Managed healthcare in South Africa:

Impact on patient care and ethical pharmaceutical sales in Kwa-Zulu Natal.

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Submitted in fulfillment of the requirements for the degree

Master in Technology

in the Department of Marketing,

Technikon Natal

2002

APPROVED FOR FINAL SUBMISSION

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ACKNOWLEDGEMENTS

I would like to thank the Faculty of Applied Sciences for the Scholarship that was awarded to me, with which I elected to pursue a Marketing qualification. My sincere gratitude goes to Dr John Macdonald, Mr Peter Raap and Mr Roger Mason for their guidance and assistance.

To my family, thank you for your support and encouragement.

And finally to my dearest husband, your encouragement and unconditional love has enabled me to achieve all that I set out to do. Thank You.

ABSTRACT

Managed care is defined by Chetty (1999: 1) as "the practice of evidence based medicine with an approach to managing both the quality and cost of medical care". Managed care was introduced into South Africa in the last decade due to increasing cost of healthcare. All forms of managed care represent attempts to control costs by modifying the behaviour of general practitioners.

The aim of the study was to determine the impact of managed healthcare on patient care and ethical pharmaceutical sales in South Africa.

This was a qualitative study with random sampling to obtain a sample of 307 general practitioners in Kwa-Zulu Natal that belonged to any health maintenance organisation. The field study was performed using a questionnaire and the return rate was 30.6%. The data was processed using SPSS ver. 9.0. Descriptive statistics, frequencies and means were first determined thereafter, inferential statistics and correlations were performed to ascertain any relationships between the variables and the significance of those relationships.

The results of the study indicated that managed care has a negative impact on patient care as it limits patient access to the general practitioner, reduces referrals to specialists and leads to the use of less than ideal drugs. It does not increase the quality of care, does not increase patient satisfaction, does not improve doctor-patient relations and consultation time is reduced.

The impact of managed care on ethical pharmaceutical sales does not appear to be positive as there is increasing usage of generic drugs. The aspects that highly influence a general practitioners prescribing habits are most therapeutically effective drug available, cost effectivity, previous experience, promotion by a sales representative, listing on the drug formulary and cheapest drug available. Financial incentives had little or no influence.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

The South African healthcare system in 1993, consisted of a private sector that catered for approximately 21 percent of the population with a consumption of over 45 percent of the country's total health expenditure (Fourie and Marx, 1993). In 1997, the South African Department of Health stated that the private sector provided care for only 23 percent of the population yet consumed nearly 62 percent of the country's total health expenditure.

Heymans and Ramsden (1997) advanced the argument that general practitioners have a direct impact on 75 percent of healthcare costs and that over-servicing accounts for 50 percent of healthcare costs. In addition, Schering Plough (1998) contend that pharmaceuticals contribute some 31 percent to South Africa's total health costs in comparison to United States of America at 10 percent and the United Kingdom at 7 percent.

Taylor (2002) stated that the following factors are responsible for increasing healthcare costs in South Africa:

- Expensive, new technologies and inventions
- New diseases such as Acquired Immune Deficiency Syndrome (AIDS)

- Demand for specialists
- More cases of old diseases such as depression
- Modern lifestyles (stress, poor eating/exercising habits)
- Perverse incentives in medical aid that allowed doctors to earn more if patients are unwell
- Fraud and abuse by doctors and/ or patients
- Ageing population
- South African Exchange rate (increasing cost of pharmaceuticals and medical equipment).

The managed healthcare approach is *"... an approach to managing both the quality and cost of medical care"* (Chetty, 1999). In the United States of America managed health care emerged as early as the 1920's but it was only legislated in 1973 (Landon, Wilson and Cleary, 1998).

According to Van der Merwe (1998) the focus in America was on improving the quality of care, with cost containment as a by-product, while in South Africa the current focus is on cost containment.

Experience in other countries indicates that managed health care is not well accepted by either physicians or patients. In America some 70 percent of physicians opposed it (Bodenheimer, 1999:584) and managed care reforms have been reversed in the United Kingdom, the Netherlands and Sweden (Stocker, Waitzkin and Iriart, 1999).

Research in South Africa indicates that the sentiment is generally negative (Govender, 2000) with the objections being based largely on concerns for income by doctors and a belief that managed care both restricts patients' access to general practitioners and results in poor patient relations. Govender's (2000) study found that the majority of those surveyed claimed to have a high level of knowledge of managed health care.

The comments raised by the respondents in the above mentioned study are worthy of consideration and it allows for further investigation into the impact of managed care on patient care.

Given the findings of Govender's (2000) study in respect of patient care, the high level of cost contribution by pharmaceuticals, and the influence of general practitioners on the cost of health care, it is appropriate to further investigate the impact of managed health care on patient care and the sales of ethical pharmaceutical products.

1.2 The Statement of the Problem

The conflicting views in other countries, on managed care and its effect on patient care and pharmaceutical sales creates a need for an investigation of managed care and its effects from a South Africa perspective.

1.3 The objective of the study

1.3.1 Primary objective

The purpose of this study is to determine the impact of managed healthcare on patient care and ethical pharmaceutical sales in South Africa.

1.3.2 Secondary objectives

1.3.2.1 To determine the impact of managed healthcare on patient care.

1.3.2.2 To determine the impact of managed healthcare on ethical pharmaceutical sales.

1.4 The research methodology

The research methodology adopted for this study consists of two parts

- Review of the relevant literature.
- Survey conducted among general practitioners in Kwa-Zulu Natal that belonged to any Health Maintenance Organisation, by means of a postal questionnaire

1.5 The delimitations

The study was limited to general practitioners from Kwa-Zulu Natal that belonged to any Health Maintenance Organisation.

1.6 The assumptions

The assumptions in this study are:

- The views of the general practitioners are without bias.
- The effect of managed healthcare on patient care and ethical pharmaceutical sales in Kwa-Zulu Natal is similar to that in the other provinces within South Africa.

1.7 The significance of the study

Managed care is still in the growing phase within South Africa and this study will be of interest to all major players within the managed healthcare industry.
This study will extend the knowledge of those involved in respect of the issues studied from a South African context.

1.8 Definition of the terms

The following definitions will be used in the study (Chetty, 1999):

Capitation: the process whereby service providers are paid a monthly *per capita* fee to manage the health of a community of people and doctors earn more for keeping patients well.

Co-payment: a cost sharing arrangement in which a covered person pays a specified charge for a specified service. The payment is required at the time of treatment and it may be a flat rate or variable amount.

Drug Formulary: a list of prescription medications, which are preferred for use by the health plan and which will be dispensed through participating pharmacies to covered persons.

- A plan that has adopted an "open or voluntary " formulary allows coverage for both formulary and non-formulary medications.
- A plan that has adopted a "closed, select or mandatory" formulary limits coverage to those drugs in the formulary.

Drug Utilisation Review: a process aimed at firstly, rational prescribing and consequent improvement of the quality of healthcare, and secondly, the reduction of unnecessary expenditure.

Ethical Drug: is a pharmaceutical product that is labelled with its brand name.

Fee-for-Service (FFS) reimbursement: the traditional health care payment system, under which physicians and other providers receive a payment that does not exceed their billed charge for each unit provided.

Generic drug: is a pharmaceutical product that is labelled with its accepted chemical name, instead of a brand or trade name, and is available from several manufacturers.

General Practitioner: primarily a physician who may or may not have competency in other fields.

Health maintenance organisations (HMOs): is an entity that provides, offers or arranges for coverage of designated health services needed by plan members for a fixed prepaid premium. An entity must have three characteristics to be classified as an HMO:

- an organised system for providing healthcare or otherwise assuring health care delivery in a geographic area,
- an agreed upon set of basic and supplemental health maintenance and treatment services and
- a voluntarily enrolled group of people.

Listed below are the various HMO models:

- Group Model HMO: A health care model involving contracts with physicians organised as a partnership, professional corporation, or other association. The health plan compensates the medical group for contracted services at a negotiated rate, and that group is responsible for compensating its physicians and contracting with hospitals for the care of their patients.

- Independent Practice Association (IPA) model HMO: a health care model that contracts with an entity, which in turn contracts with physicians, to provide health care services in return for a negotiated fee. Physicians continue in their existing individual or group practices and are compensated on a *per capita*, fee schedule or fee-for-service basis.

- Network model HMO: an HMO type in which the HMO contracts with single- and multi-speciality groups. The physician works out of his or her own office and may share in utilisation savings, but does not necessarily provide care exclusively for HMO members.

- Staff model HMO: a healthcare model that employs physicians to provide healthcare to its members. All members and other revenues accrue to the HMO, which compensates physicians by salary and incentive programs.

Health plan: Health maintenance organisation, preferred provider organisation, insured plan, self-funded plan or other entity that covers healthcare services.

Managed care: a system of healthcare delivery that influences utilisation and cost of services and measures performance. The goal is a system that delivers value by giving people access to quality, cost effective, healthcare.

Pharmacy Benefit Management (PBM): the prescribing of lower cost drugs with similar efficacy to higher cost drugs.

Preferred Provider Organisation (PPO): a program in which contracts are established with providers of medical care. Providers under contracts are referred to as preferred providers. A PPO arrangement can be insured or self funded. Providers may be, but are not necessarily, paid for on a fee-for-service basis.

Preferred providers: physicians, hospitals, and other health care providers who contract to provide health services to persons covered by a particular health plan.

Primary care: basic or general healthcare, traditionally provided by family practice, paediatrics and internal medicine.

Withhold: is the "at risk" portion of a Claim that is deducted and withheld by the health plan before payment is made to a participating physician as an incentive for appropriate utilisation and quality of care.

1.9 Overview of the Study

Chapter 2: The literature review

This chapter focuses on the South African medical situation and the evolution of managed healthcare and its various models. The resistance towards managed healthcare and its influence on physician behaviour and impact on pharmaceutical manufacturers is also detailed.

Chapter 3: The research methodology

This chapter details the sampling technique, questionnaire design, the collection of primary data and issues of validity and reliability.

Chapter 4: Analysis of the results

The focus of this chapter is the presentation and analysis of the collected data.

Chapter 5: Discussion of results

This chapter discusses the results received and compares them to the literature.

Chapter 6: Conclusions and recommendations

Conclusions and recommendations are made in this chapter.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

As stated in section 1.4, a literature review is being conducted to establish the attitudes towards managed care and the impact of managed care on patient care in other countries

This chapter will review the medical situation in South Africa; the history and evolution of managed care in the medical industry and the types of managed care models. The resistance towards managed care, influence on physician behaviour and impact on pharmaceutical manufacturers will also be reviewed.

2.2 The South African Medical Situation

2.2.1 Introduction

According to Fourie and Marx (1993) the escalation of costs in the South African private healthcare sector was said to be out of control and the medical industry was also under severe strain. Medical aid schemes are becoming unaffordable at an increasing rate to traditional customers, as a result of more than 10 years of runaway medical inflation in this sector. The problem was more serious than the poor financial position that the medical scheme industry reflected, as huge

actuarial deficits were built up due to cross subsidisation rather than advanced funding.

It is a documented trend for healthcare expenditure to occupy an ever -increasing percentage of gross national product in Western economies and it is predicted to continue or worsen. In 1993 the South African healthcare system comprised of a private sector catering for approximately 21% of the population, covered by medical aids or benefit schemes and a public sector catering for the remaining 79% which is funded by taxes. The private sector, however, was found to consume over 45% of the country's total health expenditure (Fourie and Marx, 1993).

According to1997 reports, the South African private sector provided care for 23% of the population but accounted for nearly 62% of the total health expenditure (South Africa, 1997).
This indicates that the problem is getting worse, with only a 2% increase in the population from 1993 to 1997 that consumed an extra 17% of healthcare expenditure.

Heymans and Ramsden (1997) stated that medical inflation has averaged close to 30% per annum, over the past 5 years in the private sector. The number of registered medical aid schemes has dropped from 270 to 170 over this period and the majority of present schemes are estimated to be technically insolvent.

A Sunday Times survey (April 2001a) stated that medical inflation is more than 20% a year and 70% of South Africans don't have access to private healthcare. The article further quoted the Chief Executive Officer of Discovery Health (one of the first medical schemes to embrace managed care) as saying that "some 60% of health care spending goes on 20% of the population... it is not peculiar to health care. The same distortions are found in other sectors of the economy."

Another survey by Ryan (2001) found employers spend 10% to 15% of total payroll costs on healthcare compared to 1%, 20 years ago. The medical schemes started to intervene in the treatment of its members but the healthcare industry solvency levels have slid from 28.3% of net premium income in 1997 to 20% in 2000.

The problems that existed before 1993 were present in 1997 and the healthcare crisis is not resolved to current date.

2.2.2 The impact of General Practitioners on healthcare costs

General practitioners are estimated to have a direct impact on 75% of healthcare costs. It is estimated that at least 50% of healthcare costs are due to over-servicing, which has arisen due to the following:

- the traditional fee-for-service system provides no incentives for cost cutting
- general practitioners earn more if people are sick than if they are well

- medical aids have assumed full responsibility for medical costs; members and service providers have assumed no responsibility
- whilst medical aids have assumed the full risk of healthcare funding, they have in no way attempted to manage this risk
- an over supply of general practitioners in the private sector has encouraged over servicing as general practitioners seek to make ends meet
- fraud is rampant and a fee-for-service based payment system has no means of curbing this

(Heymans and Ramsden, 1997).

What can be concluded from the research conducted by Heymans and Ramsden is that increasing healthcare costs is a multi-issue problem with each of the issues interacting with each other. The three main issues that are highlighted by Heymans and Ramsden are:

- Inherent problems with the fee-for-service system include fraud and no incentives for cost cutting.
- Medical aids assume total responsibility and risk for healthcare costs with general practitioner and patients not assuming any responsibility.
- The oversupply of general practitioners in the private sector leads to them earning more if people are sick than if they are well.

As a consequence of these three issues interacting, each general practitioner has a smaller number of patients with no incentives that allow for him to see

them as few times as possible, thus leading to escalation of costs. The introduction of a system to reduce costs was essential.

2.2.3 The emergence of Managed Health Care

The emergence of various forms of 'managed care' is inevitable and only its development will offer long term solutions within the private health sector (Broomberg, de Beer and Price, 1990).

"Managed healthcare came to the rescue. It promised to put costs back under the control of medical scheme managers without sacrificing the quality of healthcare" (Ryan, 2001).

Ryan (2001) further stated that a variety of tools were introduced which aimed to contain costs and improve quality such as capitation payments, treatment protocols, disease management and pharmacy benefit management.
Health care spending in the United States is 13.9% of gross domestic product compared with 9% in South Africa and managed care defenders believe that these figures would have been higher in both countries had managed healthcare not been introduced.

Managed healthcare in South Africa cannot be compared with the United States according to Sykes (in Ryan 2001) as the patient:doctor ratio is different, 700:1 in

the States compared with 1500:1 in South Africa.

This does not appear to be a true reflection however as there is a skew of general practitioners towards the urban areas, which is evident according to Territory Management System (2001).
It can be inferred that this move towards the urban areas would lead to an oversupply of general practitioners in the urban areas.

Sykes further states that in the United States there is intense competition for patients thus allowing health insurers to refer patients to general practitioners that have lower costs. It is further suggested that doctors in South Africa have the power to resist cost-cutting measures because competition is not that intense (Ryan 2001).

2.3 Traditional system *versus* managed care system

Managed care, according to Broomberg, de Beer and Price (1990), refer to forms of private healthcare services that differ from traditional fee-for service in the following ways:

- there is an advanced payment that is fixed, which is reimbursed to the provider for specific services and
- financing and provision of healthcare services are integrated within one organisation.

Table 2.1 details the differences between the traditional medical system and the managed care system.

Table 2.1: Traditional system *versus* managed care system

TRADITIONAL	MANAGED CARE
▫ More visits by patients more income to general practitioners	○ Every service generated is an expense and it reduces income
▫ Fee-for-service payment	○ Capitation is method of payment
▫ Curative benefits only – no emphasis on early diagnosis procedures or lifestyle improvement	○ Encourages preventative medicine with focus on individual as a whole
▫ Patient submits a claim form, after treatment, to the medical aid which reimburses the patient or doctor. The patient is responsible for the unpaid balance.	○ Service is paid for and cost controls are in place before the patient receives care. This removes the need for post treatment medical claims.

(Schering Plough, 1998).

It can be seen in Table 2.1 that managed care focuses on preventative medicine to keep the patient in a healthy state compared to the traditional system that focuses only on curative aspects.

Managed care controls costs by reducing the amount of 'unnecessary' services, as every service generated represents an expense, which will also reduce the income to general practitioners.
The traditional medical system has no cost controls in place and every service that is generated, represents additional income to the general practitioner.

A study was conducted by Volmink *et al* (1993), on the attitudes of private general practitioners towards healthcare in South Africa, before the introduction of managed care. It revealed that general practitioners acknowledged the need for healthcare reform. However, they were opposed to cost containment measures being imposed by medical aids and favoured a fee-for-service method of payment.

This suggests that the introduction of such a system will not be easily accepted.

The Business Times (December 1997) reported that beneficiaries and providers are resistant to managed healthcare although it appears to offer the only viable solution to South Africa's healthcare problems as the alternative, a national health system is less acceptable.

2.4 The History of Managed Care

Managed care is defined briefly, as "the practice of evidence based medicine

with an approach to managing both the quality and cost of medical care...and it encompasses the disciplines of analysis, efficiency, and accountability relevant to health care systems and delivery" (Chetty, 1999).
It is a system that utilises information to influence quality, outcomes, utilisation and cost of healthcare services.

Landon, Wilson and Cleary, (1998) state that managed care emerged as early as 1920 in the United States of America but the adoption of the federal Health Maintenance Organization Act in 1973 marked the beginning of an era of accelerating growth for the managed care industry.

According to Fairfield, Hunter, Mechanic and Rosleff, (1997a) managed health care was introduced in the United States of America in response to *"a healthcare 'system' lacking in coherence, suffering from organisational fragmentation and consuming large amounts of resources".*

Van der Merwe (1998) stated that in the United States of America, quality of care was the main aim and cost containment was merely a by-product, whereas in South Africa, the current focus is on containment or management of costs.
The possible reason for South Africa focussing on cost may be due to the fact that a very small percentage of the population utilises a very large percentage of healthcare funding as reported in section 2.2.1.

2.5 The Evolution of Managed Care

Table 2.2 illustrates the evolution of managed care as experienced in the United States of America (Chetty, 1999.)

Table: 2.2: Evolution in America

ASPECT	STAGE OF EVOLUTION			
	I	II	III	IV
Managed care patient population	<5%	10-20%	30-50%	>60%
Utilization of medical services	High	Declines	Continues to decline	Declines up to 40%
Structure	Majority of physicians in solo practice	HMOs, PPOs, IPAs proliferate	Dominant HMOs and PPOs emerge	2-3 Networks dominate market
Pricing	Fee-for-service	Determined by discounts and withholds	Global fees and capitation	Total healthcare cost per covered life
Cost of care	By medical claim	By encounter with negotiated fees	Cost per covered life with negotiated premiums	Emphasis on preventative medicine and wellness awareness

The managed care population increases in each progressing stage. Chetty (1999) is unfortunately silent on the missing percentages. This could be an

indication that no exact population statistics exist due to the changes that have taken place in the various states in America.

Table 2.2 details the structures of managed care which reflect the general practitioners going from total autonomy in stage I to member of a dominant managed care organisation in stage IV. The general practitioners were unhappy with these changes as stated by among others, Fairfield *et al* (1997b).

Stage I in Table 2.2 also reflects pricing on a fee-for-service basis moving up to stage IV where a total health care cost is per covered life. The fee-for-service system allows general practitioners to claim every time the patient was treated. In stage IV the general practitioner is paid a capitation fee and therefore every treatment represents a cost.

Managing cost and care delivery is not static, it evolves along a generally predictable four stage continuum with increasing effects that radically change the financing, structure and delivery of care (Chetty, 1999; Van der Merwe, 1998).

According to Van der Merwe (1998), the South African market appears to be between stages II and III of the American evolution process. However, the South African market has not experienced the same decline in utilization or the same market penetration.

Chetty (1999) stated that managed health care initiatives in South Africa are at different stages of evolution at different parts of the country and most of them are in stage I or stage II of the development process.

Both Van der Merwe (1998) and Chetty (1999) have different views on the stage of evolution that exists in South Africa, the reason being that no studies have been conducted in this country.

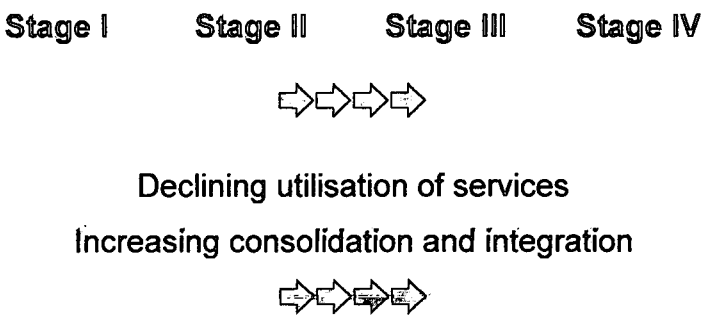


Figure 2.1: Evolution progression

Figure 2.1 above details the evolution progression that can be deduced from Table 2.2. The evolution from stages I to IV shows a decline in the utilisation of medical services with an increase in the consolidation of practices and integration into managed care organisations such as the health maintenance organisation.

2.6 Models of Managed Care Organisations

The literature cites five managed health care models:

- Health Maintenance Organisation
- Preferred Provider Organisation
- Exclusive Provider Organisation
- Point of Service Plans
- Speciality Health Maintenance Organisation

The managed care organisations are aimed primarily at physicians, as these groups of people are responsible for treating the majority of patients.

There are two types of physicians in South Africa, specialist physicians and general practitioners. The literature makes reference to physicians that are the same as general practitioners, and they may or may not have competencies in other fields.

The following is an explanation of the various models that general practitioners can be a part of in the move towards a managed health care system.

2.6.1 The Health Maintenance Organisation

According to Chetty (1999) the Health Maintenance Organisation (HMO) is a healthcare system that is responsible for both the financing and delivery of health services to covered members or an enrolled population and it occurs in various formats:

- The Staff Model

The physicians are employed by the Health Maintenance Organisation and are paid salaries and additional bonus or incentive payments, which are based on their productivity (Chetty, 1999).

Productivity measures include cost containment by monitoring prescribing habits and billing tendencies (Schering Plough, 1998). Example: Medicross

- The Group Model:

These are medium sized or large multi-speciality group practices, of which physicians are employees or employee-owners. The Health Maintenance Organisation contracts with these multi-speciality group practices to provide services to its members (Chetty, 1999).

- The Network Model:

The Health Maintenance Organisation contracts with more than one group practice (Chetty, 1999). Reimbursement tends to be on a discounted fee-for-service basis (Landon, Wilson and Cleary, 1998). Example: GPNet

- The Independent Practitioner Association (IPA) model:

In this case the Health Maintenance Organisation contracts with individual physicians or small groups in private practice (Landon, Wilson and Cleary, 1998). The IPA models are the most numerous of physicians' managed care organizations and they allow physicians to obtain contracts without making substantial changes in their practices. This enables them to care for their non-managed-care patients as well (Bodenheimer, 1999). Example: Durban IPA, Newcastle IPA.

2.6.2 Preferred Provider Organisation

According to Chetty (1999), the Preferred Provider Organisation contracts with selected groups of participating providers. The covered members are allowed to use non-preferred general practitioners but they benefit from lower co-payments/levies at the preferred provider general practitioners.

2.6.3 Exclusive Provider Organisation

This organisation is similar to Preferred Provider Organisations but they limit their covered members to participating providers exclusively (Chetty, 1999).

2.6.4 Point of Service Plans

This is a hybrid of the Health Maintenance Organisation and Preferred Provider Organisation. The general practitioners are reimbursed through capitation

payments. They also receive bonuses funded by withholds, which is the retained portion of the fees that is payable upon achievement of the cost control mechanisms that have been set (Chetty, 1999).

2.6.5 Speciality Health Maintenance Organisation

According to Chetty (1999), the development of this type of organisation is restricted and includes limited components of health coverage such as Dental health and Mental health.

It is believed that the Health Maintenance Organisation predominates in South Africa however no studies have been performed to show which of the models most of the general practitioners are affiliated to.

2.7 The Case for Managed Healthcare

Gary Taylor, Managing Director of one of Medscheme's (South Africa's leading healthcare insurer) Divisions, states " the time for managed care has arrived whether we like it or not". The managed healthcare solution is a suite of integrated intervention programmes that identify and manage clinical risk (Taylor, 2002).

Heymans and Ramsden (1997) and Taylor (2002) have already highlighted the various issues that are responsible for the current state of healthcare costs.

Taylor (2002) acknowledges that managed healthcare is not a simple process. He further states that the American system of managed healthcare was introduced into South Africa without any modifications and general practitioners believe that "it does not work – because they couldn't make it work".

The survey by Ryan (2001) reports that health insurance premiums in the United States increased by just 2% per year between 1994 and 1998 which was seen as success for managed care although premiums are currently increasing by as much as 20%.

Managed care was responsible for reducing healthcare costs in the United States but costs are once again increasing and it may be due to general practitioners defying the restrictions that have been imposed on them.

Medical inflation in South Africa continues to rise at more than 20% per year and It is believed that the figure would be 4% to 5% higher without managed care (Sunday Times, April 2001b)

From the literature reviewed it is evident that medical inflation in South Africa has been at very high levels for many years and it is set to increase much more.

South Africa is in dire need of a healthcare system to reduce unnecessary costs, to prevent the collapse of the entire South African medical system. It appears currently that managed care is the only viable option and it is essential that patients, service providers and medical aids adopt a viable system.

The 6.6% rise in costs for Medscheme, between January and September 2000 is considered evidence of the efficacy of its managed healthcare programme (Ryan, 2001).

Managed care can be successful in South Africa, as the leading healthcare insurer, Medscheme has stated that their rise in costs was much lower than the medical inflation rate of more than 20%.

Taylor (2002) states that 33% of all treatment charged for (in South Africa) is clinically non-essential and the challenge is to identify that wastage and pay for only cost-effective, appropriate treatment.

The following are examples of managed care that are showing promising results in South Africa according to Taylor (2002):

- capitation systems that require patients to visit a single provider only
- general practitioner profiling – a system that uses statistical reports to inform doctors where they are not keeping within general cost norms

- chronic medication authorisations which substitute generic drugs for ethical drugs
- performance-based reimbursement for doctors – a system that pays doctors more if the cost of prescriptions and "unnecessary" referrals to specialists are reduced.

It was recently reported that the South African health system is in crises as a number of medical aid schemes are struggling to avoid insolvency and rumours say that " 'one of the big ones' could soon go to the wall" (Clarke, 2002).

It was further stated (Clarke, 2002) that the government's new social insurance policy, which requires all employees to have health insurance, could push medical administrators over the edge. Sanlam Health was sold to Medscheme in February 2002 as it was not profitable. "Observers say that this is a strong indication of an industry in crisis".

Managed healthcare was introduced into South Africa in the early 1990's yet almost 10 years later, the medical industry is experiencing major problems. Limited information is available regarding doctor acceptability and penetration of managed care reforms. However one thing is certain, unless something is done soon the entire healthcare industry in South Africa will be in jeopardy.

Managed healthcare appears to be the only option to reverse the current downward spiral.

2.8 Resistance to managed healthcare

According to Bodenheimer (1999) "By the mid-1990's, physicians and patients alike were resisting the shackles that managed care appeared to have placed on them." Nearly 70% of 6000 physicians in 22 markets surveyed in the United States of America in 1998 characterized themselves as against managed care.

Findings by Simon *et al* (1999) indicate that medical academics and medical students also viewed managed care negatively and supported the fee-for-service system as a better system for delivering quality patient care.

Bodenheimer (1999) points out that managed care was blamed for reducing the growth in net annual income for doctors from 7.2 percent in the period 1986-1992 to 1,7 percent in the period 1993-1996.

There is some evidence that there is a relationship between lowered earnings for doctors and reduced patient care. Bodenheimer (1999) also points out that fee-for-service was replaced by the payment of salaries or capitation with a system of bonuses for limiting referrals and for seeing increased numbers of patients.

According to Kuttner (1999), 'market-driven health care' was advertised as the salvation of the American health care system for more than a decade. In the early 1990's cost savings were easily accessible to entrepreneurs but towards late 1990's the pressure to protect profit margins led to dubious business strategies such as the avoidance of sick patients, worsening of staff to patient ratios and the outright denial of care.

Kuttner (1999: 668) further stated that in an industry that was driven by investor owned companies, the original promise of managed care "greater efficiency in the use of available resources and greater integration of preventative and treatment services" has often degenerated into the avoidance of cost.

Fairfield *et al* (1997b) argue that this system encourages general practitioners to practice cost-effective medicine. The effect of these schemes is shown by a study conducted by Grumbach *et al* (1998) who found that 57 percent of the respondents reported feeling pressured into limiting referrals and increasing the number of patients seen per day. The respondents in this study further believed that such pressure compromised customer care.

According to Chetty (2000) the introduction of managed care into South Africa was too aggressive and corporate-dominated which offered the impression that cost was being managed rather than care. He further stated that the National

Department of Health did not customise the American managed care system to the needs of South Africa.

The perception by South African general practitioners was that there was a shift in benefits from providers of care (doctors) to payors (medical aids) and a shift of risk to the providers (doctors). The doctors were therefore concerned about their destiny, erosion of practices and clinical autonomy (Chetty, 2000).

The situation in parts of Europe and South America have already been described as have the results of Govender's (2000) South African study, which indicate very mixed views on the efficacy of managed health care systems.

As a result of the general practitioners attitude to managed care and its control mechanisms in the United States of America, the majority of general practitioners in South Africa have adopted a negative attitude.
Govender (2000) stated that 69% of the respondents have a negative attitude towards managed care.

Overall there seems to be concern that managed healthcare leads to a reduction in patient care and a reduction in doctor's earnings (Bodenheimer, 1999).

Ryan (2001) states the rise in the United States medical inflation is "being driven by an ageing population, expensive new drugs and treatments, consumer

demand and a growing ability among doctors and hospitals to resist managed care payment cuts."

The USA Today (Ryan, 2001) reported that the strong economy in the United States contributed to the rise in medical inflation as patients and doctors abandoned the 'tightest' forms of managed care for 'looser', more expensive versions which offered greater choice.

General practitioners in South Africa are aware of the changes taking place on the managed care front in the United States of America. From personal experience many general practitioners believe that managed care was unsuccessful in the United States and it would most likely be unsuccessful in a Third World country such as South Africa.

2.9 The Influence on Physician Behaviour

General practitioners in a managed care system according to Fairfield *et al* (1997b) may experience a lack of clinical freedom or decreased autonomy or they may be satisfied with working within the guidelines of evidence based medicine that have been set.

Inglehart (1994) points out that the willingness of general practitioners to adapt to the managed care situation could be due to work within the managed care structure being preferable to no work at all.

All forms of managed care represent attempts to control costs by modifying the behaviour of doctors, although they do so in different ways (Inglehart, 1994).

Once plans contract with a physician direct influences can be grouped into four basic dimensions:

- financial incentives which are related to a doctor's financial return for professional services
- administrative or management strategies such as utilization review and compliance to the formulary, referral requirements and profiling systems linked to administrative sanctions
- structural characteristics of practices which are the structural components of care, such as the physical composition and location of practice site, availability of services, staffing patterns and governance
- Information or normative influences such as the professional culture of the organization and the nature of professional interactions

(Inglehart, 1994).

Incentives such as risk sharing, performance related payments, withholds and bonuses encourage doctors to practice cost effectively (Fairfield *et al*, 1997b).

Fairfield *et al* (1997a: 1825) state "the potential for financial incentives to change clinical practice is well documented" and that the use of clinical guidelines is a powerful way of modifying practice and controlling the use of services.

An inherent problem with the traditional fee-for-service system is that it leads general practitioners to earn more if the patients are sick than if they are well. The oversupply of general practitioners in the private sector has encouraged over-servicing as a means of making ends meet.
The managed healthcare system is offering financial incentives in return for compliance with its guidelines and this financial incentive is additional income. With the inflation rate soaring and the ever-increasing cost of living, it is assumed that many doctors will comply just to earn this additional income.

2.10 The Impact on Pharmaceutical Manufacturers

Managed care serves to reduce drug utilisation cost, which is an ever-increasing percentage of total healthcare costs. Most managed care organisations use drug formularies to help reduce the cost of prescription drugs.

A managed care drug formulary according to Bissenbach and Penna (in Chetty, 2000), is a comprehensive list of drugs that is designed to encourage physicians to prescribe the most cost effective medications. The formularies may typically

include lower-priced generic (or multi-source) products and may exclude higher priced, branded products.

Chetty (2000) stated that analyses of healthcare spend in South Africa, performed by the Representative Association of Medical Schemes, found medicine expenditure to be 29.5% in 1995 and 27% in 1998. Medicines accounted for the largest cost with private hospital expenses next in line.

Although the medicine expenditure in 1998 was slightly lower in percentage terms than 1995, the drug expenses are still very high compared to the United States and United Kingdom. The drop could possibly be due to increased managed care penetration.

The Business Times (December 1997) quoted Heymans as saying that pharmaceutical companies have not felt the effect of managed healthcare yet. The government has passed a bill allowing generic substitution and a proposed single exit pricing on drugs, stopping the mark-up on medicines.

The single exit pricing on drugs will stop pharmacists and general practitioners from selling drugs at a profit thus reducing the total drug expenditure.

According to Kuttner (1999) the United States pharmaceutical industry has succeeded in resisting cost controls as the 'research' pharmaceutical companies

have been rapidly developing new drugs that are medically beneficial to the patient, which medical aids will pay for. Thus managed care companies in an attempt to reduce cost, have increased the required co-payment by patients.

Different types of formularies exist:

- An open formulary which is not restrictive and physicians may prescribe any drug
- A closed formulary which is an exclusive list of specific drugs and physicians must choose from this list
- A limited formulary which restricts the number of drugs in each therapeutic class and the addition of a new drug, requires the deletion of an old one
- An unlimited formulary which places no restrictions on the number of drugs in each therapeutic class

Combinations of the above formulary types may exist (Chetty, 1999).

According to Chetty (1999), most of the formularies in South Africa, are developed in an environment where data is lacking or poor thus the formulary process was tender based with final selection by a committee of experts that considered the scientific properties of the drug.

Chetty (2000), stated that the formularies are developed by committee members from the South African Managed Care Coalition (SAMCC) which consists of:

- Academics
- Clinical Experts
- Pharmaceutical companies
- Medical Aid Schemes
- African Health Synergies.

Bissenbach and Penna (in Chetty, 2000) suggest that an expert committee should consider the cost-effectiveness of a drug along with efficacy before listing. The therapeutic appropriateness, uniqueness, clinical experience, clinical outcome, product future and cost are important issues when evaluating products for the formulary.

Van der Linde (1997), states that the South African Managed Care Coalition (SAMCC), after more than two years of work, has succeeded in producing a formulary which contains about 4000 product names and the various packaging available. The drug functions and some guidelines on drug usage in the most common diseases that are encountered by general practitioners are also included but a second process has begun to reduce the drug list to 1500 drugs.

The formularies that exist in South Africa include the GPNet and Medicross formulary, the Medicross Capitation formulary, the African Health Synergies (previously known as SAMCC) formulary and the Igolide formulary (Schering Plough, 2002).

The formularies listed above are very similar with regards to the drugs that are listed as pharmaceutical companies often apply to list their drugs in all formularies to ensure maximum exposure. The difference between the Medicross and Medicross Capitation formularies is that the latter has mainly generic drugs and only the cheapest available ethical drugs should a generic drug not exist. Pharmaceutical companies participate in the formulary process to get their drugs listed. Managed care organisations have convinced many companies to offer their drugs on tender. This will enable general practitioners to comply and prescribe the drug.

Chetty (2000) has stated that duplicates of the prescriptions are captured onto a system and are then sold to the participating medical aid schemes and pharmaceutical companies.

This data can be utilised by medical aid companies to review a general practitioners drug usage. Should the drug usage be too expensive compared to the average costs, the general practitioner will be monitored and could possibly face exclusion if he does not change his prescribing habits. The exclusion will prevent him from providing his services to members of that medical scheme and it will affect his income.

The pharmaceutical companies purchase the data to help with the marketing of their drugs. General practitioners who utilise a large percentage of drugs that fall within the therapeutic class of interest become important targets.

The general practitioners are aware that their prescribing data is being sold and in return they are paid financial incentives which are derived from the sale of the data.

From a pharmaceutical manufacturers point of view, it is important for a company's drugs to be on the formularies however it is not known if a general practitioner will prescribe a drug merely because of its presence on the formulary.
The adoption of a closed or limited formulary imposes restrictions on pharmaceutical companies and potentially threatens their profits.

Pharmaceutical companies incur large costs to get a drug onto the formulary and thereafter pay annual fees to keep it there and additional fees to purchase data on specific general practitioners prescribing habits.

The monetary figures are substantial but no impact studies have been performed to show if any benefits exist for the drug companies, in terms of increased drug market share or Rand sales, which can be translated into profit.

2.11 Medical Aid Industry and Managed Care

Broomberg, de Beer and Price (1990), stated that some medical aid administration companies in South Africa were investigating 'managed care' options, which reflected their own perceptions as to the current structures and limitations of the private health sector.

Medical aid companies in the United States have adopted managed care plans to reduce costs.

In South Africa many medical aid companies are embracing managed care in an attempt to reduce their costs and maintain profitability especially since a growing number of medical aid schemes, representing 4.6 million people, are struggling to avoid insolvency (Clarke 2002).

Medicaid is the largest health insurer in the United States of America providing cover for 41.3 million people, with an expenditure of 155.4 billion dollars. Managed care was experimented with in many of the States in an effort to limit Medicaid expenditure. Forty-nine of the fifty states currently rely on some form of managed care to serve their Medicaid populations, with the percentage of Medicaid beneficiaries enrolled in managed care plans increasing from 9.5% in 1991 to 48% in 1997 (Inglehart, 1999).

Medscheme is the largest health insurer in South Africa, providing cover for 1.2 million lives (Chetty, 1999). Magennis (1997) has stated that ongoing research and development of service and programs to keep pace with the changing medical climate, has resulted in Medscheme's unique managed care solutions

that are customised for South Africa. In 1997, a multi-million rand Data Warehouse was built, to support its managed care and consulting efforts.

Medscheme's rise in costs between January and September 2000 of 6.6% was evidence of the efficacy of its managed care programme as compared to the rest of the medical aid industry (Ryan, 2001).
Discovery Health is one of the biggest medical aid insurers on the forefront of the managed health care revolution in South Africa.

According to Robert Dale the marketing director of a specialist medical aid service company (Sunday Times, April 2001b) the single most important managed healthcare tool implemented in South Africa is the medical savings scheme that was implemented in 1992 by Discovery Health.
These savings accounts operate like bank savings accounts but can only be used for day-to-day medical expenses. More than 600 000 medical savings accounts are in existence, because these savings can be carried over to the following year. After a certain period of time these savings accounts can be paid out to the member.

Discovery Health also has a vitality program, which promotes good health by negotiating lower subscription rates to top health and fitness clubs; lower rates at selected hotels and flight companies.

Discovery Health launched its American subsidiary, Destiny Health in the United States and it is proving to be successful as it allows members more freedom of choice compared to the existing managed care plans (Walker, 2000).

Sanlam Health is another role player in the managed care industry and according to a Sunday Times survey (March 2001) it has launched a rewards programme for two of its top medical aid schemes to promote preventative care and a healthy lifestyle among members.

Although Sanlam Health introduced the above programme, it was still remaining unprofitable and in February 2002 it was sold to Medscheme (Clarke, 2002).

Medical aid insurers appear to be the most positive players in the managed healthcare industry. Managed care will help them reduce their costs and aid in their profitability with healthcare risk transfer to the member and the provider.

2.12 Conclusion

It has been shown that managed care emerged in United States of America and the same reforms were introduced into South Africa in the early 1990's due to rapidly escalating healthcare costs.

Managed healthcare initiatives in South Africa are at different stages of evolution in different parts of the country but limited information is available.

The general practitioners in the United States were negative about managed care and resistant to the changes. General practitioners in South Africa are aware of this. From personal experience doctors are of the opinion that managed care did not work in the United States of America and doubt if it will be successful here.

Managed care influences doctor behaviour by various means in an attempt to control cost and it also serves to reduce drug costs that impact the profitability of pharmaceutical companies.

This study will determine the impact of managed care on patient care and ethical pharmaceutical sales and will help the medical industry by providing information that is lacking in South Africa.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

The aim of the study is to seek the opinions of the respondents on the impact of managed healthcare on patient care and on the sales of ethical pharmaceutical products. This involves the collection of opinions in the search for insights and ideas. The nature of the study is therefore exploratory because as Mouton & Marais (1990:43) point out "Exploratory studies usually lead to insight and comprehension rather than the collection of accurate and replicable data... Hypotheses tend to be developed as a result of the research."

Churchill (1991:128) supports this point of view stating that "the major emphasis in exploratory research is on the discovery of ideas and insights".

As Mouton & Marais (1990:155) point out while the terms qualitative and quantitative research are used extensively, the distinction between them is unclear. They suggest that these terms should not be seen as absolutes but rather as representing extremes on a continuum. The research for this study was directed at collecting what is essentially qualitative data but an attempt to introduce a quantitative element was made through the use of a ranking scale in the research instrument. The research design therefore lies at an intermediate

position on the continuum proposed by Mouton & Marais, which is nearer the qualitative end of the continuum.

3.2 Sample frame, size and technique

The population of interest is all the general practitioners in KwaZulu Natal who belonged to a Health Maintenance Organisation. This population is dynamic in nature with considerable movement in and out of the population caused by factors such as, among others, new entrants, retirements, and emigration.

The sample frame adopted for this study is the Territory Management Files of Schering Plough (Pty) Ltd that is held to be a comprehensive listing of private practice general practitioners in KwaZulu Natal. The listing is arranged in alphabetical order and could therefore be held to be random (Boyd, Westfall & Stasch, 1989:403). The size of the population of interest is 1230 and the sample element is the individual general practitioner.

Sekaran (2000: 253) provides a table, from which it is possible to calculate the sample size given the size of the population. She maintains that use of this table ensures a good decision model (Sekaran, 2000: 252). Utilising this table the appropriate sample size for the current study was 291. However as simple random sampling was the methodology used to select the individual research elements it was necessary to refine this number.

Simple random sampling involves the selection of every *nth* element from a listing. In the current case if $n = 4$ a sample size of 307 is obtained which provided some leeway for the non-return of questionnaires.

Furthermore, as Kinnear & Taylor (1987:232) point out "there is no one sample size, which is optimal for any study. The only way to ensure the required precision will be to select the largest sample".

The sampling methodology adopted for this study is therefore the selection of every 4^{th} entry in the Territory Management Files of Schering Plough (Pty) Ltd.

3.3 The research instrument

The research instrument adopted for this study is a hand delivered and collected questionnaire. The use of a questionnaire is necessary because the sample size makes the use of the interview technique impractical.

The questionnaire is given in Appendix 1 and it comprises of a biographical section with 4 questions and a second section with 11 questions. In the second section, questions 9, 13 and 14 contain sub-questions and question 15 is open-ended. The questions were designed according to a four-point Likert scale and a five-point Likert scale depending on the degree of differentiation deemed necessary.

3.4 Description of field research

The questionnaires are hand delivered to the various doctors and then collected in due course. Hand delivery and collection of the questionnaires enhances the chances of obtaining an acceptable rate of return for the questionnaires. Telephonic reminders are given to those doctors that do not have completed questionnaires for collection. When visiting doctors to collect the questionnaire those doctors who have not completed the questionnaire but show an interest, are reminded once more before another collection is carried out.

The sample size was 307 and the return rate of usable questionnaires was 94, which is 30.6%.

A return rate of 30.6% usable questionnaires is considered suitable as the population being studied is homogeneous, in respect of the nature of the study, as all members are subjected to the same managed care mechanisms of control.

According to Diamantopoulis and Schlegelmilch (1997), when the degree of variability within the population is larger, a larger sample is required thus "if the population was 300 000 identical pink 40 watt light bulbs, a sample of one would be sufficient to describe the population".

Diamantopoulis and Schlegelmilch (1997) further stated that another consideration to be taken into account is the cost in time and / or money.

3.5 Treatment of the data

The data is edited, coded and then processed using the Statistical Package for the Social Sciences (SPSS version 9.0) software package.
Descriptive statistics, frequencies and means are determined which provide a general overview of the data.
Thereafter, inferential statistics; cross tabulations and correlation's are performed, where applicable, to determine if any relationships exist between the variables and the significance of those relationships.

3.6 Validity and reliability

3.6.1 Introduction

Reliability is the extent to which the obtained results may be generalised to different measuring occasions, measurement forms and measurement administrators (Welman and Kruger, 1999).

When considering the validity of the research, it depends on whether the measured factors are those that needed to be measured and the tests that have been used, perform exactly as they should perform (Leedy, 1997).

The five types of validity are as follows:

- Content validity – according to Burns (2000) is the representativeness or sampling adequacy of the content of a measuring instrument and is most often determined on the basis of expert judgement.
- Predictive validity – involves the wish to predict the performance or other criteria by means of an assessment or technique (Burns, 2000)
- Face validity – refers to whether the test appears to measure what one wants to measure or if the test appears to test what the name of the test implies. This type of validity is difficult if not impossible to measure (Burns, 2000)
- Construct validity – when a variable is measured with an instrument, the instrument must measure that which it is supposed to measure. This requirement is referred to as the construct validity of the scores obtained on a measuring instrument. Construct validity of a measuring instrument refers to the degree to which it measures the intended construct rather than the irrelevant constructs or measurement error (Welman and Kruger, 1999).
- Criterion-related validity – this type of validity refers to the degree to which diagnostic and selection measurement / tests correctly predict the relevant criterion. The relevant criterion refers to the variable which is to be diagnosed or on which success is to be predicted, respectively (Welman and Kruger, 1999).

The following sections will critique the survey procedures, to determine the validity and reliability of the performed research.

3.6.2 Sampling

There are a large number of general practitioners in private practice within South Africa, however sampling was limited to the Kwa-Zulu Natal Province only, to facilitate a greater control of the study and to remain within affordable cost parameters. An assumption is made which stated that the effect of the managed care system on the general practitioners in Kwa-Zulu Natal is similar to the effects on practitioners throughout South Africa. This assumption can be made because managed care organisations have similar mechanisms of control.

3.6.3 Questionnaire

To determine the reliability of the measuring instrument, the questionnaire was pilot tested by the first ten respondents who found the content to be acceptable with no ambiguous questions.

As a measure of internal consistency validity, two questions that measured the same variable but were worded in a negative and positive way were included in the questionnaire. Consistency of the views on these questions will indicate whether the respondents have understood the questions and provided thoughtful answers.

Positive and negative questions were used to improve and check the validity of the responses and the open-ended question allowed the respondents to offer additional opinions on the subject matter.

The data was edited to ensure that no questions were unanswered, thereafter the data was captured and analysed with double-checking to ensure that the process was reliable.

Even though the field study was well controlled and the research appears to be valid and reliable, the research could be used to provide an indicator of the impact of managed care on patient care and ethical pharmaceutical sales in Kwa-Zulu Natal, and may not necessarily be applicable to the whole of South Africa.

CHAPTER 4
ANALYSIS OF RESULTS

4.1 Introduction

The analysis and results will be presented in order of the sub-objectives of the study however other data which includes the demographic data, membership of Health Maintenance Organisations and attitude to managed care will be presented first. This additional data is important, as it will facilitate understanding of the impact of managed care on patient care and ethical pharmaceutical sales.

4.2 The Demographic Data

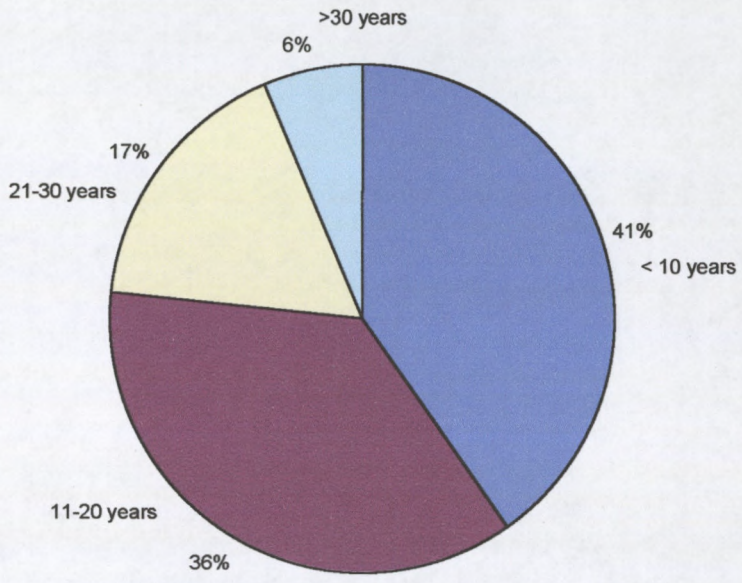
The demographic data shows 86.2% of the respondents to be male and 13.8% female.

Figure 4.1 reflects the number of years in practice.

- Approximately 41% of respondents have been in practice for up to 10 years
- 36% between 11 and 20 years
- 17% between 21 and 30 years
- and 6% were in practice for more than 30 years.

The mean age is between 36 and 55 years with 59% of the respondents. 77% of the respondents were between the ages of 24 and 55.

Figure 4.1 Years in Practice



4.3 Membership of Health Maintenance Organisations

Table 4.1 below, reflects the percentage of respondents that belong to the various health maintenance organisations (HMOs) in South Africa.

- KZNMCC only has a membership of 37.2%
- KZNMCC and IPA-type has a membership of 18.1%
- GPNet only members are on 10.6%
- Medicross only members are on 9.6%.

These affiliations contribute 75.5% of membership with the balance being split in smaller numbers among the other groups.

Table 4.1 Membership of Health Maintenance Organisation

Organisations	Percentage
GPNet Only	10.6
Medicross Only	9.6
KZNMCC Only	37.2
IPA-Type Only	7.4
Other	1.1
KZNMCC,IPA type	18.1
KZNMCC, GPNet	4.3
KZNMCC, GPNet, IPA type	7.4
GPNet, KZNMCC,Other	1.1
Medicross, KZNMCC	1.1
KZNMCC, Other	2.1
TOTAL	100

It is evident from Table 4.1 that KZNMCC is the only organisation that exists in the largest percent individually as well as in combination with other HMOs. Multiple-organisation membership exists with 34.1% of the respondents.

4.4 Attitude to Managed Care

4.4.1 Overall attitude

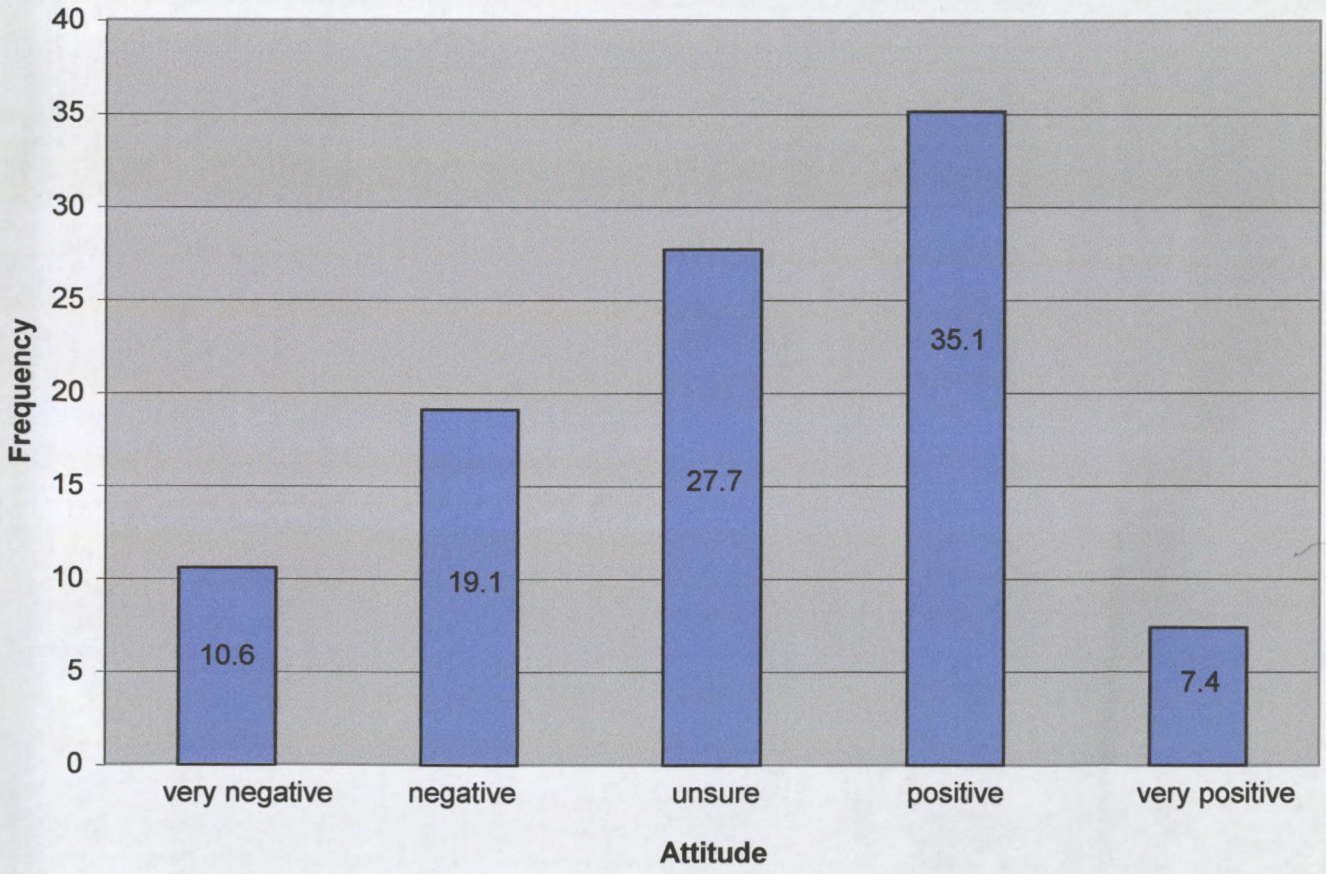
The respondents were asked to indicate their attitude to managed care on a 5 point Likert scale with equal positive and negative intensities. The results in figure 4.2 are as follows:

- 29.7% of respondents have a negative attitude which comprises of 10.6% very negative and 19.1% negative

- 27.7% of the respondents were unsure of their attitude
- 42.5% of respondents have a positive attitude which consisted of 35.1% being positive and 7.4% very positive.

There appears to be many respondents who are unsure of their attitude towards managed care. The respondents who were very negative and negative are closely distributed compared to those that are positive and very positive. A very large percentage of respondents have a positive attitude but a very small percentage is very positive.

Figure 4.2 Attitude towards managed care



The mean attitude was 3.0957 and a t-test showed that the results are significant (.000) at 95% confidence interval (2-tailed).

4.4.2 Attitude *versus* years in practice

Table 4.2 shows the attitude of the respondents who have been in practice for the specified number of years.

Table 4.2 Attitude *versus* years in practice

Attitude	Years in Practice				Total (N)
	0-10	11-20	21-30	>30	
Very Negative	3	3	4	0	10
Negative	9	6	3	0	18
Unsure	12	9	3	2	26
Positive	13	14	3	3	33
Very positive	1	2	3	1	7
Total (N)	38	34	16	6	94

The results are as follows:

- less than 10 years in practice – almost equal numbers that are unsure and positive, however it is also equal to the sum of the negative and very negative attitude within this group. Only one respondent was very positive.

- between 11 and 20 years in practice - a positive attitude predominates. The sum of the negative and very negative attitudes as well as the unsure attitude have been reduced in this group compared to those in the <10 years.
- Between 21-30 years in practice - have almost equal splits in all five levels of attitude.
- Those that have been in practice >30 years reflect no negative or very negative attitude. There are more positive than unsure attitudes and one respondent is very positive.

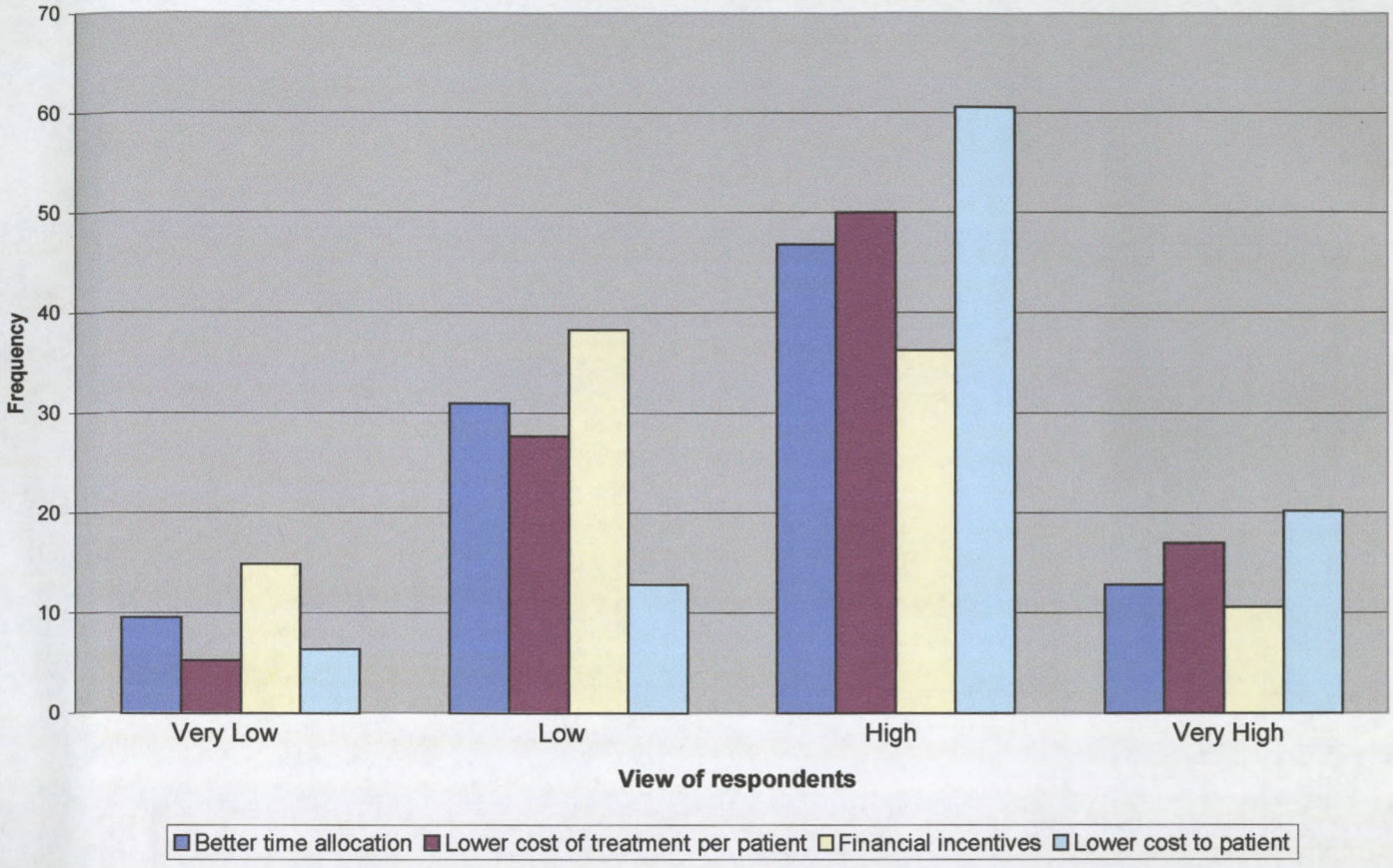
4.5 Sub-objective 1: To determine the impact of managed healthcare on patient care.

4.5.1 Incentives to practice managed care

The respondents were asked to rate the following aspects as incentives to practice managed care:

- Better time allocation – 46.8% rated this highly and 12.8% very high, resulting in a majority of almost sixty percent. Approximately thirty one percent viewed this aspect to be low as an incentive with 9% considering it very low.
- Lower cost of treatment per patient – Fifty percent of respondents rated this aspect highly and 17% viewed it very highly. Approximately 28% rated it low and 5% rated it very low.

Figure 4.3 Incentives to practice Managed Care



- Financial incentives – Approximately 11% rated this aspect very highly with approximately thirty-six percent considering it highly. The majority of 53% consisted of lowly 38% and five percent very low.
- Lower cost to patient – The majority of respondents, approximately sixty-one percent, rated this as a high incentive to practice managed care and 20% rated it very highly. Approximately thirteen percent considered this low and 6% very low.

Table 4.3 details the results of the t-tests for the above aspects, which were found to be significant at a 95% confidence interval.

Table 4.3 Incentives to practice managed care

ASPECT	Mean	Std dev	Sig. (2-tailed) 95% confidence
Better time allocation	2.63	.83	.000
Lower cost of treatment per patient	2.79	.79	.000
Financial incentives	2.43	.87	.000
Lower cost to patient	2.95	.77	.000

4.5.2 Managed care and the patient

Figure 4.4 reflects the respondents views on patient access, referrals to specialists, consultation time and quality of care.

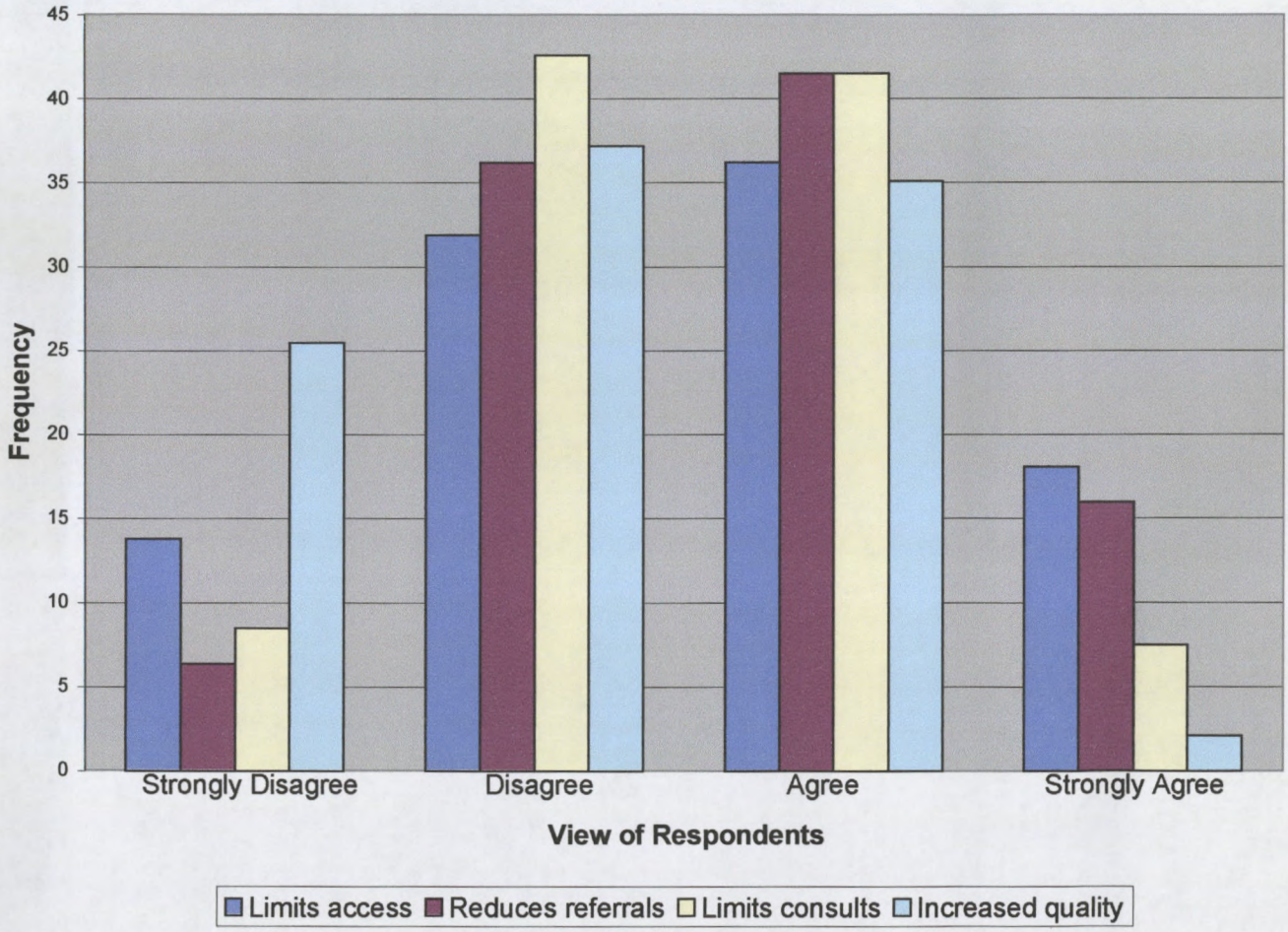
The respondents were asked to what extent they agreed with the following statements:

- Managed care limits patient access to the general practitioner – approximately thirty-six percent agreed and 18% strongly agreed. Approximately 31% disagreed and fourteen percent strongly disagreed with

the statement. The majority of the respondents (54%) are of the opinion that patient access is limited with managed care.

- Managed care reduces referrals to specialists – approximately 42% of the respondents agreed and 16% strongly agreed. Thirty-six percent disagreed and approximately 7% strongly disagreed. Fifty-eight percent of the respondents are in agreement that referrals to specialists are being reduced with managed care.

Figure 4.4 Patient Care : Access, Referrals, Consultation Time and Quality



- Managed care limits consultation time – approximately 42% agreed with 7% strongly agreeing. Approximately 43% disagreed and eight percent strongly disagreed. The sum of the percentages on either side is almost equal indicating that consultation time was limited in almost half of the respondents.
- Managed care leads to increased quality of care – approximately thirty-seven percent of respondents disagreed with approximately 26% strongly disagreeing. Thirty-five percent of the respondents agreed and 2% strongly agreed. There is a higher percentage of respondents that strongly disagreed compared to those that strongly agreed indicating that managed care does not lead to increased quality care.

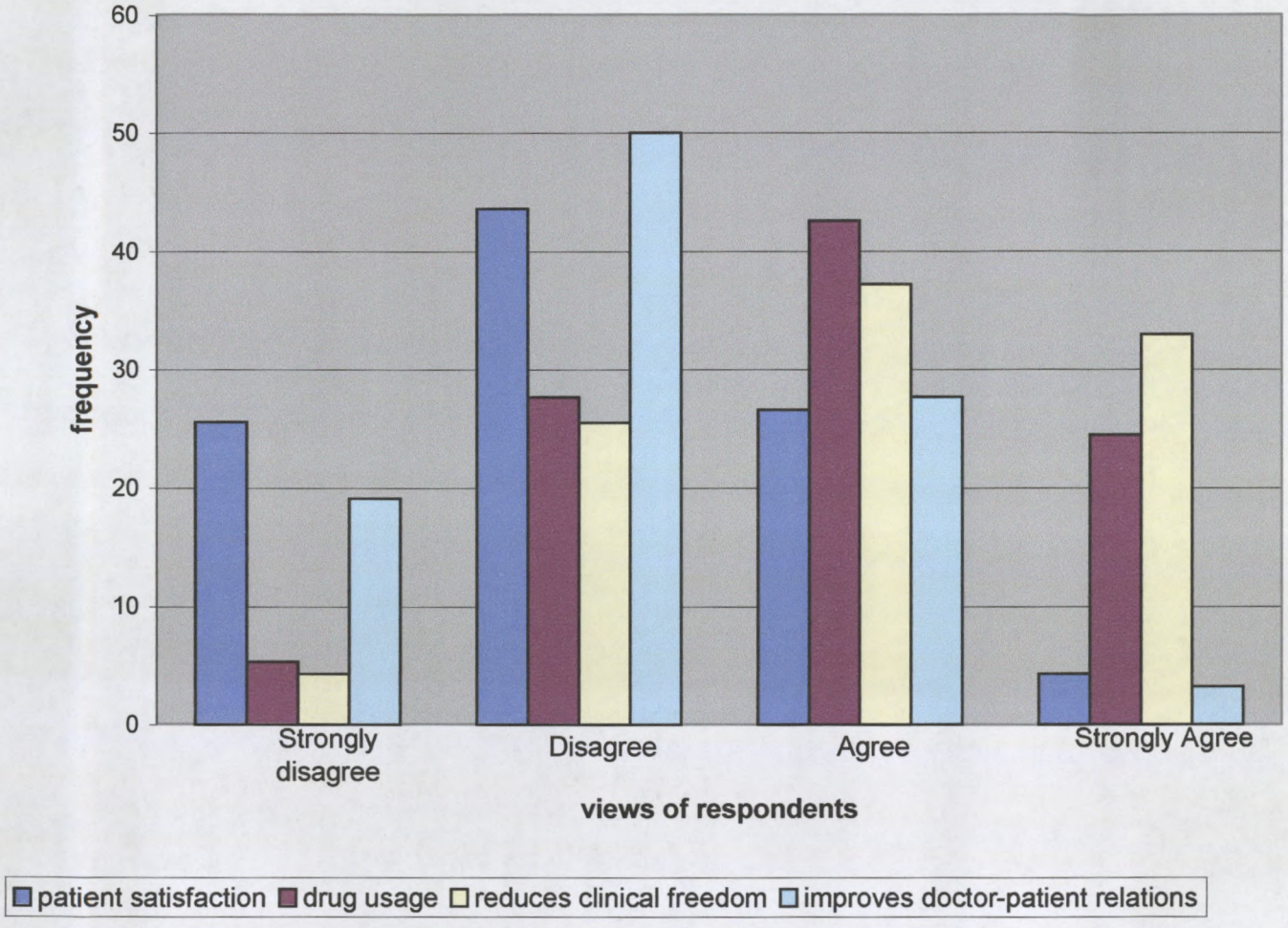
Table 4.4 details the results of the t-tests for the above aspects, which were found to be significant at 95% confidence interval.

Table 4.4 Patient Care: Access, Referrals, Consultation Time and Quality

ASPECT	Mean	Std dev	Sig. (2-tailed) 95% confidence
Managed care limits patient access to the general practitioner	2.59	0.94	.000
Managed care reduces referrals to specialists	2.67	0.82	.000
Managed care limits consultation time	2.48	0.76	.000
Managed care leads to increased quality of care	2.14	0.83	.000

Figure 4.5 reflects the respondents views on patient satisfaction, drug usage clinical freedom and doctor-patient relations.

Figure 4.5 Patient Care: Satisfaction, Drugs, Clinical Freedom and Relations



The respondents were asked to which extent they agreed with the following:

- managed care leads to increased patient satisfaction – approximately 44% disagreed with a further twenty-six percent strongly disagreeing, representing a majority of 70%. Approximately twenty-seven percent agreed and 4%

strongly agreed.

- managed care leads to the use of less than ideal drugs – approximately 43% agreed and approximately twenty five percent strongly agreed. Approximately twenty eight percent disagreed and 5% strongly disagreed. A majority of 68% of the respondents were in agreement with the statement.
- managed care reduces clinical freedom – twenty six percent disagreed and four percent strongly disagreed while 37% agreed and 33% strongly agreed, to provide a majority of seventy percent that agreed with the statement.
- managed care improves doctor-patient relations – Fifty percent disagreed and 19% strongly disagreed while approximately twenty eight percent agreed and 3% strongly agreed.

Results of the t-tests that were performed on the above aspects in Table 4.5, were found to be significant at 95% confidence interval (2-tailed).

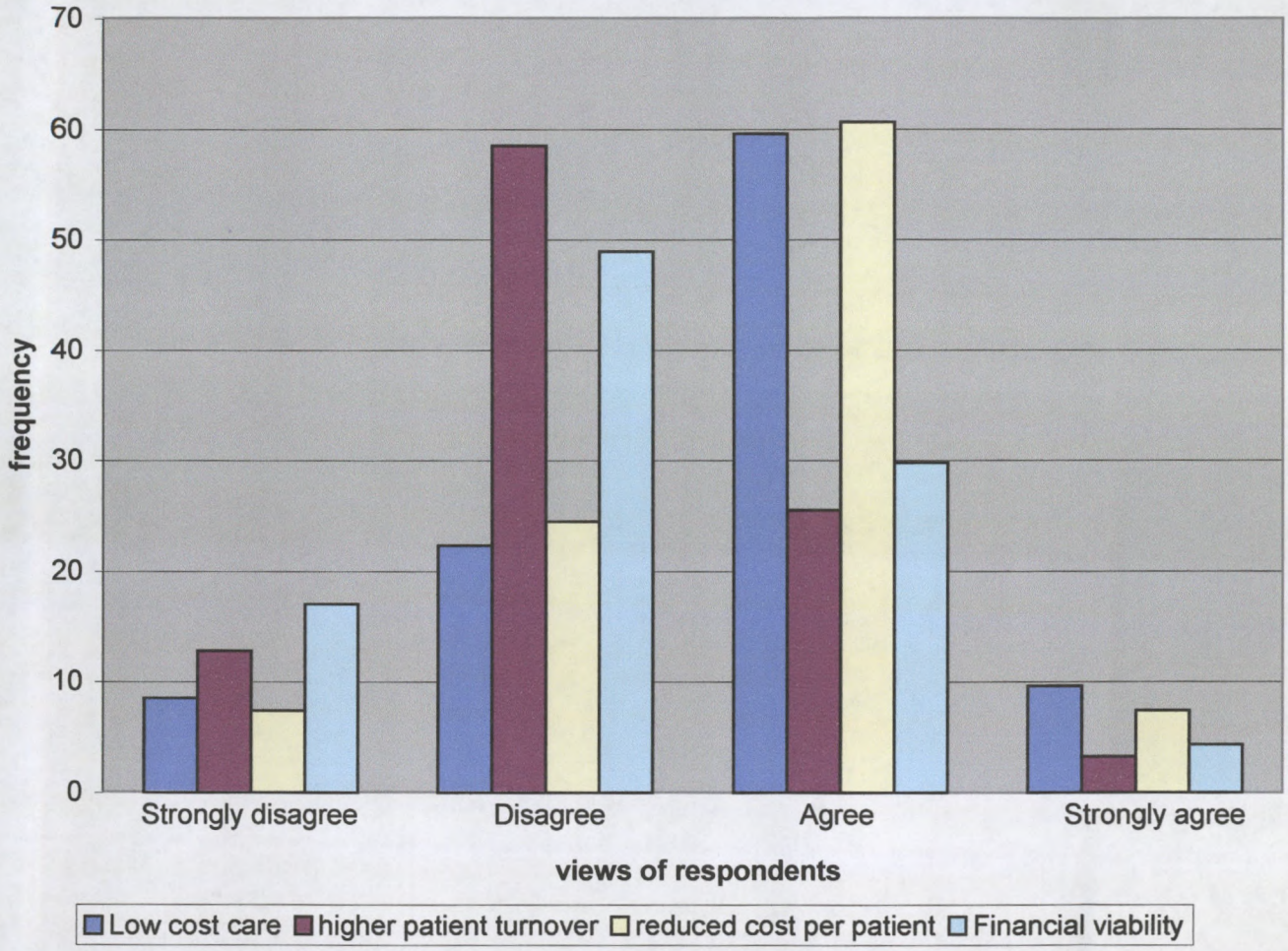
Table 4.5 Patient Care: Satisfaction, Drugs, Clinical Freedom and Relations

ASPECT	Mean	Std dev	Sig. (2-tailed) 95% confidence
Managed care leads to increased patient satisfaction	2.09	0.83	.000
Managed care leads to the use of less than ideal drugs	2.86	0.85	.000
Managed care reduces clinical freedom	2.99	0.87	.000
Managed care improves doctor- patient relationships	2.15	0.76	.000

4.5.3 Cost of care

Figure 4.6 reflects the respondents views on patient cost, patient turnover and financial viability of practice.

Figure 4.6 Cost of Care



The respondents were asked to what extent they agreed with the following statements:

- managed care promotes low cost care – approximately 60% of the respondents agreed with ten percent strongly agreeing. Approximately 22% disagreed and 8% strongly disagreed. One of the aims of managed care is to achieve a lower cost of care. Since majority of the respondents agree with the statement, it can be assumed that managed care is being effective with the cost of care.
- managed care leads to higher patient turnover – approximately fifty-nine percent disagreed with a further 13% strongly disagreeing. Approximately 25% agreed and three percent strongly agreed. With a majority of 72% of respondents disagreeing with the statement it stands to reason that the patient base is not large enough for the number of doctors and the over-servicing that resulted led to failure of traditional medical system.
- managed care leads to reduced cost per patient – 61% of the respondents agreed with seven percent strongly agreeing. Twenty-five percent disagreed and 7% strongly disagreed. It is assumed that the cost reduction could be due to limited number of consultations per patient per year.
- managed care improves financial viability of practice – approximately 49% disagreed with seventeen percent strongly disagreeing. Thirty percent of the respondents agreed with approximately 4% strongly agreeing.

Table 4.6 details the results of the t-tests for the above aspects that were found to be significant at 95% confidence interval (2-tailed).

Table 4.6 Cost of Care

ASPECT	Mean	Std dev	Sig. (2-tailed) 95% confidence
Managed care promotes low cost care	2.69	0.79	.000
Managed care leads to higher patient turnover	2.19	0.69	.000
Managed care leads to reduced cost per patient	2.68	0.72	.000
Managed care improves financial viability of practice	2.21	0.77	.000

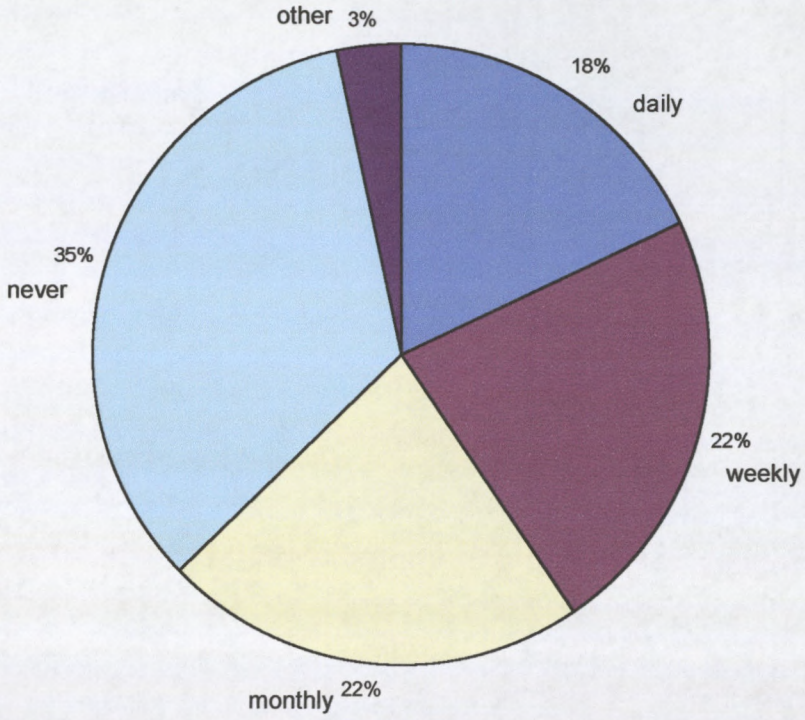
4.6 Sub-objective 2: To determine the impact of managed healthcare on ethical pharmaceutical sales

4.6.1 Drug Formularies

Forty-five percent of the respondents believed that the drug formulary contained most of the drugs that they have been prescribing, before the formulary was introduced, while 30% disagreed and 25% were unsure.

The respondents were asked how often they consulted the drug formulary (Figure 4.7), their rate of compliance (Figure 4.8), reasons for either compliance (Figure 4.9) or non-compliance.

Figure 4.7 Consultation of the drug formulary



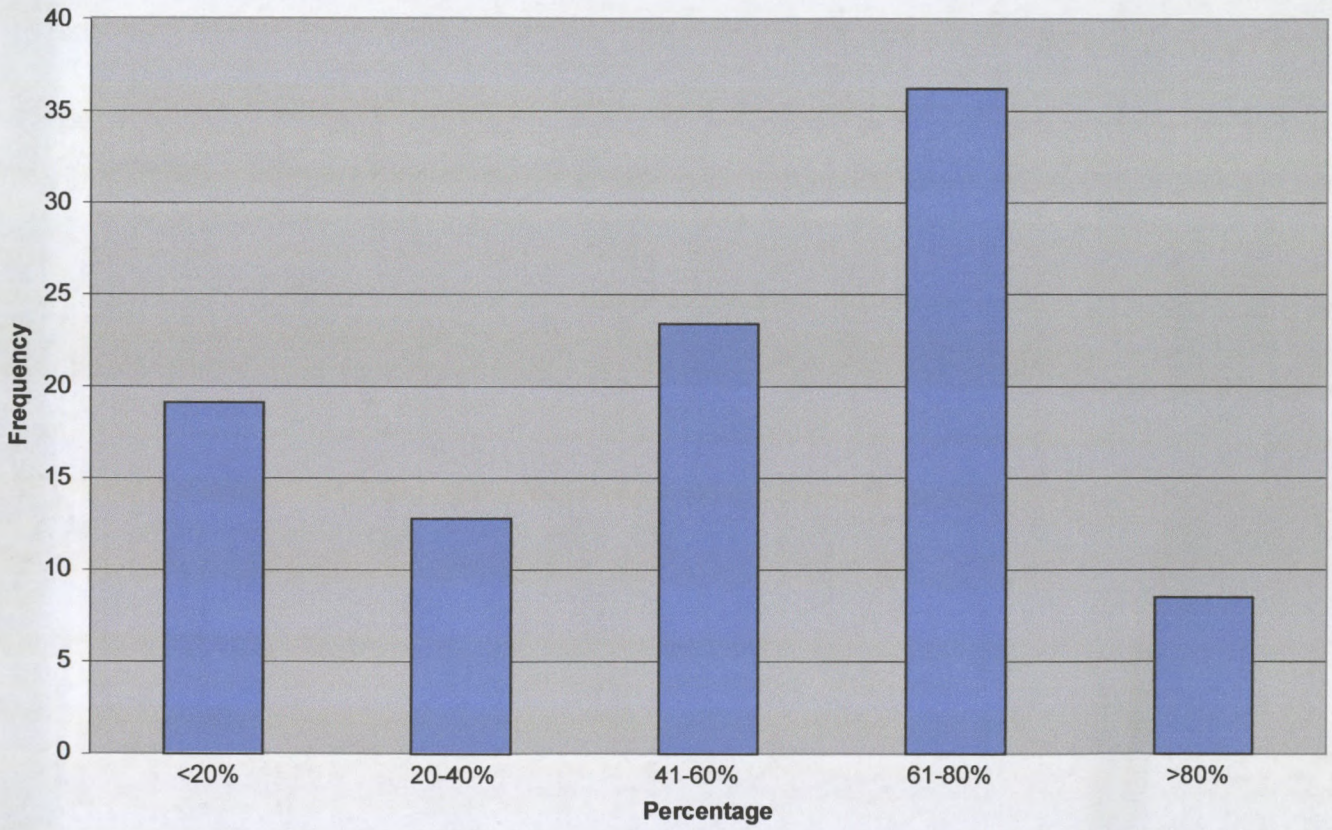
According to Figure 4.7 the frequency of consultation of the formulary is as follows:

- on a daily basis - 18%
- on a weekly basis - 22%
- on a monthly basis - 22%
- never consult the formulary - 35%
- other (consult the formulary only when needed) - 3%

The rate of compliance to the formulary illustrated in Figure 4.8, reflects the following:

- less than twenty percent - 19.1%
- between twenty and forty percent - 12.8%
- between forty-one and sixty percent - 23.4%
- between sixty-one and eighty percent - 36.2%
- greater than eighty percent - 8.5%.

Figure 4.8 Compliance with the formulary



The combined values of the first two categories reflect 31.9% of the respondents complying at less than forty percent compared to the latter two categories with

44.7% of respondents complying at greater than sixty-one percent.

The respondents who had a compliance rate of <40% were asked for their reasons for not adhering to the formulary. The majority of these respondents stated their reasons for non-compliance as listed in Table 4.7 while the rest cited either a single or combination of reasons that are included in Table 4.7.

None of the respondents had chosen the option, which stated that the formulary contains more expensive/ethical drugs.

One respondent added that it was time consuming to adhere to the formulary.

Table 4.7 Reasons for non-compliance

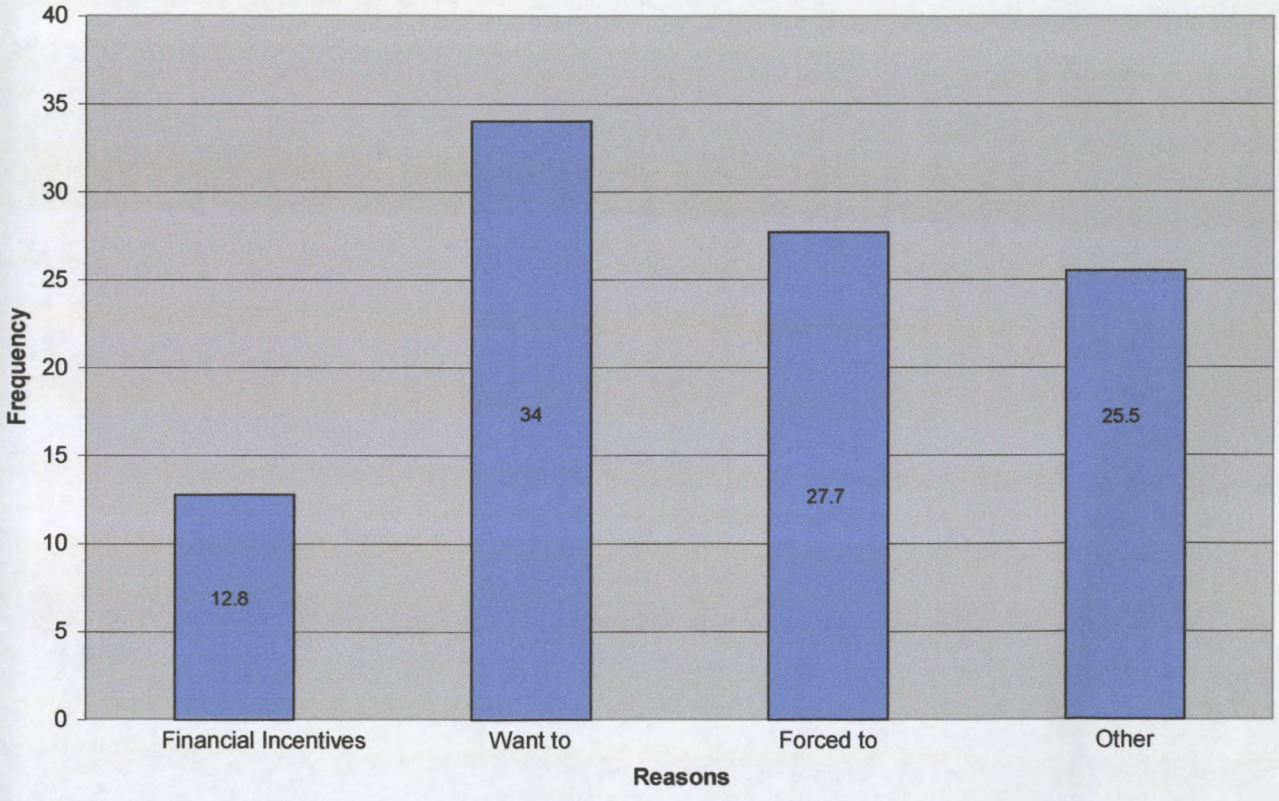
Reasons for formulary non-compliance	Percentage of respondents
◦ The drug list is too restricted	23.3%
◦ The drugs I prefer to use are not listed; the drug list is too restricted and the formulary does not contain the latest or newest drugs.	26.7%
◦ The drugs I prefer to use are not listed	13.3%
◦ The drugs I prefer to use are not listed; the formulary has more generic/cheap drugs; the drug list is too restricted and the formulary does not contain the latest or newest drugs.	13.3%
Total	76.6%

The respondents were asked to best describe their reason for compliance with the formulary. The results illustrated in figure 4.9 are as follows:

- want to comply – 34%
- forced to comply – 27.7%
- financial incentives – 12.8%
- other – 25.5%.

The respondents that chose 'other' stated that they did not choose to comply but the drugs they prescribed were listed on the formulary.

Figure 4.9 Reasons for Complying with the Formulary



A Pearson's correlation was used to determine the interrelationship between how often the formulary was consulted and reasons for compliance. The results in Table 4.8, below shows the correlation is significant at a 99% confidence interval. The correlation coefficient (r) = 0.46 indicates a positive relationship.

Table 4.8 Pearson's Correlation

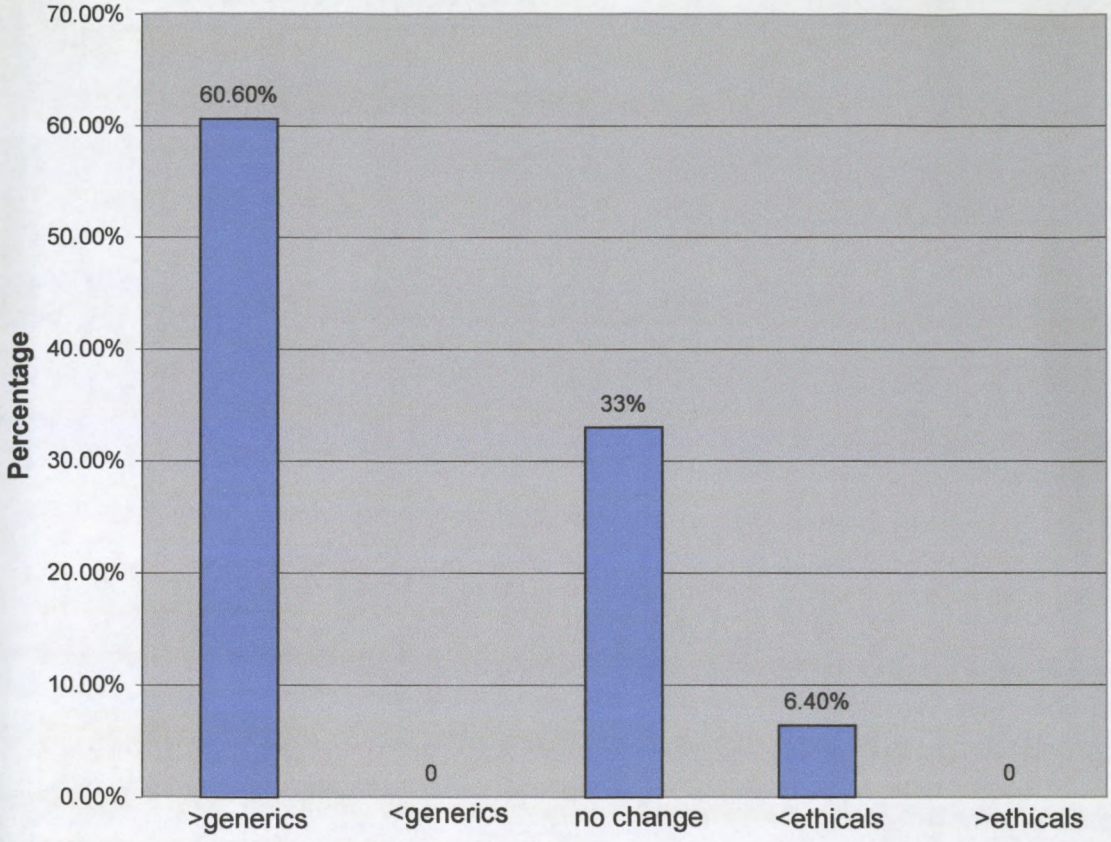
		Consultation of drug formulary	Reason for compliance
Consultation of drug formulary	Pearson Correlation	1.000	.457(**)
	Sig. (2-tailed)	.	.000
Reason for compliance	Pearson Correlation	.457(**)	1.000
	Sig. (2-tailed)	.000	.
** Correlation is significant at the 0.01 level (2-tailed).			

4.6.2 Prescribing habits

The respondents were asked how their prescribing habits have changed with managed care detailed in Figure 4.10. The results are as follows:

- 60.6% are prescribing more generic drugs
- 33% reported no change in prescribing habits
- 8.4% are prescribing fewer ethical drugs.

Figure 4.10 Change in Prescribing Habits

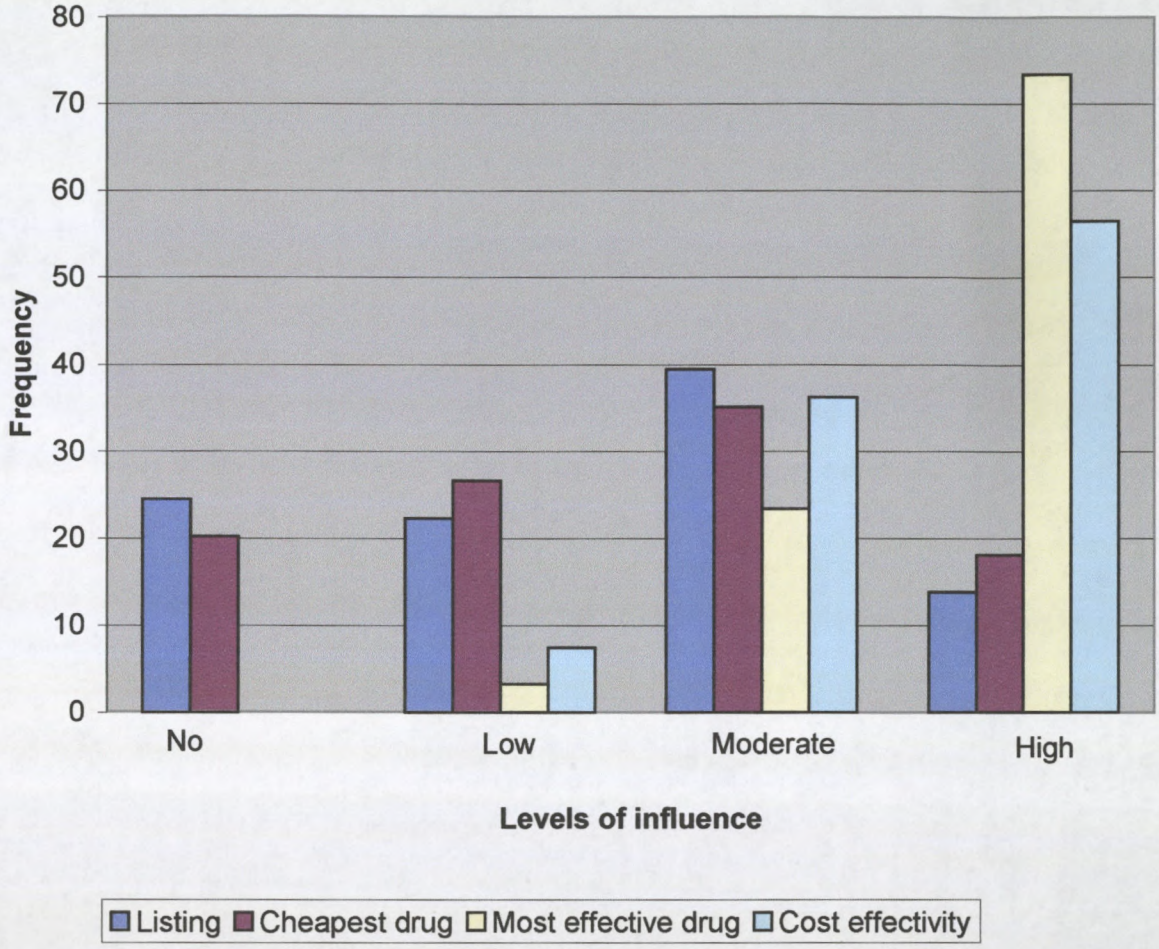


The respondents were asked to indicate the level of influence that the options listed in Table 4.9 and illustrated in Figure 4.11, have on their prescribing habits.

Table 4.9 Prescribing habits: listing, cheapest/most effective drug, cost effectivity

ASPECT	No influence	Low influence	Moderate influence	High influence
Listing on the formulary	24.5%	22.3%	39.4%	13.8%
Cheapest drug available	20.2%	26.6%	35.1%	18.1%
Most effective drug available	0%	3.2%	23.4%	73.4%
Cost effectivity of the drug	0%	7.4%	36.2%	56.4%

Figure 4.11 Prescribing:Listing,Cheapest drug, Most effective drug, Cost effectivity



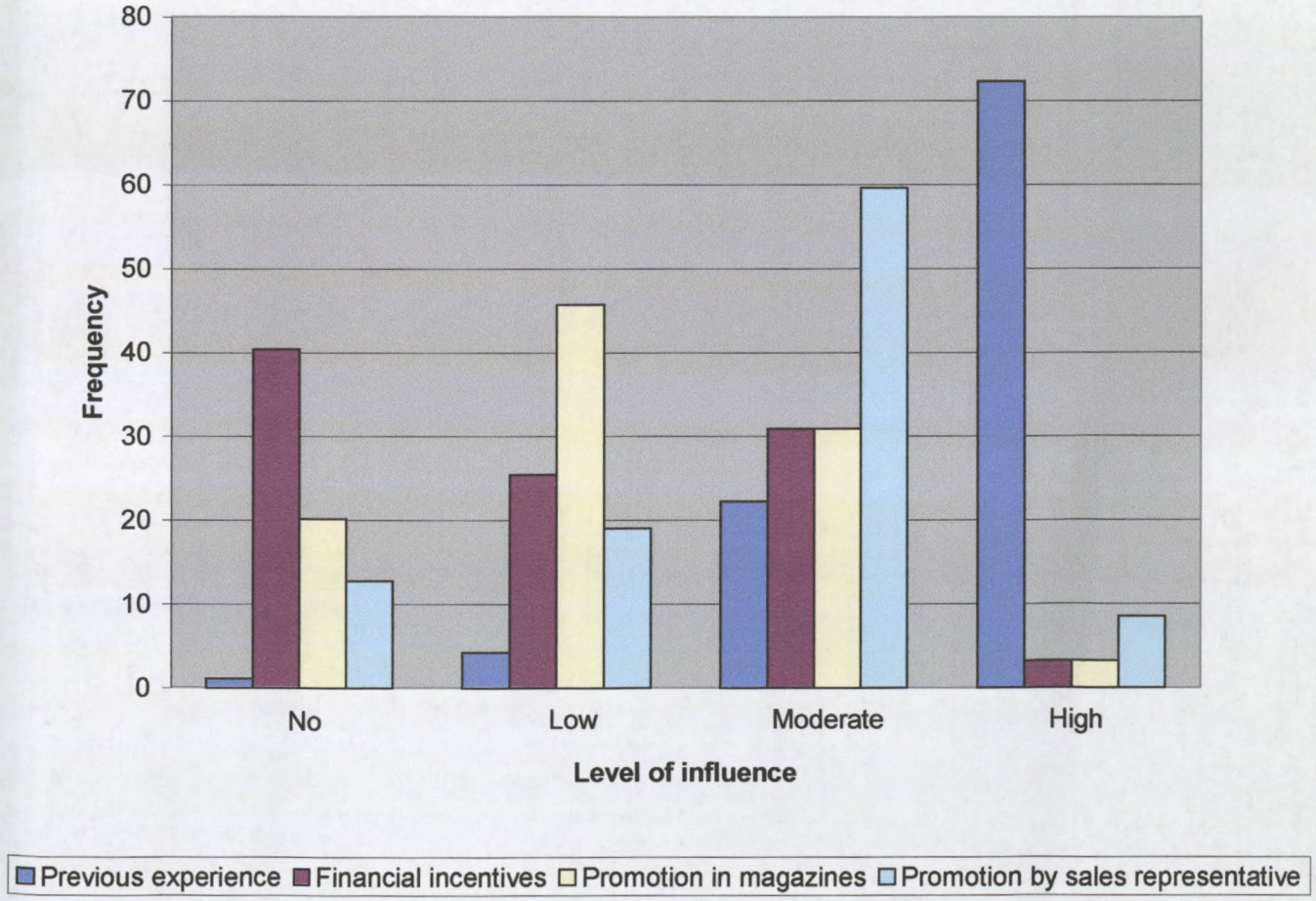
The results in Table 4.9 and Figure 4.11 indicate that listing on the formulary and cheapest drug available, does not affect prescribing habits in any major way as the responses varied from no influence to high influence in varying proportions.

The most effective drug available and cost effectivity of a drug has a very high influence on prescribing habits with 73.4% and 56.4% respectively.
It can therefore be assumed that a drug which is both effective in action and cost effective will be prescribed regardless of its listing or non-listing on the formulary.

Table 4.10 Prescribing habits: Experience, Financial incentives, Magazines, Sales representative

ASPECTS	No influence	Low influence	Moderate influence	High influence
Previous experience	1.1%	4.3%	22.3%	72.3%
Financial incentives or bonuses	40.4%	25.5%	30.9%	3.2%
Promotion through magazines	20.2%	45.7%	30.9%	3.2%
Promotion by a sales representative	12.8%	19.1%	59.6%	8.5%

Figure 4.12 Prescribing: Experience, Financial incentives, Magazines, Sales representative



The results in Table 4.10 and Figure 4.12 indicate previous experience has a high influence on prescribing habits with 72.3% of the respondents.

Financial incentives shows a combined no influence to low influence of 69.9% which is a majority of respondents. This result is consistent with the response received when asked to rate financial incentives as an incentive to practice managed care (section 4.5.1).

Promotion through magazines has a combined majority of 65.9% in the no to low influence categories.

Promotion by a sales representative has a moderate influence on prescribing habits in majority of the respondents with 59.6%. A very low percentage of respondents considered this option to have a high influence.

4.7 Additional Findings

The open-ended question asked for further comments on managed care which 28.7% of respondents answered. The responses were categorised as follows:

4.7.1 Responses for Managed Care

- Managed care has been in my practice before it was even introduced in this country.

- Managed care may be a good idea in a selected group of patients.
- Managed care is essential and it will grow vastly in the next few years.
- Managed care can work with properly investigated risk sharing where the medical funders do not dictate to suppliers of service. Better communication with medical aids is needed.

4.7.2 Responses Against Managed Care

- Managed care has failed elsewhere. Does managed care really work? Is it managing patient care or the economy? Is managed care effective care and what about the long-term cost of care?
- Managed care manipulates the doctor/patient interaction and an IPA dictated formulary may not suit all practitioners and their patients for example wealthy patients will not settle for generics thus pushing up the value of scripts.
- Managed care adds to the cost of medical care by adding "middlemen".
- Managed care has failed in South Africa due to bureaucratic red tape and the representative bodies, which govern it there are too many financial players other than the patient.
- Managed care should be more user friendly and respondents hate being dictated to by people that don't have medical/paramedical qualifications thus frustration and resentment surfaces.
- Doctors should retain prescribing autonomy, as the patients should be managed by the general practitioner.

CHAPTER 5

DISCUSSION OF RESULTS

5.1 Introduction

This section will analyse the results of the field study and compare it with data from the literature review.

5.2 Membership of Health Maintenance Organisations

The majority of respondents in this survey belong to more than one health maintenance organisation (HMO).

According to the stages of evolution, with each progressive stage, dominant HMOs emerge and from the results it can be seen that the KZNMCC organisation on its own has the largest share of membership. Table 4.1 further shows that the respondents who belong to other HMOs are also members of the KZNMCC organisation making it a dominant HMO.

5.3 Attitude to Managed Care

The respondents overall attitude to managed care and their attitudes *versus* the years in practice were determined.

The results of the overall attitude in Figure 4.2 indicate a closer distribution of the negative and very negative attitude, which in combination is almost equal to those that were unsure. The positive attitude was much greater than the very positive indicating that very few respondents were highly happy or excited about managed care.

The literature review indicates that the general practitioners in other countries have a negative attitude towards managed care.
The results of Govender's (2000) South African study also reflected a similar negative attitude.
Overall an unsure to positive attitude exists and in light of the literature surveyed it is assumed that many of the respondents who have a positive attitude could be more in the unsure category.

It could also be assumed that the change in attitude from negative to more positive could be due to the following reasons:

- increased penetration of managed care in the country
- the modified approach the organisers of managed care are utilising
- the respondents are aware of the increasing problems within the healthcare industry and they may believe that managed care is the only option that can save the South African healthcare industry.

The attitudes of the respondents *versus* the years in practice according to Table 4.2 indicate the following:

- Those respondents that have been in practice for less than 10 years showed an almost equal positive and unsure attitude. The results show a larger amount of the respondents with a very negative attitude compared to a very positive attitude. This is possibly due to this group of respondents wanting to make as much money as possible to pay off debt from studying and setting up of a medical practice.

- Respondents that have been in practice between 11 - 20 years show a more positive attitude with also a drop in the unsure category compared to the previous group. The respondents that have been in practice between 21 - 30 years reflect attitudes of equal intensity in all levels.

- The respondents that have been in practice >30 years don't have any negative attitudes and there are more positive than unsure attitudes although the number of respondents in this category is smaller. The reason could be that this grouping of respondents chose to practice medicine for the sake of healing people and not just for the income. It is further assumed that they have seen the traditional system fail and are willing to embrace a new system that may benefit their patients.

Simon *et al* (1999) indicates that medical academics and students viewed managed care negatively.

5.4 Sub-objective 1: To determine the impact of managed care on patient care

This section will comprise of the following: Incentives to practice managed care, Managed care and the patient and Cost of care.

5.4.1 Incentives to practice managed care

The respondents were asked their views on the following as incentives to practice managed care:

Grumbach *et al* (1998) stated that general practitioners felt pressured by the managed care system to increase the number of patients seen per day and they believed that such pressure compromised patient care.

- Better time allocation – the results indicate that the respondents consider this to be a good incentive. Consultation fees are a fixed amount per visit and if the consultation takes longer than the allocated time, the general practitioner will not be paid more money. It can therefore be assumed that general practitioners will have to spend less time with patients in order to see more patients and earn more income.

The empirical research supports Grumbach *et al* (1998) in terms of the general practitioners seeing more patients per day.

- Lower cost of treatment per patient – the majority of respondents were in favour of this option. This could be due to a lower cost of treatment translating into more income as in the managed care system every treatment represents a cost to the general practitioner.

- Financial incentives – it was assumed that financial incentives would have been highly accepted as an incentive to practice managed care but the results of this study indicate that only 11% of the respondents view this option highly. The majority of 53%, a combination of low and very low, indicates that financial incentives will not be a good motivator for the practice of managed care.

  This finding is supported, in the South African context, by the finding that only 12.8% of the respondents cited financial incentives as their reason for complying with the formulary. However it is contrary to Fairfield *et al*'s (1997a) suggestion that financial incentives do change prescribing habits. This apparent difference may be caused by the relatively underdeveloped state of managed care in South Africa and the position may change over time

- Lower cost to patient – a majority of 61% of respondents rated this option highly and 20% very highly, as an incentive to practice managed care. The reason for the respondents feeling strongly about this option could be due to the number of patients having exhausted their medical aid funds very early in the year. It is assumed that most general practitioners will still take care of their patients, at a cost to themselves as intense competition exists with the oversupply of service providers.

5.4.2 Managed Care and the Patient

Bodenheimer (1999) and Kuttner (1999) stated that the new capitation method of payment led to reduced or poor patient care. This included reducing the amount of referrals to specialists, avoidance of sick patients, outright denial of care, increasing patient turnover and the lack of clinical autonomy which may lead to the use of less than ideal drugs for the patient.

The respondent's views on the following aspects of patient care, as illustrated in Figure 4.4, indicate the following:

- Managed care limits patient access to the general practitioner – the results of a combined agree / strongly agree view show a majority of 54%. It appears that managed care is penetrating the market but as it progresses to a higher

stage of evolution, it is assumed that more respondents would be in agreement with the statement, which is in keeping with the literature.

This is one of the aims of managed care as general practitioner services were found to represent a large percentage of healthcare costs. However limiting patient access to the general practitioner cannot be seen as an improvement in patient care.

- Managed care reduces referrals to specialists – respondents views indicate higher percentages for those that agreed and strongly agreed compared to those that disagreed and strongly disagreed. This trend is in keeping with the control mechanisms that are used by managed care organisations in South Africa and in other countries.

- Managed care limits consultation time – the results were fairly close on either side of the scale indicating that only half the respondents felt consultation time was limited.

  This finding tends to support the assumption in section 5.4.1 paragraph three. The results are ambiguous in that half the respondents with respect to the limited consultation time.

The other half of the respondents appear to ignore the time limits to place patient care above financial gain. It is not known if these respondents need

more time because their patient base comprises of a large number of very elderly or very young patients or if they prefer spending quality time with counseling.

Financial incentives did not rank highly as an incentive to practice managed care. It can be further seen that those respondents who place quality of care over limited consultation time will be penalised financially as managed care organisations attach withholds for non-compliance with the rules and also fewer patients represents less income.

- Managed care leads to increased quality of care – more respondents strongly disagreed than those that strongly agreed with the statement. The combination of those that disagreed and strongly disagreed showed a majority of 63%.

  This finding would suggest that the majority of the respondents perceived that managed care leads to a decrease in the quality of care received by patients. It is further worth noting that even those who considered managed care as an improvement, were not prepared to offer a strong agreement.

In view of the fact that the literature consulted, supports the perception that managed care reduces the quality of patient care, it is suggested that this finding seriously undermines the claims made by the supporters of managed care that it is to the patients advantage.

The respondent's views on the following aspects of patient care as illustrated in Figure 4.5, indicate the following:

- Managed care leads to increased patient satisfaction – a majority of 70% of the respondents, a combination of disagree and strongly disagree, disagreed with the statement. The aspects concerning patient satisfaction could be limited access to the general practitioner, reduced consultation time, fewer visits to specialists, use of cheaper drugs and possibly poorer relations with the general practitioner.

  The findings of the empirical research are in keeping with those expressed in the literature. This finding is consistent with the perception that managed care reduces the quality of patient care from the general practitioners viewpoint. However it should be treated with caution, as the views of the patients were not investigated in this study.

- Managed care leads to the use of less than ideal drugs – a large percentage of the respondents 68%, comprising of the agree and strongly agree responses, believed the statement to be true. This is an expected response as the results of the empirical research indicate only 34% of the respondents wanted to comply with the formulary.

  This finding adds another dimension to the perception that patient care is diminished by the managed care approach in that it suggests that the

respondents believe that compliance with the formulary leads to the patient being denied the ideal drug for his or her condition.

These results support the results of the previous statements as well as the views expressed in the literature.

- Managed care reduces clinical freedom – 70% of the respondents a combination of those that agree and strongly agree, indicate that managed care does reduce clinical freedom. This is one of the mechanisms that is used by managed care organisations to curb increasing drug costs, thus for managed care to be successful it is expected that clinical freedom will be reduced.

  However this reduced clinical freedom will impact negatively on patient care as there is a high probability of the less than ideal drugs being used as reflected in the preceding paragraph. The results expressed in this statement support the previous findings and are similar to the views expressed in the literature.

- Managed care improves doctor-patient relations – 50% of respondents disagreed and a further 19% strongly disagreed, providing a majority of 69% in disagreement with the statement. The literature supports this view and it would seem unlikely that managed care would improve doctor-patient relations when access is limited and consultation time is reduced.

These results show the respondents perceptions regarding doctor-patient relations and it provides insight as to why there is negativity about managed care.

The results indicate that managed care does not improve doctor-patient relations, which is supported by previous findings in this study that suggest that managed care affects patient care negatively as access to the general practitioner is limited, consultation time is being reduced and less than ideal drugs are being used. This could lead to "doctor hopping" as the patient searches for a general practitioner who will provide them with satisfactory care, similar to that of the old medical system.

5.4.3 Cost of Care

The majority of the respondents agreed that managed care promotes low cost care, which is in keeping with the aims of the health maintenance organisations. The majority of respondents also believed that managed care leads to reduced cost per patient.

When asked if managed care leads to higher patient turnover a majority of 72% of the respondents (combined disagree and strongly disagree) disagreed. These results are interesting as patient turnover is expected to increase should the general practitioner want to retain the same level of income with the managed care system.

Managed care limitations on the number of consultations per patient per year reduces the general practitioner income. The results in the literature indicate that general practitioners in other countries were pressurized into seeing more patients per day, however in urban South Africa there are more general practitioners taking care of a small patient base, resulting in fewer patients per doctor. It is thus unlikely that patient turnover will increase.

The respondents who indicated that managed care leads to higher patient turnover could be those that belong to structured health maintenance organisations such as Medicross or the respondents could be preferred providers for certain medical aid organisations.

The respondents were asked if managed care improves the financial viability of practice, to which 67% disagreed (combined disagree / strongly disagree) while 30% agreed. These results are expected as one of the aims of managed care is to decrease the costs that general practitioners contribute to total healthcare spend. This aim is being achieved at a disadvantage to the general practitioners.

Previous findings in this study indicate that access to the general practitioner is being limited, doctor-patient relations are negatively affected and clinical freedom is being reduced which will lead to patients visiting another doctor. It is expected that this will affect the financial viability of the practice.

Those respondents that disagreed have a view similar to that of general practitioners in other countries with managed care programs. The respondents that agreed with the statement could be preferred providers or they could be salaried staff in a health maintenance organisation where there is a larger patient base and fewer doctors within the complex.

5.4.4 Summary

When considering the overall impact that managed care has on patient care it is evident from this study that:

- patient access to the general practitioner is reduced (Section 4.5.2, page 60)
- referrals to specialists are being reduced (Section 4.5.2, page 61)
- consultation time is being limited (Section 4.5.2, page 62)
- managed care does not increase the quality of care (Section 4.5.2, page 62)
- managed care does not lead to increased patient satisfaction (Section 4.5.2, page 63)
- managed care reduces clinical freedom (Section 4.5.2, page 64)
- managed care leads to use of less than ideal drugs (Section 4.5.2, page 64)
- managed care does not improve doctor-patient relations (Section 4.5.2, page 64).

In regard to incentives to practice managed care the respondents rated better time allocation and lower cost of treatment highly. However the financial viability

of general practitioner practice does not improve with managed care. This may help to explain the response from 50% of the respondents who are in favour of financial incentives. These incentives represent additional income that may help with the financial viability of practice.

The literature review shows managed care having a negative effect on patient care for many reasons which include reducing quality of care, reducing referrals to specialists, avoidance of sick patients and the compromising patient care according to Simon *et al* (1999), Bodenheimer (1999), Kuttner (1999) and Grumbach *et al* (1998).

The views from the open-ended question express similar sentiments to the empirical research and the literature review.

According to the method of triangulation if the components of the literature review, empirical research and qualitative open-ended question offer the same views or results then the results of the empirical research can be held to be valid. The results of the various statements were found to be supportive, showing the field study to be reliable.

5.5 Sub-objective 2: To determine the impact of managed care on ethical pharmaceutical sales

5.5.1 Drug Formularies

➢ Consultation, compliance and non-compliance

The frequency of usage of the drug formulary, the rate of compliance and the reasons for either compliance or non-compliance with the formulary was determined.

The results presented in Figure 4.7 indicate the degree of consultation of the formulary to be widely spread with 35% of the respondents claiming to have never consulted the formulary. However when looking at the rate of compliance to the formulary the results indicate 23.4% complying between 41-60% and 44.7% complying between 61-100% of the time.

This is not a contradiction as evidence from the research shows that the formulary contains most of the respondents' drugs of choice.

The reasons for compliance with the formulary were 34% - want to comply, 27.7% - forced to comply, 12.8% - financial incentives and of the 25.5% that chose 'other', many stated that they did not choose to comply.

The precise reasons for 34% choosing to comply are unknown while the 12.8% complied due to financial incentives. Those that felt that they were forced into complying are complying regardless. In hindsight the question that was asked could have been constructed differently to determine the reasons behind the choices.

It is not known whether the respondents that wanted to comply, did so partly due to financial incentives, which is added income, to improve their financial viability or due to the convenience of a formulary.

It could be presumed that those respondents who were 'forced to comply' felt this way due to the formulary containing less than ideal drugs or possibly due to reduced clinical freedom.

The respondents that either wanted to comply or were forced to comply will be receiving financial incentives for compliance as well, thus the combination of both these categories and financial incentives results in 75.5% of the respondents receiving financial incentives. This is in keeping with the literature from other countries.

Although some of respondents chose not to comply, the high level of compliance reflects that the formulary contains most of the drugs that the respondents chose to prescribe. This could indicate that the formulary was well compiled. The respondents also indicated that previous experience strongly influenced their

prescribing habits, thus it could be said that the formulary contained a large percentage of drugs that have been used previously.

The results of Govender's (2000) study reflected higher percentages of respondents that complied due to financial incentives (24%) or because they were forced to (33%).

The reasons for non-compliance included the restricted nature of the formulary, the drugs that are preferred for use are not listed and the latest/newest drugs are not listed. The financial incentives were once again not the biggest contributor thus showing the consistency and reliability of the responses.

- Prescribing Habits

The majority of the respondents prescribing habits have changed with managed care as 60.6% are prescribing more generic drugs and 8.4% are prescribing fewer ethical drugs, which is the same as more generics thus providing a total usage of 69% more generic drugs.

It is conceivable however that the move to managed care has been the event which sensitised general practitioners to the need to reduce patients drug expenditure as medical aids have provided limited resources in regard to acute

drug benefits. It has been stated in the literature that many medical aids have gone bankrupt and those that exist are trying to keep their heads above water. Managed care cannot be solely blamed for the change in prescribing habits as the move to generic drugs could also be caused by an appreciation of the practitioners of the general economic climate.

This change in prescribing will have a major impact on the sales and profitability of ethical drug manufacturers. It is therefore important that ethical pharmaceutical manufacturers determine the true cause behind the increasing generic prescriptions and take counter active steps to curb the decrease in ethical drug prescriptions.

The degree of influence that each of the following options have on the respondents prescribing habits were:

- listing on the formulary – the results indicate that most respondents consider this option to have a moderate influence on prescribing habits however approximately 47% of responses comprises of a combined no to low influence.

  This option had a high influence on a small number of respondents but overall listing of a drug on the formulary tends to have a combined majority of moderate to high influence on prescribing habits and could be due to the formulary offering good treatment guidelines.

- cheapest drug available – the results show this option to have a moderate influence with many respondents. Approximately eighteen percent of respondents considered the cheapest drug available to have a high influence indicating the respondent's willingness to prescribe ethical or the more expensive drugs.

  Pharmaceutical companies need to note that cost is not the only option that the respondents consider when prescribing a drug.

  This is further supported by paragraph one, page 96.

- most effective drug available – this option has a high influence with 73.4% of respondents and a moderate influence in 23.4% of respondents. It is evident that effectiveness of a drug is of paramount importance and will strongly influence prescribing habits.

  The effectiveness of a drug is important but again it is not the only option that should be taken consideration by pharmaceutical manufacturers.

- cost effectivity – the results show 56.4% of respondents consider cost effectiveness to have a high influence with a further 36.2% stating a moderate influence. The results indicate that cost effectivity is the main issue when it comes to choice of drug with more than 92% of the respondents being highly influenced.

  A cost-effective drug is considered to be one that performs the function required at the lowest possible cost. These results support the findings above

in respect of the cheapest drug available and most effective drug available. This represents an important finding for ethical and generic pharmaceutical companies as it indicates that if a drug performs its function and is not exorbitantly priced, it will be prescribed.

- previous experience – majority of the respondents considered previous experience to have a high influence. It can therefore be assumed that if the general practitioner prescribed a drug before the introduction of the formulary he would possibly consider prescribing it regardless of its listing on the formulary. An established product would have more support than one, which the general practitioner has not used extensively.

- financial incentives – the results of this option proved to be consistent with the views expressed on financial incentives in other questions in this survey. Almost a third of the respondents believed that financial incentives have a moderate influence on prescribing habits but a combined majority of 65.9% expressed no to low influence.
  The speculation concerning financial incentives in paragraph two, page 93, indicates that it is possible that only 12.8% of the respondents are strongly influenced by financial incentives while the rest of the respondents are not.

The consistency of results shows internal consistency validity to be present in this study.

- promotion by a sales representative – the majority of respondents indicated that sales representatives have a moderate influence on prescribing habits. This aspect is very important as sales representatives are the largest and most expensive sales / marketing tool that any pharmaceutical company has.

  Managed care is progressing in South Africa and it is inevitable that most doctors will have limited time to treat the maximum number of patients in order to ensure financial viability.

It is possible that doctors may currently have limited time for sales representatives as the influence is moderate. If managed care becomes the prevalent mode the amount of time which practitioners will be prepared to devote to seeing sales persons may well be reduced as the time spent with the sales person does not earn income. It would be argued that because the formulary is the determining instrument for prescribing drugs it is unnecessary for general practitioners to see the sales representatives.
This is another consideration for pharmaceutical drug manufacturers. It might be better financially to make use of gatherings of doctors rather than seeing them individually.

If the sales representative is currently effective in performing their job, it is expected that general practitioners will prescribe their drugs.

- promotion through magazines – this option showed a combined majority of 65.6% of the respondents expressing a no to low influence on prescribing habits. Promotion through magazines will not highly influence prescribing but it may have an influence on patients who tend to read these magazines in waiting rooms. It can be assumed that patients may request that their general practitioner prescribe a particular drug. It was found that this medium is not an effective alternative for the promotion of drugs.

The aspects that highly influence general practitioners prescribing habits according to this study are most effective drug available, cost effectivity and previous experience. Promotion by a sales representative has a moderate influence among majority of the respondents while listing on the drug formulary and cheapest drug available varies in their influence on prescribing habits without a majority in any influence category.
Promotion through magazines and financial incentives were of no to low influence according to the respondents.

The research therefore suggests that although managed care reforms have changed prescribing habits to include more generic drugs, ethical drug manufacturers that have the established, therapeutically effective and cost effective drugs can retain or gain market share or sales provided that the information is passed on to the general practitioner by a good sales representative.

The listing of drugs on the formulary should be considered as managed care is In the growth phase in South Africa and it may reach a stage that allows prescription of drugs that are only on the formulary. It should be noted that the compliance figures are in the higher level and while most of the respondents comply with the formulary for different reasons, the compliance is visible.

The answers to the open-ended question indicated that the respondents do not want to be dictated to regarding the drugs that they should be prescribing and that general practitioners should retain prescribing autonomy.

The three components: the literature review, statistical analysis and the answers to the open-ended question, provided similar end-points therefore the questions that were asked and the resulting views are valid.

The formulary is an inherent part of managed care. It costs pharmaceutical manufacturers substantial amounts of money to get a drug listed on the formulary but they should consider the cost of not having their drugs listed particularly if it is a cost-effective drug. Those pharmaceutical manufacturers that don't have listed drugs must assess to what extent the use of good sales representatives can capitalize on general practitioner resentment of being dictated to.

The impact of managed care on ethical pharmaceutical sales does not appear to be of a positive nature as usage of generic drugs is increasing. Pharmaceutical

companies need to investigate further the reason behind the move to generic drugs and to consider streamlining research costs to allow for drugs to become cost effective. It is also important that pharmaceutical companies take note of the apparent lack of force that financial incentives have as motivators to prescribe drugs.

However should an ethical pharmaceutical manufacturer take note of the aspects that tend to influence prescribing habits, the sales can be realised but it is important that medical aid administrators are aware of the benefits of ethical drugs in terms of therapeutic effects, cost effectivity and quality of life benefits.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Conclusions

6.1.1 Impact of managed healthcare on patient care

Managed care is still in the early stages of evolution in South Africa and the responses generally reflect a positive attitude. Concerns that were raised included the lack of autonomy, poor patient care and enforced use of generic drugs. The results of the research into the impact of managed care on patient care indicated the following:

- patient access to the general practitioner is reduced (Section 4.5.2, page 60)
- referrals to specialists are being reduced (Section 4.5.2, page 61)
- consultation time is being limited (Section 4.5.2, page 62)
- managed care does not increase the quality of care (Section 4.5.2, page 62)
- managed care does not lead to increased patient satisfaction (Section 4.5.2, page 63)
- managed care reduces clinical freedom (Section 4.5.2, page 64)
- managed care leads to use of less than ideal drugs (Section 4.5.2, page 64)
- managed care does not improve doctor-patient relations (Section 4.5.2, page 64).

These findings are disturbing in that they suggest that the statement made in chapter 1 that the objective of managed health care in South Africa is cost reduction rather than improved customer care is true.

In regard to incentives to practice managed care the respondents rated better time allocation and lower cost of treatment highly. However the financial viability of general practitioner practice does not improve with managed care. This may help to explain the response from 50% of the respondents that are in favour of financial incentives. These incentives represent additional income that may help with the financial viability of practice.

The following are recommended for managed care organisations:

- Managed care organisations in South Africa should have more communication with general practitioners to emphasise the importance and benefits of a managed care system.
- Managed care organisations should conduct utilisation reviews for individual practitioners as certain practice profiles may be out of the norm but still essential such as a practice with mainly high risk patients or elderly patients.

6.1.2 Impact of managed healthcare on ethical pharmaceutical sales

The aspects that highly influence general practitioners prescribing habits according to this study are most effective drug available, cost effectivity and

previous experience. Promotion by a sales representative has a moderate influence among majority of the respondents while listing on the drug formulary and cheapest drug available varies in their influence on prescribing habits without a majority in any influence category.

The formulary is an inherent part of managed care. It costs pharmaceutical manufacturers substantial amounts of money to get a drug listed on the formulary but they should consider the cost of not having their drugs listed particularly if it is a cost-effective drug. Those pharmaceutical manufacturers that don't have listed drugs must assess to what extent the use of good sales representatives can capitalize on general practitioner resentment of being dictated to.

The listing of drugs on the formulary should be considered as managed care is In the growth phase in South Africa and it may reach a stage that allows prescription of drugs that are only on the formulary. It should be noted that the compliance figures are in the higher level and while most of the respondents comply with the formulary for different reasons, the compliance is visible.

The impact of managed care on ethical pharmaceutical sales does not appear to be of a positive nature as usage of generic drugs is increasing. Pharmaceutical companies need to investigate further the reason behind the move to generic drugs and to consider streamlining research costs to allow for drugs to become cost effective. It is also important that pharmaceutical companies take note of the

apparent lack of force that financial incentives have as motivators to prescribe drugs.

Pharmaceutical drug manufacturers that have a new pharmaceutical drug that is therapeutically effective and cost effective can benefit from listing on the drug formulary provided an effective sales team is in place.

6.2 Recommendations for future studies

The research that has been conducted on managed care in South Africa is limited. Future work can include:

- Managed healthcare: Impact on patient care from a patient perspective.
- Managed healthcare: Impact on hospital care.
- Managed healthcare: Impact of managed care on specialists.
- Managed healthcare in South Africa: the stages of evolution that exist in various parts of the country with an in-depth look at population density and statistics to determine the level of uniformity.

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APPENDIX 1 Questionnaire

Letter of information and consent

Title of Research: **Managed Healthcare in South Africa:**

Impact on patient care and ethical pharmaceutical sales in Kwa-Zulu Natal.

Dear Participant,

I am currently studying for a Masters Degree in Marketing and my research titled above will contribute towards achieving my goal. General Practitioners throughout Kwa-Zulu Natal are chosen at random.

I require your assistance by completing the questionnaire, which will take **< 5 minutes** of your time.

All responses will be treated with anonymity.

Participation in the study is voluntary and you are free to withdraw from the study at any time. The information you give will only be used for research purposes, and your identity and individual answers will be kept totally confidential.

I greatly value your assistance.

Sincerely,

Marla Naidoo
Tel: 082 7815449
Fax: 031 4002227

PS: Please Find below your agreement for the research.

I, Dr..... have adequately discussed the study with the researcher, understand that I may withdraw from it at any time without giving reasons, and voluntarily agree to participate by completing the questionnaire.

Signature:..... Date:.....

Questionnaire

Please tick your response ☑ or fill in your answer where required:

Section A:

1. Gender: Male ☐ Female ☐
2. Number of years in practice _____
3. Age: a) 24-35 ☐ b) 36-45 ☐ c)46-55 ☐ d) 56-65 ☐ e) >66 ☐
4. Which of the following organisations are you a member of:

a) GPNet ☐ b) Medicross ☐ c) KZNMCC ☐ d) IPA-type ☐ e) Other _____

Section B:

5. Which of the following indicates your attitude to managed care?

a) very negative ☐ b) negative ☐ c) unsure ☐ d) positive ☐ e) very positive ☐

6. Please indicate how highly you rate the following as incentives to practice managed care:

ASPECT	Very Low	Low	High	Very High
a) better time allocation				
b) lower cost of treatment per patient				
c) financial incentives				
d) lower cost to patient				

7. How often do you consult the drug formulary when prescribing?

a) daily ☐ b) weekly ☐ c) monthly ☐ d) never ☐ e) other _____

8. How do you rate your compliance to the formulary?

a) <20% ☐ b) 20-40% ☐ c) 41-60% ☐ d) 61-80% ☐ e) >80% ☐

9. Answer **only** if your response to **Q8** was **a or b**, **if not go to Q10**.

The formulary is not adhered to because (please tick ☑)

a) The drugs I prefer to use are not listed _____

b) It has more generic/cheap drugs _____

c) It has more ethical/expensive drugs_____

d) The drug list is too restricted _____

e) It does not include the latest/new drugs _____

10. Which of the following **best describes** the reason why you comply with the formulary?

a) Financial incentives ☐ b) want to ☐ c) forced to ☐ d) other _____

11. Does the formulary list most of the drugs that you prescribed before the formulary was introduced?

a) Yes ☐ b) No ☐ c) Unsure ☐

12. How have your prescribing habits changed with managed care?

a) More generics ☐ b) Fewer generics ☐ c) No change ☐ d) Fewer ethicals ☐

e) More ethicals ☐

13. Please indicate the degree to which the following influence your choice of drug.

(Please Tick ☑)

ASPECTS	**No influence**	**Low influence**	**Moderate influence**	**High influence**
a) Listing on the formulary				
b) Cheapest drug available				
c) Previous experience				
d) Most effective drug available				
e) Financial incentives or bonuses				
f) Promotion through magazines				
g) Cost effectivity				
f) Promotion by a sales representative				

14. To what extent do you agree with the following statements with regards to managed care?

(Please Tick ☑)

ASPECT	Strongly Disagree	Disagree	Agree	Strongly Agree
a) Limits patient access to GP				
b) Reduces referrals to specialists				
c)Leads to higher patient turnover				
d) Leads to reduced cost per patient				
e) Encourages the use of ethical drugs				
f) Limits consultation time				
g) Reduces clinical freedom				
h) Leads to increased quality of care				
i) Promotes low cost care				
j) Dictates the use of generic drugs				
k) Leads to increased patient satisfaction				
l) Leads to the use of less than ideal drugs				
m) Improves financial viability of practice				
n) Improves doctor-patient relationship				

15. Do you have any further comments on managed care that you would like to make?

_____

_____

_____

_____

_____.

Thank You

Marla