16 Bar graph depicting whether or not the participants' component or section has a clear organizational structure (organogram).**



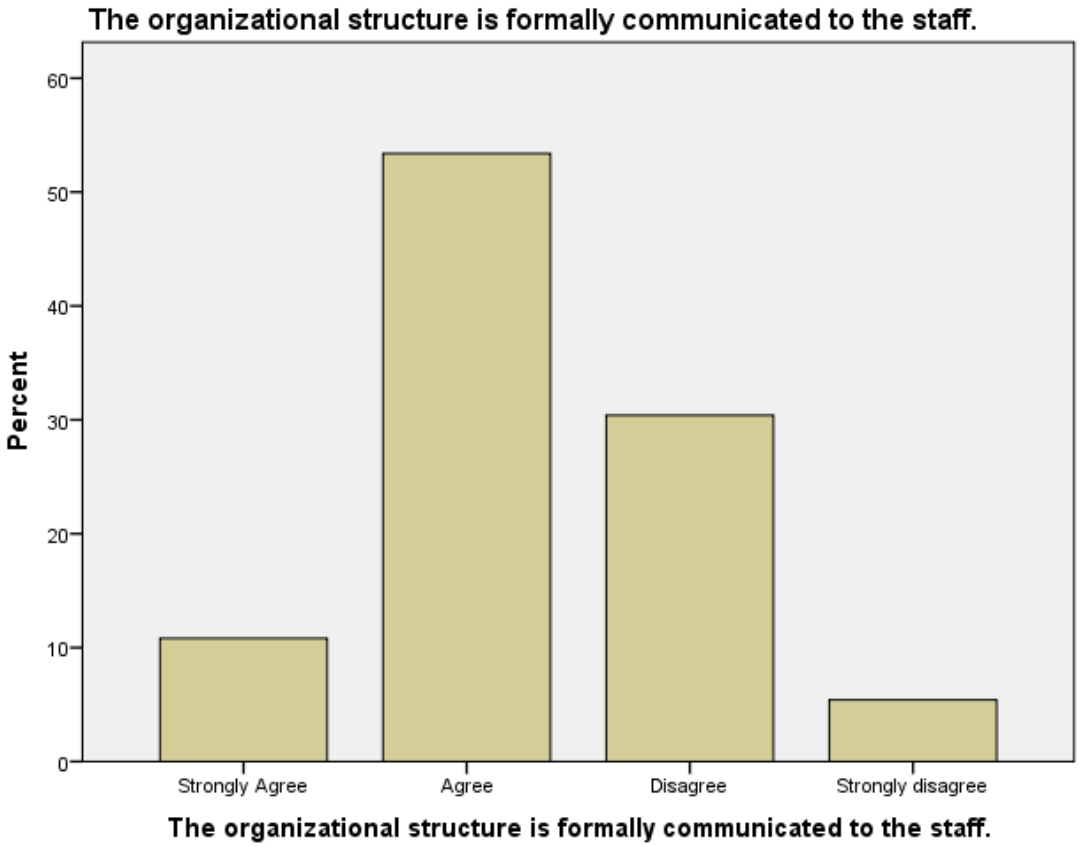

The clinics seemingly omit to have sectional organograms as well. The frequency table and the bar graph above illustrate that 79(74+5) participants, i.e.53.4% (50.0%+3.4%) disagreed to the statement. 69(20+49) participants, i.e.46.6% (13.5%+33.1%) agreed that there is sectional organograms.

**Table 4.17 Frequency table depicting whether or not the participants believe that the organizational structure is formally communicated to the staff.**

**The organizational structure is formally communicated to the staff.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 16 | 10.8 | 10.8 | 10.8 |
| | Agree | 79 | 53.4 | 53.4 | 64.2 |
| | Disagree | 45 | 30.4 | 30.4 | 94.6 |
| | Strongly disagree | 8 | 5.4 | 5.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.17 Bar graph depicting whether or not the participants believe that the organizational structure is formally communicated to the staff.**



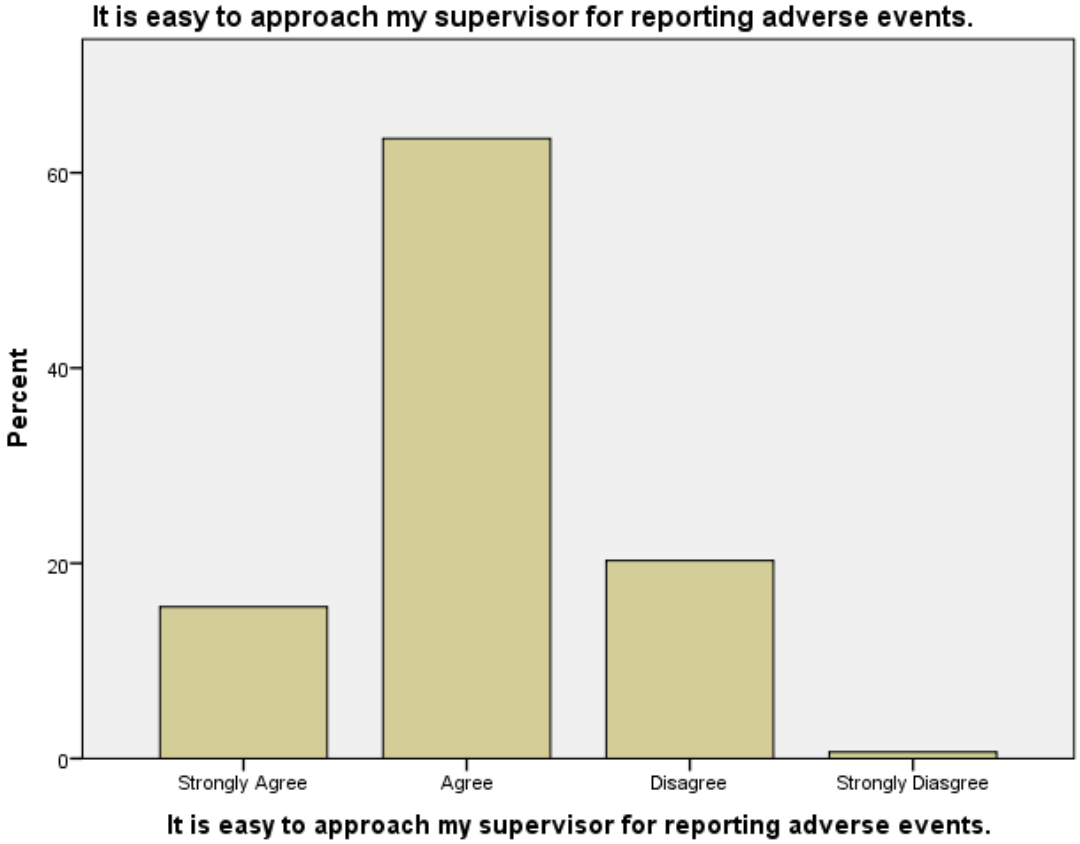

The organizational structure is formally communicated to all staff as illustrated by the frequency table and graph above. 95(79+16) participants, i.e.64.2% (53.4%+10.8%) agreed compared to the 53(8+45) participants, i.e. 35.8% (5.4%+30.4%), who disagreed.

**Table 4.18 Frequency table showing whether or not the participants believe it is easy to approach my supervisor for reporting adverse events.**

**It is easy to approach my supervisor for reporting adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 23 | 15.5 | 15.5 | 15.5 |
| | Agree | 94 | 63.5 | 63.5 | 79.1 |
| | Disagree | 30 | 20.3 | 20.3 | 99.3 |
| | Strongly Disagree | 1 | .7 | .7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.18 Bar graph showing whether or not the participants believe it is easy to approach my supervisor for reporting adverse events.**



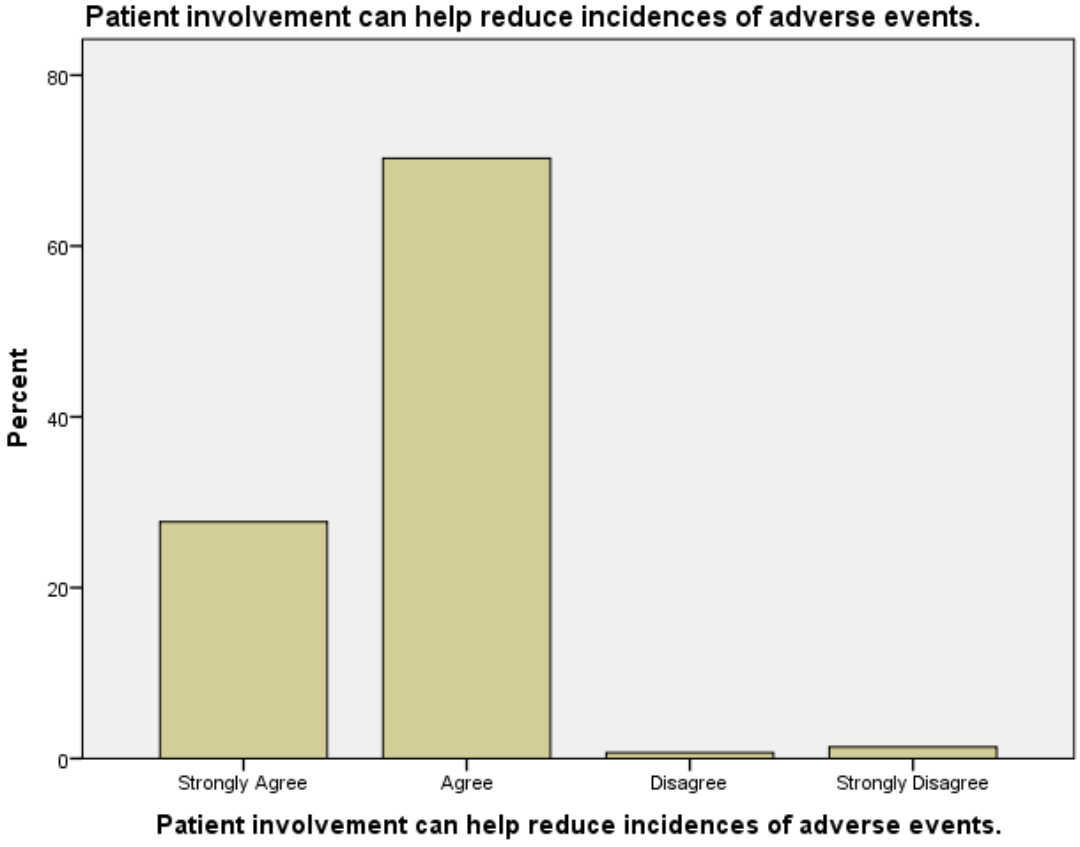

A majority of the participants find it easy to approach supervisor for reporting of adverse events as displayed by the frequency table and the bar graph above. 117 (94+23) participants, i.e.79% (63.5%+15.5%) agreed to the statement and 31(30+1), i.e.21% (0.7%+20.3%) disagreed.

**Table 4.19 Frequency table showing whether or not participants believe that patient involvement can help reduce incidences of adverse events.**

**Patient involvement can help reduce incidences of adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 41 | 27.7 | 27.7 | 27.7 |
| | Agree | 104 | 70.3 | 70.3 | 98.0 |
| | Disagree | 1 | .7 | .7 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.19 Bar graph showing whether or not participants believe that patient involvement can help reduce incidences of adverse events.**



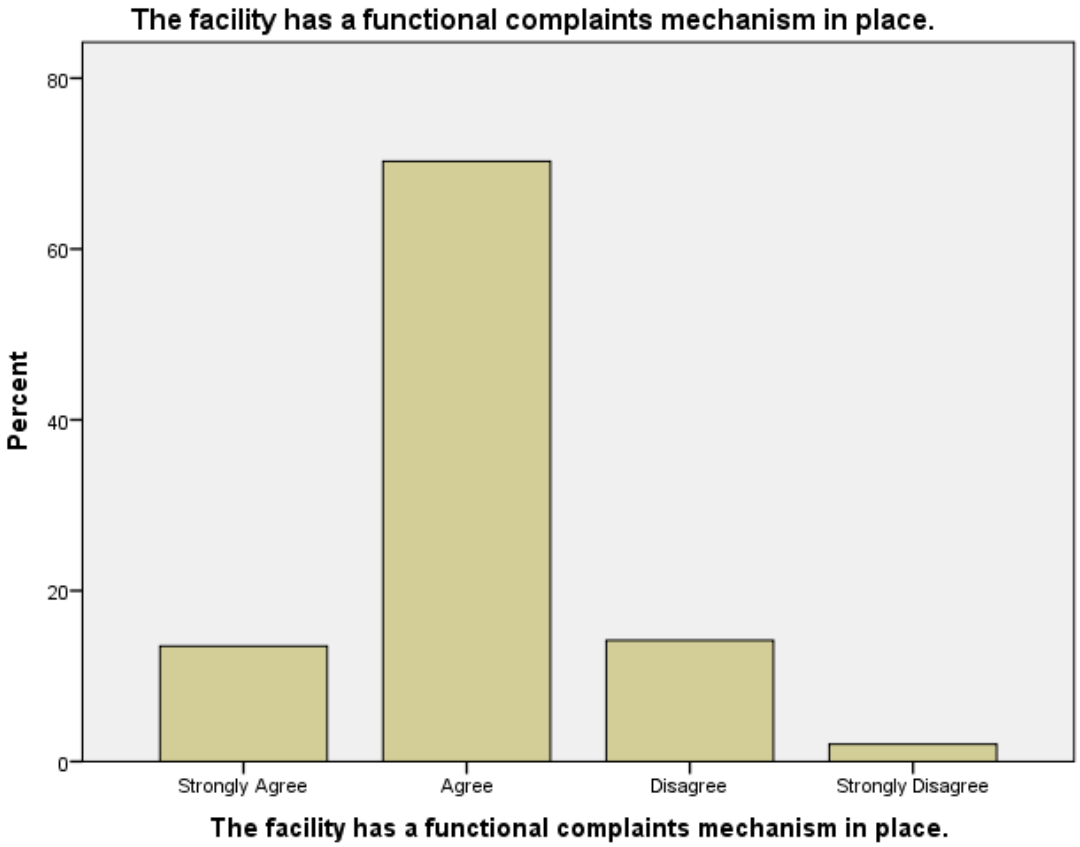

The majority of the participants, 145(104+41), i.e.98% (27.7%+70.3%) believe that patient involvement can help reduce incidence of adverse events compared to the 3(2+1), i.e.2% (0.6%+1.4%) who disagreed to that statement. It can therefore be said that when patient are involved in their care incidences of adverse events can be reduced.

**Table 4.20 Frequency table showing whether or not the participants agree that the facility has a functional complaints mechanism in place.**

**The facility has a functional complaints mechanism in place.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 20 | 13.5 | 13.5 | 13.5 |
| | Agree | 104 | 70.3 | 70.3 | 83.8 |
| | Disagree | 21 | 14.2 | 14.2 | 98.0 |
| | Strongly Disagree | 3 | 2.0 | 2.0 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.20 Bar graph showing whether or not the participants agree that the facility has a functional complaints mechanism in place.**



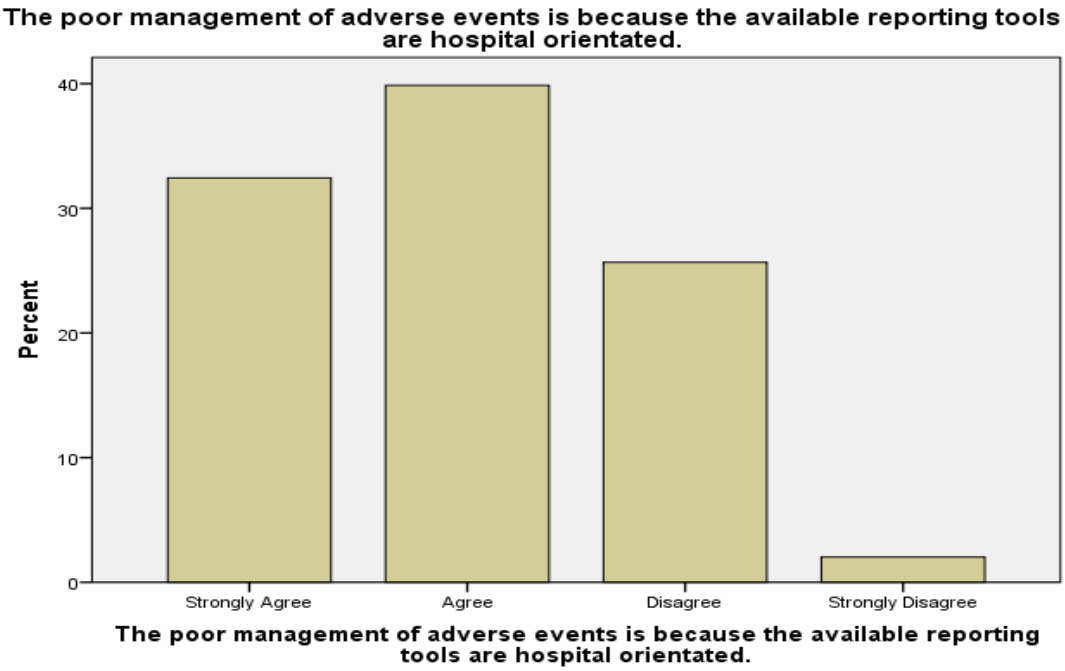

Most facilities have a functional complaints mechanism in place. The frequency table and the bar graph above illustrate that the majority, 124(104+20) participants, i.e.83.8% (13.5%+70.3%) agreed to the statement and 24(21+3) participants, i.e.14.2% (14.2%+2.0%) disagreed to that statement.

**Table 4.21 Frequency table depicting whether or not the participants believe that the poor management of adverse events is because the available reporting tools are hospital orientated.**

**The poor management of adverse events is because the available reporting tools are hospital orientated.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 48 | 32.4 | 32.4 | 32.4 |
| | Agree | 59 | 39.9 | 39.9 | 72.3 |
| | Disagree | 38 | 25.7 | 25.7 | 98.0 |
| | Strongly Disagree | 3 | 2.0 | 2.0 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.21 Bar graph depicting whether or not the participants believe that the poor management of adverse events is because the available reporting tools are hospital orientated.**



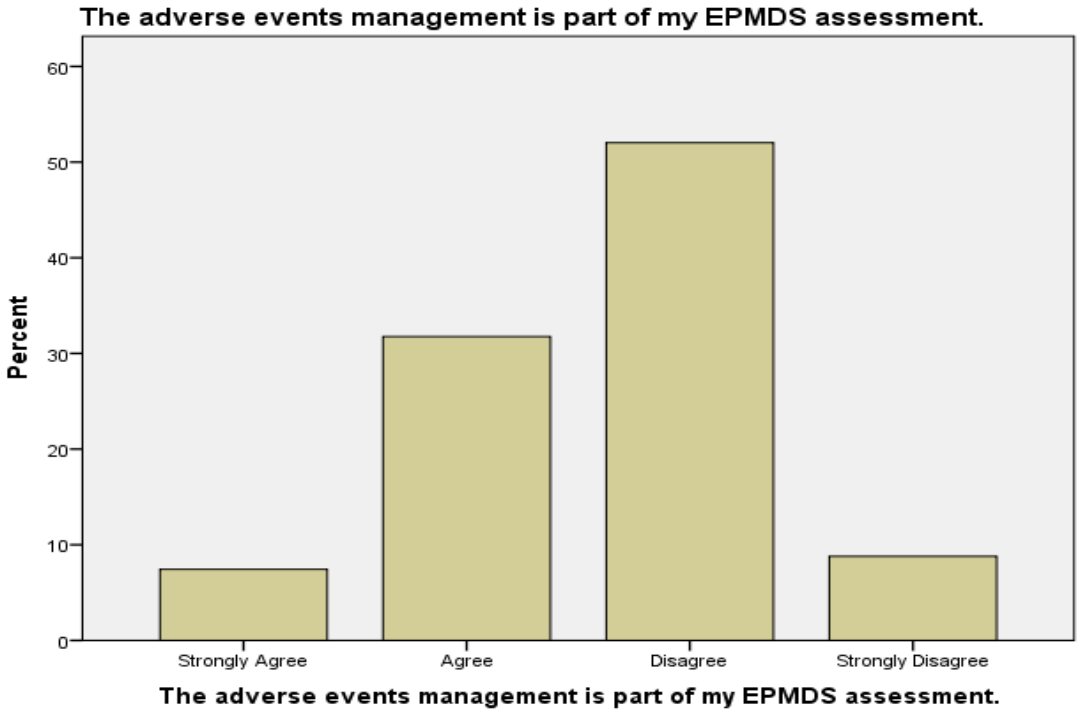

The general feeling by the participants is that poor management of adverse events is because the available reporting tools are hospital orientated. The frequency table and the bar graph above illustrate that 107(48+59) participants, i.e.72.3% (32.4%+39.9%), agreed to the statement. 41(38+3) participants, i.e.27.7% (25.7%+2.0%), disagreed to that statement.

**Table 4.22 Frequency table showing whether or not the adverse events management is part the participants' EPMDS assessment.**

**The adverse events management is part of my EPMDS assessment.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 11 | 7.4 | 7.4 | 7.4 |
| | Agree | 47 | 31.8 | 31.8 | 39.2 |
| | Disagree | 77 | 52.0 | 52.0 | 91.2 |
| | Strongly Disagree | 13 | 8.8 | 8.8 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.22 Bar graph showing whether or not the adverse events management is part the participants' EPMDS assessment.**



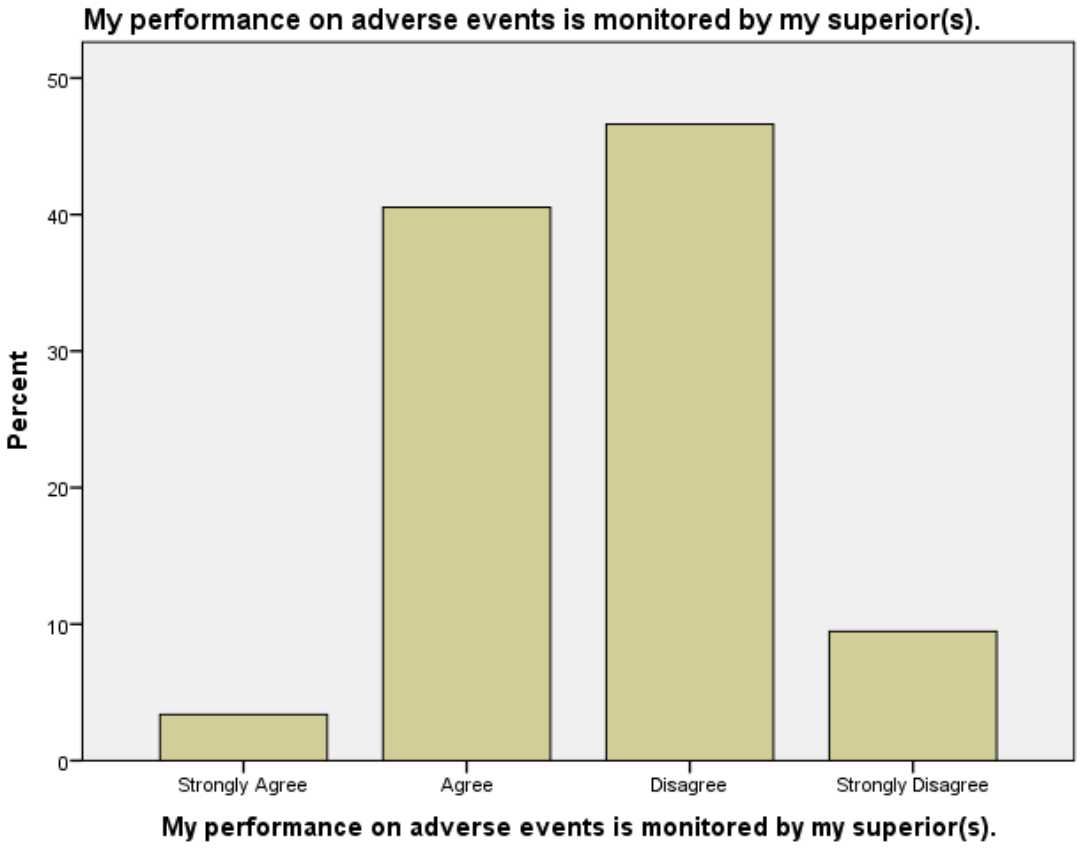

There is a need to include adverse events in the EPMDS, as this is not happening satisfactorily. The above frequency table and the bar graph illustrates that 90(77+130) participants, i.e.60.8% (52.0%+8.8%) disagreed that adverse events management is part of their EPMDS. Only 58(11+47) participants, i.e.39.2% (7.4%+31.8%) agreed to the statement.

**Table 4.23 Frequency table depicting whether or not the participants' performance on adverse events is monitored by their superior(s).**

**My performance superior(s).on adverse events is monitored by my superior(s).**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 5 | 3.4 | 3.4 | 3.4 |
| | Agree | 60 | 40.5 | 40.5 | 43.9 |
| | Disagree | 69 | 46.6 | 46.6 | 90.5 |
| | Strongly Disagree | 14 | 9.5 | 9.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.23 Bar graph depicting whether or not the participants' performance on adverse events is monitored by their superior(s).**



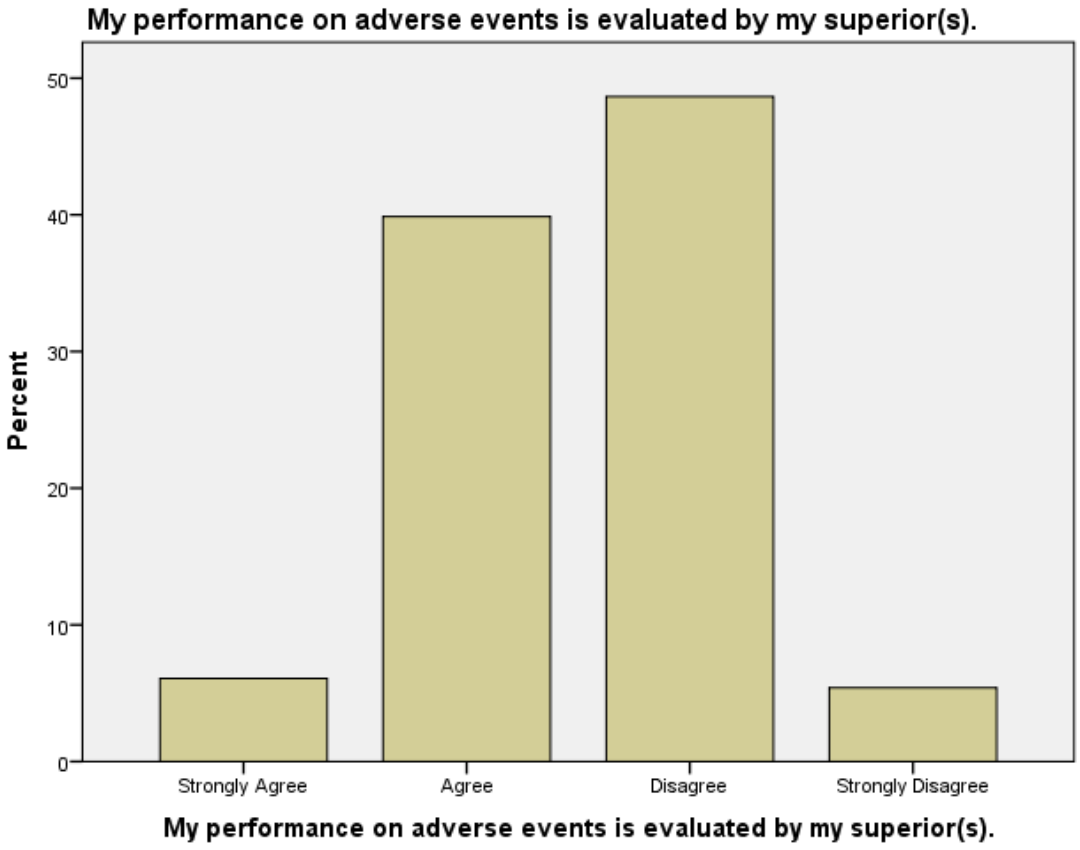

The performance on adverse events is not monitored. The above frequency table and the bar graph show that, 83(69+14) participants, i.e.56.1% (46.6%+9.5%) disagreed to the statement. 65(60+5) participants, i.e.43.9% (40.5%+3.4%) agreed to have their performance monitored.

**Table 4.24 Frequency table depicting whether or not the participants' performance on adverse events is evaluated by their superior(s).**

**My performance on adverse events is evaluated by my superior(s).**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 9 | 6.1 | 6.1 | 6.1 |
| | Agree | 59 | 39.9 | 39.9 | 45.9 |
| | Disagree | 72 | 48.6 | 48.6 | 94.6 |
| | Strongly Disagree | 8 | 5.4 | 5.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.24 Bar graph depicting whether or not the participants' performance on adverse events is evaluated by their superior(s).**




The evaluation of staff performance on adverse events needs to be improved upon. The frequency table and the bar graph above illustrates that 80(72+8) participants, i.e.54% (48.6%+5.4%) have not had their performance on adverse events evaluated whilst 68(58+9) participants, i.e.46% (6.1%+39.9%) agreed to that statement.

**Table 4.25 Frequency table depicting whether or not the participants believe that increased workload lead to poor adverse events management.**

**Increased workload lead to poor adverse events management.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 72 | 48.6 | 48.6 | 48.6 |
| | Agree | 69 | 46.6 | 46.6 | 95.3 |
| | Disagree | 5 | 3.4 | 3.4 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.25 Bar graph depicting whether or not the participants believe that increased workload lead to poor adverse events management.**

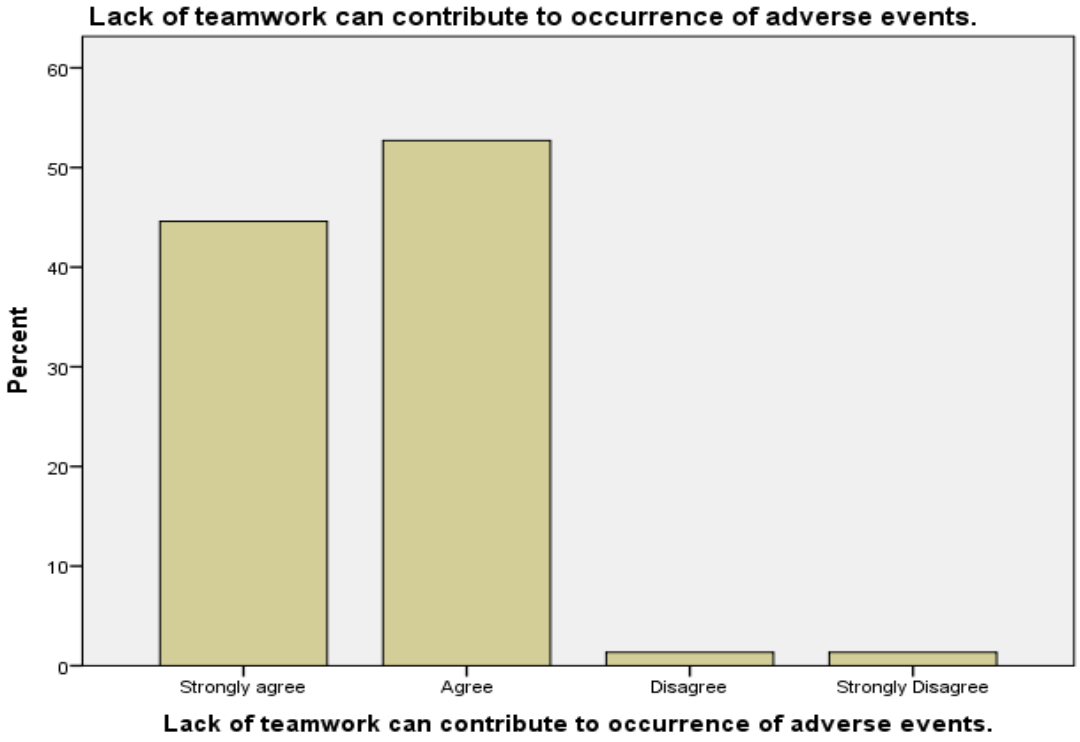

The increased workload leads to poor adverse events management. The frequency table and the bar graph above illustrate that majority of the participants, 141(72+69), i.e.95.2% (48.6+46.6%) agreed to the statement, whereas a small portion 7(5+2), i.e.4.8% (3.4%+1.4%)disagreed.

**Table 4.26 Frequency table depicting whether or not the participants believe that the lack of teamwork can contribute to occurrence of adverse events.**

**Lack of teamwork can contribute to occurrence of adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly agree | 66 | 44.6 | 44.6 | 44.6 |
| | Agree | 78 | 52.7 | 52.7 | 97.3 |
| | Disagree | 2 | 1.4 | 1.4 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.26 Bar graph depicting whether or not the participants believe that the lack of teamwork can contribute to occurrence of adverse events.**



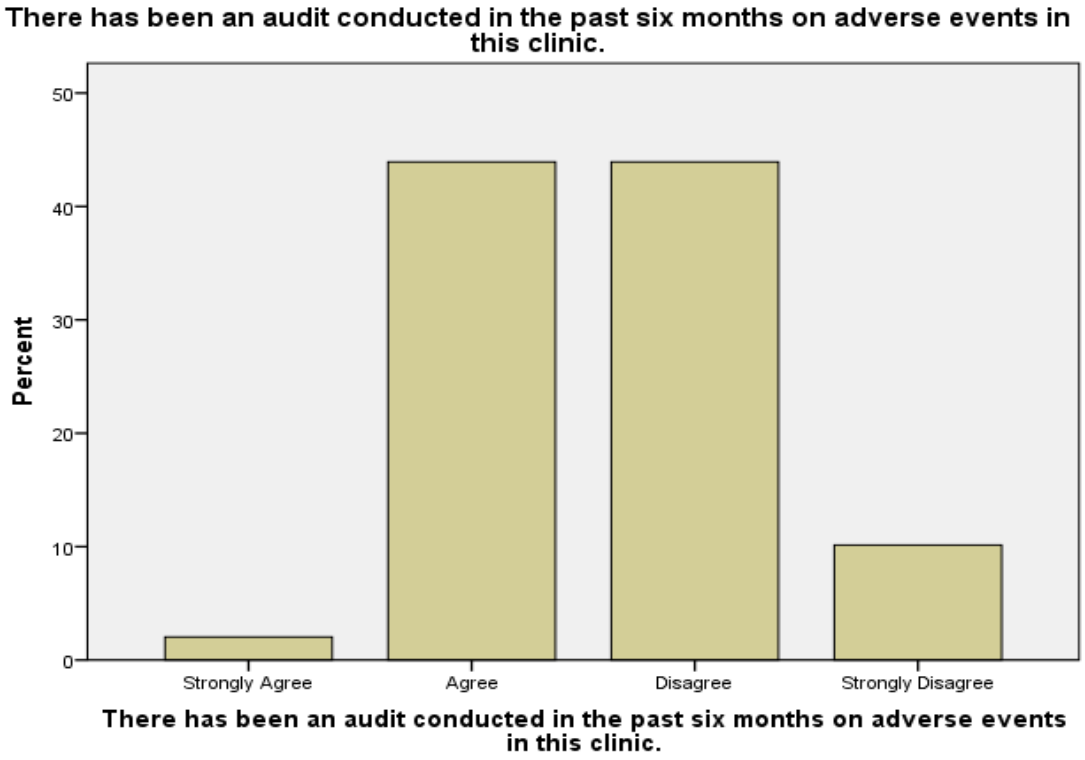

The lack of teamwork can contribute to occurrence of adverse events as illustrated by the above frequency table and bar graph. The majority of 144(66+78) participants, i.e.97.3% (44.6%+52.7%), agreed to the statement. Only 4(2+2) of the participants, i.e. 2.7% (1.35%+1.35%) disagreed to that statement.

**Table 4.27 Frequency table depicting whether or not there has been an audit conducted in the past six months on adverse events in the clinic.**

**There has been an audit conducted in the past six months on adverse events in this clinic.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 3 | 2.0 | 2.0 | 2.0 |
| | Agree | 65 | 43.9 | 43.9 | 45.9 |
| | Disagree | 65 | 43.9 | 43.9 | 89.9 |
| | Strongly Disagree | 15 | 10.1 | 10.1 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.27 Bar graph depicting whether or not there has been an audit conducted in the past six months on adverse events in the clinic.**



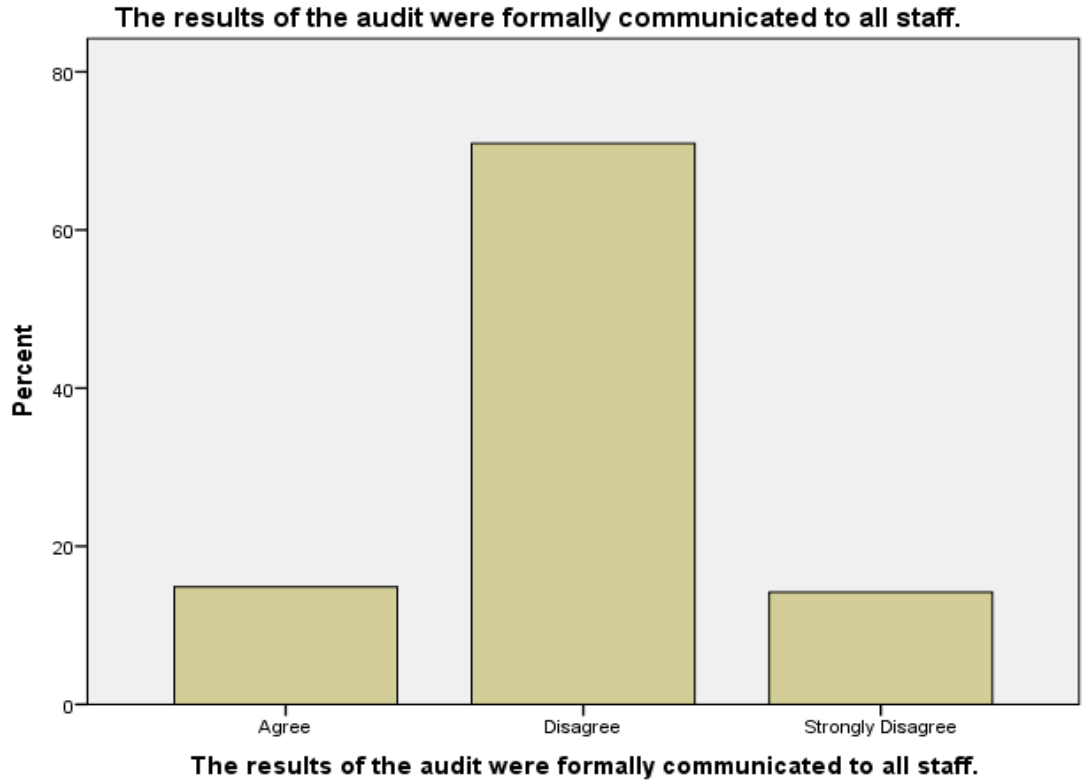

The audits in the clinics are being conducted to some extent, although there is need for improvement to ensure patient safety. The frequency table and the bar graph above show that of the 148 participants, 80(65+15), i.e.54% (43.9%+10.1%) disagreed to an audit being conducted in the past six months on adverse events in the clinic and 68(65+3) participants, i.e.46% (43.9%+2.0%) agreed to that statement.

**Table 4.28 Frequency table depicting whether or not the results of the audit were formally communicated to all staff.**

**The results of the audit were formally communicated to all staff.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Agree | 22 | 14.9 | 14.9 | 14.9 |
| | Disagree | 105 | 70.9 | 70.9 | 85.8 |
| | Strongly Disagree | 21 | 14.2 | 14.2 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.28 Bar graph depicting whether or not the results of the audit were formally communicated to all staff.**



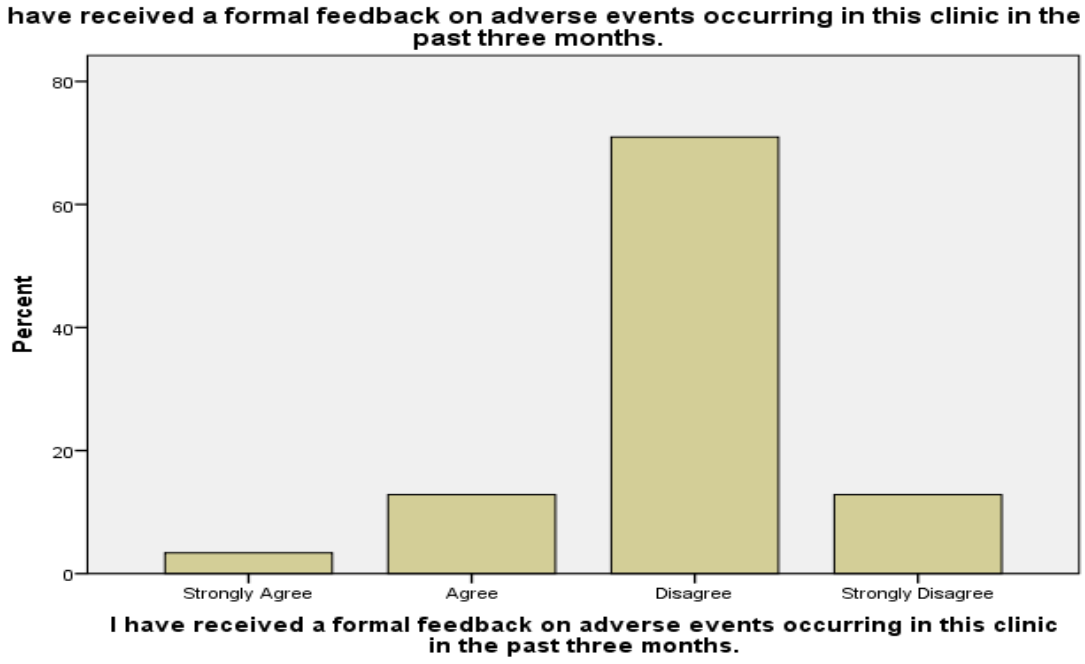

The results to the audits are not formally communicated to all staff as illustrated in the above frequency table and bar graph. 126(105+21) participants, i.e.85% (70.9%+14.1%) disagreed that audit results were communicated and only 22 i.e.15% participants agreed.

**Table 4.29 Frequency table showing whether or not the participants have received a formal feedback on adverse events occurring in the clinic in the past three months.**

**I have received a formal feedback on adverse events occurring in this clinic in the past three months.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 5 | 3.4 | 3.4 | 3.4 |
| | Agree | 19 | 12.8 | 12.8 | 16.2 |
| | Disagree | 105 | 70.9 | 70.9 | 87.2 |
| | Strongly Disagree | 19 | 12.8 | 12.8 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.29 Bar graph showing whether or not the participants have received a formal feedback on adverse events occurring in the clinic in the past three months.**



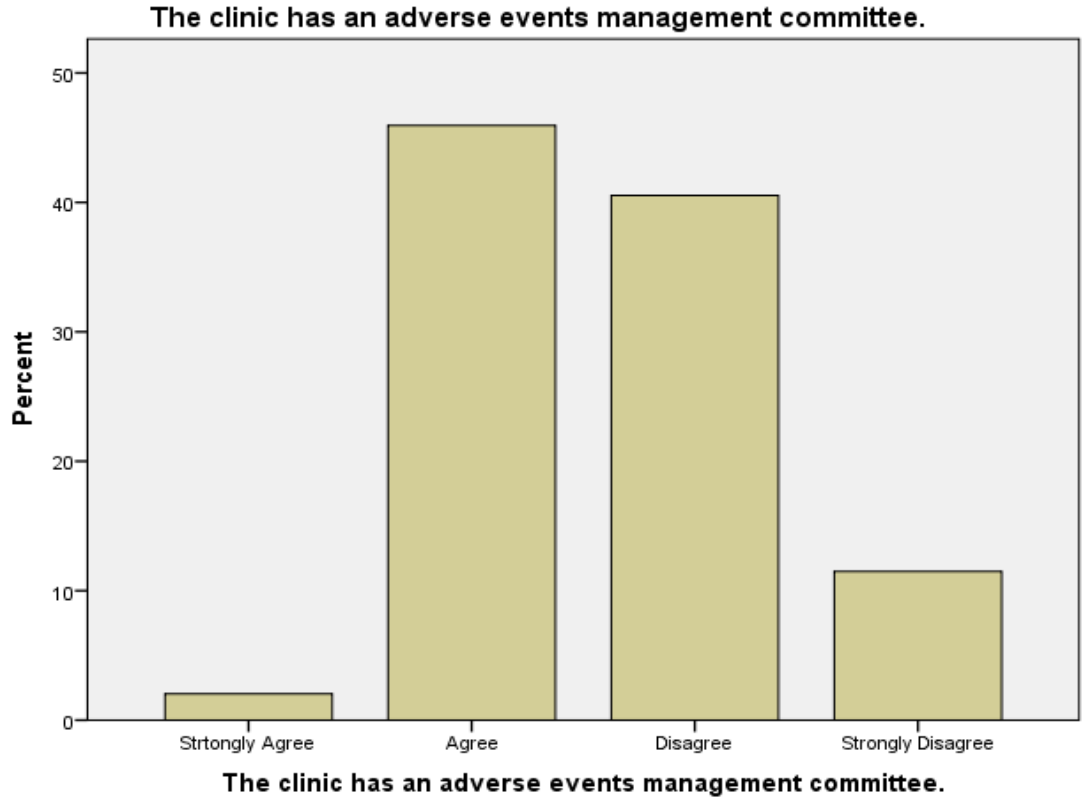

Formal feedback is not conveyed to staff after occurrence of adverse events in clinics as shown by the frequency table and bar above. The majority, 124(105+19) participants, i.e.83.8% (70.9%+12.8%) disagreed to that statement and only 24(19+5), i.e.16.2% (3.4%+12.8%) agreed.

**Table 4.30 Frequency table depicting whether or not the participants believe that the clinic has an adverse events management committee.**

**The clinic has an adverse events management committee.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 3 | 2.0 | 2.0 | 2.0 |
| | Agree | 68 | 45.9 | 45.9 | 48.0 |
| | Disagree | 60 | 40.5 | 40.5 | 88.5 |
| | Strongly Disagree | 17 | 11.5 | 11.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.30 Bar graph depicting whether or not the participants believe that the clinic has an adverse events management committee.**



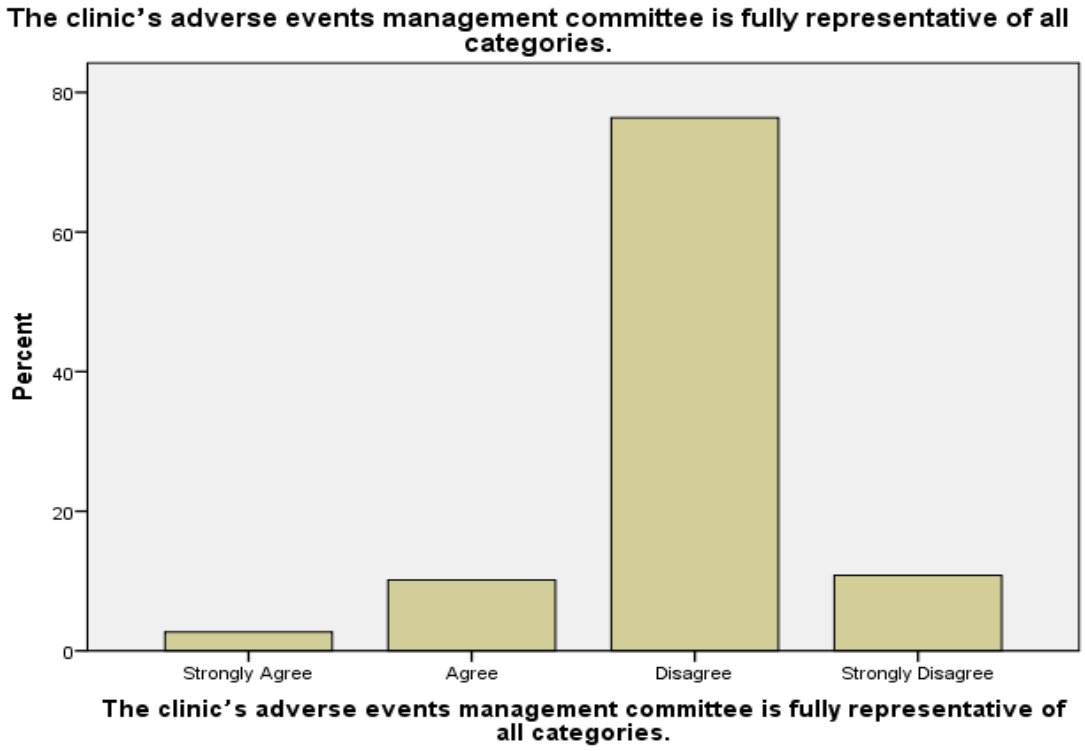

The frequency table and bar the graph show that 71(68+3) participants, i.e.48% (45.9%+2.0%) agreed that clinic had adverse events management committee and 77(60+17) participants, i.e.52% (40.5%+11.5%) did not agree to that statement. The clinics need to improve on having these committees as they assist in improving patient safety.

**Table 4.31 Frequency table showing whether or not the participants are of the view that the clinic's adverse events management committee is fully representative of all categories.**

**The clinic's adverse events management committee is fully representative of all categories.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 4 | 2.7 | 2.7 | 2.7 |
| | Agree | 15 | 10.1 | 10.1 | 12.8 |
| | Disagree | 113 | 76.4 | 76.4 | 89.2 |
| | Strongly Disagree | 16 | 10.8 | 10.8 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.31 Bar graph showing whether or not the participants are of the view that the clinic's adverse events management committee is fully representative of all categories.**



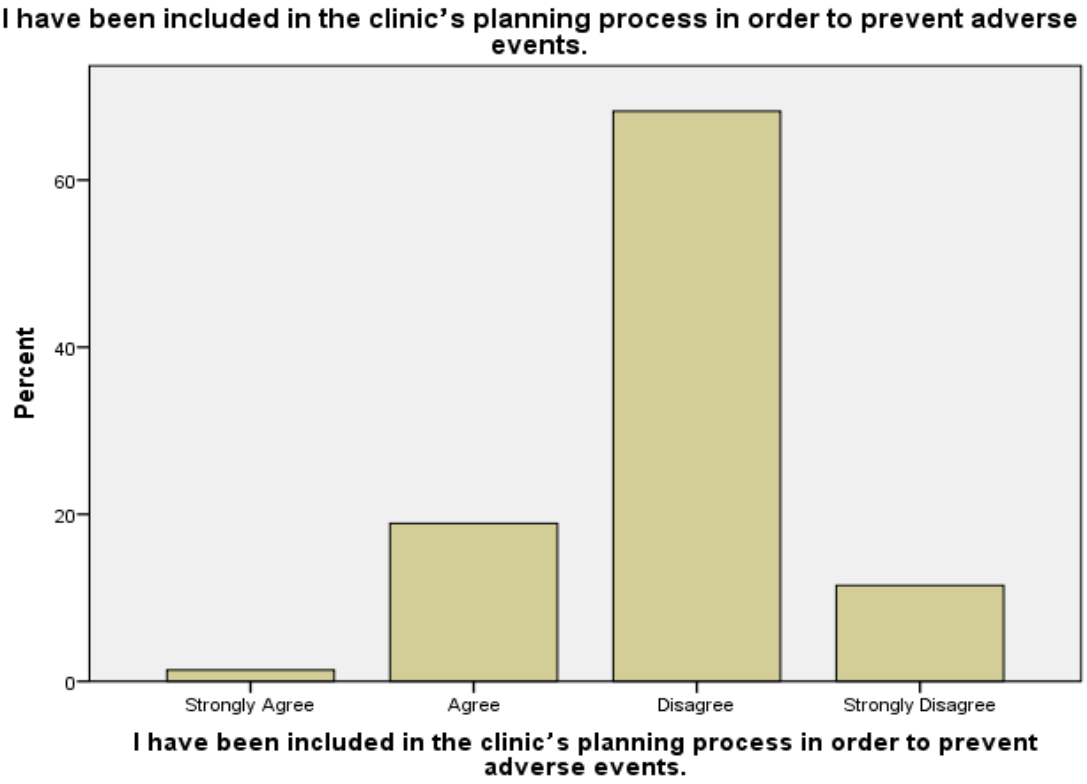

The frequency table and the bar graph above illustrate that the clinic adverse events management committees are not fully representative of all categories. 129(113+16) participants, i.e.87.2% (76.4%+10.8%) disagreed to the statement and 19(15+4) participants, i.e.12.8% (2.7%+10.1%) agreed to that statement.

**Table 4.32 Frequency table showing whether or not the participants have been included in the clinic's planning process in order to prevent adverse events.**

**I have been included in the clinic's planning process in order to prevent adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 2 | 1.4 | 1.4 | 1.4 |
| | Agree | 28 | 18.9 | 18.9 | 20.3 |
| | Disagree | 101 | 68.2 | 68.2 | 88.5 |
| | Strongly Disagree | 17 | 11.5 | 11.5 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.32 Bar graph showing whether or not the participants have been included in the clinic's planning process in order to prevent adverse events.**



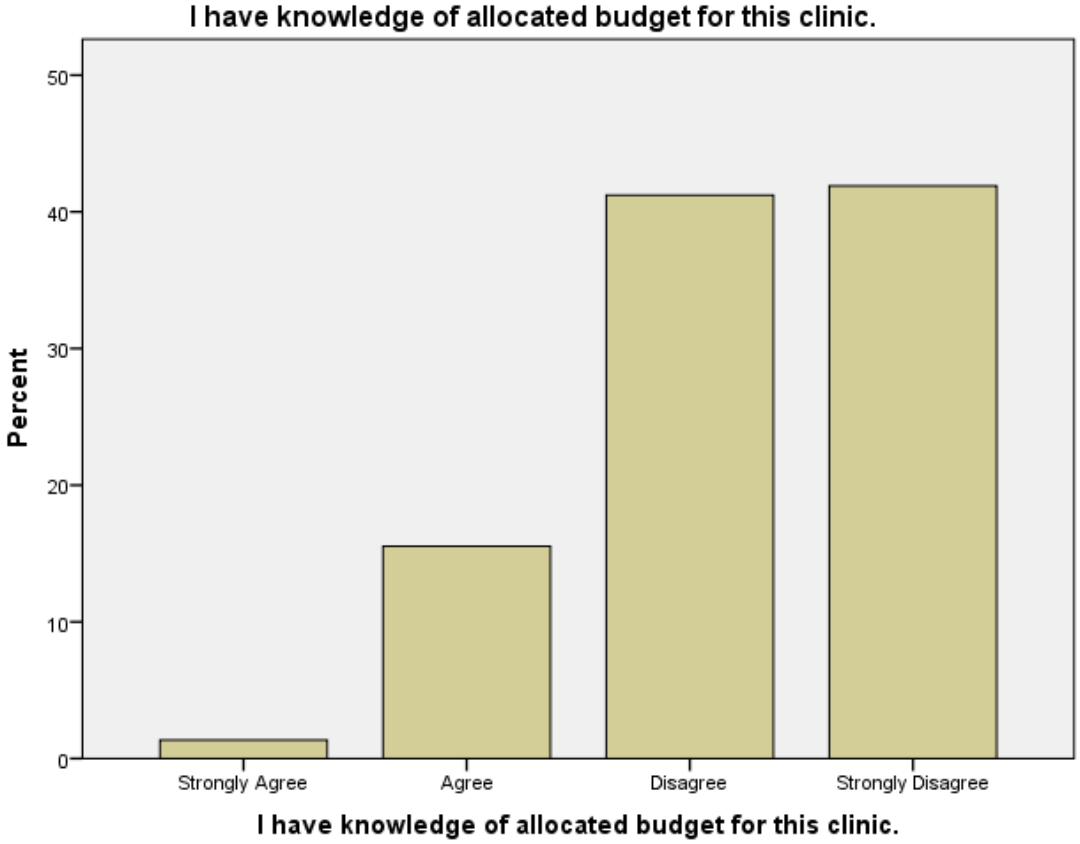

The clinics do not include staff in the planning process in order to prevent adverse events as illustrated by the frequency table and bar graph above. 118(101+17) participants, i.e.79.7% (68.2%+11.5%) disagreed to the statement and only 30(28+2) participants, i.e.20.3% (1.4%+18.9%) agreed to having been included.

**Table 4.33 Frequency table showing whether or not that participants have knowledge of allocated budget for this clinic.**

**I have knowledge of allocated budget for this clinic.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 2 | 1.4 | 1.4 | 1.4 |
| | Agree | 23 | 15.5 | 15.5 | 16.9 |
| | Disagree | 61 | 41.2 | 41.2 | 58.1 |
| | Strongly Disagree | 62 | 41.9 | 41.9 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.33 Bar graph showing whether or not that participants have knowledge of allocated budget for this clinic.**



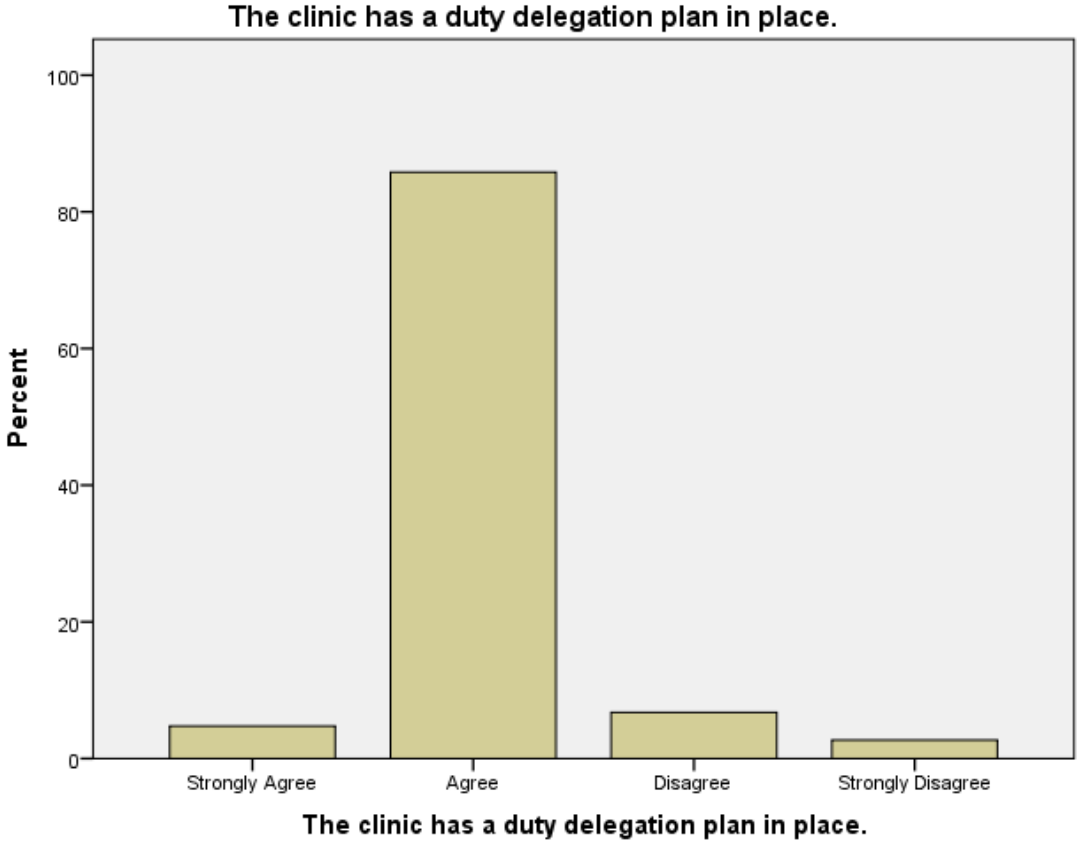

Clinic budgets are not communicated to staff as illustrated by the above frequency table and bar graph. 123(61+62) participants, i.e.83.1% (41.2%+41.9%) had no knowledge of clinic budget, only 25(23+2), i.e.16.9% (1.4%+16.9%) had knowledge of the budget.

**Table 4.34 Frequency table depicting whether or not the participants believe that the clinic has a duty delegation plan in place.**

**The clinic has a duty delegation plan in place.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 7 | 4.7 | 4.7 | 4.7 |
| | Agree | 127 | 85.8 | 85.8 | 90.5 |
| | Disagree | 10 | 6.8 | 6.8 | 97.3 |
| | Strongly Disagree | 4 | 2.7 | 2.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.34 Bar graph depicting whether or not the participants believe that the clinic has a duty delegation plan in place.**




The clinics had duty delegation plan in place as illustrated by the above frequency table and bar graph. 134(127+7) participants, i.e.90.5% (4.7%+85.8%) agreed to the statement, and only 14(10+4), i.e.9.5% (6.8%+2.7%) disagreed to that statement.

**Table 4.35 Frequency table depicting whether the participants believe that the duty delegation plan is communicated to all staff members.**

**The duty delegation plan is communicated to all staff members.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 8 | 5.4 | 5.4 | 5.4 |
| | Agree | 125 | 84.5 | 84.5 | 89.9 |
| | Disagree | 11 | 7.4 | 7.4 | 97.3 |
| | Strongly Disagree | 4 | 2.7 | 2.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.35 Bar graph depicting whether the participants believe that the duty delegation plan is communicated to all staff members.**

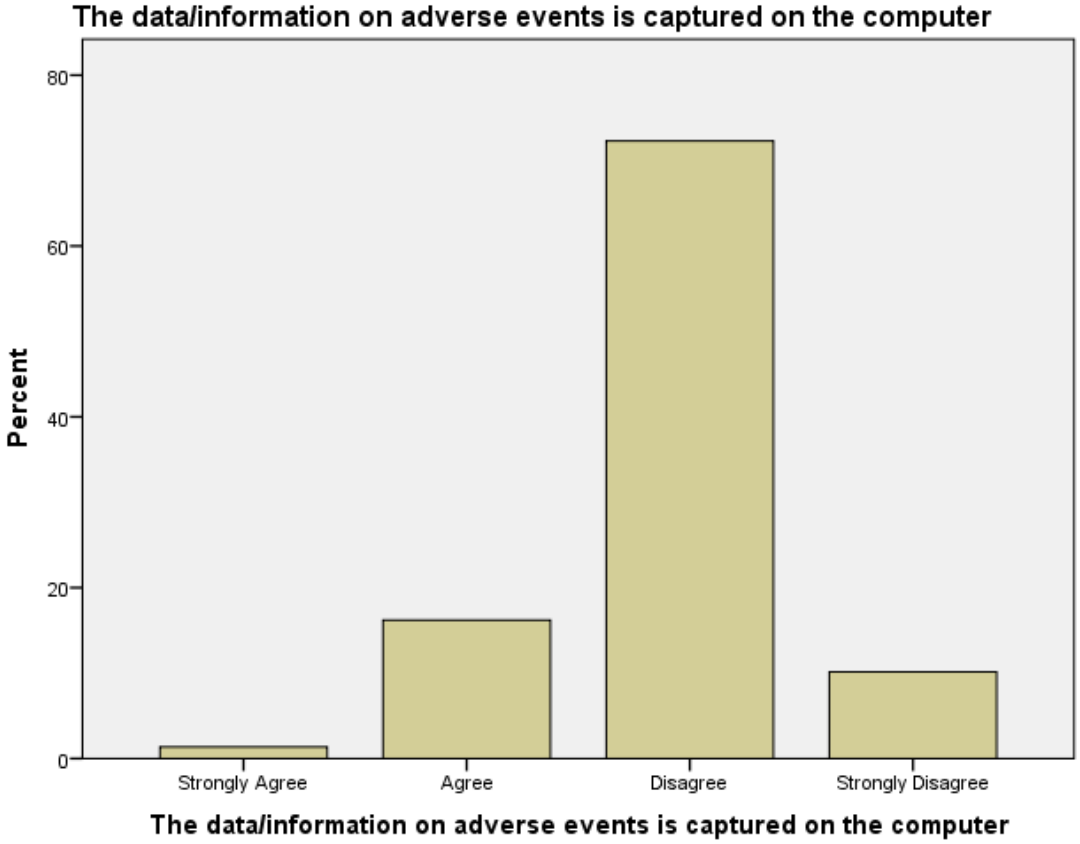

The staff was aware of duty delegation as it was communicated to all staff. The frequency table and the bar graph show that 133(125+8) participants, i.e.89.9% (5.4%+84.5%) agreed to the statement and 15(11+4) i.e.10.1% (7.4+2.7%) disagreed.

**Table 4.36 Frequency table depicting whether or not the participants believe that the data/information on adverse events is captured on the computer.**

**The data/information on adverse events is captured on the computer**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 2 | 1.4 | 1.4 | 1.4 |
| | Agree | 24 | 16.2 | 16.2 | 17.6 |
| | Disagree | 107 | 72.3 | 72.3 | 89.9 |
| | Strongly Disagree | 15 | 10.1 | 10.1 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.36 Bar graph depicting whether or not the participants believe that the data/information on adverse events is captured on the computer.**



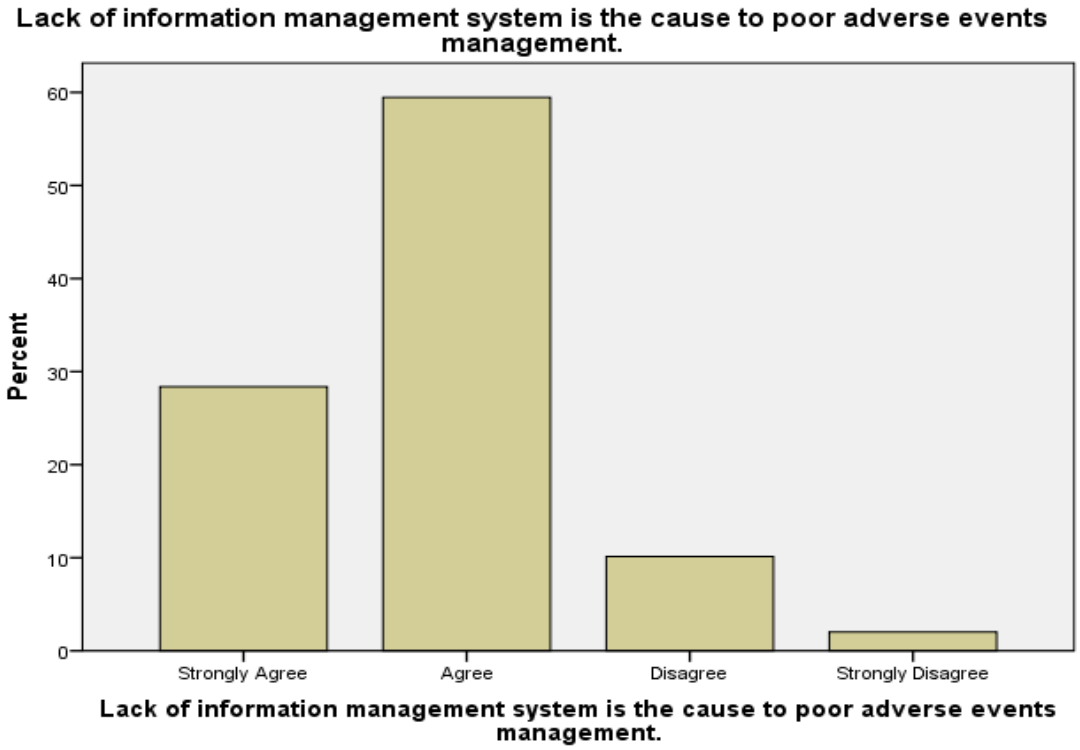

There is lack of information management as illustrated by the frequency table and the bar graph above. Of the 148 participants, 122(107+15), i.e.82.4% (72.3%+10.1%) disagreed to the statement that data/information on adverse events is captured on the computer and 26(24+2) participants, i.e.17.6% (1.4%+16.2%) agreed to the statement.

**Table 4.37 Frequency table showing whether or not the participants are of the view that lack of information management system is the cause to poor adverse events management.**

**Lack of information management system is the cause to poor adverse events management.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 42 | 28.4 | 28.4 | 28.4 |
| | Agree | 88 | 59.5 | 59.5 | 87.8 |
| | Disagree | 15 | 10.1 | 10.1 | 98.0 |
| | Strongly Disagree | 3 | 2.0 | 2.0 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.37 Bar graph showing whether or not the participants are of the view that lack of information management system is the cause to poor adverse events management.**



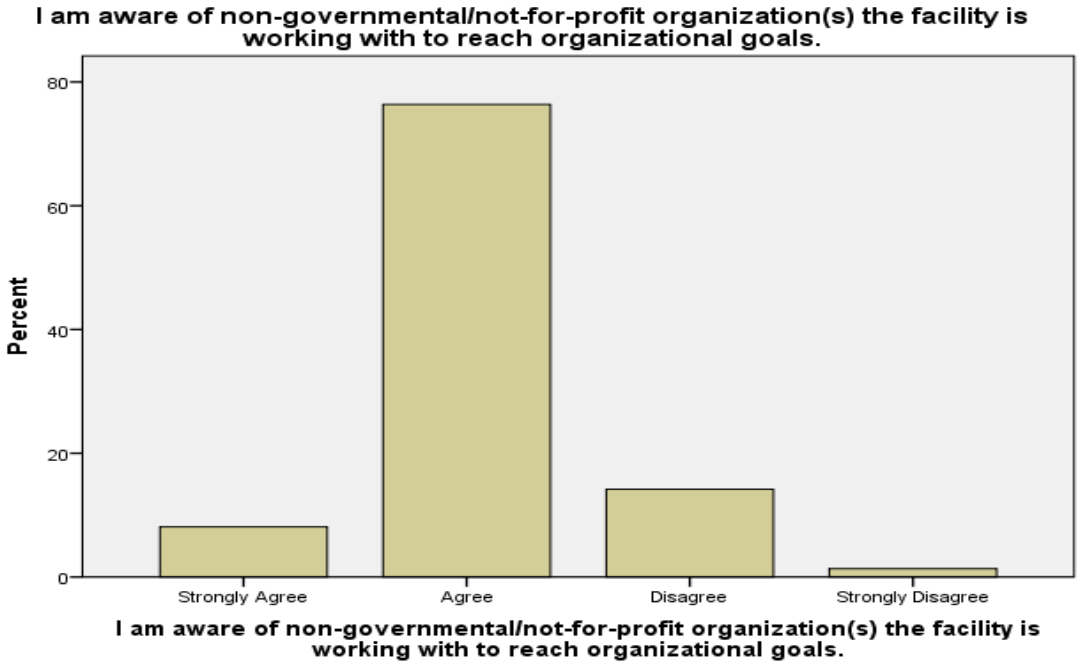

The frequency table and bar graph above illustrate that lack of information management system is the cause to poor adverse events management. 130(42+88) participants, i.e.87.9% (28.4%+59.5%) agreed to the statement and only18 (15+3) participants, i.e.12.1% (10.1%+2.0%) disagreed.

**Table 4.38 Frequency table depicting whether or not the participants are aware of non-governmental or not-for-profit organization(s) the facility is working with to reach organizational goals.**

**I am aware of non-governmental/not-for-profit organization(s) the facility is working with to reach organizational goals.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 12 | 8.1 | 8.1 | 8.1 |
| | Agree | 113 | 76.4 | 76.4 | 84.5 |
| | Disagree | 21 | 14.2 | 14.2 | 98.6 |
| | Strongly Disagree | 2 | 1.4 | 1.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.38 Bar graph depicting whether or not the participants are aware of non-governmental or not-for-profit organization(s) the facility is working with to reach organizational goals.**



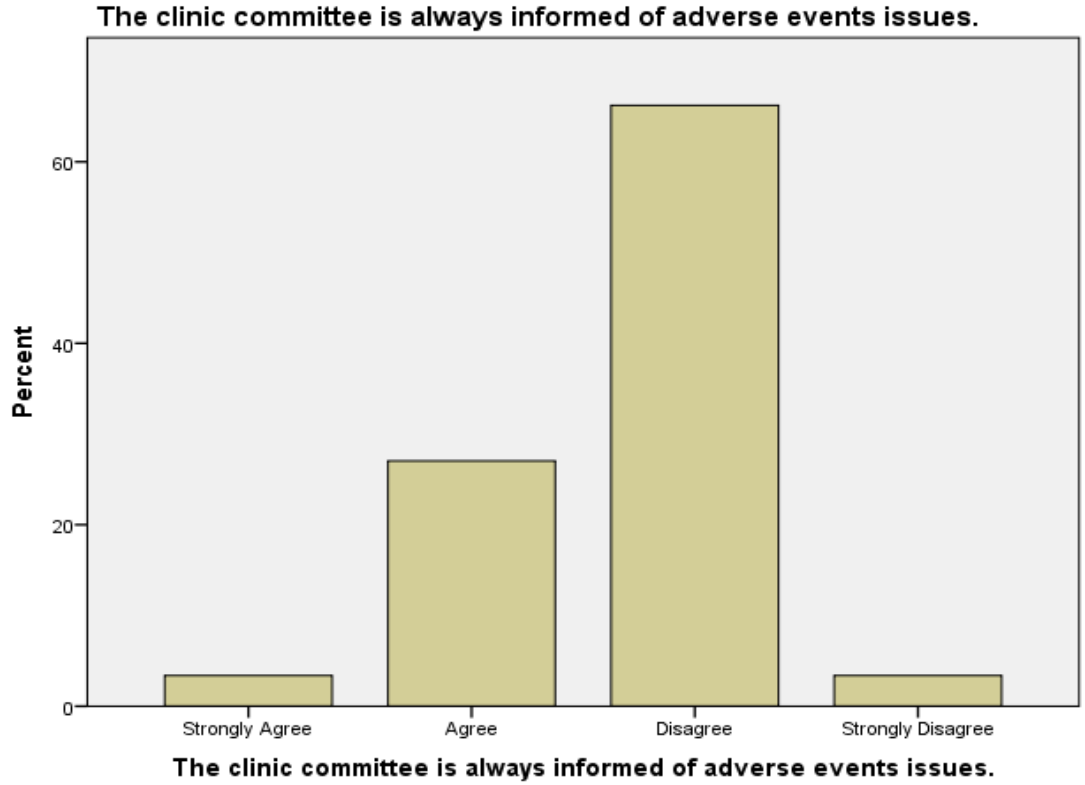

The non-governmental or not-for-profit organizations are visible in the clinics. The frequency table and the bar graph illustrate that majority of participants, 125(12+113), i.e.84.4% (8.1%+76.3%) had knowledge of non-governmental organizations working with clinics and only a small portion, 23(21+2), i.e. 15.6% (14.2%+1.4%)who did not.

**Table 4.39 Frequency table showing whether or not the participants are of the opinion that the clinic committee is always informed of adverse events issues.**

**The clinic committee is always informed of adverse events issues.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 5 | 3.4 | 3.4 | 3.4 |
| | Agree | 40 | 27.0 | 27.0 | 30.4 |
| | Disagree | 98 | 66.2 | 66.2 | 96.6 |
| | Strongly Disagree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.39 Bar graph showing whether or not the participants are of the opinion that the clinic committee is always informed of adverse events issues.**



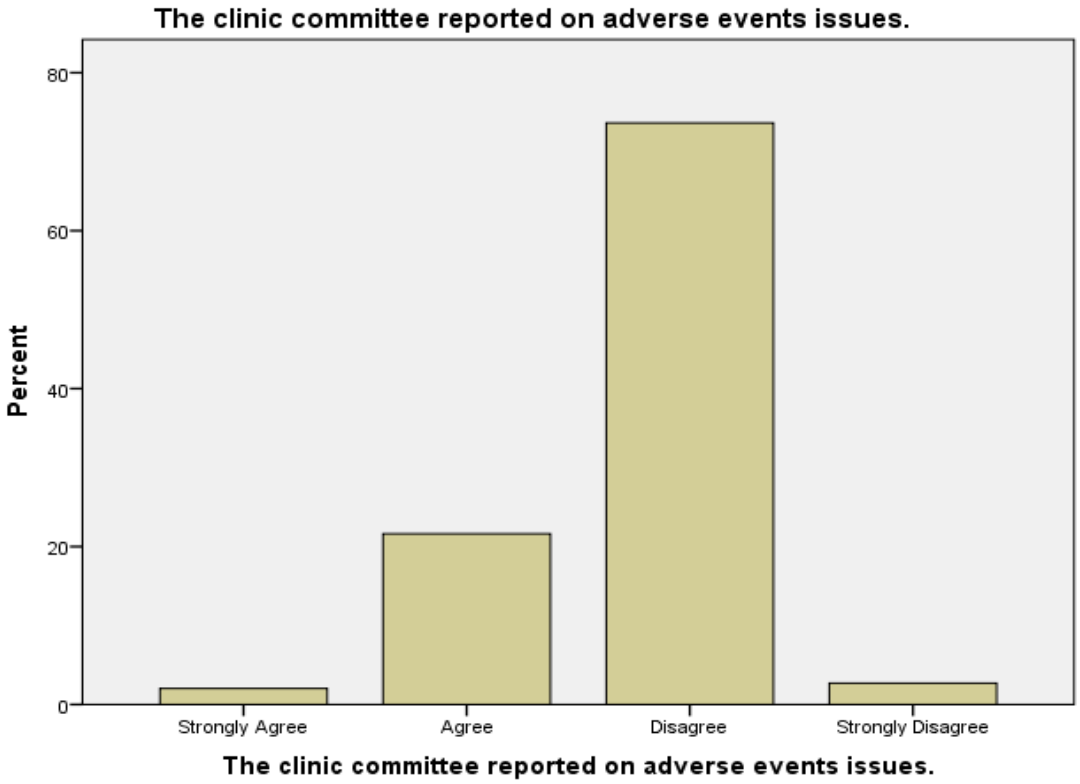

Community participation is not supported as illustrated by the frequency table and the bar graph above. 103(98+5) participants, i.e.69.6% (66.2%+3.4%) disagreed that the clinic committee is always informed on adverse events issues. Only 45(40+5) participants, i.e.30.4% (3.4%+27.0%) agreed to the statement.

**Table 4.40 Frequency table showing whether or not the participants are of the opinion that the clinic committee reported on adverse events issues.**

**The clinic committee reported on adverse events issues.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 3 | 2.0 | 2.0 | 2.0 |
| | Agree | 32 | 21.6 | 21.6 | 23.6 |
| | Disagree | 109 | 73.6 | 73.6 | 97.3 |
| | Strongly Disagree | 4 | 2.7 | 2.7 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.40 Bar graph showing whether or not the participants are of the opinion that the clinic committee reported on adverse events issues.**



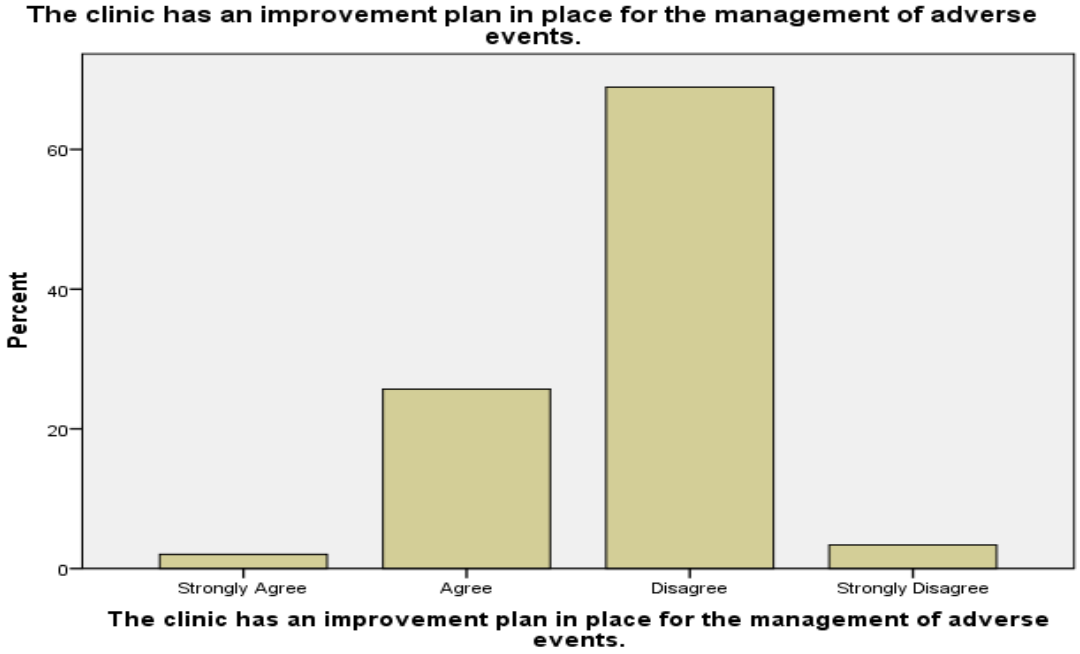

Community participation is not encouraged as illustrated by the frequency table and the bar graph above. Only 35(32+3) participants, i.e.23.6% (2.0%+21.6%) agreed that clinic committee reported on adverse events issues. 113(109+4) participants, i.e.76.3% (73.6%+2.7%) disagreed to that statement.

**Table 4.41 Frequency table depicting whether or not the participants believe that the clinic has an improvement plan in place for the management of adverse events.**

**The clinic has an improvement plan in place for the management of adverse events.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 3 | 2.0 | 2.0 | 2.0 |
| | Agree | 38 | 25.7 | 25.7 | 27.7 |
| | Disagree | 102 | 68.9 | 68.9 | 96.6 |
| | Strongly Disagree | 5 | 3.4 | 3.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.41 Bar graph depicting whether or not the participants believe that the clinic has an improvement plan in place for the management of adverse events.**



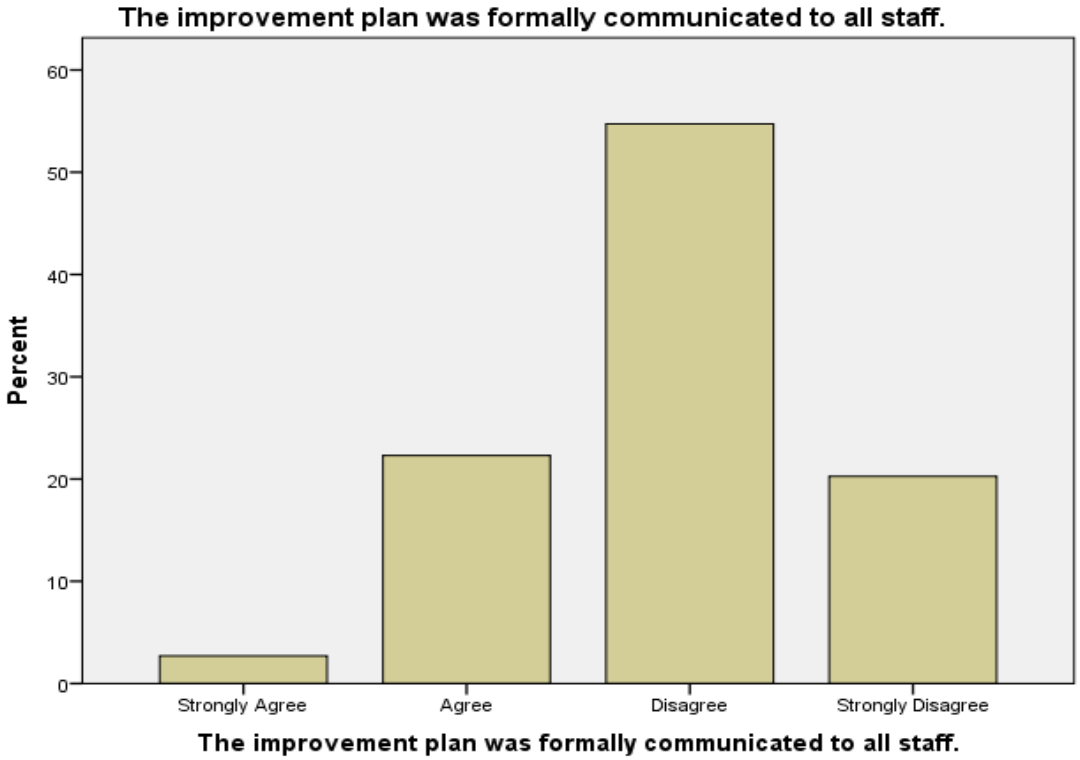

Most clinics do not have improvement plan in place. The frequency table and the bar graph above show that 107(102+5) participants, i.e. 72.3% (68.9%+3.4%) disagreed that clinic had improvement plan in place and 41(38+3), i.e.27.7% (2%+25.7%) participants agreed.

**Table 4.42 Frequency table showing whether or not the participants believe that the improvement plan was formally communicated to all staff.**

**The improvement plan was formally communicated to all staff.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 4 | 2.7 | 2.7 | 2.7 |
| | Agree | 33 | 22.3 | 22.3 | 25.0 |
| | Disagree | 81 | 54.7 | 54.7 | 79.7 |
| | Strongly Disagree | 30 | 20.3 | 20.3 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.42 Bar graph showing whether or not the participants believe that the improvement plan was formally communicated to all staff.**



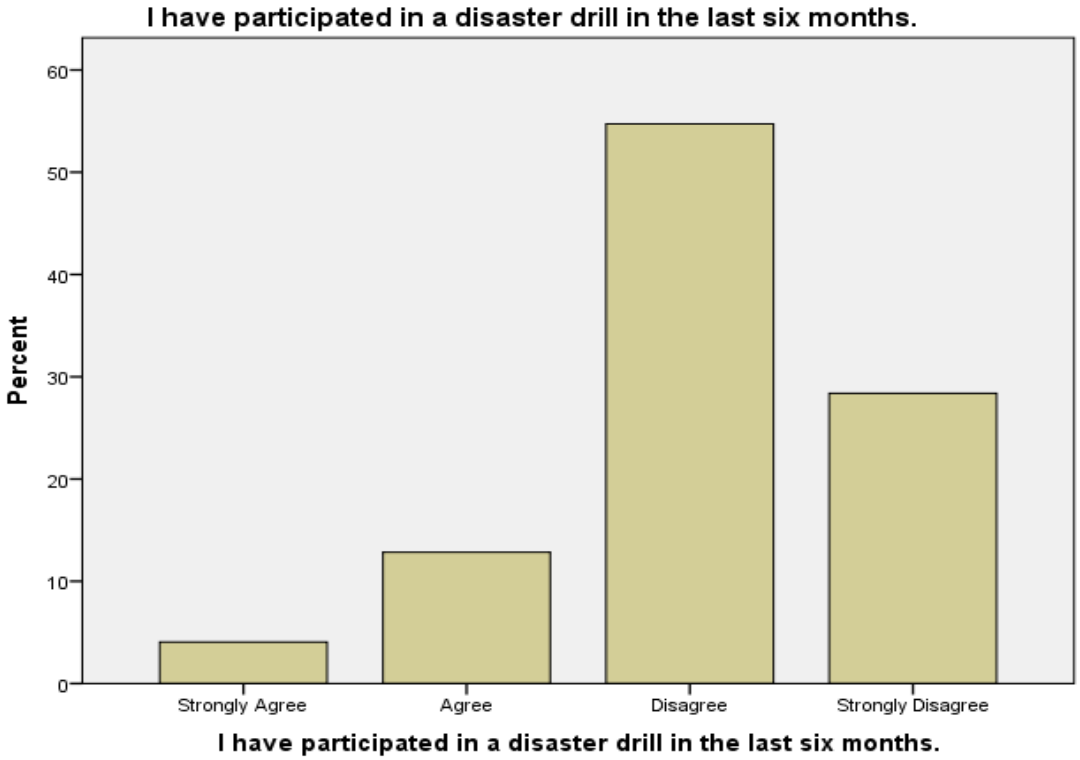

Improvement plans are not formally communicated to all staff. The above frequency table and bar graph above show that 37(33+4), i.e.25% (2.7%+22.3%) participants agreed that the improvement plan was formally communicated to all staff and the majority participants, 111(81+30), i.e.75% (54.7%+20.3%) disagreed to that statement.

**Table 4.43 Frequency table depicting whether or not the participants have participated in a disaster drill in the last six months.**

I have participated in a disaster drill in the last six months.

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 6 | 4.1 | 4.1 | 4.1 |
| | Agree | 19 | 12.8 | 12.8 | 16.9 |
| | Disagree | 81 | 54.7 | 54.7 | 71.6 |
| | Strongly Disagree | 42 | 28.4 | 28.4 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.43 Bar graph depicting whether or not the participants have participated in a disaster drill in the last six months.**



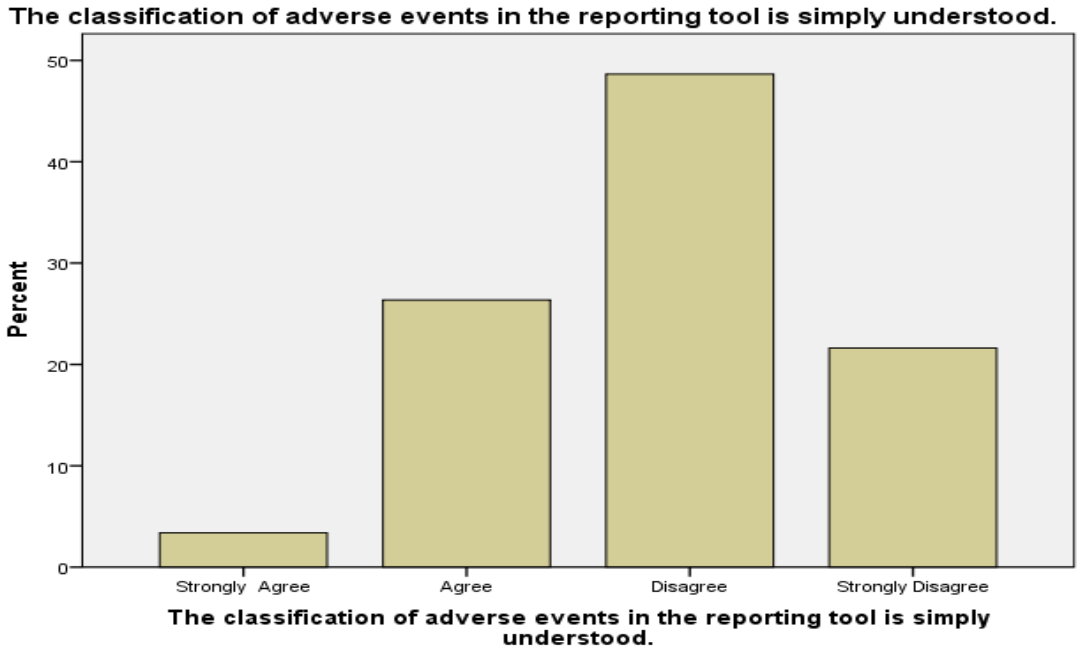

Clinics are not ready to handle disasters. The frequency table and the bar graph above show that only 25(6+19) participants, i.e.16.9% (4.1%+12.8%) participated in disaster drills conducted in clinics in the last six months compared to 123(81+42) participants, i.e.83.1% (54.7%+28.7%) who did not.

**Table 4.44 Frequency table showing whether or not the participants are of the opinion that the classification of adverse events in the reporting tool is simply understood.**

**The classification of adverse events in the reporting tool is simply understood.**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Strongly Agree | 5 | 3.4 | 3.4 | 3.4 |
| | Agree | 39 | 26.4 | 26.4 | 29.7 |
| | Disagree | 72 | 48.6 | 48.6 | 78.4 |
| | Strongly Disagree | 32 | 21.6 | 21.6 | 100.0 |
| | Total | 148 | 100.0 | 100.0 | |

**Figure 4.44 Bar graph showing whether or not the participants are of the opinion that the classification of adverse events in the reporting tool is simply understood.**




The frequency table and the bar graph above show that the majority of participants, 104(72+32), i.e.70.2% (48.6%+21.6%)disagreed that the classification in the adverse events reporting tools is simply understood and only 44(5+39) participants, i.e. 29.8% (3.4%+26.4%) agreed.

## 4.3 CONCLUSION

This chapter focused on data analysis. The frequency tables and bar graphs clearly indicated the participants' opinions on all forty questions. The extent to which the objectives of the study were met and research questions answered is clearly demonstrated by the tables and bar graphs. One can note that results are discussed in details in the next chapter.

# CHAPTER 5
# DISCUSSION, RECOMMENDATIONS AND CONCLUSION

## 5.1 INTRODUCTION

This chapter provides a broad discussion of adverse events management. This is done by providing examples of court cases that the Department of Health has had to deal with as a result of poor management of adverse events. The chapter goes further to provide a discussion based specifically on the answers that were given by the respondents. The chapter also provides examples of types of adverse events that are often experienced by Health facilities and their effects on the victim, family, and community in general. The chapter then provides answers to the research questions. The chapter also provides an indication whether or not each hypothesis was accepted. The conclusion provides an indication of whether or not the study has been able to meet its objectives.

## 5.2 CLAIMS DUE TO ADVERSE EVENTS

According to Mbonambi and Broughton (2013), the Department of Health faced lawsuits amounting to approximately R1 billion, most cases are adverse events related to obstetrics and gynaecological practice. The hospital facing the biggest number of claims was Prince Mshiyeni Memorial Hospital, facing sixteen claims amounting to approximately R100 million. Prince Mshiyeni Memorial Hospital was followed by King Edward VIII Hospital which faced ten claims amounting to approximately R62.8 million. The next hospital was Addington Hospital with fifteen lawsuits amounting to approximately R47.2 million. According to the chairman of the Medical Association of South Africa Dr Norman Mabaso, the public health is serving 80% of the population and will therefore face more litigation than the private hospitals. The adverse events that have cost the Department of Health millions of rand range from diagnosis errors, diagnostic procedures, and treatment errors. Examples of these cases are given below.

In the financial year 2006/2007 there was a case at Inkosi Albert Luthuli Hospital where a patient came to the hospital for a brain-tumour biopsy. In such a procedure the patient is supposed to be subjected to a drip and that drip must be continuously monitored to ensure that the drip site is intact and is unobstructed. It so happened that

in this case, due to the nursing staff's failure to monitor the drip, the site where the drip was inserted developed gangrene in the patient's thumb and index finger. The KwaZulu-Natal Department of Health incurred a claim of R1 million as a result of that error. This error could be classified as a treatment error.

In 2013 The KwaZulu-Natal Department of Health offered an out of court settlement of R7 million to the mother of a boy who attended Prince Mshiyeni Memorial Hospital after breaking his ankle and leg when he fell out of a tree in April 2008. The boy was treated as an out-patient and his leg was put on cast. A couple of days later the boy and his mother returned complaining of the pain and the mother was told that it was normal for such pain to occur on such a fracture. The mother and the boy were therefore turned away. A few days later the boy could not move his toes and when he was taken back to the hospital, upon removal of the cast the doctor found that the leg was no longer getting the blood supply and as a result the leg had to be amputated. This was pure negligence hence the department realized it was not going to win the court case on this matter. This could be viewed as a diagnostic error since the nursing staff and or doctor failed to assess the cause of pain.

In 2006 a woman who visited Prince Mshiyeni Memorial Hospital complaining of labour pains was turned away without having been assessed to establish the stage of labour. The woman gave birth two days later to a paralysed baby. The woman had attended regular clinic visits and had not been informed nor referred for suspected abnormalities. All pregnant women are subjected to an ultrasound scan within 26 weeks of gestation to detect any abnormalities with an unborn child. On presentation to the health facility with labour pains the women is supposed to be examined to assess the stage of labour. If the patient is in active labour she is admitted so that she can be closely monitored on the progress of labour. In the above-mentioned case the nurses failed to correctly diagnose that the patient was in labour, a case of diagnosis error.

## 5.3 ADVERSE EVENTS IN PRIMARY HEALTH CARE CLINICS

There are a number of adverse events that are occurring in the primary health care clinics in uMgungundlovu. The researcher will discuss adverse events that have occurred from 2013/2014 to 2014/2015 in the fixed clinics.

### 5.3.1 Adverse events related to transportation

Most clinics do have access to transport that is being utilized by the school health, family health team and tracer teams. These cars cannot be used to transport a patient needing further medical care, as these are not designed to do so. The clinics do not have ambulances stationed in their premises even if the clinics are required to provide maternity services. This poses a challenge when clinics are faced with an emergency needing urgent referral for further care.

Ambulance delays continue to be a problem in the clinics. In one incidence a baby died after a failed resuscitation as ambulances never came. On the day of the incidence it was reported by the local newspaper that ambulances were on standby at the agricultural royal show for any medical emergencies. Apparently there was no coordinated planning for calls from health facilities. Most of the times when ambulances do arrive, they will tell you that they prioritize house calls as patients in clinics are under medical care forgetting that clinics do not have doctors and specialized equipment to keep patient alive.

Another incidence is that of a woman who requested the night nurses to come to attend to her outside the clinic as that family had called on an ambulance which has delayed, when nurses explained that the protocol does not allow them to go and fetch patients outside clinic, the patient was advised to come to the clinic. When the patient eventually came to the clinic, the woman was having a cord prolapse with no pulsation, meaning the umbilical of the unborn child was protruding through the birth canal without pulse and that meant no sign of life to the baby. The woman was assisted, with difficulty to deliver the baby due to language barrier as the woman was from outside South Africa. The woman was progressed for health after delivering a 28 week baby who was dead and the report was handed over to the day shift nurses.

### 5.3.2 Equipment related adverse events

There have been incidences where medical equipment gives wrong reading. For example clinics were supplied with wrist blood pressure monitoring machines that are not suitable to cope with a huge workload. These devices were delivered to clinics without consultation with clinic managers. Other incidences include the delivery of medical devices to clinics whereby the staff is not properly trained on how to operate them. For example, a drip monitoring equipment requires skill to operate so that a patient is not overloaded with intravenous fluids. The companies who will offer training on the usage of such devices should deliver these special equipments instead of the deliveries being made by an ordinary hospital driver. The existing reporting tool does not cater for this type of adverse event that occur as a result of failed equipment, the tool caters for deaths and serious disability caused by a defective device. Reporting of near misses offer a good teaching opportunity and this can prevent serious disability and death.

### 5.3.3 Policies and Protocols related adverse events

There is limited availability of protocols that should aim to deal with various adverse events management issues in the clinics. These issues are patient record management, patient identification, dealing with near misses, sexual abuse of patients and dealing with death in a clinic to mention but a few. For example, a protocol on protecting female patients against potential sexual abuse must be developed. The protocol can state that no male healthcare professional can perform a vaginal examination when alone with a patient. There could also be a protocol that deals with the handling of patients that die in the clinics as well as protocols that deal with the handling of cases where babies are born dead. For example there was a case where a patient whose baby died at birth. The nurses allowed the mother to take the dead body home, something that should not have been allowed. It later emerged that the baby corpse was eventually buried by the mother at her residence due to the fact that she was a foreigner and had no financial means to bury the child. This is a reflection of unavailability of protocols or the monitoring thereof. When a patient dies in the clinic, it is the responsibility of the clinic to call for an undertaker, at the expense of the family, to collect the corpse for keeping in the mortuary until burial. In this case the nurses did not follow procedure, which unfortunately is not documented, but is a

procedure by experience since hospitals do not allow clinics to refer copse to them. There is no standard protocol that gives guidance as to how destitute families who experience death of their members in the clinics must be dealt with.

The study have showed that majority of nurses (77%) were aware of reporting procedures. It could be that the benefits of adverse events reporting and recording are not understood as the study showed that 39.9% omitted to report adverse events. For example a woman gave birth unattended and the newborn baby hit the floor. The newborn baby has since developed seizures. This adverse event was not reported and the manager came to know about it through patient complain six weeks after the incidence had occurred. On investigating the incident, it was found that there were no records kept at the clinic of the patient's medical history. The patient prior to the incident had not booked pregnancy therefore did not bring a maternity record to the clinic on the day of incidence. The procedure is that the health facility must keep necessary documentation of the woman who has given birth and that of her baby. Due to lack of knowledge on how to deal with such a case the nurses did not obtain the details of the patient.

### 5.3.4 Knowledge and Skills related adverse events

An incident reflecting skills challenge is an example of failure to ask and record history of known allergies by the patient. A patient had a medicine adverse event and the medical records did not show recording of known allergies. It is a standard protocol that all patients are asked this question. The outpatient record that was used for this patient did not have the pre-written space allowing the health worker to ask for known allergies. The nurse lacked history-collecting skills that require that patients should be asked of their known allergies. This is done whether the patient record accommodates this or not. Another example of skills challenges occurred when a patient that was treated in one of the uMsunduzi clinics, was found collapsed just outside the facility. On investigating the patient' record it was apparent that the nurse failed to do proper diagnosis, treatment and care. The patient was re-examined and found to have a serious form of pelvic inflammatory disease, with suspected pregnancy. This type of diagnosis requires that the patient be referred to a hospital for urgent attention. Because of the ongoing ambulance strike in the KwaZulu-Natal

Provincial Health Department at that time, the nurse assumed that there would be no ambulance available. The nurse could have reported this matter to the operational manager who would have called the ambulance managers to authorize transportation using private ambulances.

There have been incidences of missing documents and these incidents go unreported, as the reporting tool does not cater for such. The patient identification is not stressed as patients get treated using other patient records. It is a required norm that before attending to a patient, the nurse needs to positively identify the patient being attended to. This study showed that 97.3% of participants are of the opinion that lack of proper identification can lead to adverse events. This can be done by asking the name, age and the date of birth for the patient as well as ascertaining what type of treatment the patient is on. Nurses do not positively identify patients when taking bloods. This result in patients being allocated wrong results and automatically wrong diagnosis and treatment. Another example of breached patient safety is the tendency of not writing the patient's medication. Normally when issuing the patient with medication, it should be clearly written with the patient name, the register number as well as instructions on how to take medicines to avoid taking medicine incorrectly or taking medicine that does not belong to the patient.

The primary health care training standard is so low that even the person charged with coordinating the course is not skilled enough to cope with the responsibility of producing well skilled nurses. The reason might be that she also has a responsibility to coordinate the functioning of Primary Health Care Services for the uMsunduzi municipality clinics. This poor training program results in nursing giving wrong diagnosis and treatment to patients. There is no onsite training to ensure that the nurses that are treating patients have the knowledge and skill to do so. Birth complications are a result of limited skills of maternity nurses. For effective patient safety there should be nurses with advanced midwifery skills that enable identification, preventing and managing of complications of birth.

Delayed treatment is common as patients wait for long for their medical records and before being attended to by a nurse or a doctor, clinics waiting times ranges from two

to six hours before patients are attended to by a nurse or a doctor. In some cases patients get booked for doctor and would wait for a week or more before being seen by a doctor who is not always at the clinic. The department can be commended for ensuring that in most clinics there are doctors available on a daily basis. This step will assist to ensure that nurses are supported where there are difficult cases to deal with. Furthermore the Department of Health can ensure that in the clinics that are offering twenty-four hours of service, the doctors are available as well beyond office hours.

### 5.3.5 Adverse events related to decision-making

The researcher is of the opinion that the clinic managers or supervisors do not have sufficient autonomy. In many instances managers do not have a final say on the specifications needed for medical equipments and supplies that will enhance quality service delivery. The managers are not even allowed to attend the cash flow meetings that discuss clinic issues, which they better understand. Other autonomy related issues are clinics are expected to operate twenty-four hours seven days a week, but are not included in the planning process. The managers are only told to implement projects without having participated in the planning process. This has led to a situation where some clinics are open twenty-four hours even when the infrastructure is unable to cater for extra services and cannot have a decent delivery room that is well equipped to ensure a healthy mother and a healthy baby is delivered without complications. For example, in some clinics the nurses are not enough to be spread around all hours to ensure proper coverage, and in some cases infrastructure is not compatible to programs that are offered by the individual clinic. For example because of the highly infectious tuberculosis, waiting rooms as well as consultation rooms should be well ventilated. The buildings are old, with small windows that do not offer proper ventilation and doors are such that when a healthcare worker is sitting it is impossible to ensure that air circulation is through the door to the window with no cross infection from a highly infectious patient to the health worker. When a manager gets to motivate for redesigning of the building to meet the infection control specifications, it is a long-term effort that is not guaranteed to materialize. The infrastructure does not allow for patients without known allergies to medication to be put under observations. For example there was an incident of a patient who reacted to injection minutes after being given the injection. The patient was found lying in a toilet by fellow patients. In

a clinic patients are given immediate dosages and are required to leave so that the next patient can be served as there is no space and human resource to observe the patient.

Lack of autonomy also delays the process of aligning human resources to be compatible with services rendered. The clinic managers are not involved in the recruitment of staff. In most cases the clinics are functioning with half the size of the staff needed due to an old staffing norm that does not compliment the rising disease burden and the workload associated with such. Furthermore the nurses that are recruited in clinics are not all trained in primary health care and this decision to recruit unskilled nurses with the aim to train them as they work is a challenge as there are many incidences of wrong diagnoses and treatment. In a recent incident of a woman who visited the clinic in 2015, complaining of labour pains was advised to take a taxi to hospital without being assessed of her condition because the nurses were busy attending a motor vehicle accident victim. The woman eventually gave birth inside the taxi to an apparently 26 weeks lifeless baby. The nurses failed to make a decision because they were overwhelmed by the emergency task at hand and there were only two of them at that time. Should the operational managers be involved in the recruitment process, this will ensure that the required number of nurses with the required skills are recruited.

The clinics had been out of critical medication, mainly some antiretroviral, iron supplements, analgesia and tuberculosis drugs. Operational managers were told to negotiate with other provinces and ask for medication and collect for themselves. Apparently there is no clear indication as to the reason for medicine shortages but the managers were told that the challenges were contract related. This is another example of poor planning and communication. If there was proper monitoring there would be a contingency plan towards end of financial year to ensure that clinics order in bulks for medicines to be available. Medicine availability is one of the standards that clinics are measured on through the National Core Standards to ensure quality and patient safety. If doctors and nurses are forced to give medicines outside the required protocols, this put clients at risks of dependency and resistance to certain medicines. In the ordering of antiretroviral medicines, the clinics are expected to order from hospitals and not from the Provincial Medicine Supply Deport. The hospitals cut orders and not issue

according to calculated re-order levels. If clinics were given autonomy to order antiretrovirals direct from The Provincial Medicine Supply Deport, the shortage challenge would have been overcome as the Deport issue according to orders.

## 5.4 CONSEQUENCES OF POOR ADVERSE EVENTS MANAGEMENT

- **Departmental**

There are unexpected expenditures arising from claims filed by aggrieved families. The institutional image is tarnished by the reported serious adverse events and this lead to public lacking trust to the capability of the facility.

- **Patient/family**

The family is left with a burden of having to care for a disabled child for example. Should the person affected by an adverse event be a breadwinner, this means a change of circumstances where the breadwinner loses a job.

- **Healthcare worker**

Doctors will change careers or move from the public health where most of these adverse events and litigations occur to a private practice where the working conditions allow for limited adverse events. The school leavers will be filled with fear of choosing health profession as a career and this will mean that the Department will not reach the goal of having enough health care professionals to render services.

## 5.5 ANSWERS TO THE RESEARCH SUB- QUESTIONS

- **What are the reasons for poor adverse event management?**

In answering this research question the researcher posed questions on the questionnaire to assess whether or not the participants agreed to those reasons. This study has proved that there are various elements that are reasons for poor adverse events management. Firstly in respect to the lack of training on adverse events management as a cause to poor management of adverse events, the majority of the participants (93.9%: N139) agreed to this opinion. Secondly, the lack of proper patient identification was cited as another reason for poor adverse event management by the majority of participants (97.3%: N144). Thirdly, the tools that are available in the clinics are hospital oriented as confirmed by the majority of the participants

(72.3%) and that the classification in the reporting tool is not clearly understood as further confirmed by 70.2% of the participants. Furthermore the majority of participants (95.2%), agreed to the increased workload and lack of teamwork (97.3%) as reasons to poor adverse events management.

It is a requirement by the National Core Standards to conduct periodic quality assessments or audits, as they are popularly known. This study found that audits are not consistently done and feedback is not offered to all staff to ensure that there is improvement in patient safety. 54% of the participants agreed that audits had not been conducted and 85.8% agreed to feedback not being formally given to all staff. The clinics are expected to hold daily briefing sessions where issues like patient safety are discussed and this study has proved that this was not being done as majority of participants (83.8%), attested to that. The fact that the clinics did not have an information management system in place to ensure that data on adverse events is electronically captured to be available for teaching, monitoring and evaluation purposes is one reason for poor adverse events management as agreed to by 87.9% of participants.

The facilities need to improve in having adverse events committees that are fully representative of all categories of staff as per the National Core Standards requirement. Only 52% of participants agreed that clinics had these adverse events management committees and 86.2% of participants believed that these are not fully representative of all categories of staff.

- **Are available documents followed in the management of adverse events?**

Fair amount of staff have been orientated and trained on the adverse events policy, (69.6%: N103), which is commendable. The study showed that training is not an on-going process as participants (81.7% N: 121) were not trained in a six months period. No formal training either on the training programs. If there are scheduled training most participants are willing to undergo (95.3%: N141).

There is some lack of reporting of adverse events. 59 participants i.e. (39.9%) agreed to have omitted reporting adverse events in the last six-months. This should be worrying that about 40% of participants are not reporting which could be that that

they missed reporting serious adverse events. The 89(60.1%) participants that are reporting should be commended for doing so.

- **What is the current information management system in place?**

There is communication on adverse events management as the majority of participants (77% N: 114), are aware of reporting procedures. The study showed that there is no electronic capturing and storage of information on adverse events as the majority of participants agreed to that (82.4%). Capturing information electronically assist in ensuring that data is available for monitoring and evaluation and teaching purposes.

There is organizational structure that the staff knows about and there seem to be no challenge in approaching supervisors for reporting adverse events, it can be said that the reason the 39.9% participants are not reporting can be attributed to the shortcomings of the reporting tools.

- **Does the environment allow for effective adverse events management?**

There is poor planning around adverse events management. The majority of participants (79.7%), agreed to being excluded in the planning and about (83.1%) agreed to not knowing budget allocated to the clinic. The study showed that adverse events management is not included in the Employee Management and Development System (EPMDS) as 60.8% of participants agreed. The staff performance management did not include adverse events as 56.1% of participants agreed that performance was not fully monitored and 54% agreed that the performance is not evaluated.

Community involvement is not encouraged as the study showed that 76.3% of participants are of the opinion that the clinic committee is not encouraged to report on adverse events management issues and further 69.6% of participants believe the clinic do not report to the clinic committee on these issues. There are complaints mechanism in place in most facilities according to 83.8% of participants as well as 84.4% is aware of non-government organizational partnerships. These strategies can be used to assist in ensuring patient safety in clinics.

The study showed that the clinics are not ready for disasters. The majority of participants (83.1%) confirmed that there had been no disaster drills that were conducted in the clinics.

- **What quality improvement plan is in place for the management of adverse events?**

The study showed the unavailability of quality improvement plan as confirmed by the 72.3% of participants and also that where the plan is available it is not communicated to all staff.

## 5.6 ANSWER TO THE MAIN RESEARCH QUESTION

- **Why health workers are unable to implement adverse events management procedures that are in place?**

Based on the answers to the sub-research questions discussed above, it could then be concluded that the main reason why health workers are unable to implement adverse events management procedures that are in place is because there is insufficient ongoing training of staff on the issues of adverse events. Furthermore the tools that are available to report on are not user friendly to allow for staff members to report incidents as they occur in the clinic environment. Furthermore the study showed that there is poor planning for adverse events prevention like engaging staff in disaster drills, formulating adverse events management committee and conducting audits on adverse events.

## 5.7 ANSWERS TO THE RESEARCH HYPOTHESES

- **HO**: Nurses within the uMgungundlovu primary health care clinics have not been formally orientated/trained on policy on adverse events management.

The study showed that nurses have been orientated and trained on the policy on adverse events management. Therefore the hypothesis is rejected.

- **HO**: The structure and components of reporting tools are hospital oriented and therefore makes it difficult for nurses in the uMgungundlovu primary health care clinics to report adverse events.

The study showed that reporting tools are hospital orientated to allow the nurses to easily report on incidences that occur and related to clinic environment. Therefore the hypothesis is accepted.

- **HO**: Nurses performance on adverse events management is not part of their Employee Performance Management and Development assessment.

The study showed that the nurse's performance on adverse events is not part of EPMDS. Furthermore the study showed that the performance is not monitored and evaluated. Therefore the hypothesis is accepted.

- **HO**: There are proper communication systems in the uMgungundlovu primary health care clinics on adverse events management.

The study showed that there is no feedback that is given to staff after an audit has been conducted or when an adverse event has occurred. Furthermore the study showed that data on adverse events is not electronically captured. This hypothesis is therefore rejected.

- **HO**: The clinics within uMgungundlovu Health District inform their communities on patient safety.

The study showed that there is poor community involvement. The clinic committees that are representing communities are not reported on issues related to adverse events nor are they encouraged to report to clinic on these issues. The hypothesis is therefore rejected

## 5.8 RECOMMENDATIONS FOR IMPROVEMENT

- It is recommended that the adverse events management should be part of all training programs. Adverse events training should be incorporated to the primary health care course programs as well as during in-service training programs. Operational Managers must undergo a compulsory training that will equip them with skills on conducting monitoring and evaluation, coordination of programs and strategic planning.

- It is recommended that regular sustainable document reviews be implemented to ensure that correct accurate documentation is implemented, that important and critical information is recorded and this used as a learning situation for preventing documentation adverse events. In all documents in which adverse events are identified, there is missing information that limits further investigation.

- Performance management on adverse events should not be limited to the quality focal person, but be part of all health care workers so that the culture of patient safety is enforced. It is therefore recommended that the job descriptions be reviewed.

- Celebration of International Patient Safety Day as per the Health Calendar can create a sustainable awareness to patients as well as healthcare workers. Therefore, it is recommended that the International Patient Safety Day should be celebrated on a yearly basis and that this should be a key responsibility area of the district quality manager. In uMgungundlovu Health District this day has never been celebrated, even the researcher became aware of its existence during this study.

- It is recommended that the reporting tools should be primary health care orientated. The current reporting tools, which are found in the uMgungundlovu Health District Adverse Events Reporting Policy (2012), are hospital orientated and allow only for the supervisor to do the reporting without offering a template to be used by the health care worker. Furthermore the monthly summary is hospital orientated and does not allow for a reporting person to clarify and distinguish death and serious disability. The researcher further recommends that adverse events reporting tools for primary health care should be adopted from the Primary Health Care Clinical Risk Management Policy (2012), which clearly lists the risks that are specific to the primary health care setting. The reporting tool designed should contain elements that are informed by activities that are related to primary care. The researcher acknowledges that the tools cannot contain all the elements, but they must

ensure that at least the basic elements are included so that the tools are user friendly.

- In view of the limitations of the existing reporting tools the researcher has proposed tools that will be user friendly to allow for effective and efficient reporting. The proposed tools are in line with the uMgungundlovu Health District Adverse Events Reporting Policy (2012). Firstly it is the reporting tool by the health care worker who needs to report the incidence within twenty-four hours (see annexure 5). Secondly is the monthly reporting tool by the supervisor as a summary of all incidences (see annexure 6)

- It is recommended that operational managers be included in the planning processes for resources acquisition, whether it is human, financial and material. Operational managers should be part of cash flow committees in the hospital and be allowed to prioritize activities as identified.

- Furthermore the researcher recommends involving operational managers in the formulation of policies that affect day to day functioning of clinics. This will assist in developing policies on aspects like dealing with deaths in the clinics, which are currently not catered for.

- The nurses are not orientated on important of research. It is therefore recommended that nurses should be encouraged to be involved in research activities. It is recommended that further research on this topic be conducted to further explore the issues around adverse events management.

- This study was limited to uMgungundlovu Health District. It is recommended that a similar study within clinics in other districts so that a comprehensive position can be reached as to the status of adverse events in the entire province.

- The available policies in uMgungundlovu Health Districts were last reviewed in 2012. This therefore means that policies are not evaluated for effectiveness

to ensure service delivery. There is a need for a review on various policies on various programs like adverse events to ensure patient safety, drug supply management, human resource recruitment policies to allow for specific skills to be placed in clinics and hospital role in supporting clinics achieve patient safety, to mention a few.

## 5.9 CONCLUSION

The study managed to investigate reasons for failure to identify, report and manage adverse events. Furthermore the study managed to interrogate the available documents' ability to assist in adverse events management. The study evaluated if there exists information management systems in the management of adverse events management. The study managed to investigate the work environment in the management of adverse events. The study managed to evaluate whether improvement plans exist in clinics on adverse events management. Therefore the main objective of this study, which was to explore reasons for not implementing available adverse events management procedures that are set down, has been achieved.

## LIST OF REFERENCES

### 1. PUBLISHED SOURCES

### 1.1 BOOKS


Babbie, E. 1992. 6th Ed. *The Practice of Social Science.* California: Wadsworth Publishing Company.

Babbie, E. and Mouton, J. 2001. *The Practice of Social Science Research.* Cape Town: Oxford University Press.

Brink, H., van der Walt, C., and van Rensburg, G. 2012. *Fundamentals of research Methodology for Healthcare Professionals.* Cape Town: Juta.

Bryman, A. 2012. 4th Ed. *Social Research Methods*. New York: Oxford University Press Inc.

Bryman, A. and Bell, E. 2007. *Business Research Method*. New York: Oxford University Press Inc.

Carroll, R.L. 2009. *Risk Management Handbook for Health Care Organizations*. California: Jossey-Bass.

Collis, J. and Hussey, R. 2014. 4th Ed. *Business Research: A Practical Guide for Undergraduates and Postgraduates Students.* United Kingdom: Palgrave Macmillan.

Creswell, J.W. 2014. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches.* United Kingdom: Sage Publications.

Creswell, J.W. and Plano Clark, V.L. 2007. *Designing and Conducting Mixed Methods Research.* California: Sage Publications.

Cronjé, G.J., du Toit, G.S., Motlatla, M.D.C., and Marais A. 2006. 6thEd. *Introduction to Business Management*. Cape Town: Oxford University Press.

Crooks, V.A., and Andrews, G.J. 2009. *Primary Health Care: People, Practice, Place*. England: Ashgate Publishing Company.

Dennill, K., and Rendall-Mkosi. 2012. 4th Ed. *Primary Health Care in Southern Africa: a comprehensive approach.* Cape Town: Oxford University Press.

Denscombe, M. 2007. 3rd Ed. *The Good Research Guide for Small Scale Social Research Projects*. England: Open University Press.

De Vos, A.S., Strydom, H., Fouché, C.B, and Delport, C.S.L. 2005. 3rd Ed. *Research at grass roots: For the Social Sciences and Human Service Professions.* Pretoria: van Schaik Publishers.

Dixon,J.C., Singleton,R., Straits, B.C. 2015. *The Process of Social Research.* USA: Oxford University Press.

Dunn, D.S. 2010. 2nd Ed. *The Practical Researcher: A Student Guide to Conducting Psychological Research.* United States of America: Wiley-Blackwell.

Edmonds, W.A. and Kennedy, T.D. 2013. *An Applied Reference Guide to Research Designs: Quantitative, Qualitative, and Mixed Methods*. California: Sage Publications, Inc.

Elliot, J. 2005. *Nursing Narrative in Social Research*. London: Sage Publications.

Fox W., and Bayat, M.S. 2007. *A Guide to Managing Research.* Cape Town: Juta and Co.

Harding, J. 2013. *Qualitative Data Analysis: From Start to Finish*. London: Sage Publications Ltd.

Kerfoot, K.M. And Barnum, B.S. 1995. 4th Ed. *The Nurse as Executive.* United States: Aspen Publication.

Kavaler, F., and Alexander, R.S. 2014. 3rd Ed. *Risk Management in Healthcare Institutions: Limiting Liability and Enhancing Care*. United States: Jones and Bartlett Learning.

Kelly, P. 2010. 2nd Ed. *Essentials of Nursing Leadership and Management.* United States: Cengage Learning.

Kelly, P., and Tazbir, J. 2013. 3rd Ed. *Essentials of Nursing Leadership and Management*. United States: Cengage Learning.

Koontz, H. and Weihrich, H. 2008. 7th Ed. *Essentials of Management: An International Perspective.* New Delhi: McGraw-Hill Publishing Company Limited.

Kothari, C.R. 2004. 2nd Ed. *Research Methodology: Methods and Techniques*. New Delhi: New Age International Publishers.

Krause, G.P. 2000. *Health Care Risk Management: Organization and Claims Administration*. United States of America: Beard Books.

Kumar, R. 2005. *Research Methodology: A step By Step Guide for Beginners.* London: Sage Publications.

Kumar, R. 2008. *Research Methodology.* New Delhi: APH Publishing Corporation.

Liebler, J.G., and McConnell, C.R. 2012. 6th Ed. *Management Principles for Health Professionals.* United States: Jones and Bartlett Learning.

Mills, A.J., Mills, J.H., Forshaw, C., and Bratton, J. 2007. *Organizational Behavior In a Global Context*. Canada: Broadview Press.

Mitchell, M.J., and Jolley, J. 2007. 6th Ed. *Research Design Explained*. USA: Thomson Wadsworth.

Mullins, L.J. 2005. 7th Ed. *Management and Organizational Behavior.* England: Prentice Hall.

Naidu, S.P. 2005. *Public Administration: Concepts and Theories*. New Delhi: New Age International Publishers.

Neale, J. 2009. *Research Methods For Health and Social Care*. London: Palgrave Macmillan Publishers.

Oliver, P. 2010. *Understanding the Research Process*. London: Sage Publications

Parashar, P. 1997. *Public Administration in the Developed World*. New Delhi: Sarup and Sons.

Perri, 6. and Bellamy, C. 2012. *Principles of Methodology: Research Design in Social Science.* London: Sage Publications.

Salkind, N.J. 2010. *Encyclopedia of Research Design, Volume 1*. USA: Sage Publications.

Sapru R.K. 2013. 3rd Ed. *Administrative Theories and Management Thought*. Delhi: PHI Learning Private Limited.

Scheinn, E.H. 2010. 4th Ed. *Organizational Culture and Leadership*. USA: John Wiley and Sons.

Scheinn, E.H. 1988. 3rd Ed. *Organizational Pyschology*. New Jersey. Prentice Hall.

Shafritz, J.M. and Hyde, A.C. 2012. 7th Edition. *Public Administration: Classic Readings*. Wadsworth: Cengage Learning.

Winstanley, C. 2010. *Writing a Dissertation for Dummies*. England: John Wiley and Sons, Ltd.

Youngberg, B.J. 2011. *Principles of Risk Management and Patient Safety*. United States: Jones and Bartlett learning.

**1.2 JOURNALS**

Adler, L., Yi, D., Li, M., McBroom, B., Hauck, L., Sammer, C., Jones, C., Shaw, T., and Classen, D. 2015. Impact of Inpatients Harms on Hospital Finances and Patient Clinical Outcomes. *Patient Safety Journal*. 0(0). 1-7.

Bartlett, G., Blais, R., Tamblyn, R., Clermont, R.J. and MacGibbon, B. 2008. Impact of patient communication problems on the risk of preventable adverse events in acute care settings. *Canadian Medical Association Journal*. 178(12):1555-1562.

Bhise, V. and Singh, H. 2015. Measuring diagnostic safety of inpatients: time to set sail in uncharted waters. 2(1):1-2.

Clarke, J.R., Johnston, J., Davis, M., Augustine, A.J., Grissinger, M., Gaunt, M.J., Cohen, H. and Marrella, M. 2008. Mapping a Large Patient Data Base to the 2005 Patient Safety Event Taxonomy. *United States Agency for Healthcare Research and Quality*. 1-11.

Classen, D.C., Resar, R., Griffin, F,. Federico, F. Frankel, T., Kimmel, N., Whittington, J.C., Frankel, A., Seger, A., and James, B.C. 2011. 'Global Trigger Tool' Shows That Adverse Events In Hospitals May Be Ten Times Greater Than Previously Measured. *Health Affairs Journal.* 30(4):581-589.

Cunningham, T.R., and Geller, E.S. 2008. Organizational Behavior Management in Health Care: Applications for Large-Scale Improvements in Patient Safety. *United States Agency for Healthcare Research and Quality*. 1-18.

Curry, L.A., Linnander, E.L., A., Brewster, A.L., Ting, H., Krumholz, H.M., and Bradley, E.H. 2015. Organizational culture change in U.S. hospitals: a mixed methods longitudinal intervention study. *Implementation Science Journal*. 10(29):1-11.

Devine, E.B., Wilson-Norton, J.L., Lawless, N.M., Hansen, R.N., Hollingworth, W., Fisk, A.W., and Sullivan, S.D. 2008. Implementing an Ambulatory e-Prescribing System: Strategic Employed and Lessons Learnt to Minimize Unintended Consequences. *United States Agency for Healthcare Research and Quality.* 1-14.

Dingley, C., Daugherty, K., Derieg, M.K., Persing, R. 2008. Improving Patient Safety Through Provider Communication Strategy Enhancements. *United States Agency for Healthcare Research and Quality*. 1-17.

Dookie, S. and Singh, S. 2012. Primary Health Services at district level in South Africa: a Critique of the primary health care approach. *BioMed Central family practice Journal.* 13(67):1-4.

Emmanuel, L., Berwick, D., Conway, J., Combes,J., Hatlie, M., Leape, L., Reason, J., Schyve,P., Vincent, C., and Walton, M. 2008. What Exactly Is Patient Safety. *United States: Agency for Healthcare Research and Quality.* 1-18.

Emmanuel, L., Walton, M., Hatlie, M., Lau, D., Shaw,T., Shalowitz, J., and Combes, D. 2008. The Patient Safety Education Project: An International Collaboration. *United States Agency for Healthcare Research and Quality*. 1-15.

Fischbacher-Smith, D., and Fischbacher-Smith, M. 2009. We May Remember But What We Did We Learn? Dealing with Errors, Crimes and Misdemeanors Around Adverse Events. *Financial Accountability And Management Journal.* 25(4):451-474.

Fitzgerald, M., Farrow, N., Scicluna, P., Murray, A., Xiao, Y., and Mackenzie, C.F. 2008. Challenges to Real-Time Decision Support in Health Care. *United States Agency for Healthcare Research and Quality*. 1-12

Fricton, J.R, and Davies, D. 2008. Personal Health Records to Improve Health Information Exchange and Patient Safety. *United States Agency for Healthcare Research and Quality*. 1-11.

Gallego, B., Magrabi, F., Concha, O.P., Wang, Y., and Coiera, E. 2015. Insights into temporal patterns of hospital patient safety from routinely collected electronic data. *Health Information Science and Systems Journal. 2015. 3(Suppl 1): S2.*
Biomedicine and Healthcare 2013 Conference, 18-19 April 2013.

Gebauer, A. 2012. Mindful Organizing as a Paradigm to Develop Managers. *Journal of Management Education*. 37(2):203-228.

Henriksen, K., Oppenheimer, C., Leape, L.L., Hamilton, K., Bates, D.W., Sheridan, S., Brulet, M.E., Gaba, D.M., Wears, R.L., and Schyve, P.M. 2008. Envisioning Patient Safety in the Year 2015: Eight Perspectives. *United States Agency for Healthcare Research and Quality*. 1-13.

Kaprielian, V., Østbye, T., Wartburton, S., Sangvai, D., and Michener, L. 2008. A System to Desrcibe and Reduce Medical Errors in Primary Care. *United States Agency for Healthcare Research and Quality*. 1-13

Heideveld-Chavalking, A.J., Calsbeek, H., Damen, J., Gooszen, H. and Wolff, A.P. 2014. *BioMed Central Journal*. 8(46):1-19.

Khoo, E.M., Lee, W.K., Sararaks, S., Samad, A.A., Liew, S.M., Cheong, A.T., Ibrahim, M.Y., Su, S.H, Hanafiah, A.N.M., Maskon, K., Ismail, R., and Hamid, M.A. 2012. Medical errors in primary care clinics-a cross sectional study. *BioMedCentral Family Practice Journal.* 13(127): 1-6.

Lanzillotti, L.S., De Seta, M.H., de Andrade, C.L.T., and Mendes junior, W.V. 2015. Adverse events and other incidences in neonatal intensive care units. *Ciência and Saúde Coletiva Journal.* 20(3):937-946.

Layde, P.M., Meurer,L.N., Guse, C.E., Yang,H., Laud,P. , Meurer,J.R., Jean Grube, J., Brasel, K.J., , and Hargarten, S. 2008. Confidential Performance Feedback and Organizational Capacity Building to Improve Hospital Patient Safety:Results of a Randomized Trial. *United States Agency for Healthcare Research and Quality.* 1-12.

Matsatseng, T., and Moodley, J. 2005. Adverse events in gynaecology at King EdwardVII Hospital, Durban, South Africa. *Journal of Obstetrics and Gynaecology*. 25(7):676-680.

Mattox, E.A. 2012. Strategies for Improving Patient Safety: Linking Task Type to Error Type. *Critical Care Nurse Journal*. 32(1):52-60.

McCulloch, P., Kreckler, S., New, S., Sheena, Y., Handa, A., and Catchpole, K. 2010. Effect of a "Lean" intervention to improve safety processes and outcomes on a surgical emergency unit. *British Medical Journal.* vol 341. 1043-1047.

Mehta, U., Durrheim, D.N., Blockman, M., Kredo, T., Gounden, R., and Barnes, K.I. 2007. Adverse drug reactions in adult medical inpatients in a South African hospital serving a community with a high HIV/AIDS prevalence: prospective observational study. *British Journal of Clinical Pharmacology*. 65(3):396-406.

Morimoto, T., Gandhi, T.K., Seger, A.C., Hsieh, T.C., Bates, D.W. 2014. Adverse drug events and medication errors: detection and classification methods. *British Medical Journal 2014.* 13:306-314.

Muldoon, L.K., Hogg, W.E., and Levitt, M. 2006. Primary Care (PC) and Primary Health Care (PHC): What is the difference? Canadian Journal of Public Health. 97(5):409-411.

Murillo-Zamorano, L.R., and. Petraglia, C. 2011. Technical efficiency in primary health care: does quality matter? *The European Journal of Health Economics.* 12(2):115-125.

Nwokike, J. 2008. Monitoring Adverse Drug Reactions in the Public Health Programs: the case of the Nigeria TB program. *Unites States Agency for International Development*. 1-40.

Pepper, M.S, and Slabbert, M.N. 2011. Is South Africa on the Verge of a medical malpractice litigation storm? *South African Journal of Bioethics and Law*. 4(1):29-35.

Provonost, P.J., Morlock, L.L., Sexton, J.B., Miller, M.R., Holzmueller, C.G., Thompson, D.A., Lubomski, L.H., and Wu, A.W. 2008. Improving the Value of Patient Safety Reporting Systems. United States Agency for Healthcare Research and Quality. 1-11.

Richter, J.P., McAlearney, A.S., and Pennell, M.L. 2014. Evaluating the Effect of safety Culture on Error Reporting: A Comparison of managerial and Staff Perspectives. *American Journal of Medical Quality*. 1-9.

Royal, S., Smeaton, L, Avery, A. J., Hurwitz, B., Sheikh, A. 2006. Intervention in the primary care to reduce medication related adverse events and hospital admissions: systematic review and meta-analysis. *Quality and Safety in Health Care Journal*. 23-31.

Sagwa, E., Mantel-Teewisse, A.K., Ruswa.N., Musasa,J.P., Pal, S., Dhliwayo, P., and van Wyk, B. 2012. The burden of adverse events during treatment of drug resistant tuberculosis in Namibia. *Southern Med Review.* 5(1):6-13.

Scanlon, M.C., Karsh, B.T., and Saran, K.A. 2008. Risk-Based Patient safety Metrics. *United States Agency for Healthcare Research and Quality*. 1-16.

Sohail, M. 2005. Accessibility and Quality of Government Primary Health care: Achievement and Constraints. *Bangladesh Institute of Development Studies*. 31(3/4): 63-98.

Taylor, B.B., Marcantonio, E.R., Pagovich, O., Carbo, A., Bergman, M., Davis, R.B., Bates, D.W., Phillips, R.S., and Weingart, S.N. 2008. Do Medical Patients Who Report Poor Service Quality Experience More Adverse Events and Medical Errors? *Medical Care Journal*. 46(2):224-228.

Thornlow, D.K. and Stukenborg, G.J. 2006. The Association Between Hospital Characteristics and Rates of Preventable Complications and Adverse Events. *Medical Care Journal*. 44(3):265-269.

Wetzels, R., Wolters, R., van Weel, C., and Wensing, M. 2009. Harm caused by adverse events in primary care: a clinical observational study. *Journal of Evaluation in Clinical practice*. Vol 15. 323-327.

**1.3 WEBSITES/ELECTRONIC RESOURCES**

KwaZulu-Natal Department of Health. 2014. *Annual Performance Plan* 2014/15-2016/17. [Online]. Available: http:// www.kznhealth.gov.za . [Accessed 11th February 2015].

*KwaZulu-Natal Department of Health. 2014. NHI Progress in uMgungundlovu Health district: April 2014*. [Online]. Available: http://www.kznhealth.gov.za . [Accessed 11th February 2015].

KwaZulu-Natal Department of Health. 2014. *Annual Report 2013-2014: Vote 7*. [Online]. Available: http:// www.kznhealth.gov.za. [Accessed 11th February 2015].

KwaZulu-Natal Department of Health. 2015. *Strategic Plan 2015-2019*. [Online]. Available: http:// www.kznhealth.gov.za . [Accessed 11th February 2015].

Whittaker,S., Shaw, C., Spieker, N., and Linegar, A. 2011. Quality Standards for Healthcare Establishments in South Africa. [Online]. Available: www.cohsasa.co.za/sites/cohsasa.co.za/files/publication_pdfs/chap_5_quality_standards_pgs_59-_68_0.pdf. [Accessed 18th December 2014]

World Health Organization. 2009. Conceptual Framework for the International Classification for Patient Safety: Final Technical Report. [Online]. Available: http://www.who.int/patientsafety/taxonomy/ICPS_Statement_of_Purpose.pdf. [Accessed 17th April 2015].

## 1.4 GOVERNMENT DOCUMENTS

South Africa. Constitution of the Republic of South Africa of 1996. Pretoria: Government Printers.

South Africa. National Health Act 61, 2003. Pretoria: Government Printers.

South Africa. Labour Relations Act 66, 1995. Pretoria: Government Printers.

South Africa. Occupational Health Act 85, 1993. Pretoria: Government Printers.

South Africa. Department of Health. Policy on Quality Health for South Africa. Pretoria: Government Printers.

South Africa. Department of Health. 2000. *The Primary health Care Package for South Africa-a set of norms and standards*. Pretoria: Government Printers.

South Africa. Department of Health. 2009. *The Primary Health Care Supervision Manual.* Pretoria: Government Printers.

South Africa. Department of Health. 2008. 4th Ed. *Primary Health Care Standard Treatment Guidelines and Essential Medicines List*. Pretoria: Government Printers.

South Africa. Department of Health. Primary Health Care 101guideline. 2013-14. Pretoria: Government Printers.

South Africa. Department of Health. National Service Delivery Agreement. 2010-2014. Pretoria: Government Printers.

South Africa. Department of Planning, Monitoring and Evaluation. 2013. *Medium Term Strategic Framework* (2014-2019). Pretoria: Office of the Presidency.

South Africa. Department of Planning, Monitoring and Evaluation. 2011. National Development Plan 2030. Pretoria: Office of the Presidency.

Statistics South Africa. 2012. Census 2011. Pretoria: Stats SA.

UMgungundlovu Health District. 2012. Primary Health Care Clinical Risk Management Policy.

UMgungundlovu Health District. 2012. Adverse Events Policy and Reporting System.

**2. UNPUBLISHED SOURCES**

**2.1 DISSERTATION /THESES**

Mbabazi, P. 2007. *The Relationship Between Nurse Staffing and Selected Patient Outcomes in CHUCK Kigali-Rwanda*. Unpublished Dissertation (M.N.). University of KwaZulu-Natal. School of Nursing and Public Health.

Zondi, B.W. 2012. Employee Performance Management and Development within the Regional Hospitals in the KwaZulu-Natal Department of Health. Unpublished Thesis (PhD). University of KwaZulu-Natal. Graduate School of Business and Leadership.

**2.2 REPORTS/CONFERENCES**

Chimanzi, J. 2011. Information technology as a business enabler for effective health delivery systems in KZN. Presentation delivered at the Provincial Health Summit, KwaZulu-Natal. 02 September.

UMgungundlovu Health District. 2013. National Core Standards External Assessment Report.

**2.3 NEWSPAPERS**

Boy, 8, wins R11m lawsuit against dept. News24. 23 April 2014. [Online]. www.m.news24.com/news/SouthAfrica/News/boy-8-wins-R11m-lawsuit-against-dept-20120423. [Accessed 17th March 2015].

Mbonambi, G., and Broughton, T. 2013. KZN hospitals face major lawsuits-Crime &Courts. IOL News. [Online]. Available: www.iol.co.za/news/crime-courts/kzn-hospitals-face-major-lawsuits-1.1609034. [Accessed 12th February 2015].

Regchand, S. 2011. R600m lawsuit against KZN Health Dept. The Mercury. 28 September. [Online]. Available: www.iol.co.za/news/south-africa/kwazulu-natal/r600m-lawsuit-against-kzn-health-dpt-1.1146300. [Accessed 6thFebruary 2015].

Regchand, S. 2015. MEC conceded in birth defect case. The Mercury. 12 February. [Online]. Available: www.iol.co.za/news/crime-courts/mec-concedes-in-birth-defect-case-1.1817024 [Accessed 12 February 2015].

**2.4 WEBSITES**

Dietrich, B. 2005. Adverse events to patients in hospitals from a private pathologist perspective. [Online]. Available: www.who.int/patientsafety/events/05/Dietrich.pdf. [Accessed 10th February 2015].

South Africa. Department of Planning, Monitoring and Evaluation. 2014. Operation Phakisa. Pretoria: Office of the Presidency. [Online]. Available: http//:www.operationphakisakisa.gov.za/Pages/Home/aspx. [Accessed 17th April 2015].

**ANNEXURES**

## ANNEXURE 1-LETTER OF INFORMED CONSENT

**Informed Consent Letter**

**UNIVERSITY OF KWAZULU-NATAL**
**COLLEGE OF LAW AND MANAGEMENT STUDIES**
**SCHOOL OF MANAGEMENT IT AND GOVERNANCE**

Dear Respondent,

**Master of Public Administration Project**
**Researcher**: Thembekile Maureen Khoza (072 642 1884)
**Supervisor:** Prof TI Nzimakwe (031-260 2606)
**Co-Supervisor**: Dr Wellington Bonginkosi Zondi (074 412 0754)
**Research Officer**: Ms M Snyman (031-260 8350)

I, Thembekile Maureen Khoza, am a Masters student, at the School of Management IT and Governance, of the University of KwaZulu-Natal. You are invited to participate in a research project entitled Management of Adverse Events in Primary Health Care Clinics In uMgungundlovu Health District: Nurses' Perspective.

.

The aim of this study is to explore what makes the clinics fail to manage adverse events as per expected practices. Furthermore the study aims to impart awareness amongst nurses as to the benefits of reporting adverse events.

Through your participation I hope to understand adverse events management. The results of the survey are intended to contribute to the body of knowledge on adverse events management and could be used by students in furthering their understanding of adverse events management within health facilities.

Your participation in this project is voluntary. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey group. The School of Management IT and Governance will maintain confidentiality and anonymity of records identifying you as a participant.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor at the numbers listed above. The survey should take you about 20 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Investigator's signature_____ Date_____

**This page is to be retained by participant**

**UNIVERSITY OF KWAZULU-NATAL**
**COLLEGE OF LAW AND MANAGEMENT STUDIES**
**SCHOOL OF MANAGEMENT IT AND GOVERNANCE**

**Master of Public Administration Project**
**Researcher**: Thembekile Maureen Khoza (0724562120)
**Supervisor**: Prof TI Nzimakwe (031-260 2606)
**Co-Supervisor**: Dr Wellington Bonginkosi Zondi (074 412 7054)
**Research Officer**: Ms M Snyman (031-260 8350)

**CONSENT**

I hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT…….

DATE…….

**This page is to be retained by researcher**

**ANNEXURE 2-RESEARCH INSTRUMENT**

**QUESTIONNAIRE**

**SECTION 1**

Tick appropriate box:

1. Age group

**<30years** ☐ **30-40 years** ☐ **40-50years** ☐ **>50years** ☐

2. How long have you worked in this facility?

**<1 year** ☐ **1-5 years** ☐ **5-10years** ☐ **>10years** ☐

3. Indicate the section in which you are allocated

3.1 Triage ☐

3.2 Well baby clinic ☐

3.3 Chronic ☐

3.4 HAST clinic ☐

3.5 Maternal and child ☐

3.6 Minor Ailments ☐

3.7 Treatment Room ☐

3.8 Managers office ☐

4. Indicate your role in the section In which you work

**Employee** ☐ **Team Leader** ☐ **Clinic Supervisor (OM)** ☐

**SECTION 2**

Tick the most appropriate option.

**Question 1**

**I have been formally orientated/trained on policy on adverse events management.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|
| | | | |

**Question 2**

**I have been trained on adverse events in the past six months.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 3**

**I have formal training on adverse events management.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 4**

**I would like to do a course on adverse events if supported by my clinic.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 5**

**Lack of awareness/training on adverse events management is one reason for poor adverse events management.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 6**

**Training of staff on adverse events can help alleviate the problem.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 7**

**Lack of proper patient identification can lead to adverse events.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 8**

**I am fully aware on reporting procedure on adverse events.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|
| | | | |

**Question 9**

**I have omitted reporting on adverse events in the past six months.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 10**

**I have witnessed a near-miss in the past three months.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 11**

**The clinic has an organizational structure (organogram) fully displayed.**

| Strongly agree | Agree | Disagree | Strongly disagree |
|---|---|---|---|

**Question 12**

**My component/section has a clear organizational structure (organogram).**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 13**

**The organizational structure is formally communicated to the staff.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 14**

**It is easy to approach my supervisor for reporting adverse events.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 15**

**Patient involvement can help reduce incidences of adverse events.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 16**

**The facility has a functional complaints mechanism in place.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 17**

**The poor management of adverse events is because the available reporting tools are hospital orientated.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 18**

**The adverse events management is part of my EPMDS assessment.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 19**

**My performance on adverse events is monitored by my superior(s).**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 20**

**My performance on adverse events is evaluated by my superior(s).**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 21**

**Increased workload lead to poor adverse events management.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 22**

**Lack of teamwork can contribute to occurrence of adverse events.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 23**

**There has been an audit conducted in the past six months on adverse events in this clinic.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 24**

**The results of the audit were formally communicated to all staff.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 25**

**I have received a formal feedback on adverse events occurring in this clinic in the past three months.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 26**

**The clinic has an adverse events management committee.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 27**

**The clinic's adverse events management committee is fully representative of all categories.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 28**

**I have been included in the clinic's planning process in order to prevent adverse events.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 29**

**I have knowledge of allocated budget for this clinic.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 30**

**The clinic has a duty delegation plan in place.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 31**

**The duty delegation plan is communicated to all staff members.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 32**

**The data/information on adverse events is captured on the computer.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 33**

**Lack of information management system is the cause to poor adverse events management.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 34**

**I am aware of non-governmental/not-for-profit organization(s) the facility is working with to reach organizational goals.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 35**

**The clinic committee is always informed of adverse events issues.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 36**

**The clinic committee reported on adverse events issues.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 37**

**The clinic has an improvement plan in place for the management of adverse events.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 38**

**The improvement plan was formally communicated to all staff.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 39**

**I have participated in a disaster drill in the last six months.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Question 40**

**The classification of adverse events in the reporting tool is simply understood.**

| | | | |
|---|---|---|---|
| **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |

**Thank you for participating in the study. Your opinion is of value.**

## ANNEXURE 3-ETHICAL CLEARANCE

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

30 June 2015

**Ms Thembekile Maureen Khoza 214580296**
**School of Management, IT and Governance**
**Westville Campus**

**Dear Ms Khoza**

**Protocol reference number: HSS/0409/015M**
**Project title: Management of Adverse Events in Primary Health Care Clinics in uMgungundlovu Health District: Nurses' perspectives**

**Full Approval – Expedited Application**

In response to your application received on 24 April 2015, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol have been granted **FULL APPROVAL.**

**Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number.**

**PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.**

**The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.**

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

.....

**Dr Shamila Naidoo**
**On behalf of Dr Shenuka Singh (Chair)**
**Humanities & Social Sciences Research Ethics Committee**

**/pm**

Cc Supervisor: Dr Thokozani Nzimakwe & Dr Bonginkosi W Zondi
Cc Academic Leader Research: Prof Brian McArthur
Cc School Administrator: Ms Angela Pearce

**Humanities & Social Sciences Research Ethics Committee**
**Dr Shenuka Singh (Chair)**
**Westville Campus, Govan Mbeki Building**
**Postal Address:** Private Bag X54001, Durban 4000
**Telephone:** +27 (0) 31 260 3587/8350/4557 **Facsimile:** +27 (0) 31 260 4609 **Email:** ximbap@ukzn.ac.za / snymanm@ukzn.ac.za / mohunp@ukzn.ac.za
**Website:** www.ukzn.ac.za

**ANNEXURE 4-PERMISSION FROM THE DEPARTMENT OF HEALTH TO CONDUCT RESEARCH**

health
Department:
Health
PROVINCE OF KWAZULU-NATAL

**Health Research & Knowledge Management sub-component**
10 – 103 Natalia Building, 330 Langalibalele Street
Private Bag x9051
Pietermaritzburg
3200
Tel.: 033 – 3953189
Fax.: 033 – 394 3782
Email.: hrkm@kznhealth.gov.za
www.kznhealth.gov.za

**Reference : HRKM146/15**
**NHRD Ref.: KZ_2015RP36_401**
**Enquiries : Ms G Khumalo**
**Telephone :** 033 – 395 3189

Dear Ms T M Khoza

**Subject: Approval of a Research Proposal**

1. The research proposal titled **'Management of Adverse Events in Primary Health Care Clinics In uMgungundlovu Health District: Nurses' Perspective'** was reviewed by the KwaZulu-Natal Department of Health (KZN-DoH).

The proposal is hereby **approved** for research to be undertaken at selected clinics at Umgungundlovu District.

2. You are requested to take note of the following:
   a. Make the necessary arrangement with the identified facility before commencing with your research project.
   b. Provide an interim progress report and final report (electronic and hard copies) when your research is complete.

3. Your final report must be posted to **HEALTH RESEARCH AND KNOWLEDGE MANAGEMENT, 10-102, PRIVATE BAG X9051, PIETERMARITZBURG, 3200** and e-mail an electronic copy to hrkm@kznhealth.gov.za

For any additional information please contact Ms G Khumalo on 033-395 3189.

Yours Sincerely

Dr E Lutge

**Dr E Lutge**
**Chairperson, Health Research Committee**
**Date:** 24/06/15

## ANNEXURE 5 – INCIDENCE REPORTING FORM

**ANNEXURE: 5**

**Incidence Reporting Form**

(To be completed by healthcare worker within 24 hours)

**A. Type of Adverse Event** (tick relevant response)

| | |
|---|---|
| Surgical | |
| Product or Device | |
| Patient Protection | |
| Care Management | |
| Environmental | |
| Criminal | |
| Transport | |

**B. Action Taken**

| | Yes | No |
|---|---|---|
| Incident communicated to a senior staff member | | |
| Was there a witness present at time of incident? | | |
| Patient offered first aid treatment | | |
| Patient seen by doctor on site | | |
| Patient diagnosed according to type of | | |
| Patient referred for further management | | |
| Patient discharged home | | |
| Has the incidence been recorded on the Adverse Events Register | | |
| Has the incidence been reported to supervisor? (Attach report) | | |
| | | |

**C. Grading of Event According to Risk incurred**

| | |
|---|---|
| | |
| None (no injury sustained) | |
| Minor (harm sustained lasting less than four weeks) | |
| Moderate (harm sustained is semi-permanent) | |
| Major (permanent harm incurred by the patient) | |
| Catastrophic (injury resulted in death) | |
| | |
| | |

**INCIDENCE REPORTING**

**DATE OF INCIDENCE**: _____ **TIME OF INCIDENCE**: _____

**NAME OF PATIENT:** _____

**REG NO OF PATIENT:**_____ **AGE:**_____**GENDER:**_____

**NAME OF REPORTING OFFICER**: _____

**RANK OF REPORTING OFFICER**: _____

**DETAILS OF INCIDENCE**:

SIGNATURE :_____ DATE OF REPORTING: _____

WITNESS: _____ SIGNATURE: _____

RECEIVED BY:_____ (SUPERVISOR) DATE :_____

## ANNEXURE 6 – MONTHLY SUMMARY REPORTING TOOL

**ANNEXURE: 6**

**Monthly Summary Reporting Tool**

(To be completed by Supervisor by the 3rd of the month)

**FACILITY:_____ REPORTING MONTH:_____**

| CATEGORY OF ADVERSE EVENT | DESCRIPTION OF ADVERSE EVENT | NUMBER |
|---|---|---|
| SURGICAL | Surgical procedure performed on wrong site | |
| | Surgical procedure performed on wrong patient | |
| | Disability as a result of surgical procedure | |
| | Death as a result of surgical procedure | |
| PRODUCT OR DEVICE | Use of malfunctioning device | |
| | Administration of contaminated intravascular product | |
| | Infiltration caused by use of intravascular product | |
| | Air embolism caused by use of intravascular product | |
| | Disability as a result of use of product or device | |
| | Death as a result of use of product or device | |
| PATIENT PROTECTION | Facility acquired infection (nosocomial) | |
| | Patient absconded whilst under care | |
| CARE MANAGEMENT | Patient given a wrong diagnosis | |
| | Administration of wrong medication | |
| | Medicine administered medicine on wrong site | |
| | Medicine administered on the wrong route | |
| | Allergic reaction as a result of medicine administered | |
| | Pressure ulcers acquired in the facility | |
| | Patient refusal to care or to referral for further care | |
| | Disability as a result of care given | |
| | Death as a result of care given | |
| ENVIRONMENTAL | Patient electrocuted whilst under care | |
| | Patient falls on the site of the facility | |
| | Patient acquire burns while under facility care | |
| | Patient exposed to contaminated or wrong gas | |
| | Disability as a result of injury | |
| | Death as a result of injury | |
| CRIMINAL | Care by unlicensed personnel | |
| | Sexual assault of patient while under facility care | |
| | Physical abuse while under care of facility | |
| | Disability as a result of criminal activity | |
| | Death as a result of criminal activity | |
| TRANSPORT | Injury incurred whilst being transported | |
| | Cross Infection incurred while being transported | |
| | Delayed ambulance arrival | |
| | Disability incurred due to ambulance delay | |
| | Death as a result of ambulance delay | |

**SUMMARY OF EVENTS**

**FACILITY :_____**

**Reporting period: from:_____to_____**

| **CATEGORY** | **TOTAL REPORTED** |
|---|---|
| SURGICAL | |
| PRODUCT OR DEVICE | |
| PATIENT PROTECTION | |
| CARE MANAGEMENT | |
| ENVIRONMENTAL | |
| CRIMINAL | |
| TRANSPORT | |
| **OVERALL TOTAL** | |