THE ASSESSMENT OF KNOWLEDGE AND ATTITUDES OF HEALTH LEGISLATION (HL) AMONG PRIVATE FAMILY PRACTITIONERS (FP) WORKING IN A DEFINED GEOGRAPHICAL AREA

Submitted to :

Nelson R Mandela School of Medicine

University of KwaZulu-Natal

Durban

South Africa

Submitted in partial fulfillment of the academic requirements for the degree :

Master of Public Health

in the School of Family and Public Health Medicine

Submitted by : Mahomed Faruk Mahomed

Student Number: 743746070

SUPERVISOR : Mr Andy Gray

March 2011

ABSTRACT

Introduction

Since the 1994 change in power in South Africa, there have been many necessary changes in health legislation (HL), in accordance with the principles enshrined in the Constitution, Such changes have been recognized as being both complex and fraught with stakeholder interests. There is a perception that private family practitioners (FP) generally harbour negative attitudes towards HL that has been brought into effect in recent years. It is also possible that FP, in general, lack knowledge regarding HL. The aim of the study was to assess the knowledge and attitudes of private family practitioners (FP) to health legislation (HL) within a localized geographical area of the eThekweni Metro, KwaZulu-Natal Province. The specific objectives were:

- To determine family practitioners' knowledge of health legislation.
- To determine family practitioners' attitudes towards health legislation.
- To assess the correlation between family practitioners' knowledge and attitudes.
- To compare the self-reported knowledge of health legislation with the objective assessment of knowledge and attitudes.
- To establish practitioners' perceptions of the future of the profession, and of family practice in particular.

Methods

A cross-sectional descriptive and analytical study was performed, using a pre-tested, validated, structured questionnaire. This instrument was personally hand-delivered to each of a group of private family practitioners practising within a confined geographical area. The sample comprised of 101 family practitioners. Data were analysed using SPSS version 15.0 (SPSS Inc., Chicago, Illinois).

Results

The study revealed that private FP possess limited knowledge about HL and have a negative attitude in general towards HL. The mean knowledge score was 55% (standard deviation 12.2%). The mean score for attitudes towards health legislation was 46,3% (standard deviation 4.2%). The correlation coefficient between knowledge and attitudes was 0.244 (p=0.022). Therefore, there was a weak positive, but statistically significant, correlation between knowledge and attitudes. Thus, in general, as knowledge increased, so did attitudes improve and become more positive. The self reported knowledge and attitudes of FPs seemed to show some unexpected though non-statistically significant anomaly, in that FPs who considered themselves "well aware" of certain parts of HL, together with those who were "not aware", reporting a more negative attitude towards HL than those who considered themselves to be "aware". FPs' perceptions of the future of the profession, and of family practice in particular, were generally reported as being reasonable to poor. Financial viability and sustainability of FP, in particular, were reported as being reasonable to poor. The attractiveness of the profession to the youth of today was reported as being poorer than in the past. However, the majority of FP held the perception that medicine as a profession was distinct as it responds to a calling to serve society at large, giving this aspect of the question a ranking of "reasonable to good".

Conclusion and Recommendations

The study revealed that this group of FPs attained an overall mean knowledge score of 55% with respect to HL. FPs' knowledge of HL requires improvement, which can be achieved through effective education and training programmes. Private FPs need to embrace the change process, but also need to be more pro-active in vocalizing their opinions. The Health Ministry and relevant authorities and policymakers need to play a greater role in creating an atmosphere that embraces and facilitates change by involving

relevant stakeholders. Lastly, it is recommended that this study serve as a template for a broader research project involving larger numbers of participants and a wider geographical area. In addition, an intervention tool should be devised. Such a tool could take the form of a structured education programme on HL, with an associated monitoring and evaluation aspect, which would enable an assessment of the intervention programme in terms of its value and the influence it has on improving knowledge and attitudes.

DECLARATION

I, Dr M F Mahomed, declare that :

(i) the research reported in this dissertation, except where otherwise indicated, is my original research;

(ii) this dissertation has not been submitted for any degree or examination at any other university;

(iii) this dissertation does not contain other persons' data, pictures, graphs or other information, unless specifically acknowledged as being sourced from other persons;

(iv) this dissertation does not contain other persons' writing, unless specifically acknowledged as being sourced from other researchers. Where written sources have been quoted, then :

- their words have been re-written but the general information attributed to them has been referenced;
- where their exact words have been utilized, their writing has been placed inside quotation marks, and referenced.

(v) where I have reproduced a publication of which I am an author, co-author or editor, I have indicated in detail which part of the publication was actually written by myself alone and have fully referenced such publications.

(vi) this dissertation does not contain text, graphics or tables copied and pasted from the Internet or other sources, unless specifically acknowledged, and the source being detailed in the dissertation and in the References section.

…… Date : ……..

M F MAHOMED

Department of Public Health Medicine

Nelson R Mandela School of Medicine

University of KwaZulu-Natal

DURBAN

DEDICATION

To my family made up of my wonderful and loving wife (Amaboo – Ames) and two children viz. Safia and Zain. This dedication to you is in recognition of your constant encouragement, support and tremendous sacrifices made during the course of the study.

A special mention needs to be made of the high degree of maturity and caring exhibited by my son (Zain) during very turbulent emotional times for us as a family in the past 2 years.

May you continue to grow as an exemplary young man, Zain.

PUBLICATIONS OR PRESENTATIONS

None

ACKNOWLEDGEMENTS

I hereby humbly offer my sincere gratitude and appreciation to the following persons for their invaluable support, guidance and input towards the completion of this dissertation.

Mr Andy Gray, my supervisor, in the Department of Therapeutics and Medicines Management and at the Centre for the Aids Programme of Research in South Africa (CAPRISA), Nelson R Mandela School of Medicine, University of KwaZulu-Natal; for his constant support, advice, patience and understanding, and, sincere encouragement throughout this study.

Professor Indres Moodley in the Department of Public Health Medicine, Nelson R Mandela School of Medicine, University of KwaZulu-Natal; for his advice and guidance in the early stages of this study.

Mrs Tonya Esterhuizen, statistician at the School of Health Sciences, Nelson R Mandela School of Medicine, University of KwaZulu-Natal, who encouraged and motivated me and made each step in the analyses and interpretation of the data easier and assisted in improving my understanding of statistics.

Dr Faith Modise Matlaopane. A good friend and fellow colleague, who practiced in Kimberley, Northern Cape. Unfortunately, was laid to rest recently (on 4 September 2010). Faith and I spoke at length telephonically and he always told me “I know, Faruk, you will never let this one slip by you”. I wish to thank him for his continuous encouragement and support. May his soul rest in peace.

My secretary at work, Mrs Ubashnie Venketasamy, who always obliged and assisted with typing, photocopying, printing, faxing, phoning, etc. and computer work. Thank you so much for all the assistance rendered in order that this study would materialize. Your assistance is highly appreciated.

Cheryl Borresen who played an extremely vital role in preparing all the drafts on computer and ultimately putting together the final written dissertation. A big thank you to Cheryl. A long and happy life to you. May God bless you.

All the family practitioners who participated in the study. Thank you immensely fellow colleagues for your time, co-operation, patience and enthusiasm.

Thank you to Mrs Sharitha Davids, administrative secretary at USCIPA, for playing a vital coordinating role in the initial aspects of this study.

Thank you to fellow colleagues who assisted me in my busy practice on a temporary basis, in the past 2 years, for continuing to provide care to the community at times when I was away involved with this study.

ACRONYMS AND ABBREVIATIONS

ACP ..... Advance Care Planning

AIDS ..... Acquired Immune Deficiency Syndrome

BHF ..... Board of Healthcare Funders of Southern African

CON..... Certificate of Need

CPD ..... Continuing Professional Development

DoH ..... Department of Health

DSP ..... Designated Service Provider

FP ..... Family Practitioner/s

GP ..... General Practitioner

HPCSA ..... Health Professions Council of South Africa

HIV..... Human Immunodeficiency Virus

HL ..... Health Legislation

HMO ..... Health Maintenance Organisation

ICD-10 ..... International Classification of Diseases – 10th revision

IOM..... Institute of Medicine

IPA..... Independent Practitioners Association

KZNMCC ..... KwaZulu-Natal Managed Care Coalition

MoH ..... Minister of Health

MHC ..... Managed Health Care

MRSCAA ..... Medicines and Related Substances Control Amendment Act

MSA..... Medical Schemes Act

NHA ..... National Health Act

NHI ..... National Health Insurance

NHRPL ..... National Health Reference Pricing List

NR ..... Non-respondents

PMB ..... Prescribed Minimum Benefits

PPA ..... Preferred Provider Association

PWA ..... People with AIDS

SAMA ..... South African Medical Association

SAMCC..... South African Medicines Control Council

TOP ..... Termination of Pregnancy

USCIPA ..... Upper South Coast Independent Practitioners' Association

TABLE OF CONTENTS

ABSTRACT ii

DECLARATION v

DEDICATION vii

PUBLICATIONS OR PRESENTATIONS viii

ACKNOWLEDGEMENTS ix

ACRONYMS AND ABBREVIATIONS xi

TABLE OF CONTENTS xiii

LIST OF TABLES xvii

LIST OF FIGURES xx

LIST OF APPENDICES xxi

CHAPTER 1: INTRODUCTION 1

1.1 Introduction 1

1.2 Background 5

1.3 Motivation for the research 8

1.4 Aim and objectives of the study 9

1.5 The research hypothesis to be investigated 10

1.6 Summary of selected health legislation and related aspects 10

1.6.1 National Health Act (NHA). 11

1.6.2 Medical Schemes Act (MSA) 12

1.6.3 Medicines and Related Substances Control Amendment Act (MRSCAA) of 1997 14

1.6.4 National Health Reference Pricing List (NHRPL) 15

1.6.5 Managed healthcare (MHC) 16

1.6.6 International Classification of Diseases Coding – 10th revision (ICD-10) 16

1.7 Operational definition of terms and key words 17
1.8 Summary 18
CHAPTER 2: LITERATURE REVIEW 20
2.1 Introduction 20
2.2 Family practitioners' knowledge of health legislation 20
2.3 Family practitioners' attitudes towards health legislation 25
2.4 The relationship between knowledge and attitudes 30
2.5 Perceptions of the future of medicine as a profession, and of family practice in particular 30
2.6 Conclusions 32
CHAPTER 3: RESEARCH METHODOLOGY 33
3.1 Introduction 33
3.2 Type of research 34
3.3 Study design 34
3.4 Study participants 34
3.4.1 Selection of participants 35
3.4.2 Sample size 35
3.5 Survey methods 36
3.5.1 Pilot study 36
3.5.2 Reliability of the survey instrument 37
3.5.3 Questionnaire design 37
3.5.4 Fielding the questionnaire 38
3.5.5 Variables 39
3.5.6 Data Analysis 40
3.5.7 Bias and confounding 41
3.6 Ethical Considerations 41
3.6.1 Declaration of conflict of interest 42

3.6.2 Independent review *42*

3.6.3 Collaborative partnerships *42*

3.6.4 Value *43*

3.6.5 Fair subject selection *44*

3.6.6 Favourable risk/benefit ratio *44*

3.6.7 Confidentiality *45*

3.6.8 Respect for study participants *45*

3.7 Summary 46

CHAPTER 4: RESULTS 47

4.1 Introduction 47

4.2 Particiaption rate 47

4.3 Demographics 48

4.4 Family practitioners' knowledge of health legislation 53

4.5 Family practitioners' attitudes to health legislation 63

4.6 Correlation between attitudes and knowledge scores 69

4.7 Comparison of self-reported knowledge and objective assessment 70

4.8 Family practitioners views on the future 83

4.9 Conclusion 87

CHAPTER 5: DISCUSSION 88

5.1 Introduction 88

5.2 The study sample 88

5.3 Family practitioners' knowledge of health legislation 91

5.4 Family Practitioners' attitudes to health legislation 95

5.5 The correlation between attitude and knowledge scores 98

5.6 Comparing self-reported knowledge with objective assessment 99

5.7 Family practitioners' perception of the future of the medical profession and of family practice in particular 100

5.8 Limitations of the study 101
5.9 Conclusion 102
CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS 103
6.1 Introduction 103
6.2 Conclusions 103
6.3 Recommendations 104
REFERENCES 107
APPENDICES 115
Appendix 1 116
Questionnaire 116
Appendix 2 125
Letters from Authorities:
2.1 Vice-Chairperson of USCIPA 126
2.2 Ethical Approval from the Biomedical Research Ethics Committee 127
Recertification of study dated 11 November 2010 128
2.3 Letter of approval from the Postgraduate Education Committee 129
2.4 Letter of Progress to study participants 130
2.5 Certificates for Ethics training 131/132
Appendix 3 133
Information documents and Informed Consent
3.1 Information document: Pilot study 134
3.2 Information document: Main study 136
3.3 Informed Consent document: Pilot study 138
3.4 Informed Consent document Main study 139

LIST OF TABLES

Table 1: Per capita health expenditure by race (1985, 1987) 3

Table 2: Medical school of qualification 51

Table 3: Residential area of patients 51

Table 4: Perceived patients' monthly income level 52

Table 5: Percentage of patients who pay for packaged service 53

Table 6: Question 14a. Identifying HL from a list 54

Table 7: Question 14b. Identifying the location of the CON in HL 55

Table 8: Questions 14c to 14e. Details of the CON 55

Table 9: Questions 15a to 15c. Details from the MSA 56

Table 10: Questions 17a to 17c. Effects of the CON 57

Table 11: Questions 18a and 18b. Effect of MHC on FP 57

Table 12: Questions 19a to 19f. Examples of MHC models 58

Table 13: Questions 20a to 20c. The process of determining the NHRPL 59

Table 14: Questions 21a to 21d. Details from the MRSCAA 60

Table 15: Questions 22a to 22d. Medicines pricing issues 60

Table 16: Questions 24a to 24c. Legislation and rights of citizens 61

Table 17: Question 25 responses - ICD-10 Coding and some important features 62

Table 18: Question 27. When is patient confidentiality information revealed? 62

Table 19: Questions 9a to 9c. Attitudes towards HL information and reform changes. 64

Table 20: Question 10. Present attitudes towards HL impact on FP 64

Table 21: Question 11. Past attitudes towards HL compared to the present 65

Table 22: Questions 16a and 16b. Satisfaction with PMBs, and agreement with concept of CON 68

Table 23: Questions 26a to 26d. Confidentiality, Termination of Pregnancy, Age of Consent for treatment 66
Table 24: Question 29 responses - FP attitudes to the need for HL education and on recent HL reform 67
Table 25: Questions 12a to 12e. Awareness of health legislation by FP 70
Table 26: Questions 13a to 13e. Understanding of health legislation by FP 71
Table 27: Summary statistics for knowledge and attitudes scores by self-reported awareness of NHA 72
Table 28: ANOVA comparison of means between the three groups of question 12a . 72
Table 29: Summary statistics for knowledge and attitudes scores by self-reported awareness of MSA 73
Table 30: ANOVA comparison of means between the three groups of question 12b . 73
Table 31: Summary statistics for knowledge and attitudes scores by self-reported awareness of NHRPL 74
Table 32: ANOVA comparison of means between the three groups of question 12c .. 74
Table 33: Summary statistics for knowledge and attitudes scores by self-reported awareness of MRSCAA 75
Table 34: ANOVA comparison of means between the three groups of question 12d . 76
Table 35: Summary statistics for knowledge and attitudes scores by self-reported awareness of ICD-10 77
Table 36: ANOVA comparison of means between the three groups of question 12e . 77
Table 37: Summary statistics for knowledge and attitudes scores by self-reported understanding of NHA 78
Table 38: ANOVA comparison of means between the three groups of question 13a . 78
Table 39: Summary statistics for knowledge and attitudes scores by self-reported understanding of MSA 79

Table 40: ANOVA comparison of means between the three groups of question 13b . 79
Table 41: Summary statistics for knowledge and attitudes scores by self-reported understanding of NHRLP 80
Table 42: ANOVA comparison of means between the three groups of question 13c . 80
Table 43: Summary statistics for knowledge and attitudes scores by self-reported understanding of MRSCAA 81
Table 44: ANOVA comparison of means between the three groups of question 13d . 81
Table 45: Summary statistics for knowledge and attitudes scores by self-reported understanding of ICD-10 82
Table 46: ANOVA comparison of means between the three groups of question 13e . 82
Table 47: Questions 28a to 28e. The future of FP..... 83

LIST OF FIGURES

Figure 1: Age distribution of respondents 49

Figure 2: Duration of practice as a private FP 50

Figure 3: Perceived percentage of patients with medical scheme cover 52

Figure 4: Distribution of knowledge scores 63

Figure 5: Distribution of attitude scores 68

Figure 6: Correlation between knowledge and attitudes 69

Figure 7: Sustainability of FP 84

Figure 8: Financial viability of FP 84

Figure 9: Attractiveness to the youth 85

Figure 10: Provides a comfortable life 86

Figure 11: Responds to a calling to serve society 86

LIST OF APPENDICES

APPENDIX 1 116

Questionnaire

APPENDIX 2 125

Letters from authorities

2.1 Vice-Chairperson of USCIPA 126

2.2 Ethical approval from the Biomedical Research Ethics Committee 127

Recertification of study dated 11 November 2010 128

2.3 Letter of approval from the Postgraduate Education Committee 129

2.4 Letter of Progress to study participants 130

2.5 Certificates

2.5.1 Ethics Training 131/132

APPENDIX 3 133

Information documents and Informed Consent

3.1 Information document – Pilot study 134

3.2 Information document – Main study 136

3.3 Consent document – Pilot study 138

3.4 Consent document – Main study 139

CHAPTER 1: INTRODUCTION

1.1 Introduction

The 1994 change in power in South Africa, from an oppressive regime to a democracy, has been accompanied by necessary changes in legislation, including health legislation. A number of pieces of health legislation have been enacted and promulgated in the past 17 years, in accordance with the principles enshrined in the Bill of Rights of the Constitution of the Republic of South Africa (Republic of South Africa, 1996). Prior to 1994, a policy of legally-enforced racial segregation permeated the fabric of the lives of the people of South Africa. This period has been associated most strongly with the rule of the National Party and included the time during which "Grand Apartheid" was legislated. The state policy of "apartheid" consolidated the racial injustices of the preceding 300 years of colonial history and entrenched the economic marginalization and social separation of South Africans.

Colonial subjugation, followed by legislated racial segregation and discrimination against people of colour, impacted on people's health in many different ways. The resulting social circumstances contributed to ill health. In particular, the migrant labour system, associated with the use of single-sex hostels, resulted in the creation of overcrowded, unhygienic, unsafe slum dwellings in urban areas. These settings were beset by widespread alcoholism, sexually-transmitted disease and other infections, including tuberculosis. Such settings were also characterized by a high turnover of migrant workers, reported to be almost 100% in a year in some gold mines (Coovadia *et al*., 2009). These authors have pointed to the "return of these workers to families in the reserves and the forced repatriation of labourers too ill to be productive spread tuberculosis in the reserves", and have noted that "[b]y the late 1920s, more than 90% of

adults in parts of the rural reserves of Transkei and Ciskei had been affected by TB". Early diagnosis and treatment of infectious diseases was not possible in such circumstances. The migrant labour system, and general impoverishment of the majority of the population (Africans in particular), impacted negatively on the structure of the family. Coovadia *et al.* (2009) also noted that, from the 1950s, "deepening poverty made marriage increasingly unaffordable for the groom". Co-habitation outside of marriage became more common. The consequences were dire: "Over 40% of black households in 2003 were female headed, reflecting the high proportion of adults who would live usually with their children, without cohabiting men"; "It is usual for children to be raised without fathers contributing to their upbringing either socially or financially". This situation made it difficult for children to be socialized into responsible adults. The concept of family, a basic fabric of society, was virtually non-existent. By contrast, children raised in a nuclear family were expected to be more likely to succeed economically. Healthy and happy families, together with other societal bonds, are expected to produce high levels of education and productivity.

"Apartheid" policy also demanded segregated health services, which compounded social inequality in access to health and health care. This extended to the management of health services, with Health Departments segregated according to racial groupings. In addition, the so-called 'homelands' (Bantustans) and the provincial Departments of Health were also separated. Inequality in access was therefore racially determined, with an additional urban-rural divide. The Bantustans operated separately, each with their own putative government departments, although control was carefully monitored and manipulated by the government in Pretoria. Health services were systematically under-funded in these Bantustans. Overall, more money was spent on health services directed at the White population. Heywood (2007.1:13) has shown that, in 1982, the entire health budget for the KwaZulu Bantustan (with a population of about 5 million) was equivalent

to the budget for the Johannesburg General Hospital (then a 'Whites only' hospital). The same source has provided per capita health expenditure per race group for 1985 and 1987, depicted in Table 1, which clearly demonstrates this inequality in funding, as well as the racially-determined gradient.

Table 1. Per capita health expenditure by race (1985, 1987)

Racial group	Years	
	1985	**1987**
African	R115	R137
Coloured	R245	R340
Indian	R249	R356
White	R451	R597

Source: Heywood, 2007.1:13

Compounding this already dire situation, no significant challenge to this system was made by professional medical organizations. In 1998, the Truth and Reconciliation Commission (TRC) found that:

> *The health sector, through apathy, acceptance of the status quo and acts of omission, allowed the creation of an environment in which the health of millions of South Africans was neglected, even at times actively compromised, and in which violations of moral and ethical codes of practice were frequent, facilitating violations of human rights (TRC Report: The Health Sector, October 29, 1998).*

Health professionals are expected to play a significant role in ensuring that health rights are protected and promoted. However, many health professionals collaborated with the "apartheid" regime and were even complicit in high-profile human rights abuses, including the death in detention of Steve Biko. It is felt that, while a political Convention for a Democratic South Africa (CODESA) was held in the country, a similar process has

not occurred within the wider medical community. The policy of racial discrimination, the migrant labour system and the subsequent destruction of family life, the inequality in access to healthcare, coupled with vast income disparities and extreme violence have all been part of South Africa's history. All these factors have been inextricably linked to healthcare delivery services and to the health status of the majority of the people of South Africa.

The African National Congress (ANC) and various other progressive bodies and organizations have developed, over a period of time, an alternative framework wherein racial equality is of paramount importance. A culture of tolerating ill-health is to be replaced by a new vision of health-seeking behaviour. This was, and continues to be, a challenge facing all South Africans. It is this vision which has informed the post-apartheid legislative process. A cornerstone of democracy in South Africa is the Bill of Rights included as Chapter 2 of the new Constitution, adopted on 11 October 1996 (Republic of South Africa, 1996). The Bill of Rights entrenches the rights of all the people in the country and affirms democratic values of human dignity, equality and freedom. It has been described as "one of the most substantive forward-looking legal frameworks within which fundamental political and social change can be effected" (Gray and Pillay, 2006). Section 27 of the Bill of Rights of the Constitution firmly entrenches health rights, as follows (Republic of South Africa, 1996):

> ***"27. Health care, food, water and social security***
>
> *1. Everyone has the right to have access to*
>
> *a. health care services, including reproductive health care;*
>
> *b. sufficient food and water; and*
>
> *c. social security, including, if they are unable to support themselves and their dependants, appropriate social assistance.*

2. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of each of these rights.

3. No one may be refused emergency medical treatment."

In accordance with the State's duty to realize the right of access to health care services, a range of legislative and other measures have been adopted. Problems around equity, access, affordability, quality and comprehensive care have been addressed in the health legislation (HL), both as amendments to existing laws and as new laws. This range of legislative measures, if adequately implemented, "would most likely go a long way in ensuring access to health care services, in developing a rights framework in respect thereof, and ultimately, in holding institutions and individuals accountable for the delivery of efficient and quality health care services for all South Africans" (Gray and Pillay, 2006).

This study set out to assess the level of knowledge of selected HL possessed by private family practitioners (FP), to assess their attitudes towards such HL, and also to ascertain whether there was any correlation between the two parameters. Their views on the future of the profession as a whole, and of private FP in particular, were also explored.

1.2 Background

HL has been recognized the world over as being both complex and fraught with stakeholder interests. Scott-Samuel and O'Keefe (2007), writing in the Bulletin of the World Health Organization, stated that "the careful and responsible management of the well being of the population is the very essence of good government - for this reason, government must play a key stewardship role in ensuring that the public continue to

enjoy equitable access to good quality health care". For South Africa, this means establishing the best and fairest health system possible, within the constraints of available resources, in order to ensure that the rights to access to healthcare as guaranteed in the Bill of Rights are realized.

In South Africa, health care services are largely organized as a two-tier delivery system, with an under-funded and over-stretched public sector and a better-resourced private sector. The private sector stakeholders consist primarily of self-employed or corporate employed private healthcare service providers (FP, medical specialists, nurses, pharmacists, optometrists, psychologists, dentists and other health professionals) and the facilities in which they provide healthcare services (private practices, clinics, hospitals, pharmacies and laboratories). To this may also be added traditional and complementary health practitioners. The funding mechanisms for the private sector also encompass a range of stakeholders, including medical aid schemes, medical aid scheme administrators, life and short-term insurance companies. Politically, medical schemes are organized in the form of the Board of Healthcare Funders of Southern Africa (BHF). A proportion of health expenditure is also out-of-the pocket, in the form of co-payments as well as services and goods purchased for cash payments. In the case of family practice, a proportion of patients without medical aid coverage purchase a packaged service for cash, which includes the consultation, medication as well as any procedures and/or injections. This is sometimes referred to as a 'one-stop-shop' service. By contrast, the public health system is organized in three spheres (national, provincial and district). In terms of personnel it includes all healthcare workers employed by the national, provincial and local spheres of government. Services are delivered through healthcare facilities owned or operated by the State. Funding is provided from a range of fiscal sources, in the form of national budgets (including conditional grants provided to provincial departments), provincial health budgets and local government expenditure. By

design, the national sphere is responsible for setting goals and priorities as well as norms and standards for the provision of healthcare services. The provincial sphere is responsible for all public sector hospitals, community health services and clinics in the province. The hub of healthcare service delivery is intended to be the district, responsible for the provision of comprehensive Primary Health Care. The boundaries of health districts are coterminous with those of district and metropolitan municipalities.

Overarching both private and public sectors, and representing members from both sectors, are the voluntary associations, such as the South African Medical Association (SAMA). SAMA can be considered to be a trade union for medical practitioners and is affiliated to the Congress of the South African Trade Unions (COSATU). However, collective bargaining is only operative in the public sector. Health professionals are also registered and held to account by statutory health councils, including but not limited to the Health Professions Council of South Africa (HPCSA).

Significant difference in healthcare expenditure between the private and public sectors have persisted since 1994. Direct comparisons are complicated by difficulties in accessing data. The most recently accessible data show that, in 2009, South Africa spent 8.9% of Gross Domestic Product (GDP) on health, with 5.2% of GDP expended in the private sector and 3.7% in the public sector (Day and Gray, 2010). This disparity was also reflected in per capita expenditure, which was R9 605 per medical scheme beneficiary in 2009, compared with R2 206 per uninsured person in the 2009/2010 public sector fiscal year (Day and Gray, 2010). Due to the historical inequality alluded to, the government has a constitutional duty to protect and fulfill the right of access to healthcare services. This implies that, in addition to addressing problems in the public sector, it is incumbent upon government to regulate the private sector in an attempt to bring an end to the inequitable and unaffordable distribution of healthcare services. At

the opening of the Risk Equalisation International Review Panel Workshop held in Cape Town in 2004, the then Minister of Health, the late Dr Manto Tshabalala Msimang, emphasized that the private health sector was a significant part of the health system as it played a complementary role to the public system and that medical schemes would continue to act as the main financial intermediaries in the private sector. The late Minister stated that "it was clear that the private sector would continue to play a key role in the provision and financing of health care for South Africans and for this reason government would continue to take a keen interest in the functioning of this sector" (Minister of Health, 2004). Regulation of the private health sector has, since 1994, aimed to make access to healthcare more equitable. As indicated before, the ruling party's overall policy intent in this regard was developed before and immediately following the change of government in 1994. It was described in the ANC manifesto in 1994 and then entrenched in the 1997 White Paper on the Transformation of the Health System in South Africa (Minister of Health, 1997).

1.3 Motivation for the research

It is the researcher's perception that private FP generally harbour negative attitudes towards HL that has been brought into effect in recent years. It is also possible that FP, in general, lack knowledge regarding HL. This is evident in discussions at regular FP meetings and Continuing Professional Development sessions. However, there has been no systematic evaluation of such knowledge and attitudes among FP in South Africa. Given the many changes in HL over recent years, a study evaluating such parameters will be significant for the profession and for patient care. This is particularly true when considering the intention to make significant changes to the health system in the future, with introduction of the National Health Insurance (NHI) (Motsoaledi, 2010). Although some details were released by the Health and Education Committee of the ANC at the

2010 National General Council (NGC) in Durban, a White Paper on National Health Insurance is expected in early 2011. Implementation is expected to commence in 2012 and the policy will be phased in incrementally over a 14-year period. It would be reasonable to assume that if knowledge of HL were to increase amongst private family practitioners, attitudes could become more positive, as has been shown in the case of registered nurses (Gill and Bligh, 1995).

1.4 Aim and objectives of the study

Aim

The aim of the study was to assess the knowledge and attitudes of private family practitioners (FP) to health legislation (HL) within a localized geographical area of the eThekweni Metro, KwaZulu-Natal Province. The FP in this area play a role in providing healthcare services to a population of approximately 1.5 million people.

Objectives

1. To determine family practitioners' knowledge of health legislation in South Africa.
2. To determine family practitioners' attitudes towards health legislation in South Africa..
3. To assess the correlation between family practitioners' knowledge and attitudes towards HL in South Africa.
4. To compare the self-reported knowledge of health legislation in South Africa with the objective assessment of knowledge and attitude.
5. To establish practitioners' perceptions of the future of the profession in South Africa, and of family practice in particular.

1.5 The research hypothesis to be investigated

It was hypothesized that private family practitioners (FP) have limited knowledge of health legislation (HL) and negative attitudes towards health legislation (HL). Further, it was hypothesized that there was no correlation between FP's level of knowledge of HL and their attitudes towards HL. Lastly, it was hypothesized that FP believe that the future of the profession, and private FP in particular, is poor or far from being favourable.

1.6 Summary of selected health legislation and related aspects

In order to provide the context for the study, this Section provides an accessible summary of the key elements of the three pieces of HL focused on in this study:

- The National Health Act (Act 61 of 2003) (Republic of South Africa, 2003), and in particular Section 36 dealing with the Certificate of Need (CON) and Section 14 dealing with requirements for confidentiality
- The Medical Schemes Act (Act 131 of 1998) (Republic of South Africa, 1998)**,** and in particular the Chapter 3 of Regulations published in terms of the Act (dealing with contributions and benefits), Section 8 (dealing with prescribed minimum benefits (PMB)) and Chapter 5 (dealing with managed healthcare (MHC)).
- The Medicines and Related Substances Act (Act 101 of 1965) (Republic of South Africa, 1965), specifically as amended by the Medicines and Related Substances Control Amendment Act (Act 90 of 1997) (Republic of South Africa, 1997), and in particular Sections 18A and 18B (dealing with the ban on bonusing), Section 22A (dealing with the control of medicines and scheduled substances), Sections 22C and

22D (dealing with licensing, including the dispensing licence) and Section 22F (dealing with generic substitution).

In addition, these pieces of HL will be placed in the context of the National Health Reference Pricing List (NHRPL) and the International Classification of Diseases Coding – 10th revision (ICD-10).

1.6.1 National Health Act (NHA).

In 2009, a significant portion of the policy contained in the 1997 White Paper was enacted into law in the form of the National Health Act (Act 61 of 2003) (Republic of South Africa, 2003). This is the most important law setting out the legislative framework for healthcare delivery in South Africa. It is intended to replace the apartheid-era Health Act of 1977.

The NHA provides for a licensing mechanism for health establishments in order to improve the allocation and distribution of health resources throughout the country. The intended legislative mechanism is the certificate of need (CON), referred to by the then Minister as "the most comprehensive licensing system ever contemplated within the South African health sector" (Tshabalala Msimang, 2001). The same Minister also acknowledged that the CON "will take considerable resources to implement" (Tshabalala Msimang, 2001). This Section of the NHA has yet to be brought into effect, but has engendered strong reactions.

The CON is intended to apply to all health establishments, whether in the public or private sector. The duration of the CON may not exceed 20 years. According to Section 36(3) of the NHA, the Director-General is required to take the following factors into account when deciding whether to issue a CON:

" a. consistency of health services development in terms of national, provincial and municipal planning;

b. equitable distribution and rationalization of health services and health care resources, and the need to correct inequities based on racial, gender, economic and geographical factors;

c. the demographics and epidemiological characteristics of the population to be served; and

d the need to ensure the availability and appropriate utilization of human resources and health technology."

There is also provision in the NHA for the Minister of Health to prescribe mechanisms to enable a coordinated relationship between private and public health establishments in the delivery of health services. The Act makes provision for a National Health Council to develop policy and guidelines for and to monitor the provision, distribution, development, management and utilization of human resources within the national health system.

1.6.2 Medical Schemes Act (MSA)

The 1998 Act replaced a 1967 version, as informed by the findings of the 1995 National Health Insurance Committee of Inquiry. The necessary Regulations to accompany the Act were brought into effect in 2000. A number of key new elements were introduced.

Community rating was mandated in the medical schemes environment, in order to remove the predominantly risk-rating systems that had become prevalent after a 1993 amendment to the previous Act. This was a deliberate bid to promote equity of access to medical scheme benefits for the sick and elderly. There was also a concern on the part of government that medical schemes were designing their benefits in such a way

that the acutely ill and injured were being referred to public health sector facilities when their treatment became too expensive.

A subsequent amendment to the Act in 2002 (Republic of South Africa, 2002) introduced the concept of prescribed minimum benefits (PMBs). PMBs were designed as a set of defined benefits to ensure that all medical scheme members have access to minimum health services regardless of the benefit option they have selected. The aim was to provide medical scheme beneficiaries with a core set of services that would improve their health and well-being and to make healthcare more affordable. Anti-retroviral treatment was included in the PMB list in January 2005, following the extension of the list to include chronic conditions treated in ambulatory care settings. Therefore, the PMBs require that medical schemes have to cover the costs related to treatment and care of (Healthman, 2010):

- any emergency condition
- a limited set of 270 diagnosis-specific medical conditions
- 29 chronic conditions.

PMBs were therefore created to ensure that medical scheme beneficiaries have continuous access to a minimum basket of healthcare services, regardless of the benefit option chosen or utilisation during the year. PMBs also serve to limit schemes' liabilities, ensuring that they remain financially healthy. When beneficiaries receive good care on an ongoing basis, their general wellness improves, resulting in fewer serious conditions that are expensive to treat. PMBs also require schemes to protect the interests of their beneficiaries by ensuring, for instance, first covering essential treatments before setting funds aside for discretionary services.

However, a dispute has arisen in terms of how much a medical aid scheme is obliged to pay in terms of claims for PMBs. The dispute centers around the interpretation of the words “fair and full” in Regulation 8(1) of the General Regulations published in terms of the MSA. The outcome of ongoing court action involving the Council of Medical Schemes (CMS) and the Board of Healthcare Funders (BHF) will have significant implications for the future costs of medical aid scheme membership and the benefits enjoyed by their membership. This situation was further complicated by the scrapping of the NHRPL in July 2010 and the demise of the HPCSA’s Ethical Price List.

1.6.3 Medicines and Related Substances Control Amendment Act (MRSCAA) of 1997

The Medicines and Related Substances Act (Act 101 of 1965) is intended to ensure the safety, efficacy and quality of medicines marketed in South Africa (Republic of South Africa, 1965). In order to make healthcare more accessible and affordable, medicine prices needed regulation. The rising costs of medicines together with the constitutional imperative on government to improve access, necessitated an amendment to the Act in 1997. Act 97 of 1997 became incorporated into Act 101 of 1965. The Medicines and Related Substances Control Amendment Act (MRSCAA) was passed by Parliament in 1998, but was only effected in 2003, following the withdrawal of a court action by the pharmaceutical industry and its organizations. The MRSCAA included provisions for the parallel importation of medicines, mandatory offer of generic substitution, and the establishment of a Medicine Pricing Committee and the introduction of a transparent, non-discriminatory pricing system for medicines. In addition, bonusing and sampling practices in relation to medicines were prohibited.

Although some progress has been achieved in terms of the affordable medicine pricing interventions, this process has been characterized by intense conflict and repeated legal

actions. Policy has still not been resolved. A specific dispensing fee for the dispensing of medicines by pharmacists has been settled, but the fee for licensed dispensing practitioners (including FP who hold Section 22C(1)(a) licences) remains contested.

1.6.4 National Health Reference Pricing List (NHRPL)

The National Health Reference Pricing List (NHRPL) is a reference list formulated in an attempt to reflect the real cost of providing a service. This list has been used by providers of service and by medical schemes in the determination of tariffs and benefit designs. However, this guideline tariff structure was scrapped after a legal challenge was launched against the Department of Health by various stakeholders in the private sector. The proceedings in court found the entire process to be invalid and flawed from the outset as the Department could not show adequate proof of having consulted with the National Health Council before the promulgation of the regulations in 2007 as required by the NHA (Medical Chronicle, 2010). Accordingly, the High Court of South Africa declared the NHRPL to be invalid and set it aside (Hospital Association of South Africa and others vs. Minister of Health and another, 2009). For now, this has left schemes and providers to create their own tariff structures. A tariff based on commissioned research is presently being used by private providers of service. However, it will take some years before the legislation can be amended to allow for the NHRPL, as initially intended, to be re-issued. Other structures may well have been put in place before that, as part of the proposed National Health Insurance. The Director-General of Health has endorsed the Council of Medical Schemes (CMS) as the best placed structure to oversee the tariff setting in 2011. This will require an “industry inclusive” multi-lateral dialogue, and will also demand that all players be transparent, accommodating and serious about finding a solution.

1.6.5 Managed healthcare (MHC)

Kongstvedt has defined managed healthcare (MHC) as “the practice of evidence-based medicine” and as “an approach to managing both quality and cost of medical care” (Kongstvedt, 2011). MHC brings the disciplines of analysis, efficiency and accountability to bear on health care systems and delivery. In general, there are two elements common to MHC systems – “(i) authorization systems and (ii) some level of restriction on a member’s choice of provider. Such restriction can be minor or it can be strict” (Chetty, 2000). Examples of MHC models and practices, some of which are already evident in South Africa, include Health Maintenance Organisations (HMO), Preferred Provider Associations (PPA), Independent Practitioner Associations (IPA) and Designated Service Provider (DSP).

1.6.6 International Classification of Diseases Coding – 10th revision (ICD-10)

This is a coding system developed by the World Health Organization (WHO), that translates the written description of medical and health information into standard codes, e.g. J03.9 is an ICD-10 Code for acute tonsillitis (unspecified) and G40.9 denotes epilepsy (unspecified). Such codes are included in billing systems to inform medical schemes about what conditions their members were treated for so that claims can be settled correctly. Some have perceived mandatory submission of ICD-10 Codes on accounts to medical schemes as having created an ethical dilemma around the aspects of privacy and patient confidentiality. A pro-forma consent form has been designed by SAMA to offer an interim solution to these perceived dilemmas.

When an individual joins a medical scheme, he/she chooses and pays for a particular benefit option. This benefit option contains a basket of services, often with limits on the health services for which claims will be reimbursed. Since ICD-10 Codes provide accurate information on the condition diagnosed, these codes help the medical scheme to determine what benefits the beneficiary is entitled to and how these benefits could be covered. This is particularly important in the case of a PMB condition. If the incorrect ICD-10 Codes are provided, a PMB-related service might be paid for from the wrong benefit (such as from a member's medical savings account), or a claim refused if the day-to-day or hospital benefit has been exhausted. ICD-10 Codes must also be provided on prescriptions for medicines and on referral notes to other healthcare providers (e.g. pathologists and radiologists). Medical schemes are obliged by law to treat information about members' conditions with the utmost confidentiality. They are not allowed to disclose ICD-10 Codes to any other party, including employers or family members, as stipulated in the Regulations to the NHA (Minister of Health, 2007).

1.7 Operational definition of terms and key words

The two key operational terms used in this study are 'knowledge' and 'attitude'. Knowledge, attitude and practice constitute a triad of interactive factors characterized by dynamism and unique interdependence (Bankowski and Bryant, 1985).

Since time immemorial, the profession of medicine has been accorded a place of consecration of the highest order. Those who profess it have been held as bearing a holy responsibility. It was initially practised only by priests, the elite and the most-trustworthy citizens, and is therefore an immensely value-laden profession (Badran, 1995). The place of medicine lies somewhere between God's will to end life and His

mercy which encompasses cure or alleviation of human suffering. This ethical dilemma continues to this very day. Knowledge and attitudes are key to discharging this duty.

Knowledge is the capacity to retain and use information, a mixture of comprehension, experience and discernment (Badran, 1995). It refers to an accumulation of facts and data that one may have experienced or read about. It is also everyday learning. Understanding, on the other hand, is that which one truly grasps, empathizes with and can explain. Understanding is knowing the how and the why. Wisdom is the prudent and appropriate application of that which one knows and understands.

Education is a pre-requisite of knowledge (Badran, 1995).

Attitude is internal and refers to one's behaviour, manner or disposition. It refers to an inclination to react in a certain way towards certain situations, to see and interpret according to certain predispositions (Badran, 1995).

There is a relationship between knowledge and attitudes. Attitude, in itself, is influenced by, amongst other factors, knowledge (Badran, 1995). It can be reasonably assumed that appropriate knowledge ought to lead to a more positive attitude.

1.8 Summary

This Chapter has provided background information and the motivation for the study, as well as on key operational terms which will enable easy understanding of the study.

The format to follow will be Literature review (Chapter 2), followed by Research Methodology (Chapter 3), Results (Chapter 4), Discussion (Chapter 5) and finally Conclusion and Recommendations (Chapter 6). Appendix 1 contains the Questionnaire,

Appendix 2 Letters from authorities (USCIPA, Biomedical Research Ethics Committee, Postgraduate Education Committee); Letter of Progress to the Study Participants; Certificates of ethics training; and Appendix 3 Information documents and Informed consent documents for the Pilot Study and Main Study.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter attempts to review South African and international literature in order to identify major research studies that have been documented with respect to the assessment of knowledge and attitudes of family practitioners (FP) towards health legislation (HL). However, there is a paucity of published information on the knowledge and attitudes of FP to HL both in South Africa and internationally. Similarly, little has been reported on the relationship between knowledge and attitudes, in relation to HL in particular, or on the impact that changes in knowledge of HL may have on attitudes. There is limited literature reported about FPs' perception of medicine as a profession, and, of family practice in particular. In general, though, this lack of evidence supports the need for this study.

This literature review thus focused on the available evidence that demonstrates the extent to which FP display knowledge of HL, on studies covering FPs' attitudes towards HL, and any evidence of the relationship between these two parameters. Finally, research into the perception of the future of medicine as a profession, and family practice in particular, will be covered.

2.2 Family practitioners' knowledge of health legislation

The knowledge and attitudes of private family practitioners in relation to HL might be expected to be poor, as law is not within their core training or competency. Only one unpublished study has been conducted in South Africa, which has attempted to assess both the knowledge and attitudes of private practitioners on various issues, including HL

(Prof Indres Moodley; personal communication). This study was conducted in 2007, in conjunction with a pharmaceutical company, and focused on the urban centres (largely Durban and Pietermaritzburg) of the KwaZulu-Natal province only. In addition, a very poor response was obtained, as the questionnaire was posted or delivered electronically. The results obtained were thus not considered significant. Hence, the study was abandoned.

While not perhaps indicative of knowledge *per se*, when a legal issue in relation to health has attained high media or professional attention, and potentially affects the practices of FPs, they will demonstrate high awareness of the issue. An important example from South Africa is that of the dispensing of medicines by medical practitioners (Gilbert, 1998). While the majority of the pharmacists interviewed in this study singled out the 'dispensing doctor' as the principal problem confronting community pharmacy in South Africa at that time, the medical practitioners interviewed showed a united front, and were described as "fiercely protecting" what they perceived to be their "inherent right to dispense medicines". This state of affairs will continue to be hotly debated and contested by both sides for some time. These practitioners were certainly highly aware of the issues, but the extent to which they had knowledge of the intricacies of the legal provisions governing dispensing practice at that time might well be questioned.

This link between the profile of a legal issue and medical practitioners' knowledge of the issue has also been demonstrated in other countries, particularly in relation to highly controversial issues. Abortion provides a particularly telling example. Up to 5 years ago, the Abortion HL was still very much a controversial issue in Brazil. Loureiro and Vieira (2004) found that physicians working in emergency wards in São Paulo, Brazil, had limited knowledge of health legislation governing abortion in that country. While the

respondents in this study demonstrated good overall general knowledge about abortion (reported as 70%), they had poor knowledge of the legal details. In particular, they harboured misconceptions about the enforcement of the prevailing legislation in practice. At that time, the provisions governing abortion in the Brazilian penal code dated back to 1940 and stated that "abortion is illegal except when performed to save a woman's life or in the case of rape" (Loureiro and Vieira, 2004). In the case of foetal malformation incompatible with neonatal life, abortion could be approved of on a case by case basis, but this required a lawyer's petition before a judge, with statements from three physicians and a mental health professional. Thus, in Brazil at that time, as was the case in most of Latin America and the Caribbean region, abortion was legally highly restrictive. It is significant that a large study, conducted among 572 Brazilian obstetricians/gynaecologists, at about the same time (2002-2003), showed that accurate knowledge about the law governing abortion (Goldman, *et al*., 2005) was demonstrated by 48% of the respondents. Similar findings might be expected among South African obstetricians and gynaecologists as well. Nonetheless, the authors concluded that "Brazilian Obstetricians and Gynaecologists needed more information on abortion laws and on safe, effective abortion procedures", as there was still confusion over the Ministry of Health guidelines on the gestational age limit for abortion in Brazil at that time. The moral, ethical, religious and public health implications of liberalizing abortion HL in Brazil are still to be realized.

Another issue that would be expected to have high media and professional recognition, and also to involve complex legal provisions, would be that of consent, particularly when the patient is unable to give consent for treatment or research. Bravo *et al.* (2003) used hypothetical situations involving an older adult who required medical care or who was being solicited for research to investigate the level of knowledge of the legal provisions governing informed consent for treatment or research on behalf of a person with

diminished decision making capacity. The participants were elderly adults, caregivers for mentally impaired persons, researchers into ageing and members of Research Ethics Boards in Quebec, Canada. A lack of knowledge was shown by all 4 groups (including those which would have had medical practitioners represented viz.: 98 researchers and 136 members of Research Ethics Boards out of a total sample size of 968 participants) in relation to situations where a cognitively impaired person in need of care or solicited for research was not legally represented. These authors also pointed to evidence from Australia and Great Britain showing that doctors in these countries were unaware of important aspects of the law relating to what was termed "substituted consent".

A related and equally contentious issue is that of Advance Care Planning (ACP). As Cartwright *et al.* (2009) explain,

> "an ageing population, increasing levels of dementia, rising health care costs and the shift to increased patient involvement in decisions about their care have focused attention on Advance Care Planning (ACP), especially in relation to end-of-life decision-making";
>
> "ACP can be done by any adult at any time, but is particularly relevant to older people, people with late stage chronic disease or people likely to progress to a point in their disease where they are unable to communicate their wishes. Based on the ethical principle of patient autonomy and the legal doctrine of patient consent, ACP is designed to ensure that patient choice is respected if the patient becomes incapable of participating in treatment decisions". (Cartwright *et al*., 2009)

These authors conducted a survey among medical practitioners (both FP and medical specialists) in New South Wales, Australia in 2008. A 5-page anonymous questionnaire was utilized to test participants' knowledge of ACP. In this jurisdiction, the principal legislative options for ACP at the time were the appointment of a proxy (or substitute

decision maker) or the completion of a written document called an “Advance Health Care Directive” (AHCD). Despite a high level of support for ACP and the use of AHCDs, the study revealed confusion and a broad lack of knowledge and misunderstanding among medical practitioners of the form of substituted consent enabled in New South Wales and of the role of various substitute decision-making legal instruments.

Yet another high profile issue is that of child neglect and abuse. A study conducted among 175 primary care physicians in four eastern Turkish cities showed that almost half did not have adequate knowledge of (or appropriate attitudes towards) the identification and reporting of a case of suspected child abuse (Açik, 2004). The recommendation made was that there was a serious need to develop educational programmes for these FPs working with children (of abuse and neglect) to increase their knowledge and skills in detecting, assessing, reporting, treatment and prevention of such abuse and neglect.

Family practitioners have several important responsibilities, such as acting as a role model, information provider, an identifier/modifier of risk behaviour, lobbyist and researcher. They are often able to influence the behaviour of their own patients as well as the society as a whole in the prevention of illness and promotion of well-being. This can be accomplished by both serving as personal role models and actively promoting healthy behaviour among their patients. A high profile area in which they could contribute meaningfully is that of smoking cessation. FP would thus be expected to show high levels of knowledge about tobacco and anti-smoking health legislation. However, a study of smoking and smoking related beliefs, attitudes and knowledge of tobacco and anti-smoking legislation amongst Turkish physicians (conducted in Istanbul in 2006) reported inadequate knowledge of tobacco regulations and anti-smoking HL (Uysal, 2007). This review indicated a deficiency in knowledge amongst this cohort of

physicians regarding tobacco and anti-smoking legislation. Furthermore, these FPs indicated that they had little knowledge about the availability of specialized tobacco dependence treatment centers and as a consequence reported low referral rates.

Although not strictly legislative provisions, important policies applicable to medical practice also provide opportunities to assess medical practitioners' levels of knowledge. In Nigeria, for instance, Onifade and Odeyemi (2007) described the level of awareness, knowledge and attitudes of health care workers at the Lagos University Teaching Hospital to "Sharps" and Sharps Policies. The knowledge of Sharps policies was not as impressive as less than two-thirds (58.9%) of the respondents (of whom just under half were medical practitioners) had heard of the term 'Sharps Policy'.

2.3 Family practitioners' attitudes towards health legislation

Where proposed or enacted HL has the potential to impact on FPs' practices, they would be expected to hold strong opinions. This was certainly the case with the practitioners interviewed by Gilbert (1998), at the time when the Medicines and Related Substances Control Amendment Act (Act 90 of 1997) (Republic of South Africa, 1997) introduced the new dispensing licence for authorized prescribers. Equally, Brazilian medical practitioners, as members of a largely conservative and mostly Roman Catholic society, would be expected to have strong views on abortion (Loureiro and Vieira, 2004; Goldman, *et al*., 2005). Loureiro and Vieira (2004) reported that:

> [m]ost accepted the prevailing legal conditions for performing an abortion in Brazil but would also include fetal malformation incompatible with life, while opposing decriminalization of abortion on other grounds.

Goldman, *et al*., (2005) found that those who "favoured liberalization were more likely to have the correct knowledge about abortion laws". However, where legislation deals with an issue not considered important by FP, they may not show the expected attitudes. Uysal (2007) showed minimal knowledge of Turkish tobacco and anti-smoking legislation among local physicians (12% of whom were FPs), most of whom were themselves non-smokers. Although 88% of the respondents reported asking patients about their smoking habits, only 63% reported suggesting an effective smoking cessation therapy where indicated. Also, although most agreed that physicians were valuable as role models, only half believed that physicians should not smoke. More than three-quarters of both smoker and non-smoker physicians reported that they observed physicians smoking in practice areas. As mentioned before, these physicians considered their knowledge of tobacco regulatory legislation as inadequate, but also expressed the view that they had little knowledge about the availability of specialized tobacco dependence treatment centres and, as a consequence, reported low referral rates. It could well be that their attitude to this particular HL reflected societal values at the time, and not attitudes specific to the medical profession.

The continuing struggle to reform health systems financing in the United States has provided opportunities to assess medical practitioners' attitudes to the complex HL changes mooted and implemented over time. A study based on a nationally representative sample conducted over a 9-month period in 2007 demonstrated that a plurality of US physicians supported government legislation to reform healthcare delivery, such as the tax-funded Medicare programme (McCormick *et al*., 2010). Only a very small fraction of US physicians surveyed supported leaving the US healthcare financing system as it then was. However, it must be acknowledged that this national, postal survey achieved only a 50.8% response rate. Although no systematic difference

between non-respondents and respondents was reported, it could be true that those who participated harboured strong attitudes towards reform and reform options and that the result was subject to bias for this reason. President George Bush Jnr (Republican) was in power then. This was at the time when the lack of access to health insurance for a large sector (47million people: 10%) (Ackermann and Carroll, 2003) of the population was becoming a priority issue for many Americans.

Canada is usually held up as the example of what the US health system should emulate. However, a survey of 2087 randomly selected Canadian physicians showed that their attitudes towards Medicare as a healthcare delivery model in Canada was initially very negative (Stevenson and Williams, 1985). The extent to which attitudes were influenced by the respondents' ideological stance was explored. The survey showed, for example, that there was "marked consensus on questions of professional autonomy compared with government control of the health care system and the opposition to Medicare in principle". This held true even though the respondents provided "relatively favorable assessments of the administration and effectiveness of [Canadian] Medicare in practice". The authors stated that:

> variation in the intensity of professional criticism of Medicare was grounded in subjective perceptions of occupational stress, threats to professional status, and differences in values concerning the definition of health problems and policy priorities.

The survey also showed that the results obtained with specialists and general practitioners were consistent. However, general practitioners and younger practitioners (who graduated after 1970) were "more supportive of union and strike activities to settle income disputes" than were specialists. This could have been reflective of their relative status within the profession and whether or not they were salaried or fee-dependent.

The authors felt that “ideological resistance within the profession toward government intervention was an important constraint upon change and reform of health programs”. They concluded that:

> [g]iven this strong opposition in principle, it seems unlikely that governments can produce any substantial proposals for reform of Medicare which will not be resisted by the medical profession.

However, they did also show that physicians “accommodate themselves, to some degree, to government policies which they initially oppose”. Nonetheless, this statement has profound resonance with the post-apartheid experience in South Africa:

> The insistence of the profession upon its autonomy and its continued dominance of health care leaves little room for policy-makers to manoeuvre if public opinion and the fiscal crisis of the state continue to pressure for ways to rationalize the Canadian health care system. (Stevenson and Williams, 1985).

Can South African HL reforms succeed “in spite of strong professional opposition, relying upon the support of public opinion and the long-term adaptive capacity of physicians”? An uncomfortable opinion has been expressed by Dussault (2008). He has pointed out that, in low-income countries, professional monopolies may hinder the development of health systems reforms aimed at improving access and quality. While based on traditional concerns about “regulatory capture”, this paper posits the idea of a “social contract” between health professions and society, in favour of a better performing healthcare delivery system. Dussault identifies Cuba, Iran and Sri Lanka as positive examples, yet none of these can be considered as exemplars of the type of constitutional democracy entrenched in South Africa since 1994.

Although not dealing with knowledge of HL *per se*, a survey of 211 Nigerian physicians (hospital-based consultants and residents) assessing knowledge, attitude and global comfort in caring for patients with AIDS has provided some interesting results (Oyeyemi *et al*., 2007). Although these hospital-based practitioners demonstrated satisfactory clinical knowledge, they harboured negative attitudes and low level of comfort in caring for patients with AIDS. In this study, knowledge was weakly but positively associated with attitude, while attitude was modestly associated with comfort. Physicians willing to care for AIDS patients were more knowledgeable, showed a better attitude and were more comfortable in caring for them than those who were unwilling or undecided. Those who knew someone with AIDS (whether a family member or otherwise) were also more comfortable than their counterparts who did not know anyone with AIDS.

The study reinforced the need for ongoing education focussed on experiential learning, and professional socialization in order to influence physicians' attitude and enhance their feeling of comfort when caring for PWA (Oyeyemi *et al.*, 2007). Inadequate education about HIV and AIDS and a lack of protective and treatment materials appear to contribute to discriminatory behaviours and attitudes among Nigerian healthcare workers, including breaches of confidentiality and testing for HIV without informed consent (Reis *et al.,* 2005).

The negative attitude shown by these Nigerian physicians confirms those of previous studies of physicians in several countries in North America, Asia and Africa (Adelekan *et al*., 1995). Poor attitude among physicians more than two decades after AIDS was first discovered, indicates that much needs to be done to change health professionals' attitudes.

2.4 The relationship between knowledge and attitudes

The relationship between knowledge and attitudes is not always simple and linear, as was shown in relation to Turkish physicians and anti-smoking legislation (Uysal, 2007). In this instance, it was not completely clear as to whether an increase in knowledge would necessarily have a positive impact on attitudes towards smoking legislation. Nonetheless, the recommendations of many studies are based on the premise that more knowledge will be associated with an improved (positive) attitude. Turkish physicians seemed to be aware of the ill-effects and harm caused by cigarette smoking; yet, many continued to smoke. Many lacked knowledge in terms of information related to rehabilitation centres. A study dealing with the issues of substituted consent and advance care planning indicated an obvious lack of knowledge on the part of FP, but also positive attitudes and a willingness to assist patients in need (Cartwright *et al.*, 2009). By contrast, both American and Canadian physicians who demonstrated a more positive attitude to HL reform were also reported to be more knowledgeable about HL dealing with such reforms (McCormick *et al*., 2009; Stevenson and Williams, 1985).

2.5 Perceptions of the future of medicine as a profession, and of family practice in particular

In the United States of America, recognizing growing frustration among family physicians, confusion among the public about the role of family physicians, and continuing inequities and inefficiencies in the US health care delivery system, the leadership of 7 national family medicine organizations initiated the Future of Family Medicine (FFM) project in 2002. The goal of the project was to transform and renew the specialty of family medicine to meet the needs of people and society in a changing environment (Future of Family Medicine Project Leadership Committee, 2004).

A national research study conducted by independent research firms, interviews and focus groups identified key issues for diverse constituencies, including patients, payers, residents, students, family physicians, and other clinicians. It showed that "[f]amily physicians found themselves painted as gatekeepers standing between their patients and care rather than being able to serve their patients as gateways to appropriate care".

> "Family Medicine cannot fully succeed, nor will the needs of the public be met, without fundamental changes in the US health care system. Americans were frustrated by a health care system that produces wondrous results for few, but costs so much that even basic care is increasingly unaffordable for many; that promises the latest in science and technology, but delivers care that is fragmented, impersonal, or of inconsistent quality; that permits experimentation in health plan provisions and financial incentives, but does not learn from the resulting chaos and inequities". (Future of Family Medicine Project Leadership Committee. 2004).

Nearly four decades ago, the specialty of family practice was created to fulfill the generalist function in medicine, which the American people wanted and which suffered with the growth of sub-specialization after World War II. "Although the specialty has delivered on its promise to reverse the decline of general practice" (Graham *et al*., 2002) and "provide personal, frontline medical care to people of all socio-economic strata and in all regions of the United States" (David, 2003), all is not well either with family medicine or with health care in general (David, 2003). Nonetheless, family medicine is seen as key to delivering quality, affordable, equitable and accessible primary healthcare. This was clearly illustrated in 2001, when the United States Institute of Medicine (IOM), through the Committee on the Quality of Health Care, concluded that "the nation's understanding of primary care was so poor, it was necessary to redefine it to establish a basis for study." (Institute of Medicine, Committee on Quality of Health Care in America, 2001.) The IOM definition clarified that "primary care is not a discipline

or specialty but a function as the essential foundation of a successful, sustainable health care system". The IOM concluded that the evidence pointed "to family physicians, general internists, general pediatricians, and many nurse practitioners and physician assistants as the key primary care providers in the United States".

"That family physicians are key providers of primary care is indisputable; thus, family medicine and primary care are and will remain intertwined" (Midtling *et al*., 1990).

2.6 Conclusions

This chapter has attempted to summarise the very sparse available literature, both from South Africa and abroad, on the degree to which FPs demonstrate knowledge of HL, what their attitudes are to HL, and whether a consistent relationship between knowledge and attitudes has been demonstrated. What literature does exist seems to support that there is a relationship between knowledge and attitudes. However, this relationship is not always a positive one, in that as one parameter increases the other would do so automatically. Furthermore, the literature reviewed attempted to report on the few studies done primarily in North America illustrating FPs' perception of Medicine as a profession, and of private family practice in particular.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

Health legislation (HL) impacts directly on the way family practitioners (FP) conduct their practices and business. The political changes that have taken place in South Africa since 1994 and the new HL developed by the post-apartheid government have impacted on the medical profession in various ways. FP need to practice medicine and also need to conduct their businesses ethically, ensuring that the community they service receives the best attention in accordance with legal requirements. FPs often practise in isolation and need to ensure that they do keep up with clinical development, policy trends and legislative changes. Although they are required to maintain registration with the Health Professions Council of South Africa (HPCSA), and this entails compliance with annual Continuing Professional Development (CPD) requirements, the extent to which they engage with the HL and policy issues is entirely their personal choice. The only specified requirement is for annual exposure to ethics training.

The specific objectives of this study were to assess the knowledge of and attitudes to HL exhibited by FP; to establish the relationship between these two parameters and also to assess FPs' perceptions of the future of medicine as a profession, and family practice in particular. In addition, the study sought to make recommendations about possible remedial actions. Patients rely on their doctors to abide by the law, but if their knowledge is limited, they may not be working within the ambit of the law, and therefore in the best interests of their patients. This chapter presents the methods used in the study to collect, store and analyse data, as well as dealing with ethical considerations.

3.2 Type of research

A descriptive and analytical study was conducted, using a self-administered, structured questionnaire.

3.3 Study design

A cross-sectional survey design was employed. The design had an analytic component (by comparing groups) and a descriptive component which allowed for cross-classification between sub-groups. This study design was usually relatively cheaper to do cost-wise, was hypothesis-generating and took into consideration several factors and outcomes. The main disadvantage of this type of study is bias and confounding.

3.4 Study participants

The study population comprised of private FP working within the Southern Sub-structure Region of the eThekwini Metro, KwaZulu-Natal. This geographical area includes Umbumbulu, Magabeni, KwaMakhutha, Folweni, Malagazi, Isipingo (Hills, Rail, Beach), Lotus Park, Orient Hills, Umlazi and parts of Lamontville. The majority of the FP working in this area are members of the Upper South Coast Independent Practitioners' Association (USCIPA). USCIPA is a branch of the KwaZulu-Natal Managed Care Coalition (KZNMCC), which in turn is affiliated to the South African Managed Care Coalition (SAMCC). However, as the number of FP working in this area was limited, FP practising in the adjoining areas of Clairwood, Merebank, Merewent, Wentworth, Chatsworth and Durban Central were identified for inclusion, provided they satisfied the inclusion criteria. The study was concentrated primarily within the USCIPA structure,

although both members and non-members working within the geographical area were eligible for inclusion. Participants included all members of USCIPA who met the inclusion criteria and a randomly selected group from the additional areas outside of the Southern Sub-structure Region.

3.4.1 Selection of participants

Inclusion criteria:

- FP who were members or non-members of USCIPA, practising in the Southern Sub-structure Region of the eThekwini Metro, KwaZulu-Natal or randomly selected from adjoining areas (Clairwood, Merebank, Merewent, Wentworth, Chatsworth and Durban Central)
- willingness to participate and sign informed consent.

Exclusion Criteria:

- FP practicing outside the geographical areas listed above
- refusal to participate or sign informed consent.

The initial sample frame was constructed from the USCIPA membership list. Members of USCIPA were then addressed by the Principal Investigator (PI) at a regular CPD meeting. The co-operation and willingness of these FP was sought. Thereafter, a random selection was made of registered FP practising in the additional areas listed, and each was personally approached by the PI to participate.

3.4.2 Sample size

Based on advice from a statistician (personal communication: Mrs Tonya Esterhuizen), a sample size of 101 participants was considered acceptable for this study, in view of the planned personal delivery of the questionnaire. However, given the limited sample size,

the external validity of the results was considered to be limited to the specific geographic region from which respondents were selected. As no *a priori* estimates of the extent of knowledge or attitudes could be determined from the literature, and no inferential statistical analysis was planned, a formal sample size calculation was not performed. The total number of FP approached amounted to 115. Of these, 101 consented to participate (70 from the USCIPA area and 31 from the adjoining areas mentioned). The participation rate was high: 101/115; 87.7%.

3.5 Survey methods

The study involved the use of a self-administered, structured questionnaire, which was hand delivered to each study participant. The design of the questionnaire was guided by the principles outlined by Bhattacharya (2004).

3.5.1 Pilot study

The draft questionnaire was piloted with 6 FP, all of whom were men, in order to validate the instrument before the main study was started. This group consisted of 3 FP with more than 15 years' experience in private practice, and 3 with less than 15 years' experience. The pilot study assisted in refining the research instrument, providing information regarding the wording and clarity of the questions, relevance of the content to family practice, FPs' comprehension of the questions, relevance of the questions to their intended topics, effectiveness in providing useful information and the degree to which the questions were interpreted and understood by different individuals. Once the participants in the pilot study had completed the draft questionnaire, the opportunity was used to discuss words and sentences that were not understood and questions that required prompting and explanation. The respondents' reactions assisted in determining

the options for the main study and the codes to be used. In addition, logistical issues (e.g. time taken) and the suitability of categories were also assessed.

A few modifications, mainly of a technical nature, were made after the pilot study. The length of the questions was altered to ensure that the questionnaire could be completed comfortably in 20 minutes.

3.5.2 Reliability of the survey instrument

As the survey instrument used in this study was a self-administered structured questionnaire, it was important to ensure its reliability. This was achieved by piloting and pre-testing the questionnaire. In addition, the services of a professional statistician were secured to advise on the design and analysis.

3.5.3 Questionnaire design

The questionnaire was divided into 5 sections and consisted of a total of 30 questions. The questionnaire is provided in Appendix 1.

The first section elicited demographic details and comprised of 8 questions. These dealt with the age, sex, place of qualification, duration of practice of the FP participant, and questions related to the nature of the practice itself and the patients seen.

The second section was intended to determine the FP's knowledge of health legislation, and was comprised of 11 questions. These were Questions 14-27, excluding Questions 16, 23 and 26. In some questions, knowledge was elicited as a series of multiple choice questions, to avoid guesswork (Bhattacharaya, 2004). In 8 knowledge questions, a binary option (Yes/No) was offered. A nominal response (no specific order) was elicited in 4 questions.

The third section explored the FP's attitudes toward health legislation, and was comprised of 7 questions. In 4 questions, a binary response (Yes/No) was elicited. In 3 questions, statements were provided and respondents were asked to indicate the extent to which they agreed with those statements, on a pre-determined 5-point Likert scale (strongly disagree, disagree, neutral, agree, strongly agree) (Bhattacharaya, 2004). Although opinion is divided as to whether a 5-point or a 4-point Likert scale is optimal, a 5-point scale allows respondents to select a neutral option (neither agree nor disagree). The Attitude questions were Questions 9-11, 16, 26, 28 and 29.

The fourth section was designed to compare the self-reported knowledge of HL (understanding and awareness) and the objective assessment of knowledge and attitudes. These comprised of 2 questions: viz.: Questions 12 and 13: neither knowledge nor attitude assessing questions but assessing self-reported knowledge. Question 12 was an awareness question and Question 13 an understanding question in relation to HL. The outcomes of these questions were then compared to the objective assessment of knowledge and attitudes by ANOVA.

The fifth section was intended to establish the FPs' perception of the future of the profession and of family practice in particular.

One question (question 23) dealt with neither knowledge nor attitude, but was designed only to gather information.

3.5.4 Fielding the questionnaire

The Principal Investigator (PI) contacted FPs for an appointment at a time that was suitable to them, and a signed informed consent form was obtained from the FP at the appointed time. Participants were informed that they need not answer any question that

they were uncomfortable with, as notified in the information sheet. Participants read the information sheet and signed the informed consent in duplicate. One copy of the informed consent to participate in the study was kept with the investigator; the other copy was left with the participant. The PI clarified any queries that participants had regarding the information, bearing in mind that consent is a process. The participant information sheets and informed consent forms are included in Appendix 3.

The questionnaire took approximately 20 minutes to complete, during which time the PI remained in the waiting area of the FPs' consulting rooms. Upon completion, the FP placed the questionnaire in an envelope which was inserted through an opening into a sealed box. No names or identification appeared on the questionnaire or on the envelope. While anonymity was essential and there were no identifiers recorded, the questionnaire contained potential identifiers in some aspects of the demographic data.

The research was done in accordance with an approved protocol. Sound, careful and accurate methodology was employed. Recognised and safe measures were used for the data capturing process, cleaning of the data and then subsequent analysis. Safety measures to avoid loss of data during storage were implemented and the data were captured in Microsoft Excel and stored using SPSS version 15.0 (SPSS Inc., Chicago, Illinois). The data were stored on a computer which was only accessed by the researcher (PI). Analysis of the data occurred after careful checking and data cleaning was performed.

3.5.5 Variables

Variables were classified as being categorical or numerical (Katzenellenbogen and Joubert, 2002. 9:84-87).

3.5.6 Data Analysis

Raw data were first entered into Microsoft Excel, in which a descriptive analysis was done and presented in the form of bar graphs, pie charts and tables. Further statistical analysis was done in SPSS version 15.0 (SPSS Inc., Chicago, Illinois), assisted by a statistician (Mrs Tonya Esterhuizen). Categorical variables were summarized by the number and percent of study subjects classified into given categories and presented in the form of frequency tables.

Knowledge scores were generated by summing together the correct responses to the knowledge questions and expressed as a percentage by dividing the raw score by the maximum possible score and multiplying by 100. As there were no right or wrong answers for the attitude questions, they were scored by allocating a point to the most positive attitudes. The points were summed across all the items and expressed as a percentage by dividing the raw score by the maximum possible score and multiplying by 100. A scored copy of the questionnaire appears in Appendix 1 to indicate which questions were knowledge and which were attitude, as well as which were the correct or most positive answers. Knowledge and attitude scores were then summarized using mean, standard deviation and range or medians. Histograms were used to assess the normality of the distribution. For categorical data, graphs and pie-charts were used to present results.

The correlation between knowledge and attitudes was graphically represented using scatter plots and statistically analysed using Pearson's correlation coefficients. ANOVA testing was used to compare scores between independent groups. A p value <0.05 was considered as statistically significant.

3.5.7 Bias and confounding

Bias was minimized by piloting and refining the questionnaire prior to implementation in the main study. The personal delivery and collection of questionnaires assisted in optimizing the response rate and thus minimizing non-responder bias. The sequence of the questionnaire was structured to illustrate a pattern which demonstrates a logical flow. Leading questions were avoided. In this way, information bias was minimized. Potentially, it was envisaged that there should be no non-participants as positive and constructive collaborative partnerships with the study population were established earlier in the study process. However, social desirability bias could not be eliminated. Information bias, in the form of poor recall, could also not be eliminated.

As associations tested in this study were assessed on a bivariate level, potential confounding effects could not be controlled for in the analysis. Both knowledge and attitudes may be correlated with duration of practice, site of initial university training or other factors not elicited in this survey.

3.6 Ethical Considerations

Ethical considerations for the study consisted of eight components:

- conflict of interest;
- independent review;
- collaborative Partnership;
- value:
    - social
    - scientific
    - scientific validity
- fair subject selection;

- risk/benefit ratio;
- confidentiality;
- respect for study participants.

Each aspect is described in some detail.

3.6.1 Declaration of conflict of interest

The Principal Investigator is the current Chairperson of USCIPA. It was therefore necessary for him to declare this potential conflict of interest at the very outset. There was a potential for exploitation of vulnerabilities, as the practitioners recruited could be perceived as members in a hierarchical structure. The Vice-Chairperson was approached with regard to the intention to do such a study and granted approval in writing after consulting with the members. In this manner, conflict of interest was avoided.

3.6.2 Independent review

Approval for the study was provided by the Biomedical Research Ethics Committee of the University of KwaZulu-Natal (ref.: H127/06). The approval letter is provided as Appendix 2.

3.6.3 Collaborative partnerships

The Vice-Chairperson of USCIPA is nominated by the members of the executive committee. The executive committee is the body that represents its members at executive meetings held once monthly. The project ensured collaboration between different role-players; in this instance, the executive committee, and the members in general and the Vice-Chairperson. The stakeholders worked together in a partnership situation in order to realize fruitful completion of the project.

The letter of permission, written by the Vice-Chairperson of USCIPA, was distributed to all members of USCIPA, following approval by the Biomedical Research Ethics Committee and is also presented in Appendix 2.

Each study participant also read the information sheet and signed the informed consent in duplicate. One copy of the informed consent to participate in study was kept with the investigator; the other copy was left with the participant. The PI clarified any queries that participants had regarding the information, bearing in mind that consent is a process.

3.6.4 Value

Social:

The study highlighted the paradigm shift from the narrow, purely medical sphere towards a broader socio-political milieu of healthcare delivery. The research project provided information, which can serve as a baseline for the formulation of recommendations for an improved understanding of HL by FPs. The research can assist in mapping out a different way in which HL in general is enacted and introduced to the citizens of the country.

Scientific:

The research will lead to increased knowledge, which will be of benefit to the profession and to private FP in particular. The outcome will inform recommendations and further suggestions.

Scientific validity:

The research was done in accordance with an approved protocol. Sound, careful and accurate methods were employed. Recognized and safe measures were utilized for the data capturing process, cleaning of the data and then subsequent analysis. Safety

measures for storage of the data to avoid loss were implemented. Safety measures for storage of the data to avoid loss were implemented. Data collection tools were stored in a locked filing cabinet, with the researcher being the only person with a key. Computer records were backed up and kept in a locked safe in a separate location to which the researcher alone had access.

3.6.5 Fair subject selection

Inclusion in the study was open to all private FPs within the specified geographical area. Although the majority of study participants were members of USCIPA, inclusion was not limited to members.

3.6.6 Favourable risk/benefit ratio

The question to be posed here is: to what extent did the study impose upon or harm the study participants and how would these same participants benefit from the study? The principles of non-maleficence and beneficence were adhered to, and no exploitation of study participants occurred. The following potential risks to the participants were considered:

- inconvenience factor – this was minimized by making an appointment to see the study participant, conduct the interview and have the questionnaire filled in.
- possibility of discomfort experienced to some extent by participant due to lack of awareness/optimal knowledge of relevant HL.

It was considered that overall risk was minimal throughout the study.

There were no direct benefits to individual study participants during or after the study. However, there is the potential for benefit in the future, once the results are made public. The potential benefits to individuals and to society were considered to outweigh the

possible risks. There was very little likelihood of harm to be suffered by the participants, in the form of psychological, physical, legal, social or economic harms. There was no inherent risk to participants' families or, for that matter, to society at large.

3.6.7 Confidentiality

Confidentiality was maintained during and after the study. This was done by:

- anonymizing the data collection.
- keeping signed consent forms and documents separately from the information sheets and questionnaires and locking these in a secure location.

There was no risk of stigmatization or victimization, as every effort was made to protect this identifiable cohort of FP. The specific geographical area under study will also be anonymised in any future publication. While anonymity was essential and there were no individual identifiers in the questionnaire, the data did contain potential identifiers (e.g. gender and age). This information was however necessary for the research design and potential participants were informed of this risk. They were therefore reassured that they need not answer any question that they were uncomfortable with, both verbally and in the information sheet provided.

3.6.8 Respect for study participants

Respect for study participants was maintained throughout the study and after its completion. Such respect included respect for participant autonomy, confidentiality issues, gathering of data and deriving results/conclusions and also making available a copy of the paper/report to be published for each participant on conclusion of the project. The results of the study will be made known to participants in a manner that is respectful of the interests of all concerned.

3.7 Summary

This chapter has summarized the methods used in this study, which was conducted in line with international best practises. Once the results of the survey have been finalized, a report will be provided to the participants and also made available to the Health Professions Council of South Africa and the national Department of Health. The findings will add to the body of knowledge which will be of benefit to the profession, to private family practice in particular and to patient care. The outcome will inform recommendations, including on how FPs can become actively involved in shaping HL, together with government representatives and the wider society. All significant ethical considerations were strictly adhered to in conducting this research study.

The results obtained are outlined in Chapter 4.

CHAPTER 4: RESULTS

4.1 Introduction

The results will be presented according to the main objectives of the study, supplemented with graphs and tables. These objectives were:

1. To determine family practitioners' knowledge of health legislation.
2. To determine family practitioners' attitudes towards health legislation.
3. To assess the correlation between family practitioners' knowledge and attitudes.
4. To compare the self-reported knowledge of health legislation with the objective assessment of knowledge and attitudes.
5. To establish practitioners' perceptions of the future of the profession, and of family practice in particular.

In addition, an implementation objective was set, to provide recommendations for various audiences. These are covered in more detail in Chapter 6.

4.2 Participation rate

Out of 60 members of USCIPA practising in the designated geographical area, 55 agreed to participate. Another 15 non-members also practising in the designated geographical area were approached and all agreed to participate. . An additional 40 FP practising in the listed adjacent areas were personally approached by the PI to participate. Of these, 31 agreed to participate. The total sample was therefore 101, representing a participation rate of 87.8% (101/115).

The structured questionnaire consisted of 30 questions divided into 5 different sections, as follows:

- demographics and general issues: 8 questions
- HL knowledge assessment: 11 questions
- assessment of attitudes towards HL: 7 questions
- questions related to self-reported knowledge (understanding and awareness): 2 questions
- information gathering question (related to neither knowledge nor attitude): 1 question
- the last question was a follow-on question: 1 question

The respondents were encouraged to answer all the questions to the best of their ability. They were made aware of the fact that all efforts will be made to keep the information obtained strictly confidential. However, they could choose not to answer any question relating to demographics or general information. In each case, the number of non-responses to individual questions is shown.

4.3 Demographics

As expected, the respondents were mostly middle-aged. Of the 101 participants, the most common age group was 40 - 49 years (representing 28.7% of the sample) with only 2% being younger than 30 years. The age distribution, in 5-year age bands, and those aged 60 and older is provided in Figure 1. Data on age was provided by all respondents.

The majority of the respondents were male (90/101; 89.1%).

All the respondents also answered the questions related to the duration of their practice as private FP.

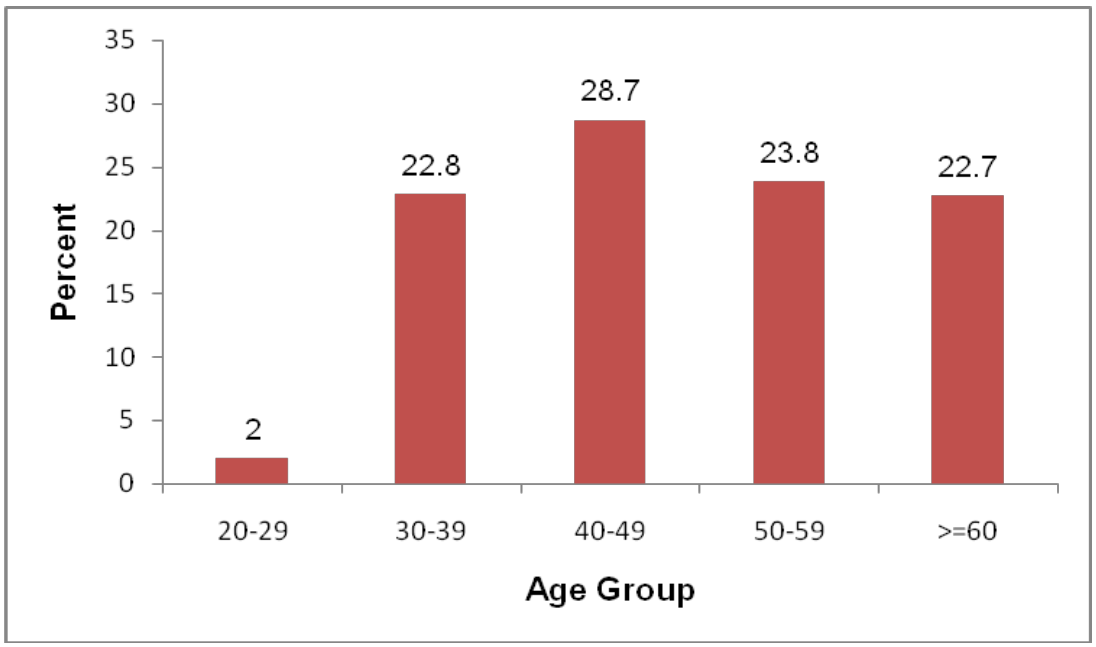

Figure 1: Age distribution of respondents (n=101, 100%)

More than half of the respondents (58.4%: 20.8% + 37.6%)) had been in practice for 15 years or more. The most common duration in private family practice was reported to be greater than 20 years (37.6%), followed by 15-20 years (20.8%). The distribution is depicted in Figure 2.

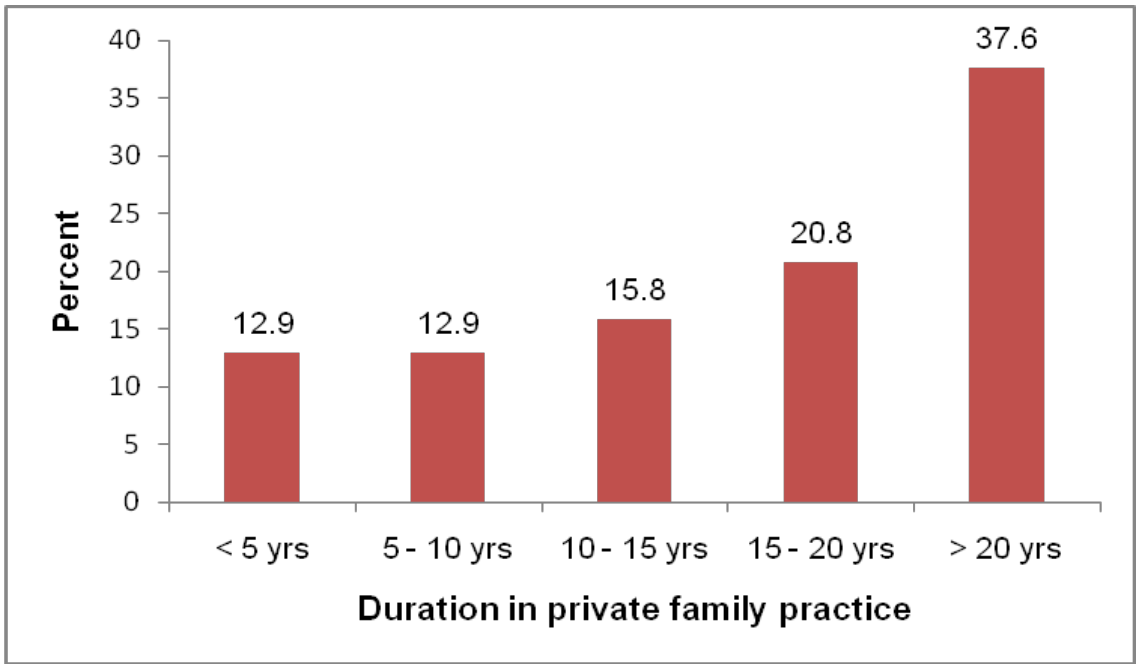

Figure 2: Duration of practice as a private FP (n=101, 100%)

Almost half of the respondents (46/101; 45.5%) stated that they had qualified at the University of KwaZulu-Natal or its predecessor (the University of Natal). The rest were graduates of other South African universities (24/101; 23.8%), as listed in Table 2, or had graduated from universities outside South Africa (9/101; 8.9%). There were 22 respondents who chose not to answer this question (21.8%). In each case, the current name of the university is listed. The University of Limpopo was formally known as the Medical University of Southern Africa (MEDUNSA), while the Walter Sisulu University was known as the University of the Transkei (Unitra).

Table 2. Medical school of qualification

Institution	N	%
University of KwaZulu-Natal, Nelson R Mandela School of Medicine, (UKZN NRMSM)	46	45.5
University of the Witwatersrand (Wits)	6	5.9
University of Cape Town (UCT)	4	4.0
University of Limpopo, MEDUNSA campus (MEDUNSA)	13	12.9
Walter Sisulu University (WSU); University of the Transkei (Unitra)	1	1.0
Other universities outside South Africa	9	8.9
Non-respondents (NR)	22	21.8
Total	101	100.0

The respondents were requested to indicate where they thought the majority of their patients resided. The respondents indicated that the majority of their patients came from urban areas (56.4%), followed by peri-urban areas (37.6%). FPs were of the opinion that very few were from rural areas (4.0%). These results are shown in Table 3.

Table 3. Residential area of patients

Area	N	%
Urban	57	56.4
Rural	4	4.0
Peri-urban	38	37.6
Non-respondents (NR)	2	2.0
Total	101	100.0

The respondents were requested to report what they thought the average monthly income of the patients attending their FP was, with answers elicited for specified bands of monthly income. The most frequently reported patients' income level was R2 000 - R2 999 per month (36.6%), followed by the R3 000 - R4 999 band (29.7%). One FP did not respond to this question, as shown in Table 4.

Table 4. Perceived patients' monthly income level

Income	N	%
R 500 – R 999	4	4.0
R 1,000 – R 1,999	18	17.8
R 2,000 – R 2,999	37	36.6
R 3,000 – R 4,999	30	29.7
> R 5,000	11	10.9
Non-respondents (NR)	1	1.0
Total	101	100.0

Respondents were requested to estimate the percentage of patients attending their practices who were beneficiaries of a medical aid scheme. Responses varied widely, with 27.2% of the respondents estimating that over 50% of their patients were beneficiaries of a medical scheme and another 26.3% estimating that 40-50% of their patients were covered in this way. The distribution of responses is depicted in Figure 3. All respondents completed this question.

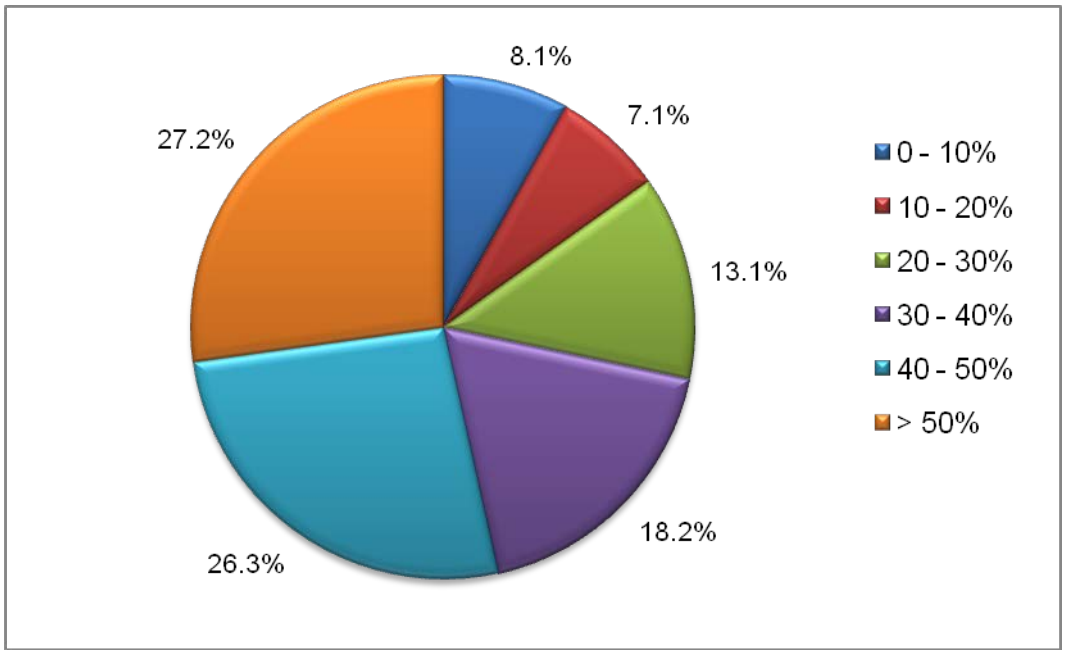

Figure 3: Perceived percentage of patients with medical scheme cover (n=101, 100%).

A certain percentage of patients attending a FP pay an all-inclusive, out-of-pocket cash fee for services rendered. These services include the consultation, medication and any procedures performed and/or injections administered. This is sometimes referred to as a "one-stop-shop" service or a "packaged service fee". Patients taking advantage of such services would not be expected to be beneficiaries of a medical scheme. The respondents were asked to indicate the percentage of their patients who pay a packaged service fee and were requested to select from 25% quartiles. The majority of respondents (64.4%) reported that between 25% and 75% of patients were likely to pay in this manner. The distribution of responses is shown in Table 5.

Table 5. Percentage of patients who pay for packaged service

	N	%
0 – 25 %	21	20.8
25 – 50 %	33	32.7
50 – 75 %	32	31.7
> 75 %	13	12.8
Non-respondents (NR)	2	2
Total	101	100.0

4.4 Family practitioners' knowledge of health legislation

This section of the chapter relates to Objective 1 (To determine family practitioners' knowledge of health legislation). Responses to the individual knowledge questions are shown as frequencies in Tables 6 to 18. The individual knowledge questions were 11 in total: Questions 14-27, excluding 16, 23 and 26. The correct answers to each are indicated in the text and also highlighted in the completed and scored example of the questionnaire (Appendix 1). The responses to each knowledge question were then summed to obtain the knowledge score.

Throughout the knowledge questions, the following abbreviations were used to indicate the health legislation (HL) or policy instruments of focus:

- NHA - National Health Act
- MSA - Medical Schemes Act
- MRSCAA - Medicines and Related Substances Control Amendment Act of 1997
- NHRPL - National Health Reference Pricing List
- ICD-10 - International Classification of Diseases – 10th revision

In question 14a, the respondents were asked to indicate which of a list of 5 options constituted HL. The correct answers were the following: NHA, MSA and MRSCAA. A significant percentage of respondents wrongly indicated that ICD-10 Coding (36/101; 35.6%) and NHRPL (43/101; 42.6%) were pieces of HL. However, as shown in Table 6, many did not answer the options in this question (indicated as NR).

Table 6. Question 14a. Identifying HL from a list

	No	Yes	NR	Total
	N (%)	N (%)	N (%)	%
14a. HL NHA	3 (3.0)	78 (77.2)	20 (19.8)	100
14a. HL MSA	6 (5.9)	59 (58.5)	36 (35.6)	100
14a. HL NHRPL	7 (6.9)	43 (42.6)	51(50.5)	100
14a. HL MRSCAA	6 (5.9)	62 (61.4)	33 (32.7)	100
14a. HL ICD-10	5 (5.0)	36 (35.6)	60 (59.4)	100

The Certificate of Need (CON) is enabled by Chapter 6 of the NHA. In question 14b, the respondents were required to identify this fact. The majority of respondents (73/101; 72.3%) were able to identify this fact, while only 3 (3.0%) reported that the CON was not dealt with in the NHA. However, as shown in Table 7, a large number of FP (25/101; 24.7%) did not respond to this question. Responses to the other options offered were also characterized by a high proportion of non-responders.

Table 7. Question 14b. Identifying the location of the CON in HL

	No	Yes	NR	Total
	N (%)	N (%)	N (%)	%
14b CON NHA	3 (3.0)	73 (72.3)	25 (24.7)	100
14b. CON MSA	11 (10.9	6 (5.9)	84 (83.2)	100
14b. CON NHRPL	9 (8.9)	7 (6.9)	85 (84.2)	100
14b. CON MRSCAA	10 (9.9)	9 (8.9)	82 (81.2)	100
14b. CON ICD10	10 (9.9)	2 (2.0)	89 (88.1)	100

Questions 14c, d and e covered more specific details about the CON. The results are shown in Table 8. Only 46 of the respondents (45.5%) were correct in indicating that the CON is applicable to both private and public services. Only 5 FP (5.0%) indicated that CON is valid for a period exceeding 10 years. The CON is valid for a period greater than 10 years but not more than 20 years. A smaller proportion failed to respond to questions 14c (8/101; 7.9%), 14d (4/101; 4.0%) and 14e (12/101; 11.8%).

Table 8. Questions 14c to 14e. Details of the CON

		N	%
14c CON is the regulation of the number of practices in an area	True	92	91.1
	False	1	1
	Non-respondents	8	7.9
	Total	101	100
14d. CON is regulation of private FP only	True	51	50.5
	False	46	45.5
	Non-respondents	4	4
	Total	101	100
14e. CON is valid for what period of time	Indefinitely	21	20.8
	< 10 years	63	62.4
	> 10 years	5	5
	Non-respondents	12	11.8
	Total	101	100

An important provision of the MSA is that dealing with prescribed minimum benefits (PMBs), and particularly those for the 29 listed chronic medical conditions. Question 15a dealt with the number of such conditions listed, and as the option provided was 29, the correct answer was "False". Only 33/101 (32.6%) provided the correct answer and 5/101 (5.0%) did not respond to this question. The results for this question and questions 15b (where the correct answer is that medical schemes have established treatment algorithms/formularies for PMBs) and 15c (which required the FP to correctly identify that community rating involves the payment of premiums by medical scheme members **not** based on their state of health) are shown in Table 9. The majority of respondents (92/101; 91.1%) answered question 15b correctly, but less than half (46/101; 45.5%) were able to correctly answer that community rating did not set premiums in relation to health status. In all three of these questions, the number of non-respondents was low.

Table 9. Questions 15a to 15c. Details from the MSA

	True	False	NR	Total
	N (%)	N (%)	N (%)	%
15a. MSA makes provision for PMB for 32 chronic conditions	63 (62.4)	33 (32.6)	5 (5.0)	100
15b. Medical aid schemes established formularies to cover PMB	92 (91.1)	7 (6.9)	2 (2.0)	100
15c. Principle of community rating and differential premiums paid by members depending on health status	47 (46.6)	46 (45.5)	8 (7.9)	100

Question 17 required the respondents to correctly identify that the CON restricts FPs from opening practice elsewhere. The correct option was therefore 17c. This option was marked as correct by 67/100 (66.3%) of respondents, but 29/101 (28.7%) did not respond to this question. The distribution of responses for and against the other options provided (17a and 17b) are shown in Table 10.

Table 10. Questions 17a to 17c. Effects of the CON

	Yes		No		NR	Total
	No.	%	No.	%	No. (%)	%
17a. Reduce size of practice	44	43.6	8	7.9	49 (48.5)	100
17b. Increase size of practice	15	14.9	13	12.9	73 (72.2)	100
17c. Restrict you from opening practices elsewhere	67	66.3	5	5	29 (28.7)	100
17d. Make no difference	22	21.8	18	17.8	61 (60.4)	100

Question 18 posed two statements about the impact of managed healthcare (MHC) on FP. The correct answer was "Yes" in both instances. The MHC model should result in an increase in the number of patients, and hence, the size of FP (18a). Furthermore, MHC is a reasonable option to curtail the increasing costs of healthcare and delivery (18b). A small number of non-respondents to each question was noted. However, as can be seen in Table 11, the majority of respondents did not choose to answer "Yes" especially with respect to Question 18a. The number of respondents who chose the correct answer to 18b (good option to curtail costs) was 43 (42.5%).

Table 11. Questions 18a and 18b. Effect of MHC on FP

	Yes		No		Makes no difference		NR	Total
	No.	%	No.	%	No.	%	No. (%)	%
18a. Managed care increases size of FP	16	15.8	56	55.5	27	26.7	2 (2)	100
18b. Managed care is a good option to curtail increasing cost of healthcare delivery	43	42.5	33	32.7	20	19.8	5 (5)	100

Question 19 required respondents to identify which of a list of models was a type of MHC practice. The correct options offered were Designated Service Providers (DSP), Health Maintenance Organisation (HMO) and Individual or Preferred Providers (IP or PP). Capitation is a financing option and therefore not an MHC model *per se*. The

correct options for Question 19 were therefore a, c and d, but not b, e or f. Table 12 shows the responses to these questions, indicating a lack of knowledge of MHC models, but also a high proportion of non-respondents.

Table 12. Questions 19a to 19f. Examples of MHC models

	No	Yes	NR	Total
	N (%)	N (%)	N (%)	%
19a. DSP (Designated Service Provider)	7 (6.9)	59 (58.4)	35 (34.7)	100
19b. Capitation	5 (5.0)	69 (68.3)	27 (26.4)	100
19c. HMO (Health Maintenance Organisation)	8 (7.9)	42 (41.6)	51 (50.5)	100
19d. IP or PP (Individual / Preferred Provider)	8 (7.9)	52 (51.5)	41 (40.6)	100
19e. All of above	5 (5.0)	55 (54.4)	41 (40.6)	100
19f. None of above	9 (8.9)	1 (1.0)	91 (90.1)	100

Questions 20a to 20c referred to the NHRPL. The Council for Medical Schemes (CMS) is responsible for the compilation of the NHRPL. Presently, the NHRPL for 2011 is still being debated by all stakeholders. Just over half of the respondents (52/101; 51.5%) knew that the NHRPL is drawn up by the CMS. By contrast, the majority of the respondents (79/101; 78.2%) understood the NHRPL to be a reference pricing list reflecting the real cost of a service. Nonetheless, a majority of respondents (59/101; 58.4%) indicated that they had no say in the determination of the NHRPL benefit by means of making submissions as an individual or as a group. The results for this series of questions are shown in Table 13. Very few FP failed to respond to these questions.

Table 13. Questions 20a to 20c. The process of determining the NHRPL

	True	False	NR	Total
	N (%)	N (%)	N (%)	%
20a. NHRPL - Compilation by CMS	52 (51.5)	43 (42.6)	6 (5.9)	100
20b. Reflects real cost of service	79 (78.2)	17 (16.8)	5 (5.0)	100
20c. FP have no say in the process	59 (58.4)	41 (40.6)	1 (1.0)	100

Questions 21a to 21d dealt with the license to dispense and related issues. These questions were poorly answered in general, except for question 21c, where the majority (77/101; 76.2%) were able to provide the correct answer regarding generic substitution. Generic substitution is not permissible where a product has been declared as being not substitutable by the South African Medicines Control Council. The accreditation of the dispensing licensing course falls under the ambit of the Pharmacy Council and not the HPCSA. Hence, the correct answer for 21a would be “No”. Only 20/101 (19.8%) respondents answered this correctly. With respect to bonusing of medication, no person shall supply any medicine according to a bonus system, a rebate scheme or any other incentive scheme. This will apply equally to pharmaceutical manufacturers as well. Hence, the correct response for question 21d was “No”. Just more than a quarter of respondents (27/101; 26.7%) answered this question correctly. As shown in Table 14, the number of non-respondents to these questions was low. However, a “don’t know” option was allowed in these questions.

Table 14. Questions 21a to 21d. Details from the MRSCAA

	Yes	No	Don't know	NR	Total
	N (%)	N (%)	N (%)	N (%)	%
21a. Under HPCSA	75 (74.2)	20 (19.8)	5 (5.0)	1 (1.0)	100
21b. Vet can prescribe	44 (43.5)	15 (14.9)	41 (40.6)	1 (1.0)	100
21c. No substitution[1]	77 (76.2)	11 (10.9)	12 (11.9)	1 (1.0)	100
21d. Bonusing of medicines is permissible	59 (58.4)	27 (26.7)	10 (9.9)	5 (5.0)	100

Questions 22a to 22d elicited knowledge in relation to statements about medicine pricing issues. This offered an insight into the impact of HL touching on dispensing issues in private family practice. The responses are shown in Table 15.

Table 15. Questions 22a to 22d. Medicine pricing issues

	True	False	NR	Total
	N (%)	N (%)	N (%)	%
22a. FP understand the recommended dispensing fee as being appropriate	15 (14.9)	84 (83.1)	2 (2.0)	100
22b. Current dispensary overhead exceeds income	88 (87.1)	11 (10.9)	2 (2.0)	100
22c. Pharmaceutical pricing regulation has no impact on profitability	18 (17.8)	81 (80.2)	2 (2.0)	100
22d. with current HL changes its not financially feasible to dispense medicines	86 (85.1)	13 (12.9)	2 (2.0)	100

Questions 24a to 24c dealt with the rights of citizens of South Africa and participatory democracy. A significant number of respondents (61/101; 60.4%) indicated that they did

[1] An error in Question 21c was detected after the study was completed – it is the Medicines Control Council, not the Pharmacy Council which is responsible for declaring a medicine "non-substitutable".

not participate in the process of commenting on HL and the same number were of the opinion that FP input is not being given the due consideration it deserves. FP showed poor knowledge of the right to comment on impending legislation, with only 22/101 (21.8%) indicating that they were well aware of their right to comment on impending legislation. As can be seen in Table 16, the number of non-respondents to these questions was low.

Table 16. Questions 24a to 24c. Legislation and rights of citizens

		N	%
24a. Are you aware that citizens have a right to comment on impending legislation	Well aware	22	21.8
	Aware	55	54.4
	No knowledge	24	23.8
	Non-respondents	0	0
	Total	101	100
24b. Did FP participate in the process of commenting on HL	Yes	39	38.6
	No	61	60.4
	Non-respondents	1	1.0
	Total	101	100
24c. FP input is seriously considered	Yes	38	37.6
	No	61	60.4
	Non-respondents	2	2.0
	Total	101	100

Questions 25a to 25d dealt with ICD-10 Coding. This question was generally adequately handled by the respondents except for 25b. Only 29/101 (28.7%) respondents acknowledged that the ICD-10 Coding system was not used by medical brokers, whereas 55/101 (54.5%) were of the opposite opinion. Medical brokers do not use ICD-10 coding, as these data are only used by medical schemes themselves. Table 17 shows the responses to these questions, and the low level of non-respondents. As with the previous questions, a “don’t know” option was allowed.

Table 17. Question 25 responses - ICD-10 Coding and some important features

	True	False	Don't know	NR	Total
	N (%)	N (%)	N (%)	N (%)	%
25a. Used to collect data and disease profiles	83 (82.2)	6 (5.9)	11 (10.9)	1 (1.0)	100
25b. Used by medical brokers to manage services	55 (54.5)	29 (28.7)	16 (15.8)	1 (1.0)	100
25c. Raises concerns regarding disclosure of confidential information	87 (86.1)	9 (8.9)	0 (0)	5 (5.0)	100
25d. Confidentiality of information preserved	97 (96.0)	2 (2.0)	0 (0)	2 (2.0)	100

In Question 27, the respondents were requested to indicate the circumstances under which patient confidentiality can be revealed. This question was well answered, with 82/101 (81.2%) answering correctly ("All of the above"). There were 6 non-respondents to this question. The responses are summarized in Table 18.

Table 18. Question 27. When is patient confidentiality information revealed?

	N	%
On instruction of a court of law	11	10.9
When called for by a statutory provision –	1	1.0
When justified in the public interest	1	1.0
With written consent of a parent if <14 years old	0	0
Deceased – call in the Superintendent	0	0
All of above	82	81.2
None of above	0	0
Non-respondents	6	5.9
Total	101	100

The mean knowledge score (standard deviation) for respondents, calculated by summing up responses to individual questions was 55.0% (12.2%). Scores ranged from 22.6% to 80.7%. Scores were approximately normally distributed (skewness statistic -0.332) and are depicted in Figure 4.

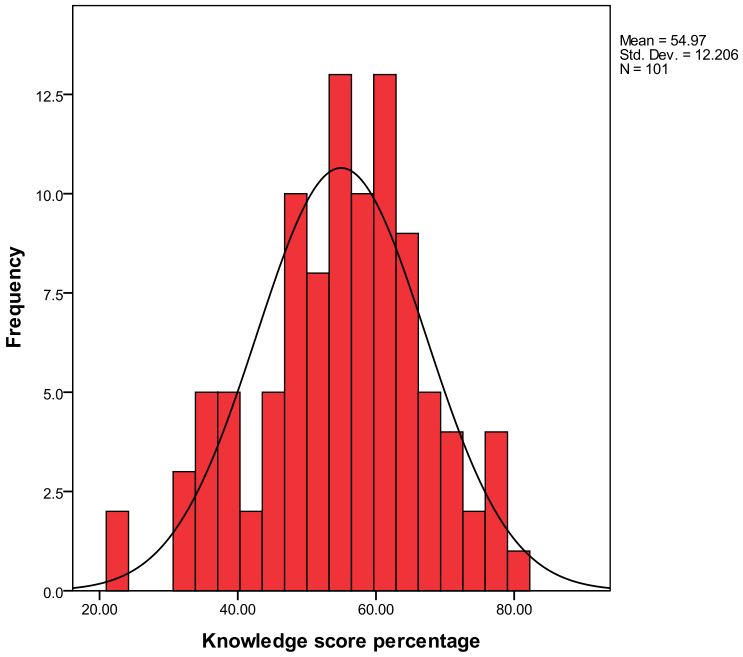

Figure 4: Distribution of knowledge scores (%)

4.5 Family practitioners' attitudes to health legislation

This section of the chapter relates to Objective 2 (To determine family practitioners' attitudes towards health legislation). The responses to the individual attitude questions are provided in Tables 19 to 25. There were 7 attitude questions in total, posed as Questions 9-11, 16, 26, 28, and 29.

The responses to Questions 9a to 9c are shown in Table 19. In response to Question 9a, 58.4% of the respondents strongly agreed and agreed (13.9% + 44.5%) that recent HL reform aimed to promote access, equity and affordability of healthcare delivery to all

citizens in South Africa. However, 52.4% of respondents strongly disagreed and disagreed (26.7% + 25.7%) with the statement (Question 9b) that the government had the authority/right to regulate FP in South Africa and 81.2% also strongly disagreed and disagreed (52.4% + 28.8%) with the statement (Question 9c) that medical scheme authorities have the right to intervene in healthcare delivery to patients.

Table 19. Questions 9a to 9c. Attitudes towards HL information and reform changes

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	NR	Total
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	%
9a	14 (13.9)	45 (44.5)	15 (14.9)	17 (16.8)	6 (5.9)	4 (4.0)	100
9b	4 (4.0)	30 (29.7)	11 (10.9)	26 (25.7)	27 (26.7)	3 (3.0)	100
9c	1 (1.0)	10 (9.9)	6 (5.9)	29 (28.8)	53 (52.4)	2 (2.0)	100

Attitudes towards HL reform as at present, in terms of its impact on FP, were assessed in Question 10. Most respondents (77/101; 76.2%) expressed negative attitudes to the question “How do you rate your attitude towards Health Legislation (HL) at present in terms of its general overall impact on your family practice?”. Only 3 participants did not respond to this question, as shown in Table 20.

Table 20. Question 10. Present attitudes towards HL impact on FP

	N	%
Positive	21	20.8
Negative	77	76.2
Non-respondents	3	3.0
Total	101	100

Question 11 attempted to determine if FPs' attitudes towards HL was any different in the past as compared to the present. The number of respondents who harboured a similarly negative feeling and attitudes towards HL in the past, prior to 1994, as compared to the present was 60/101 (59.4%), as shown in Table 21. By contrast, 39/101 (38.6%) indicated a difference in attitudes.

Table 21. Question 11. Past attitudes towards HL compared to the present

	N	%
Yes: There was a difference	39	38.6
No: There was no difference	60	59.4
Non-respondents	2	2.0
Total	101	100

Question 16 explored FPs' attitudes towards PMBs and the CON. The question was negatively answered on the whole, as shown in Table 22. Sixty-five respondents (64.4%) were not satisfied with the PMB system in relation to patients' chronic ailments; and 69 (68.3%) disagreed with the concept of the CON.

Table 22. Questions 16a and 16b. Satisfaction with PMBs, and agreement with concept of CON

	Yes	No	NR	Total
	N (%)	N (%)	N (%)	%
16a. Satisfied with PMB cover for chronic ailments	34 (33.6)	65 (64.4)	2 (2.0)	100
16b. Agree with CON for FP	27 (26.7)	69 (68.3)	5 (5.0)	100

Issues around confidentiality, termination of pregnancy (TOP) and age of consent for treatment were explored in Question 26. Question 26a was negatively answered, while Questions 26b to 26d elicited relatively positive responses. The majority of FP felt that there is no need for FP to obtain a fully informed consent from the patient prior to using

and disclosing the ICD-10 Code to medical schemes. In this case (Question 26a), 21/101 (20.8%) strongly agreed and 38/101 (37.6%) agreed. The majority of the respondents (71/101; 70.3%) strongly agreed and agreed (37.6% + 32.7%) that a signed copy of a patient's consent to release medical records must be obtained prior to forwarding such records to medical aid schemes or any other third party (Question 26b). More than half of respondents disagreed and strongly disagreed that the age at which children may independently consent to medical treatment be set at 14 years of age (Question 26c). Similarly a high proportion (65.3%) of respondents reported negative attitudes towards TOP for a person of any age without consent from a parent/guardian (Question 26d). The results are shown in Table 23.

Table 23. Questions 26a to 26d. Confidentiality, Age of Consent for treatment, Termination of Pregnancy

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	NR	Total
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	%
26a No need to obtain consent	21 (20.8)	38 (37.6)	16 (15.8)	11 (10.9)	13 (12.9)	2 (2.0)	100
26b Need patient to sign	38 (37.6)	33 (32.7)	7 (6.9)	13 (12.9)	7 (6.9)	3 (3.0)	100
26c Medical treatment at 14 years of age	15 (14.9)	20 (19.8)	9 (8.9)	38 (37.6)	17 (16.8)	2 (2.0)	100
26d TOP at any age and with no consent	9 (8.9)	6 (5.9)	16 (15.9)	26 (25.7)	40 (39.6)	4 (4.0)	100

Table 24 shows that the majority of FP (91.1%) demonstrated a positive attitude towards more education and training and more CPD sessions on HL (81.2%), as posed in Questions 29a to 29b. However, 69.3% were of the opinion that recent HL reform did not result in any significant improvements for them in their relationship with patients. In fact, 48/101 (47.5%) respondents reported a deterioration in their relationship with patients and 48/101 (47.5%) felt that aspects of HL referred to in the Questionnaire required revision.

Table 24. Question 29 responses - FP attitudes to the need for HL education and on recent HL reform

	Yes	No	NR	Total
	N (%)	N (%)	N (%)	%
29a. More education on HL	92 (91.1)	8 (7.9)	1 (1.0)	100
29b. HL CPDs	82 (81.2)	18 (17.8)	1 (1.0)	100
29c. Recent reforms improve relationships with patients	29 (28.7)	70 (69.3)	2 (2.0)	100
29d. Recent reforms – deterioration in relationships with patients	48 (47.5)	48 (47.5)	5 (5.0)	100
29e. Revise some aspects of HL	48 (47.5)	43 (42.6)	10 (9.9)	100

Of the 48 FP who answered “Yes” to question 29e, 34 provided comments on the changes they perceived to be necessary. In relation to the NHA, the view was expressed that there was “No need for CON”, that it was “Too restrictive” and “Unconstitutional”. It was also noted that South Africa needed “more doctors and healthcare facilities”. In relation to the MSA, the view was expressed that there were “Too many Medical Aid Schemes”, that these schemes involved “Too much administrative work”, and also that there was a “Lack of honesty and transparency by Medical Aid Administrators”. Other issues raised were that “Schemes and administrators” were “Too dictatorial” and that “Savings schemes should be abolished”. Respondents indicated a preference for dispensing licences to be renewed every 5

years, and for dispensing fees to be increased to be similar to those specified for pharmacists. It was also stated that there was “No need for a dispensing licence”. The ICD-10 coding system was regarded as “Too complex”, while it was felt that “Market forces” should be allowed to determine pricing (in relation to the NHRPL). In general, a “Lack of adequate and meaningful consultation with FPs” was detected, but also that FPs’ “Comments and input not taken seriously”. As HL was perceived to be “Generally too cumbersome to read”, a “Reference handbook on HL” was suggested. It was also stated that “HL increases stress in the life of a FP”.

The mean (standard deviation) attitude score was 46.3% (4.26%), and ranged from 36% to 58%. These scores were also approximately normally distributed (skewness statistic -0.013) and are depicted in Figure 5.

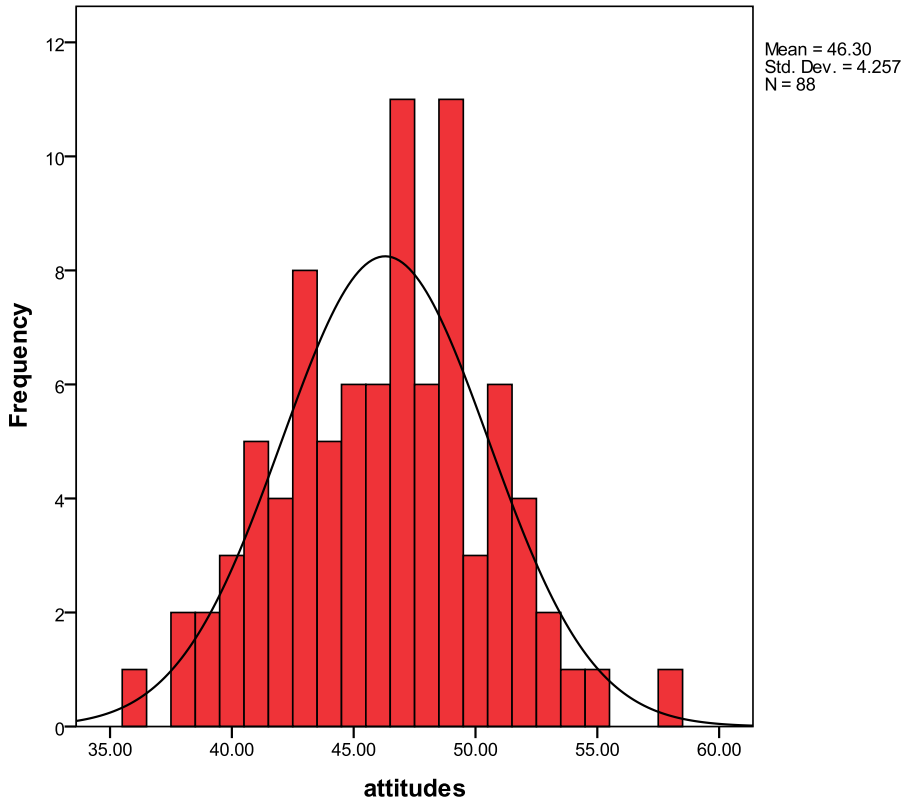

Figure 5: Distribution of attitude scores (%)

4.6 Correlation between attitudes and knowledge scores

Objective 3 sought to determine whether there was a correlation between FPs' attitudes and knowledge scores. There was a weak positive correlation demonstrated (Pearson correlation coefficient 0.244 ; p=0.022, two-tailed) based on 88 scores, as reported in the preceding sections; viz.: 4.4 and 4.5. The scatter plot for this correlation is shown in Figure 6. Thus, in general, as knowledge increased, attitudes improved. However, there were many outliers. The R^2 value was low (0.06), indicating that 6% of the variability in attitudes is explained by knowledge. It is therefore likely that many other factors influence attitudes.

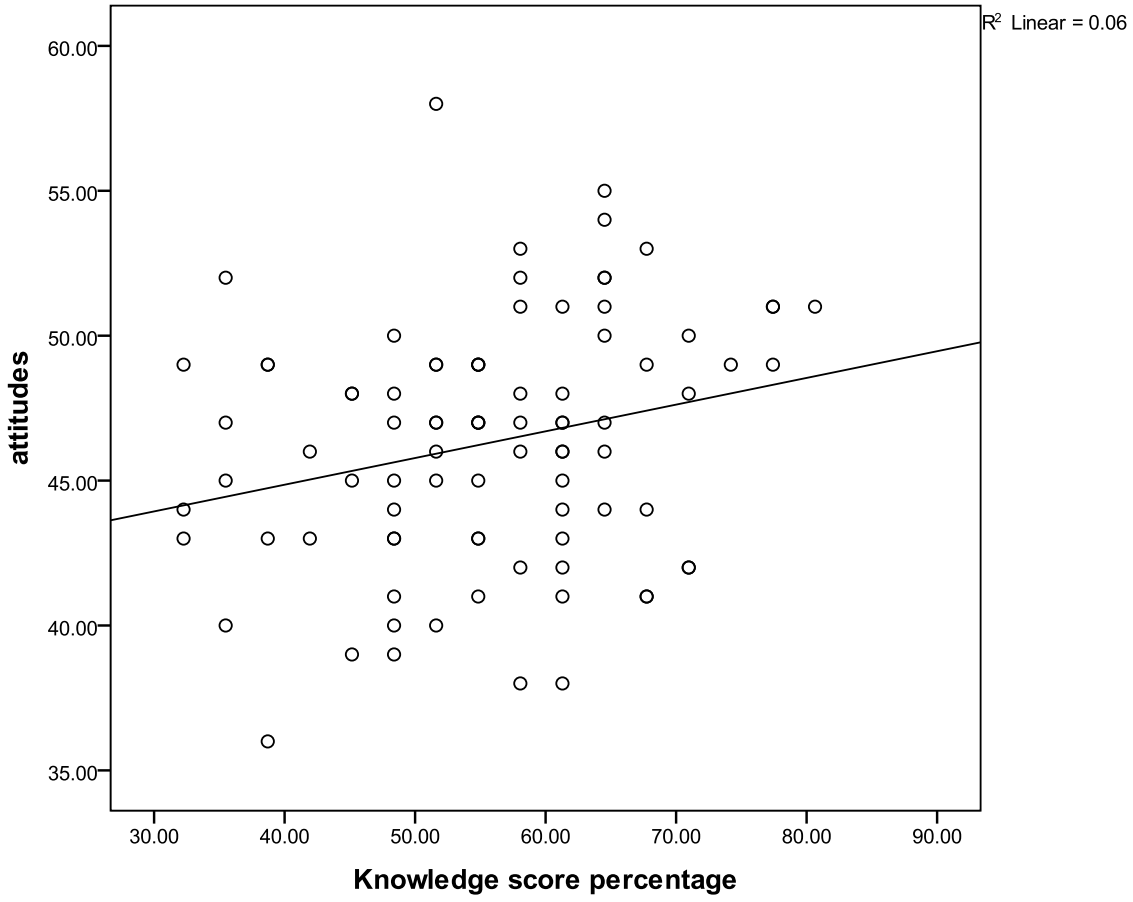

Figure 6: Correlation between knowledge and attitudes

4.7 Comparison of self-reported knowledge and objective assessment

This section deals with Objective 4 (To compare the self reported knowledge of health legislation with the objective assessment of knowledge and attitudes) and the data from Questions12 and 13. Tables 25 and 26 show the results of self-reported knowledge and were thus not used in the creation of the knowledge score described in section 4.4.

Table 25. Questions 12a to 12e. Awareness of health legislation by FP

	Well Aware	**Aware**	**No Knowledge**	**NR**	**Total**
	N (%)	**N (%)**	**N (%)**	**N (%)**	**%**
12a. Awareness of NHA	11 (10.9)	72 (71.3)	17 (16.8)	1 (1.0)	100
12b. Awareness of MSA	13 (12.9)	74 (73.3)	14 (13.9)	0 (0)	100
12c. Awareness of NHRPL	30 (29.7)	68 (67.3)	3 (3.0)	0 (0)	100
12d. Awareness of MRSCAA	26 (25.7)	66 (65.4)	9 (8.9)	0 (0)	100
12e. Awareness of ICD-10	26 (25.7)	68 (67.3)	4 (4.0)	3 (3.0)	100

Table 26. Questions 13a to 13e. Understanding of health legislation by FP

	Good	Satisfactory	Poor	NR	Total
	N (%)	N (%)	N (%)	N (%)	%
13a understanding of NHA	11 (10.8)	63 (62.4)	23 (22.8)	4 (4.0)	100
13b understanding of MSA	6 (5.9)	63 (62.4)	27 (26.7)	5 (5.0)	100
13c understanding of NHRPL	22 (21.7)	62 (61.4)	13 (12.9)	4 (4.0)	100
13d understanding of MRSCAA	17 (16.8)	53 (52.5)	27 (26.7)	4 (4.0)	100
13e understanding of ICD-10	31 (30.6)	53 (52.5)	12 (11.9)	5 (5.0)	100

Tables 27 and 28 show that those who were reportedly well aware of the NHA had the second-lowest knowledge score and the lowest attitudes score, while those who were aware of the NHA had the highest mean knowledge and attitudes scores. Those who said they had no knowledge of the NHA scored the lowest mean knowledge score but the mean score was not much lower than those who were reportedly “well aware”. There was a borderline non-statistically significant difference between knowledge scores of the three groups (p=0.068). Attitudes scores did not differ (p=0.356).

Table 27. Summary statistics for knowledge and attitudes scores by self-reported awareness of NHA

12a Awareness of NHA		Knowledge score percentage	Attitudes
Well aware	Mean	51.3	44.6
	N	11	7
	Std. Deviation	15.8	4.7
Aware	Mean	57.0	46.7
	N	72	66
	Std. Deviation	10.5	4.4
No knowledge	Mean	50.7	45.5
	N	17	15
	Std. Deviation	13.2	3.2
Total	Mean	55.3	46.3
	N	100	88
	Std. Deviation	11.8	4.3

Table 28. ANOVA comparison of means between the three groups of question 12a

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	745.1	2	372.5	2.8	0.1
	Within Groups	13095.1	97	135.0		
	Total	13840.2	99			
Attitudes	Between Groups	37.9	2	18.9	1.0	0.4
	Within Groups	1538.4	85	18.1		
	Total	1576.3	87			

There was no difference between the means of the three groups in terms of knowledge of the MSA, but a borderline non-significant difference in terms of attitudes (p=0.075). The attitude score of the aware group was higher than that of the other two groups. These results are shown in Tables 29 and 30.

Table 29. Summary statistics for knowledge and attitudes scores by self-reported awareness of MSA

12b Awareness of MSA		Knowledge score percentage	Attitudes
Well aware	Mean	53.1	44.7
	N	13	9
	Std. Deviation	14.3	4.2
Aware	Mean	56.2	46.9
	N	74	65
	Std. Deviation	11.9	4.3
No knowledge	Mean	50.2	44.5
	N	14	14
	Std. Deviation	11.2	3.3
Total	Mean	55.0	46.3
	N	101	88
	Std. Deviation	12.2	4.3

Table 30. ANOVA comparison of means between the three groups of question 12b

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	470.018	2	235.009	1.596	.208
	Within Groups	14429.478	98	147.240		
	Total	14899.496	100			
attitudes	Between Groups	93.372	2	46.686	2.676	.075
	Within Groups	1482.946	85	17.446		
	Total	1576.318	87			

In terms of awareness of NHRPL, the knowledge score decreased as the self reported awareness decreased, but the difference was not statistically significant (p=0.107). There was no difference between the attitudes scores of the three groups, as shown in Tables 31 and 32.

Table 31. Summary statistics for knowledge and attitudes scores by self-reported awareness of NHRPL

12c Awareness of NHRPL		Knowledge score percentage	attitudes
Well aware	Mean	56.5	46.9
	N	30	24
	Std. Deviation	14.4	4.2
Aware	Mean	54.9	46.1
	N	68	61
	Std. Deviation	10.9	4.4
No knowledge	Mean	40.9	46.0
	N	3	3
	Std. Deviation	12.2	1.7
Total	Mean	55.0	46.3
	N	101	88
	Std. Deviation	12.2	4.3

Table 32. ANOVA comparison of means between the three groups of question 12c

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	663.2	2	331.6	2.3	.1
	Within Groups	14236.3	98	145.3		
	Total	14899.5	100			
Attitudes	Between Groups	12.7	2	6.4	.3	.7
	Within Groups	1563.6	85	18.4		
	Total	1576.3	87			

In terms of awareness of MRSCAA, the knowledge score decreased as the self reported awareness decreased, but the difference was not statistically significant (p=0.503). There was no difference between the attitudes scores of the three groups (p=0.240), as shown in Tables 33 and 34.

Table 33. Summary statistics for knowledge and attitudes scores by self-reported awareness of MRSCAA

12d Awareness of MRSCAA		Knowledge score percentage	Attitudes
Well aware	Mean	57.1	47.2
	N	26	22
	Std. Deviation	15.7	4.9
Aware	Mean	54.5	46.2
	N	66	59
	Std. Deviation	11.0	4.0
No knowledge	Mean	52.0	44.1
	N	9	7
	Std. Deviation	9.2	4.2
Total	Mean	55.0	46.3
	N	101	88
	Std. Deviation	12.2	4.3

Table 34. ANOVA comparison of means between the three groups of question 12d

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	207.7	2	103.8	.7	.5
	Within Groups	14691.8	98	149.9		
	Total	14899.5	100			
Attitudes	Between Groups	52.0	2	26.0	1.5	.2
	Within Groups	1524.3	85	17.9		
	Total	1576.3	87			

There was a statistically significant difference between the attitude scores of the three groups in terms of awareness of ICD-10 (p=0.014). Those who were aware of ICD-10 had the highest attitudes, as shown in Tables 35 and 36.

Table 35. Summary statistics for knowledge and attitudes scores by self-reported awareness of ICD-10

12e Awareness of ICD-10		Knowledge score percentage	attitudes
Well aware	Mean	53.3	44.3
	N	26	22
	Std. Deviation	12.2	5.0
Aware	Mean	55.9	47.2
	N	68	61
	Std. Deviation	12.3	3.8
No knowledge	Mean	58.1	44.5
	N	4	4
	Std. Deviation	5.9	3.1
Total	Mean	55.3	46.3
	N	98	87
	Std. Deviation	12.1	4.3

Table 36. ANOVA comparison of means between the three groups of question 12e

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	156.3	2	78.2	.5	.6
	Within Groups	13940.5	95	146.7		
	Total	14096.8	97			
Attitudes	Between Groups	152.3	2	76.2	4.5	.0
	Within Groups	1413.0	84	16.8		
	Total	1565.3	86			

The mean knowledge score decreased as the self reported knowledge and understanding of NHA decreased but the difference was not quite statistically significant (p= 0.078). There was no difference in attitudes between the three groups, as shown in Tables 37 and 38.

Table 37. Summary statistics for knowledge and attitudes scores by self-reported understanding of NHA

13a understanding of NHA		Knowledge score percentage	Attitudes
Good	Mean	57.5	46.1
	N	11	10
	Std. Deviation	10.6	5.0
Satisfactory	Mean	56.9	46.8
	N	63	56
	Std. Deviation	12.1	3.8
Poor	Mean	50.6	44.8
	N	23	21
	Std. Deviation	10.6	4.8
Total	Mean	55.5	46.2
	N	97	87
	Std. Deviation	11.8	4.2

Table 38. ANOVA comparison of means between the three groups of question 13a

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	709.4	2	354.7	2.6	.1
	Within Groups	12727.5	94	135.4		
	Total	13436.8	96			
Attitudes	Between Groups	63.9	2	31.9	1.8	.2
	Within Groups	1479.5	84	17.6		
	Total	1543.4	86			

There was a statistically significant difference between the three groups in terms of knowledge (p=0.015). Those who had satisfactory understanding of MSA scored the highest in terms of knowledge. Attitudes were not quite significantly different between the groups (p=0.076), as shown in Tables 39 and 40.

Table 39. Summary statistics for knowledge and attitudes scores by self-reported understanding of MSA

13b understanding of MSA		Knowledge score percentage	Attitudes
Good	Mean	54.3	45.8
	N	6	5
	Std. Deviation	10.7	5.5
Satisfactory	Mean	57.9	47.0
	N	63	55
	Std. Deviation	11.9	3.9
Poor	Mean	50.1	44.8
	N	27	26
	Std. Deviation	10.7	4.4
Total	Mean	55.4	46.3
	N	96	86
	Std. Deviation	11.9	4.2

Table 40. ANOVA comparison of means between the three groups of question 13b

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	1158.2	2	579.1	4.4	.0
	Within Groups	12271.8	93	132.0		
	Total	13430.0	95			
Attitudes	Between Groups	92.0	2	46.0	2.7	.1
	Within Groups	1433.3	83	17.3		
	Total	1525.3	85			

There was a statistically significant difference between the three groups in terms of knowledge (p=0.033). Those who had good understanding of NHRPL scored the highest in terms of knowledge. Attitudes were not quite significantly different between the groups (p=0.058), as shown in Tables 41 and 42.

Table 41. Summary statistics for knowledge and attitudes scores by self-reported understanding of NHRLP

13c understanding of NHRPL		Knowledge score percentage	Attitudes
Good	Mean	60.4	48.3
	N	22	20
	Std. Deviation	13.7	3.8
Satisfactory	Mean	54.8	45.7
	N	62	54
	Std. Deviation	10.8	4.1
Poor	Mean	50.1	45.6
	N	13	12
	Std. Deviation	11.1	4.6
Total	Mean	55.4	46.3
	N	97	86
	Std. Deviation	11.8	4.2

Table 42. ANOVA comparison of means between the three groups of question 13c

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	937.4	2	468.7	3.5	.0
	Within Groups	12493.0	94	132.9		
	Total	13430.3	96			
Attitudes	Between Groups	101.4	2	50.7	3.0	.1
	Within Groups	1423.9	83	17.2		
	Total	1525.3	85			

There was a statistically significant difference between the three groups in terms of knowledge (p=0.024). Those who had good understanding of MRSCAA scored the highest in terms of knowledge. Attitudes were also significantly different between the groups (p=0.021) with those who had good understanding also scoring highest, as shown in Tables 43 and 44.

Table 43. Summary statistics for knowledge and attitudes scores by self-reported understanding of MRSCAA

13d understanding of MRSCAA		Knowledge score percentage	Attitudes
Good	Mean	60.0	47.9
	N	17	15
	Std. Deviation	15.0	4.1
Satisfactory	Mean	56.5	46.7
	N	53	48
	Std. Deviation	10.8	4.2
Poor	Mean	50.7	44.3
	N	27	24
	Std. Deviation	10.4	3.8
Total	Mean	55.5	46.2
	N	97	87
	Std. Deviation	11.8	4.2

Table 44. ANOVA comparison of means between the three groups of question 13d

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	1022.7	2	511.4	3.9	.0
	Within Groups	12414.1	94	132.1		
	Total	13436.8	96			
Attitudes	Between Groups	135.7	2	67.8	4.0	.0
	Within Groups	1407.7	84	16.8		
	Total	1543.4	86			

Self reported understanding of ICD-10 did not influence knowledge or attitudes scores, as shown in Tables 45 and 46.

Table 45. Summary statistics for knowledge and attitudes scores by self-reported understanding of ICD-10

13e understanding of ICD-10		Knowledge score percentage	attitudes
Good	Mean	55.5	46.8
	N	31	28
	Std. Deviation	14.4	4.2
Satisfactory	Mean	54.8	46.1
	N	53	47
	Std. Deviation	10.1	4.5
Poor	Mean	58.9	45.5
	N	12	10
	Std. Deviation	12.4	3.1
Total	Mean	55.5	46.2
	N	96	85
	Std. Deviation	11.9	4.2

Table 46. ANOVA comparison of means between the three groups of question 13e

		Sum of Squares	df	Mean Square	F	Sig.
Knowledge score percentage	Between Groups	164.0	2	82.0	.6	.6
	Within Groups	13216.1	93	142.1		
	Total	13380.2	95			
Attitudes	Between Groups	13.9	2	6.9	.4	.7
	Within Groups	1497.4	82	18.3		
	Total	1511.3	84			

4.8 Family practitioners views on the future

This section deals with Objective 5 (To establish family practitioners' perceptions of the future of the profession, and of family practice in particular). The respondents were asked about their perception of FP in Questions 28a to 28e in terms of certain parameters. Sustainability, financial viability and attractiveness (to the youth of today) of medicine as a profession were perceived as being generally reasonable to poor by the respondents with financial viability and attractiveness to the youth being more on the poor side. In terms of Question 28d, just over half (54.5%) provided a "good" and "reasonable" response to the proposal that medicine as a profession provided a comfortable life for the FP and the FP's family. The remainder (43.5%) did not share this view. Many (69.3%) reported a favourable attitude towards medicine as being a profession distinct from others in that it responds to a calling to serve society at large. The detailed responses are provided in Table 47 and Figures 7 to 11.

Table 47. Questions 28a to 28e. The future of family practice

	Good	Reasonable	Poor	No Change	NR	Total
	N (%)	N (%)	N (%)	N (%)	N (%)	%
28a. Sustainability	9 (8.9)	40 (39.6)	42 (41.6)	6 (5.9)	4 (4.0)	100
28b. Financially viable	5 (5.0)	34 (33.7)	57 (56.3)	2 (2.0)	3 (3.0)	100
28c. Overall attractiveness to the youth	4 (4.0)	33 (32.6)	58 (57.4)	4 (4.0)	2 (2.0)	100
28d. Comfortable life	9 (8.9)	46 (45.6)	38 (37.6)	6 (5.9)	2 (2.0)	100
28e. Responds to a call to serve	36 (35.6)	34 (33.7)	20 (19.8)	8 (7.9)	3 (3.0)	100

The majority of FP were of the opinion that the sustainability of family practice ranged between reasonable to poor (81.2%), as shown in Figure 7.

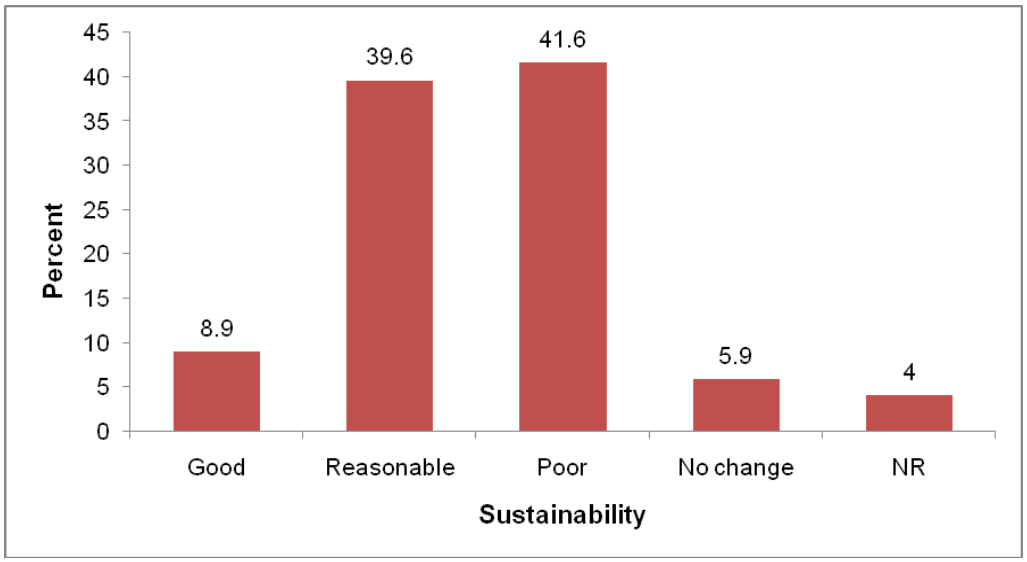

Figure 7: Sustainability of family practice (NR = Non-respondents) (n=101, 100%)

The financial viability of family practice was also regarded as being primarily reasonable to poor (90%), as shown in Figure 8.

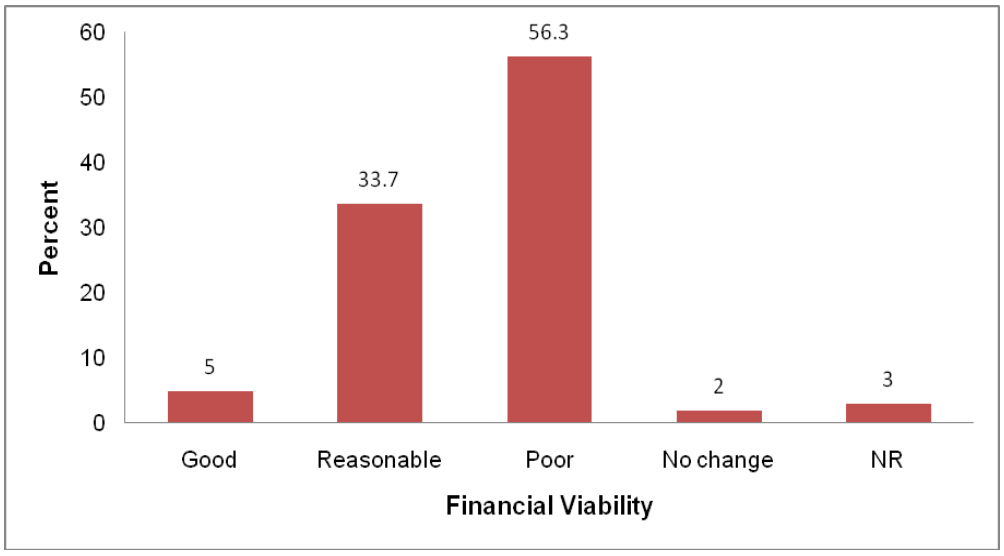

Figure 8: Financial viability of family practice (NR = Non-respondents) (n=101, 100%)

In terms of Medicine, and family practice in particular, being attractive to the youth of today as a career path in life, the majority of the respondents were of the opinion that such attraction as at present was more poor (57.4%) than being reasonable (32.6%): 90% in total, as shown in Figure 9.

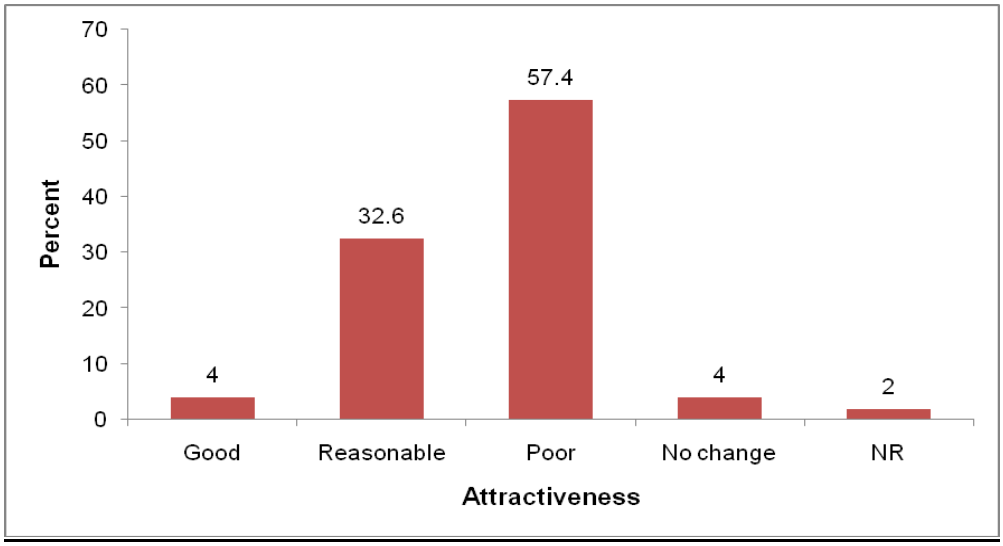

Figure 9: Attractiveness to the youth (NR = Non-respondents) (n=101, 100%)

Almost half of the FP (54,5%: 45.6% reasonable and 8.92% good responses) indicated that medicine as a profession, and family practice in particular, provided a comfortable life with responses being mostly reasonable, as shown in Figure 10.

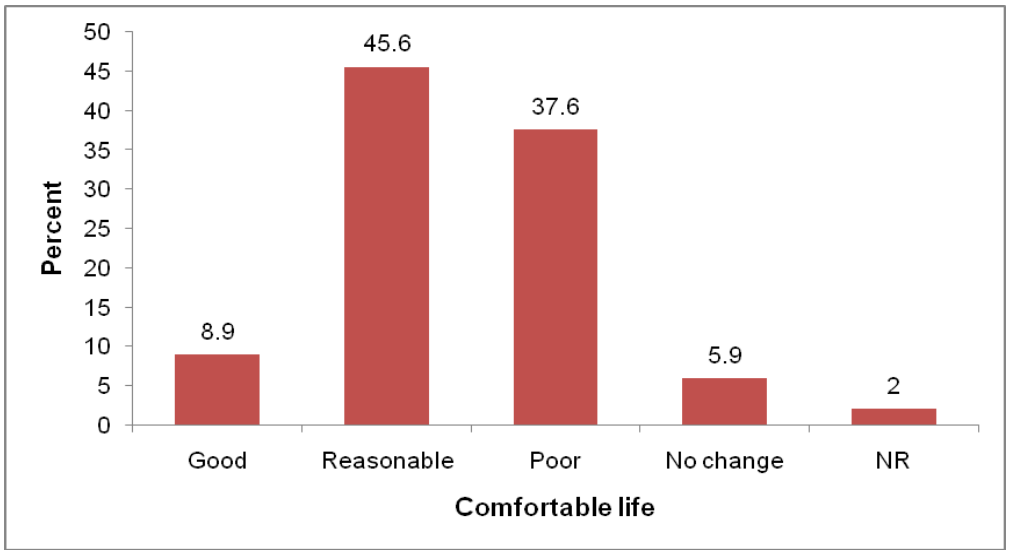

Figure 10: Provides a comfortable life (NR = Non-respondents) (n=101, 100%)

The majority of the respondents (69.3%) felt that the future of medicine was good to reasonable as it is a distinct profession and responds to a calling to serve society at large. These responses were indicated as good (35.6%) and reasonable (33.7%) in Figure 11.

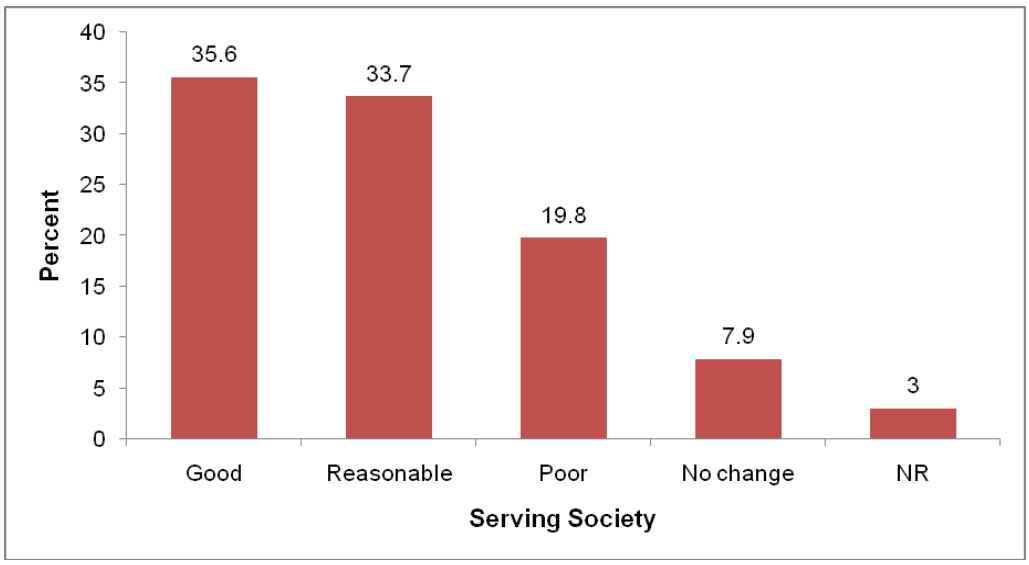

Figure 11: Responds to a calling to serve society (NR = Non-respondents) (n=101, 100%)

4.9 Conclusion

The survey conducted for this study showed that FPs' knowledge of HL was inadequate (a mean score of 55%). FPs' attitudes to HL tended to be negative with the mean score being below 50% (46.3%). There was a weakly positive correlation between attitudes and knowledge scores, and this was statistically significant. Generally, as knowledge increased, so did attitudes improve. However, FPs' perceptions of the future of the profession, and of family practice in particular, were generally reported as being reasonable to poor. Financial viability and sustainability of family practice, in particular, were reported as being reasonable to poor. The attractiveness of the profession to the youth of today was reported as being poorer than in the past. However, the majority of FP held the perception that medicine as a profession was distinct as it responds to a calling to serve society at large, giving this aspect of the question a ranking of "reasonable to good".

CHAPTER 5: DISCUSSION

5.1 Introduction

This chapter discusses the research findings of the study. These findings will inform the recommendations presented in Chapter 6. The chapter is structured around the study objectives; these being to determine family practitioners' knowledge of health legislation, their attitudes towards health legislation, the correlation between their attitudes and knowledge scores, to compare the self-reported knowledge of HL with an objective assessment of knowledge and attitudes, and lastly, to determine their perceptions of the future of the medical profession in general and of family practice in particular.

However, this is prefaced by a consideration of the study sample and the extent to which it represented a typical set of South African family practitioners and therefore the extent to which the findings could be generalized.

5.2 The study sample

The majority of FPs (89.1%) sampled in this study were men, which is not uncommon in private family practice presently in South Africa. This situation, however, differs from the general trend these days in developed countries. In Ireland, as in many European countries, the phenomenon of "the feminisation of general practice" is well underway (Teljeur and O'Dowd, 2009). As these authors explain: "for some time most of the Irish medical school intake has been female, and this has led to increased female enrolment into general practice". Similarly, a review of specialty choices of male and female medical school graduates in Canada, UK and the USA in 2001 revealed that female

medical students were more likely to become primary care physicians and paediatricians rather than other sub-specialities (Phillips and Austin, 2009). In this Canadian study, for example, it was shown that women accounted for a minority of practising physicians at that time (37.9%), but a majority of family physicians (58.6%).

Most of the doctors (>85%) were middle aged, or at least over the age of 30 years. Nearly one quarter of the doctors had been working in private practice in the area for less than 10 years. This may indicate that young professionals are not entering private practice in this area, or that the barriers to entry are significant. With the anticipated exit from practice of those over the age of 60 (22.7%) in the next few years and the lack of younger doctors to take their place, practitioners will need to be sourced from outside the area. This perhaps indicates that young doctors do not see this as an area they want to work in, and suggests the need to establish how younger graduates can be encouraged to work in family practice in this area. It is significant to note that the eThekwini Southern Sub-structure Region, and Isipingo in particular, has always been perceived as an unsafe area. Crime is still very rife in that area and doctors, in particular, are regarded as soft targets. However, it may also be worth considering whether this age group is more likely to be entrenched in its beliefs about health policy and legislation, and therefore resistant to change.

The sample was also skewed towards those who qualified from the local medical school (Nelson R Mandela School of Medicine, University of KwaZulu-Natal), with almost half (45.5%) having trained at this institution. The balance received their training from at least five other institutions outside the KwaZulu-Natal Province. It seems FPs tend to cluster around or remain near the institution they trained in. The degree of mobility among doctors would be impacted upon by a wide range of factors, including perceptions about the quality of life in a particular area.

The respondents believed their patients to be drawn largely from urban or peri-urban areas, with only a small percent (4%) reportedly coming from rural areas. However, given the nature of the target area, patients' income levels were expected to be generally low. Accordingly, the respondents reported that they felt that just over 50% of their patients were earning less than R3 000 a month. Despite low incomes and relatively low levels of access to medical scheme cover, these patients still preferred to attend a private practice rather than to access public health services and many of them accessed a "packaged service". Medical scheme membership was reported to be over 50% by almost a third (27.2%) of the respondents and only 29.7% of respondents indicated that their patients' monthly income ranged between R3 000-R4 999 and beyond R5 000. Those patients who paid out-of-pocket for a "packaged service" were reported to represent between 25-75% of the total number of patients.

Overall, the nature of the practices from which respondents were drawn would be expected to also shape their responses, as such practices are very vulnerable to changes in the financial model. Issues such as the dispensing licence and CON would therefore have been expected to have resonance for such practitioners, and to elicit strong opinions. While representative of a segment of private practice in South Africa, this sample could not be considered typical of the practitioners from more affluent areas where patients were more likely to be medical scheme beneficiaries. However, they may well be representative of FPs practising in formerly "black" urban settings and of the members of many independent practitioner associations, at least in KwaZulu-Natal.

5.3 Family practitioners' knowledge of health legislation

Family Practitioners' knowledge of health legislation was shown to vary substantially. While many were able to correctly identify major pieces of health legislation (such as the NHA, MSA, and MRSCAA), these questions were not answered by a high proportion of the respondents. Obviously, a high non-response rate has serious implications for the limitations of the study, but may also indicate low levels of knowledge and a reluctance to guess.

Although strictly-speaking, the difference between HL in the form of Acts of Parliament (primary legislation) and Regulations issued by Ministers (secondary legislation) and other instruments and policies (such as ICD-10 Coding) is important, this difference may not be perceived by practitioners without legal or public health training. The fact therefore, that 35.6% of participants indicated that the ICD-10 Coding was a piece of HL and that 42.6% indicated the same in terms of the NHRPL, may be largely irrelevant. Both these questions were also marked by a high non-response rate. Nonetheless, the conclusion that knowledge amongst this cohort of FP was inadequate, particularly with respect to these important and relevant aspects of HL, seems supportable. Similar findings were reported, for example, in relation to Turkish physicians' knowledge of tobacco and anti-smoking legislation (Uysal, *et al*., 2007).

The finding that FPs' knowledge levels were inadequate is also bolstered by the responses received in relation to controversial and highly visible elements such as the CON. The proposed process for licensing of facilities has been a much debated issue in both the private sector and public sectors since the NHA was passed in 2003. FP ought to acquaint themselves more with the salient aspects of this intended initiative on the part of the DoH, notwithstanding the fact that implementation has been delayed. It was interesting to note that 91.1% of respondents viewed the purpose of the CON as being

regulation of the number of practices in a given geographical area. The majority of FP (66.3%) knew that the CON will restrict them from opening practices elsewhere, but fewer were clear about the duration of the licence issued. However, the duration has yet to be determined for individual types of facilities, with only the maximum (20 years) stated. It is also important to note that licensing systems can help to promote access to health care services by promoting rational distribution of health care services in accordance with the needs of the local population, and encouraging providers to draw up business plans and do feasibility studies before setting up a health establishment. This, in turn, can promote the long-term viability of the practice and sustained health care services to the relevant community, while reducing the likelihood of over servicing in one community and under servicing in another. Overall, therefore, they are a means of eliminating wasteful and unnecessary expenditure within the system arising from competition between health establishments. In future, licensing may also be an important part of the means by which the quality of the health services delivered at health establishments can be assured. They will be a means of excluding providers who have demonstrated themselves unfit or unworthy to conduct a health establishment on the basis of their lack of professional ethics and failure to observe legal requirements and will enable ongoing monitoring and evaluation of health establishments in terms of their adherence to safety and operational standards.

Given the fact that a proportion of patients seen by FPs were beneficiaries of medical schemes, they would have been expected to be conversant with the provisions for PMBs. A basic element therefore, is the number of chronic ambulatory conditions (initially 26, but now increased to 29 conditions). Only 32.6% of respondents were able to select the correct option in this regard and answered correctly. Once again, these responses indicate a limitation of knowledge of HL and related aspects amongst FP.

Managed healthcare (MHC) models have been variably applied in South Africa, and it was therefore unsurprising that the questions on this issue were not well answered. Less than 50% of the respondents understood MHC as an appropriate option to curtail the increasing cost of healthcare delivery. The details of MHC models are complex. Capitation, for example is a payment option, which can be utilized as one way of managing costs and is used as a payment concept by MHC organizations. Types of MHC models need to be studied more by FP as the healthcare financing industry continues to adopt such models. Given the centrality of financing in many FPs professional lives, the extent to which they were unable to outline their rights with respect to the NHRPL in a participatory democracy was telling. More than half of the respondents (58.4%) were not clear about these rights to provide input. To some extent, this may reflect a degree of compliance with change over time, as a learned behavior. As with pharmacists, family physicians in other settings, would be expected to become "compliant" over a period of time, and slowly adapt to changes in HL (Joranson and Gilson, 2001).

One of the earliest issues to raise the ire of South African FPs was the proposed dispensing licence, first floated in an amendment to the General Regulations to the Medicines Act in 1996, but included in the amendment to the Medicines Act passed in 1997 (Republic of South Africa, 1997). In terms of this amendment, brought into effect in 2004, all dispensing FP (which would have included almost all the participants in this study) were required to complete a supplementary course on Dispensing of Medicines. The course was to be accredited by the South African Pharmacy Council and not the HPCSA. This fact was also controversial at the time, so it was surprising to see that only 19.8% of participants correctly answered the question in this regard. Other aspects of the MRSCAA, such as the ban on bonusing and sampling, rebate systems or any other incentive schemes, was also poorly understood by the respondents. While the ban most

directly affects pharmaceutical manufacturers, it covers business practices that were, prior to 2004, widespread in the South African private sector and used by FPs to reduce the cost of stocking and providing medicines. Such measures were critical to ensuring the affordability of "packaged services". The actual question posed (21d) may have been somewhat confusing in its wording, but this was not identified as problematic in any way in the pilot study. However, when questions were posed as statements, FPs were able to identify versions considered correct, for example, that the recommended dispensing fee is inappropriate and dispensing overheads exceed income, and that it is not financially feasible to dispense medicines to their patients. These are, however, opinions that are widely shared by the cohort from which both the researcher and respondents were drawn. That they agreed is therefore not surprising, and should not be over-emphasised.

Another aspect that has been the subject of widespread comment is the perceived ethical problems with providing ICD-10 Coding, such as issues of confidentiality and disclosure of information to third parties. That a high proportion of respondents were knowledgeable of this issue, and of the circumstances during which confidential information may be revealed, is therefore also unsurprising.

A key element of South Africa's post-apartheid democracy has been the provision of opportunities and mechanisms for providing comment on impending legislation. However, just over half (54.4%) of FP) were "aware" that citizens enjoy such a right. Only 21.8% of respondents describe themselves as "well aware" of this right. Interestingly, only 38.6% reported actually making an input personally or via a representative body such as an IPA.

Overall, the summed knowledge scores were low, with an average of 55% achieved by the respondents. That this ranged from about 23% to almost 81% was indicative of the variability of knowledge among the sample of FPs polled. Lack of knowledge was demonstrated in specific questions relating to CON, PMBs, MHC, sampling and bonusing, and the dispensing licence course. A somewhat disappointing response was noted with respect to the NHRPL and participatory democracy. The inertia on the part of FP to participate in processes known to them regarding commenting on impending HL is not confined to South Africa alone. Although dealing with very different legislative issues, a North American study showed a similar position, and also pointed out that healthcare professionals tended to become compliant over a period of time, and gradually adapt to the changes in HL (Joranson and Gilson 2001). It appeared from this study that FP in the area of focus were not in support of the HL changes, did not attempt to register their objection via the appropriate channels (of which they were aware) and somewhat passively accepted the status quo. It was interesting to see whether this was borne out in the responses to the attitude questions posed.

5.4 Family Practitioners' attitudes to health legislation

The majority of the participants (58.4%) agreed that recent HL reform in South Africa aimed to promote access, equity and affordability of healthcare delivery to all the people in South Africa However, over half (52.4%) strongly disagreed or disagreed that government ought to have the authority/right to regulate family practice and a large majority (81.2%) strongly disagreed or disagreed with medical schemes having the right to intervene in healthcare delivery to patients. It may be tempting to draw the conclusion that the degree of objection towards medical schemes and administrators intervening was greater than that towards government regulating HL. In other settings, it has been shown that FP generally do not approve of proposals for government and third-party

regulation (Turk *et al.*, 1994). The ideological resistance within the profession toward government intervention and regulation in healthcare delivery remains an important constraint upon change and reform in many countries.

It was also apparent that attitudes had not changed over time. The majority (76.2%) of respondents had a negative attitude towards HL at the present time, in terms of the general overall impact it has had on FP, and many (59.4%) stated that this attitude towards HL was not any different prior to 1994. There has been considerable knowledge exchange over recent years, in the form of CPD sessions arranged by, among others, IPAs. However, it seems that knowledge acquisition does not necessarily result in a more positive attitude.

In terms of specific elements of recent HL, more than two-thirds of FP (68.3%) did not agree with the concept of the CON. Almost the same number agreed that the CON reduces the size of a family practice, and furthermore, restricts a FP from opening up additional practices. Here, adequate knowledge acquisition (as described above) was related to a negative attitude. This is contrary to the assumption that an increase in knowledge would result in a more positive and favourable attitude. The licensing legislation is viewed as being restrictive, and hence, not met with favourably by FP. Similarly, 64.4% of FP were not satisfied with the PMB cover for chronic ailments.

Attitudes to issues regarding ethics and confidentiality were illuminating. Over half of the FP agreed (strongly agree 20.8% and agree 37.6%) that there was no need for them to obtain a fully informed consent from the patient prior to using and disclosing the ICD-10 Code to medical schemes. This response may be partly due to the laborious process involved in obtaining consent from each patient coming into the rooms. A follow-up question indicated that only 37.6% of FP strongly agreed that a signed copy of the

patient's consent must be obtained prior to forwarding medical records to medical schemes. However, many FP (54.4%) strongly disagreed or disagreed with the statement that 14 years should be the age at which children may independently consent to medical treatment. An even higher percentage (65.3%) of FP disagreed that termination of pregnancy may be conducted on a person of any age without parental consent. This may indicate that FP tend to be conservative in terms of their attitudes towards certain issues. This assumption was borne out by the research done on trans-sexualism wherein it was demonstrated that GPs (FP) generally tend to hold the most conservative views (Franzini, *et al.*, 1986). However, it is also possible that FP have genuine medical concerns about children having these procedures, especially at such an early age and because of complications that may arise.

The majority of the respondents (91.1%) indicated that more education and training in HL is necessary, and 81.2% were of the opinion that CPD sessions should have more of a HL component to them. A similar finding was demonstrated in Turkey (Uysal *et al.*, 2007) and Canada (Brachman *et al.*, 1996). That this is true across such highly varied settings is also indicative of an attitude – FP recognize their lack of knowledge and desire more knowledge. However, it is also telling that almost half of the FP (47.5%) indicated that recent reforms in HL had not resulted in improvements in their relationship with patients, despite being of the opinion (as shown above) that recent HL reform in South Africa aimed to promote access, equity and affordability of healthcare delivery to all people. This dichotomy deserves closer examination. On a summary basis, FPs attitudes were shown to be largely negative, as was postulated before the study was conducted.

5.5 The correlation between attitude and knowledge scores

A weak positive correlation, but statistically significant correlation between knowledge and attitude was demonstrated (correlation coefficient 0.244; p=0.022). Therefore, in general, as knowledge increased so did attitudes improve. However, there were many outliers and only 6% of the variability in attitudes was explained by knowledge. Many other factors, other than knowledge, may therefore be influencing attitudes. Some of the other factors affecting attitudes towards HL may include:

- the restrictive nature of some HL designs (such as the CON and the dispensing licence),
- lack of engagement and ownership on the part of FP with respect to the process of change,
- limited channels of communication between the NDOH and private FPs.

FP themselves need to be more pro-active in voicing their opinions. Despite their awareness of the concept of participatory democracy, a small proportion (38.6%) actually made an input in terms of changes to HL via a local representative body (e.g. an IPA). Sheikh and Porter (2011) have referred to this phenomenon as 'intellectual disempowerment', found that "[p]ractitioners are unable to contribute systematically to ideational processes in policy development for public health". This research was, however, conducted in five Indian cities. Other factors identified as important in that setting may not be applicable in South Africa. For example, the lack of 'positive power' by practitioners to contribute intellectually to the policy process was attributed to general factors including a lack of discursive skills and linguistic capability on the part of FPs, intellectual demoralization among practitioners, a power battle between practitioners on the ground and policy-makers, and "a separation of the world of ideas from the world of

action". Nonetheless, some factors may be common, including that "opportunities for the exchange of knowledge and views between groups of actors were often deficient, with private practitioners in particular experiencing a phenomenon of intellectual isolation".

5.6 Comparing self-reported knowledge with objective assessment

An additional objective which emerged from the analysis considered the results obtained in terms of two self-reported knowledge questions (Question 12, an awareness question and Question 13, an understanding question), and the correlation with knowledge and attitudes. In terms of the first question (Question 12), those who were reportedly well aware of the NHA had the second-lowest knowledge score and the lowest attitudes score. Those who were aware of the NHA had the highest mean knowledge and attitudes scores. Those who said they had no knowledge of the NHA scored the lowest mean knowledge score but it was not much lower than those who were reportedly "well aware". There was a non-statistically significant difference between knowledge scores of the three groups (p=0.068). Attitudes scores did not differ (p=0.356). In relation to the MSA, there was no difference between the means of the three groups in terms of knowledge, but a borderline non-significant difference in terms of attitudes (p=0.075). The attitudes score of the aware group was higher than that of the other two groups. In terms of the NHRPL, the knowledge score decreased as the self reported awareness decreased, but the difference was not statistically significant (p=0.107). There was no difference between the attitudes scores of the three groups in this case. In terms of the MRSCAA, the knowledge score decreased as the self-reported awareness decreased, but the difference was not statistically significant (p=0.503). There was no difference between the attitude scores of the three groups (p=0.240) in this case. In terms of ICD-

10 Coding, there was a statistically significant difference between the attitude scores of the three groups in terms of awareness of ICD-10 (p=0.014), and those who were aware of ICD-10 had the highest attitude scores.

With regard to the second series of questions (Question 13), the mean knowledge score decreased as the self reported knowledge (understanding) of NHA decreased but the difference was not quite statistically significant (p= 0.078). There was no difference in attitudes between the three groups. There was a statistically significant difference between the three groups in terms of knowledge of the MSA (p=0.015). Those who had satisfactory understanding of MSA scored the highest in terms of knowledge. Attitudes were not quite significantly different between the groups p=0.076). There was a statistically significant difference between the three groups in terms of knowledge of NHRPL (p=0.033). Those who had good understanding of NHRPL scored the highest in terms of knowledge. Attitudes were not quite significantly different between the groups (p=0.058). There was a statistically significant difference between the three groups in terms of knowledge of the MRSCAA (p=0.024). Those who had good understanding of MRSCAA scored the highest in terms of knowledge. Attitudes were also significantly different between the groups (p=0.021) with those who had good understanding also scoring highest. Self reported understanding of ICD-10 Coding did not influence knowledge or attitudes scores.

5.7 Family practitioners' perception of the future of the medical profession and of family practice in particular

The majority of respondents felt that the sustainability, financial viability and overall attractiveness of the profession was poor, and this was generally in line with what had been reported in the literature. In the USA, for example, Geyman (2002) indicated that

an effort needed to be made to make medicine (as a profession) a more attractive career option. Of private family practice in particular, reference was made to Dr James W Redka's letter (Institute of Medicine, 2001), who suggested greater involvement of experienced FP in discussions with the US government and other stakeholders to pave a way forward towards a better future for family medicine.

5.8 *Limitations of the study*

A self-delivered survey method lends itself to a far better yield than the average mailed or emailed questionnaire, improving the quality of the information obtained. Response rates with mailed questionnaires are usually less than 30% (Whitcomb, 2007). In addition, personal delivery and retrieval ensures that the targeted study participant actually completes the questionnaire and does not rely on another party to do so (Katzenellenbogen and Joubert, 2002. 9:84-87). Nonetheless, this study was subject to a number of important limitations.

The sample size of 101 FPs was small. Although the sample size was approved by a statistician, based on the expected high yield, the small sample resulted in a very low number of women practitioners and low number of young practitioners. Such respondents may have provided very different responses.

As discussed above, the FPs involved in the study were those who served lower income communities primarily. It would be important to include FPs serving higher income communities in any further research.

In terms of the instrument design, the lack of a 'don't know' option may have contributed to a higher than expected non-response rate. It has been envisaged that there should

be no non-responses, as a positive and constructive collaborative partnership with the study population was created before the study commenced. While this contributed to the high level of consent to participate, it did not affect the responses to questions. A lack of a response may also be interpreted as no knowledge about that question. The questions posed varied from the general (e.g. responses to statements) to the very specific. The conclusions drawn should be restricted to the specific pieces of HL included, and may not be generalisable to HL in general.

Questions 18 and 24a were designed as knowledge questions but could be interpreted as an expression of an opinion rather than concrete knowledge. This could be seen as a limitation. However, even if these questions are excluded, the final results are not altered significantly and the conclusion reached by the study remains as before. Instead of a mean knowledge score of 55%, a score of 50% is attained.

5.9 Conclusion

The original hypotheses posed regarding the level of knowledge and attitudes of HL amongst this group of FP were indeed shown to be valid. However, the hypothesis regarding the lack of a relationship between knowledge and attitude did not hold true. More knowledge generally results in an improved and more positive attitude. However, in some instances, an increase in knowledge may be associated with a more negative and unfavourable response. Significantly, these FP perceive their future, and the future of the medical profession, by and large, as being far from favourable. This was especially true with respect to sustainability, financial viability and attractiveness to the youth of today.

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

HL encompasses the Acts of Parliament, Regulations and other similar legislative instruments that deal with all aspects of health protection and promotion, disease prevention and delivery of healthcare. South Africa's history has been marked by discrimination based on race and gender, the inhumane migrant labour system and subsequent dismantling of the concept of "family", inequity in access to healthcare, vast income disparities and extreme violence. These factors are all related to healthcare delivery services and impact on the health status of the majority of the people of South Africa. The year 1994 saw the ushering in of a new government with a new Constitution. This Constitution establishes the foundation for democratic institutions and upholds a wide range of human rights. It has paved the way for changes in legislation, including HL.

6.2 Conclusions

This study focussed on key aspects of HL relevant to private family practice. The private family practitioner (FP), in addition to conducting his/her practice as a business, needs to function ethically and legally when performing the vocation of being a doctor in the community being serviced. Such a function makes it incumbent upon the private FP to be knowledgeable about relevant HL. The community looks up to the FP to have adequate knowledge on HL and to abide by the law. The purpose of this study was to assess the knowledge and attitudes that FPs have of HL; to establish the relationship between these two parameters and also to assess FPs' perception of medicine as a

profession, and of family practice, in particular. The measurement instrument used was an anonymous, structured, self-delivered questionnaire. Finally, the study sought to make recommendations about remedial action that could be taken to address the situation, as described.

The study revealed that private FP possess limited knowledge about HL and have a negative attitude in general towards HL. A relationship was shown to exist between these two parameters. More knowledge generally resulted in an improved and more positive attitude, but this was not invariably the case. Although knowledge *per se* is an important factor in determining attitudes, there are various other factors that play a role in determining FPs' attitudes towards HL. Financial interests and perceived effects on financial stability of the practice may play a major role. During the analysis, a fourth objective arose, which entailed the assessment of self-reported knowledge (awareness and understanding) as compared to the objective assessment of knowledge and attitudes. Generally, awareness of HL was not associated with any significant impact on FP attitudes towards HL. However, as awareness decreased, knowledge of HL also decreased. Generally, mean knowledge scores decreased as self-reported understanding decreased. Furthermore, those FPs who exhibited good understanding of HL scored amongst the highest in terms of knowledge. FPs perceive their future and the future of the medical profession, by and large, as being far from favourable. However, a majority of FP (69.3%) perceived medicine as a profession that responds to a calling to serve society.

6.3 Recommendations

These recommendations are directed to FP themselves, the Ministry and Departments of Health, the HPCSA and SAMA.

FP's knowledge of HL requires improvement, which can be achieved though effective education and training programmes. It is therefore recommended that some CPD sessions are focused primarily and exclusively on pertinent HL and related aspects. It is also possible to include courses of HL as mandatory, as has been done with the related issue of Ethics. FPs have shown their willingness to participate in such continuing education programmes.

As knowledge increases and more knowledge is acquired by the FP, it is likely that attitudes will become more favourable and hence positive, generally. However, there are several other factors that influence attitude as well. Some of these factors (e.g. financial aspects) may be difficult to change. However, greater knowledge of the intentions of government, in relation to patient benefits, may improve attitudes

Healthcare workers are an integral part of society. A wave of change (for the betterment of the majority of citizens) is slowly making its presence felt in our country, in major parts of our continent of Africa and in various other parts of the world, including even in China. This change implies a change in healthcare delivery as well. Hence, private FP need to embrace this process as it will result in a better life for all who inhabit our country. There needs to be an atmosphere created that enables a paradigm shift from a narrow, purely medical sphere to a broader socio-political milieu of healthcare delivery.

FPs need to be more pro-active in vocalizing their opinions, regaining the "positive power" and redressing the "intellectual disempowerment" referred to by Sheikh and Porter (2011). FPs need to take advantage of the rights afforded to them in a participatory democracy. The Health Ministry and relevant authorities and policymakers need to play a greater role in creating this atmosphere that embraces and facilitates change by involving relevant stakeholders. Agreement on aims and goals in HL reform

necessitates that government representatives become actively involved with the medical profession, with private FPs in particular, and with society in drafting the HL. This calls for open channels of communication and listening for ideas and suggestions.

FPs' perception of medicine as a profession, and of themselves in particular, can change. This change can be facilitated by a policy process which is more inclusive and involves structures representing FPs such as the IPAs and SAMA.

Lastly, it is recommended that this study serve as a template for a broader research project involving larger numbers of participants and a wider geographical area. In addition, an intervention tool should be devised. Such a tool could take the form of a structured education programme on HL, with an associated monitoring and evaluation aspect, which would enable an assessment of the intervention programme in terms of its value and the influence it has on improving knowledge and attitudes.

REFERENCES

Açik, Y. 2004. Level of knowledge and attitude of primary care physicians in Eastern Anatolian cities in relation to child abuse and neglect. *Preventive Medicine,* 39(4):792-797.

Ackermann, R.T. & Carroll, A.E. 2003. Support for national health insurance among US physicians: a national survey. *Annals of Internal Medicine,* 139:795-801.

Adelekan, M.L., Jolayemi, S.O., Ndom, R.J., Adegboye, J., Babatunde, S., Tunde-Ayimode, M., Yusuff ,O. & Makanjuola, A.B. 1995. Caring for people with AIDS in a Nigerian Teaching Hospital: staff attitudes and knowledge. *AIDS Care.* 7:S63-73.

Badran I.G. 1995. Knowledge, attitude and practice: the three pillars of excellence and wisdom, a place in the medical profession. *Eastern Mediterranean Health Journal,* 1(1):8-16.

Bankowski, Z. & Bryant, K. 1985. Health Policy Ethics and Human Values. *Proceedings of the CIOMS (Council for International Organisations of Medical Science) Round Table Conference: An International Dialogue, 18th (CIOMS Round Table Proceedings 1985).* Geneva. World Health Organisation. 8-10.

Bhattacharaya, R. 2004. Designing a questionnaire for medical research and audit. [Online] Available from: http://www.edu.rcsed.ac.uk/lectures/1t25.htm [7 May 2010.

Board of Healthcare Funders of Southern African. 2011. [Online] Available from: http://www.bhfglobal.com/ [20 February 2011]

Brachman, P.Jr,, Korzarsky, P., Cetron, M., Jacob, M.S., Boonit, B., Wongsrichanalai, J, & Keystone, J.S. 1996. Knowledge and Attitude of Hospital-.Based Physicians

and trainees About HIV Infection in the United States, Canada, India, and Thailand. *Archives of Internal Medicine.* 156:761-766.

Bravo, G., Pâquet, M. & Dubois, M-F. 2003. Vulnerable Subjects and Canadian Research Governance*. Journal of Medical Ethicss*, 2003, 29: 44-50.

Buskin, S.E., Li, L., Yin, H., Yu, T. & McGough, J.P. 2002. HIV/AIDS knowledge and attitudes in Chinese medical professionals and students before and after an informational lecture on HIV/AIDS. *Journal of Public Health Management and Practice.* 8:38-43.

Cartwright, C. Montgomery, J. Rhee, J. & Zwar, N. 2009. *NSW Medical Practitioners Knowledge of and Attitudes to Advance Care Planning.* Report to NSW Health, November 2009.

Chetty, M. 2000. *Introduction to Basics of Managed Health Care.* 2nd ed. Cape Town. Published by a grant by Parke-Davis Pharmaceutical Co., Cape Town.

Coovadia, H., Jewkes, R., Barron, P., Sanders, D. & McIntyre, D. 2009. The health and health system of South Africa: historical roots of current public health challenges. *Lancet Sep 5*, 374(9692):817-34.

David, A.K. 2003. Necessary change in family medicine: entering adult-hood. *Fam Med.* 35:217-219.

Day, C. & Gray, A. 2010. Health and related indicators. In Fonn S, Padarath A (Eds). *South African Health Review 2010*. Health Systems Trust, Durban.

Dussault, G. 2008. The health professions and the performance of future health systems in low-income countries: support or obstacle? *Soc Sci Med* 66: 2088-2095.

Ebersohn, P.Z. Judgment handed down on 28 July 2010 by the Acting Judge of the High Court of South Africa (North Gauteng Division, Pretoria) in the matter between the Hospital Association of South Africa Ltd (the applicant) and the Minister of Health, the Director-General of the Department of Health – Case heard on 22 and 23 February 2010.

Franzini, L.R. & Casinelli, D.L. 1986. Health professionals' factual knowledge and changing attitudes towards transsexuals. *Social Science Medicine,* 22(5):535-539.

Future of Family Medicine Project Leadership Committee. 2004. The future of family medicine: A collaborative project of the Family Medicine Community. *Annals of Family Medicine*, 2:S3-S32. [Online] Available from: http://www.annfammed.org/cgi/content/full/2/suppl_1/s3 [10 March 2011]

Geyman, J.P. 2002. Family practice in a failing health care system: new opportunities to advocate for system reform. *J Am Board Fam Prac.* 15:407-416.

Gilbert, L. 1998. Dispensing doctors and prescribing pharmacists: a South African perspective. *Soc.Sci. Med,* 46:83-95.

Gill, B.I. & Bligh, J.A. 1995. Registered nurses' knowledge and compliance with regulations relating to the administration of ward recordable medications. *Int J Nurse Pract*, Nov 1(1):43-51.

Goldman, L.A., García, S.G., Díaz, J. & Yam, E.A. 2005. Brazilian obstetrician-gynecologists and abortion: a survey of knowledge, opinions and practices. *Reproductive Health*, 2:10.

Graham, R., Roberts, R.G., Ostergaard, D.J. et al. 2002. Family practice in the United States. A status report. *JAMA,* 288:1097-1101.

Gray, A. & Pillay, K. 2006. Health Legislation. In *South African Health Review*. P Ijumba & P Barron (Eds). Durban**:** Health Systems Trust. 4-8. [Online] Available from: http://www.hst.org.za/publications/682 [27 February 2011]

Healthman. PMBs Summary, January 2010. [Online] Available from: http://www.healthman.co.za. A GPMG publication. [July 2010]

Heywood, M. 2007. A background to health law and human rights in South Africa. In *Health and Democracy. A Guide to Human Rights, Health Law and Policy in Post-Apartheid South Africa*. Hassim, A., Heywood, M. & Berger, J. (Eds). Cape Town: Siber Ink Publishers.

Institute of Medicine, Committee on Quality of Health Care in America. 2001. *Crossing the Quality Chasm: A New Health System for the 21st Century.* Institute of Medicine. Washington DC: National Academy Press.

International Classification of Diseases and Related Health Problems. 1994. 10th ed. WHO, Geneva. Vol. 3

Joranson, D.E. & Gilson, A.M. 2001. Pharmacists' knowledge of and attitudes toward opioid pain medications in relation to federal and state policies. *J Am Pharm Assoc (Wash),* 41(2):13-220.

Katzenellenbogen, J.M. & Joubert, G. 2002. Data Collection and Measurement. In Katzenellenbogen, J.M., Joubert, G. & Abdool Karim, S.S (Eds). *Epidemiology. A Manual for South Africa*. 9:84-87, Cape Town: Oxford Press.

Kongstvedt, P.R. 2011. *The Managed Health Care Handbo*ok. 4th ed. Sudbury, MA.: Jones and Bartlett.

Loureiro, D.C. & Vieira, E.M. 2004. Knowledge and opinions concerning legal and ethical issues with abortion among physicians working in emergency wards in Ribeirão Preto, São Paulo, Brazil. *Cad Saude Publica,* 20(3):679-88.

McCormick, D,. Woolhandler, S., Bose-Kolanu, A., Germann, A., Bor, D.H. & Himmelstein, D.U. 2010. US physicians' views on financing options to expand health insurance coverage: a national survey. *J Gen Intern Med,* 24(4): 526-531.

Medical Chronicle. Editorial. August 2010. Ending an Era of Discontent. RPL Court ruling. 1-2. [Online] Available from: http://medicalchronicle.co.za/files/2010/10/MC0810.pdf [27 February 2011]

Midtling, J.E., Barnett, P.G., Blossom, H.J. & Burnett, W.H. 1990. The Future of Family Practice Training in California. *West J Med,*152:317-321. [Online] Available from: htp://www.ncbi.nlm.nih.gov/pmc/articles/PMC1002349/pdf/westjmed00115-0103.pdf [27 February 2011]

Minister of Health, 1999. Regulation published in terms of the Medical Schemes Act, No 131 of 1998. Government Gazette, Cape Town. Vol. 412 No. 20556. [Online] Available from : http://www.doh.gov.za/docs/regulations/1999/reg1262.pdf [27 February 2011]

Minister of Health, 2007. Regulation issud in terms of the Medical Schemes Act (Act 131 of 1998). Notice no. 681 in Government Gazette no. 30110 of 23 July 2007. Cape Town [Online] Available from: http://www.info.gov.za/view/DownloadFileAction?id=72288 [27 February 2011]

Minister of Health, 2010. Regulation published in terms of the Medicines and Related Substances Act, 1965. Medicines and related substances act, 1965 regulations relating to a transparent pricing system for medicines and scheduled substances: amendment (dispensing fee for pharmacists). Government Gazette, Cape Town. Vol. 33407 No. 541 published 23 July 2010. [Online] Available from: http://www.greengazette.co.za/pages/2010/07/Gazettes/Regulation/20100723_-_Regulation_Gazette_No_33407_of_23-Jul-2010,_Volume_541_No_9337,_007/ [27 February 2011]

Motsoaledi, A. 2010. Involvement of family practitioners in the HIV/AIDS campaign in South Africa – Know your status. To the medical fraternity at the Elangeni Hotel. Durban. 22 March 2010. Meeting co-ordinated by the KZNMCC

Onifade, K.A.U & Odeyemi, K.A. 2007. 'Sharps' and Sharps Policies; Knowledge of Health Workers at the Lagos University Teaching Hospital, Nigeria. N*igerian Medical Practitioner*, 52(2):42-46.

Oyeyemi, A.Y., Oyeyemi, B.O. & Bello, I.S. 2007. Physicians and AIDS care: does knowledge influence their attitude and comfort in rendering care? *Afr J Health Sci,* 14: 37-43.

Phillips, S.P. & Austin, E.B. 2009. The feminization of medicine and population health*. JAMA*, 301(8):863.

Reis, C., Heisler, M., Amowitz, L.L., et al. 2005. Discriminatory attitudes and practices by health workers toward patients with HIV/AIDS in Nigeria. *PLoS Medicine.* 2 (8):e246. dol:10:1371/journal.pmed.0020246 [Online] Available from: http://www.plosmedicine.org/article/citationList.action [10 March 2011]

Republic of South Africa, 1965. Medicines and Related Substance Control Act (Act 101 of 1965).

Republic of South Africa, 1996. Constitution of the Republic of South Africa (Act No. 108 of 1996). Chapter 2. Bill of Rights, Section 27. [Online] Available from: http://www.info.gov.za/documents/constitution/1996/index.htm [27, February 2011]

Republic of South Africa. Medicines and Related Substances Control Amendment Act, No 90 of 1997. Government Gazette, Cape Town. Vol. 309, No. 18505. [Online] Available from: http://www.info.gov.za/view/DownloadFileAction?id=70836 [27 February 2011]

Republic of South Africa, 2001. Medical Schemes Amendment Act (Act 55 of 2001). Government Gazette, Cape Town. Vol. 438 published 14/12/2001 no. 22951. [Online] Available from: http://www.info.gov.za/view/DownloadFileAction?id=68157 [27 February 2011]

Republic of South Africa, 2002. Medicines and Related Substances Amendment Act (Act 59 of 2002). [Online] Available at http://www.info.gov.za/view/DownloadFileAction?id=68096 [27 February 2011]

Republic of South Africa, 2003. National Health Act (Act 61 of 2003). [Online] Available from http://www.info.gov.za/view/DownloadFileAction?id=68039 [27 February 2011]

Scott-Samuel, A. & O'Keefe, E. 2007. Health impact assessment, human rights and global public policy: a critical appraisal. *Bulletin of the World Health Organization*, 85(3):212-217 [Online] Available from: http://www.who.int/bulletin/volumes/85/3/06-037069.pdf [27 February 2011]

Sheikh, K. & Porter, J.D.H. 2011. Disempowered doctors? A relational view of public health policy implementation in urban India. *Health Policy and Planning,* 26:83-92.

Stevenson, H.M. and Williams, A.P. Physicians and Medicare in Canada. *Canadian Public Policy* XI(3): 504-521.

Teljeur, C. & O'Dowd, T. 2009. The feminisation of general practice – crisis or business as usual? *The Lancet*, 374:1147.

Truth and Reconciliation Commission Report. 1998. The Health Sector. Findings arising out of health sector hearings. (Para. 138-149).

Tshabalala Msimang, M. 2001. The Way Forward. Summing up by Minister of Health, South African Health Summit 2001, Sandton Convention Centre, Johannesburg, South Africa, 22 November 2001. Health Systems Trust, News. [Online] Available from: http://www.doh.gov.za/docs/sp/2001/sp1118.html [27 February 2011]

Tshabalala Msimang, M. 2004 Opening Address: Minister of Health. Risk Equalisation International Review Panel Workshop, 26 January 2004. Cape Town, South Africa. [Online] Available from: http://www.polity.org.za/article/tshabalalamsimang-risk-equalisation-international-review-panel-workshop-26012004-2004-01-26 [27 February 2011]

Turk, D.C., Brody, M.C. & Okifuji, E.A. 1994. Physicians' attitudes and practices regarding the long-term prescribing of opioids for non cancer pain. *Pain*, 59(2):201-208.

Uysal, M.A., Dilmen, N., Karasulu, L. & Demir, T. 2007. Smoking habits among physicians in Istanbul and their attitudes regarding anti-smoking legislation. *Tüberküloz ve Toraks Dergisi,* 55(4):350-355.

Whitcomb, M.E. 2007. Preparing the personal physician for practice (P4): meeting the needs of patients: redesign of residency training in family medicine. *J Am Board Fam Med,*20(4):356-64. [Online] Available from: http://www.jabfm.org/cgi/search [13 March 2011]

APPENDICES

Appendix 1 Questionnaire 116

Appendix 2 Letters from authorities 131

2.1 Vice-Chairperson of USCIPA 132

2.2 Ethical approval from the Biomedical Research Ethics Committee 133

Recertification of study dated 11 November 2010 134

2.3 Letter of approval from the Postgraduate Education Committee 135

2.4 Letter of Progress to study participants 136

2.5 Certificates: Ethics Training 137/138

Appendix 3 Information documents and Informed Consent 139

3.1 Information document – Pilot study 140

3.2 Information document – Main study 142

3.3 Consent document – Pilot study 144

3.4 Consent document – Main study 145

APPENDIX 1

(Knowledge Questions: Question 14-27 excluding Questions16, 23 and 26;

Attitude Questions: Questions 9-11, 16, 26, 28 and 29)

QUESTIONNAIRE

Kindly indicate the correct answer/s with a tick in the appropriate box.

1. Tick the correct box that your age will fall into:

20-29yr.	30-39yr	40-49yr	50-59yr	>59yr
☐	☐	☐	☐	☐

2. Gender: Male ☐ Female ☐

3. Duration that you have been in private family practice (FP) in your geographical area:

<5yr	5-10yr	10-15yr	15-20yr	>20yr.
☐	☐	☐	☐	☐

4. State Medical School at which you qualified as a doctor and year of qualification.
Please tick appropriate box:

(a) NRM Medical School (UKZN) ☐

(b) Witwatersrand Univ. Med. School ☐

(c) Univ of Cape Town Med. School ☐

(d) Pretoria Univ. Med. School. ☐

(e) Medical Univ of S.A. (Medunsa) ☐

(f) Walter Sisulu Univ.Med.School (Unitra) ☐

(g) Univ of OFS.Med.School ☐

(h) Other University-Name:_____

Country:_____ Year of Qualification:_____

5. The majority of patients attending your FP will fall into 1 of the following categories:

Urban ☐ rural ☐ peri-urban (semi-rural) ☐

6. Average monthly income of majority of patients attending your FP.

R500	R500-R1000	R1000-R2000	R2000-R3000	R3000-R5000	>R5000
☐	☐	☐	☐	☐	☐

7. Percentage of patients attending your FP on a Medical Aid scheme.

0-10%	10-20%	20-30%	30-40%	40-50%	>50%
☐	☐	☐	☐	☐	☐

8. Percentage of patients who pay an all-inclusive cash fee. (for consultation, injection and medication); i.e. a packaged service.

0-25%	25-50%	50-75%	>75%
☐	☐	☐	☐

9. Kindly indicate your attitude towards the following statements by ticking the box you consider to be most appropriate.

	Strongly Agree	Agree	Neither agree/ Nor disagree	Disagree	Strongly disagree
Recent HL reform in SA aims to promote access, equity and affordability of healthcare delivery to all the people in SA	☐	☐	☐	☐	☐
Government has the authority/ right to regulate private FP in SA.	☐	☐	☐	☐	☐
Medical Schemes have the right to intervene in healthcare delivery to patients.	☐	☐	☐	☐	☐

10. How do you rate your attitude towards Health Legislation (HL) at present in terms of its general overall impact on your FP?

Positive ☐ Negative ☐

11. Is this attitude towards HL any different in the past compared to the present for yourself?

Yes ☐ No ☐ If Yes, when in the past and why?

When:_____Why:_____

12. Indicate your level of awareness of the following:

	Well Aware	Aware	No
Knowledge			
(a) National Health Act (NHA) No 61 of 2003	☐	☐	☐
(b) Medical Schemes Act (MSA) No 131 of 1998	☐	☐	☐
(c) National Health Reference Pricing List (NHRPL) 2005	☐	☐	☐
(d) Medicines and Related Substances Control Amendment Act (MRSCAA) No. 90 of 1997	☐	☐	☐
(e) International Classification of Disease (ICD-10) 10th edition. 1993.	☐	☐	☐

13. How do you rate your understanding of the following?

	Good	Satisfactory/ Reasonable	Poor
(a) NHA	☐	☐	☐
(b) MSA	☐	☐	☐
(c) NHRPL	☐	☐	☐
(d) MRSCAA	☐	☐	☐
(e) ICD-10	☐	☐	☐

14. Indicate with a tick in the appropriate box /boxes the correct answer/answers to the following statements.

(a) The following are pieces of HL:

NHA	MSA	NHRPL	MRSCAA	ICD-10 CODING
☐	☐	☐	☐	☐

(b) The Certificate of Need (CON) is contained in chapter 6 of which piece of HL?

NHA	MSA	NHRPL	MRSCAA	ICD-10 CODING
☐	☐	☐	☐	☐

(c) The CON refers to the concept of regulation of the number of practices in a given geographical area:

True ☐ False ☐

(d) The Certificate of Need (CON) is a regulation applicable to private FP only.

True ☐ False ☐

(e) The CON is valid:

Indefinitely ☐ a period less than 10 years ☐ a period greater than 10 years ☐

15. Indicate whether these statements are True or False.

(a) The MSA makes provision for Prescribed Minimum Benefits (PMB) for 32 chronic conditions.

True ☐ False ☐

(b) Medical Aid Schemes have established formularies to cover these PMB conditions.

True ☐ False ☐

(c) The principle of community rating allows for members of a scheme (or one of its options) to pay differential premium rates for cover as determined by their state of health.

True ☐ False ☐

16. Indicate either Yes or No to the following questions.

(a) Are you satisfied that most of your patient's chronic ailments/conditions are catered for by the PMBs mentioned for these conditions? Yes ☐ No ☐

(b) Do you agree with the concept of CON for FP? Yes ☐ No ☐

17. Do you understand the CON to affect your FP in any one or more of the following ways?

(a) Reduce the size of your practice and income ☐

(b) Increase the size of your practice and income ☐

(c) Restrict you from opening practices elsewhere ☐

(d) Make little or no difference ☐

18.(a) Managed health care (MHC) will increase the size of your FP and your income.

Yes ☐ No ☐ Make no difference ☐

(b) MHC is a good option to curtail the increasing cost of healthcare delivery.

Yes ☐ No ☐ Make no difference ☐

19.Which of the following is a type of managed care model? Tick appropriate box/boxes

(a) Designated Service Provider (DSP.) ☐

(b) Capitation Option ☐

(c) Health Maintenance Organization (HMO) ☐

(d) Individual Practitioner /Preferred Provider ☐

(e) All of the above ☐

(f) None of the above ☐

20. Indicate whether True or False.

(a) The Council for Medical Schemes (CMS) is a statutory body that has been charged with the responsibility for the compilation of the NHRPL.

True ☐ False ☐

(b) The NHRPL is, as mandated by the NHA & MSA, a reference list that reflects the real cost of providing a service such as to enable medical schemes to determine their respective benefits and providers of services can also use to determine their fees.

True ☐ False ☐

(c) As a FP, you have No say in determining the NHRPL benefit for your services because you cannot make a submission as an individual or as a group.

True ☐ False ☐

21. Please tick the appropriate box.

(a) "Licensing" in terms of dispensing of medicines, implies that you have successfully completed a supplementary course presented under the Health Professions Council (HPCSA) Act 1974.

Yes ☐ No ☐ Do not know ☐

(b) The MRSCAA makes provision for a veterinarian to prescribe, compound or dispense any schedule 2 to 5 substance.

Yes ☐ No ☐ Do not know ☐

(c) Generic substitution may Not be permissible where a product has been declared Not substitutable by the Pharmacy Council.[2]

Yes ☐ No ☐ Do not know ☐

(d) Section 18 A of the MRSCAA (on "Bonusing") implies that No person shall supply any medicine according to a bonus system, rebate system or any other incentive scheme except for the pharmaceutical manufacturers.

Yes ☐ No ☐ Do not know ☐

22. State whether True or False

(a) FP in general understand the recommended dispensing fee as being appropriate.

True ☐ False ☐

(b)Current dispensary overhead expenses exceeds the income derived from dispensing activities.

True ☐ False ☐

(c) The introduction of the pharmaceutical pricing regulation has little or No impact on profitability.

True ☐ False ☐

d) In view of the current HL changes, it is Not financially feasible to dispense medicines.

True ☐ False ☐

[2] An error in Question 21c was detected after the study was completed – it is the Medicines Control Council, not the Pharmacy Council which is responsible for declaring a medicine "non-substitutable".

23. Indicate below the percentage of medication you dispense or prescribe as being generic substances.

10%	10-25%	25-50%	50-75%	>75%
☐	☐	☐	☐	☐

24. (a) How aware are you of the fact that the citizenry of S.A. have the right to comment on any impending legislation as it is in the process of being developed?

Well aware ☐ Aware ☐ No knowledge ☐

(b) Did you as an individual FP or via a representative group (USCIPA, KZNMCC, NCD, etc) participate in the process of commenting with respect to aspects of the NHA, MSA or MRSCAA prior to promulgation?

Yes ☐ No ☐

(c) Do you understand this participation and input process to mean that your concerns as a FP are being seriously given the due consideration they deserve.

Yes ☐ No ☐

25. Indicate whether True or False

(a) The alphanumeric ICD-10 coding system is currently being used to collect health-related data for the compilation of statistics, and also to determine changing disease profiles.

True ☐ False ☐ Do not know ☐

(b) ICD –10 Coding System is used by medical brokers to manage services and benefits as well as to enable faster payments of claims to healthcare providers.

True ☐ False ☐ Do not know ☐

(c) ICD-10 Coding system raises concerns around disclosure of confidential medical information to medical schemes and potentially to other third parties.

True ☐ False ☐

(d) According to the NHA, all information concerning a patient is confidential, unless Non-disclosure of the information represents a serious threat to public health.

True ☐ False ☐

26. Rank the following statements by ticking the appropriate box

	Strongly Agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
(a) Presently, there is no need for the FP to obtain a fully informed consent from the patient prior to using and disclosing the ICD-10 code to medical schemes.	☐	☐	☐	☐	☒
(b) Before forwarding medical records to medical schemes or any other 3rd party, a signed copy of the patient's consent to release such records must be obtained.	☒	☐	☐	☐	☐
(c) 14 years should be the age at which children may independently consent to medical treatment.	☐	☐	☐	☐	☒
(d) Termination of Pregnancy may be conducted on a person of any age without consent from her parent or guardian.	☐	☐	☐	☐	☒

27. Tick the correct box/boxes.

When can a FP reveal confidential information?

(a) At the instruction of a court of law. ☐

(b) In terms of a statutory provision ☐

(c) Where justified in the public interest ☐

(d) With the written consent of parent or guardian ☐
If patient is a minor (14 years old)

(e) In the case of a deceased patient, a written consent by ☐

the superintendent of the hospital.

(f) All of the above: ☒

(g) None of the above: ☐

28. Indicate your opinion by ticking the appropriate box.

In terms of the following aspects, the future of FP can be deemed as being:

	Good	Reasonable /Satisfactory	Poor	No change
(a) Sustainability	☐	☐	☐	☐
(b) Viability in financial terms	☐	☐	☐	☐
(c) Overall attractiveness of the medical profession to the youth.	☐	☐	☐	☐
(d) A profession that provides a comfortable life for you and your family.	☐	☐	☐	☐
(e)A profession that is distinct from others in that it beckons a calling of you to serve society at large.	☐	☐	☐	☐

29 Kindly indicate your choice of answer by ticking the appropriate box	Yes	No
(a) More education and training on health legislation is necessary	☐	☐
(b) CPD (Continuous Professional Development) sessions should have more of a health legislation component	☐	☐
(c) Recent reforms in health legislation have resulted in improvements for you in your relationship with patients	☐	☐
(d) Recent reforms in health legislation have resulted in a deterioration for you in your relationship with patients	☐	☐
(e) Aspects of health legislation contained in this questionnaire require revision.	☐	☐

30. If answer to 29 (e) is Yes, state which aspects require revision and why.

APPENDIX 2

LETTERS FROM AUTHORITIES

2.1 Vice-Chairperson of USCIPA 126

2.2 Ethical approval from the Biomedical Research Ethics Committee 127

Recertification of study dated 11 November 2010..... 128

2.3 Letter of approval from the Postgraduate Education Committee 129

2.4 Letter of Progress to study participants 130

2.5 Certificate - Ethics Training 131/132

Appendix 2.1

UPPER SOUTH COAST INDEPENDENT PRACTITIONER'S ASSOCIATION:

Dr Raj Ramlutchman
Vice-Chairperson-USCIPA
162/164 Old Main Road
Isipingo Rail
4110
uscipa@netactive.co.za
Tel: 031-9026895
Fax: 031- 9029725

09 March 2006

To members of USCIPA
Also, to whom it may concern,

This is to certify that I, Dr Raj Ramlutchman, ID No: 6003205081084 Practice no: 1448498 MP No: 0338257 am Vice-Chairperson of USCIPA (Upper South Coast Independent Practitioners Association). USCIPA is affiliated to KZNMCC (Kwa-Zulu Natal Managed Care Coalition), which in turn is affiliated to SAMCC (South African Managed Care Coalition).

A member of, and the current Chair of USCIPA, Dr M.F.Mahomed (Faruk), has approached the executive about doing research in our geographical area. The issue about research in the private sector has been discussed previously and a circular was sent out to all members as recently as late November 2005.
Dr M.F.Mahomed is presently doing the Bioethics & Research Methodology Module at the NRM Medical School, Durban, working towards the MPH Degree. An essential requirement of this is that he prepare/develop a health research protocol and ultimately implement the chosen research project and write a scientific report. He has decided to choose a topic that will ultimately be of benefit to us as practitioners in this area and also thereby benefit our community whom we service.
This letter serves to notify you that the USCIPA executive has given me the mandate, on behalf of its members, to allow Dr M.F.Mahomed to conduct his proposed project in our area. He may be required to go beyond USCIPA in which case he will liaise with the appropriate IPAs executive there.
It is hoped that you will co-operate with this research as best as you can. He will be making contact with each one of you on an individual 1 on 1 basis, to explain his project, etc. to you and to obtain your consent to participate.

On behalf of the executive, I wish him well in this endeavor and trust that the ultimate outcome will serve a useful purpose to our patients and also to us in the profession.

We will try to offer him the administrative support that he may need of our office from time to time.
This project will take place over a period of +- 6 to 9 months duration commencing in June 2006. Dr M.F.Mahomed will source his own sponsorship to finance the project.

Many thanks

Yours Faithfully

Dr R.Ramlutchman
(Vice-Chairperson)

15

Appendix 2.2

UNIVERSITY OF
KWAZULU-NATAL

Research Office
BIOMEDICAL RESEARCH ETHICS ADMINISTRATION
Nelson R Mandela School of Medicine
Private Bag 7, Congella 4013
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604769
Fax: 27 31 2604609
Email: buccas@ukzn.ac.za
Website: www.ukzn.ac.za

11 January 2007

Dr M F Mahomed
Dept of Therapeutics and Medicines Management
Nelson R Mandela School of Medicine
University of KwaZulu-Natal
Fax: 9025732

Dear Dr Mahomed

PROTOCOL: **The assessment of knowledge and attitudes of Health Legislation (H.L.) among private family practitioners (FP) working in a defined geographical area. Dr M F Mahomed, Therapeutics and Medicines Management. Ref: H127/06**

The Biomedical Research Ethics Committee considered the abovementioned application and the protocol was approved at its meeting held on 07 November 2006 pending appropriate responses to queries raised. These conditions have now been met and the study is given full ethics approval and may begin as at 11 January 2007.

It is also noted that the research will be carried out on private family practitioners and that no municipal staff will be involved, and that permission was therefore sought from the USCIPA as included under Appendix A of your application.

This approval is valid for one year from 11 January 2007. To ensure continuous approval, an application for recertification should be submitted a couple of months before the expiry date. In addition, when consent is a requirement, the consent process will need to be repeated annually.

I take this opportunity to wish you everything of the best with your study. Please send the Biomedical Research Ethics Committee a copy of your report once completed.

Yours sincerely

DR J MOODLEY
Chair: Biomedical Research Ethics Committee

Appendix 2.2

UNIVERSITY OF
KWAZULU-NATAL

RESEARCH OFFICE
Biomedical Research Ethics Administration
Westville Campus, Govan Mbeki Building
Private Bag X 54001
Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604769 - Fax: 27 31 2604609
Email: BREC@ukzn.ac.za
Website: http://research.ukzn.ac.za/ResearchEthics/BiomedicalResearchEthics.aspx

11 November 2010

Dr M F Mahomed
Dept of Therapeutics and Medicines Management
Nelson R Mandela School of Medicine
University of KwaZulu-Natal
Fax: 031-9025732

Dear Dr Mahomed

PROTOCOL: The assessment of knowledge and attitudes of Health Legislation (H.L.) among private family practitioners (FP) working in a defined geographical area. Dr M F Mahomed, Therapeutics and Medicines Management. Ref: H127/06

RECERTIFICATION APPLICATION APPROVAL NOTICE

Approved: 04 November 2010
Expiration of Ethical Approval: 03 November 2011

I wish to advise you that your application for Recertification dated 28 September 2010 for the above protocol has been noted and approved by a sub-committee of the Biomedical Research Ethics Committee (BREC) for one year. The lapsed period 11 January 2008 to 04 November 2010 is condoned. The start and end dates of this period are indicated above.

If any modifications or adverse events occur in the project before your next scheduled review, you must submit them to BREC for review. Except in emergency situations, no change to the protocol may be implemented until you have received written BREC approval for the change.

The approval will be ratified by a full sitting of the Committee at a meeting to be held on **14 December 2010.**

Yours sincerely
Mrs A Marimuthu
Senior Administrator: Biomedical Research Ethics

Appendix 2.3

UNIVERSITY OF
KWAZULU-NATAL

1 February 2007

Professor A Gray
Therapeutics and Medicine Management
Nelson R Mandela School of Medicine

Dear Professor Gray

PROTOCOL : The assessment of knowledge and attitudes of health legislation (HL) among private family practitioners (FP) working in a defined geographical area. M F Mahomed, Therapeutics and Med Mgt. Ref.: H127/06 M-PH

The Postgraduate Education Committee approved the abovementioned study on 1 February 2007.

Please note :

- the Postgraduate Education Committee must review any changes made to this study.
- the study may not begin without the approval of the Ethics Committee.

May I take this opportunity to wish the student every success with the study.

Yours sincerely

PROFESSOR P MOODLEY
Chair : Postgraduate Education Committee

c.c. Dr M F Mahomed

**Postgraduate Education Administration,
Medical School Campus**

Postal Address: Private Bag 7, Congella, 4013, South Africa

ephone: +27 (0)31 260 4416 **Facsimile:** +27 (0)31 260 4723 **Email:** [redacted] **Website:** www.ukzn.ac.za

Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

DR M F MAHOMED & PARTNERS

B.Sc M.B.Ch.B (Natal)DHSM(Natal) FCFP (S.A.)
Pr No: 1460447
Vat Reg.No: 4880118213

Tel:031 9022798/031 9029740
Cell:0832311137

Fax:031 9025732
e-mail:mfm@medis.co.za (W)
faruk@webmail.co.za (H)

Postal Address
P O Box 23448
Isipingo
4110
Kwa Zulu Natal
South Africa

Surgery
Suite 1
Mahomed Medical Centre
8 Pardy Road
Isipingo Rail
4133

13th October 2008

Re: MPH Research Project – Final Year

Dearest Colleague,

I wrote to you last year to notify you of my intention to conduct a research project involving family practitioners. As you may recall, this research project is on Health Legislation. Thanks to you, I have now completed my field work. I personally visited just over 100 family practitioners. My sincere thanks to each one you and your staff for the co-operation and professionalism exhibited.

The information contained in the questionnaire which you completed has been duly collected in a database format. This data will be analysed in due course and the findings there-from will be utilized in preparation for my manuscript write-up and thesis dissertation. Thereafter, I will appear before a board of examiners; as well as external examiners. This entire process ought to take a few months (+ - 6 months) as I am a part time post-graduate student.

As indicated in my protocol, I intend to publish my findings in a journal; and also to engage with and to make representations to the DOH. Looking forward to constructive and positive outcomes.

You will receive a copy of my findings when complete.

Once again, thank you for your co-operation as a participant in this study.

Knowledge is power. The search goes on.

Much obliged.

Dr M F Mahomed (Faruk)

Appendix 2.5.2

CERTIFICATE OF ATTENDANCE

RESEARCH ETHICS COMMITTEE
University of KwaZulu-Natal

I, the undersigned, acting as representative of the aforementioned CPD Provider, hereby certify that -

Dr M F Mahomed

MP0210188

attended the following approved CPD Activity(ies)/Programme

RESEARCH ETHICS WORKSHOP

on

25 and 26 November 2004

The Medical and Dental Professional Board's approved CPD reference number is as follows:

A003 / 036 / 03 / 2004

and I certify that the said practitioner qualifies for 12 CPD points, obtained as follows:

	Clinical	Ethics
Category 2b		12

Dean : Faculty of Health Sciences

DATE : 30 November 2004

COPY

Appendix 2.5.2

FACULTY OF HEALTH SCIENCES
UNIVERSITY OF KWAZULU-NATAL

CERTIFICATE OF ATTENDANCE

THIS SERVES TO CONFIRM THAT

Dr M F Mahomed

ATTENDED A WORKSHOP

"CONDUCTING RESEARCH ETHICALLY"
HELD BY THE RESEARCH ETHICS COMMITTEE

25-26 NOVEMBER 2004

Topics Covered

- Ethics Review of Research - The Administrative Process
- Requirements for Ethical Research
- Informed Consent in Research
- Basic Biostatistics
- Special Issues
- Community Participation in Research
- Working on scenarios
- Justice issues in Research
- Implementation of Ethics Review of Research
- Protocol Review

PROFESSOR A DHAI
CHAIR : RESEARCH ETHICS COMMITTEE
HEAD : BIOETHICS, MEDICAL LAW AND RESEARCH ETHICS

30 NOVEMBER 2004
Date

COPY

APPENDIX 3

INFORMATION DOCUMENTS AND

INFORMED CONSENT

3.1 Information document – Pilot study 134

3.2 Information document – Main study 136

3.3 Consent document – Pilot study 138

3.4 Consent document – Main study 139

APPENDIX 3.1

INFORMATION DOCUMENT – PILOT STUDY

Study title: The assessment of knowledge and attitudes of Health Legislation (H.L.) among private family practitioners (FP) working in a defined geographical area.

Greeting: Good day Dr …….. .

Introduction:

I am doing research on the knowledge and attitudes of Health Legislation (H.L.) among private family practitioners. This research is towards part fulfillment of the Masters in Public Health that I am currently involved in. The project includes all family practitioners from the USCIPA who are agreeable to participate. Before I embark on the study, I would like to pilot the questionnaire among 6-8 FPs from another IPA. This pretest method will assist me in refining the research tool to be used. I would like to obtain information regarding wording and clarity of the questions, the relevance of the content of the questionnaire to family practice and the understanding of the questions.

Invitation to participate: I invite you to participate in this pilot research.

What is involved in the study – I request that you fill in a questionnaire that has questions on health legislation. It will take about 30 minutes to complete. I will wait in the reception area during this time and will be available to clarify any queries you have on the questions. Once you have completed filling in the questionnaire, please put it into the accompanying envelope, seal it and drop it into this box. At this stage I will ask you how you felt about the questions asked, and the timing needed for completion of questionnaire. This feedback will be crucial for the main study. As many of your criticisms as possible will be addressed in order that the final questionnaire benefits fully from this feedback.

Risks: There are no risks to you as a result of your participation in this study. None of the data gathered from this pilot study will be used in the analysis and write up of the project. However, you may be a bit uncomfortable if you realize that you are Not really well aware of health legislation.

Benefits: There are No direct benefits to you from your involvement in this pilot study. The benefits of the main study are that, depending on the outcomes, family practitioners could play a more involved role in the planning of pertinent legislation. In addition, training programs specific to health legislation would be proposed for family practitioners.

Your participation is voluntary. There will be no penalty or loss to you if you do not participate. In addition, you may discontinue participation at any time.

Reimbursements: You will Not be paid for participating in this study.

Confidentiality: All efforts will be made to keep your information confidential. Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the Research Ethics Committee.

My contact numbers are 9022798 and 0832311137. You can call me if you require more information on the study.

The contact details of BREC administrator – for reporting of complaints/ problems are **MRS S BUCCAS, Nelson R Mandela School of Medicine,** Private Bag 7, Congella 4013
Telephone: +27 (0) 31 260 4769
Fax: +27 (0) 31 260 4609
email: buccas@ukzn.ac.za

Do you have any questions?

Thank you for your time

Faruk Mahomed.

APPENDIX 3.2

INFORMATION DOCUMENT – MAIN STUDY

Study title: The assessment of knowledge and attitudes of Health Legislation (H.L.) among private family practitioners (FP) working in a defined geographical area.

Greeting: Good day Dr …….. .

Introduction:
I am doing research on the knowledge and attitudes of Health Legislation (H.L.) among private family practitioners. This research is towards part fulfillment of the Masters in Public Health that I am currently involved in. The project includes all family practitioners from the UCISPA who are agreeable to participate.

Invitation to participate: I invite you to participate in this research.

What is involved in the study – I request that you fill in a questionnaire that has questions on health legislation. It will take about 30 minutes to complete. I will wait in the reception area during this time and will be available to clarify any queries you have on the questions. Once you have completed filling in the questionnaire, please put it into the accompanying envelope, seal it and drop it into this box.

Risks: There are No risks to you as a result of your participation in this study. However, you may be a bit uncomfortable if you realize you are Not really well aware of health legislation. In addition, while the questionnaire has been anonymised, some aspects of the demographic data that is being collected could be potential identifiers, e.g. there is a question on which medical school you qualified at. This has been done to see if there is a correlation between knowledge and attitudes towards HL by FPs and their respective training institutions. Please feel free Not to fill in the questions if you feel uncomfortable with this.

Benefits: Currently there are No direct benefits to you from your involvement in the study. However, depending on the outcomes of the study, family practitioners could play a more involved role in the planning of pertinent legislation. In addition, training programs specific to health legislation would be proposed for family practitioners.

I will present the results of the study to all participating family practitioners at one of the IPA meetings.

Your participation is voluntary. There will be no penalty or loss to you if you do ot participate. In addition, you may discontinue participation at any time.

Reimbursements: You will not be paid for participating in this study.

Confidentiality: All efforts will be made to keep your information confidential. Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the Research Ethics Committee. If results are published, the locale will be anonymised in order to avoid cohort or individual identification.

My contact numbers are 9022798 and 0832311137. You can call me if you require more information on the study.

The contact details of BREC administrator – for reporting of complaints/ problems are
MRS S BUCCAS, Nelson R Mandela School of Medicine, Private Bag 7, Congella 4013
Telephone: +27 (0) 31 260 4769
Fax: +27 (0) 31 260 4609
email: buccas@ukzn.ac.za

Do you have any questions?

Thank you for your time

Faruk Mahomed.

APPENDIX 3.3

CONSENT DOCUMENT – PILOT STUDY

Consent to Participate in Research

You have been invited to participate in a pilot research study.

You have been informed about the study by …Dr MF Mahomed.

You may contact me at 9022798 / 0832311137 at any time if you have questions about the research.

You may contact the Medical Research Office at the Nelson R Mandela School of Medicine at 031-260 4604 if you have questions about your rights as a research participant.

Your participation in this pilot research is voluntary, and you will Not be penalized or lose benefits if you refuse to participate or decide to stop.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet which is a written summary of the research.

The pilot research study, including the above information, has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate.

_____ _____

Signature of Participant **Date**

APPENDIX 3.4

CONSENT DOCUMENT – MAIN STUDY

Consent to Participate in Research

You have been invited to participate in a research study.

You have been informed about the study by …Dr MF Mahomed.

You may contact me at 9022798 / 0832311137 at any time if you have questions about the research.

You may contact the Medical Research Office at the Nelson R Mandela School of Medicine at 031-260 4604 if you have questions about your rights as a research participant.

Your participation in this research is voluntary, and you will Not be penalized or lose benefits if you refuse to participate or decide to stop.

If you agree to participate, you will be given a signed copy of this document and the participant information sheet which is a written summary of the research.

The research study, including the above information, has been described to me orally. I understand what my involvement in the study means and I voluntarily agree to participate.

_____ _____

Signature of Participant **Date**