

UNIVERSITY OF KWAZULU-NATAL

High cost of healthcare in the private sector ***EThekwin Hospital and Heart Centre***

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I, Andricia Hareepersad, declare:

- ❖ This thesis has not been submitted for any degree or examination at any other university.
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ABSTRACT:

South Africa faces a quandary of healthcare issues which is categorized by a prejudiced and fragmented healthcare delivery system. South Africa has a two-tier healthcare system which is made up of a dismal public healthcare sector and an exorbitantly priced private healthcare sector. The private healthcare sector has come under scrutiny as healthcare pricing has surged year on year. The purpose of this research was to determine the factors that have contributed to the high healthcare costs, unpack the role that Medical Aid Schemes have on costing, assess the impact of the impending National Health Insurance and finally understand if Lean methodologies are applied, how it would assist in reducing costs in the private healthcare sector. A quantitative research design was conducted using a positivism philosophy at EThekweni Hospital and Heart Centre. This cross sectional study was conducted among medical professionals and management that were selected randomly at this hospital. An online questionnaire was carried out to determine what factors contributed to the high healthcare costs at this hospital. The data was analysed using the statistical program SPSS. The research analysis yielded results that indicated that the costs of pharmaceuticals were a large contributing factor to high healthcare costs. The medical aid schemes were placing pressure on doctors in terms of diagnosis and treatment options made available. There was a resounding impression that there was little or no confidence in the NHI implementation. The target population had a fair knowledge of Lean in general but not specifically in healthcare. The recommendation is that Lean methodologies need to be discussed with relevant stakeholders at the hospital. The hospital should embark on a journey which looks at how lean can be introduced at the organization and tailor the process to ensure that it can be implemented without many challenges. The gap in research showed that there was little to no long term research on the implementation of lean at a high level at the hospital hence the concept of lean was not well received as there is little knowledge in this area.

TABLE OF CONTENTS:

ACKNOWLEDGEMENTS.....	i
ABSTRACT.....	iv
TABLE OF CONTENTS.....	v
LIST OF FIGURES.....	viii
LIST OF TABLES.....	xi
CHAPTER 1: INTRODUCTION.....	1
1.1 INTRODUCTION.....	1
1.2 MOTIVATION OF THE STUDY.....	1
1.3 FOCUS OF THE STUDY.....	2
1.4 PROBLEM STATEMENT.....	2
1.5 RESEARCH OBJECTIVES.....	3
1.6 RESEARCH QUESTIONS.....	3
1.7 METHODOLOGY.....	3
1.8 CHAPTER OUTLINE.....	4
1.9 SUMMARY.....	5
CHAPTER 2: LITERATURE REVIEW.....	6
2.1 INTRODUCTION.....	6
2.2 FACTORS CONTRIBUTING TO HIGH HEALTHCARE COSTS.....	7
2.3 MEDICAL AID SCHEME IMPACT ON THE PRIVATE SECTOR HEALTHCARE COSTS.....	18
2.4 THE NATIONAL HEALTH INSURANCE IMPACT ON THE PRIVATE HEALTHCARE SECTOR.....	21
2.5 CAN LEAN IMPLEMENTATION HELP REDUCE HIGH HEALTHCARE COSTS.....	24

2.6	SUMMARY	28
CHAPTER 3: RESEARCH METHODOLOGY		30
3.1	INTRODUCTION	30
3.2	AIM OF STUDY	30
3.3	RESEARCH DESIGN AND METHODS	30
3.4	RESEARCH PARADIGM	32
3.5	STUDY SETTING	32
3.6	POPULATION AND SAMPLE OF THE STUDY	32
3.7	SAMPLING METHOD	33
3.8	CONSTRUCTION OF THE INSTRUMENT	34
3.9	DATA COLLECTION	35
3.10	DATA ANALYSIS	36
3.11	RELIABILITY AND VALIDITY OF STUDY	36
3.12	BIAS	37
3.13	ETHICAL CONSIDERATIONS	38
3.14	SUMMARY	39
CHAPTER 4: RESULTS AND DISCUSSION		40
4.1	INTRODUCTION	40
4.2	PARTICIPATION & BIOGRAPHICAL INFORMATION	40
4.3	OBJECTIVE 1 - RESULTS AND DISCUSSION	44
4.4	OBJECTIVE 2 - RESULTS AND DISCUSSION	54
4.5	OBJECTIVE 3 - RESULTS AND DISCUSSION	59
4.6	OBJECTIVE 4 - RESULTS AND DISCUSSION	66
4.7	SUMMARY	73

CHAPTER 5: CONCLUSION AND RECOMMENDATIO	75
5.1 INTRODUCTION	75
5.2 CONCLUSION	75
5.3 IMPLICATIONS OF THIS RESEARCH	76
5.4 LIMITATIONS OF THIS RESEARCH	76
5.5 RECOMMENDATIONS TO SOLVE THE RESEARCH PROBLEM	77
5.6 RECOMMENDATION FOR FUTURE STUDIES	77
5.7 MANAGERIAL IMPLICATIONS	78
5.8 SUMMARY	78
REFERENCES	79
APPENDIX 1: ONLINE SURVEY	87
APPENDIX 2: ETHICAL CLEARANCE	92
APPENDIX 3: TURNITIN REPORT	93

LIST OF FIGURES:

Figure	Description	Page
2.1	Technology and the drivers of healthcare expenditure growth	8
2.2	Key principles and attributes to Health Technology Management	11
3.1	Research Onion for this research	31
4.1	Gender profile by position at Hospital	41
4.2	Number of years worked by position at Hospital	42
4.3	Race group by position at Hospital	43
4.4	Age profile by position at the Hospital	43
4.5	Evaluating if there is a nurse shortage at this hospital	45
4.6	Evaluation if the workforce can be streamlined at this hospital	46
4.7	Evaluation if doctors are over-servicing patients at this Hospital	47
4.8	Evaluation of new medical technology on job efficiency at this Hospital	48
4.9	Evaluation if new medical technologies add value to patients	49
4.10	Evaluation if older treatments can be used over new treatments	50
4.11	Evaluation if incentives are given for more expensive treatments	51
4.12	Evaluation what factors contribute to the high healthcare costs at the Hospital	52
4.13	Evaluating how many cases of medical mal-practice with the year	53
4.14	Evaluating if some medical treatments are being questioned by the Medical Aid	54
4.15	Evaluation whether Medical Aid scheme are dictating what treatments doctors can administer	55

Figure	Description	Page
4.16	Evaluating if there has been Medical Aid fraud at this Hospital	56
4.17	Evaluating whether this Hospital incentivizes the use of generic treatment	57
4.18	Evaluating if Medical Aid Schemes are paying doctors in line with NHRP	58
4.19	Evaluating if target population understood the purpose of the NHI	59
4.20	Evaluation if the participant's believed that the NHI was vital for SA	60
4.21	Evaluation if the introduction of the NHI will negatively impact hospitals in the private healthcare sector	61
4.22	Evaluation if the introduction of the NHI will drive medical professionals abroad	62
4.23	Evaluation if the NHI will ensure patients are not ripped off by the exorbitant pricing of the private healthcare sector	63
4.24	Evaluation if the NHI should focus more the public healthcare sector than the private healthcare sector	64
4.25	Evaluation if respondents believed that the NHI will be a complete failure	65
4.26	Evaluation if respondents understand the Lean approach in healthcare	66
4.27	Evaluation if respondents feel that Lean can only work in the manufacturing environment and will not work in healthcare due to its complexity	67
4.28	Evaluation if respondents feel that Lean is about cutting down resources and forcing employees to take on more work	68
4.29	Evaluation if respondents feel that Lean helps to improve efficiencies and quality of care by eliminating aspects of the process that don't add value	69

Figure	Description	Page
4.30	Evaluation if respondents feel that there is reluctance for medical professionals to adopt the lean ideology into healthcare	70
4.31	Evaluation if respondents feel that a tailored Lean strategy can be implemented if all stakeholders agree at the hospital	71
4.32	Evaluation if respondents feel that a culture of improvement is feared because if medical errors are disclosed this creates room for lawsuits and litigation	72
4.33	Evaluation if respondents feel that they won't support Lean implementation because there is a lack of knowledge on how to integrate this at the hospital	73

LIST OF TABLES:

Table	Description	Page
2.1	Reasons for patients suing physicians and health workers	8
2.2	Key principles and attributes to Health Technology Management	11
4.1	Survey Participation	41

CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION:

Healthcare in South Africa has become a serious point of contention for Government as the gap between public and private healthcare widens. According to Mayosi and Benatar (2014) the challenge that South Africa faces is that only 30 % of the country's doctors serve 84 % of the national population with the remaining 70 % of doctors serving 16 % of the population. This highlights the disparity of healthcare in the country. The private healthcare sector has come under scrutiny as prices increase exorbitantly year on year which has exacerbated the already high barriers to access private healthcare. To determine the factors that drive healthcare costs up, has become circuitous and complicated as there are many stakeholders that contribute to the high healthcare costs in the private sector (Chetty, 2016). The solution that would be required needs to evaluate what are the factors that contribute to the high healthcare costs and to determine what measures could adequately contend with the healthcare challenges in the private sector.

1.2 MOTIVATION FOR THE STUDY:

The intention of this research is to evaluate what factors drive costs up at a private hospital and to understand the impact of the medical aid scheme and the impending National Health Insurance roll out in this arena. The research findings are important to the private healthcare sector to understand as this sector has come under scrutiny. Furthermore, the research seeks to evaluate whether Lean methodologies can assist in reducing the high costs. The hospital that will be investigated is EThekweni Hospital and Heart Centre. The stakeholders that will benefit from this study will be the management and medical professionals at the hospital and other private hospitals under the National Hospital Network which this private hospital belongs to. The benefit of this research will enable this hospital to look at areas that need attention which will enable the hospital to be more competitive in terms of improved costs. The research also adds to existing literature by looking at an array of factors that impact on costing in the private sector.

1.3 FOCUS OF THE STUDY:

The research will focus on the private healthcare sector and evaluate the opinions of both management and medical professionals at the hospital in relation to the drivers of high healthcare costs. Research on how to reduce these costs was not critically analysed. The main focus of this research was to understand and highlight critical factors that impacted on healthcare costs in the private sector.

1.4 PROBLEM STATEMENT:

According to Strydom (2017) South Africa has been classified as one of the most unequal countries in the world by the World Bank due to the large disparities in healthcare. These statements highlight the severity of the healthcare crisis the country faces. According to Strydom (2016) South Africa spends 8.8 % of the GDP on healthcare of which 4.5 % is spent on private healthcare which serves 16 % of the population. The problem with the private healthcare sector is that although it provides good healthcare to the consumers that are covered, the costing is exorbitant and is increasing at a rate beyond inflation (Strydom, 2016). The private healthcare sector has been characterised as a sector that is driven by profits. According to Chetty (2015) the challenge in remedying the healthcare crisis is to find solutions that will not compromise quality. The aim of this research was to understand why healthcare costs were high in the private healthcare sector by determining what factors contributed to the high costs. Research also delved into determining how the medical aid schemes impacted on the costing of the private healthcare sector. With the drive from Government implementing the National Health Insurance into the healthcare sector, it was prudent to understand what the thoughts were from the medical fraternity working in this sector. With the knowledge that barriers to access private healthcare has increased year on year, the research aimed to evaluate if this sector would support the implementation of Lean methodologies to help reduce costing.

1.5 RESEARCH OBJECTIVES:

- 1.5.1 To identify what factors contribute to high costs of healthcare in the private sector.
- 1.5.2 To evaluate how the introduction of the National Health Insurance will impact on private healthcare sector hospitals.
- 1.5.3 To determine whether medical aid schemes contribute to the high health care costs in the private sector hospitals.
- 1.5.4 To determine if Lean methodology approach will be adopted at the hospital to reduce costs.

1.6 RESEARCH QUESTIONS:

The research objectives were converted in research questions which could be analysed during the research.

- 1.6.1 What are the cost drivers that contribute to the high costs of healthcare at EThekweni Hospital and Heart Centre?
- 1.6.2 How will the introduction of the National Health Insurance impact on the hospital activities?
- 1.6.3 How does the medical aid scheme contribute to the costing model of the hospital?
- 1.6.4 Can Lean methodologies reduce healthcare costs at this hospital?

1.7 METHODOLOGY:

For this research an exploratory cross-sectional quantitative research design method was selected. A positivism paradigm was selected as the research philosophy. Due to the research paradigm positivism being used for this research it ensures that the human factor exploitation is prevented, in that this research paradigm seeks more fact based data and negates the emotional aspects that sometimes come through during surveys (Rose, Spinks and Canhato, 2014). The exploratory research approach was selected based on the purpose of this research which required understanding of the issue. The sampling technique to be applied is probability sampling applying the simple random frame. The research instrument to be used will be surveys in the form of questionnaires. These

questionnaires will seek to determine why healthcare costs are high in the private healthcare sector. The reason for choosing this type of research instrument is due to the fact that responses from the questionnaires can be obtained relatively quickly. The research instrument is flexible in that it can measure a wide range of variables and questionnaires can reach a broader population at a low cost (Rose et al., 2014).

1.8 CHAPTER OUTLINE:

The outline of the chapters will be illustrated below.

CHAPTER 1: Introduction

This chapter introduced the basis of why the research needed to be conducted by indicating the current problem. Research objectives were highlighted to express the research purpose. The research approach in terms of the type of research to be conducted was also listed. Finally the chapter listed the flow of information by each chapter to reveal how the research was conducted.

CHAPTER 2: Literature Review

This chapter provided extensive analysis on the research topic which covered why healthcare costs were high in the private healthcare sector. The literature review delved into the different research objectives to understand and deliberate the extent of how these factors contributed to the research problem. This chapter helped develop the background to the type of questions that was asked in the online survey.

CHAPTER 3: Methodology

This chapter illustrated the type of research design, approach and philosophy that was applied when conducting the research and it also provided a detailed explanation to the choice of research design selected. It provided insight to the study setting. Details on how the research was conducted were listed and explanations provided on how the research was governed from an accuracy, reliability and validity point of view.

CHAPTER 4: Results and Discussion

This chapter illustrates the data that was collected during the survey and analysed using SPSS. Cross tabulation analysis was conducted. All results were extensively discussed and evaluated against literature to determine if there were similarities or contention on the findings.

CHAPTER 5: Conclusion and Recommendation

This chapter finalizes the research to conclude if the objectives of the research were met and it provided recommendations on how this research could be furthered and improved. It also illustrated limitations. Finally it highlighted the key stakeholders that would benefit from this research and provided recommendations on how these research findings could be applied.

1.9 SUMMARY:

This chapter provides an encapsulating review on the purpose of the research. It commenced by introducing the research problem and indicating the objectives of the research followed by how the research would be conducted. A brief outline was also listed to illustrate how the research would proceed.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION:

The literature review undertaken gives an all-encompassing overview of the global phenomenon on high health care costs in the private healthcare sector. Advancements in technology, diagnostics and pharmaceuticals are at a pinnacle stage in the health care industry giving people a selection of healthcare options. The impact of these facilities result in either benefits or costs to the end users. In South Africa the healthcare system displays a waste of 21 % which constitutes of overtreatment (5.9%), administrative complexity (3.8%), pricing failure (3.2%), failure of care (3.8%), fraud and abuse (3.1%) and failure of coordination (0.9%) (Bateman, 2014b). This means that 21% of every rand spent on healthcare is not value adding. The research undertaken was to determine why health care services in the private health care sector in South Africa are exorbitantly priced. There is confounding information surrounding high health costs, which ranges from high tariffs, over servicing of patients and high administrative fees of medical aid schemes. However, these are just symptoms of the health care crisis. Taxonomy of various factors were reviewed to assess its impact to healthcare costs in the private healthcare sector. The research also assessed possible solutions to these factors based on literature. Initially the parochial scope zoomed in and unpacked factors within the hospital environment that contribute to the high health care costs to determine root causes to the current crisis that the private sector found itself in. An in-depth literature review on medical aid schemes and its impact to the private health care sector was conducted. A better understanding of the relationship between the hospital and the medical aid schemes were required to interpret the impact it had on the end user in terms of costs. The National Health Insurance (NHI) which is the 3rd attribute to this research was extensively researched; to understand its implications to the private health care sector and whether its implementation would result in a positive outcome or if it is just a glorified myth. Finally a pervasive review on the implementation of Lean within the health care framework with the objective of reducing the rising costs of health care in the private sector by taking into account the 3 attributes mentioned in this research

was conducted. An overview on how this framework could be utilized at the hospital under research will be presented.

2.2 FACTORS CONTRIBUTING TO HIGH HEALTHCARE COSTS:

Rising costs in both primary and private healthcare are due to a combination of factors, while it may be arguable whether these price increases may occur as a direct result of increased costs or the desire for inflated profit margins. High health care costs is a global phenomenon which has received a lot of scrutiny; policy holders and regulators in this sector have hurdled together to establish how to control the spiralling costs in the health care arena. According to Doherty (2015) there is minimal control on health care pricing in the private health care sector and the type and quality of services are not well regulated or monitored. As a result this has led to the distortion that can be seen in the private health care sector in terms of quantity, quality and price of health care services as well as no control over anti-competitive behaviour (Doherty, 2015). The challenge is health care is no longer seen as a service but rather as a commodity in the global market. The following review examines the fundamental factors that drive costs in the private healthcare sector globally and nationally in South Africa.

2.2.1 MEDICAL TECHNOLOGY:

Medical technology refers to advanced medical equipment and electronic health records. According to Armstrong-Mensah (2017), the use of advanced medical technology is on rise as it expands treatment options for various illnesses and it assists in the tracking of patients health information. According to Karaca-Mandic, Town and Wilcock (2017) implementing high technology health care services are not just to deliver high quality health care but it is motivated towards profitability of these services. Developing technology in healthcare is expensive as researchers seek to create tools that are the epitome of innovation and design. Medical treatments such as robotic surgery, magnetic resonance imaging and positron emission topography are high cost treatments that have improved the quality of healthcare but in turn have increased medical costs for patients (Armstrong-Mensah, 2017). According to Bateman (2014a) usually in most industries the use of modern technology helps reduce costs however in healthcare, CEO of Discover

Health, believes that you can't bring the cost down as you still require the medical professional. These new technology advancements have assisted physicians in treating patients more effectively but literature has also shown that this new technology has also become a tool for the health care arena to commercially exploit individuals requiring this service. Due to the large costs associated with these medical treatments, policy makers and health economists have started investigating if these investments are actually worth it (Folland, Goodman & Stano, 2017). According to OECD (2017) there are 3 categories of medical technology which are:

- 2.2.1.1 High value technology which results in high health benefits.
- 2.2.1.2 Effective technology which use can be expanded. It is effective for some treatment but when expanded to other conditions it shows a rapid decline in effectiveness.
- 2.2.1.3 Low value technology is treatment that offers little evidence of effectiveness and generally does not generate value.

Through literature there is a lot of debate that surrounds the advancement of new medical technologies and the cost implication it has to the patient on the receiving end. Another issue is the operational cost of the medical technology as this will directly impact on the treatment cost that the patient is subjected to.

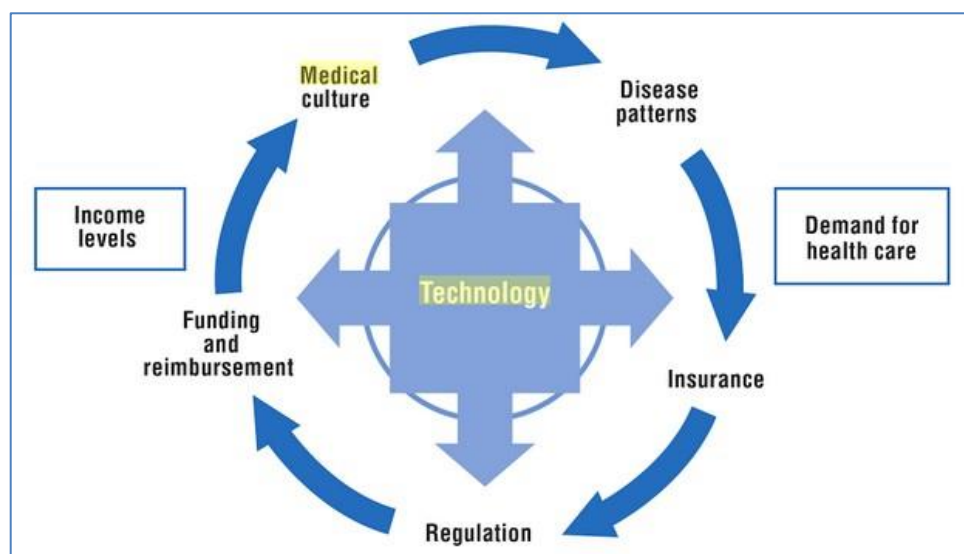


Figure 2.1: Technology and the drivers of healthcare expenditure growth (OECD, 2017)

According to Folland et al., (2017) although medical technology impacts on healthcare costs, people are willing to pay for this perceived improved quality that the new technology brings. However, patients are not capable of ascertaining if the treatment that they are receiving will benefit them in relation to the cost that they are subjected to for the treatment. Furthermore, marketing of these new technologies in terms of the improved quality that it will bring to health care has also influenced the way people view medical technologies. According to Karaca-Mandic et al., (2017) latest technology is an important factor for patients deciding which provider to use to receive treatment. Hence, medical technology adoption also prompts competition between hospitals which is another factor that contributes to high health care costs in the private sector. Here again the perceived image that hospitals with the latest medical technologies are at the pinnacle of quality health care also influences an individual's decision in which hospital they choose to receive treatment. In terms of how medical technology diffuses through the health care industry is also dependent on physician's adoption of the new medical technology and can be attributable to the age of the physician, location of practice and type of practice (Karaca-Mandic et al., 2017). Factors such as adoption and diffusion of medical technology, income levels and consumer demand for the perceived impact of new medical interventions all drive the cost of medical technology (OECD, 2017). The global crisis is that in the past adoption and diffusion of medical technology resulted in gains in longevity and quality of life for the patient but in recent times it has become the principle driver for health care expenditure with a plateaued effect on gains on quality of life. According to OECD (2017) policy makers, regulators and payers need to structure the system in health care in such a way to promote appropriate use of medical technology. This is illustrated in figure 2.1. The challenge faced is to understand what criteria should be used to determine appropriate use of medical technology. According to Sampietro-Colom and Martin (2016) in South Africa there seems to be a lack of governance, structure, regulation and assessment on medical technologies implementation. The concern in South Africa is the manner in which medical technologies are procured as well as the level of inappropriate usage of these technologies resulting in unplanned expenditure (Sampietro-Colom and Martin, 2016). Empirical studies on healthcare have indicated that medical technologies require complementary equipped facilities and highly specialized trained personnel

to operate this technology leading to a direct increase in health care (Dewar, 2015). In the healthcare sector, a Health technology assessment is conducted to evaluate the safety, quality, efficiency and cost benefit of medical technologies prior to implementation. According to Hegarty, Amoore, Blackett, McCarthy and Scott (2017) organizations need to conduct Health technology Assessments at a local level to explore benefits and the life cycle costs that will be delivered by the new technology. According to Lehoux, Miller, Daudelin and Denis (2017) although Health Technology Assessments are used globally by most health policy makers, a shortcoming is that the outcome of decisions made on the procurement or implementation of a new technology usually comes once the new technology is in the adoption phase. According to Lehoux et al., (2017) all stakeholders which include entrepreneurs, investors, regulatory agencies, public and health policy makers should apply new approaches such as Responsible Research Innovation (RRI) which look at technologies that address the most sine qua non health care issues on a global scale. On a local level Health Technology Management can be applied as it evaluates the management of existing technology at the hospital as in the case of EThekweni Hospital and Heart Centre. According to Hegarty et al., (2017) Health Technology Management helps to ensure the most imperative management of the technology and it supports the health care purpose and delivers value. Figure 2.2 highlights the key factors that the Health Technology Management system assesses in the health care environment. The health technology management framework represents a paradigm shift in the manner in which hospitals view medical technology adoption and usage. Like most capital investments in any industry deriving value is crucial to ensure that the investment was economically viable, however this framework ensures that the adoption or management of the medical technology benefits the end user which is the patient receiving the treatment. This framework also governs the manner in which medical technology is utilized in treatment. There needs to be a balanced approach when medical technology is applied in the healthcare setting so as to ensure when treatment is given to patients that it is in the best interest of the patient's condition and that the medical technology applied was the only solution for diagnosis.

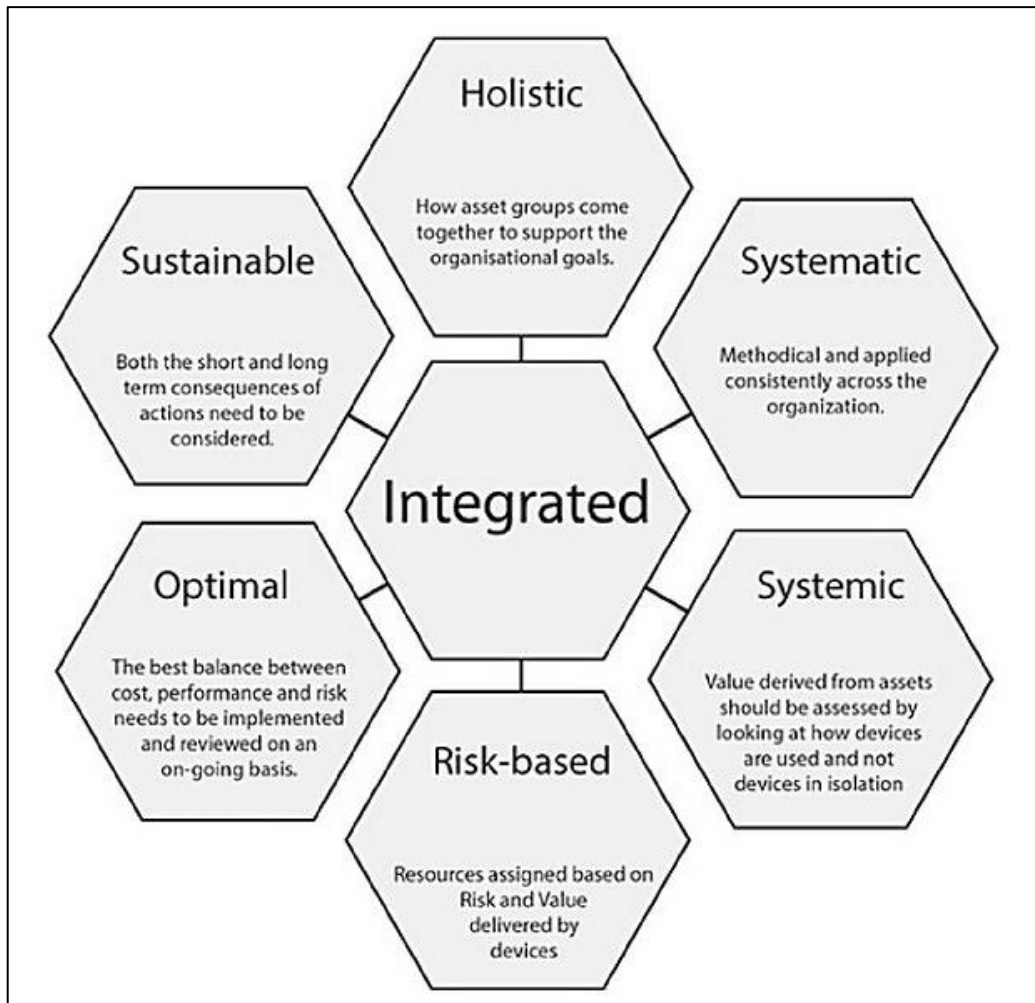


Figure 2.2: Key principles and attributes to Health Technology Management
(Hegarty et al., 2017)

2.2.2 MEDICAL MAL-PRACTICE LIABILITY:

Medical mal-practice is defined as an act or omission during the treatment of a patient resulting in an injury which deviates from accepted medical standards of practice by a physician (Riga, 2017). According to Armstrong-Mensah (2017) medical mal-practice is one of the main health care cost contributing factors globally. According to Goldman (2017) a patient can claim medical mal-practice if he/she can prove the following:

- 2.2.2.1 The medical practitioner owed a duty to the patient.
- 2.2.2.2 The medical practitioner breached the above duty.
- 2.2.2.3 The breach of the duty led to the patient getting injured.
- 2.2.2.4 Damages were incurred as a result of the alleged injury.

From the above list it seems pretty straight forward as to why a patient will claim medical mal-practice however it does not seem to set a limit to what can be deemed litigious or not. Medical mal-practice leads to litigation which can lead to financial compensation to the patient that had suffered from medical negligence and in some cases it promotes quality and can encourage physicians to ensure that they maintain the basic standard of health care (Wang, Li, Jiang, Dear and Hsieh, 2017). However, in the health care industry medical negligence is seen more as a deterrent and does not necessarily improve or promote high quality healthcare (National Academies of Sciences, Institute of Medicine, Board on Healthcare Services and Committee on Diagnostic error in Healthcare, 2016). Due to an increase in the cases of medical mal-practice, physicians have opted to practice defensive medicine. According to Management Association (2017) defensive medicine is viewed as practicing additional procedures and tests that deviate from the normal guideline and when physicians avoid high risk patients. According to Armstrong-Mensah (2017) defensive medicine resulted in unwarranted tests and diagnostics in hospitals in Canada resulting in up to 24% - 90 % admissions and 27 % - 67 % inpatient days in hospitals as a result. Health care professionals such as obstetricians and gynaecologists have highly litigious fields of practice resulting in these professions practicing defensive medicine more than other fields of medicine (Ali, Hummeida, Elhassan, M. Nabag, Ahmed and Adam, 2016). The challenge in healthcare is that human error cannot be eradicated completely hence there is risk that a complication can occur. According to the Deputy Health Minister Gwen Ramokgopa, at the end of March 2016 South Africa faced medical legal claims amounting to R 37 billion which was primarily due to medical litigation in the maternal and neonatal treatments (Masweneng, 2017). According to Wang et al., (2017) the 3 most common medical mal-practice litigation allegations are misdiagnosis, delay in treatment and a lack of consent. Some studies have indicated that when there is a patient centric approach whereby there is open communication and error disclosure from the physician it may reduce further escalation from the patient (Management Association, 2017). However, the fear faced by most physicians is the fact that open disclosure opens them up to more complaints and mal practice litigations (Management Association, 2017). According to Dhali (2016) some countries have implemented apology laws that enable open disclosure between physician and patient but prohibits the use of

this apology against the physician in terms of mal-practice litigation. Evidence have shown that apology laws have reduced compensation payments and settlements by 47 % and has helped to expedite the resolution process and the amount of claims of mal-practice (Dhai, 2016). In South Africa medical mal-practice is handled through an Alternative claims resolution process which include specialised health court systems and judges to handle such cases (Dhai, 2016). Physicians purchase medical mal-practice insurance to protect themselves against claims that result in financial harm and bankruptcy. The insurance premiums for these medical liabilities vary with physicians practicing high risk specialities paying higher premiums (Armstrong-Mensah, 2017). According to Beik (2017) the rise in the medical mal-practice premiums and the increase of defensive medical practices have a direct increase to the health insurance that patients have to pay. From a hospital management perspective it is a challenge to identify or quantify defensive medical practice as there is a grey area between normal and extended self-protective treatments (Ali et al., 2016). Table 2.1 lists possible scenarios that can lead to medical mal-practice.

Table 2.1: Reasons for patients suing physicians and health workers (Management Association, 2017)

Topic	Study
Negative doctor-patient/family communication and communication failure	- Hickson et al. (1994) - Levinson, Roter, Mullooly, Dull and Frankel (1997) - Moore, Adle and Robertson (2000) - Roter (2006)
Dissatisfaction about care	- Beckman, Markakis, Suchman and Frankel (1994) - Hickson, Clayton, Githens and Sloan (1992) - Levinson et al. (1997)
Desire to protect others from similar problems and to prevent similar incidents in the future.	- Hickson et al. (1992) - Vincent, Young and Philips (1994)
Desire for compensation (monetary or moral).	Bismark, Dauer, Paterson and Studdert (2006)
Cultural factors (connected with national/race characteristics)	- Chiu (2010) - Fileni and Magnavita (1995)

According to Goldman (2017), cases of medical mal-practice can be reduced by conducting quality, risk management and patient safety programmes which promotes better care to be delivered to the patient. Furthermore, studies on traditional mechanisms towards current medical liability systems were analysed and it was found that the communication and resolution program (CRP) approach yielded a significant reduction on medical litigation cases (National Academies of

Sciences et al., 2016). Essentially such an approach focuses on the patient as well as reducing the cases of litigation. However, from a health care consumer perspective individuals requiring health care are faced with a dilemma as there is no guarantee that physicians will ensure quality health care services are provided or that unnecessary treatments are not performed.

2.2.3 SKILLS SHORTAGE:

The health care arena represents an environment that is challenging and demanding hence requiring a health care workforce that is skilled as they are crucial for a sustainable healthcare domain. According to Liu, Goryakin, Maeda, Bruckner and Scheffler (2017) having the right mix of health care workers with the correct drive can ensure an effective and efficient health care environment. Globally countries face diversity in epidemiology, demography and disability of their people which impacts on the healthcare systems as well as the healthcare professionals (Jimenez, Bui, Mantilla and Miranda, 2017). According to Jimenez et al., (2017) in order for countries facing this global healthcare crisis to ensure universal health coverage, they need to acknowledge that healthcare professionals are pivotal and that they form the heart of the health care system. The challenge South Africa faces is an acute shortage of skilled healthcare professionals in the healthcare sector. According to Liu et al., (2017) South Africa like most middle income countries' face difficulties in relation to shortage of skilled healthcare professionals due to the following:

- 2.2.3.1 Availability of qualified health care workers.
- 2.2.3.2 Recruitment and retention of health care workers.
- 2.2.3.3 Productivity and the quality of the care that is provided by the health care workforce.

According to Exhibition (2017) majority of these healthcare professionals constitute of nurses. The nurse crisis has been exacerbated by staff reductions, additional work responsibilities and being overworked which has impacted on the quality of health care delivered (Young and Kroth, 2017). The challenge faced in the private sector is to retain the skilled nurses that they have trained resulting in lucrative remuneration packages being offered to ensure retention. Higher

remuneration packages cannot guarantee retention of skills as migration of skills globally is the next challenge that is faced in the health care sector. According to Smith and Jury (2016) migration of skilled health care professionals to developed countries create a vacuum in poorer countries resulting in a depleted work force left to deal with the countries health outcomes. As a result the challenge faced by hospitals are a diminishing effectiveness of health care supply, reduced morale with staff and having to invest in additional training for new staff (Smith and Jury, 2016). This is not a phenomenon limited to South Africa but globally as the World Health Organization (WHO) indicated that highly skilled healthcare professionals are being recruited by developed countries at a rapid pace (Exhibition, 2017). According to Exhibition (2017) nurses in South Africa are the most sought after than there global counterparts as nurses in South Africa receive extensive training across all the nursing disciplines making them flexible to work in any environment. The next reality relating to the nursing shortage is the fact that in the past women dominated the field of nursing representing 90 % of the nursing workforce however in recent years women have become more empowered and have more employment options in different fields in industry hence creating a gapping strain in the nursing field (Dahlkemper, 2017). In South Africa the next predicament faced is that some health care professionals namely nurses have been sent into the health care system without properly qualifying from the University of Zululand (Brief, 2017). The challenge with this issue is that countries like South Africa are moving towards prepping nurses for advanced roles. According to Maier and Aiken (2016) the trend of nurses performing clinical activities which were usually performed by physicians is now becoming more prevalent globally. Hence, it is imperative that nurses graduate with proper qualifications. According to The South Africa Medical Association (SAMA) the shortage of healthcare professionals is self-inflicted as every year there is 30 000 aspiring candidates who apply to study medicine and only 1000 are accepted which is primarily due to the lack of space at the Universities (Bodumela, 2017). According to Brief (2016) there are fewer doctors per 100 000 patients in the private sector than most countries globally. The state of quandary that South Africa faces is how to deal with this crisis as implementing lucrative remuneration packages or incentives to retain skilled health care professionals will directly impact on health care costing.

2.2.4 PHARMACEUTICALS:

Pharmaceutical's is a form of medical treatment such as prescription drugs and medical devices that can be used for human consumption or use. There have been many advancements and innovations in the pharmaceutical industry addressing chronic illnesses and diseases. The Organisations for Economic Co-operation and Development (OCED) countries which include South Africa promote quick access to new treatments but the system has failed to address the concern of affordability due to the exorbitant pricing of pharmaceuticals (OECD, 2017). According to Gray (2015), South Africa engaged with a National Drug Policy since 1996 which looked at ensuring that generic treatments were used as a substitution, non-discriminatory single exit price for medicines and maximum dispensing fee for pharmacists and practitioners to list a few. Globally spending on speciality pharmaceuticals such as oncology should reach \$ 150 billion by 2020 highlighting the crisis that the world faces (OECD, 2017). These excessive pharmaceutical costs are attributable to rapacious pricing strategies by pharmaceutical manufacturers and the introduction of orphan and specialized drugs which usually come at high costs (Wouters, Kanavos and Mckee, 2017). According to Walton, Basu, Mullahy, Hong and Schumock (2016) the next challenge with the increasing pharmaceutical costs is that in some cases there are no associated health benefits which has prompted discussion that pricing of pharmaceuticals should be tied to value based pricing. Pharmaceutical costs in relation to benefits to the end user vary from life in years to a quality adjusted life (Walton et al., 2017). The issue with value based pricing is that it does not take into account externalities where treatment to one individual patient often impacts other's lives and the perception of value to one patient which varies to the next (Walton et al., 2017). In a hospital environment the decision to use a specific pharmaceutical is decided by the physician. Studies have found that the use of more expensive pharmaceuticals is usually incentive based for the physician and the impact to the patient is high cost treatment which sometimes is not covered by their medical insurances (Walton et al., 2017). Some pharmaceutical companies monopolize the market and believe by hiking the prices of their products it would result in a better reflection on the value of their product (Flannery, Pandya, Laine, Almeter and Flynn, 2017). According to Wouters et al., (2017) policy makers are

now looking at the use of generic drugs to reduce the costs of pharmaceuticals. Essentially generic drugs are bioequivalent of branded drugs which essentially contain all active ingredients and are of the same quality. According to Wouters et al., (2017) the reason that generic drugs are cheaper is due to the fact that it is cheaper to bring a product that is a bioequivalent to the market and there is reduced marketing expenses as there is already a market for such a drug. According to Flannery et al., (2017) generic pharmaceuticals have saved the health care industry billions of dollars annually however when there is a shortage of these drugs, generic treatments such as intravenous generics as an example spike up exorbitantly. The issue with drug shortages is that it leads to market consolidation and in some cases manufacturers exiting the market which as a result increases prices for patients and providers (Schumock and Vermeulen, 2017). In South Africa, the Government has instituted many controls over pharmaceutical pricing such as cost plus methods, profit caps, comparative pricing and direct price negotiations (Mackintosh, Banda, Wamae and Tibandebage, 2016). However, even in light of such controls, South Africa has ranked among the world's 5 most expensive pharmaceutical markets globally (Mackintosh et al., 2016). According to Rashidian, Omidvari, Vali, Sturm and Oxman (2015) implementation of budgetary policies for health care utilization on a national level can reduce the increasing pharmaceutical costs. One of the biggest challenges for South Africa is the high rates of individuals with aids, tuberculosis and malaria. The treatments for these conditions are expensive. On a national level South Africa could practice voluntary pooled procurement. According to Kim and Skordis-Worrall (2017) voluntary pooled procurement is when multiple buyers purchase treatments in bulk which is based on economies of scale which help reduce procured treatment pricing. This in turn will positively impact on the costs to the end user. According to Wouters et al., (2017) regulators and payers should make it simpler for generic drugs to enter the market and they should stimulate competition between generic drug manufacturers. On a local level such as in a hospital setting proceeding with the implementation of pharmaceutical budget caps and pharmaceutical reimbursement rate reduction policies can help incentivise the physicians practice on pharmaceutical use and in turn can help reduce costs (Rashidian et al., 2015).

2.3 MEDICAL AID SCHEME IMPACT ON THE PRIVATE SECTOR HEALTHCARE COSTS:

Medical aid is a type of insurance which covers individuals in terms of financial cover for medical treatment and expenses. Literature was reviewed to understand whether there was any correlation with medical aid scheme rates and the high health care costs in the private sector and essentially to determine what impact the medical aid schemes in South Africa have had on the costing in the private healthcare sector. According to Retief (2015) it is imperative to be a part of a medical aid scheme to enable people access to the private healthcare in South Africa due to exorbitant pricing. Hence, medical aid schemes have become the leading health financing tool for private health care. Through literature it has been noted that the amount of financing has reduced resulting in out of pocket payments for consumers. Notably so, the recent trends observed is that the number of medical aid schemes as well as the number of benefit options available on remaining medical aid schemes have been declining (Kaplan and Ranchod, 2014). In South Africa the 5 largest medical aid schemes are Discovery Health, Bonitas, Momentum Health, Medshield and Fed Health. According to Kaplan and Ranchod (2014) Discovery is the largest medical aid scheme in the country accounting for more than 53 % open market and 29 % of all medical aid beneficiaries and is at least 4 times the size of the 2nd largest medical aid scheme. Although Discovery Health medical aid scheme is the largest in the country, the perception that having a larger membership would enable larger pools of benefits is far from reality, like all other schemes, this medical aid also faces a downward trend of benefits. According to Zimmelman (2016) members of medical aid schemes have been left astounded by the increasing premiums that they are being subjected to. However, increases in medical aid rates are not unusual and not restricted to South Africa (Erasmus, 2016). According to Erasmus (2016) medical aid scheme rate increases are attributable due to:

- 2.3.1 The weakening rand which has resulted in high costs for imported medicines and equipment.
- 2.3.2 The average age of members on the scheme increasing.
- 2.3.3 Physicians charging higher medical rates.

2.3.4 High private healthcare costs.

2.3.5 Increase in the number of claims from members.

According to Bateman (2014a) Discovery Health claimed that there has been an average increase of 11.5 % over the last 5 years which is attributable to price increase (7%) and 4.5 % volume increase, indicating that these increases have been close to CPI. Discovery Health also indicated that there has been a trend that consumers are visiting doctors and hospital more frequently which highlights an increase of 4.5% (Bateman, 2014a). There is a lot of contention between medical aid schemes and health practitioners as health practitioners feel that they are being short paid for services they are rendering resulting in them charging exorbitant prices to the patient to recover costs for the treatment prescribed (Zimmelman, 2016). According to Girgis (2015) there is a war on doctors from medical aid companies in that they enforce how doctors should practice medicine in order to reduce costs. Doctors are judged by medical schemes by how much they have costed the medical aid companies. According to Girgis (2015) as a doctor the imperative is to ensure that the best care for the patient is the prerogative but medical aid schemes are overriding the doctors decisions in order to save costs. Apart from this being an issue for the physicians, patients are being affected as they have no control over their own healthcare decisions, as medical aid schemes will only allow medicines based on cost and not on effectiveness. According to Young (2013) medical aid schemes control decision making process in healthcare in different forms such as limiting drug formularies, insisting on the use of generic medications, demanding motivational letters for certain surgical procedures and limiting funds and consultations by physicians. It is argued that the business model for medical aid schemes is for profit. According to Young (2013) the portion that the medical aid schemes claim from membership fees for administrators are disproportionately high in relation to the amount paid to the physicians whom believe that they are the real value adders in the system. This may explain why physicians are charging above medical aid rates. Further research in relation to medical aid schemes revealed that the Council for Medical Schemes which is an organization that governs medical aid schemes states that authorization requests cannot be denied without peer to peer contact with medical professionals. Essentially it would be a specialist of the similar knowledge and

expertise. However, this never occurs as medical aid schemes employ medical advisors that are not specialists and lack experience (Young, 2013). According to Girgis (2015) CEO's and medical aid administrators of medical aid schemes are raking in the revenue but pushing their own agenda and controlling what doctors can and cannot do. However, the opinion is that the private healthcare sector system is deeply fallacious and uses the medical aid schemes as a diversion to the public (Ncayiyana, 2012). There has been much literature on fraud that has plagued medical aid schemes due to the private healthcare sector. According to Bateman (2015a) the estimated fraud in the private healthcare sector is approximately R 13 billion and could be greater as there is a lack of data to allocate an accurate figure. According to Bateman (2015a) fraud against medical aid schemes varied from billing for non-covered services, delinquencies of co-payments, false consults and false prescriptions to list a few. Scams also included pharmacies retailing nappies and cosmetics and submitting these expenses as medical claims (Bateman, 2014a). In cases of fraud where there is clear information Discovery Health will terminate the patient's membership and report the doctor to the Health Professions Council of South Africa and cancels any contract they have with the doctor in question. According to Phakgadi (2017) in light of fraud cases new allegations from healthcare professionals have surfaced indicating that medical aid schemes having being spying in their practices which is illegal and an invasion of the patients privacy. Discovery Health is among the accused medical aid schemes. Spying on the healthcare professionals are by medical aid schemes sending private investigators with a video camera concealed in private consultations which is conducted when there is suspicion that the doctor is suspected of misconduct. The issue with fraud as discussed above is that it is resulting in all healthcare professionals being tarnished with the same image. The consensus in the healthcare arenas is that prices need to drop however a more holistic view needs to be taken with respect to healthcare professionals and medical aid schemes. In 2016 the Head of Benefit Management for the Council for Medical Aid Schemes, Mr. Paresh Prema announced that they had developed a new regulatory framework that would enable medical aid schemes to offer low cost medical aid schemes. According to Bateman (2015b) introduction of such a scheme will allow access to private healthcare to an additional 12 million people that will cover basic medical cover for general practitioner visits, dentistry,

pathology, radiology and optometry. Stakeholders from the Health Professions Council of South Africa and the Council for Medical Schemes should meet to discuss this ongoing contention between both parties and work on an amicable solution that ensures that the patient above all else is made the priority.

2.4 THE NATIONAL HEALTH INSURANCE IMPACT ON THE PRIVATE HEALTHCARE SECTOR:

The National Health Minister Aaron Motsoaledi has been driving the implementation of the National Health Insurance. On the 29th June 2017, the white paper on the National Health Insurance was approved and soon will be gazetted as a policy document. According to Detels, Gulliford, Tan and Karim (2017) the National Health Insurance system is aimed at providing a non-discriminatory healthcare system which allows access to healthcare facilities and rules out financial barriers. Implementation of the National Health Insurance is envisaged to be interspersed over a period of 14 years into South Africa's healthcare arena. According to Detels et al., (2017) the National Health Insurance is based on the following principles:

- 2.4.1 Social cohesion
- 2.4.2 Equity
- 2.4.3 Social solidarity
- 2.4.4 Fairness
- 2.4.5 Affordability
- 2.4.6 Effectiveness

According to Pallotti and Engel (2016) the National Health Insurance is vital for South Africa as the countries health system is faced with the ongoing crisis of diseases which include HIV and TB. However, the challenge is to determine how the National Health Insurance will help the crisis that South Africa faces. South Africa's healthcare system has been dealing with the inadequacy and disorganization of a two tiered healthcare system which is a combination of a well-resourced private healthcare sector and a falling apart public healthcare sector. This large gap between the private and public healthcare sector has worsened over time and has been further exacerbated by the maldistribution of skilled

human resources. There are mixed feelings in relation to the implementation of the National Health Insurance as countries that have a similar economic situation as South Africa have had varying degrees of success (Barlow, 2016). According to Yi (2017) the National Health Insurance will be funded by various sources which include a new mandatory employment insurance contribution which will be higher for individuals that earn higher salaries, general taxes, windfall taxes and the removal of tax subsidies for private healthcare insurance. Inflation, a sluggish economy and high unemployment levels are also likely to influence the estimated R256-billion that will be needed for the establishment of an NHI fund. In addition, high-income earners will have little incentive to migrate from the relative comfort of private healthcare. According to Chronicle (2015) one of the prerequisites of the National Health Insurance will be the certificate of need which has to be implemented. The certificate of need will essentially govern where healthcare professionals can practice to ensure that there is an unprejudiced spread of healthcare services across the country. The certificate of need is a newly promulgated law that is in the process of being passed by the government as a mandatory law in conjunction with the National Health Insurance implementation. There is a lot of contention in relation to the certificate of need as although it helps in addressing critical factors such as distribution of skills and resources to underserved areas in South Africa, to the health practitioners it is not viable and strips them from their autonomy. One of the main issues in rolling out the National Health Insurance has been the reluctance of private medical practitioners to work in the public healthcare sector (Chronicle, 2015). According to Bateman (2014b) medical practitioners are shying away from the underserved areas due to the fact that these terrains do not support medical practitioners due to issues that range from constant drug shortages, lack of medical equipment and the fact that hospitals in these areas are managed by individuals that lack knowledge of healthcare delivery. According to Forum (2016) the South African Private Practitioners Forum believe that the government should utilize the same structure in the National Health Insurance that it administers to other constitutional structures such as education and housing whereby the government takes care of the impoverished and leaves the private healthcare market alone. This is a very rhetoric statement made by the South African Private Practitioners Forum as the private healthcare market has been running without much interference from the

government and has resulted in the ever widening gap between private and public healthcare. However, on the same notion if the public healthcare facilities are not given the platform like other constitutional services and taking into consideration the time period that the National Health Insurance will be phased in, this may result in the already impoverished left with escalating grim conditions of healthcare service. There is a lot of controversy between the private healthcare sector in relation to the National Health Insurance. According to Barlow (2016) the National Health Insurance is not private healthcare sector friendly hence there is a lot of resistance from the private healthcare professionals. When the National Health Insurance is assessed from a standalone point, one can't help but admit that the government has set a very ambitious target which is to ensure free healthcare for all. From an individual perspective the funding of the National Health Insurance will impose additional taxes on people of the country who are already being overtaxed (Forum, 2016). According to Forum (2016) after the 2014/15 National inspections were conducted, which assesses standard healthcare compliance in the public healthcare arena found that only 3.1 % of these facilities were compliant, 13 % conditionally compliant and 67.6 % critically non-compliant. This would mean that only 16 % of public healthcare facilities could be used as per the standards set out by the National Health Insurance. From the private healthcare sector perspective, this would potentially mean that they would be crowding out of private healthcare facilities. Hence, it highlights fundamental factors that the National Health Insurance is neglecting at this stage. Government should be focusing on how to improve the infrastructure of public healthcare facilities. This in turn would attract specialists from the private healthcare arena back into the public healthcare arena. The appalling audit findings that were found during the 2013 Base Audit found that out of 3880 public healthcare facilities only 32 facilities complied with healthcare guidelines which range from infection control to general patient safety (Forum, 2016). Statistics such as this highlight the urgent intervention that is required by government to improve public healthcare hence raising the question whether the National Health Insurance is the right solution when there is still a lot of work required to improve public healthcare infrastructure. According to Barlow (2016) issues that the private healthcare sector will face by the implementation of the National Health Insurance will be that healthcare professionals will have to practice at a fixed rate that will be governed by the Health Minister and the fund.

This will have an immediate negative impact as healthcare professionals will resort to leaving the country for better remuneration and this will impact on a loss of specialist skills. According to Barlow (2016) another disturbing issue is that medical aid schemes will be used only to cover complimentary treatments that are not covered by the National Health Insurance which is yet to be defined. The challenge here is that most individuals will not be able to afford medical aids as they will be paying towards the National Health Insurance fund which will result in some treatments such as cosmetic surgery not being covered and hence the demand for such treatments reduces thus impacting on the private healthcare sector bottom line. The problem that is illustrated from the literature above is not on the philosophy of implementing universal healthcare but how government plans to execute the new program when there is so much of underlining concerns which is predicted to have colossal impacts on the consumers and the healthcare industry.

2.5 CAN LEAN IMPLEMENTATION HELP REDUCE HIGH HEALTHCARE COSTS?

From the above paragraphs it can be seen that healthcare costs have been increasing at a rapid rate and as a result healthcare providers are under enormous pressure to improve costs whilst still maintaining healthcare standards. According to Costa, Filho, Rentes, Bertani and Mardegan (2017) hospitals around the world are implementing strategies and tools such as Lean methods to reduce costs. The degree of how Lean is implemented into healthcare varies between countries. Lean is a quality improvement methodology which was originally used in the automotive and manufacturing industry which has protracted over the years into the healthcare sector (Moraros, Lemstra and Nwankwo, 2016). According to Aherne and Whelton (2016) Lean is a logical approach to diagnosing and exterminating waste and non-value adding activities in a process through continuous improvement. The Lean methodology was designed to increase productivity and efficiencies by eliminating wastes and has been the success tool of Toyota. According to Costa et al., (2017) the lean approach stipulates the value of a process and guides an organization on how to align their processes to yield value for the organization and ultimately to their customer. According to Costa et

al., (2017) the lean philosophy was introduced into healthcare according to literature in 2002 hence it is a fairly new methodology in this industry. In a hospital setting Lean defines the value from a patient's perspective and guides the hospital to implement clinical changes to ensure valuable care (Spoerl, 2012). In the healthcare sector adoption of Lean requires a shift in the mind-set of the entire organization which changes the clinical care from a process of a series of tasks to be completed to a process which can be continuously improved to achieve valuable outcomes for the patients. In the healthcare arena there are a multitude of processes which have many avoidable wastes and therefore Lean implementation can benefit this industry by improving quality of patient care, reducing time and resources which in turn improves the service delivery to the patient. The Lean model in a healthcare setting involves removing wasteful processes which vary from long patient wait times to documentation protocols. According to Spoerl (2012) the eight categories of waste in a hospital setting are:

- 2.5.1 Overproduction - By requesting unnecessary tests.
- 2.5.2 Waiting - The time taken between lab specimen arriving and the start of the analysis.
- 2.5.3 Material movement - The movement of charts between workrooms.
- 2.5.4 Motion - The traveling between multiple wards during rounds.
- 2.5.5 Inappropriate processing - When multiple care providers viewing and reviewing patients information.
- 2.5.6 Inventory - When patients are waiting for long periods in examination rooms.
- 2.5.7 Correction - When incorrect medication is administered because of illegible handwriting.
- 2.5.8 Underutilization - When you have physicians transporting medically stable patients.

In a case study at Presence Health St. Mary and Elizabeth Medical Centre, lean implementation at this facility encountered much difficulty. According to Rice (2015) the tactic applied by this healthcare facility was to utilize the front line workers to assist in improving processes at the hospital. This allowed engagement on all levels and yielded positive outcomes as it encouraged a team approach.

Initially ideas generated for process improvements were met with contention and negative feedback but as processes become more efficient and team meetings more constructive, lean implementation became a part of the culture (Rice, 2015). According to Rice (2015) Lean implementation creates a stable working environment with a clear vision and standardized procedures which create a foundation for continuous improvement to attain world class performance. In the healthcare arena once the healthcare workforce understands Lean, the culture of the organization improves with staff understanding the value that they create and deliver to the patient. If healthcare staff feel motivated by their success, this has a domino effect on the service delivery given to patients. From various journals it can be deduced that the aim of Lean will remain the same but the manner in which it is applied will vary from one hospital setting to the next. According to Costa et al., (2017) for lean to be adaptable to the healthcare arena, key aspects such as staff empowerment and gradual continuous improvement are crucial. Another important factor found in literature is that the approach that is taken in terms of the Lean ideologies that are required by the hospital needs to be understood. According to Roemeling, Land, Ahaus, Slomp and Van Den Biklaardt (2017) not all Lean interventions will lead to satisfactory results as in some cases later interventions implemented can distort or even reverse initial positive results. The biggest challenge for most organizations implementing Lean is to sustain the gains that were initially generated and sustain this as the organization moves forward. According to Roemeling et al., (2017) in the study of Lean implementation into the hospital sector, one should also look at reducing variability in the process and not just waste. Variability is a crucial component to healthcare delivery as it impacts patient service and healthcare costs. Although the Lean methodology has demonstrated positive results, there has been much controversy on its application in the healthcare as well as having its performance questioned (Moraros et al., 2016). According to Guo and Hariharan (2012) although the Lean methodologies are praised in the manufacturing industry it is met with resistance in the healthcare industry as healthcare professionals believe that patient care is an art and not a science. When one compares the hospital sector to manufacturing sector, it becomes apparent that applying the exact methodology of Lean into healthcare is met with scepticism. There are fundamental differences between the sectors as the healthcare sector is defined by a pull system in which patients will pull a

service from the hospital whereas the manufacturing sector is defined by a push system as the amount of product required is based on a forecast (Guo and Hariharan, 2012). However, there are underlying principles within these sectors that are similar. One of the challenges with process improvement in the healthcare sector is unlike the manufacturing sector that has adopted a culture of improvement; the healthcare sector tends to shy away from this concept. According to Guo and Hariharan (2012) the healthcare sectors failure to adopt such an environment is due to being afraid of public disclosure of quality data, lawsuits for medical errors and professional licensing laws that punish medical professional for admitting to mistakes. As such a hostile environment is created and reluctance to participate in process improvements which highlights faults in the process is avoided at all costs. From the above it can be seen that contention with respect to Lean implementation is rather a case of expecting implementation and outcomes to be the same as it would be in the manufacturing sector and hence this is where the issue lays. According to Hassle, Nielsen and Edwards (2016) some research supports following the approach which was developed by Toyota, as closely as possible however, potential complications for the implementation of the Lean ideology originally developed for the motor vehicle industry into the hospital sector has not been studied and fully conceptualized. Research on Lean implementations in the healthcare sector have publications which has focused on improving support peripheral activities and not on high level implementation into core activities of the hospital (Hasle et al., 2016). These support peripheral activities look at patients flow through an emergency department and reducing waiting time for patients. The complexity of the hospital environment will require a tailored Lean implementation approach that takes into consideration the different values that the hospital sector looks at. According to Hasle et al., (2016) the 3 values in the hospital sector are clinical value (patient outcome), experiential value (patients experience of care) and operational value (cost effectiveness) which have 3 different stakeholders. To unpack this further Lean implementation will have to have these 3 stakeholders present to adopt a methodology that will fit the environment and the desired outcomes. The reason that there is a lot of uncertainty with regard to lean implementation into healthcare is that there is a gap in literature that has not captured the long term results of Lean into the core functions of healthcare. Furthermore there is limited research

done on understanding the sequence to be followed by healthcare organizations to implement lean in their different departments, and on the applicability of various lean tools in different healthcare settings. There is undoubtable evidence that Lean implementation in healthcare can improve costs and care to the patient but the methodology of its application will have to be custom fit to the environment it will be implemented into to ensure sustainable gains and buy in from the various stakeholders of the organization.

2.6 CHAPTER SUMMARY:

The literature review evaluated factors that contribute to the high costs of healthcare in the private healthcare sector of South Africa and globally. The private healthcare sector in South Africa has come under scrutiny as prices for healthcare delivery have become so excessive that it has impeded access to healthcare impacting on millions of South Africans. Comprehensive studies of the various facets to the healthcare arena that have contributed to high costs in healthcare were assessed. The insight to the factors that contribute to high healthcare costs highlighted the esoteric knowledge that end users of healthcare may not realize and understand. The impact of medical aid schemes on healthcare costs was also explored. Most people view medical aid schemes as the passage to good healthcare as access to healthcare today is more of a commodity than a human right. Medical aid scheme contributions have also been increasing year on year and literature has highlighted the contention that exists between healthcare professionals and medical aid schemes. Beyond the back drop of medical care practices, dwell wars that exist between medical aid schemes and medical professionals whereby the blame for high healthcare costs are thrown between camps. Literature explored within these facets how healthcare costs could be lowered if there is better governance and, if objectives at each healthcare facility are understood. Literature on the National Health Insurance was also explored and shone a dark reality on the shortcomings of a large scale project to be headed by government. Research illustrated the benefits that the proposed National Health Insurance would bring but it also revealed major issues with the proposed execution. Lean implementation in healthcare was also explored. Research indicated that such a methodology could reduce healthcare costs significantly by

streamlining the process. The literature review laid the foundation to understand what the cost drivers to high healthcare costs were and it also highlighted how external factors impeded on the healthcare arena. Chapter 3 helps to unpack how all these factors interact and further it scrutinises these aspects from a medical professional and management perspective.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION:

This chapter elucidates the research design, philosophy, approach and strategy selected to conduct the research analysis. From the literature review important variables were analysed and inferred which impacted on high healthcare costs in the private healthcare sector. This chapter outlines how the research was conducted and explains the choice of methodology utilized. Data from the research was analysed to annotate the relationship between the various factors to be analysed at the research location EThekwini Hospital and Heart Centre. The sample size and sampling technique was selected based on the research environment and the timeline that was available. All data from the research was analysed using analytical software on Questionpro which assisted in deducing trends and concluding findings.

3.2 AIM OF STUDY:

The aim of the research was to determine what factors contributed to the high healthcare costs in the private healthcare sector and how medical aid schemes impacted on the cost structure of healthcare by interpreting internal views of medical professionals and hospital management at the research location. It further delved into how the proposed national health insurance would impact the private healthcare sector. The next step was to understand if lean methodologies were understood and if such a system was to be implemented whether there would be active participation. In essence the research culminates to elucidate why as end users to healthcare the price we pay for the right to good healthcare has become uneconomical.

3.3 RESEARCH DESIGN AND METHODS:

A research design in all research platforms sets the backdrop of how the research will commence. According to Tripathy and Tripathy (2017) the significance of a research design is the following:

- 3.3.1 Indicates the type of resources required in terms of time, money and manpower.
- 3.3.2 Guides the research onto the right path.
- 3.3.3 It eliminates bias and marginal errors.
- 3.3.4 Maximizes reliability of results.
- 3.3.5 It visualizes possibility of flaws and inadequacies.

For this research an exploratory cross-sectional quantitative research design method was selected. According to O'Grady and O'Grady (2017) quantitative research design approach assists in measuring unbiased data in a structured manner and evaluates relationships between the data that is collected. This was the fundamental reason why such a design method was selected as there has been a lot of controversy that has surrounded the high healthcare costs in the private sector, and understanding the very facets that contribute to the ever escalating costs had to be equitable. For this reason a qualitative research design was not selected. According to Karkukly (2017) a qualitative research design is a research style that embraces personal experience, observations and interviews and also takes into account the researchers own personal insight as part of the relevant data which can result in the research findings being subjective.

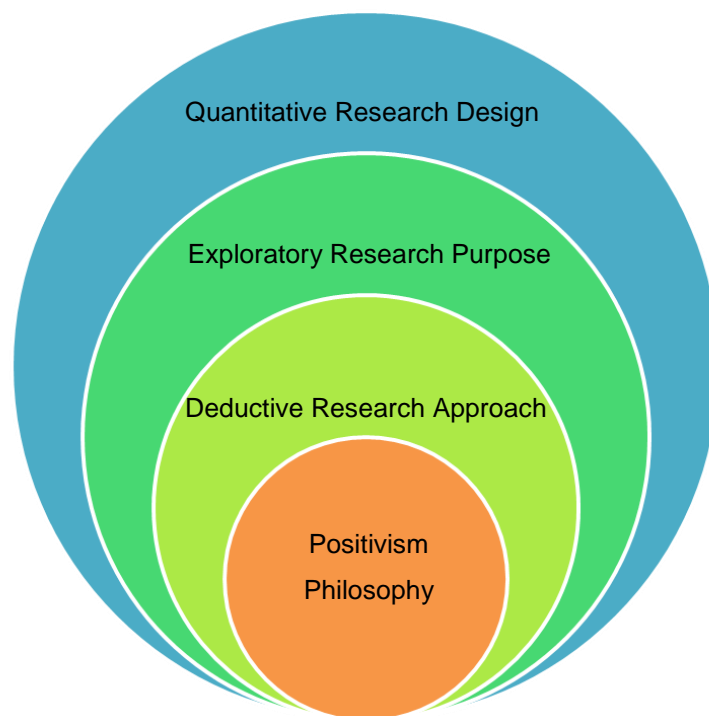


Figure 3.1: Research Onion for this research

3.4 RESEARCH PARADIGM:

Research paradigms contribute to views and knowledge that advise how researchers conduct their work. For this research a positivism philosophy was embarked on due to the fact that such a paradigm is exemplified by extensive testing and is usually free from human bias. According to Brennen (2017) a positivism philosophy exudes internal and external validity in that it links how findings from the research conducted correlates to the issue being studied as well as it generalizes findings.

3.5 STUDY SETTING:

The research was conducted at EThekwini Hospital and Heart Centre located in Durban, KwaZulu Natal. EThekwini Hospital and Heart Centre is an independent private hospital that is a part of the Lenmed Group.

The hospital is at the fore front of medical technology in that it has advance speciality medical suites available for a range of medical conditions. This hospital was selected as it is a relatively new hospital in Durban as it opened its door less than 10 years ago and it features as one of South Africa's leading hospitals in terms of medical technology. This hospital represents a good composite of medical professionals with different medical credentials and with management team members that have experience in other private hospitals.

3.6 POPULATION AND SAMPLE OF THE STUDY:

The target population for this research had to consist of full time medical professionals and management. With the use of a sampling frame, a list of all management and medical professionals were listed for the research. The list was confirmed with the Hospital Manager to ensure that all employees that fitted the research criteria were included. The criteria was to ensure that the members selected were full time employees as some medical professionals worked at the hospital on a part time basis. Hence, the target population for this research accounted to 55 staff members from a total staff compliment of 130 employees. According to Smith (2017) the target population can be defined as purposive generalization of notions, morals and sentiments of the sample that should reflect the population. Hence, it is imperative that the correct population is selected to

ensure that meaningful findings are extracted for the research. According to Saunders, Lewis and Thornhill (2015) in most research cases, it is found that the larger the sample size the closer the distribution of the data will be to normal distribution making such analysis more robust. The rule of thumb for most research cases conducted is a 95 % confidence level. According to Saunders et al., (2015) for the above research taking into account the target population of 55 employees, 48 samples will have to be assessed to obtain a 95 % confidence level.

3.7 SAMPLING METHOD:

According to Smith (2017) sampling techniques are either probability sampling, whereby there is a certain chance that each individual in the population will occur in the sample and non-probability sampling which whereby there is a minimal chance that each individual in the population will occur in the sample. According to Beins (2017) the drawback of the probability sampling technique is the fact that there is certainty that all participants are sampled and in most research cases this is not practicable due to resources available and time. However, for this research the probability sampling method was applied. The reason this sampling method was selected was due to the fact that the target population was relatively small and applying such a method would ensure that participants in the target population get an equal chance of being sampled. Hence, the drawback of such a technique was minimized due to the nature and number of participants required in this research. According to Beins (2017) there are 4 sample strategies that can be applied when using probability sampling which are:

- 3.7.1 Simple random sampling - It is a process whereby the population is accurately identified and where there is a probability that each individual would be sampled.
- 3.7.2 Systematic random sampling - It is a process whereby an equitable and a non-random sample is created that results sampling at particular intervals after an initial random selection.
- 3.7.3 Stratified random sampling - It is a process where groups based on particular characteristics and prescribed groups are identified and selected at random.

- 3.7.4 Cluster sampling - It is a process of sampling in which a number of groups are distinguished in a population and where clusters are randomly screened for participation in the research.

The sampling strategy applied for this research was simple random sampling. Here again this strategy was selected based on the fact that there was a well-defined sample population and due to the small number of individuals required for the research.

3.8 CONSTRUCTION OF THE INSTRUMENT:

The research instrument selected was a survey strategy in the form of an online questionnaire to collect the primary data. According to Beins (2017) the survey strategy is defined as a research approach whereby the researcher poses questions to the respondent. The reason such an instrument was selected was due to the fact that an online survey is economical and can reach target audience easily as well as it captures data accurately. According to Beins (2017) the following guidelines were adhered to when constructing the survey:

- 3.8.1 Avoid asking questions on mundane activities that may not be easily remembered by the respondents.
- 3.8.2 Abstain from questions that have obscure quantifications.
- 3.8.3 Ensure that questions don't contain offensive languages which may upset the respondent.
- 3.8.4 Refrain from asking questions on historic events that some respondents may not be able to answer due to the time in which they joined the organization.

Essentially for this research questions were based on the information learned from the literature review. It was imperative to understand what the views and opinions were from medical professionals and management. There is a lot of contention that exists in the healthcare arena with opposing views on why healthcare costs are high with individuals within this sector shifting blame on one another hence it is not a straightforward answer as to what contributes to the ever escalating costs. The questionnaire had to be designed to understand what the medical

professionals themselves believed to be the issue and also of great importance was to get feedback from the management team. Questions were posed from the perspective of their belief within the hospital that they were worked at as opposed to what they believed is the global issue. Questions in the questionnaire were structured as per the research question objectives. The initial section of the research instrument consisted of 5 questions which collected information such as gender, position held, race, age profile and years of service at the hospital. The second section of the questionnaire addressed the first 2 objectives of the research which were, to determine what factors contributed to the high healthcare costs and the impact of medical aid schemes to EThekweni Hospital and Heart Centre. It was made up of varying questions that were specific to the findings from the literature review. Section 3 of the research instrument addressed the 3rd objective which was to understand the perception that the team at the hospital had towards the government regulated National Health Insurance Act. Section 4 of the research instrument addressed the final objective of the research which was to understand what lean methodologies meant to the key stakeholders at the hospital and if steps were taken to embark on such a journey whether there would be buy-in. For the research questionnaire the Likert scale measurement system was selected to evaluate and quantify the answers. According to Erickson (2017) a Likert scale measurement system is a type of scale that is used to evaluate the magnitude of an individual's emotions and judgement. For the research the 5 point Likert scale system was used. It ranged from answers that were strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). Answers that ranged from strongly disagree and disagree indicated that the respondent felt that the answer contradicted to their knowledge. An answer of neutral indicated that the respondent was unsure or lacked knowledge to make a definite answer. Answers that ranged from agree to strongly agree indicated that the respondent believed that the answer was in compliance to their thoughts and feelings.

3.9 DATA COLLECTION:

The research instrument which was an online survey was constructed using Questionpro. The online survey included an introduction which indicated the purpose of the questionnaire as well as the ethical clearance code. The online

survey was emailed from Questionpro to the hospital manager at EThekwini Hospital and Heart Centre. The hospital manager thereafter distributed this link to the target group. The survey was opened for duration of 3 weeks to ensure that all respondents answered. Email reminders were sent to the hospital manager every week to encourage participation. A total of 54 individuals responded to the survey, with only 52 completing the survey. All the data was collected on Questionpro.

3.10 DATA ANALYSIS:

According to Albers (2017) data analysis in research is conducted to determine if findings are statistically significant or not. Data was analysed using the program IBM SPSS. Prior to entering the data into SPSS, the data was checked for missing data. Only completed survey results were inputted to SPSS. Data was initially analysed using descriptive statistics such as frequencies and cross tabulation. According to Reviews (2017a) descriptive statistics characterizes the fundamental features of the data and summarizes the data. Inferential statistics were conducted on the data to determine whether there was a difference between the viewpoints of the medical professionals and management in relation to the research objectives. The Chi-Square test was conducted during cross tabulation to determine if there is a relationship between the feedback received from the medical professionals and management.

3.11 RELIABILITY AND VALIDITY OF STUDY:

According to Pajo (2017) reliability in research is defined as the measure of invariability in the research measurement tool. It is essentially a measure to ensure that the research measurement tool that has been selected to gather data actually measures what is required. According to Mohamad, Sulaiman, Sern and Salleh (2015) reliability can be tested by testing for Cronbach alpha value (α). The Cronbach alpha value for the research questionnaire analysis was 0.807. The Cronbach alpha value indicates the internal consistency of the scale. According to Mohamad et al., (2015) an Cronbach alpha value (α) between 0.8 - 0.90 is acceptable. Validity of the research is defined as the competence of the research measuring tool to obtain and quantify the occurrence that is required to be

measured (Pajo, 2017). According to Pajo (2017) there are 4 types of validity tests which are:

- 3.11.1 Face validity - This form of validity assumes that the measurement tool is an accurate measure of the construct.
- 3.11.2 Content validity - This form of validity refers to the extensive account of all aspects of the construct that is considered.
- 3.11.3 Construct validity – This form of validity is similar to content validity however the main purpose of such validity is that it measures the degree in which the construct is carried out in terms of whether the measurement scale used measures accurately the feedback.
- 3.11.4 Criterion validity - This form of validity occurs when the researcher is not satisfied with the current measurement of the construct as a result they create a new measurement for the construct.

To ensure validity in this research content validity was assessed first. The questionnaire was shared with medical experts from another private hospital. Feedback and criticism to the initial questions were taken into consideration and the research tool was adjusted. Literature was also checked to determine the type of scale to be used in such research conditions.

3.12 BIAS:

According to Bero (2017) bias in research is defined as a systematized error or variation from the intended results. Bias is a factor in research that can occur at any stage of the research. According to Smith and Noble (2014) there are six types of bias which are:

- 3.12.1 Design Bias - This type of bias is a result of a poor design and inconsistency between the objectives and the approach.
- 3.12.2 Selection Bias - This type of bias can occur during the process when participants are recruited and when selecting the research inclusion criteria.

- 3.12.3 Data Collection Bias - This type of bias can occur when the researchers own faith and thoughts impact on the way data is gathered.
- 3.12.4 Measurement Bias - This type of bias can occur in quantitative research. When the measurement instrument is not tested for validity and reliability measurement bias can occur.
- 3.12.5 Analysis Bias - This type of bias can occur if the researcher looks for results that affirm their hypothesis or their intimate intuition.
- 3.12.6 Publication Bias - This type of bias can occur in both quantitative and qualitative studies. In quantitative studies such bias occurs when research is only published if research demonstrates significant research findings. And in the case of qualitative studies bias can occur when research is not published due to findings in research not being evidently presented.

In this research the following biases were considered to be reasons for concern which were measurement bias and analysis bias. To prevent measurement bias the questionnaire was analysed to ensure that the questionnaire was properly worded. Furthermore, a pilot run on the questionnaire was conducted. The participants were also assured that their details would remain anonymous and confidential. To prevent analysis bias, the research data was analysed using a methodical research tool.

3.13 ETHICAL CONSIDERATIONS:

According to Datt and Datt (2016) ethical consideration is an important facet in research as it ensures that the research presented imparts original knowledge and it is free of error. It essentially ensures that the researcher takes accountability in the research that is generated in terms of the findings and the participants involved. As per the requirements from the University of KwaZulu Natal, a gatekeeper's letter was required from the organization where the research would be conducted. Furthermore ethical clearance had to be obtained from the University prior to commencement of the research.

3.14 SUMMARY:

This chapter highlighted the approach that was taken for the research. The basis of the research methodology was justified in this chapter and steps on how the research was conducted were further indicated. The research setting was also highlighted and the reason for the choice of the hospital selected was also given. Based on the objectives of this research a quantitative exploratory cross sectional study was conducted. The chapter listed the sampling approach and data collection process. Important facets in the research such as reliability, validity and ethical considerations were also discussed to highlight the steps taken to ensure that the research data presented authentic information that was accurate, free from bias and consistent. The next chapter will present results from the statistical analysis of data and discussion on the findings.

CHAPTER 4: RESULTS & DISCUSSION

4.1 INTRODUCTION:

This chapter presents the analysis, understanding and discussion of the research data that was collected during the survey. The significance of the data was to evaluate the stance that the medical professionals and management had on the research objectives. It was imperative to understand what the medical professionals felt in relation to the high healthcare costs in the private healthcare sector. The analysis was conducted using IBM SPSS. Descriptive analysis such as frequencies and cross tabulation was used to analyse data. To evaluate the reliability of the survey, scale analysis (reliability analysis) was conducted on the survey questions. This analysis calculates the Cronbach's alpha value. Inferential statistics such as Pearson Chi-square test was conducted during the cross tabulation to determine if there was a relationship between the responses received from management and the medical professionals. All results were extensively discussed. This chapter initially outlines the participation statistics and biographical information of the survey. Thereafter, quantitative findings are presented in 4 sections which are the factors that contribute to high healthcare costs, the impact that medical aid schemes have on healthcare costs, the impact that the implementation of the National Health Insurance will have on the private healthcare sector and finally to determine if Lean methodologies will have an impact on healthcare costs.

4.2 PARTICIPATION & BIOGRAPHICAL INFORMATION:

For this research, the instrument used was an online survey which was administered using the software Questionpro. The online survey link was sent to the Hospital manager to distribute to the medical professionals and management which were the target population for this research. The survey was opened from 5th October to 30th October 2017 which equates to 26 days. To ensure active participation a reminder email was sent to the Hospital Manager on a weekly basis.

Table 4.1: Survey Participation

Category	Number
Number of participants that received the survey	55
Number of participants that started the survey	54
Number of participants that completed the survey	52
The completion rate for the survey	96.26 %
The participation rate for the survey	94.54 %
The average duration to complete the survey	8 minutes

The biographical information is presented below which ranges from gender, age profile, race group and the number of years that the participant worked at EThekwini Hospital & Heart Centre.

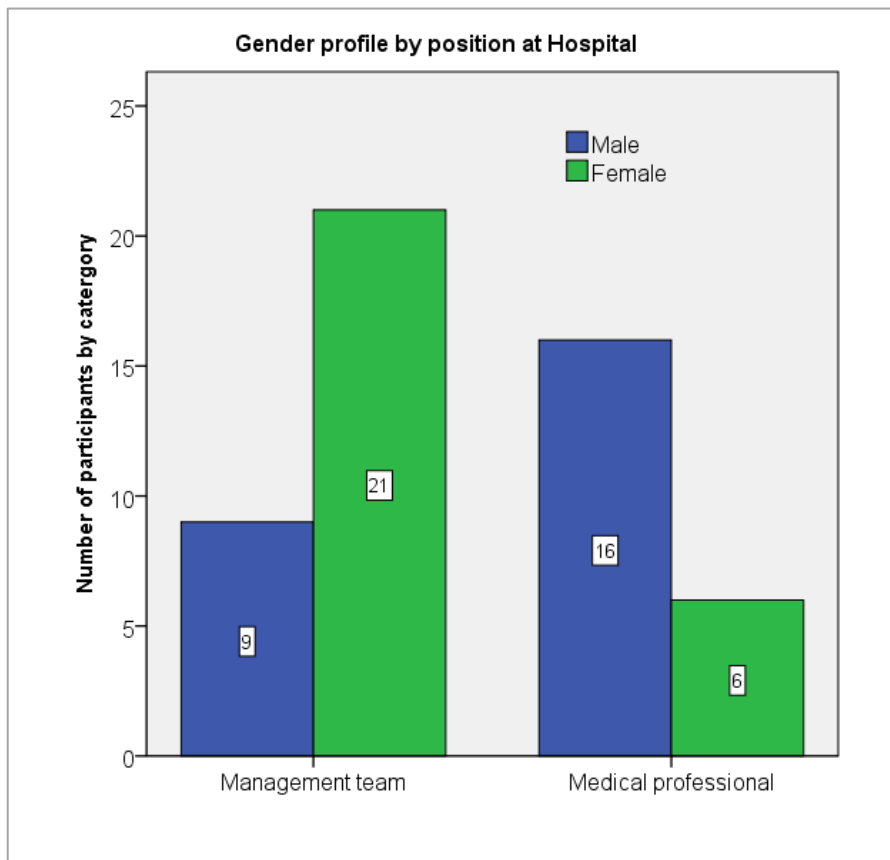


Figure 4.1: Gender profile by position at Hospital

Figure 4.1 indicates the gender profile by position at the hospital. The target population represents 42.3 % medical professionals and 57.7 % management. The management team are made up primarily of females which represents 40.3 % and 17.3 % of males. Medical professionals are primarily males which account for 30.8 % and females that make up 11.5 %. There is a good distribution of gender by position at this hospital.

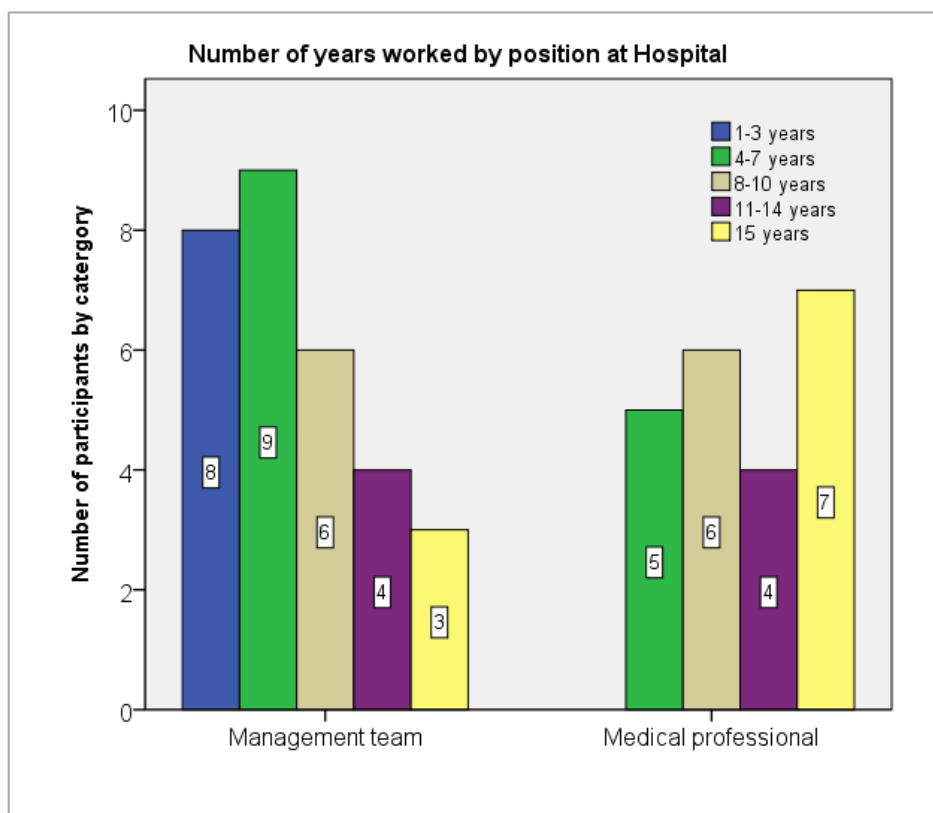


Figure 4.2: Number of years worked by position at Hospital

The next graph figure 4.2 represents the number of years that both the management and medical professional teams have worked at the hospital under research. The management team is represented by a wide range of individuals with different years of experience. The management team consisted of 5.8 % of people that were at the hospital for more than 15 years. Similarly the medical professional team consisted of individuals that worked between 4 to 15 years with majority of medical professionals 13.5 % having worked more than 15 years at the hospital. This range of experience was valuable as this covers a wide spectrum of individuals by age category.

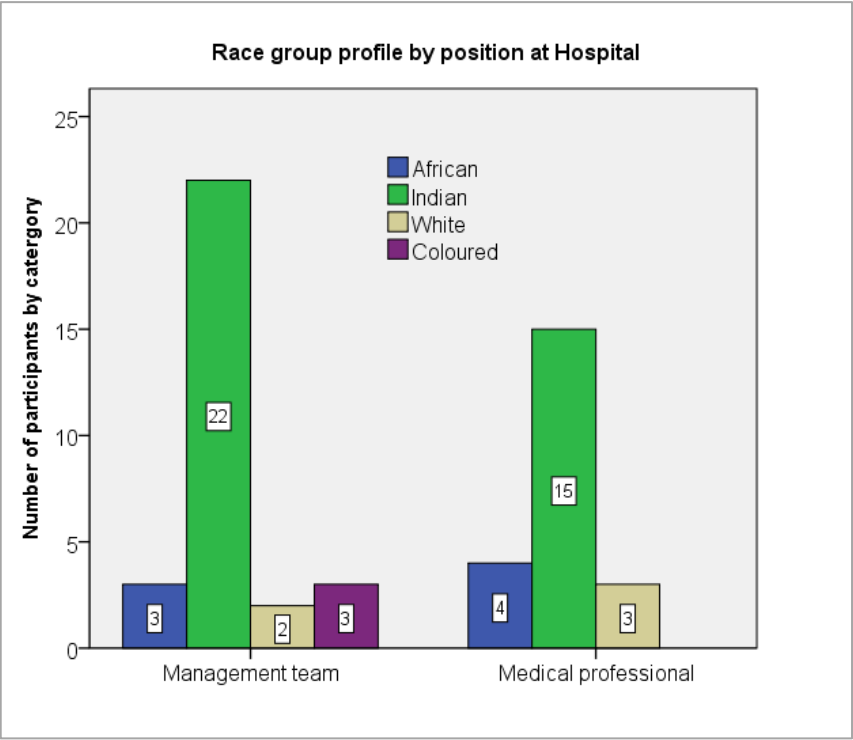


Figure 4.3: Race group by position at Hospital

The survey also captured the ethnicity of the individual participating in the survey by position held at the hospital. Majority of the participants from both the management and medical professional team consisted of 71.1 % of Indians.

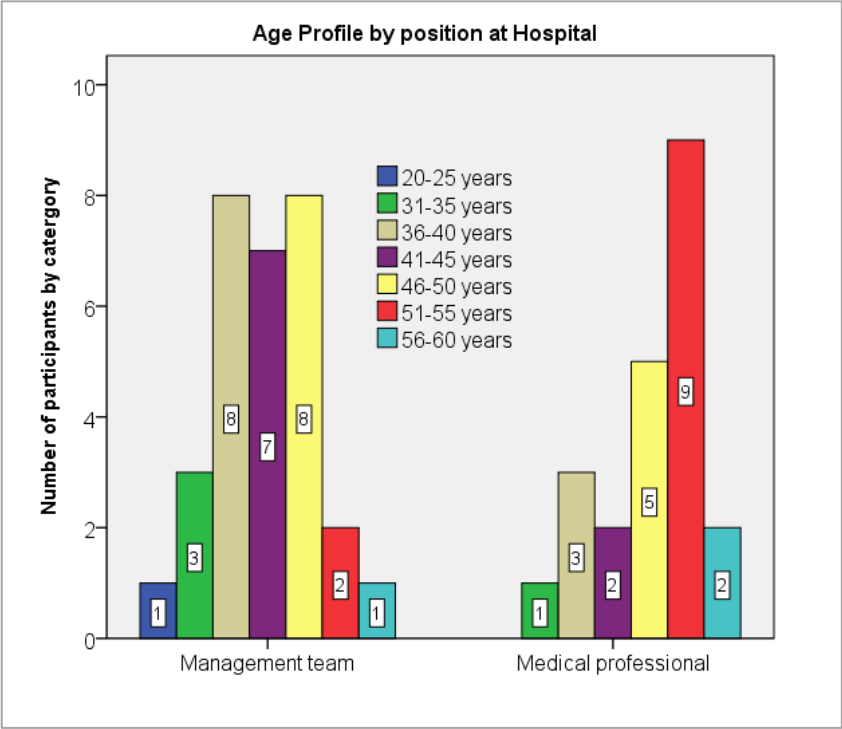


Figure 4.4: Age profile by position at the Hospital

The demographic element surveyed was the age profile by position at the hospital as represented in figure 4.4. Majority of the medical professionals 17.3 % belonged to the 51-55 year age category. With the management team there was an average balance of individuals 14.7 % that belonged to the 36-50 year age category. The age profiles for both teams were favourable as there was a good spread in terms of age category.

4.3 OBJECTIVE 1 - RESULTS AND DISCUSSION:

The first objective of the research was to determine the factors that contributed to high healthcare costs at EThekwini Hospital and Heart Centre. The first objective of this research was to determine what factors contributed to the high healthcare costs in the private sector. Based on literature it was found that the costs of pharmaceuticals, medical technology, shortage of skills and medical mal-practice are contributing factors to high costs of healthcare. These factors were made into statements to understand whether the target population believed these factors contributed to the high healthcare costs at the Hospital. The survey probed the views of participants. The target population was divided into the management team and medical professional teams. This was to assess whether there was a difference in the opinions. This section consisted of 9 questions. Findings for the first factor, shortage of skills, were illustrated in figure 4.5 and 4.6. Findings for the second factor, medical mal-practice were illustrated in figure 4.7 and 4.13. Findings for the third factor, medical technology were illustrated in figures 4.8 to 4.10. Findings for the fourth factor, pharmaceuticals were illustrated in figure 4.11. Figure 4.12 gave an overall view of what the respondents believed to be the main driving factor to high healthcare costs at the hospital.

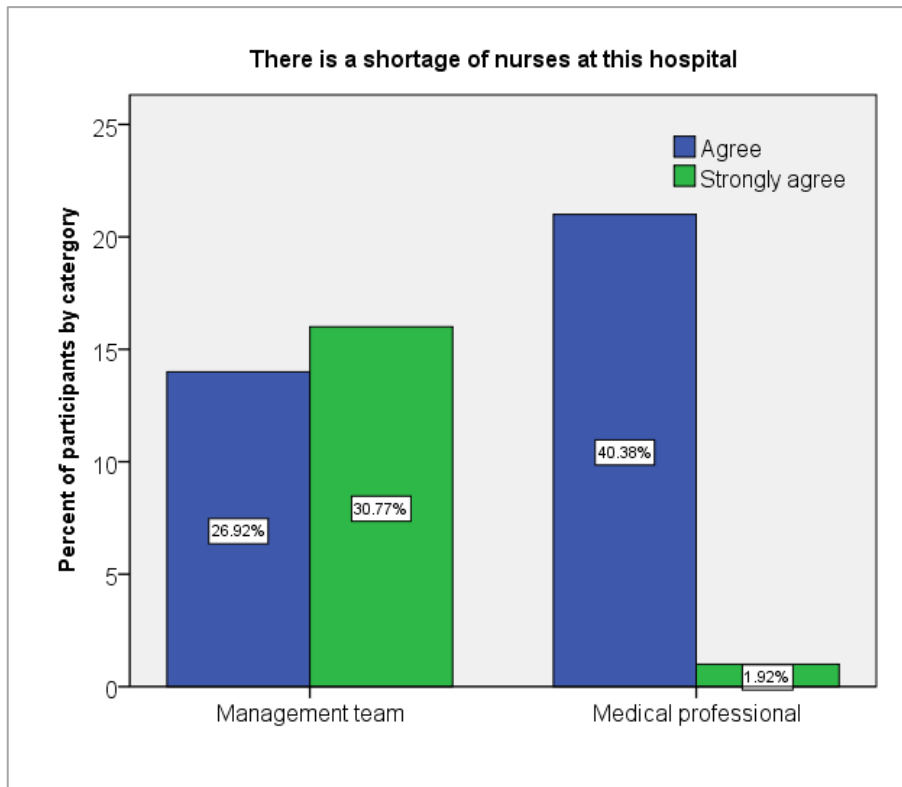


Figure 4.5: Evaluating if there is a nurse shortage at this hospital

There is indisputable evidence that there is a shortage of nurses at this hospital. The Pearson Chi-square value for the cross tabulation was 13.729 and the corresponding p value was > 0.05 . This indicated that both management and medical professional teams believed positively that there was an issue at this hospital in that there was a shortage of nurses. These findings comply with the minutes of the recent board of directors meeting held at the hospital in August 2017. According to Bechan (2017) salary packages for nurses have become extremely competitive with some packages that have become elusive. To mitigate these challenges the hospital has hired recruitment staff to assist the hospital, however this too has become a challenge.

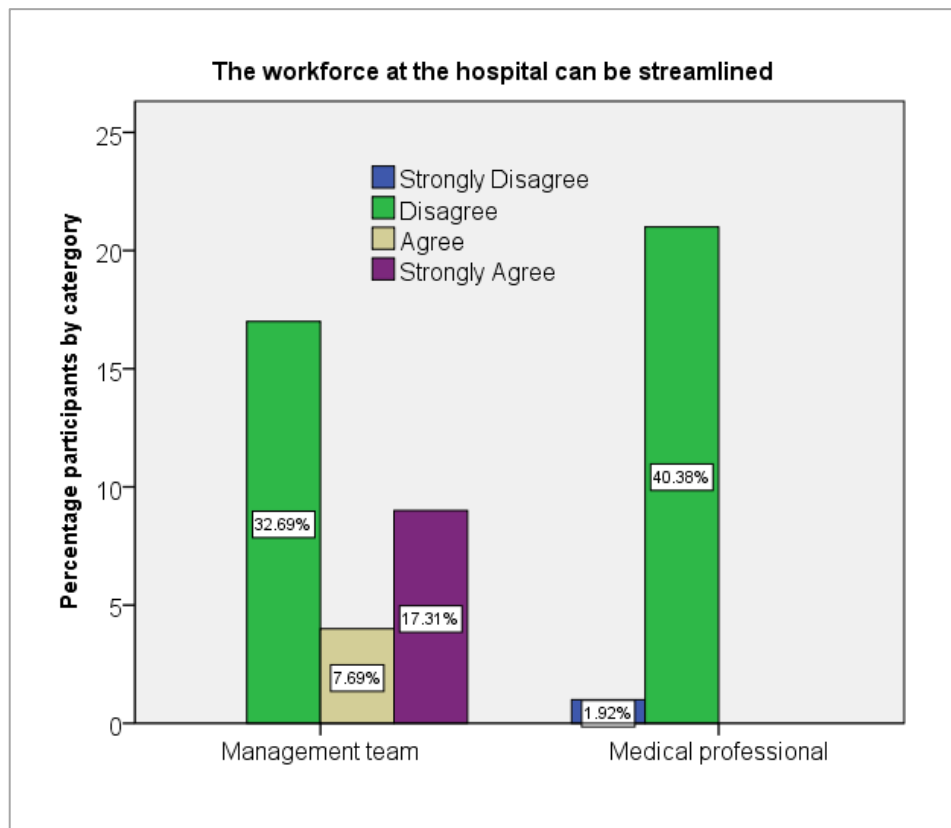


Figure 4.6: Evaluation if the workforce can be streamlined at this hospital

From the analysis, a total of 73.05 % medical professionals and management believe that the workforce cannot be streamlined, with 25 % of the management team believing that the workforce can be streamlined. The Pearson Chi-square value for the cross tabulation was 13.510 and the corresponding p value was > 0.05 . This is indicative that both the teams believe strongly that the current workforce cannot be minimised. This is not uncommon in the healthcare sector. According to Turner (2017) skills shortage has been exacerbated by the fact that there are issues with training and education which has impacted on the level of skill and volume of staff that are available to enter this sector. Due to this issue, salaries of staff have increased to ensure retention.

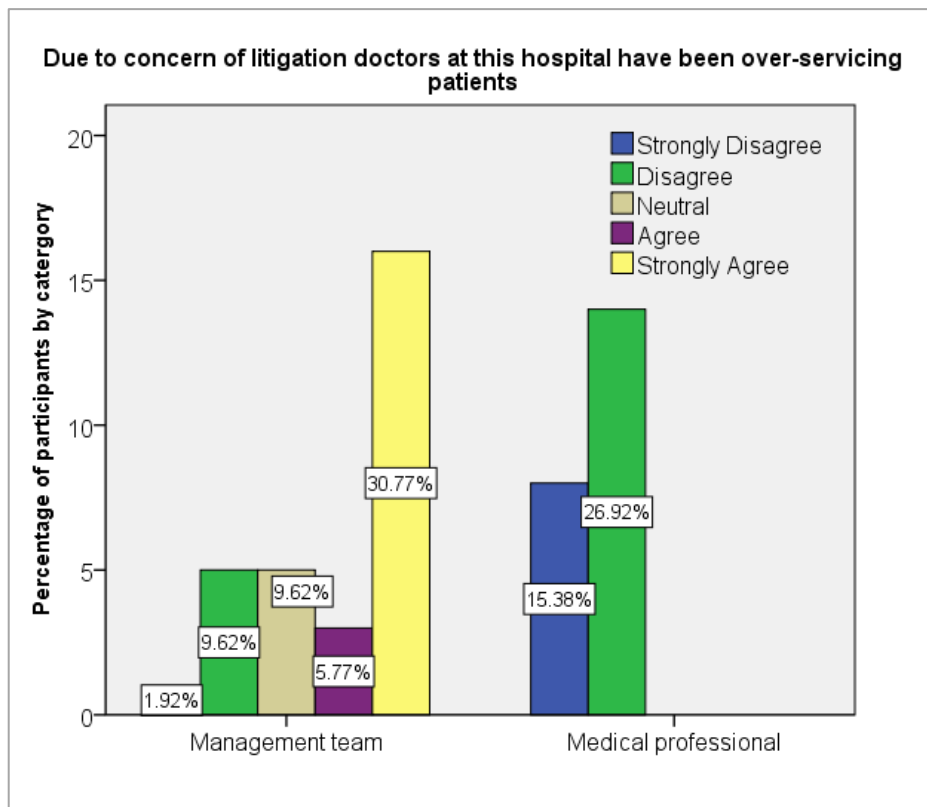


Figure 4.7: Evaluation if doctors are over-servicing patients at this Hospital

The next survey questioned revealed conflicting views in relation to whether doctors at the Hospital were over-servicing their patients to prevent litigation. All 42.3 % of the medical professionals responded negatively to the statement with 36.54 % of the management team agreeing to the statement. The Pearson Chi-square value for the cross tabulation was 33.264 and the corresponding p value was < 0.05 which is indicative that there is relationship that exists between the position held at the hospital and the opinion of whether doctors are over-servicing their patients. The Pearson's correlation coefficient (r) for this question was -0.741 confirming that views are conflicting between both teams. The contention with this analysis is that there is evidence that a small fraction of medical professionals have been over-servicing patients to prevent litigation. Medical professionals seemed to be biased with this statement and this was confirmed by minutes of the board meeting held at the Hospital. According to Bechan (2017) there has been upward trend of the length of stay at the hospital for certain procedures and this is currently being investigated. According to Bechan (2017) the efficiency index for medical specialities such as anaesthetist, radiology, pathology and prosthesis were on average above 28 % of the required efficiency index. The efficiency index

measures the actual cost over the expected cost which generates a ratio which ideally should be 1 % with a maximum of 1.05 %.

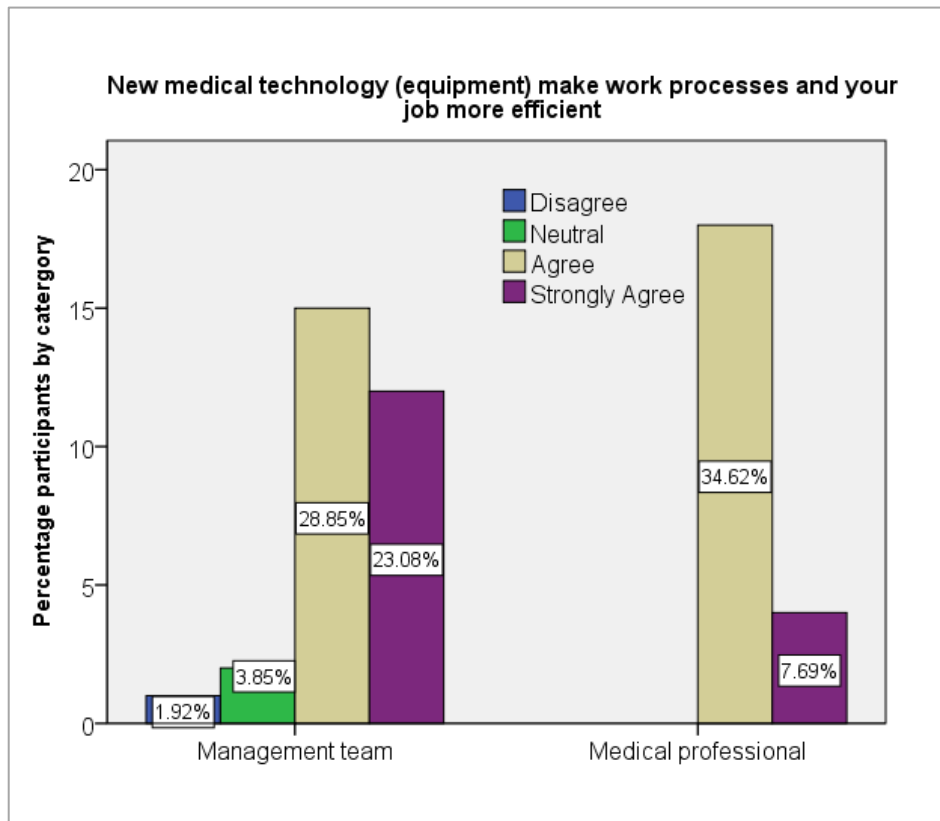


Figure 4.8: Evaluation of new medical technology on job efficiency at this Hospital

With EThekwini Hospital and Heart centre being at the fore front with medical technology it came as no surprise that majority of the participants believed that medical technology made their job more efficient. The Pearson Chi-square value for the cross tabulation was 6.188 and the corresponding p value was > 0.05 indicating that there was no difference between the management and medical professional teams. There were only 1.92 % of the management participants that disagreed with this statement.

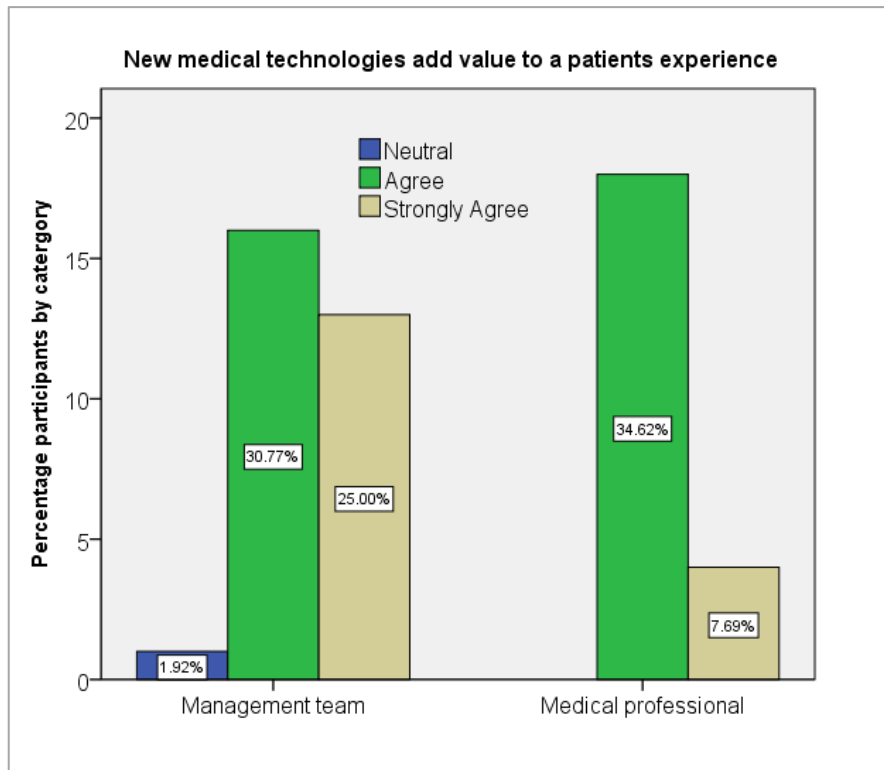


Figure 4.9: Evaluation if new medical technologies add value to patients

Both medical professionals as well as management positively believed that medical technology added value to their patients with a total positive response of 98.08 %. The Pearson Chi-square value for the cross tabulation was 4.764 and the corresponding p value was > 0.05 indicating that there was no significant difference between management and medical professionals. According to Reviews (2017b) medical technology has been instrumental in improving quality, safety and efficiency in healthcare and has been adopted in most healthcare environments. According to Bechan (2017) due to the state of the art medical technology that the hospital has, there has been an increase of 20 % in the number of admissions after the implementation of new medical treatment systems.

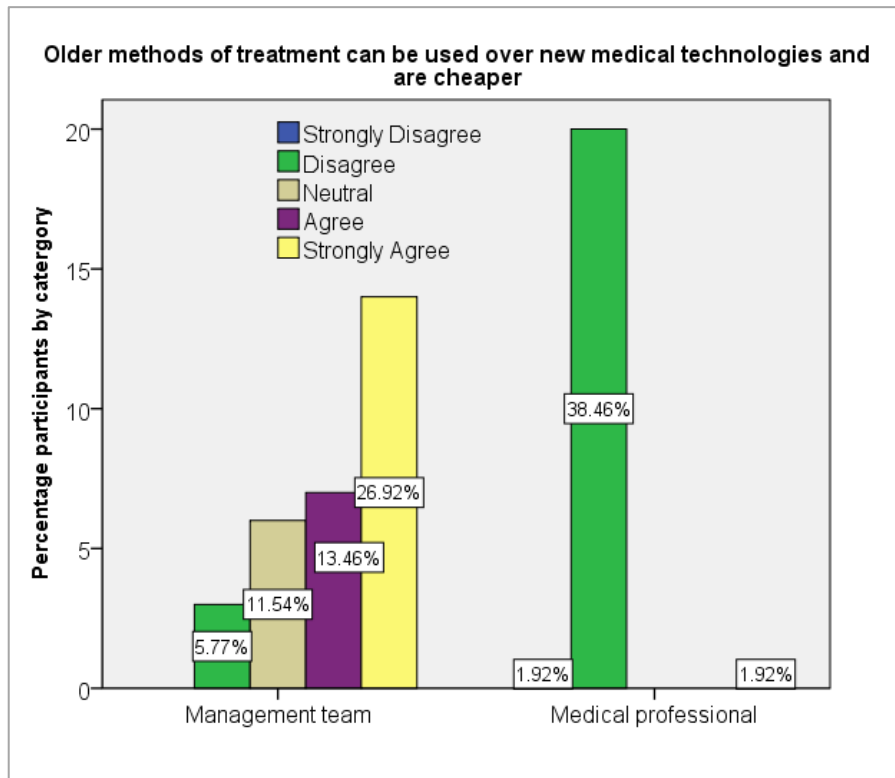


Figure 4.10: Evaluation if older treatments can be used over new treatments

This question yielded conflicting responses from the management and medical professional team. An amount of 38.46 % medical professionals responded negatively to the statement whereas 40.38 % of management responded positively. The Pearson Chi-square value for the cross tabulation was 37.488 and the corresponding p value was < 0.05 . The Pearson's correlation coefficient (r) for this question was -0.737 confirming that views are conflicting between both teams. The results are not surprising as medical professionals globally prefer the use of new medical technologies as it also helps to reduce litigation. According to Henderson (2017) to avoid cases of accidents in the medical rooms medical professionals will implement steps using advanced medical technology at the expense of the patient to prevent any mistreatment or incident.

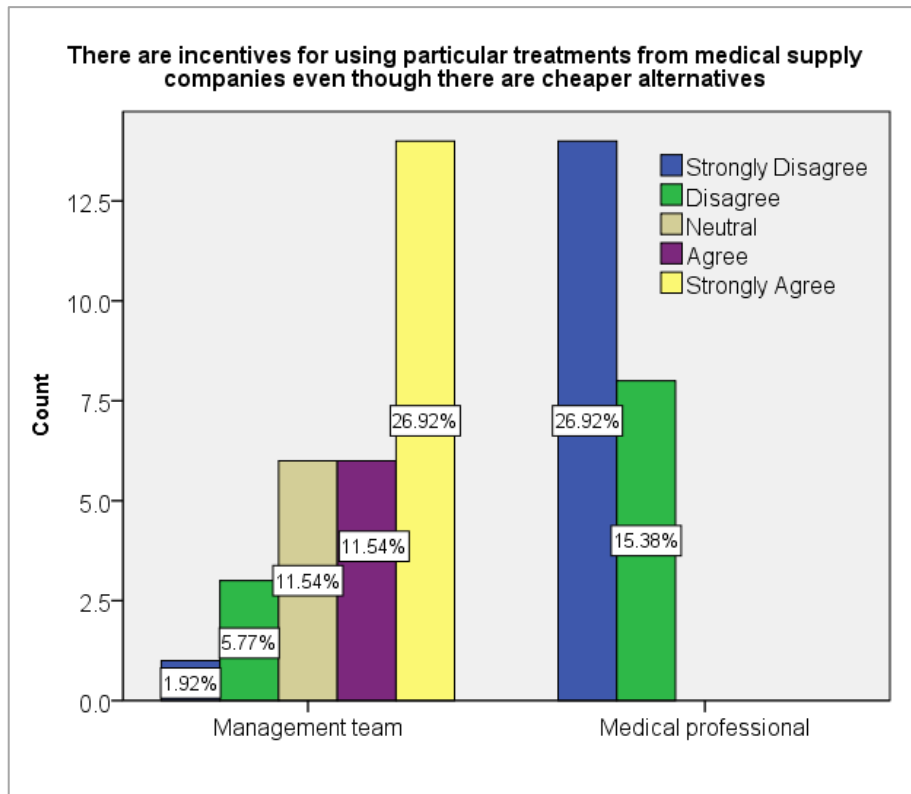


Figure 4.11: Evaluation if incentives are given for more expensive treatments

This survey questioned aimed to understand whether there was trend towards the use of more expensive medical treatments due to incentives. The Pearson Chi-square value for the cross tabulation was 39.237 and the corresponding p value was < 0.05 . The Pearson's correlation coefficient (r) for this question was -0.807 confirming that views are conflicting between both teams. Management believed that medical professionals were implementing and using medical treatments that could be substituted with more economical treatments. According to Bechan, (2017) the hospital has found that medical devices that are used in cardiac surgery have been sourced from preferred suppliers at exorbitant prices. Medical devices used in medical procedures are procured by the hospital. According to Tozzi (2014) doctors have preferred lists of devices that they wish to use although there are more economical options available. It is a trend that is difficult to eliminate as hospitals in their bid to keep specific medical professionals are willing to stock the preferred devices although cheaper alternatives exist (Tozzi, 2014). From the response from the medical professionals it can be seen that they believe their choice is not bias. As per literature medical professionals don't care about the cost of medical devices or treatments (Tozzi, 2014).

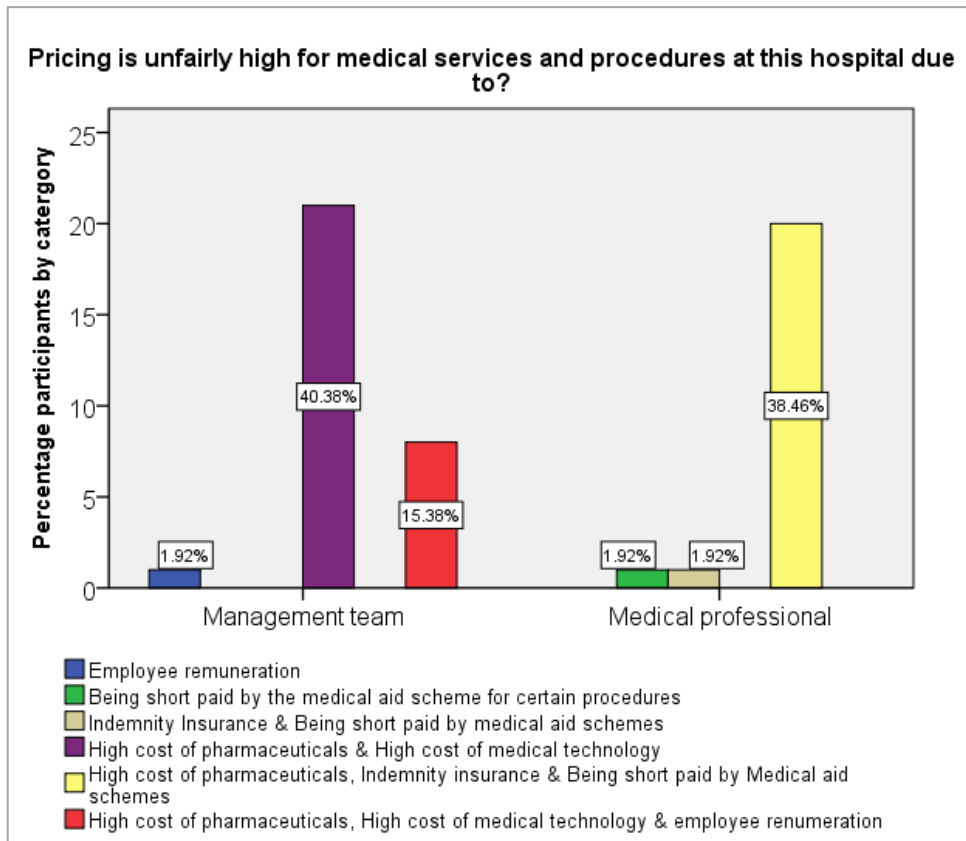


Figure 4.12: Evaluation what factors contribute to the high healthcare costs at the Hospital

Based on literature there were factors that contributed to the high healthcare costs in the private sector. This survey question aimed to determine which factors were the most significant to the target population. The Pearson Chi-square value for the cross tabulation was 52.000 and the corresponding p value was < 0.05 . The management team 40.38 % believed that the cost of pharmaceuticals and cost of medical technology were the contributing factors to high healthcare costs at this hospital. With 38.46 % of medical professionals believing that the cost of pharmaceuticals, indemnity insurance and being short paid by medical aid schemes were the contributing factors to high healthcare costs at this hospital. The responses highlighted that each target population selected a response that seemed to impact them the most. The cost of pharmaceuticals ranked in both responses highlighting that this is a factor that requires serious tracking. The hospital has been evaluating the supply chain of pharmaceuticals and will roll out a new procurement policy in 2018 (Bechan, 2017).

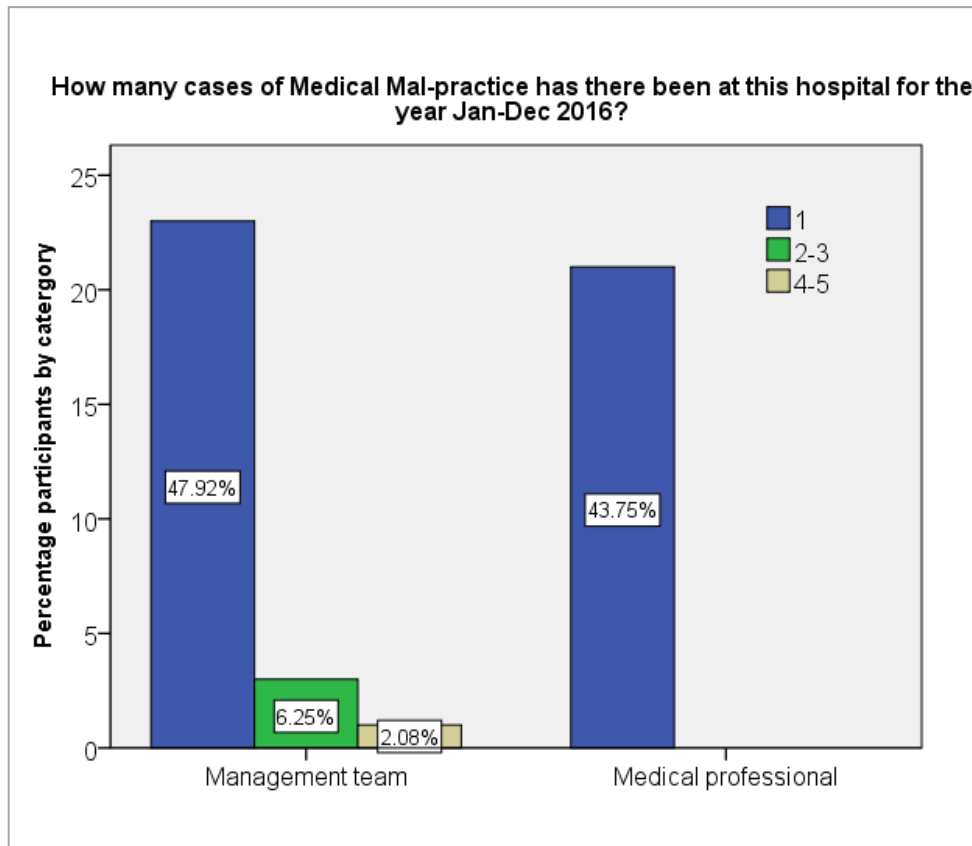


Figure 4.13: Evaluating how many cases of medical mal-practice with the year

The Pearson Chi-square value for the cross tabulation was 3.394 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. According to Bechan (2017) there has been one case of medical mal-practice for the year 2016.

4.4 OBJECTIVE 2 - RESULTS AND DISCUSSION:

The 2nd objective of the research was to determine how medical aid schemes impacted on the healthcare costs at EThekwini Hospital and Heart Centre. The survey consisted of statements that were based on findings from the literature review. The survey probed the views of participants. This section consisted of 5 questions.

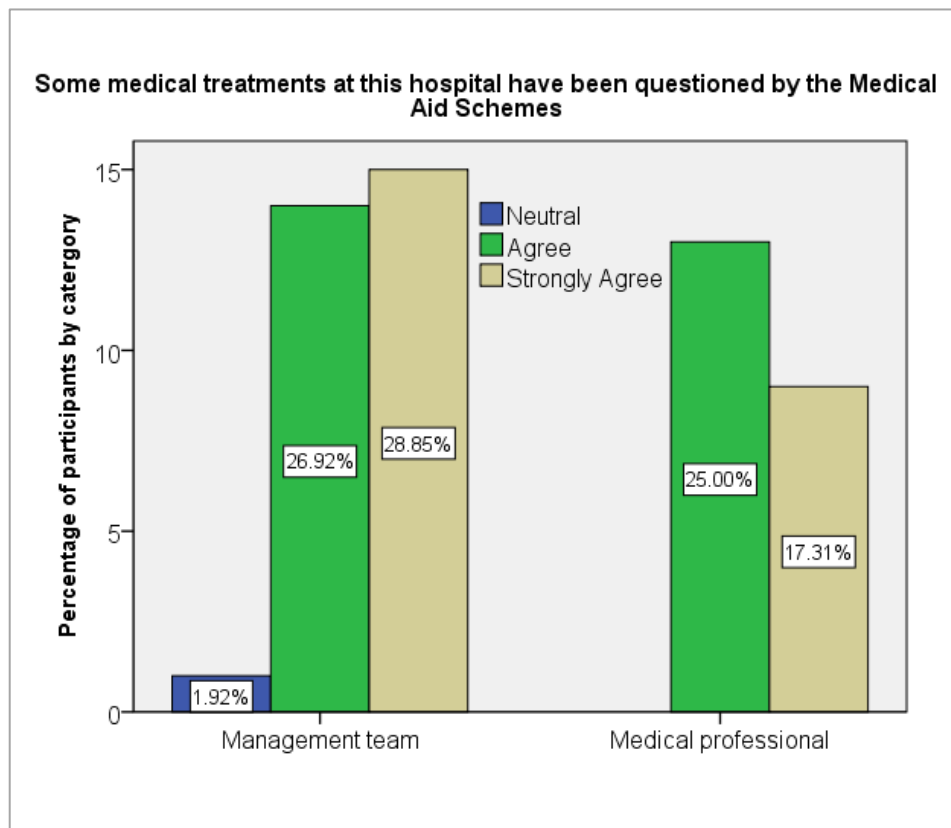


Figure 4.14: Evaluating if some medical treatments are being questioned by the Medical Aid

This survey question aimed to determine if there were treatments at the hospital that were questioned by the medical aid scheme. The Pearson Chi-square value for the cross tabulation was 1.338 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. Majority of both the management team and medical professionals positively responded that there were treatments that were questioned. This was confirmed with the Hospital manager. According to Bechan (2017) treatments relating to Ophthalmology were raised as a concern from the Medical Aid companies.

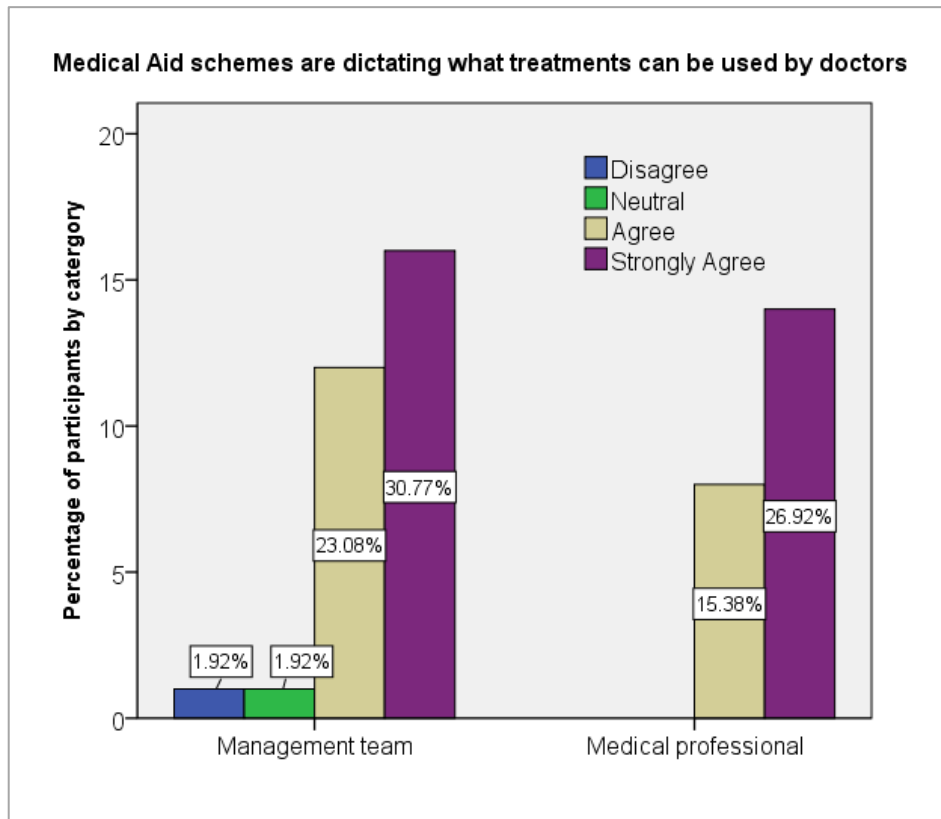


Figure 4.15: Evaluation whether Medical Aid scheme are dictating what treatments doctors can administer

There was a strong consensus in the response which indicated that both management and medical professionals believed that Medical Aid schemes were dictating what treatments should be administered. The Pearson Chi-square value for the cross tabulation was 1.774 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. This response concurs with literature. According to Health24 (2015) Medical Aid schemes will fund medical protocols on the basis of evidence based medicine however recently Medical Aid schemes have been cutting back on treatments that they can fund which as a result has comprised the care provided by hospitals. According to Bechan (2017) treatments for Cardiac procedures have been questioned in terms of medical devices used. The challenge with this aspect is that this changes the treatment protocol for the specialists whom don't see the merit of the change.

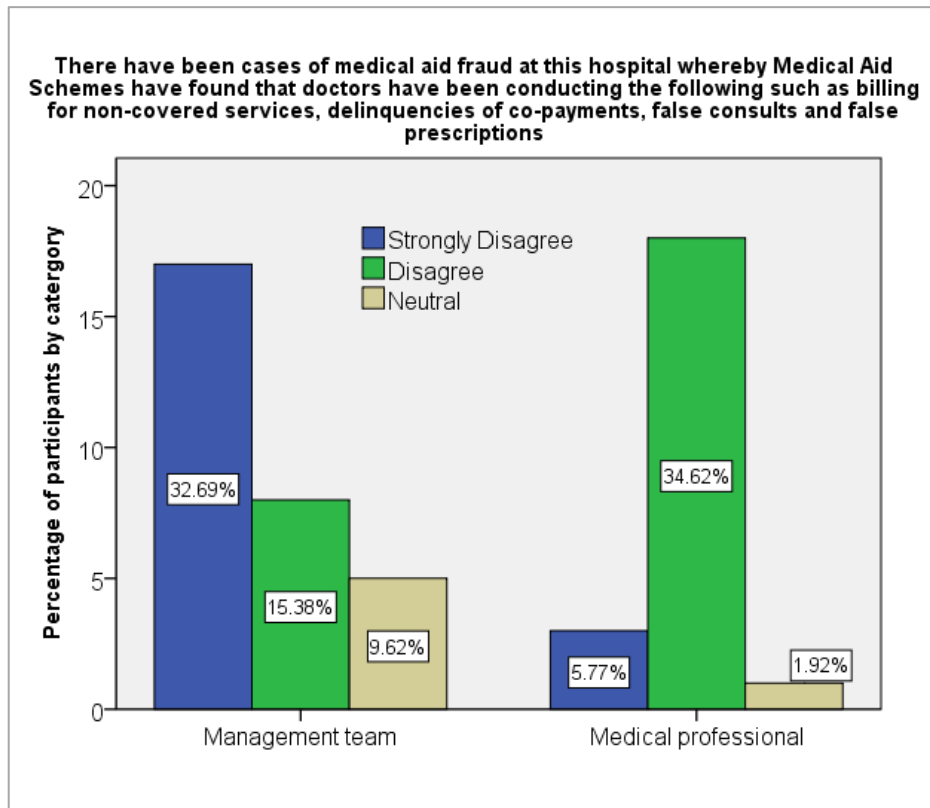


Figure 4.16: Evaluating if there has been Medical Aid fraud at this Hospital

Both the management and medical professional team responded negatively to the statement with a total of 88.46 % disagreeing with the statement. This response was verified with the Hospital Manager who confirmed that there were no cases presently. However this is not an indication whether Medical Aid fraud is not taking place currently at the hospital. The Pearson Chi-square value for the cross tabulation was 15.448 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. According to Ogunbanjo and Knapp van Bogaert (2014) Medical Aid fraud is a national phenomenon with an increase of cases whereby medical professional are filling unscrupulous medical claims in order to achieve a profit. Medical Aid fraud is not easily detectable as there are many stakeholders involved in the fraud which range from medical professionals, medical supply companies and patients.

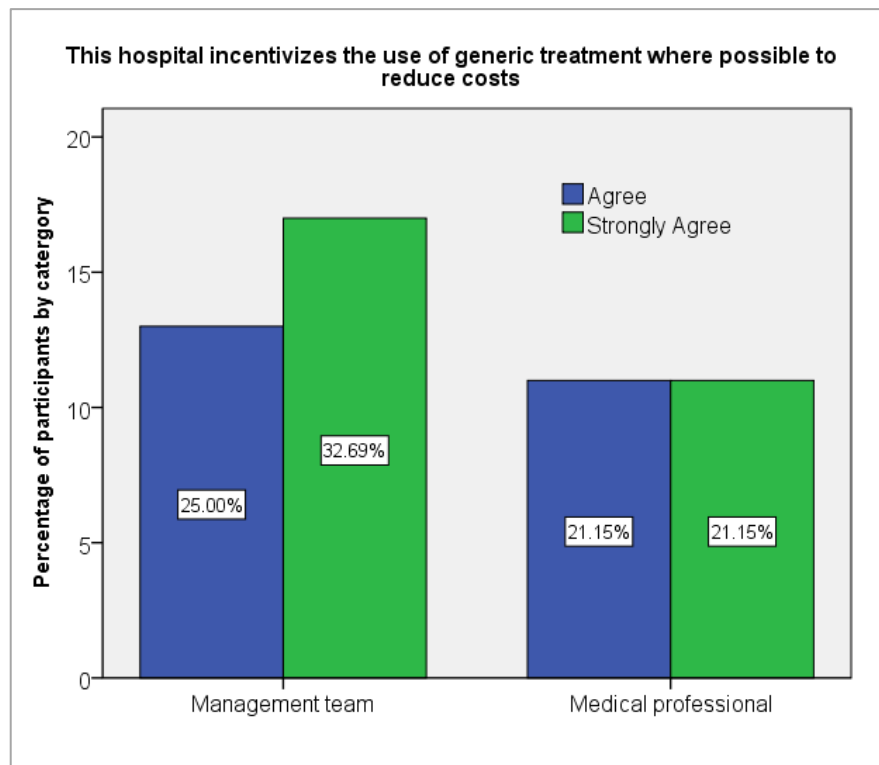


Figure 4.17: Evaluating whether this Hospital incentivizes the use of generic treatment

The next survey question probed whether the Hospital incentivized the use of generic treatment. Both management and medical professionals responded positively to the statement with all of them agreeing with the statement. The Pearson Chi-square value for the cross tabulation was 2.234 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. This response was confirmed with the hospital manager. According to Bechan (2017) the hospital uses 59.6 % of generic medicines and 40.4 % of branded medicines of which there is no generic equivalent. According to Bechan (2017) this statistic is promising as generic usage is 3.4 % above the National Hospital Network usage trends of generic medicines. According to Ibrahim, Wertheimer and Babar (2017) the biggest challenge in the healthcare industry is that physicians and pharmacists benefit from the sales of high value drugs. The second challenge is that cheaper alternatives may give the user the impression that the medication is of a lower quality (Ibrahim et al., 2017). EThekwini Hospital and Heart Centre has drafted a generic substitution policy which has been implemented to ensure that

pharmacists promote the use of generic medications. Due to the fact that the hospital incentives the use of generic medication has resulted in higher usage of generic drugs and buy in from the medical professionals at the hospital.

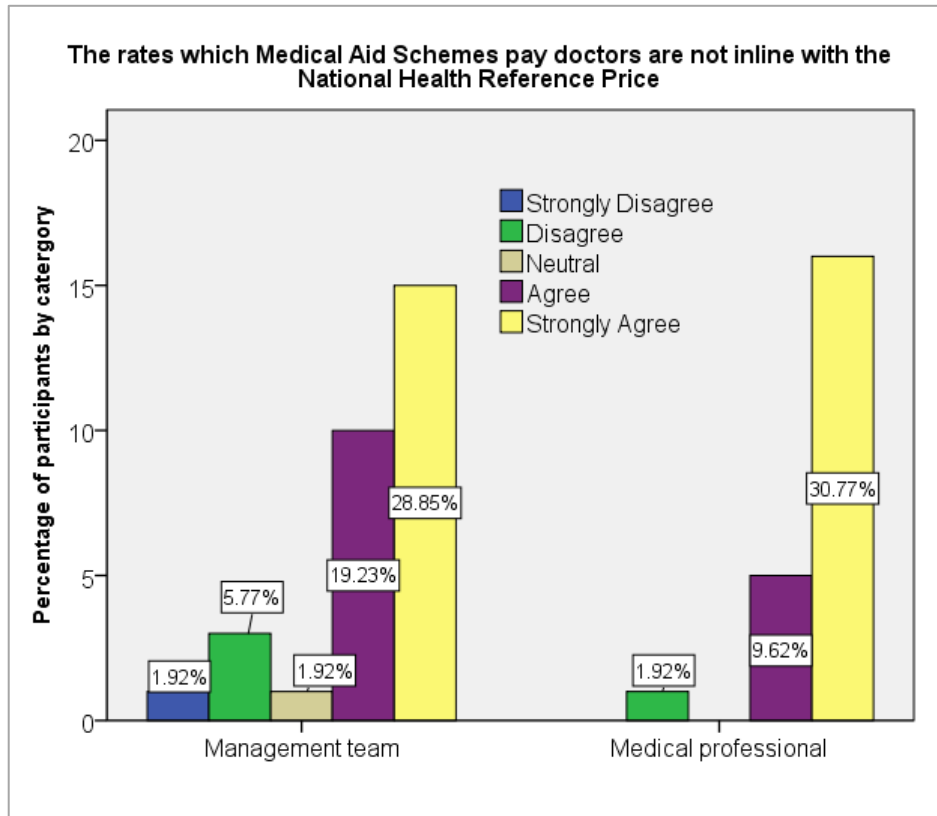


Figure 4.18: Evaluating if Medical Aid Schemes are paying doctors in line with NHRP

Management and medical professionals strongly believed that Medical Aid schemes were not paying doctors according to the National Health reference price. The Pearson Chi-square value for the cross tabulation was 3.552 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. This issue is not restricted to EThekweni Hospital and Heart Centre but is becoming an issue nationally. The outcome of this issue can be seen by the efficiency index for a lot of the medical specialities being above the target of 1, indicating that in order for more revenue to be generated, it seems that some medical professionals have been over-servicing their patients.

4.5 OBJECTIVE 3 - RESULTS AND DISCUSSION:

The 3rd objective of the research was to determine how the introduction of the National Health Insurance will impact EThekweni Hospital and Heart Centre. The National Health Insurance (NHI) white paper was released in June 2017 and signifies the commencement of universal health coverage for the citizens of South Africa. Literature has indicated that there is mixed reviews with the implementation of the National Health Insurance. The survey consisted of statements that were based on findings from the literature review. The survey probed the views of participants. This section consisted of 7 questions.

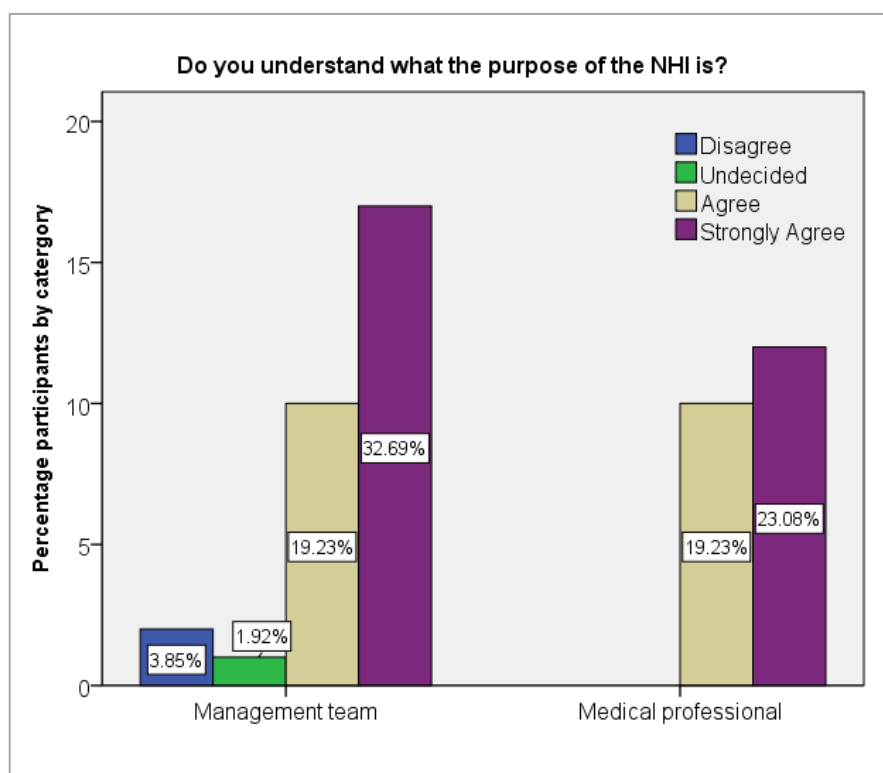


Figure 4.19: Evaluating if target population understood the purpose of the NHI

The target population responded positively to the question with majority of the respondents agreeing that they understand the purpose of the NHI. The Pearson Chi-square value for the cross tabulation was 2.695 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. According to Bechan (2017) the management team as well as the medical professionals have been briefed about the impending NHI. The Hospital manager did express concern that there has been no initiation or proposals that

government has approached the hospital with. There is just speculation from media reports at this stage.

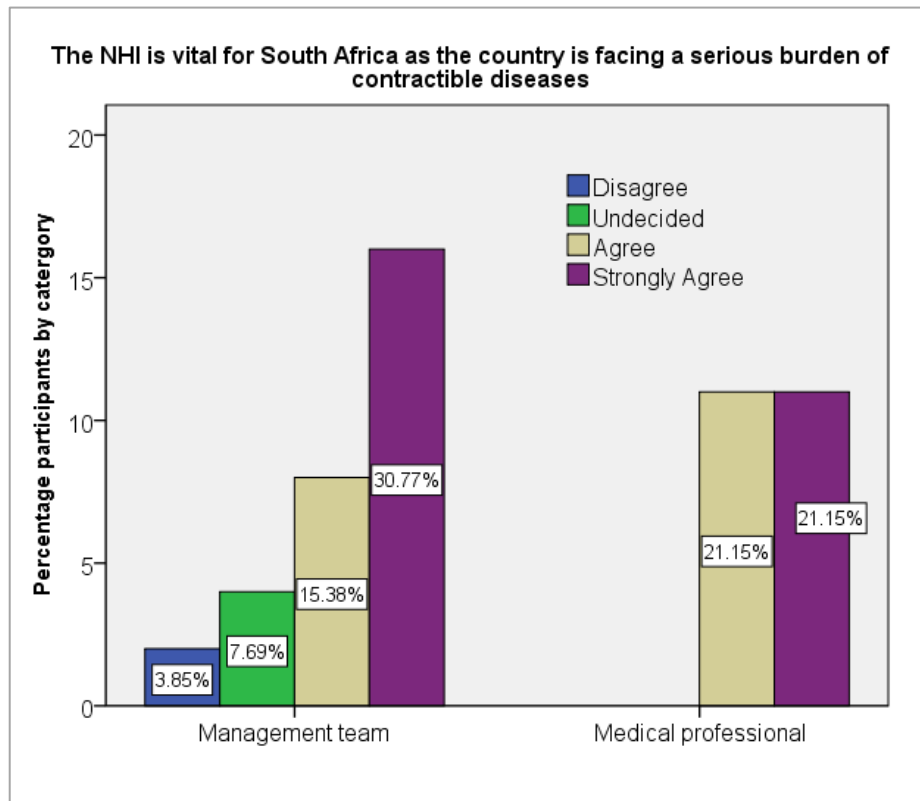


Figure 4.20: Evaluation if the participant’s believed that the NHI was vital for SA

The target population responded positively to the question with majority of the respondents agreeing that the NHI was vital for South Africa. The Pearson Chi-square value for the cross tabulation was 6.318 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. According to Weimann and Weimann (2017) healthcare users believe that the NHI in South Africa is vital to eliminate the corruption that is rife in the public healthcare sector.

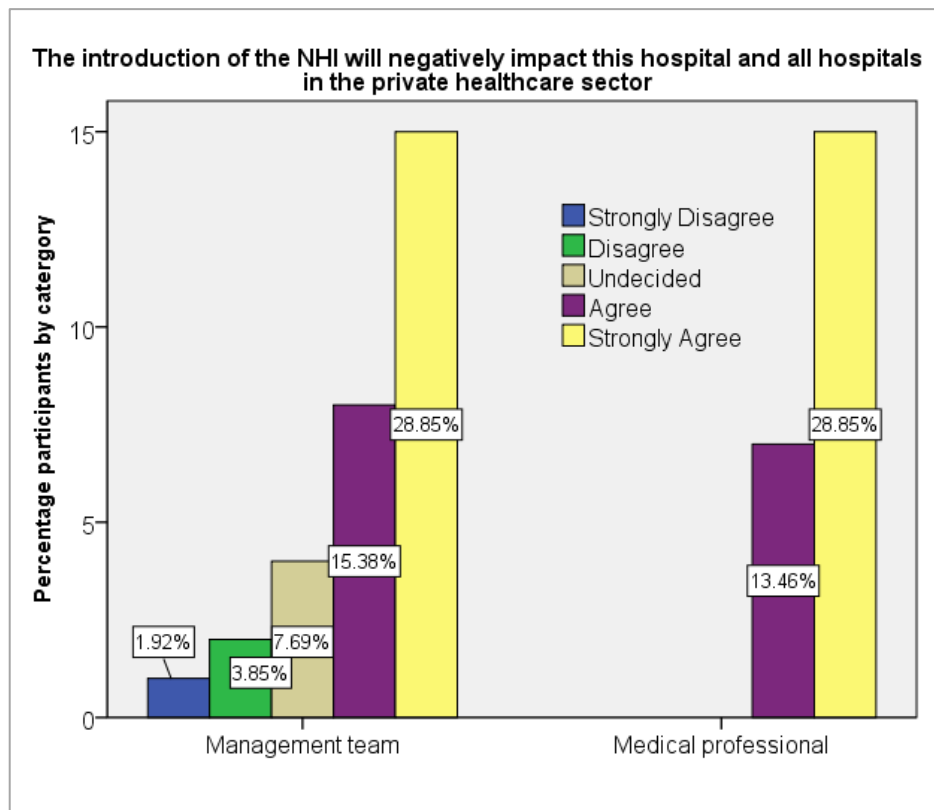


Figure 4.21: Evaluation if the introduction of the NHI will negatively impact hospitals in the private healthcare sector

The Pearson Chi-square value for the cross tabulation was 5.977 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The response was positive with majority of the target population agreeing that the NHI will negatively impact private hospitals. According to Urbach (2017) for private hospitals the NHI spells disaster as these hospitals would be overflowing with patients and the hospital would not be able to cope.

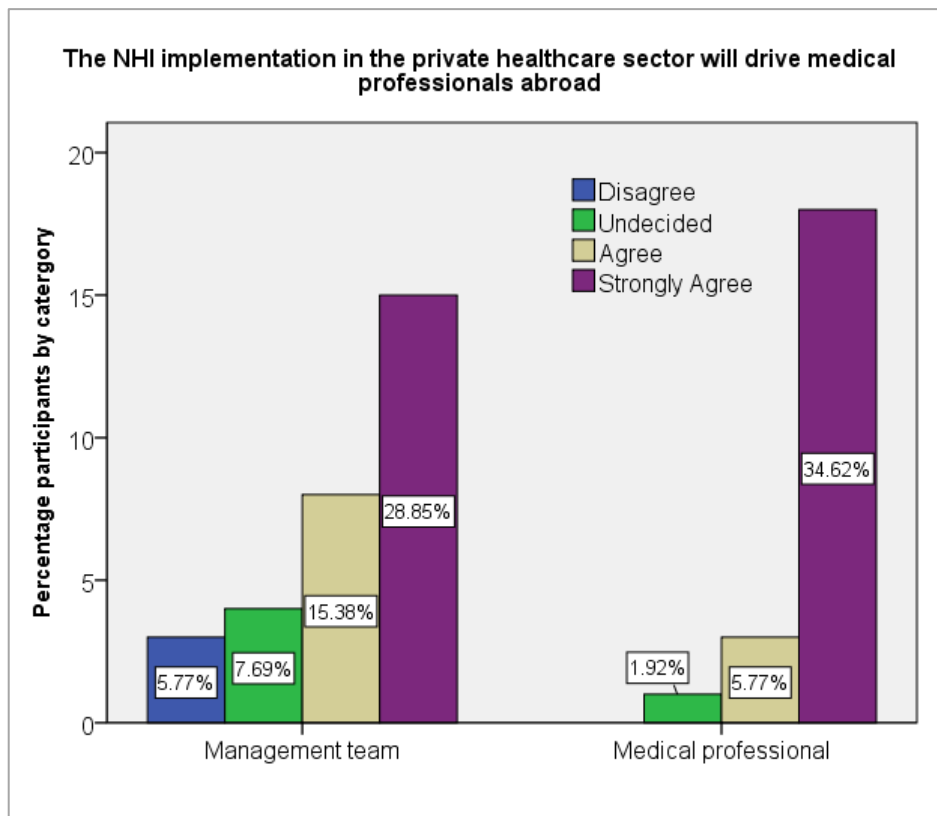


Figure 4.22: Evaluation if the introduction of the NHI will drive medical professionals abroad

The Pearson Chi-square value for the cross tabulation was 6.263 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The response was positive with majority of the participants agreeing to the fact that the NHI implementation would drive away medical professionals abroad. It complies with literature as most medical staff feel that the proposed NHI will strip them from their autonomy of being a medical professional and having the right to work in a facility of their choice (Chronicle, 2015). Furthermore medical professionals will have to charge at rates that are set out by the Government, which will create financial strain to most medical professionals in the field. The financial strain for medical professionals is subjective in that, it has more to do with living an exclusive lifestyle as opposed to financial deprivation.

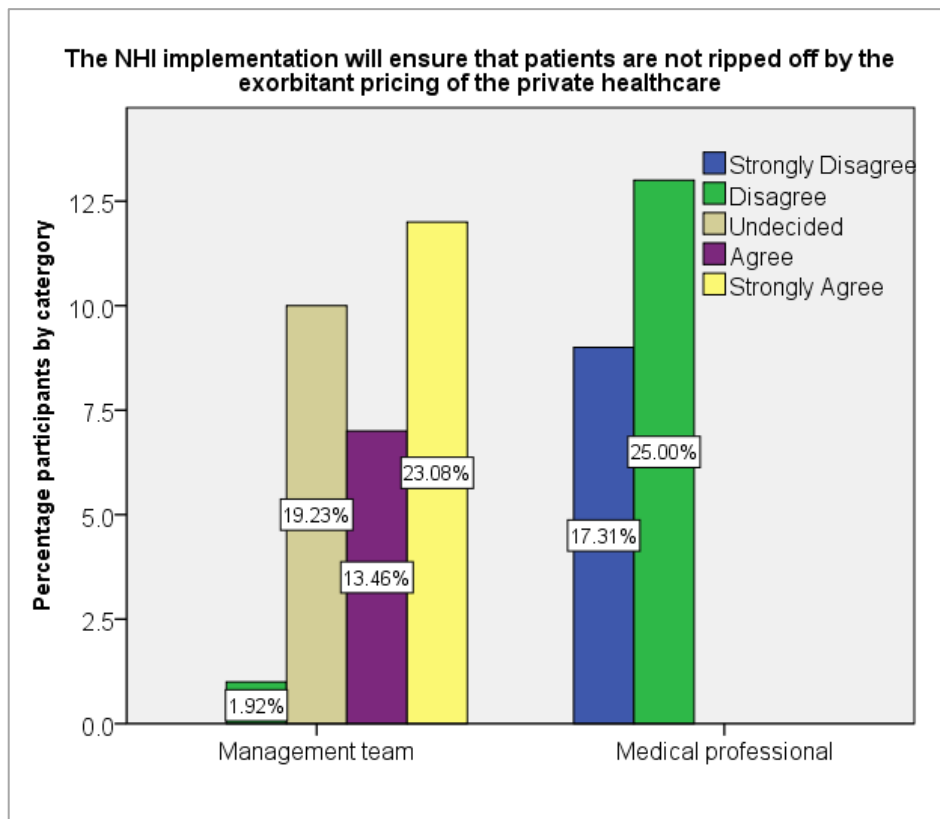


Figure 4.23: Evaluation if the NHI will ensure patients are not ripped off by the exorbitant pricing of the private healthcare sector

The Pearson Chi-square value for the cross tabulation was 48.196 and the corresponding p value was < 0.05 . There are significant differences between the target population responses. Medical professionals responded negatively to the statement with the management team giving mixed response which varied from being neutral to agreeing to the statement. This mixed emotions signalled that management team could be suggesting that there should be more controls in place with pricing in relation to medical professionals. This would require further investigation.

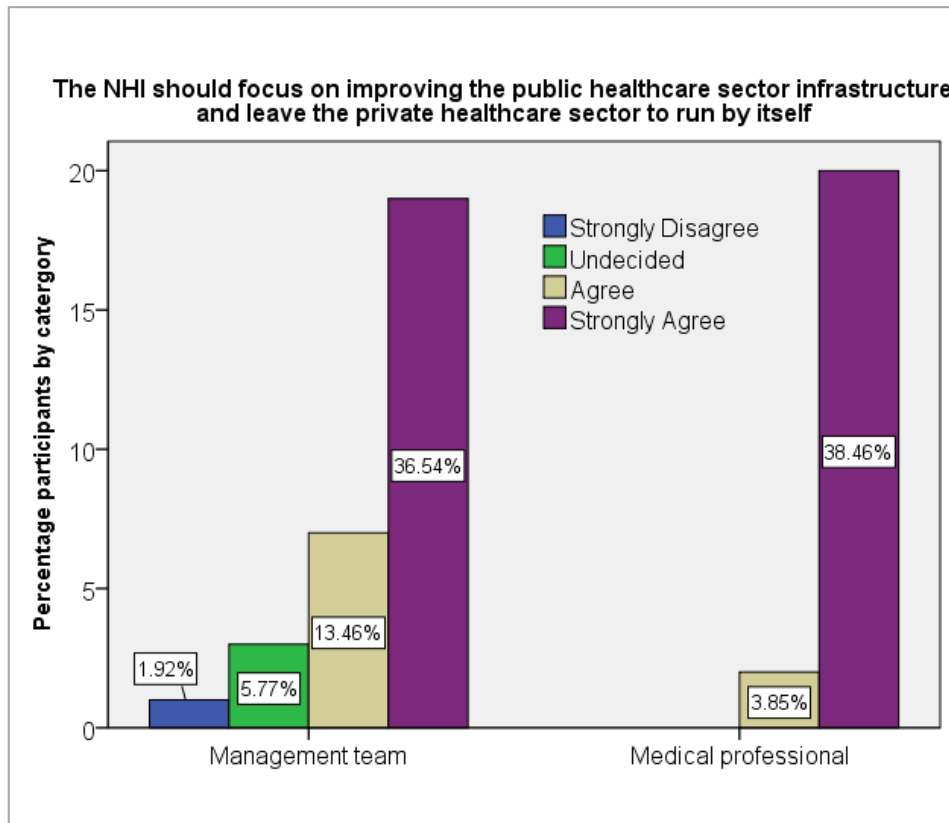


Figure 4.24: Evaluation if the NHI should focus more the public healthcare sector than the private healthcare sector

The Pearson Chi-square value for the cross tabulation was 5.708 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. This concurred with literature as healthcare professionals have raised questions about the impending NHI addressing the dismal state that the public healthcare sector is in before it comprises a sector that has provided stable and efficient healthcare (Chronicle, 2016). The biggest challenge with the NHI is that it states that all healthcare facilities must comply within the standards for quality but it has not delivered any changes yet (Chronicle, 2016). This is an issue of paramount importance as public healthcare facilities have a lack of resources which is in dire need of government intervention. The second major issue is the fact that the NHI will nationalise the private sector without any compensation.

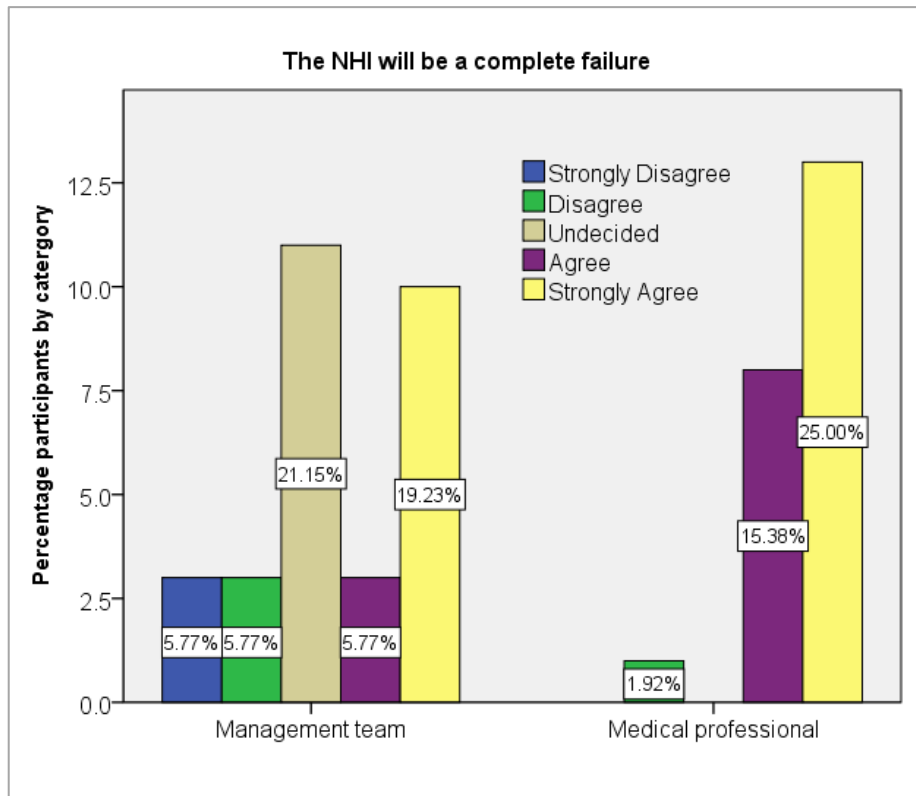


Figure 4.25: Evaluation if respondents believed that the NHI will be a complete failure

The Pearson Chi-square value for the cross tabulation was 16.832 and the corresponding p value was < 0.05 . There was a significant difference between the target population responses. The target population response varied from agreeing to the statement and with 21.15 % of management undecided about whether the NHI would be a complete failure. Here again similar to figure 4.23, there are participants within the management team that see some merit to the impending NHI. These mixed reviews actually highlight two aspects to the literature review. Literature has alluded to the fact that the NHI would not be a failure if the execution was conducted properly (Chronicle, 2016). However, this is marred by the reality that the NHI as per the white papers released this year will be funded by uncertain sources which raise question marks. According to Forum (2016) the South African Private Practitioners Forum believe the fundamental issues which plague the NHI process needs to be addressed before implementation. The second issue is that a mandatory tax will be required to be paid into the NHI which creates an additional burden to the citizens of South Africa.

4.6 OBJECTIVE 4 - RESULTS AND DISCUSSION

The 4th objective of the research was to determine if lean methodologies were to be implemented at EThekweni Hospital and Heart Centre, would it help to reduce healthcare costs. The survey consisted of statements that were based on findings from the literature review. The survey probed the views of participants. This section consisted of 8 questions.

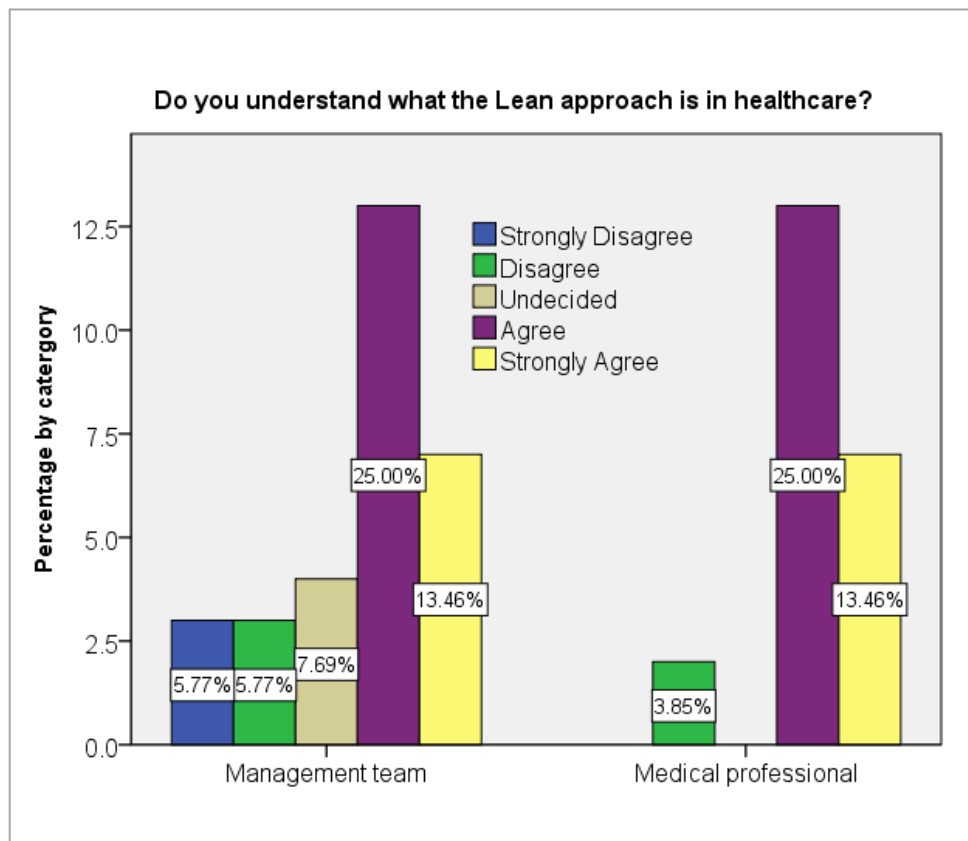


Figure 4.26: Evaluation if respondents understand the Lean approach in healthcare

The Pearson Chi-square value for the cross tabulation was 6.114 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. The hospital manager confirmed that management and medical professionals have attended seminar on Lean implementation in healthcare.

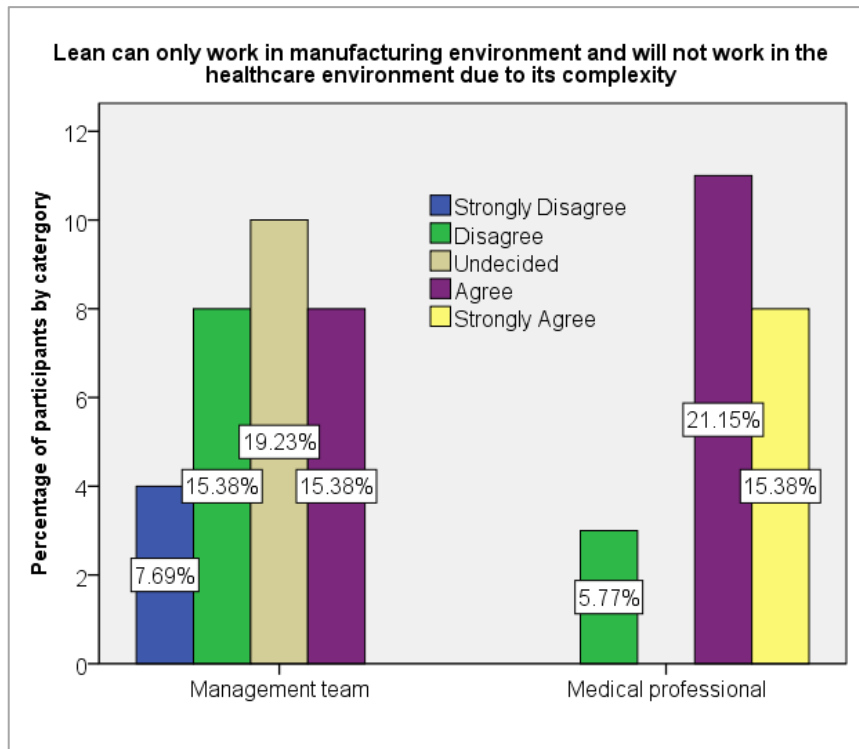


Figure 4.27: Evaluation if respondents feel that Lean can only work in the manufacturing environment and will not work in healthcare due to its complexity

The Pearson Chi-square value for the cross tabulation was 24.086 and the corresponding p value was < 0.05 . There was a significant difference between the target population responses. The target population response varied from agreeing to the statement and with 19.23 % of management undecided and collectively 21.15 % of management and medical professionals disagreeing with the statement. The mixed reactions are indicative that there is uncertainty about Lean methodologies. These reactions are concerning considering the fact that for Lean to be driven in the organization, management and medical professionals need to welcome the change and allow Lean to transform the culture (Toussaint and Berry, 2013). Furthermore there have been healthcare cases which have proved that Lean has been applied in such a complex work environment as healthcare and has received similar successes as an assembly-line manufacturing facility (Toussaint and Berry, 2013). The results indicate that management as well as medical professionals should attend more Lean seminars to go through case studies which highlight how Lean methodologies have been implemented in healthcare.

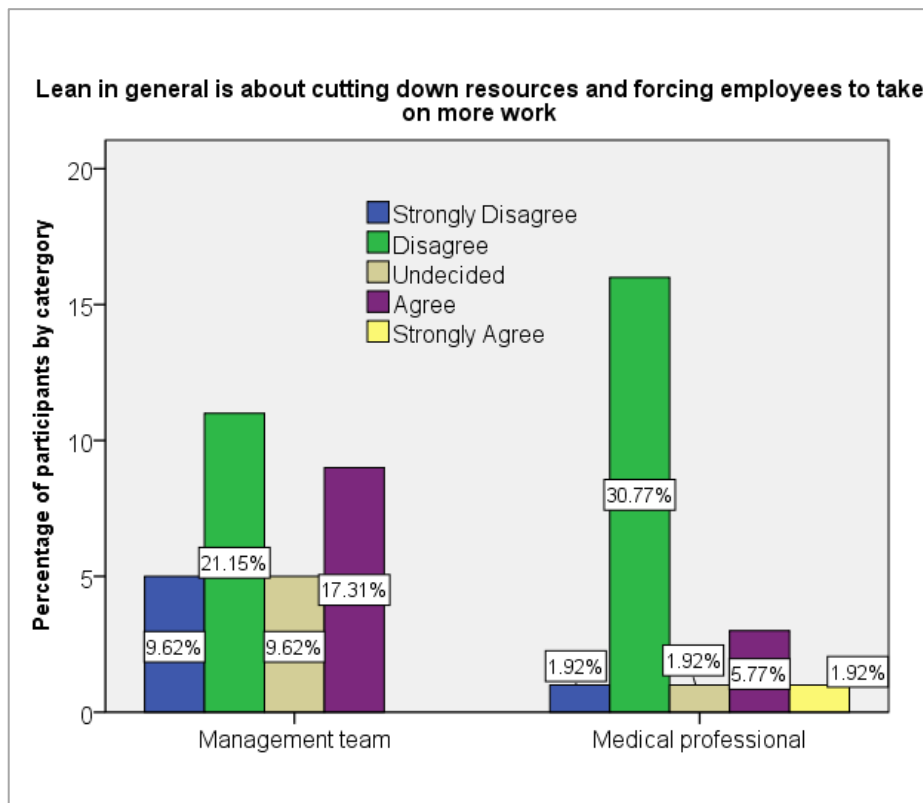


Figure 4.28: Evaluation if respondents feel that Lean is about cutting down resources and forcing employees to take on more work

The Pearson Chi-square value for the cross tabulation was 9.247 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded negatively to the statement with just 17.31 % of management agreeing to the statement. The responses highlight that the target population has an understanding of the lean approach and that reduction of waste is not about cutting down the workforce but more about stream-lining the way the workforce engages in their work activities.

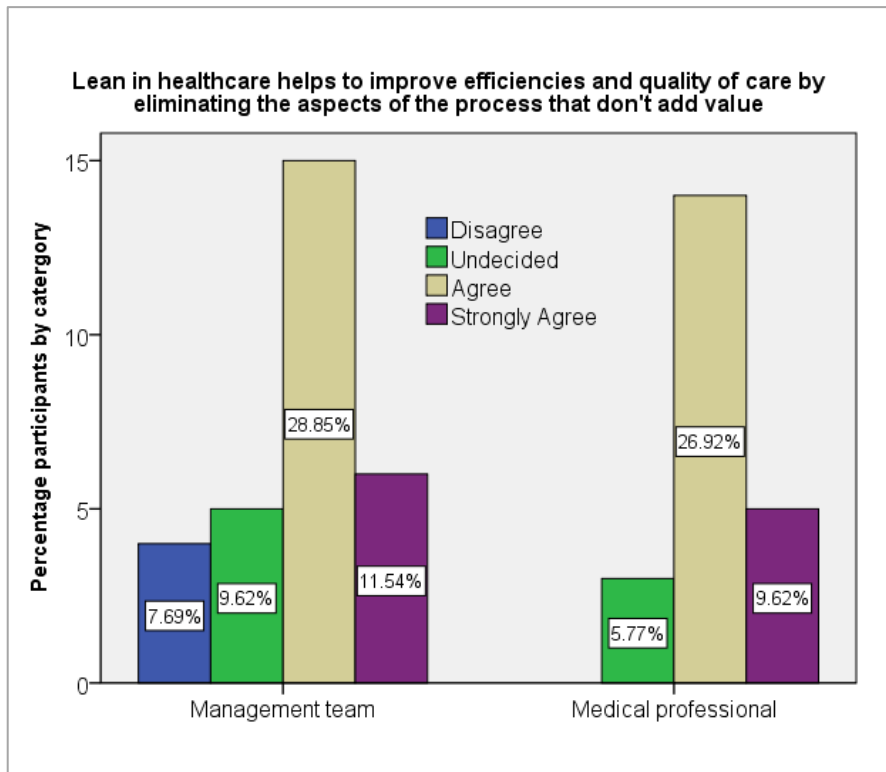


Figure 4.29: Evaluation if respondents feel that Lean helps to improve efficiencies and quality of care by eliminating aspects of the process that don't add value

The Pearson Chi-square value for the cross tabulation was 3.477 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. According to Toussaint and Berry (2013) Lean adds value by reducing errors, faster response time, improved care and improved value for patients. Here again the response of the target population is indicative that they seem to have a good understanding of what Lean principles are in a work environment and that they believe that Lean can bring about improvements but there seems to be a sense of disjointedness when it comes to Lean in Healthcare.

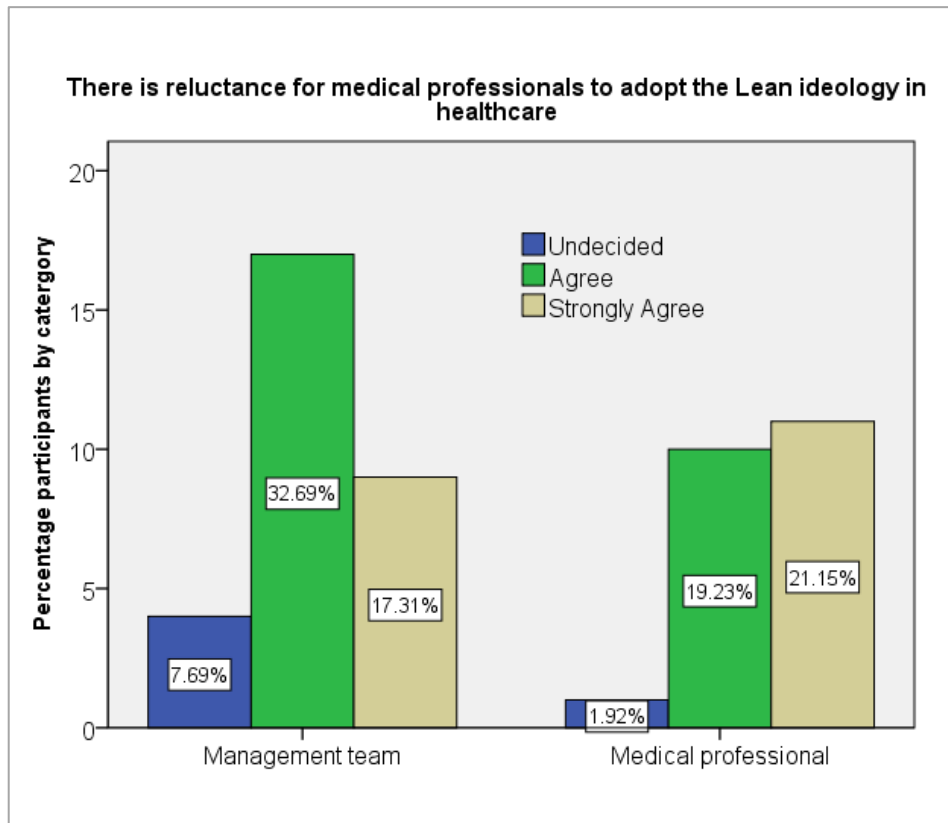


Figure 4.30: Evaluation if respondents feel that there is reluctance for medical professionals to adopt the lean ideology into healthcare

The Pearson Chi-square value for the cross tabulation was 2.647 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. This statement confirmed that the target population believed that Lean methodologies could improve processes but there was reluctance to implement this strategy in healthcare. This concurs with literature. Most healthcare professionals believe that Lean is a cost cutting tool rather than a value creating tool, which has come from another industry being forced into healthcare which they believe is too complex to make a difference. According to Lee and Cosgrave (2014) medical professionals feel that they would lose their autonomy, income and respect as they believe that the Lean approach will dictate how they should administer healthcare.

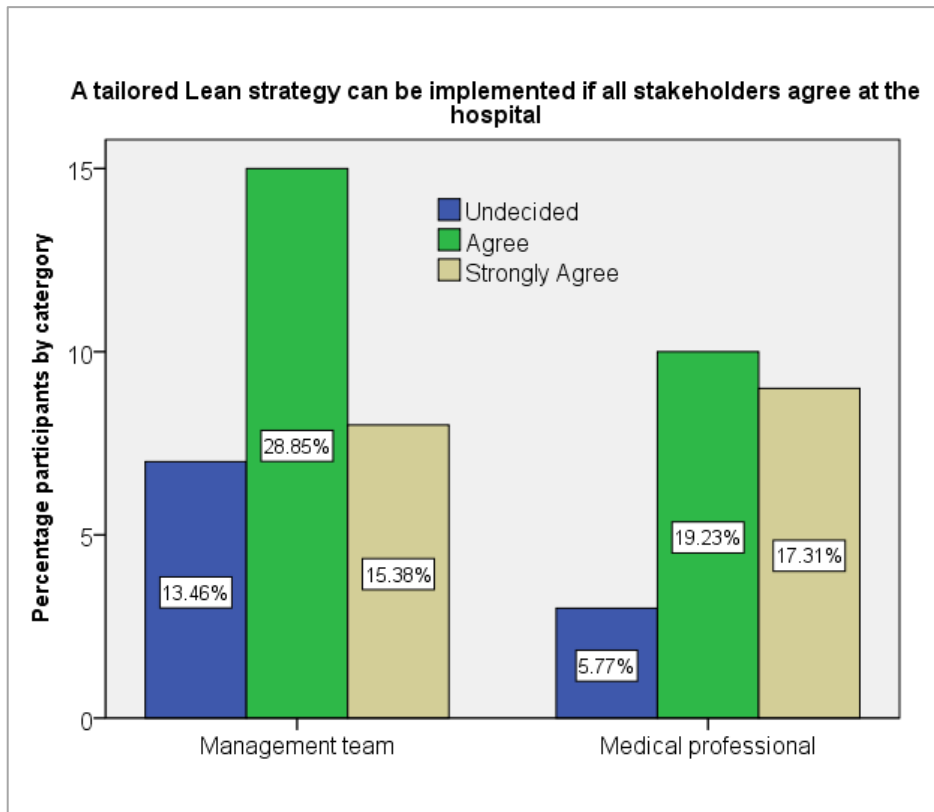


Figure 4.31: Evaluation if respondents feel that a tailored Lean strategy can be implemented if all stakeholders agree at the hospital

The Pearson Chi-square value for the cross tabulation was 1.463 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. However there were still 19.23 % of the population that were undecided about the Lean concept in healthcare. Here again this statement concurs with literature. The strategy enforced in healthcare will have to differ from manufacturing. According to Schonberger (2017) Lean methods have to be executed differently in healthcare with a more patient centric approach because in the manufacturing sector there is a large distance between manufacturers and the end customers. With the manufacturing sector Lean is very focused on operational efficiencies. According to Schonberger (2017) Lean in healthcare has to be tailored to fit into the healthcare sector to ensure that efficiencies are based on quick responses to care for the patient and being more customer focused.

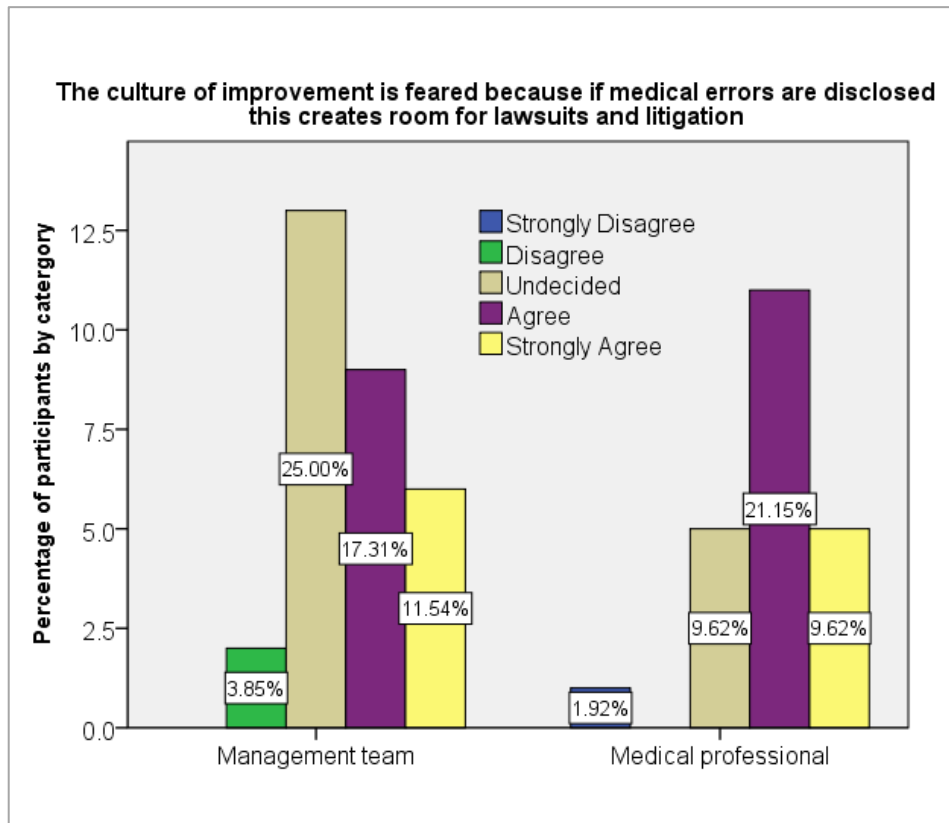


Figure 4.32: Evaluation if respondents feel that a culture of improvement is feared because if medical errors are disclosed this creates room for lawsuits and litigation

The Pearson Chi-square value for the cross tabulation was 5.752 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded positively to the statement. The findings highlight that the healthcare fraternity feel that the Lean approach creates a sense of transparency which can become an issue from a legal point of view. According to Pascale, Jos, Jochen, Wim and Dominique (2016) lean methods in healthcare help create an environment which is transparent and free of ambiguity. According to Pascale et al., (2016) the lean approach also tracks how processes can be improved which sometimes will entail viewing errors in healthcare. This is never an easy task for medical professionals as they are left to feel vulnerable and exposed to litigation.

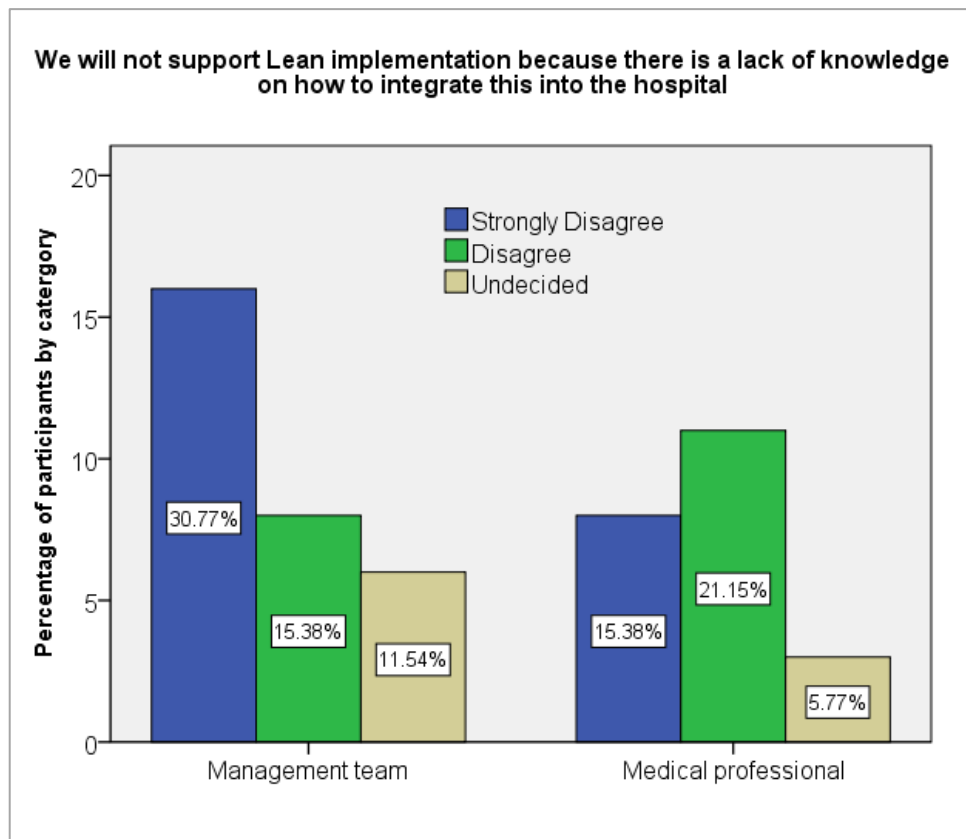


Figure 4.33: Evaluation if respondents feel that they won't support Lean implementation because there is a lack of knowledge on how to integrate this at the hospital

The Pearson Chi-square value for the cross tabulation was 2.980 and the corresponding p value was > 0.05 . There was no significant difference between the target population responses. The target population responded negatively to the statement. The results indicate that the management and medical professional team are open to engaging in the lean approach. The target population has knowledge on lean methodology due to seminars that they have attended.

4.7 SUMMARY:

This chapter presented the analysis of the results in a graphical format. Each objective for the research that was analysed was placed in a separate section with the results and discussion. The target population represented a good mix of management and medical professionals with varying years of experience at the hospital. The target population was split into management and medical professionals to determine if there was difference in viewpoints. Analysis of results

confirmed findings from literature. Research objective 1 was to determine what factors contributed to the high costs in healthcare in the private healthcare sector, the factor that stood out as the contributing factor of most significance was the high costs of pharmaceuticals. This was followed by the cost of medical technology, indemnity insurance and being short paid by Medical Aid schemes. Results also indicated that there is a shortage of nurses. There is a strong sense that medical professionals are over-servicing patients to prevent medical malpractice. Research objective 2 was to determine the impact that Medical Aid schemes had on costing at the hospital. There seemed to be a shared consensus amongst the target population that Medical Aid schemes were dictating what treatments should be administered and that they were not reimbursing doctors in line with the National Health reference price. The positive finding from the research was that the hospital had made huge strides in changing to generic medical supplies and is on average ahead of most hospitals that are part of the National Hospital Network with generic substitution exceeding the average 56.2 % substitution rate. Research objective 3 was to determine the impact that the National Health Insurance had on the hospital. The target population understood what the National Health Insurance was about and believed that South Africa needed such as a system to improve the public healthcare sector. Results indicated that there was valid concern that the National Health Insurance would impact hospitals in this sector and medical professionals. These concerns concurred with literature. Research objective 4 was to determine if Lean methodologies can reduce the high healthcare costs in the private sector. Results indicated that the target population had an understanding of the approach but believed that it would only work in manufacturing. There was consensus that the target population would like to embark on the Lean journey if it was tailored to the hospital needs. Results also indicated that medical professionals were concerned about Lean in terms of disclosing medical errors due to concern of litigation.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION:

This research was undertaken to understand what the contributing factors that have resulted in high healthcare costs in the private sector. The study was conducted at EThekweni Hospital and Heart Centre, a private hospital which is a part of the National Hospital Network based in KwaZulu Natal. This chapter will illustrate what was achieved in terms of knowledge and insight gained and offer recommendations. Limitations that were experienced during the research will also be detailed and recommendations for further research that can be conducted to understand areas that require further investigation will be listed. Implications of this research at the hospital will also be discussed.

5.2 CONCLUSION:

The research has found that management and medical professionals share similar opinions and concerns. Findings of the research have highlighted that the cost of pharmaceuticals is a major contributing factor to the high costs of healthcare being administered. Secondary factors ranged between medical technology costs, indemnity costs and being short paid by the Medical Aid schemes. Currently the hospital has embarked on a generic drug substitution program and has managed to use a total of 59.6 % of generic drugs of its total drug usage. Therefore secondary factors would need more attention to reduce costs further. Another area that generated speculation was the fact that medical professionals are utilizing more expensive treatment although cheaper alternatives exist. This was further illustrated with the fact that the efficiency index for certain medical specialities were above range. Further findings revealed that the consensus between management and medical professionals were that Medical Aid schemes were impacting on the costs at the hospital. This ranged from dictating what treatments would be covered to not paying doctors in line with the National Health Reference Price. The 3rd set of findings highlighted that the proposed National health Insurance would negatively impact this hospital and the medical staff. The consensus from the findings concluded that government should leave the private sector to operate by itself. The final set of findings pertained to Lean

methodologies. The target population showed interest in this tool but had little understanding of Lean in Healthcare as most of their responses were indicative that they were open to the idea but were not convinced that the Lean approach would help this hospital.

5.3 IMPLICATIONS OF THIS RESEARCH:

The research has brought useful insight to understanding what contributes to the high costs in healthcare. Social media, newspapers and people in general have stereotyped the private healthcare sector to being driven to make profits and therefore the stance most individuals take is that the hospital or the doctor is ripping patients off. The aim of this research was to find the root causes to this phenomenon and understand how it contributed to making healthcare costs exorbitant in this sector and how could measures be taken to reduce these costs. The research findings highlighted that there are a few stakeholders that contribute to these costs. This ranged from the pharmaceutical supply chain which drives the costs of medication up, the constant contention between Medical Aid schemes and doctors, the fear of litigation which takes the form of over-servicing patients, using medical treatments that are more expensive, and increasing the length of stay of patients because of being short paid by the Medical Aid. There was serious concern for the impending NHI. And finally there was a lack of knowledge with Lean implementation specifically in healthcare. These findings will be able to guide the private healthcare sector on areas that need attention as it affects the important stakeholders which in turn impact on the cost structure and how marketable the hospital is.

5.4 LIMITATIONS OF THIS RESEARCH:

Some of the limitations that were encountered during this research were time constraints and therefore a cross sectional study was conducted. The second limitation was the fact that this was a quantitative study and therefore responses were generated from closed ended questions. The issue with this was, in some cases there were conflicting view points from the respondents which highlighted that there was areas of concern that could not come through with the use of the

questionnaire. A qualitative study should follow findings of this research to delve deeper.

5.5 RECOMMENDATIONS TO SOLVE THE RESEARCH PROBLEM:

The following recommendations should be considered to resolve the research problem. The Hospital manager should meet with the relevant stakeholders at the hospital to develop key performance indicators that management and medical professionals will be rated against which must be on cost effectiveness. One of the findings prevalent in this research was the fact that the hospital tracked revenue generated and also tracked number of admissions on a monthly basis. The concern is that this sort of data almost incentivizes additional treatments or over-servicing of patients. The efficiency index is a measurement that is being measured on an annual basis. This should be tracked monthly as this gives a clear picture of the activities of the hospital in terms of length of stay and cost per event. Targets should be set to highlight where the hospital need to be in terms of efficiency index across all medical specialities. This should be done by medical professional and area of speciality. The Hospital manager should also engage with the relevant stakeholders at the Medical Aid scheme to plan how both parties can work better together to achieve economical healthcare. The hospital should also look at employing a Lean specialist that can help drive Lean through all levels of the hospital.

5.6 RECOMMENDATION FOR FUTURE STUDIES:

A qualitative study should be embarked on to further delve into areas of concerns that were highlighted in the research by management and medical professionals. Secondly a pilot study should be conducted at the hospital where Lean methodologies can be implemented. It can be piloted in one medical speciality. This area will be the basis where management and medical professionals can assess how the Lean approach is applied and evaluate the challenges and benefits that come with it.

5.7 MANAGERIAL IMPLICATIONS:

The Hospital manager will have to engage with the key stakeholders with the findings of this research to discuss how to mitigate areas of concern.

5.8 SUMMARY:

The private healthcare sector of South Africa has been characterized by selling healthcare as a commodity as opposed to administering healthcare for the welfare of the people. The aim of this research was to determine why healthcare costs in this sector were disproportionately high. The research revealed factors that contributed to the high costs but also helped reveal the consequence of actions within this sector that also drove prices higher. It revealed that there was a range of stakeholders (suppliers, medical professionals, and medical aid schemes) with different intentions whose decisions impacted on the end user being the patient. The findings of the research concurred with literature but also highlighted issues within the hospital setup as well. The need for better governance at the hospital is required to ensure that the stakeholders are held against key performance indicators that will ensure that targets are met from a cost effectiveness point of view without comprising the health to the patient. The research also highlighted that Medical Aid Schemes, medical professionals as well as the hospital need to work together to find a common ground. Recommendations to solve the research problem and recommendations for future studies have been stipulated. My belief is that a lot of these issues can be mitigated if there are policies and protocols put into place.

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APPENDIX 1: ONLINE SURVEY

Greetings:

You are invited to participate in my survey for my MBA dissertation. The research to be conducted seeks to determine if healthcare costs are being exploited by the private healthcare sector. The study essentially seeks to unpack how hospitals endeavour to reduce healthcare costs and to determine how the introduction of the National Health Insurance will impact the private sector. It will take approximately 12 minutes to complete the questionnaire. Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. It is very important to understand your opinions. Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential. If you have questions at any time about the survey or the procedures, you may contact Andricia Hareepersad at 0846011195 or by email at the email address andriciah@gmail.com. Please note that by completing the survey you are consenting to take part in the survey. Ethical clearance with ethical clearance approval number **HSS/1341/017M** was obtained. Thank you very much for your time and support. Please start with the survey now by clicking on the Continue button below.

QUESTIONS:

1. Please select the position you hold at EThekwini Hospital & Heart Centre								
MANAGEMENT				MEDICAL PROFESSIONAL				
2. Please advise what is your race?								
BLACK		INDIAN		WHITE		COLOURED		
3. Please specify your gender.								
MALE				FEMALE				
4. How many years have you been working at EThekwini Hospital & Heart Centre?								
1-3		4-7		8-10		11-14		15+
5. Please indicate your age.								
20-25	26-30	31-35	36-40	41-45	46-50	51-55	56-60	61-65
6. There is a shortage of nurses at this hospital.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE
7. The workforce at the hospital can be streamlined.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE
8. Due to concern of litigation doctors at this hospital have been over-servicing patients.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE
9. New medical technology (equipment) make work processes and your job more efficient.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE
10. New medical technologies add value to a patients experience.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE
11. Older methods of treatment can be used over new medical technologies and are cheaper.								
STONGLY DISAGREE		DISAGREE		NEUTRAL		AGREE		STRONGLY AGREE

12. There are incentives for using particular treatments from medical supply companies even though there are cheaper alternatives					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
13. How many cases of Medical Mal-practice has there been at this hospital for the year Jan-Dec 2016?					
1	2-3	4-5	6-7	8-9	10
14. Pricing is unfairly high for medical services and procedures at this hospital due to?					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
15. Some medical treatments at this hospital have been questioned by the Medical Aid Schemes.					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
16. Medical Aid schemes are dictating what treatments can be used by doctors.					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
17. There have been cases of medical aid fraud at this hospital whereby Medical Aid Schemes have found that doctors have been conducting the following such as billing for non-covered services, delinquencies of co-payments, false consults and false prescriptions.					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
18. This hospital incentivizes the use of generic treatment where possible to reduce costs.					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
19. The rates which Medical Aid Schemes pay doctors are not in line with the National Health Reference Price.					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
20. The restrictions (alternative procedures and medication) implemented by the medical aid administrator of the Medical Aid					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	
21. Do you understand what the purpose of the NHI is?					
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE	

22. The NHI is vital for South Africa as the country is facing a serious burden of contractible diseases.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
23. The introduction of the NHI will negatively impact this hospital and all hospitals in the private healthcare sector.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
24. The NHI implementation in the private healthcare sector will drive medical professionals abroad.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
25. The NHI implementation will ensure that patients are not ripped off by the exorbitant pricing of the private healthcare				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
26. The NHI should focus on improving the public healthcare sector infrastructure and leave the private healthcare sector to operate in isolation.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
27. The NHI will be a complete failure.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
28. Do you understand what the Lean approach is in healthcare?				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
29. Lean can only work in manufacturing environment and will not work in the healthcare environment due to its complexity.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
30. Lean in general is about cutting down resources and forcing employees to take on more work.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
31. Lean in healthcare helps to improve efficiencies and quality of care by eliminating the aspects of the process that don't add value.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE

32. There is reluctance for medical professionals to adopt the Lean ideology in healthcare.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
33. A tailored Lean strategy can be implemented if all stakeholders agree at the hospital.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
34. The culture of improvement is feared because if medical errors are disclosed this creates room for lawsuits and litigation.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE
35. We will not support Lean implementation because there is a lack of knowledge on how to integrate this into the hospital.				
STONGLY DISAGREE	DISAGREE	NEUTRAL	AGREE	STRONGLY AGREE

APPENDIX 2: ETHICAL CLEARANCE



09 October 2017

Ms Andriela Hareepersad (216073463)
Graduate School of Business & Leadership
Westville Campus

Dear Ms Hareepersad,

Protocol reference number: HSS/1341/017M

Project title: High cost of healthcare in the private sector, Ethekwini Hospital and Heart Centre

Approval Notification – Expedited Approval

In response to your application received on 14 August 2017, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has 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 Shenuka Singh (Chair)

/ms

Cc Supervisor: Dr Muhammad Hoque
Cc Academic Leader Research: Dr Emmanuel Mutambara
Cc School Administrator: Ms Zarina Bullyraj

APPENDIX 3: TURNITIN REPORT



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