THE SOUTH AFRICAN MANAGED HEALTHCARE SYSTEM AND THE GENERAL PRACTITIONER

By

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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 investigate the attitudes of general practitioners towards managed care, in South Africa, and its control mechanisms. The main sub-objectives of the study were the determination of managed care knowledge and attitude towards managed care, the frequency of drug formulary usage, the reasons for compliance with the formulary and to investigate if managed care is better at providing patient care than the traditional medical system.

The study was qualitative in nature and a random sampling technique was used to sample 100 general practitioners in Kwa-Zulu Natal. The field study was performed by means of a questionnaire and the data was processed with the Statistical Package for Social Sciences version 9.0. Descriptive statistics, frequencies and means were first determined thereafter inferential statistics, cross tabulations and correlations were performed were applicable, to ascertain any relationships between the variables and the significance of those relationships.

The results of the study indicated that the respondents had a very negative attitude towards managed care but their knowledge of managed care was of a high level. The majority of the respondents consulted the formulary on either a weekly or monthly basis with 36% wanting to comply with the formulary while 33% felt forced to comply and 24% complied due to incentives. The results indicate that managed care was not better than the traditional medical system at providing patient care. The majority of respondents also felt that job security and income received was poorer with managed care.

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CHAPTER 1
INTRODUCTION

1.1 Managed healthcare reform

Managed care evolved in the United States over two decades ago as a result of escalating health costs. It was introduced into South Africa in the last decade due to increasing cost of healthcare and increasing pressure from the private sector and government to control healthcare costs.

All forms of managed care represents attempts to control costs by modifying the behaviour of general practitioners and the influences used to control general practitioners include:

a) financial incentives which are related to a general practitioner's financial return for professional services
b) administrative or management strategies such as utilization review and compliance to the formulary, referral requirements and profiling systems linked to administrative sanctions
c) 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
d) information or normative influences such as the professional culture of the organization and the nature of professional interactions

(Inglehart, 1994).

The managed care system was not well accepted by physicians in the USA and many contemplated leaving medical practice (Bodenheimer, 1999).
Managed care reforms were reversed in countries such as the United Kingdom while opposition to its introduction in other countries varied in magnitude (Stocker, Waitzkin and Iriart, 1999).

General practitioners' views on the introduction of managed care into South Africa and their attitudes towards managed care and its control mechanisms have not been studied. In addition information pertaining to managed care in South Africa is limited as it is in the early stages of evolution.
This study therefore aims to determine South African general practitioner views on managed care and its control mechanisms, including financial incentives, drug utilization reviews and the use of a formulary. The provision of patient care with managed care, income received by the general practitioner with managed care and medical aid interaction will also be investigated.

1.2 The objective of the study

The aim of the study is to investigate the attitudes of general practitioners towards managed care and it's control mechanisms.

1.3 The research sub-objectives

The following sub-objectives were investigated:

1. The determination of private general practitioners' level of knowledge on managed care and their attitude towards managed care.

2. To determine the frequency of drug formulary usage, the rate of compliance and the reason for compliance with the formulary.
3. To determine whether a general practitioner receives better income with managed care.
4. To determine if the managed care is better at providing patient care than the traditional medical system.
5. To determine the level of influence that medical aids have on therapeutic or clinical care, which is administered by the general practitioner.

1.4 The delimitation's

a) In this study, only general practitioners from Kwa-Zulu Natal will be sampled, to facilitate greater control of the field study.

b) This study will be limited to 100 general practitioners.

1.5 The assumptions

a) The first assumption is that the views of the general practitioners are without bias.

b) The second assumption is 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.

1.6 The benefits of the study

a) A similar study has never been carried out in South Africa thus the information that is received can be used in future studies on managed care

in South Africa and also to draw comparisons with general practitioner views from other countries with a managed care system.

b) The information from this study can be used by managed care organisations to understand general practitioner views and to consequently modify their control mechanisms.

c) The information on the level of usage of the formularies will be invaluable to all pharmaceutical companies that want to list their products or already have their products listed.

1.7 Definition of the terms (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 general practitioners earn more for keeping patients well.

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.

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 labeled with its accepted chemical name, instead of a brand or trade name, and is available from several manufacturers.

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 care of their patients.

Health maintenance organisations (HMOs): are entities that provide, offer or arrange 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:

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

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

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.

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.

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.

Peer review: the evaluation of quality of total healthcare provided by medical staff with equivalent training.

Preferred Provider Organisation (PPO): a program in which contracts are established with providers of medical care. Providers under sub 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.

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.

Utilisation Review: a formal assessment of the medical necessity, efficiency and / or appropriateness of healthcare services and treatment plans on a prospective, concurrent or retrospective basis
(Chetty, 1999).

1.8 Overview of the study

The literature review, chapter 2, contains secondary data pertaining to managed care and its control mechanisms, however there is no information that is available from a South African perspective as no studies of this nature have been performed. Chapter 3, the methodology, details the sampling technique, sample size, the process of collecting, analysing and interpreting the primary data as well as validity and reliability issues. The analysis of the data and the results are presented in chapter 4, with conclusions and recommendations in chapter 5. A detailed bibliography is provided with a copy of the questionnaire in the appendix.

CHAPTER 2
LITERATURE REVIEW

2.1 Introduction

Fourie and Marx (1993) stated that the South African private healthcare costs were escalating out of control. At least 50% of healthcare costs were due to over-servicing by the general practitioners (Heymans and Ramsden, 1997). The introduction of managed care was inevitable, and it was introduced into South Africa approximately six years ago.

This chapter will review the medical situation in South Africa from 1987 to 1997; the history of managed care in the medical industry; the evolution of managed care; the types of managed care models and a comparison of the traditional fee-for-service medical system and managed care capitation. Managed cares influence on physician behaviour; drug formularies and the pharmaceutical component of managed care as well as managed care in the medical aid industry and response to managed care in various countries will also be reviewed.

2.2 The South African Medical Situation, 1987-1997

According to 1987 figures, the South African private health sector accounted for 43.6% of the total health care bill, yet providing care for less than 25% of the total population (Broomberg, de Beer and Price, 1990).

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 (Fourie and Marx, 1993).

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 with the other 79% 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).

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.

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:

a) the traditional fee-for-service system provides no incentives for cost cutting
b) general practitioners earn more if people are sick than if they are well
c) medical aids have assumed full responsibility for medical costs; members and service providers have assumed no responsibility
d) whilst medical aids have assumed the full risk of healthcare funding, they have in no way attempted to manage this risk
e) an over supply of general practitioners in the private sector has encouraged over servicing as general practitioners seek to make ends meet
f) fraud is rampant and a fee-for-service based payment system has no means of curbing this

(Heymans and Ramsden, 1997).

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

A study conducted by Volmink *et al* (1993), on the attitudes of private general practitioners towards healthcare in South Africa, before the introduction of

managed care. 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.

2.3 History of Managed Care in the Medical Industry

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" (Chetty, 1999: 1) 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.

United States response to "a healthcare 'system' lacking in coherence, suffering from organisational fragmentation, and consuming large amounts of resources" resulted in the development of managed care according to Fairfield *et al* (1997a: 1824). Healthcare that was provided lacked preventative services and allowed for under-treatment and over-treatment of patients (Fairfield *et al*, 1997a). Landon, Wilson and Cleary, (1998) stated that managed care has a long history in the United States 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.

In large healthcare organisations in the United States, managed care started as early as the 1920's and it focussed on quality improvement by comparison of results of routine data and surveys across hospitals, clinics and medical staff. According to Van der Merwe (1998), quality of care was the main aim and cost containment was merely a byproduct, whereas in South Africa, the current focus is on containment or management of costs.

2.4 The Evolution of Managed Care

Market Evolution as experienced in the United States of America according to Chetty (1999):

Stage I:

- Independent, unaffiliated hospitals; majority of physicians in solo practice
- Less than 5% managed care population
- High utilization of medical services
- Fee-for-service pricing structure exists
- Employers not aggressive in pushing managed care plans
- Care is purchased by cost of medical claim

Stage II:

- managed care population10 – 20%
- proliferation of HMOs, PPOs and IPAs
- Utilization begins to decline
- Hospital bed occupancy declining
- Formation of provider networks
- Pricing is determined by discounts and withholds

- Purchase of care by encounter, negotiated fee schedules

Stage III:

- 30 – 50% of population is managed care insured
- Dominant HMOs and PPOs emerge
- Basis for cost of care: cost per covered life, negotiated premiums, POS
- Pricing is by global fees and physician capitation
- Majority of hospitals in systems and/or affiliated
- Utilisation continues to decline
- Employers offer incentives to join HMOs

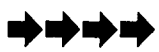
Stage IV:

- Managed Care population exceeds 60%
- Medical care fully integrated (insurer, hospital and physician share risk)
- Utilisation declines up to 40%
- 2-3 networks dominate the market
- Pricing by total Health Care cost per covered life
- Increased emphasis on preventative medicine and wellness awareness

Stage I Stage II Stage III Stage IV

Declining utilisation and margins

Increasing consolidation and integration



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), states 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.

2.5 Types of Managed Care Models

Managed care integrates the financing and delivery of medical care through contracts with selected physicians and hospitals, that provide comprehensive healthcare services to enrolled members at a predetermined monthly premium. All forms of managed care represents attempts to control costs by modifying the behaviour of general practitioners, although they do so in different ways. Most forms also restrict access of their insured populations to physicians who are not affiliated with a particular plan (Inglehart, 1994).

Five types of managed care organisations exists:

- Health Maintenance Organisation (HMO)
- Preferred Provider Organisation (PPO)
- Exclusive Provider Organisation (EPO)
- Point of Service plans (POS)
- Speciality HMOs

2.5.1 Health Maintenance Organisation (HMO)

This is a healthcare system that is responsible for both the financing and delivery of health services to covered members or an enrolled population. These organisations provide care to members through affiliated providers. HMOs have to ensure access to covered health care services, ensure quality and appropriateness of the health service they provide to members. The common models of HMOs are the Staff model, Group model, Network model and the Independent Practitioner Association (IPA) model Chetty (1999).

a) The Staff Model:

The physicians that provide care for the covered beneficiaries are employed by the HMO and are paid salaries with a bonus or incentive payment based on their productivity (Chetty, 1999).

b) The Group Model:

These are medium sized or large multispeciality group practices, of which physicians are employees or employee-owners. The physicians are employed

by the group practice and not by the HMO. The HMO contracts with these multispeciality group practices to provide all physicians services to its members (Chetty, 1999).

According to Bodenheimer (1999), in the United States of America in 1980, 141 groups with 23000 physicians existed and in 1996, 387 groups existed with 69000 physicians of which 64% of large medical groups is owned by physicians.

c) The Network Model:

The HMO contracts with more than one group practice to provide physician services to the HMO members (Chetty, 1999).

The network model tends to reimburse physicians on a discounted fee-for-service basis (Landon, Wilson and Cleary, 1998).

d) The Independent Practitioner Association (IPA) model:

IPA-model contracts with individual physicians or small groups in private practice for the purpose of securing contracts (Landon, Wilson and Cleary, 1998).

The IPA models are the most numerous of physicians' managed care organizations. HMOs can cheaply create networks of physicians by contracting with IPAs that comprise hundreds of physicians. The IPA model allows physicians to obtain contracts with the HMOs without making major changes to their practices and they can then care for people enrolled in several HMOs and PPOs as well as their non-managed-care patients (Bodenheimer, 1999).

2.5.2 Preferred Provider Organisation (PPO)

According to Chetty (1999), PPOs are entities through which health care services from selected groups of participating providers are bought. The participating providers have to abide by utilisation management and are reimbursed by the PPO. The covered members are allowed to use non-preferred general practitioners but they benefit from lower co-payments at the preferred provider general practitioners.

2.5.3 Exclusive Provider Organisation (EPO)

These are similar to PPOs but EPOs limit their covered members to participating providers exclusively. EPOs are usually implemented by employers that want to save cost (Chetty, 1999).

2.5.4 Point of service plans

This is hybrid of the Health Maintenance Organisation and Preferred Provider Organisation. The general practitioners are reimbursed through capitation payments and a withhold exists upon achieving costs and targets (Chetty, 1999).

2.5.5 Speciality HMOs

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

In the United States of America, many new plans have components of both IPA and Group models. In 1995, almost 75% of enrollees in managed care plans were in IPA's or mixed model plans and most managed care organizations have multiple options for patients to choose from (Landon, Wilson and Cleary, 1998).

The majority of general practitioners in South Africa belong to some type of managed care organisation. The models that exist in South Africa are the Staff, IPA, Network and Group models. The South African Managed Care Coalition (SAMCC) is the organisation that represents most of the IPAs nationally. Each of the various organisations has a drug formulary, which general practitioners are required to follow. The formulary used may be the general formulary set up by the SAMCC or a modified version of it (Personal Experience).

2.6 Comparison of the traditional fee-for-service medical system and managed care

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

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

The traditional fee-for-service payment system is based on more visits by patients, the greater the income earning potential whereas capitation is payment for services per member per month. With the managed care, capitation method every service that is generated provides an expense and thus reduced income to the provider. Capitation is set to become the dominant mode of payment in a managed care environment (Chetty, 1999).

The traditional system has curative benefits only, with no emphasis on early diagnosis procedures or lifestyle improvement, whereas managed care encourages preventative medicine with focus on the individual as a whole. With the fee-for-service system, the patient receives medical service and may or may not pay immediately. The patient submits a claim form to the medical aid and the medical aid then reimburses the patient or the provider. The patient is responsible for paying the balance. With managed care, the service is paid for and cost controls are implemented before the patient receives care thus eliminating any need for post treatment medical claims (Schering Plough, 1998).

2.7 Managed care's 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 represents attempts to control costs by modifying the behaviour of general practitioners and the influences used to control general practitioners include:

a) financial incentives which are related to a general practitioner's financial return for professional services
b) administrative or management strategies such as drug utilization review and compliance to the formulary, referral requirements and profiling systems linked to administrative sanctions
c) 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
d) Information or normative influences such as the professional culture of the organization and the nature of professional interactions

(Inglehart, 1994).

According to Grumbach *et al* (1998), financial incentives is the most controversial method of influencing primary care physicians, especially the incentives that were designed to encourage physicians to limit services such as referrals. The incentives are usually bonuses that are paid in addition to the

physicians base income. The bonus payments are funded by withholds, which are funds deducted from physicians base payments.

Fairfield *et al* (1997b) stated that risk sharing, performance-related payment and bonuses and withholds are incentives that encourage general practitioners to practice cost effective medicine.

The results of the study by Grumbach *et al* (1998), to determine the prevalence and effects of financial incentives, showed that 57% of the 766 physicians felt pressurized by the managed care organisations, to limit referrals and increase the number of patients seen per day. The respondents believed that such pressure compromised patient care but incentives that were dependent on the quality of care and patients satisfaction created greater job satisfaction.

There has been an increase in mandatory disclosure laws, encompassing financial incentives that are offered to physicians, to reduce the utilization of services. The objectives included the discouragement of compensation methods that compromised a patients access to treatment (Miller and Sage, 1999).

Drug utilization reviews is used to monitor drug use and control prescription drug costs by:

a. decreasing the number of prescriptions that are not indicated
b. reducing inappropriate drug use which may harm patients through prolonged therapy

c. forcing general practitioners, that do not adhere to the formulary, to follow plan guidelines

Managed care plans select general practitioners as providers and those that are not performing to standard may be deselected. The following are used to determine their success: clinical criteria, commitment to the organisation, patient satisfaction, case management of high cost patients, length of stay, office organisation, communication between primary and secondary care and the delivery of preventative services (Fairfield *et al*, 1997b).

"Many physicians see themselves as engaged in a power struggle with managed care plans... A majority of Americans were enrolled in heath maintenance organisations (HMO's) or preferred-provider organisations (PPO's). Managed care was given credit for the slowing of inflation in healthcare costs from 1993 to 1997. The growth in physician's average annual net incomes dropped from 7.2 percent for the period from 1986 through 1992 to 1.7 percent for 1993 to 1996. The stocks of for-profit HMOs scored big on Wall Street" (Bodenheimer, 1999: 584).

The American system of managed care was not well accepted by physicians in the USA and many contemplated leaving medical practice. "In the 1980's, employers and governments chose managed care as the preferred vehicle for cost containment. 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 1998 characterized themselves as against managed care. Forty-six percent said that they 'often think about leaving clinical practice' " (Bodenheimer, 1999: 584).

According to Fairfield *et al* (1997b), the general practitioners in the United States have shown feelings towards managed care that have included anger, denial, depression and negotiation before finally accepting their fate.

A survey was conducted in 1997 by Simon *et al* (1999), on the views of managed care among academic physicians and medical students in the United States. The results indicated a very high level of negativity towards managed care and the fee-for-service system was rated superior than managed care with regards to access to physicians, minimizing ethical conflicts, quality of general practitioner-patient relationships, continuity of care, quality of end-of-life care and the management of chronic illness. The survey also indicated the level of knowledge of managed care to be high.

Expansion of managed care played a key role in reducing health costs in the early and middle 1990's, mainly by limiting the freedom of decision making that physicians and consumers enjoyed. These limitations have led to serious backlashes in legislature and the ability of managed care plans to constrain healthcare costs is being questioned (Ginzberg, 1999).

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.

The future of managed care in America is uncertain as a reversal in profitability of those for-profit HMOs was seen in 1997, with only a third of the organisations showing a profit. Health care costs are threatening to rise again, reducing confidence in managed care being the answer. The control that managed care had over clinical decisions is weakening (Bodenheimer, 1999).

2.8 Drug Formularies and the Pharmaceutical component of Managed Care

The pharmaceutical component of South Africa's total health costs was 31.8% in 1992 compared to 10% in the United States of America and 7% in the United Kingdom (Schering-Plough, 1998). Thus, there was increased pressure from the

government and the private sector to control healthcare costs, in particular drug costs.

Managed care serves to reduce drug utilization cost, as it comprises an ever-increasing percentage of total healthcare costs. Most managed care organisations use drug formularies to help reduce the cost of prescription drugs. A drug formulary is a list of plan approved drugs designed to encourage physicians to prescribe the most cost effective medications and may typically include lower-priced generic (or multi-source) products and may exclude higher priced branded products (Chetty, 1999).

Different types of formularies exist:

a) An open formulary which is not restrictive and physicians may prescribe any drug
b) A closed formulary which is an exclusive list of specific drugs and physicians must choose from this list
c) 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
d) 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).

Van der Linde (1997), stated that the South African Managed Care Coalition (SAMCC), after more than two years of work, has succeeded in producing a

formulary which contained 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 SAMCC represents a large number of IPAs and 4000 general practitioners nationally, of which the majority dispense medication (Chetty, 1999). The intention of the formulary was to show the government that general practitioners could practice cost-effective medicine and that, dispensing general practitioners could dispense, to pass on a lower drug cost to the patient (Van der Linde, 1997).

According to Chetty (1999), most of the formularies 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.

From a pharmaceutical aspect, 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 due to its presence on the formulary.

2.9 Managed care in the Medical Aid industry

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.

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 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.

Southern Life, Sanlam and Discovery Health are amongst other South African health insurers that have adopted managed care.

2.10 Managed care in various countries

Managed care is being rapidly introduced into many countries, despite the problems in the Unites States. However, managed care reforms have been recently reversed in some European countries including the United Kingdom, Netherlands and Sweden. Opposition to the introduction of managed care varies among many countries, with Ecuador and Brazil opposing it totally and preferring alternatives while in Chile and Columbia, managed care organisations have experienced less resistance (Stocker, Waitzkin and Iriart, 1999).

Due to the problems experienced with the American Managed Care system, managed care organisations in South Africa are attempting to modify the American system for use in South Africa (Chetty, 1999).

Daily contact with general practitioners in South Africa indicates that they are negative about managed care in this country, and are pessimistic about its success in South Africa (Personal experience).

2.11 Conclusion

Managed care has been in the United States of America (USA) for many decades, while other countries are in the process of either introducing managed care or reversing managed care reforms.

According to Bodenheimer (1999), the American system of managed care was not well accepted by physicians in the United States of America and nearly 70% of them were "against" managed care.

Results of a survey on views of managed care, which was conducted by Simon *et al* (1999), indicated a very high level of negativity towards managed care. The survey further found that the respondents considered the traditional fee-for-service system to be superior than managed care.

Chetty (1999) stated that there is limited information on managed care in South Africa as it is in the early stages of evolution.

General practitioners views on the introduction of managed care into South Africa and their attitudes towards managed care and its control mechanisms have not been studied.

This study therefore aims to determine South African general practitioner views on managed care and its control mechanisms, including financial incentives, drug utilization reviews, medical aid interaction and quality of treatment with managed care compared to the fee-for-service system.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

The aim of this study was to determine South African general practitioner views on managed care and its control mechanisms, including financial incentives, drug utilization reviews and the use of a formulary. The provision of patient care with managed care, income received by the general practitioner with managed care and medical aid interaction will also be investigated.

The field study was performed using qualitative and quantitative techniques. This was a descriptive study with a longitudinal design.

3.2 Sampling Technique

A random sampling technique, a method where each member of a population has the same chance of being included in the sample, was used. Most of the general practitioners are subjected to similar mechanisms of control thus the random sampling technique was considered suitable (Personal experience).

3.3 Sample size

A total of 100 private practice general practitioners, in the Kwa-Zulu Natal province of South Africa were chosen.

These general practitioners did not have to be members of any managed care organisations but most of the respondents belonged to organisations such as: South African Managed Care Coalition (SAMCC); GP Net; Medicross or Independent Practitioner Association- based.

3.4 Data collection and analysis

Primary Data was collected by means of a questionnaire as illustrated in Appendix 1. The questionnaire comprised of a biographical section with 4 questions and a second section with 10 questions. In the second section, question 13 comprised of 12 sub-questions and question 14 was open-ended. Most of the questions were designed according to the five-point Likert scale as it offered attitudinal intensity that was equal with both positive and negative items. The questionnaires were personally administered and collected.

Secondary Data from published reports on the subject matter was used to compare managed care views of the South African general practitioner with views of general practitioners in other countries.

The data was edited, coded and then captured on Microsoft Excel before being processed with the Statistical Package for the Social Sciences (SPSS version 9.0) software package. Descriptive statistics, frequencies and means were determined which provided a general overview of the data. Thereafter, inferential statistics; cross tabulations and correlations were performed, where applicable, to determine if any relationships existed between the variables and the significance of those relationships.

3.5 Validity and Reliability

3.5.1 Introduction

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 has it should perform (Leedy, 1997).

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).

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

3.5.2 Sampling

There are a large number of general practitioners in private practice within South Africa, however the sampling was limited to 100 respondents in the Kwa-Zulu Natal Province only, to facilitate a greater control of the study and to minimise the cost of the study. An assumption was 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, which is justified as all managed care organisations have similar mechanisms of control.

3.5.3 Questionnaire

Due to the nature of this study, the general practitioners were willing to help and 86% completed the questionnaire in the author's presence and the balance (14) of the questionnaires were faxed or fetched when they were completed.

To determine the reliability of the measuring instrument, the questionnaire was pilot tested by the first eight respondents who found the content to be acceptable with no ambiguous questions. The respondents were happy with the time that it took to complete the questionnaire, approximately 5 minutes.

There was an error in the questionnaire that the pilot testing did not find. Questions 7 – 11 (Appendix 1) related to formularies. If the respondent had a formulary to use (question 7), then questions 8 –11 could be completed but for the respondents that did not have a formulary that they were required to use, questions 8 –11 were to be left unanswered. However, this was only discovered when the first "non-formulary" respondent completed a questionnaire, half way through the field study. The 18 " non-formulary" respondents realised that they did not or could not answer the questions but the error did not affect the validity nor the reliability of the research.

As a measure of internal consistency validity, two questions that measured the same variable but worded in a negative and positive way were included in the questionnaire. The consistency of the views on these questions indicated that the respondents read the questions and not just ticked any option.
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.

3.5.4. Summary

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

According to the method of triangulation the components of the literature review, statistical results and qualitative open-ended question in questionnaire will be discussed to show validity of the results.

The main objective of the study was to investigate the attitudes of general practitioners towards managed care in South Africa and it's control mechanisms. Due to the lack of information on managed care in South Africa the results of the open-ended question and statistical analysis will be compared with the views of medical practitioners from other countries.

The literature review reflects a very negative attitude towards managed care and its control mechanisms according to Bodenheimer (1999), Fairfield *et al* (1997b) and Simon *et al* (1999).

The statistical results according to the field study shows 69% of the respondents have a negative attitude towards managed care with answers from the open-ended question reflecting the same sentiment. The respondents were not happy with most of the control mechanisms that are being used as it reduces general practitioner income and job security, provides

poorer patient care than the traditional fee-for-service system and it reduced their autonomy, according to statistical results and answers to the open-ended question. Data from the literature review also reflected similar results according to the study by Simon *et al* (1999).

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

3.6 Conclusion

The field study was well controlled and the research appears to be valid and reliable.

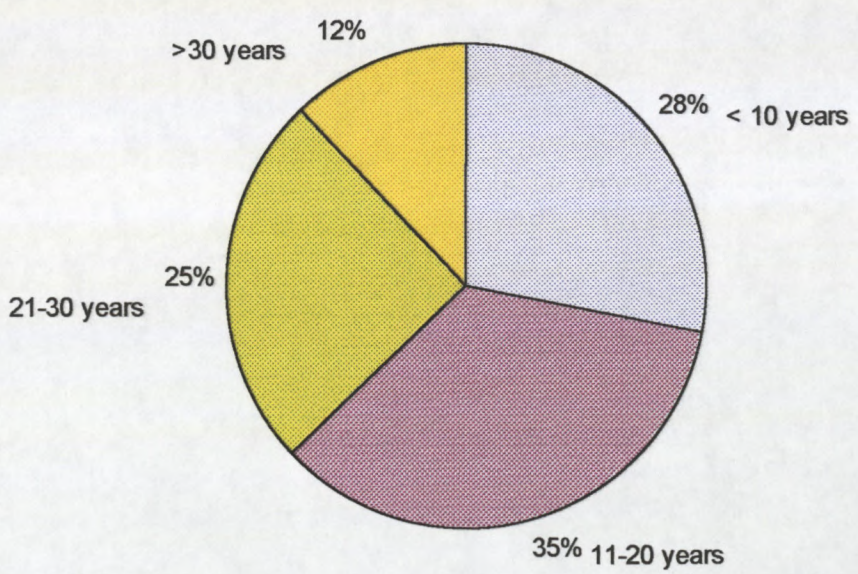
CHAPTER 4
ANALYSIS AND RESULTS

4.1 Introduction

The analysis and results will be presented in order of the sub-objectives of the study.

The demographic data shows 88% of the respondents to be male and 12% female. Figure 4.1 reflects the number of years that the respondents have been practicing for, 28% for less than 10 years, 36% between 11 and 20 years, 23% between 21 and 30 years and 13% greater than 30 years. Of the respondents surveyed the mean age was 46.51 years with 88% of them being between 30 and 60 years old.

Figure 4.1 Years in Practice



As managed care is evolving at different rates, in different parts of the country; the respondents were asked about the percentage of their patients that were on managed care plans. The results in Table 4.1 show 61 of the 100 respondents having <20% of patients on managed care plans, which falls into stages I and II in the evolution cycle, which is characterised by having a managed care population of <20%.

Table 4.1 Percentage of patients on managed care plans

No of respondents	% of patients on managed care plans
27	<5%
34	5-20%
13	20-35%
14	35-50%
12	>50%
Total 100	

Managed care has been introduced into South Africa within the last decade but there appears to be a low growth rate with 61% of the respondents having managed care population of <20%. The results of the t-test at 95% confidence interval were significant at .000 (2-tailed).

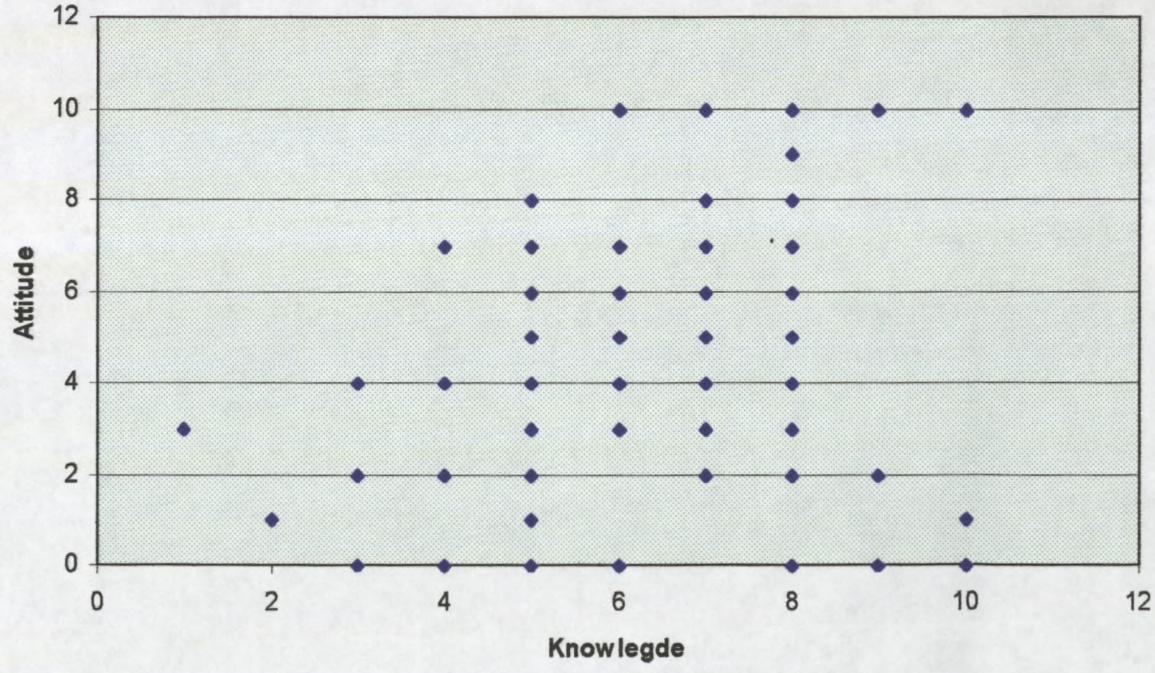
4.2 Sub-objective 1:

The determination of general practitioner level of knowledge on managed care and their attitudes towards managed care

The respondents were asked to rank their level of knowledge on a scale of 0 -10 (0= little as possible and 10= much as possible), resulted in a mean of 6.33 with a standard deviation of 1.86. The results of their attitudes towards managed care on a scale of 0 – 10 (0= as negative as possible and 10= as positive as possible), produced a mean of 4.41 with a standard deviation of 2.69.

Figure 4.2 below, a scatter plot of knowledge on managed care versus attitude towards managed care, reflects a positive relationship between the two variables.

Figure 4.2 Scatter plot of knowledge versus attitude



The correlation coefficient, an interdependence technique, was used to determine the interrelationship between knowledge and attitude. The correlation coefficient (r) = +0.66, indicating a moderately, strong positive relationship.

Table 4.2, below shows the relationship between the respondents negative and positive attitudes compared with high and low levels of knowledge. The variables were rearranged as negative or low from 0 through 5 and positive or high from 6 through 10. The results show 37% of the respondents have a high level of knowledge with a negative attitude, compared with 23% of the respondents having a high level of knowledge and a positive attitude. Of the respondents that indicated a low level of knowledge, 8% were positive but 32% were negative.

Attitude towards managed care is predominantly negative (69%) while 60% of the respondents indicated a high level of knowledge.

Table 4.2 Relationship between attitudes and knowledge

	High level of knowledge	Low level of knowledge	Total
Positive attitude	23%	8%	31%
Negative attitude	37%	32%	69%
Total	60%	40%	100%

Table 4.3 below, shows the correlation between the attitude of respondents and the number of years that they have been practicing. All of them had attitudes that were in the negative range.

From a comparison of the mean attitudes within the specific years of practice and the mean attitude of all the respondents, it was evident that the respondents that have been practicing for between 21 and 30 years have attitudes close to the overall mean of 4.41. Those practicing for >30 years have an attitude mean at 2.9, which is very negative. Respondents that have been practicing between 0-10 years were slightly more negative than those practicing for 11-20 years, as this was the transition phase from the old medical system to managed care.

Table 4.3 Attitudes at specific years of practice

Years in practice	Frequency of respondents	Attitude to managed care
0-10	28	4.57
11-20	35	4.80
21-30	25	4.39
>30	12	2.9

The results of a t-test between years in practice and attitudes of the respondents, were significant (.000) at 95% confidence interval (2-tailed).

In conclusion, the aim of sub-objective 1 was realised with the respondents reflecting a moderately high knowledge of managed care (mean of 6.33) with a

negative attitude towards managed care (mean of 4.41). A correlation coefficient between both these variables indicated a moderately, strong positive relationship at +0.66.

The attitude towards managed care is predominantly negative (69% of respondents) while 60% of the respondents indicated a high level of knowledge. Those that have been practicing for <21 years are slightly more positive than those that have been practicing for longer.

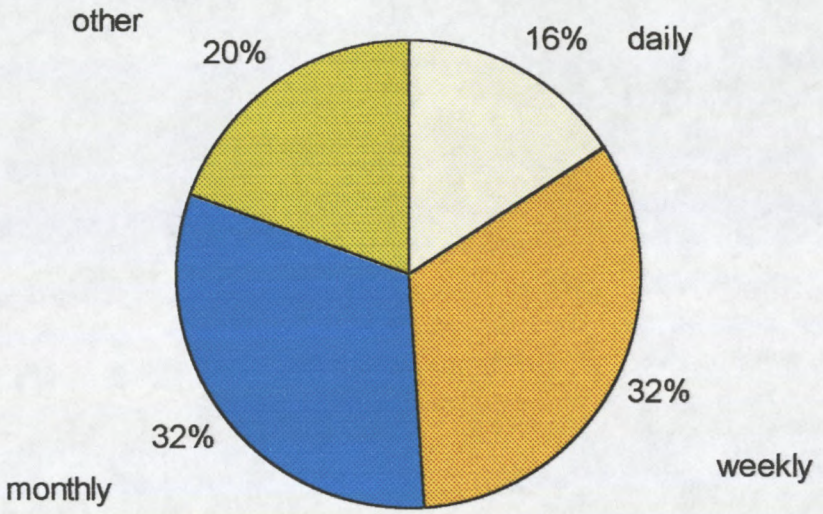
4.3 Sub-objective 2:

To determine the frequency of drug formulary usage, the rate of compliance and the reason for compliance with the formulary.

Eighty-two percent of the respondents have a formulary to use while 18% do not have a formulary. The 82% were then asked how often they consulted the formulary (Figure 4.3), their rate of compliance (Figure 4.4) and reason for compliance (Figure 4.5).

According to Figure 4.3, a very small percentage of the respondents consulted the formulary on a daily basis, with 32% consulting it weekly and 32% monthly. Those that chose "other" stated that they consulted the formulary only if they were uncertain about a drug that they wanted to use.

Figure 4.3 Consultation of Formulary

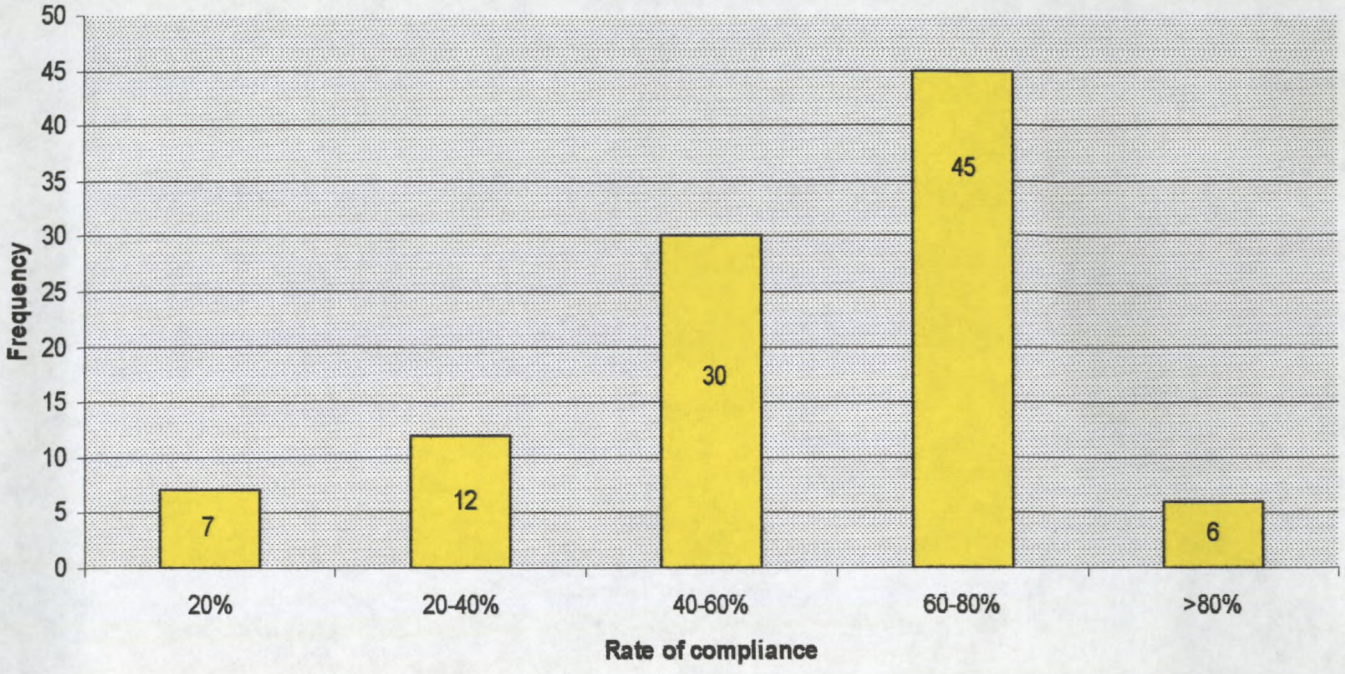


Despite the majority of respondents only consulting the formulary on a weekly or monthly basis, their compliance to the formulary according to figure 4.4 below, shows that 30% of the respondents rate their compliance between 40% - 60% and 45% in the 60% - 80% region, representing a majority of 75%.

Although 69% of the respondents were negative in their attitude towards managed care, it is surprising that the compliance figures are high as the use of a drug formulary is one of the control mechanisms that is used by managed care organisations.

The compliance figures are sent to the respondents from their managed healthcare organisations on a regular basis to inform them of their performance.

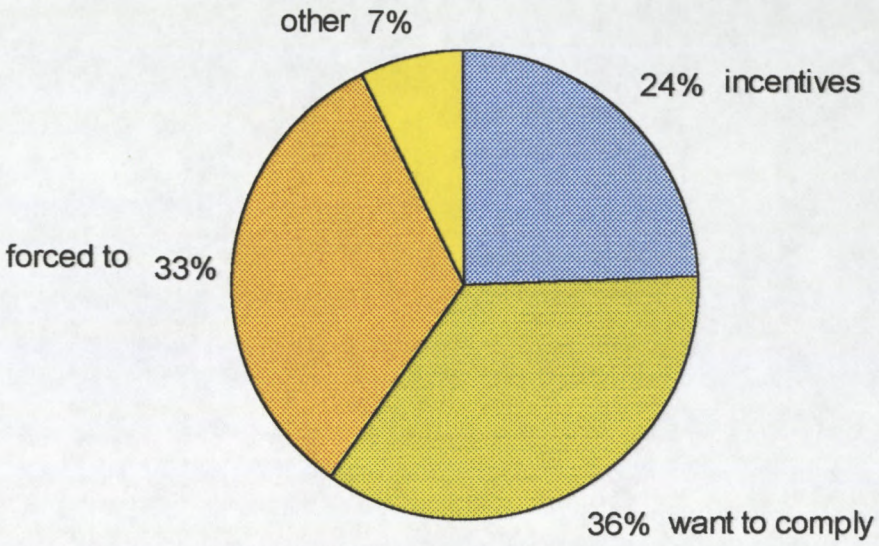
Figure 4.4 Rate of compliance to the formulary



Their reasons for compliance (Figure 4.5) indicate that 36% want to use the formulary, 24% use it due to the financial incentives and 33% use it not through choice as they are forced to. The respondents that chose "other" (7%) stated that they did not necessarily comply but by coincidence, the drugs they scripted were on the formulary.

A financial incentive is a control mechanism that is used to entice general practitioners to comply with the formulary, however had the financial incentives not been a choice, it can be deduced that the "forced to" percentage would be increased to 57%.

Figure 4.5 Reason for Formulary compliance



The respondents were also asked if financial incentives are good motivators to practice managed care and if managed care drug utilisation reviews is a good system, the results are tabulated in table 4.4. Fifty percent of the respondents agreed that financial incentives are good motivators while 41% disagreed. Fifty-four percent rated drug utilisation reviews as a good system with 29% disagreeing and 17% unsure.

Those that favoured financial incentives also favoured drug utilisation reviews, the process that monitors general practitioner drug usage, thus implying that the respondents will comply with drug usage guidelines knowing that they will be paid for it. Certain respondents said that the incentives should be removed according to comments from the open-ended question.

Table 4.4 Financial incentives and drug utilisation reviews

Rating	Financial incentives are good motivators to practice managed care	Managed care drug utilisation reviews is a good system
Agree	50%	54%
Unsure	9%	17%
Disagree	41%	29%
Total	100%	100%

A Pearson's correlation test, to determine if any relationship existed between financial incentives being a good motivator and drug utilisation reviews being a good system, was 0.375 at 0.01 significance level (2-tailed).

The aim of sub-objective 2 was realised. The results indicated that most of the respondents consulted the formulary on a weekly or monthly basis but their compliance rates were moderate, with 51% of them having a compliance of >60%. The reasons for compliance indicated that 36% wanted to comply but 57% were compelled to either by incentives (24%) or other methods of "force" (33%). At least 50% of the respondents believed that financial incentives are good motivators and that drug utilisation reviews is a good system.

4.4 Sub-objective 3:

To determine whether a general practitioner receives better income with managed care

69% of the respondents agreed that fee-for-service is better than capitation, with 21% disagreeing and 10% unsure. The t-test results were significant at 99% confidence interval (Table 4.5).

58% of the respondents agreed that payments to general practitioners are poorer with managed care, while 16% disagreed and 26% were unsure. The t-test results were significant at a 99% confidence interval (Table 4.5). The previous question was rephrased and 60% disagreed with the statement that "income received is better with managed care". 8% agreed while 29% were unsure, and a t-test also showed the results to be significant at a 99% confidence interval (Table 4.5).

Table 4.5 Results of t-tests for sub-objective 3

Aspect	N	Mean	Std dev	Sig. (2-tailed)
Fee for service is not better than capitation	100	3.75	1.23	.000
Payment to General practitioner are poorer with managed care	100	2.41	1.1	.000
Income received is better with managed care	100	3.7	.99	.000

The overall results for sub-objective 3 show that the majority of respondents receive poorer income with the managed care system and the traditional fee-for-service system is perceived to be better than capitation, a managed care payment method.

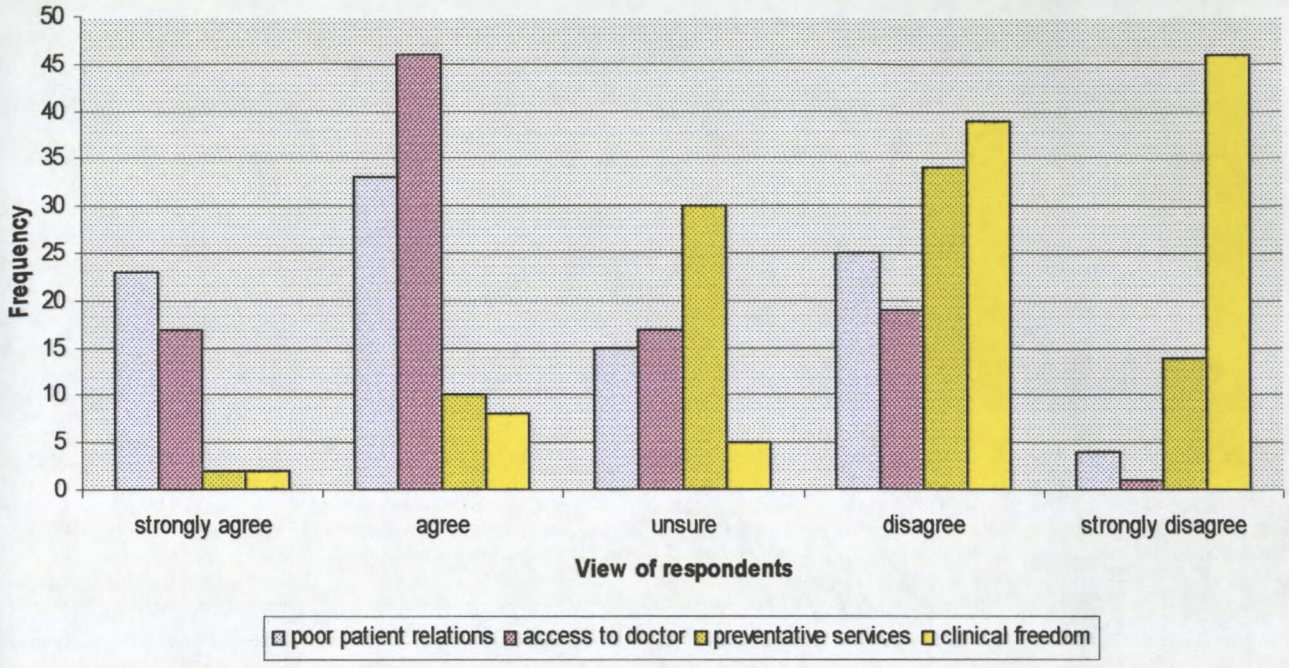
4.5 Sub-objective 4:

To determine if managed care is better at providing patient care, than the traditional medical system

Four aspects were investigated as follows:

1. When asked whether managed care resulted in poor patient relations, 56% of the respondents agreed with 29% disagreeing and 15% were unsure (Figure 4.6).
2. 63% of the respondents agreed that patient access to general practitioners is poorer while 20% disagreed and 17% were unsure (Figure 4.6).
3. 12% of the respondents agreed that preventative services are better with managed care, with 48% disagreeing and 30% were unsure (Figure 4.6).
4. When asked if managed care increased a general practitioners clinical freedom, 85% of the respondents disagreed, 10% agreed and 5% were unsure (Figure 4.6).

Figure 4.6 Provision of patients care with managed care



Results of the t-tests (Table 4.6) that were performed on the four aspects for sub-objective four and were significant at 99% confidence interval (2-tailed), for each of the aspects.

Table 4.6 Results of t-test for sub-objective 4

Aspect	N	Mean	Std Dev	Sig. (2-tailed)
Managed care allows for poor patient relations	100	2.54	1.21	.000
Access to GP is poorer with managed care	100	2.41	1.02	.000
Preventative services are better with managed care	100	3.38	1.01	.000
Managed care increases a General practitioner clinical freedom	100	4.19	.99	.000

The overall results for sub-objective 4 show that the respondents do not favour managed care as it allowed for poor patient relations, it reduces patient access to the general practitioner's, decreases a general practitioner's clinical freedom and does not offer better preventative services when compared to the old medical system. This was further emphasised by comments from the respondents, that managed care was designed for profit gain, not patients benefit; it affects patient /practitioner relations adversely and that it was unsuccessful elsewhere.

4.6 Sub-objective 5:

To determine the level of influence that medical aids have on therapeutic or clinical care, which is administered by the general practitioner

Figure 4.7 Medical aid influence on clinical care

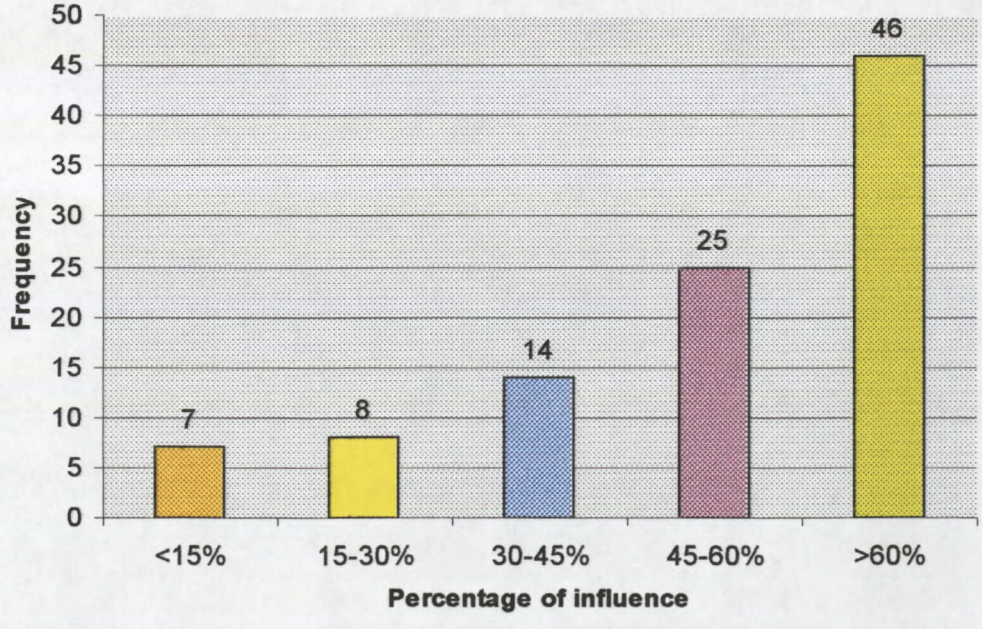
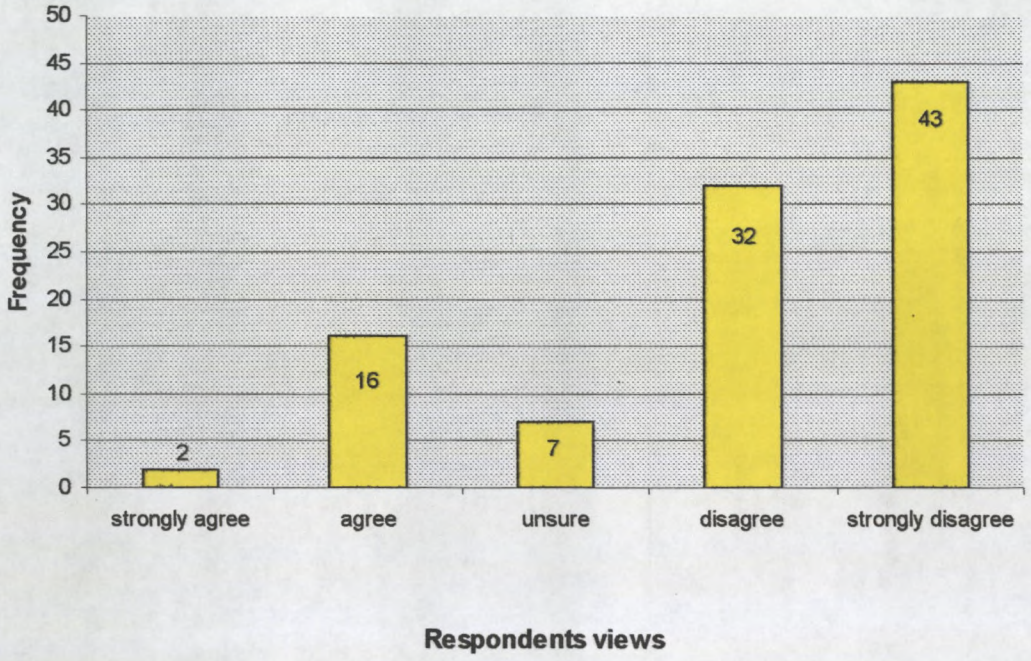


Figure 4.7 (above) illustrates the level of influence that medical aids have on the therapeutic or clinical care that is given by the general practitioner to the patient. 71% of the respondents reported that medical aids influence a large proportion (more than >45%) of clinical care and of this percentage, 46% of the respondents were subjected to >60% influence.

Figure 4.8 Medical aids should influence clinical care



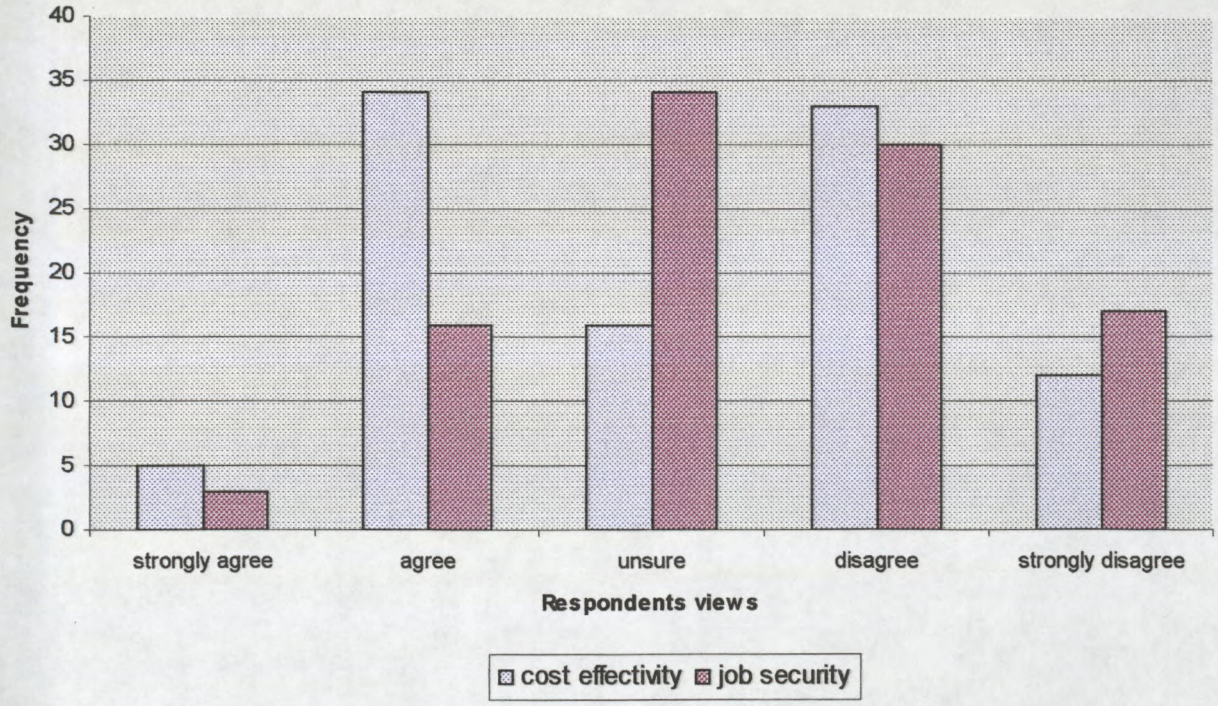
The respondents were also asked if medical aids should have an influence over the care given to the patient. The results according to Figure 4.8, shows that 75% of the respondents believe medical aids should not influence care, 16% believe medical aids should influence care and 7% were unsure. A t-test at 95% confidence interval was significant at .000 (2-tailed)

The overall results of sub-objective 5 indicates that medical aids influence a large proportion of clinical care and 75% of the respondents feel that medical aids should not have an influence on clinical care.

4.7 Additional findings

The respondents were asked if they felt that job security was better with managed care, and if they considered managed care to be more cost effective than the old medical system.

Figure 4.9 Cost effectivity and job security



The results according to Figure 4.9, above, indicate that 47% of the respondents felt that job security was not better with managed care, while 19% felt that it was and 34% were unsure. 39% of the respondents agreed that managed care is more cost effective than the old medical system, with 45% disagreeing and 16% unsure. A t-test performed on both the variables indicate that it was significant (.000) at 95% confidence interval (2-tailed).

It was further emphasised by comments from the respondents that managed care was not cost effective in treating patients and that their freedom to practice is being threatened.

4.8 Conclusion

The aims of all 5 sub-objectives were realised.

The data for the first sub-objective indicated that the respondents had a high level of knowledge but a very negative attitude towards managed care. The relationship was found to be moderately, strong positive, with a correlation (r) of +0.66.

The data for the second sub-objective indicated that 82% of the respondents were required to use a formulary with the majority consulting the formulary on a weekly or monthly basis. Compliance to the formulary was due to incentives (24%), wanted to comply (36%) and forced to comply (33%).

Sub-objective 3 results indicate that respondents receive poorer incomes with managed care. The t-tests were found to be significant, showing that they did not occur by chance.

The results of sub-objective 4 indicate that managed care was not better, than the old medical system, at providing patient care. The results were significant at a 95% confidence interval, thus reflecting that it was not due to chance.

The data for sub-objective 5, shows that medical aids have a large influence over clinical care that is given to the patient, while 75% of the respondents agreed that medical aids should not have an influence over care.

Additional findings indicated that 45% of the respondents believe that job security is poorer with managed care and that managed care is not cost effective. The results were found to be significant by t-tests, indicating that it was not a chance occurrence.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section will analyse the results of the field study and compare it with data from the literature review. Recommendations will be offered to managed care organisations and other people that are involved in the managed care industry, as well as recommendations for further research.

5.2 Conclusions

The aim of sub-objective 1 was to determine general practitioner level of knowledge on managed care and their attitude towards managed care. The overall results showed 60% of the respondents to have a high level of knowledge on managed care with 69% of the respondents having a negative attitude towards managed care (mean of 4.41).

The literature survey did not show a relationship of knowledge and attitudes but a correlation coefficient (r) = +0.66, from the data of the field study, reflected a moderately strong positive relationship.

Results of a survey conducted by Simon *et al* (1999) indicated a trend to high levels of knowledge and very high level of negativity towards managed care.

Sub objective 2 was to determine the frequency of drug formulary usage, the rate of compliance and the reason for compliance with the formulary.

Majority (64%) of the respondents consulted the formulary either on a weekly or monthly basis. The rates of compliance were mainly in the upper region, with 30% of the respondents having a compliance of 40-60% and 45% having a compliance of 60-80%. Although the attitudes towards managed care was negative the overall compliance figures were high.

The main reasons for compliance were 24% - incentive dependent; 36% - wanted to comply and 33% - forced to comply. The financial incentive, a managed care control mechanism, can be a "forced to" option of a rewarding type. Thus if the financial incentives were not an option it is assumed that a 57% - forced to comply, will result.

Grumbach *et al* (1998) stated that the respondents from his survey, felt pressurized by the managed care organisations, to limit referrals and increase the number of patients seen per day. The respondents believed that such pressure compromised patient care but incentives that were dependent on the quality of care and patients satisfaction created greater job satisfaction.

The general practitioners in this study were not given options that would determine if the financial incentives were given for increased quality of care and patient satisfaction or for limiting referrals.

However, they were asked if financial incentives were good motivators to practice managed care to which 50% of the respondents agreed and 41% disagreed.

The aim of sub-objective 3 was to determine whether a general practitioner received better income with managed care.

69% of the respondents agreed that fee-for-service is better than capitation and 58% agreed that payment to general practitioner's was poorer with managed care. The overall results indicated that the majority of the respondents received poorer income with managed care than with the traditional fee-for-service medical system. A survey by Simon *et al* (1999) reported that 55.8% of the respondents experienced a drop in income. Bodenheimer (1999) also stated that the physicians experienced a drop in growth of their average income from 7.2% to 1.7%.

Sub-objective 4 aimed to determine if managed care is better at providing patient care than the traditional medical system.

56% of the respondents agreed that managed care allowed for poorer patient relations and 63% agreed that patient access to the general practitioner was poorer with managed care. 85% of the respondents believed that managed care does not increase a general practitioners clinical freedom and 48% agreed that preventative services are not better with managed care while 30% were unsure.

Managed care was found to be not better than the traditional medical system as it allowed for poor patient relations, it reduced patient access, decreases clinical freedom and does not offer better preventative services than the traditional medical system.

Results of a study by Simon *et al* (1999), found access to physician and quality of patient relations to be better with the fee-for service system than managed care.

Fairfield *et al* (1997b), said that general practitioners may experience a lack of clinical freedom and a decrease in autonomy with managed care.

According to Kuttner (1999) the pressure to protect profit margins led to business strategies, such as the avoidance of sick patients, the worsening of staff to patient ratios and outright denial of care thus leading to poorer patient care.

The aim of sub-objective 5 was to determine the level of influence that medical aids have on therapeutic or clinical care, which is administered by the general practitioner. The results indicated that medical aids influence a large proportion of clinical care and 75% of the respondents feel that medical aids should not have an influence on clinical care.

The results of additional findings showed that 47% of the respondents felt job security was not better with managed care and 39% of the respondents agreed that managed care is more cost effective than the old medical system, with 45% disagreeing. According to Simon *et al* (1999), 54.1% of the respondents in the said that job security had diminished.

5.3 Recommendations

Managed care in South Africa is in the early stages of evolution. The negative attitude of South African general practitioner's towards managed care and its control mechanisms are due to the experience of physicians in the United States of America.

The following are recommended:

1. Managed care organisations in South Africa should conduct workshops with general practitioners to determine ways to reduce the negativity and scepticism.
2. Managed care organisations in this country should consult with general practitioners about the control mechanisms that are being used. If a compromise can be reached it should allow for the benefit of patients, general practitioners and the South African medical system.

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

1. The investigation of the managed care formulary system and its impact on pharmaceutical sales.
2. An investigation into the methods of compensation that general practitioners would prefer in a managed care environment.
3. To determine if financial incentives (withholds, bonuses) has any effect on the care that is given to the patient.

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APPENDIX 1: The Questionnaire

This questionnaire is being used to determine the attitudes of general practitioners (GP) towards managed care (MC) and its control mechanisms, for the research component of my studies.

All responses will be treated with anonymity.

Your help will be greatly appreciated.
Thank you,
Marla Govender.

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 _____

4. What percentage of your practice consists of the following groups:

Race	White	African	Indian	Coloured	Other
Percentage					

Section B:

5. Which of the following indicates your knowledge on managed care, if on a scale 0 =no knowledge
   and 10 =as much knowledge as possible? _____

6. Which of the following indicates your attitude to managed care, if on a scale 0 =as negative as possible
   and 10 =as positive as possible? _____

7. Do you have a formulary that you are required to use? Yes □ No □

8. If yes, how often do you consult the formulary when prescribing? _____

9. How do you rate your compliance to the formulary?
   a) <20% □ b) 20-40% □ c) 40-60% □ d) 60-80% □ e) >80% □

10. Why do you comply with the formulary?
a) it is incentive dependant □ b) you want to □ c) you are forced to □

11. What is the percentage of your patients on managed care plans?
   a) <5% □ b) 5-20% □ c) 20-35% □ d) 35-50% □ e) >50% □

12. What level of influence do medical aids have on care given to the patient?
   a) <15% □ b) 15-30% □ c) 30-45% □ d) 45-60% □ e) > 60% □

13. How do you rate the following? Tick the corresponding box ☑.

ASPECT	1	2	3	4	5
	Strongly agree	**Agree**	**Unsure**	**Disagree**	**Strongly disagree**
Financial incentives are good motivators to practice M.C.					
M.C. allows for poor patient relations					
M.C. drug utilisation reviews is a good system					
M.C. increases a GP's clinical freedom					
Payments to GP's are poorer with M.C.					
Preventative services are better with M.C.					
M.C. is more cost effective than the old medical system					
Access to GP is poorer with M.C.					
Income received is better with M.C.					
Fee-for-service is not better than capitation					
Medical aids should influence care					
Job security is better with managed care					

14. Do you have any further comments that you would like to share?

_____

_____

_____

Thanking You Kindly,

MARLA