

KNOWLEDGE, ATTITUDES AND PRACTICES OF GENERAL ASSISTANTS TOWARDS INFECTION CONTROL AT LETABA HOSPITAL

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DECLARATION

I, Mmalahla Rebecca Peta, declare that this research report is my own work. This report is being submitted for the degree of Master Public Health in the field of Hospital Management at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or any examination at this or any other University.

A handwritten signature in dark ink, appearing to read 'Mmalahla Rebecca Peta', written over a dotted line.

September 2014

DEDICATION

This research is dedicated to my husband, two sons and daughter who supported me through the process of conducting this research

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ABSTRACT

Introduction - The implementation of infection prevention and control guidelines is important for the improvement of quality care in hospitals. This study aimed to identify gaps in the knowledge and attitudes of general assistants about infection control and to determine if their infection control practices are in line with current policies and guidelines. In investigating the practices of general assistants, the institution was assisted to identify gaps in knowledge and try to strengthen practices.

Methodology: This descriptive cross-sectional study was conducted at Letaba hospital in Mopani district. The knowledge, attitudes and practices of 97 general assistants towards infection control at a given point in time was measured through a structured questionnaire which was administered to those who consented to participate. Purposive sampling was used as only those who were at work during the data collection period were included in the study.

Results - This study revealed that over 50% of general assistants at Letaba hospital have only moderate knowledge about infection control. Fifty seven percent of general assistants reported moderately good infection control practices, while 23% practice infection control poorly. The majority (75%) of general assistants at Letaba hospital reported positive attitudes towards infection control. The results also show that the moderate score in knowledge affected the practice of infection control.

Conclusion - This study shows that the knowledge and practice of infection at Letaba hospital is not optimal with regard to complying with infection control guidelines. It was, however, noted that attitudes towards infection control were good. Based on the fact that the attitudes were good, knowledge and practice can be improved with provision of appropriate supplies and strengthening training and supervision.

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GLOSSARY OF TERMS

General assistant: A non-medical general worker working in the wards, operating theatres and laundry responsible for cleaning the floors, sorting linen and waste management.

Nosocomial infection: An infection that is acquired while the patient is in the hospital which was not present or incubating at the time of admission (Vlok, 2004).

Medical waste: a by-product of health care, which includes sharps, non-sharps, blood, body fluids, pharmaceuticals, medical devices and radioactive material (WHO, 2000:p.1).

Knowledge: Facts, information and skills acquired through experience or education, the theoretical or practical understanding of a subject (Hornby, 2000).

Practice: Performance or a way of doing something which is carried out usually or regularly, often as a habit, tradition or custom (Hornby, 2000).

Attitude: A way of behaving towards something that shows how you feel and think about it (Hornby 2000).

LIST OF ABBREVIATIONS

CDCP	Centre for Disease Control and Prevention
CEO	Chief Executive Officer
HAI	Hospital Acquired Infections
NDOH	National Department of Health
NHS	National Health System
LDHSD	Limpopo Department of Health and Social Development
PPE	Personal protective equipment
WHO	World Health Organization

CHAPTER 1

INTRODUCTION

1.1 Introduction

The purpose of this study was to describe the knowledge, attitudes and practices of general assistants, employed by Letaba Regional Hospital in 2009, towards infection control. Letaba is a regional hospital situated in the Greater Tzaneen sub-district of Mopani District in Limpopo Province, South Africa. The hospital is the referral hospital for six district hospitals within the Mopani district, all of which are within a 100 kilometers radius. The hospital dates back to 1964 when it was opened as a mission hospital. The hospital consists of over 250 beds for patients. Various services constitute part of the hospital activities, including, amongst others, internal medicine, family medicine, surgery, paediatrics, pharmacy, nursing, clinical psychology, oral health, allied health and forensic pathology services.

This introductory chapter will cover the background to the study, the statement of the problem, the aims and objectives and an outline of subsequent chapters.

1.2 Background

Infection prevention and control refers to practices aiming at decreasing health care associated infections and nosocomial infections. According to South African Medical Journal, infection prevention and control said to be neglected South Africa. South Africa is facing high demand of health services based on the increasing burden of diseases due to TB and HIV epidemic. Due to challenges with antibiotic resistance and the unavailability of new antibiotics, infection control becomes more critical in the health care setting. The national Minister of Health, Dr Aaron Motsoaledi identified this area as one of the priorities for health care in South Africa.

Infection control is critical in improving the quality of care given to patients and as part of risk management in any health service (Minnaar, 2008). Oosthuysen, Potgieter and Blignaut (2010) emphasize the importance of infection control policies given the high prevalence of infectious diseases in hospitals. Implementation of infection control guidelines translates knowledge into action. Implementation includes the development

and maintenance of an attitude and an awareness of infection control with an acceptance of individual and collective responsibility to prevent infection (Atkinsons and Fortunato, 1996).

Today's rapidly changing health care environment makes it difficult to protect patients and health care workers from the transmission of pathogens (Chan and Day, 2007). This may lead to nosocomial infections, for which the hospital can be held responsible. Harris and Samore (2000) support the view that hospital acquired infections pose a threat to hospital workers, patients and the community and represent a major cause of morbidity and mortality in hospitalised patients.

Hospitals generate both medical and general waste. Waste generation depends on numerous factors such as established waste management methods, type of health care establishment, hospital specialization, and proportions of patients treated on a day care basis (Prüss, Giroult, and Rushbrook, 1999). Steeds, Kelly, Blackhurst, et al. (2011) highlight that hospitals should ensure that elimination of health care-associated infections become a priority of hospital quality and patient safety programs.

The South African National Department of Health formulated a policy and strategy on infection control in 2007. In this document, infection prevention and control is referred to *“the measures, practices, protocols and procedures aimed at preventing and controlling infections and the transmission of infections in the health care settings”* (NDOH, 2007 p 6).

The purpose of this policy is *“to set minimum national standards for the effective prevention and management of health care associated infections, so that hazards associated with biological agents are minimised for patients, visitors and health care personnel in health care establishment”* (NDOH, 2007:6).

The policy covers, amongst other issues, the composition of a hospital infection control committee, the roles and responsibilities of different units regarding infection control and a strategy for the prevention and control of infection. The policy does not address training requirements for health care workers or general assistants. In terms of training, the policy stipulates that the National Department of Health shall consult

the relevant professional councils to determine the training standards for infection control practitioners.

The infection control and prevention strategy focuses on seven strategic areas of action (Figure 1.1).

Strategic areas of action

- **Action area 1**
Promoting early detection of infections through active surveillance and monitoring
- **Action area 2**
Addressing health care worker needs and requirement, education for doctors, nurses and ancillary healthcare workers
- **Action area 3**
Reducing risk through implementation of guidelines for infection prevention and control
- **Action area 4**
Reducing reservoirs of infection
- **Action area 5**
Best use of antibiotics
- **Action area 6**
Management and organisation
- **Action area 7**
Research and development

Figure 1.1 Strategic areas of action for infection prevention and control

Limpopo province has adopted the national policy for its institutions. There is a provincial infection control committee which monitors the institutions in terms of their adherence to provincial and national guidelines. This policy was distributed to all institutions in Limpopo province for implementation.

Although Letaba hospital has not developed its own institutional policy with regard to infection control, it has also adopted the national infection control policy. An infection

control committee, which consists of multidisciplinary members representing each unit, was established in the hospital in 1999. The infection control programme at Letaba Hospital is coordinated by an infection control nurse who is a registered nurse and trained as infection control practitioner. The role of this committee is to monitor the compliance, through inspections, of staff in all units with regard to infection control procedures. The committee also provides feedback to the units on issues discussed in their monthly meetings. These meetings provide the opportunity to discuss infection control risks identified, recommendations and measures to address these risks and challenges to infection control. The infection control committee reports to the hospital executive management.

The contents of the hospital infection control programme are communicated to staffs through training and standard operating procedures which are displayed in all working stations. The infection control training programme started in 1999 and is reviewed by infection control committee every year. Training is conducted annually by the infection control nurse and the committee, and is compulsory for all staff. Different categories of staff are trained on different days. Based on the type of work the staff is performing, the infection control nurse and the committee decide on the content of the training programme. The training is formal (theory and practice) and conducted for two hours a day over a period of five days. In terms of training, general assistants are trained in their home language and professionals are trained in English. Different training methods are used – both lectures and demonstrations, depending on the information to be imparted. Due to the fact that there are always new developments regarding procedures in infection control, in-service education is conducted quarterly to keep staff updated.

Hospital management has ensured that all general assistants receive training on infection control measures and that they are represented in the infection control committee in order to strengthen the implementation of hospital infection control guidelines. The general assistant's role in infection control is clearly defined in the infection control programme and made known to them through training in addition to being displayed on the notice boards in different areas. Their role encompasses elements of infection control such as hand hygiene, use of cleaning solutions for the floors, use of protective clothing, sorting of linen and waste management. There are

guidelines regarding every element of infection control in order to facilitate implementation of infection control principles.

General assistants are level 2 non-medical personnel, responsible for cleaning the wards and operating theatres, sorting and washing of linen, preparing meals for patients and disposing of waste. General assistants play a critical role in infection control as they work in areas where they are in close contact with both patients and medical waste.

General assistants in Letaba hospital are allocated on a rotational basis to the units which range from high to low risk in terms of exposure to infection.

1.3 Statement of the Problem

Letaba hospital developed a training programme based on national policies and guidelines, and in-service training has been conducted for all staff members including general assistants. There has, to date, been no evaluation of the knowledge and practice of general assistants.

1.4 Justification for the Study

In South Africa it has been reported that 15% of patients suffer nosocomial infections following their admission to hospital (Department of Health Eastern Cape Province, 2006). This burden of preventable infectious diseases indicates that infection control should be a priority programme in the health setting. The Minister of Health Dr Aaron Motsoaledi laid down ministerial priorities which every health worker must ensure are not compromised. Amongst the six ministerial priorities are infection control and patient safety (Department of Health, 2011).

General assistants work in areas where the transmission of infection occurs easily. It is therefore crucial that they adopt certain principles of infection control when executing their duties. Assistants, as part of health care workers, need to be taken cognisance of in terms of infection control. Due to their level of education they might

be less considered when dealing with issues of infection control such as training and monitoring compliance.

Determining their knowledge, practices and attitudes regarding infection control will enable management to identify any gaps in the training and strengthen infection control practices.

1.5 Aim and Objectives of the Study

This study aims to identify any gaps in the knowledge and attitudes of general assistants about infection control and to determine if their infection control practices are in line with guidelines. Specific objectives are:

1. To determine the knowledge about infection control of the general assistants employed at Letaba Hospital in 2009;
2. To assess the attitudes of these general assistants towards infection control;
3. To assess the practices of these general assistants with regard to infection control; and
4. To identify any gaps in knowledge and practices that may affect the implementation of the infection control policy.

1.6 Subsequent Chapters

So far, the background to the research has been discussed. The research question and objectives were defined in this first chapter. A brief outline of the following chapters is described below.

Chapter Two: Literature Review: The purpose of the literature review chapter is to review pertinent literature that discusses knowledge, practice and attitude of health care workers or general assistants in health settings with regard to infection control.

Chapter Three: Research Methodology: The chapter describes the research methodology, study design, setting and population, sampling, study period, data collection, pilot study, data analysis, variables and ethical considerations used in this study. Limitations and ethical considerations are also discussed in this chapter.

Chapter Four: Presentation of Results: This chapter deals with an analysis of the data collected for this study relating to its aims and objectives.

Chapter Five: Discussion: The findings are discussed in this chapter.

Chapter Six: Conclusions and Recommendations: This constitutes the last chapter of the report and derives conclusions from the research related to the objectives of this study, makes recommendations and advocates areas for future research in the field of infection control.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The literature review will discuss the following issues: sources of hospital acquired infections, evidence for poor infection control in South Africa and, knowledge, attitudes and practices of health care workers about infection control. The literature review has looked at those components of infection control most relevant to the work undertaken by general assistants, namely waste management and cleaning.

The search for literature on knowledge, practice and attitude of general assistants or cleaners towards infection control did not yield any results. As the Centre for Disease Control (CDC) defines health care personnel as *“all paid and unpaid persons working in health care setting who have the potential to exposure to infectious materials including body substances, contaminated medical equipment, contaminated environmental surfaces and contaminated air”*, literature on different groups of health workers such as nurses, doctors and dentists was reviewed (CDC, 2006; 55:1).

2.2 Sources of Hospital Acquired Infections and their Mode of Transmission

In the hospital environment or any health facility, there are numerous sources of infection and general assistants are exposed to a number of these sources of infections, resulting in nosocomial infections. Prüss, Kay, Fewtrell, and Bartram (2002) explain that the main sources of infections in hospital are personnel, patients and fomites such as doctors' white coats, nurses' uniforms, hospital garments, privacy curtains, stethoscopes, bed rails and common hospital surfaces. This highlights the importance of knowledge of these sources to all the hospital personnel to ensure that they take appropriate measures.

According to Duse (2005), in order to develop infection control interventions, there is a need to understand the sources of health care infections and their mode of transmission.

Nosocomial infections are transmitted in three different ways, namely through contact, droplet spread, and air bone spread.

Contact - The transmission occurs through skin to skin contact or where microorganism through touching the patient the health care worker transfers infection from one patient to another. This happens mostly through contaminated hands of health care workers.

Droplet spread - This type of spread occurs during coughing, sneezing, talking and during procedures such as bronchoscopy. Larger droplets do not suspend in the air as such they fall in contact with the patient.

Airborne spread - This occurs similar to droplet i.e. through coughing, sneezing, talking. Here the droplets are smaller such that they suspend in the air for a longer period and able to travel for a longer distance to infect the person who is far from its origin.

In addition to the above three, there are other methods of spread of infection like contaminated water supply, equipment needles and solutions (Duse, 2005). It will be critical for hospital personnel to aware of the different methods through which nosocomial infections are transmitted.

2.3 Evidence of Poor Infection Control in South Africa

According to the Institute of Medicine in Washington DC, hospital acquired infections (HAIs) are responsible for between 44,000 and 98,000 deaths annually in the United States (Du Plessis and Monkoe, 2010). In South Africa, data on the number of HAIs is limited but it was estimated that one in seven patients entering a hospital is at high risk of an HAI (Brink, Feldman, Duse, Gopalan, Grolman, Mer *et al.* 2006). Duse (2010) has reported that HAI occur in 25% or more patients who are hospitalised in

developing countries, and estimates that they occur in 15% of hospitalized patients in South Africa and account for 5% of mortality. This highlights the fact that health personnel in South Africa are at risk of HAIs.

Inadequate compliance with hand washing, a critical component of infection control, has been reported. Duse (2005) points out that hand washing is an evidence-supported intervention for preventing infection transmission. However, most healthcare workers, who work in high risk areas, fail to wash their hands after contact with each patient and compliance with hand washing is only about 40%. The category of employees forming part of this study is at risk of acquiring infections given their level of employment. Nosocomial infections are frequently viewed as due to poor compliance with hand washing techniques (Du Plessis *et al.*, 2010).

2.4 Knowledge

Prüss *et al* (1999) stress the importance of health workers knowledge of infection control, in particular those responsible for cleaning health facilities. Knowledge plays a critical role in ensuring that employees adhere to the rules that will lead to the elimination of health care associated infections. Prüss *et al.*, (1999) further state that knowledge about infection control depends on various factors: training, having a positive attitude and commitment.

2.4.1 Factors influencing knowledge

There are several factors influencing knowledge, such as age, educational level and training.

2.4.1.1 Age

In an article on the knowledge and practices of health care workers and medical students towards universal precautions in a hospital in Mazandaran Province in Iran it was found that younger health care workers, in the 20-30 year age group, had better knowledge and practice than health care workers over 50 years of age (Motamed, Babamahmoodi, Khalilian, Peykanheirati and Nozai, 2006).

The above notion is contrary to what was established by Saini, Singh, Singh and Jairus (2011) in their study on infection control amongst health care assistants. They concluded that there is no difference in the knowledge of ward assistants of different ages towards infection control. Therefore, they concluded that age is not necessarily an impediment to knowledge. However, it could be noted that knowledge and safer practices on infection control practices are important to all health personnel despite their age. In order to avoid age influencing knowledge, health authorities should ensure that training is provided on a continuous basis (Saini *et al.*, 2011).

2.4.1.2 Training

Training is critical for mitigating against the spread of infections in hospitals. Training plays a critical role in ensuring that employees are made aware of the importance of infection control (Steed *et al.*, 2011). This awareness will assist general assistants to comply with requirements for infection control whilst carrying out their responsibilities. The overall aim of training should be to develop awareness of health, safety, and environmental issues, and how these can affect employees in their daily work (Prüss *et al.*, 1999). This awareness can be achieved through sustained training programmes.

It is however disturbing that Chan and Zenobia (2006) indicate that the role of the general assistants in infection control is underestimated and teaching about infection control has never been reported in health care education. There is also a lack of information on how to structure an infection control training programme for ward attendants/ general assistants (Chan *et al.* 2006). This could be achieved through employer initiated training programmes. The importance of creating training programmes cannot be over emphasised because failure to provide these will result in employees being exposed to HAI due to failure to observe required practises.

2.4.1.3 Education

Duse (2005) found that the education of health professionals in South Africa about infection control is very minimal. In addressing the above mentioned problem, the

infection control programme in public hospitals must use creative strategies in teaching infection control principles especially as most employees in public hospitals are illiterate in terms of English as a language. In most cases they cannot read English or cannot read at all. Based on the above, it is important that various methods of teaching such as the use of comic books, posters and different languages are used (Wurtz, 1995).

Dalin, Danielson, and Sinclair, (2008) argue that training should be conducted soon after appointment and also provided on an on-going basis, in the form of in-service education. In Singapore, for example, medical students are given their lectures on infection control before they participate in clinical work (Dalin et al. 2008). The continuous in-service education will serve as reinforcement on the training provided on appointment.

Waste management is a critical element of infection control that general assistants need to be well trained on, as failure to manage waste will compromise infection control. The National Health Service (NHS) Foundation Trust in the United Kingdom (1997) published guidelines on infection control in 1997 for the training of health workers. These guidelines highlight several critical areas for training, such as waste management, including the segregation and separation of hazardous waste. They further stated that compliance with colour coded segregation of waste will assist in preventing hazardous items such as sharps and bloody gloves being mixed with other waste which might be handled with less care such as papers (NHS Foundation Trust, 1997).

Therefore, education and training will further enhance comprehension on applicable and acceptable practices on infection control.

2.5 Practices

Practices provide guidelines to all health personnel when dealing potential area that may lead to spread or acquiring of infections in a hospital. Oosthuysen *et al.* (2010) explain that there are important infection control practices for dental assistants: namely knowledge of infectious occupational hazards, personal hygiene and care of

hands, correct application of personal protective equipment, use of environmental barriers and disposable items, disinfection, and management of waste disposal. She found a considerable gap between dental assistant's knowledge of hand hygiene and their actual practice. In addition, Oosthuysen *et al.* (2010) found that, in Limpopo, the hand basins in dental practices are sometimes used for washing instruments and discarding body fluids and not only for hand washing. Dental assistants in South Africa were found to have poor infection control practices in hospitals and contamination was found on 29% of equipment (Mehtar, Shinana, Mosala, and Dunbar, 2007). This poor practise will affect other employees in the health chain. It could also be argued that if this category of employees can manage to ignore infection control practice, it will be worse for general assistants.

2.6 Attitudes

The poor infection control practices by dental assistants (Mehtar, *et al.*, 2007) can ascribed to attitudes of employees. According Ward (2012), in the interview study with student nurses and nurse mentors regarding attitudes towards infection prevention, regardless of the guidelines and recommendations on good practices of infection control, compliance can still be low due to several reasons including attitudes.

It is reported that suboptimal exposure in hand hygiene practices had negative effects on the attitudes of student nurses towards hand hygiene. It is further found that the attitudes of doctors and many qualified nurses were negative. The reason for the negative attitudes is attributed to the perception that is an additional duty not part of patient care and that infection prevention and control is seen as time consuming and inconvenient without considering its importance in improving patient safety and outcomes (Ward, 2012).

In summary, although there is limited literature on infection control and cleaners/general an assistant, the literature has highlighted gaps in hand washing. There are several reasons for poor hand washing which includes attitudes. It is also important for health workers to have knowledge of sources of infection and their mode of spread. Factors such as education, training, age, and attitudes found to be having influence on knowledge of infection control.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the method used to conduct the study. The chapter covers the study design, the setting in which the study was conducted, the study population and sampling strategy used, how data was collected, including the design of the data collection instrument, a detailed data analysis plan and ethical considerations.

3.2 Study Design

This was a descriptive cross-sectional study. The knowledge, attitudes and practices of general assistants towards infection control at a given point in time were measured. General assistants were interviewed by the researcher using a structured questionnaire.

3.3 Study Setting

The study was conducted in Letaba regional hospital in Limpopo Province. The hospital is in the Greater Tzaneen municipality of Mopani District, 16 kilometres from Tzaneen town and 100 kilometres from the Mopani district health office. It has an approved bed capacity of 400 with a functional bed capacity of between 250 and 300 and serving a population of about 400 000. The hospital, apart from providing general services, also provides specialities such as surgery, orthopaedics, paediatrics and psychiatry.



Figure 3.1 South African map



Figure 3.2 Limpopo province map



Figure 3.3 Mopani District map

3.4 Study Population

There were 146 general assistants employed by the hospital at the time of data collection (July 2010). All general assistants employed at the hospital, and at work on the days of data collection were included in the study population. At this stage out of 146 employed general assistants only 97 were included in the study

3.5 Sampling

The sampling was done based on the reasons for inclusion and exclusion.

Inclusion criteria: any general assistant at work between 07h00-16h00 on the day of interviews.

Exclusion criteria: General assistants who were on night duty or off duty on the days of interviews. The general assistants working in the kitchen were also excluded as they do not rotate to other areas and their scope of work is different to those general assistants working in other areas.

3.6 Study Period

The data were collected on four days over a period of two weeks. The first day was dedicated to introducing the research to the participants and the remaining three days to the actual interviews. The days were selected at the convenience of the researcher and agreed to by hospital management.

3.7 Data Collection

An interviewer administered questionnaire was used to collect data. The reason for using this method of collecting data was to accommodate the general assistants who had difficulty reading and writing.

All participants were gathered in one place at the beginning of the data collection period and were informed about the project and the research process was explained

to them by the researcher. Individual interviews were then conducted on the three days that the researcher visited the institution. Interviews were conducted on site in a private room after obtaining signed, informed consent from each participant. Each interview took approximately 10 minutes.

Questions were asked using the respondent's home language i.e. Sepedi and Xitsonga. Answers were written in English to facilitate analysis.

3.7.1 Data Collection Tool

A structured questionnaire was developed by the researcher based on the infection control policy guidelines which indicate what general assistants should know with regard to infection control. The questions were divided into five sections:

- **Demographic profile of participants.** Age, years of employment, gender and level of education.
- **Training received on infection control.** Respondents were asked if they had received any training on infection control, the period since training, the duration and method of training.
- **Knowledge.** Eight questions on knowledge were asked in five key areas: hand washing, waste disposal, waste segregation, use of protective clothing (mask, gloves and aprons) and policy issues. The questions either required a "yes" or "no" answer or were open ended.
- **Practice.** Nine open ended and two closed ended questions on the respondent's reported infection control practice were asked.
- **Attitudes.** Respondents were asked to respond to ten open ended questions which reflected their attitude to various aspects of infection control.

3.8 Pilot Study

The pilot study was conducted at Maphutha L Malatji Hospital, also in Limpopo province. Five general assistants from different areas of work i.e. laundry, operating theatre, casualty and the wards were interviewed. The general assistants were purposively selected.

This pilot study was conducted to test the comprehension of the questions in the local languages (i.e. Sepedi and Xitsonga). After the pilot test, there were minor amendments to the questionnaire. The results from the pilot study were not included in the analysis.

3.9 Data Analysis

The data were coded and then entered into a MS ACCESS spread sheet by the researcher and cleaned by verifying the data with the responses in all the questionnaires in order to check for omissions, duplication and mistakes.

Data were then imported into STATA 10 for analysis (Statacorp, 2007).

3.9.1 Development of New Variables

3.9.1.1 Knowledge Score

A knowledge score was developed. Responses were given a score according to whether they were correct or not. The maximum possible score was 22. A wrong answer was given one mark and “don’t know” a zero as with wrong answer there was at least an attempt to answer the question.

Respondents were then classified into one of three groups (See table 3.1).

- | | |
|------------------|-------------------|
| 1. Score < 13 | poor knowledge |
| 2. Score 13 - 16 | average knowledge |
| 3. Score 17 – 22 | good knowledge |

Table 3.1 Score for eight questions on the knowledge of general assistants about infection control.

Question	SCORE. Total possible score 22					
	Correct answer			Wrong answer	Don't know	
B8	2			1	0	
B9	2			1	0	
B11	2			1	0	
B13	2			1	0	
Subtotal	8					
	Three correct answers		Two correct	One correct	None correct	
B10	3		2	1	0	
B12	3		2	1	0	
B15	3		2	1	0	
Sub total	9					
	Five correct	Four correct	Three correct	Two correct	One correct	Nil correct
B14	5	4	3	2	1	0
Subtotal	5					
TOTAL	22					

3.9.1.2 Practice Score

The answers to the eleven reported practice questions were coded and scored. Based on the guidelines on infection control practice, a judgement was made by the researcher about whether the answer reflected good or bad practice. For every correct answer a score “2” was given and a score of “1” was given for a wrong answer.

Table 3.2 Score for infection control practice

Question	Correct answer	Wrong answer
C1	2	1
C2	2	1
C3	2	1
C4	2	1
C5	2	1
C6	2	1
C7	2	1
C8	2	1
C9	2	1
C10	2	1
C11	2	1
TOTAL	22	11

Based on the practice score, general assistants were put into one of three categories as follows:

1. Score < 13 poor practice
2. Score 13 – 16 moderate practice
3. Score 17 – 27 good practice

3.9.1.3 Attitude Score

An attitude score was developed from the eleven attitude questions. Five questions were open ended and six were “yes” or “no” answer questions. One point was given for a correct yes (positive attitudes) or no (negative attitudes) question and two points for positive open ended questions. The maximum possible score was 16.

The general assistants were then put into one of three groups depending on their score:

1. Score < 9 bad attitude
2. Score 9 - 13 moderate attitude
3. Score 14 - 16 good attitude

Question 11 was an open ended question. Responses were listed, common themes were identified and responses were then put into thematic groups.

3.10 Relationship Between Variables

A possible relationship was explored between the following variables using Chi square test. Significance at a level of $p < 0.05$ was used.

- Age and knowledge, practice and attitude scores.
- Educational level and knowledge, practice and attitude scores.
- Years of employment and knowledge, practice and attitude scores.

3.11 Ethical Considerations

Ethics approval was obtained from the Committee for Research on Human Subjects (Medical) of the University of Witwatersrand (ethics clearance number :M091158) as well as from Limpopo Department of Health and the Chief Executive Officer (CEO) of Letaba Hospital (Appendix 2) .

No names or identifiers were recorded on the questionnaires to ensure the anonymity and confidentiality of the general assistants. Individual written informed consent was obtained from each participant. The participants were informed that their participation was voluntary and that they had the right to terminate the interview at any time if they did not want to continue.

Each participant was assigned a number and the information aggregated for presentation of results so that no individual response could be identified. Confidentiality was maintained throughout the study as the information from the respondents was kept in a locked place and accessed by the researcher only.

A commitment was made to present the results of the research to hospital management and the general assistants at Letaba hospital as well as the hospital of the researcher where the pilot was conducted which is Maphutha L. Malatji hospital. The recommendations will be implemented to improve the training of general assistants in the future.

As Letaba hospital is a regional hospital in Mopani District, the feeder district hospitals will also benefit from the results of the study in order to improve infection control in the district because there is regular in-service training at district level regarding issues of common nature.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter outlines the results of the study and is divided into the following sections:

- The demographic profile of the participants
- Knowledge of participants about infection control
- Infection control practices of participants.
- Attitudes of general assistant towards infection control.
- Relationship between age, educational level and years of employment and the knowledge and practice scores.

All general assistants who were available on the days of data collection (97) agreed to participate and completed the interview. This represents 66% of all general assistants employed by the hospital.

4.2 Demographic Profile of General Assistants

Figures 4.1 to 4.4 show that over 80% of general assistants were over the age of 25 and the majority are female. Over 50% of general assistants have been employed for more than 10 years and 22% (23) of the general assistants had no formal education. It is important to note that the majority of participants had primary or both primary and secondary education, (39 and 38 percent respectively.) The numbers shown on the bar charts represent the number of respondents, not the percentage.

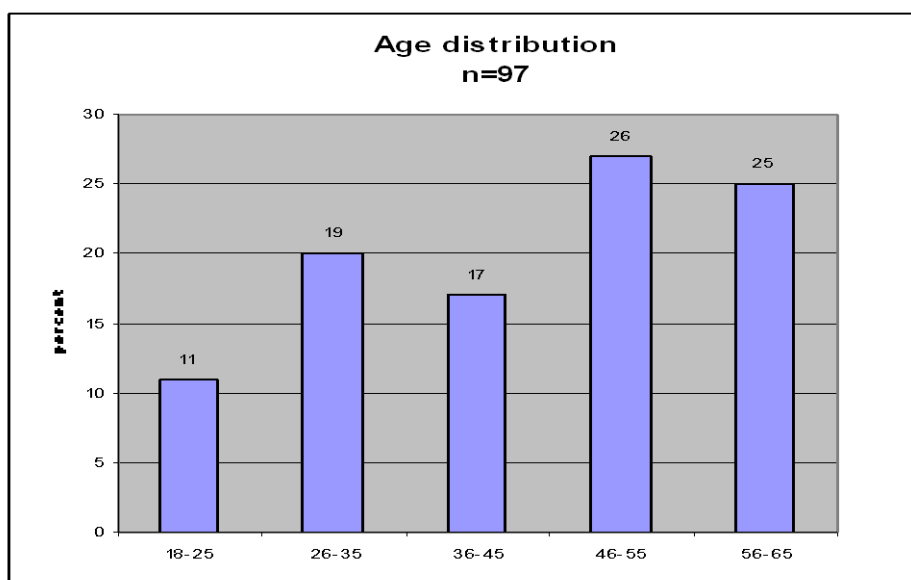


Figure 4.1 Age distribution of general assistants



Figure 4.2 Years of employment of general assistants

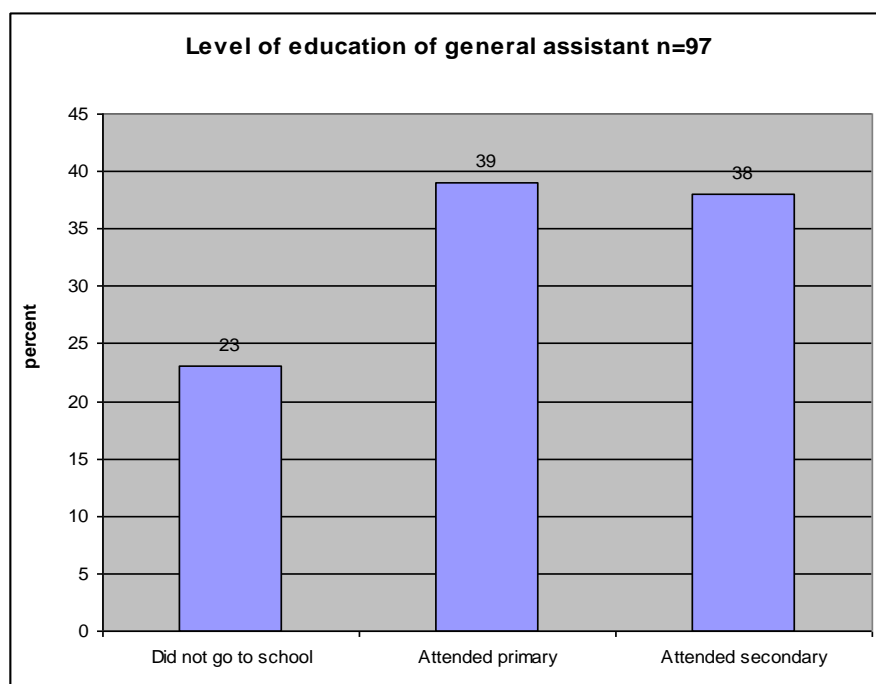


Figure 4.3 Level of education of general assistants

4.3 Training on Infection Control

Table 4.1 indicates that 87% of participants had been trained on infection control, and 75% of those trained had been trained in the past six months.

Table 4.1 Training of general assistants on infection control

Received training on infection control	84 (87%)
Time since last training	
Less than six months	63 (75%)
7-12 months	10 (10.3%)
13-23 months	8 (8.2%)
More than 24 months	3 (3.0%)

4.4 Knowledge of Infection Control

Table 4.2 below outlines the knowledge of infection control by general assistants. It is highlighted that over 80% of participants had heard about the hospital infection control policy. Out of those who heard about the policy 66% heard from the infection control nurse and 34% from a doctor or other health care workers.

Table 4.2 Knowledge of general assistants with regard to infection control policy

N = 97	Yes n (%)	No n (%)
Heard about hospital infection control policy	84 (86%)	13 (13%)
Heard about policy from infection control nurse	55 (66%)	
Heard about policy from doctor or other health care workers	29 (34%)	

Figure 4.4 presents the knowledge scores for general assistants. The results are that fifty percent of the participants displayed moderate knowledge of infection control while only 20% displayed good knowledge. Twenty seven percent of participants had poor knowledge.

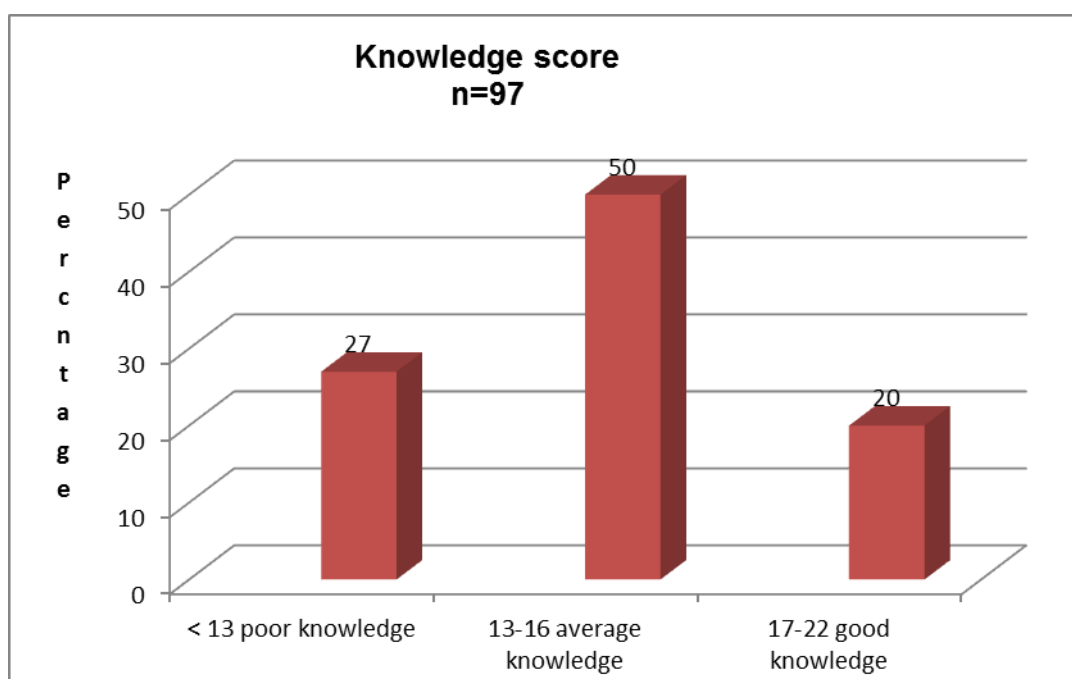


Figure 4.4 Knowledge score

Questions that most participants answered correctly included questions on hand washing, the disposal of sharps and use of gloves. Knowledge in these areas is presented in Figure 4.5. Eighty seven percent of the participants answered the question on hand washing correctly and 86% answered the question on the disposal of sharps correctly. Sixty five percent of participants gave the correct answer to the question on use of gloves. It is however noted that more than quarter of participants gave wrong answers on the use of gloves and only about 2% of participants did not know anything about the use of gloves.

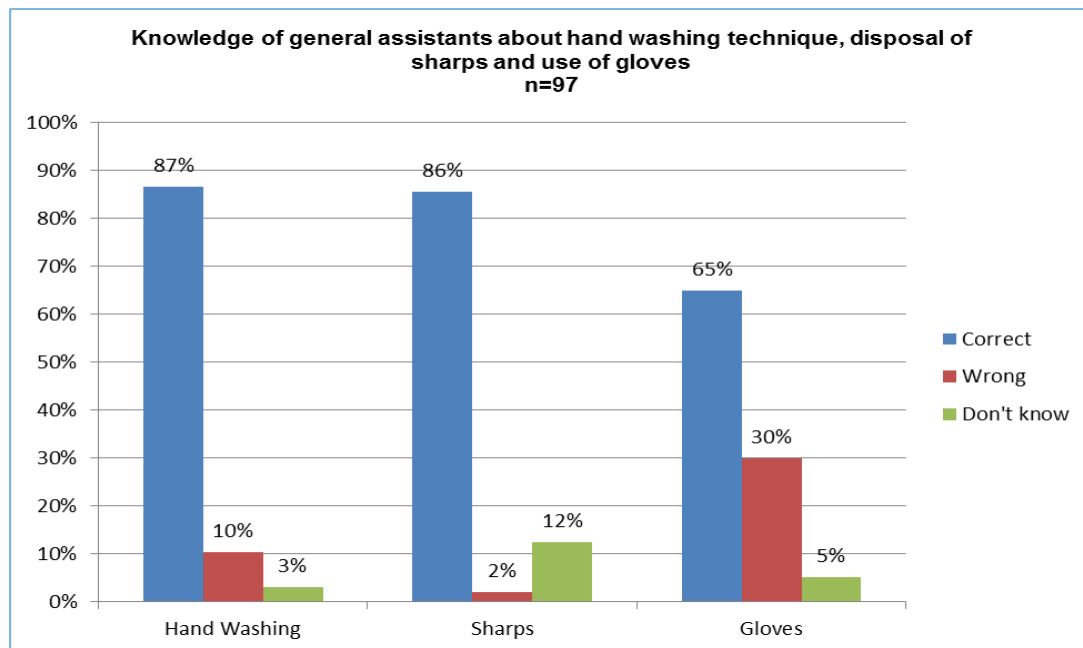


Figure 4.5 Knowledge of general assistants about hand washing technique, disposal of sharps and use of gloves

Figure 4.6 presents some of the questions which were poorly answered. Less than 50% of the participants could correctly identify the correct use for all three colour coded mops. Sixty two percent (62%) of the participants do not know all the correct steps to be followed after a needle stick injury and only 9% of the participants identified the correct solutions to be used for cleaning floors.

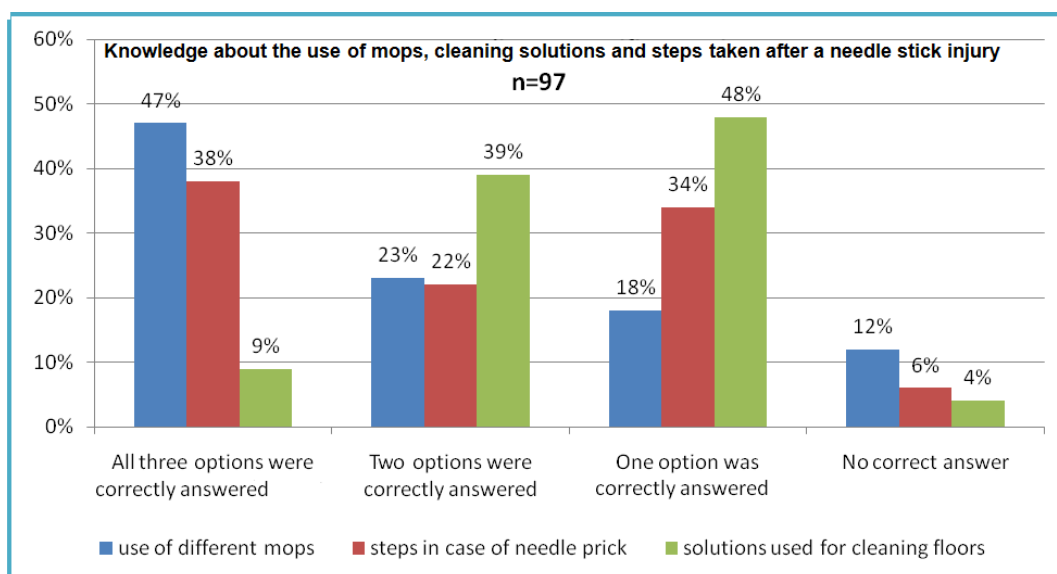


Figure 4.6 Knowledge about the use of mops, cleaning solutions and steps taken after a needle stick injury

Another question that was answered poorly was the question on sources of infection. Twenty nine percent of general assistants gave no correct answer at all (Fig 4.7).

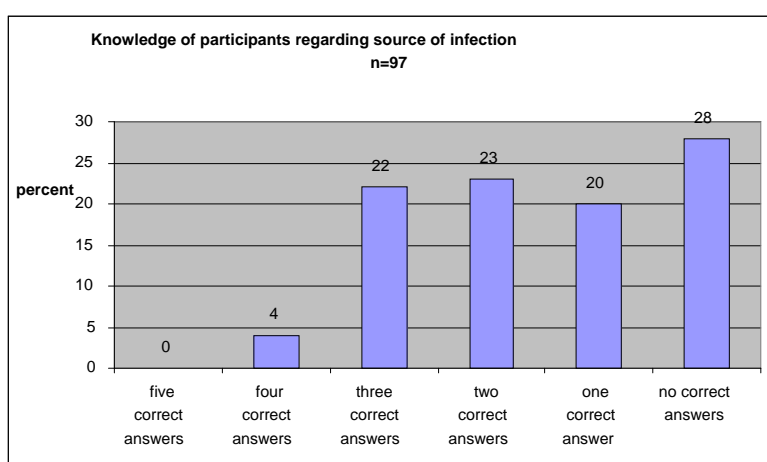


Figure 4.7 Knowledge of general assistants with regard to possible/likely sources of infection

4.5 Reported Infection Control Practices

Infection control practice is presented in Figure 4.8. The study revealed that 57% of the general assistants were found to have moderately good infection control practices, whilst 23% practiced infection control poorly.

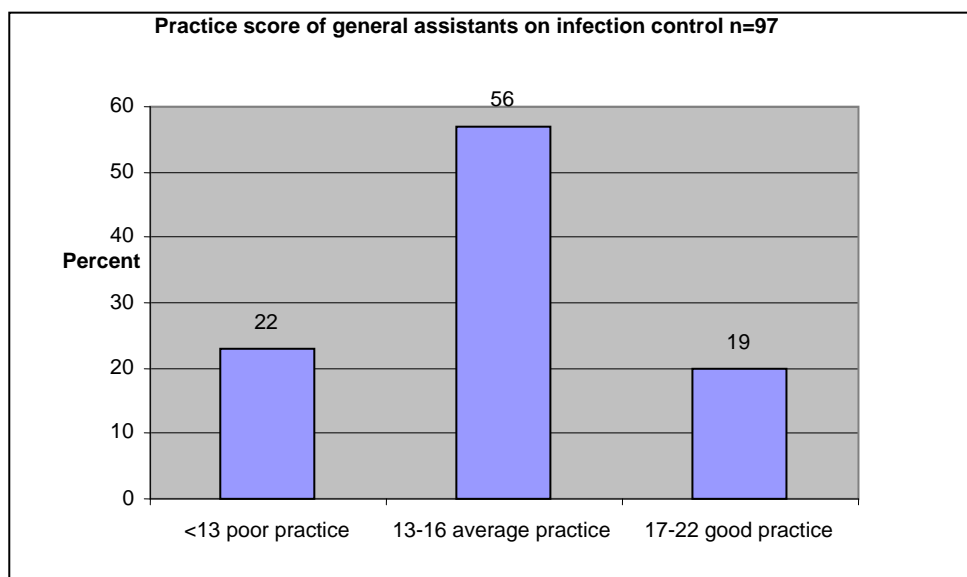


Figure 4.8 Practice score of general assistants on infection control

Table 4.3 gives the percentage of general assistants who reported correct infection control practice.

Table 4.3 Responses to questions on practice of infection control

Question	% of participants who answered questions correctly n=97
Disposal of general waste	97%
Measure to prevent infection in isolation rooms	94%
Disposal of infectious waste	90%
Technique for washing hands	90%
Use of aprons	75%
Where they start cleaning	72%
Method for disposal of sharps	65%
Reasons given for use of mask	41%
Reason given for starting area when cleaning	41%
Use of mask	35%
Frequency of emptying bins	29%

4.6 Attitudes Towards Infection Control

Figure 4.9 shows that most general assistants reported a positive attitude towards infection control. Overall eighty four percent (84%) of the general assistants in the study displayed a positive attitude toward their role in infection control.

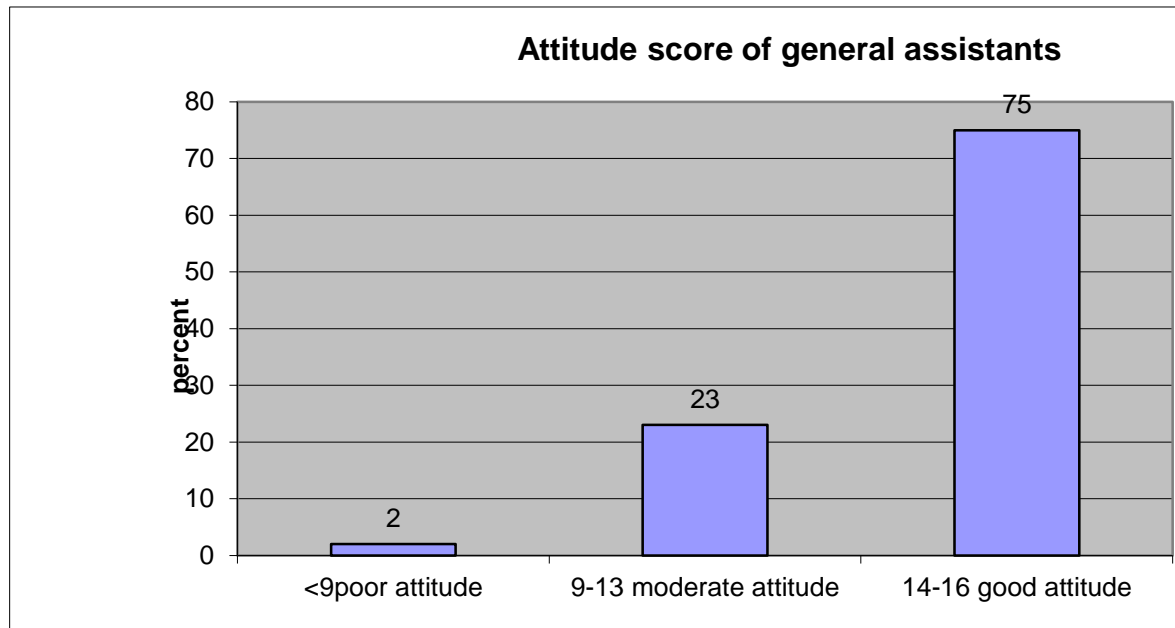


Figure 4.9 Attitude score of general assistants

Table 4.4 outlines that almost all the questions with regard to infection control were answered positively. Over ninety percent of general assistants in the study (n=88, 91%) gave a positive reason for practising infection control. Most of them indicated that they practice infection control to protect themselves and prevent the spread of infection. Nine percent gave negative reasons such as they practice infection control because of fear of being punished and because they are compelled to do so. It is however noted that all general assistants were positive about practicing infection control at home.

Table 4.4 Responses to questions on attitude towards infection control

Statement on infection control task	Positive %	Negative %
Role in infection control	84	16
Responsible for lining bins after they are emptied	87	13
View on cleaning sluice room	80	20
Feeling towards wearing of mask	86	14
Importance of washing of hands after every activity	94	6
Washing hands after touching bloody item	82	18
Segregation of waste	84	16
Reason for practicing infection control	91	9
View on practicing infection control at home	100	0

Although general assistants displayed positive attitudes towards infection control, there are some areas where there is worrying percentage of poor attitudes towards infection control. Twenty percent of respondents had poor attitudes towards cleaning of the sluice room, 18% to washing hands after touching bloody items, while 16% had a poor attitude towards their role in infection control.

4.7 Relationship between variables

The Chi-Square test was used to investigate the association between age and level of knowledge, practice and attitudes as well as between educational level and knowledge, practice and attitudes.

There was a significant association between age and the attitude ($P < 0.05$). Older participants were more likely to have a negative attitude towards infection control than younger participants.

There is also a significant association between education level and attitude ($p < 0.05$). Respondents with a formal education were more likely to have a positive attitude towards infection control.

Table 4.5 Relationship between age educational levels, years of employment and scores

Variable1	Variable2	p-value (* significant)
Age group	Knowledge score	0.619
Age group	Practice score	0.310
<i>Age group</i>	<i>Overall positive attitudes</i>	<i>0.000*</i>
Educational level	Knowledge score	0.944
Educational level	Practice score	0.338
<i>Educational level</i>	<i>Overall positive attitudes score</i>	<i>0.039*</i>
Years of employment	Knowledge score	0.987
Years of employment	Practice score	0.897
Years of employment	Positive attitudes	0.226
<i>Age group</i>	<i>Education</i>	<i>0.05*</i>

The association between age and education was significant ($p < 0.05$). The young participants were more likely to have attended the secondary schooling than those in the older age group.

4.8 Recommendations for Improved Infection Control

When asked for any suggestions to improve infection control, general assistants made some recommendations. Forty nine (51%) suggested that the hospital management should supply more protective clothing and cleaning materials. Fourteen (14%) requested more training (Figure 4.8).

Table 4.8 Suggestions of general assistants regarding infection control

Suggestion/comment	Number	%
Supply more protective clothing and cleaning Materials	49	51
Provide more training	14	14

CHAPTER 5

DISCUSSION

5.1 Introduction

In this chapter the results of the study are discussed and compared with previous studies as per the literature. The study shows that overall the general assistants at Letaba Hospital display moderate knowledge and practices with regard to infection control. Their attitude towards infection control is good. It is, however, noted that some areas of infection control still need more attention. The chapter will also highlight limitations of the study.

5.2 Knowledge of Infection Control

This study revealed that over 50% of general assistants at Letaba Hospital have moderate knowledge of infection control which is not optimal. The results of this study revealed no significant association between level of knowledge and age, years of employment or level of education.

The literature tends to support a greater level of health knowledge being associated with a higher level of education or experience in a variety of groups. A study conducted in Mazandaran (Islamic Republic of Iran) Hospital, on knowledge and practices of health care workers and medical students toward universal precautions showed an association between years of experience and knowledge; those with fewer years of experience had higher knowledge scores (WHO 2006). Chan et al (2007) revealed similar results when they looked at operating room staff. However, Vaz,

McGrowder, Alexander-Lindo, Gordon, Brown and Irving, (2010) found that healthcare workers employed for a longer period of time were more aware of precautions than those with less experience.

These studies were not conducted on general assistants and the current study may not have shown a difference between level of education and knowledge, as perhaps experience compensated for lack of education. General assistants with a low level or no education but with more experience may have knowledge similar to those with a higher level of education but less experience.

Although the general assistants in this study have different levels of education, generally the level of education is low. Less than 40% of general assistants attended secondary education and 23% had no education at all. It is likely that an inability to read or write will impact on the knowledge of general assistants and their ability to fully understand infection control. It is also possible that a lack of education may impede full understanding of the concepts of infection control. Their level of education could also prevent their being able to explore more knowledge on their own.

The fact that 23% of general assistants have no education at all and are therefore not able to read may affect the knowledge of general assistants regarding infection control as the guidelines are in a written format.

It is encouraging that some of the questions were answered well such as the question on hand washing technique, the disposal of sharps and the use of gloves.

Despite the fact that some of the questions were answered correctly, such as those on hand washing and the disposal of sharps, there are some specific and important areas where there is a lack of knowledge, such as the steps to take in the event of a needle stick injury, the use of different coloured mops and the solutions for cleaning floors, and potential sources of infection. The lack of knowledge about needle stick injuries is especially worrying as the findings from this study suggest that there may be still some risk of transmitting infections such as HIV/AIDS and hepatitis B and C.

Knowledge on solutions used for cleaning floors was sub-optimal. This could be explained at least partially by the non-compliance of suppliers of cleaning materials; sometimes there is shortage of correct materials leading to a substitution of cleaning solutions, which may confuse the general assistants in terms of knowing what solution to use. The process of procurement at times contributes to the shortage of cleaning materials where there is no contract as the process of three quotation takes long.

In addition, it is also possible that the concepts of using different cleaning materials in preventing infection may be hard to grasp by the general assistants. Correct knowledge of the main sources of infection is vital to preventing the spread of infection however in this study the knowledge of sources of infection generally was not good.

The fact that so few respondents fully understood these risks is a major concern because of the increased risk for both staff and patients who could be exposed to infection.

There is the possibility that the training is inappropriate for the level of general assistants and the methods of training need to be reviewed. Generally the lack of

knowledge is disturbing considering the number of years in employment of most of the general assistants and the training which is done on annual basis, which suggest that they should have been trained more than once. It is also noticed that some reported that they never received any training at all. It is possible that some of them were on leave or off duty at the time of training (which should then have been repeated) or the people who were not trained were the newly appointed general assistants. It is however, important to provide training at the beginning of the employment period.

5.3 Practices with Regard to Infection Control

The majority of general assistants had an average score for infection control practice. Although the majority of the general assistants have less than ten years of experience, it is expected that all of them should have displayed better practice of infection control in view of the in-service training which is done every year. This is on-job training which is done in order to remind employees about what they were trained on initially and also to update them on new developments regarding infection control.

The moderate score in knowledge would affect the practice of infection control as one can practice only what one knows. Regardless of the fact that the majority of general assistants are trained on infection control, their level of education is likely to underlie their knowledge and therefore practice. From comments made by respondents, it appears that additional factors could be the lack of adequate supervision that contributes to poor compliance to infection control practices and the lack of suitable equipment and cleaning materials. One respondent indicated that there is a need for more cleaning supervisors, and several of them commended that they need more

cleaning material and equipment. Continuous supervision and monitoring are important to ensure compliance at all times.

Although 72% of the of general assistants dispose of waste properly, it is of concern that 41% do not know the reason for this practice. Thus some general assistants correctly manage the disposal of waste as routine without proper knowledge of why it is done or important. This study found, as did Chau, Thompson, Twinn, Lee, Lopez, and Ho (2008) that there is no association between years of employment and practice of infection control.

5.4 Attitude Towards Infection Control

Generally most general assistants in this study (75%) have positive attitudes towards infection control. Although the literature review did not find any study done on general assistants, a study conducted in China on the attitudes of health care workers supports this finding (Yuan, Dembry, Higa, M., Wang, and Bradley, 2008).

Harris, Samore, Nafziger, DiRosario, Roghmanns, and Carmeli, (2000) also found that senior health personnel in two hospitals in Boston showed positive attitudes towards hand washing.

In the current study, seniority of general assistants was not recorded since there are no grading differentials within the group. However, it was found that older general assistants displayed a significantly more negative attitude towards infection control than those in younger age groups. This might be due to older people taking infection

control for granted as part of a monotonous routine while younger ones still enjoy exploring new information.

There was also an association between educational level and having a more positive attitude which could possibly be attributed to the fact that those who are educated understand the subject better than those who do not have any formal education.

It is interesting that there was no significant relationship between years of employment of general assistants and their attitude towards infection control; respondents with considerable and few years of employment had similar attitudes towards infection control. The reason might be attributed to the fact that generally the attitude is good so even those with negative attitudes could have been influenced by those with positive attitudes. This is speculative since one cannot exclude bias as the results were self-reported.

Although the percentage of general assistants who had a negative attitude towards infection control is low, it is important to strengthen the orientation programme and highlight the importance of infection control.

5.5 Suggestions from General Assistants regarding Infection Control

Suggestions made by the general assistants show that there is shortage of appropriate cleaning materials and equipment. This was also deduced in the survey by some of the questions which were not answered well such as use of mops and cleaning solutions. Supply of protective clothing also emerged as one area outside the

control of the general assistants which needs to be taken care of by the hospital management.

The results obtained and the comments by the participants indicate that implementing infection control measures is complex and that the general assistants will develop resistance when cautioned to implement proper infection control measures.

5.6 Limitations of the Study

- The practice scores were calculated using self-reported data rather than observations. This may have influenced the results obtained regarding practice of infection control. However, the data collection was done by one person and thus there was consistency in asking and interpreting the answers obtained.
- The researcher is the CEO of a nearby hospital, a fact which the general assistants would know. This may influence the findings since the interview was done face to face.
- The scoring may have been too generous and thus masked differences and associations between variables.
- The scoring was not based on any known or tried and tested scale;
- Only 97 out of 146 general assistants were interviewed. The general assistants who work at night, however, are unlikely to be different in any way from those who work during the day because they do rotate through the different work stations.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

In this chapter, conclusions are drawn and the recommendations made based on the results from the study.

6.1 Conclusion

Although there were no studies found on knowledge, attitudes and practice for general assistants on infection control in particular, those based on other health workers were useful in the compilation of a suitable survey questionnaire.

Since good infection control can contain the majority of infections in the institution including nosocomial infections, the personnel implementing effective infection control need to be knowledgeable, practice infection control and have positive attitudes towards the programme. Despite some of the questions being answered well, generally the knowledge and practice of infection control at Letaba hospital is not optimal. It is, however, noted that the attitude of general assistants is good and thus with appropriate supplies, training, supervision and encouragement the scope for improving practice by general assistants is promising.

6.2 Recommendations

As results of this study, the following are recommended in order to improve infection control at Letaba Hospital:

6.2.1 Hospital management:

- 1) Ensure that all units in the institution understand their roles and responsibilities with regard to infection control
- 2) Develop plan for purchasing of equipment to address infection control
- 3) Ensure that the requirements for the appropriate equipment, cleaning materials and personal protective equipment (PPE) are met by the hospital supply management team
- 4) Establish the need for infection control
- 5) Development of a specific curriculum for general assistants which will consider their scope of work, level of education and specific risks attached to their work environment

6.2.2 Infection control committee

- 1) Design training material congruent with the tasks and education level of general assistants and facilitation of opportunities for general assistants to learn to read and write.

6.4 Activities initiated at Letaba Hospital

As a result of the research into the knowledge, practice and attitudes of general assistants towards infection control, it is noted that, for the specific isolation requirements, step-by-step graphic instructions help employees to remember to perform each step in the proper order as shown in the following figure which was developed at Maphutha L Malatji hospital. The poster will be shared with Letaba hospital for implementation.



DEPARTMENT OF HEALTH
MAPHUTHA L. MALATJI HOSPITAL

INSTRUCTIONS FOR ENTERING ISOLATION ROOM

TAELO GE O TSENA KA PHAPHOSHING YA PHETELO

SWILERISO SWO NGHENA E KAMARENI YO HLAWULEKA



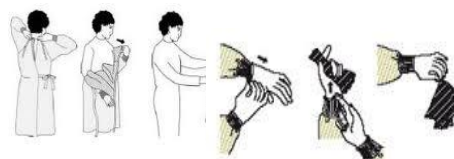

<p>1 -Wash hands with soap</p> <p>- Hlapa diatla ka meetse le sesepe</p> <p>- Hlamba mavoko hi xisibi</p> 	<p>2 -Put on gown and gloves before entering the room</p> <p>-Apara gown le digloves pele o tsena phaphosheng</p> <p>-Mbala gaweni na tigloves u nga si nghena kamareni</p> 
<p>3 -Put off the gown and gloves before leaving the room</p> <p>- Apola gown le digloves pele o e tswa ka phaphoshing</p> <p>- Hluvula gaweni na tigloves u nga si huma kamareni</p> 	<p>4 -Wash hands with soap before you leave the room</p> <p>-Hlapa diatla pele o e tswa ka phaphoshing</p> <p>- Hlamba mavoko hi xisibi u nga si huma kamareni</p> 

Figure 6.1 Infection control activities at Maphutha L Malatji hospital

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APPENDICES

APPENDIX A: ETHICS CLEARANCE CERTIFICATE AND LETTERS OF APPROVAL

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG
Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Mmalahla R Peta

CLEARANCE CERTIFICATE

M091158

PROJECT

Knowledge, Attitudes and Practices Regarding
Infection Control amongst General Assistants
at Letaba Regional Hospital

INVESTIGATORS

Mmalahla R Peta.

DEPARTMENT

School of Public Health

DATE CONSIDERED


2009/11/27

DECISION OF THE COMMITTEE*

Approved unconditionally

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE 15/03/2010

CHAIRPERSON 
(Professor PE Cleaton-Jones)

*Guidelines for written 'informed consent' attached where applicable
cc: Supervisor : Prof MH Ross

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES...





LIMPOPO

PROVINCIAL GOVERNMENT
REPUBLIC OF SOUTH AFRICA

DEPARTMENT OF HEALTH AND SOCIAL DEVELOPMENT

Enquiries: Ramalivhana NJ

Ref: 4/2/2

28 June, 2010

Ms MR Peta

MAPHUTHA MALATJI HOSPITAL

Private Bag x 11020

Namakgale


1391

Dear Ms MR Peta

"Knowledge, Attitudes and Practices regarding infection Control amongst General Assistants at Letaba Regional Hospital "

Permission is hereby granted to Ms Peta MR to conduct a study as mentioned above in Limpopo Province "

- The Department of Health and Social Development will expect a copy of the completed research for its own resource centre after completion of the study.
- The researcher is expected to avoid disrupting services in the course of his study
- The Researcher/s should be prepared to assist in interpretation and implementation of the recommendations where possible
- The Institution management where the study is being conducted should be made aware of this,
- A copy of the permission letter can be forwarded to Management of the Institutions concerned



HEAD OF DEPARTMENT
HEALTH AND SOCIAL DEVELOPMENT
LIMPOPO PROVINCE

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APPENDIX B: DATA COLLECTION INSTRUMENTS

ANNEXURE 'A'

Administered questionnaire on knowledge and attitudes on infection control amongst general assistance at Letaba regional hospital

Results from the responses will serve as the basis to describe the knowledge, attitudes and practices of infection control amongst the general assistants.

If any of the questions have different choices, I will give you the list and then please tell me which one you think is correct

A. DEMOGRAPHY

1. Age: How old are you?

- ☐ 18-25
- ☐ 26-35
- ☐ 36-45
- ☐ 46-55
- ☐ 56-65

2. Gender

- ☐ Male
- ☐ Female

3. Years of employment: how long have you worked as a general assistant?

- ☐ 0-10
- ☐ 11-20
- ☐ 21-30
- ☐ 31-over

4. Educational standard: What standard did you finish at school?

- ☐ Grade 0
- ☐ Grade 1-7
- ☐ Grade 8-12

B KNOWLEDGE AND PRACTICES

1. Have you heard anything about Letaba hospital policy on infection control?

☐ Yes

☐ No

2. From whom did you hear about it?

☐ Nurse

☐ Doctor

☐ Any other health worker

3. Did you receive any training about the policy on infection control?

☐ Yes

☐ No

4. When were you trained on infection control policy?

☐ 0-6 months ago

☐ 7-12 months ago

☐ 12-24 months ago

☐ Over 24 months ago

5. How were you trained? (If the responded does not know, the list will be given)

☐ In-service training

☐ Orientation and induction

☐ Short course

☐ On the job training

☐ Other

6. For how many days were you trained?

7. Who trained you?

8. Does hand washing with soap reduce the spread of infection?

☐ Yes

☐

No

☐

Don't know

9. Where do we use the following colour coding of cleaning mops?

White.....

Red.....

Green.....

10. Must the sharps containers be closed before you take them away?

☐

Yes

☐

No

☐

Don't know

11. What solution do you use for cleaning the floor?

.....
.....

12. Do gloves protect us from needle pricks?

☐

Yes

☐

No

☐

Don't know

13. What are the five main sources of infection in the hospital?

.....
.....
.....

14. In case of needle prick injury what would you do?

.....
.....
.....

C PRACTICES

1. When cleaning the unit where do you start and why?

.....
.....

2. How often do you empty the bins?

.....
.....
3. Which colour of bag do you use to dispose of?

- General waste

And

- Infectious waste

4. How do you dispose of sharps?
.....

5. When do you use apron as measure of infection control?
.....

6. Do you wear mask all the time when you work?

☐ Yes

☐ No

7 If No, when do you wear a mask?
.....

8. How do you dispose waste from the ward?
.....
.....

9. When washing hands where do you starts and why?
.....
.....
.....

10. How do you dilute the solution for cleaning the floor?
.....
.....

11. When entering the isolation room what measures do you take to prevent infection?

D. ATTITUDES

1. Do you have a role in infection control?

☐ Yes

☐ No

If the answer above is yes, how do you feel about your role in infection control?
.....
.....

2. Do you think lining the bin after it is emptied is your responsibility?
.....

3. What is your view about cleaning of the sluice room by general assistants?
.....
.....
.....

4. What do you think about practicing infection control at home?

.....
.....
.....

5. What is your feeling about wearing of mask?

.....
.....

6. Do you think washing of hands is necessary after every activity as it can irritate the skin?

☐ Yes

☐ No

**7. Do you think segregation of waste is necessary even when all waste is to be disposed?
Give reason for your answer**

.....
.....
.....

8. Why do you practice infection control?

☐ To avoid disciplinary actions against me

☐ To decreasing risk to patients

☐ To be given awards for my performance

Other reason given:
.....

9. Do you think washing of hands must be done only after touching items with blood?

☐ Yes

☐ No

☐ Don't know

10. Is there anything else you would like to tell me about or any suggestions about infection control at Letaba or is there anything that you would like to learn about?

.....
.....

Thank you for your assistance, when my research is finished, I shall come back to Letaba and tell you all about what I found out.