A Code of Practice for Practitioners in Private Healthcare:

A Privacy Perspective

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A Code of Practice for Practitioners in Private Healthcare: A Privacy Perspective

by

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Dedication

My sincerest gratitude and appreciation are extended to:

- the best parents anyone could ever have, **mom**, **dad** ,thank you for all the support ;

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…………………….A Privacy Perspective…….…………………………….…

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DECLARATION:

In accordance with Rule G4.6.3, I hereby declare that the above-mentioned treatise/dissertation/thesis is my own work and that it has not previously been submitted for assessment to another University or for another qualification.

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Abstract

Whereas there are various initiatives to standardize the storage, processing and use of electronic patient information in the South African health sector, the sector is fragmented through the adoption of various approaches on national, provincial and district levels. Divergent IT systems are used in the public and private health sectors ("*Recommendations of the Committee on …*" 2003). Furthermore, general practitioners in some parts of the country still use paper as a primary means of documentation and storage. Nonetheless, the use of computerized systems is increasing, even in the most remote rural areas. This leads to the exposure of patient information to various threats that are perpetuated through the use of information technology.

Irrespective of the level of technology adoption by practitioners in private healthcare practice, the security and privacy of patient information remains of critical importance. The disclosure of patient information whether intentional or not, can have dire consequences for a patient.

In general, the requirements pertaining to the privacy of patient information are controlled and enforced through the adoption of legislation by the governing body of a country. Compared with developed nations, South Africa has limited legislation to help enforce privacy in the health sector. Conversely, Australia, New Zealand and Canada have some of the most advanced legislative frameworks when it comes to the privacy of patient information.

In this dissertation, the Australian, New Zealand, Canadian and South African health sectors and the legislation they have in place to ensure the privacy of health information, will be investigated. Additionally, codes of practice and guidelines on privacy of patient information for GPs, in the afore-mentioned countries, will be investigated to form an idea as to what is needed in creating and formulating a new code of practice for the South African GP, as well as a pragmatic tool (checklist) to check adherence to privacy requirements.

Chapter 1   Introduction

"*Privacy is a fundamental human right. It underpins human dignity and other values such as freedom of association and freedom of speech. It has become one of the most important human rights of the modern age.*" – Marc Rotenberg

The main objective of chapter 1 is to introduce a brief overview of the dissertation. This includes providing background information on certain topics that will be discussed in the rest of the chapters, discussing key concepts, presenting the problem statement, objectives, research paradigm and the methodology of the research project. Privacy and governance and how they relate to patient information are also discussed, as well as a brief overview of privacy issues facing general practitioners.

Introduction

In this dissertation, the Australian, New Zealand, Canadian and South African health sectors and the legislation they have in place to ensure the privacy of health information, will be investigated. Additionally, codes of practice and guidelines on privacy of patient information for GPs, in the afore-mentioned countries, will be investigated to form an idea as to what is needed in creating and formulating a new code of practice for the South African GP, as well as a pragmatic tool (checklist) to check adherence to privacy requirements.

1.1   Background

Many cases of harassment have resulted because of the lack of adequate privacy protection of medical records ("AIDS Law Project,Wits", n.d.). The problem can even result in abstention from recommended medical care, for example, some have even refused to take a drug prescribed by therapists, simply because they fear the impact that having a certain prescription on record might have on their ability in the future to obtain medical insurance, or even employment (Simons, 1997).

Another example of a privacy infringement would be, a patient comes in and receives medication for an ailment that they do not to wish to be disclosed. The medication may be contained in an easily identifiable box, and the dispensary is in plain view of the waiting room. The individual who handles accounts decides to collect the prescription for the patient while the dispensary person is on tea break. Inadvertently the patient's status has been exposed to a person who does not know privacy procedures. This person may spread this information throughout the community having a negative impact on the patient.

The need for improved privacy of medical records can therefore not be denied when faced with such situations in today's society. In the health sector, privacy is protected through two mechanisms ("Guidelines on", 2001):

- Ethical obligations (e.g. the Hippocratic Oath, codes of conduct and non-statutory medical Associations); and

- Legislation (e.g. privacy acts and statutory codes of practice).

The Hippocratic Oath is an oath traditionally taken by physicians, which pertains to the ethical practice of medicine (Wikipedia contributors, 2006).

GPs have a legal and ethical duty to act in the best interests of patients, while making proficient use of the resources on hand (Shaw & Dhillon, 2002). They must be able to validate either following the guidelines, or acting outside them, on a patient by patient basis (Colbrook, 2005). The protection of medical records is in the best interest of the patient and since the GP has the patient's interests at heart, he/she is obliged to provide this privacy.

From a legal perspective, laws protect the privacy of patient information. This is provided through privacy acts and codes of practice, which will be investigated extensively in Chapter 3. The benefits of such legislation in various other countries are obvious, as it further protects the patient. Therefore, the development of a code of practice for the South African private health-care sector, will be a step in the right direction.

1.2 Key Concepts

1.2.1 Privacy

Very broadly, privacy is about the integrity of the individual (Hustinx, 2005). From a medical records perspective, this means that personal information should not be divulged or used by others against user's wishes, unless authorized by the user (Tuykeze & Pottas, 2005).
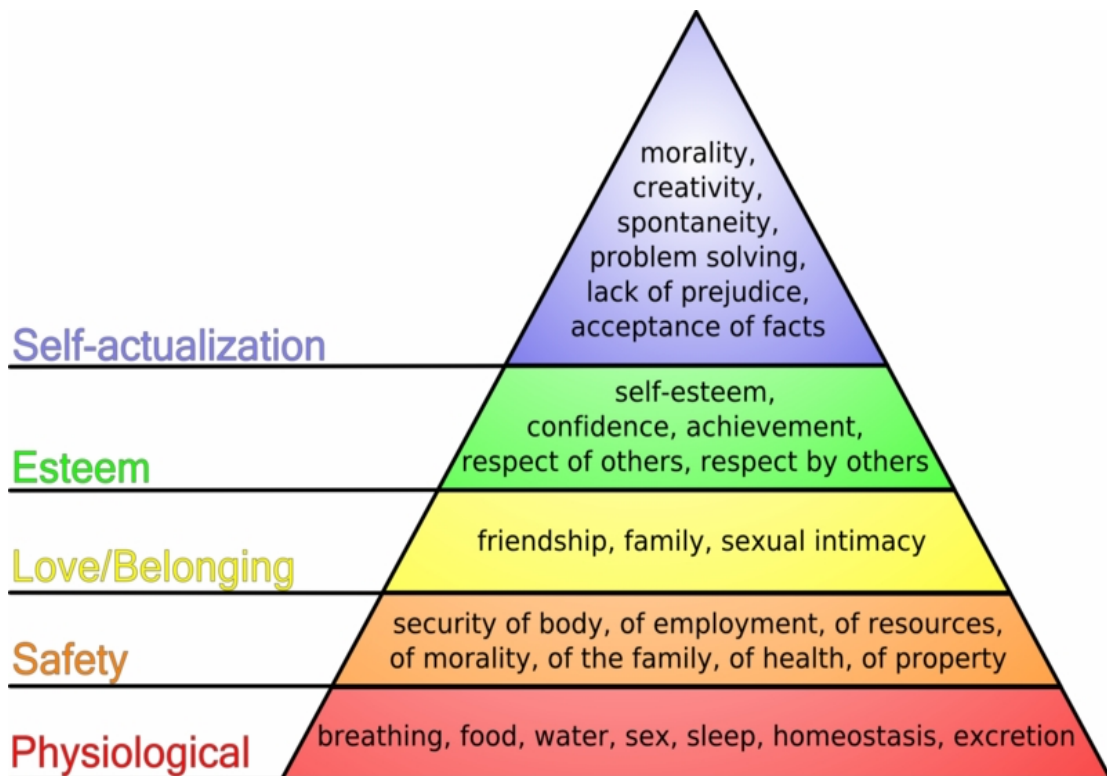
Figure 1.1 Maslow's hierarchy of needs, represented as a pyramid with the more primitive needs at the bottom (Maslow's hierarchy of needs, 2006)

The level at which the South African health sector stands in relation to its international counterparts, can be viewed in terms of Maslow's hierarchy of needs. This theory contends that peoples' more basic needs have to be largely satisfied before higher-order needs come into play. Moreover, if a

lower-order need is threatened, the importance of higher-order needs is suspended until the lower-order needs are once again satisfied. The usual classification scheme is presented as a pyramid: Physiological needs are matters of survival (such as air, water, food, warmth and rest) (Boeree, 1998). Safety encompasses basic considerations such as physical security, family security and health, but also broader concerns such as security of personal assets and employment (Clarke, 2006). As humans meet 'basic needs' they seek to satisfy successively 'higher needs' (Maslow's hierarchy of needs, 2006).

South Africa's health sector can be viewed in the same way - as it begins to fill the base needs of its peoples' health requirements, then only will it begin to satisfy the 'higher needs' (e.g. privacy). This theory might explain why South Africa lags in some aspects of privacy, as they currently have much more pressing issues to attend to (e.g. infrastructure, Aids and other diseases). Whereas there is a need to guide Private Health-Care Practices (PHCPs) in terms of privacy protection, none such guidelines have been forthcoming.

According to an international survey of privacy laws and developments conducted in 2003, there are four aspects of privacy. These are: ("Privacy and", 2003; Clarke, 2006):

- **Privacy of Personal Data (Information privacy),** sometimes referred to as 'data privacy' and 'information privacy', is related to the upper layers of Maslow's hierarchy. Individuals claim that data about themselves should not be automatically available to other individuals and organizations, and that, even where data is possessed by another party, the individual must be able to exercise a substantial degree of control over that data and its use (Barrigar, 2006).

- **Privacy of the Person (Bodily privacy)**, sometimes referred to as 'bodily privacy', is concerned with the integrity of the individual's body, and is related to the physiological and safety levels of the Maslowian hierarchy. At its broadest, it could be interpreted as extending to freedom from suffering and right to medical treatment, but these are more commonly seen as human rights rather than as aspects of privacy. Issues that are more readily associated with privacy include compulsory immunization, imposed treatments such as lobotomy and sterilization, blood transfusion without consent, compulsory provision of samples of body fluids and body tissue, and requirements for submission to biometric measurement (Clarke, 2006).

- **Privacy of personal communications** is related to both the belonging and self-esteem levels of Maslow's hierarchy, and perhaps to self-actualization as well (Dick, 2001). It relates to individuals' desire for the freedom to communicate among themselves, using various media, without routine monitoring of their communications by other persons or organizations.

- **Privacy of Personal Behavior (Territorial privacy)**, including what is sometimes referred to as 'media privacy', like privacy of personal communications, is related to both the belonging and self-esteem levels of Maslow's hierarchy, and perhaps to self-actualization as well. Many issues that come to attention relate to sensitive matters, such as sexual preferences and habits, political activities and religious practices (Benoliel, 2004).

1.2.2 Privacy and Security

Security and privacy are related but separate ("A Briefing On", 2003). It is possible to secure health information without making it private; however, it is not possible to protect privacy without having security (KPMG, 2001). Security is defined as the ability to control access and protect information from accidental or intentional alteration, destruction, loss or disclosure to unauthorized persons, while privacy is defined as controlling who is authorized to access information ("Health Insurance", n.d.).

Privacy protection includes limits of a legal nature related to the collection, handling, storage or transmission of personally identifiable or aggregate data collected from individual users ("OECD Guidelines", 2006). It means the ability to share an individual's personal and health information in confidence. Confidentiality is the controlled release of such information to a care provider under the agreement in which the information will be used or released further (Rindfleisch, 1997; "Patient Confidentiality", 1999).

Security is a measure that an organization employs to protect the confidentiality of patient information ("Patient Confidentiality", 1999).

In summary, the privacy of an individual's health information depends on the level of confidentiality maintained by organizations, which in turn, depends on the security measures implemented by them. The inverse, however, does not apply.

1.2.3 Governance

The IT Governance Institute (2001) defines corporate governance as the "set of responsibilities and practices exercised by the Board and Executive management with the goal of providing strategic direction, ensuring that objectives are achieved, ascertaining that risks are managed appropriately and verifying that enterprise's resources are used responsibly" (Tuyikeze, 2006). To help enterprises achieve this, the King report recommends seven characteristics of good corporate governance to be adopted by businesses ("Executive Summary", 2002):

- **Discipline**

  Corporate discipline is a commitment by a company's senior management to adhere to behavior that is universally recognized and accepted to be correct and proper. This encompasses a company's awareness of, and commitment to, the underlying principles of good governance, particularly at senior management level.

- **Transparency**

  Transparency is the ease with which an outsider is able to make meaningful analysis of a company's actions, its economic fundamentals and the non-financial aspects pertinent to that business. This is a measure of how good management is at making necessary information available in a candid, accurate and timely manner – not only the audit data but also general reports and press releases. It reflects whether or not investors obtain a true picture of what is happening inside the company.

- **Independence**

  Independence is the extent to which mechanisms have been put in place to minimize or avoid potential conflicts of interest that may exist, such as dominance by a strong chief executive or large shareowner. These mechanisms range from the composition of the board, to appointments to committees of the board, and external parties such as the auditors. The decisions made, and internal processes established, should be objective and not allow for undue influences.

- **Accountability**

  Individuals or groups in a company, who make decisions and take actions on specific issues, need to be accountable for their decisions and actions. Mechanisms must exist and be effective to allow for accountability. These provide investors with the means to query and assess the actions of the board and its committees.

- **Responsibility**

  With regard to management, responsibility pertains to behavior that allows for corrective action and for penalizing mismanagement. Responsible management would, when necessary, put in place what it would take to set the company on the right path. While the board is accountable to the company, it must act responsively to and with responsibility towards all stakeholders of the company.

- **Fairness**

  The systems that exist within the company must be balanced in taking into account all those that have an interest in the company and its future. The rights of various groups have to be acknowledged and

respected. For example, minority shareowner interests must receive equal consideration to those of the dominant shareowner(s).

- **Social responsibility**

  A well-managed company will be aware of, and respond to, social issues, placing a high priority on ethical standards. A good corporate citizen is increasingly seen as one that is non-discriminatory, non-exploitative, and responsible with regard to environmental and human rights issues. A company is likely to experience indirect economic benefits such as improved productivity and corporate reputation by taking those factors into consideration.

The King report highlights the need for corporate entities in South Africa to move towards a more responsible ethos in corporate governance (Dekker, 2007). Although governance normally applies to a board of directors of major companies, rather than a small business (i.e. GP), the same concepts can be .applied (National Cyber Security Summit Task Force, 2004).

Information security governance is a term used to describe how information security is addressed as part of the corporate governance responsibilities of an organization (Tuyikeze, 2006) Information security governance is the establishment and maintenance of controls to manage risks relating to confidentiality, integrity and availability of information and its supporting processes and systems (Moulton & Coles, 2003; Tuyikeze, 2006). Therefore, a GP must be able to minimize risks in his/her practice, in order to maintain a high level of confidentiality of his/her patient information. As discussed earlier in this chapter, the privacy of an individual's health information depends on the level of confidentiality maintained by the organizations that hold the information, in this case the GP.

1.2.4 Privacy Issues facing GPs

1.2.4.1 The impact of the increased use of technology on privacy

Today's GPs have a more difficult time maintaining levels of privacy, especially with the increased use of technology to store patient records (Johnsen , 2006). This increased usage of technology as a medium of information storage exposes the information to more risks, which a GP in the past would not have had to worry about. Healthcare information systems (HISs), however, do provide many advantages when used for improved access, collaboration and data sharing among healthcare providers, patients and researchers (Tuyikeze, 2006). A health information system's main purpose is to provide a full patient record (Tuyikeze, 2006; "HIMSS CPRI Toolkit:", 2006), which includes:

- Patients' histories;
- Families' histories;
- Results from specialties such as pathology, radiology and endoscopies;
- Drug treatments; and
- Procedures and problem lists.

These records now become vulnerable to attacks that normally plague information networks in today's digital world (Wilson, 2005).

1.2.4.2 The GP and the burden of legal compliance

GPs agree that smaller practices have had a hard time making the necessary adjustments when it comes to legal compliance (Wiebe, 2003). The need for a simple and fast way to guide the compliance process and check whether a practice is compliant with legal requirements is obvious. The GP, who not only has to deal with legal issues relating to malpractice, must also begin implementing procedures to deal with privacy laws, etc. This is difficult given the fact that a GP's main function is to treat patients.

1.3   Problem Statement

In general, requirements pertaining to the privacy of patient information are controlled and enforced through the adoption of legislation by the governing body of a country. Compared with developed nations, South Africa has limited legislation to help enforce privacy in the health sector. This is also reflected in a lack of privacy guidelines, best practices and policies for PHCPs.

The main problem addressed in this research is therefore that there is a lack of adequate guidance or frameworks with regards to privacy of patient information at the general practitioner's level of the health care sector. In order to investigate this properly the following sub-problems need to be investigated:

- Which South African regulations address privacy?
- How do these laws compare internationally?
- Which best practices are available for private health care practitioners in terms of privacy?

- How can legislative requirements, as pertaining to privacy, be devolved to the level of general practitioners?

1.4   Objectives

The main objective of this research is to develop a privacy code of practice and a privacy checklist for South African general medical practitioners, that can be used to address privacy issues with regard to patient information.

This will be achieved by addressing the following list of secondary objectives, that support the primary objective:

- Analyze the health sectors of various countries, to gain insight into the relationship between the health sector status and the level of legislative development.
- Discuss privacy laws affecting the privacy of health information in various countries.
- Discuss the privacy-related codes of practice (and other guidelines) for GPs in various countries.
- Compare South African legislative requirements for privacy with the international scenario, to determine the gaps, if any.
- Incorporate the information discussed and analyzed to propose a privacy framework for PHCPs.

1.5   Research Paradigm

According to Creswell (1994) and Mason (1996), a good research-undertaking starts with the selection of the topic, problem or area of interest, as well as the

paradigm (Creswell, 1994; Mason, 1996). Research paradigms can be categorized in various ways, however, one of the most common distinctions is between qualitative, otherwise known as phenomenological, and quantitative, also referred to as positivistic, research methods (Myers, 2006).

In positivistic research, the researcher is an impartial observer who does not manipulate the situation or environment at all

(Lee, 1999). The objective of positivistic research is to develop and employ mathematical models, theories and hypotheses pertaining to natural phenomena (Hoepfl 1997). This means that the researcher already knows in advance what he/she is looking for. In quantitative research, features are classified, counted, and sometimes constructed into complex statistical models in an attempt to explain what is observed. This is in contrast to qualitative research, which aims to produce a complete, detailed account (Miles & Huberman, 1994).

On the opposite end of the spectrum, the purpose of the phenomenological approach is to illuminate the specific, to identify phenomena through how they are perceived by the actors in a situation (Lester, 1999). This means gathering information and perceptions through inductive, qualitative methods such as interviews, discussions and participant observation, and representing it from the standpoint of the research participant(s). Therefore, it is much more focused on the perceptions that the research subjects have. These perceptions are normally taken for granted assumptions. Qualitative methods tend to be more appropriate in the early stages of research (exploratory research) and for theory building (Moody, 2002). With this type of research the researcher must take it upon himself in discovering and interpreting the importance of what is observed, and find a reasonable connection between what is observed and the conclusions drawn in the research report (Hoepfl 1997).

The development of an information system is viewed as a social activity combining social systems and technology for the benefit of society as a whole (Goede, 2003). The development of a code of practice, which includes a checklist for GPs, which is the primary objective of this research, is intended to help improve the levels of privacy of patient information. It deals with GPs and the people who interact with patient records, whether it be a paper-based or computer-based. Therefore, this improvement of privacy of patient information can be seen to benefit society as a whole. The emphasis of this research, therefore, is on the social side. Phenomenological or qualitative research is well suited for this type of research (Oates, 2006 pp. 292 – 295, Orlikowski & Baroudi, 1991).

The selection of appropriate research methods is critical to the success of any research project, and must be driven by the research question and the state of knowledge in the area being studied (Moody, 2002). In general, a combination of research methods may be most effective in achieving a particular research objective (Shaw, 2001; Goede, 2003). For example, when a subject area is not well understood, qualitative methods may be used to build theory and testable hypotheses. This theory may then be tested using quantitative methods such as surveys and experiments (Marsland, Wilson, Abeyasekera, & Kleih, 1999). The two types of methods have different, yet complementary strengths and when used together, can lead to a more comprehensive understanding of a phenomenon.

1.6   Methodology

Most of the research conducted for this project, is of a phenomenological nature. This is also known as interpretivist research - the researcher gathers information and filters it, while involving themselves in the study. In this case, subjectivity will play a role, with the researcher having to argue towards his interpretation of the research area and the proposed solution.

Since the research is predominantly of a phenomenological nature, the execution of a proper literature study was employed as a suitable research method. An extensive literature study was conducted to gather information as pertaining to the following:

- The status of the South African health sector;
- The status of the health sectors of other countries;
- The levels of computerization amongst GPs in the various countries researched;
- South African legislation affecting the privacy of patient information;
- International legislation affecting the privacy of patient information; and
- Codes of practice and guidelines on privacy of patient information for GPs in the countries researched.

Arguments were employed to show that the status of health sectors can affect the level of privacy legislation and its development in a country.

All of the information gathered, was used in the formulation of a privacy code of practice for GPs and a checklist to enable the GP to determine his/her own level of adherence to privacy requirements.

1.7   Structure of the Dissertation

The layout of the dissertation is shown in Figure 1.2. It is divided into three main sections.

Section 1 covers the background of the research area. Chapter 1 provides a brief introduction of the area of research and explains the problem statement, objectives, research paradigm and the research methodology of the dissertation. Chapter 2 introduces the health sectors of Australia, New Zealand, Canada and South Africa respectively. It also discusses the levels of computerization at GPs in these countries. In Chapter 3, privacy legislation affecting patient information in the four countries, is studied. Privacy-related codes of practice for the health sector and guidelines are also discussed to gain further insight into the effect these documents have on the privacy of patient information.

Section 2; starting with Chapter 4, proposes a South African code of practice for privacy protection in PHCPs. This code of practice is specifically targeted at private health care practitioners in the South African health-care sector. In addition to the privacy code of practice, a checklist (based on the code) is presented. This serves as a pragmatic tool which enables GPs to check their levels of adherence to privacy-related requirements.

Finally, Section 3, Chapter 5 constitutes the conclusion of the dissertation. This chapter summarizes what has been covered, moreover it shows how the objectives itemized in Chapter 1, were achieved. The Chapter further considers proposals for possible future and continued research in this area.

1.8 Layout Structure of Dissertation
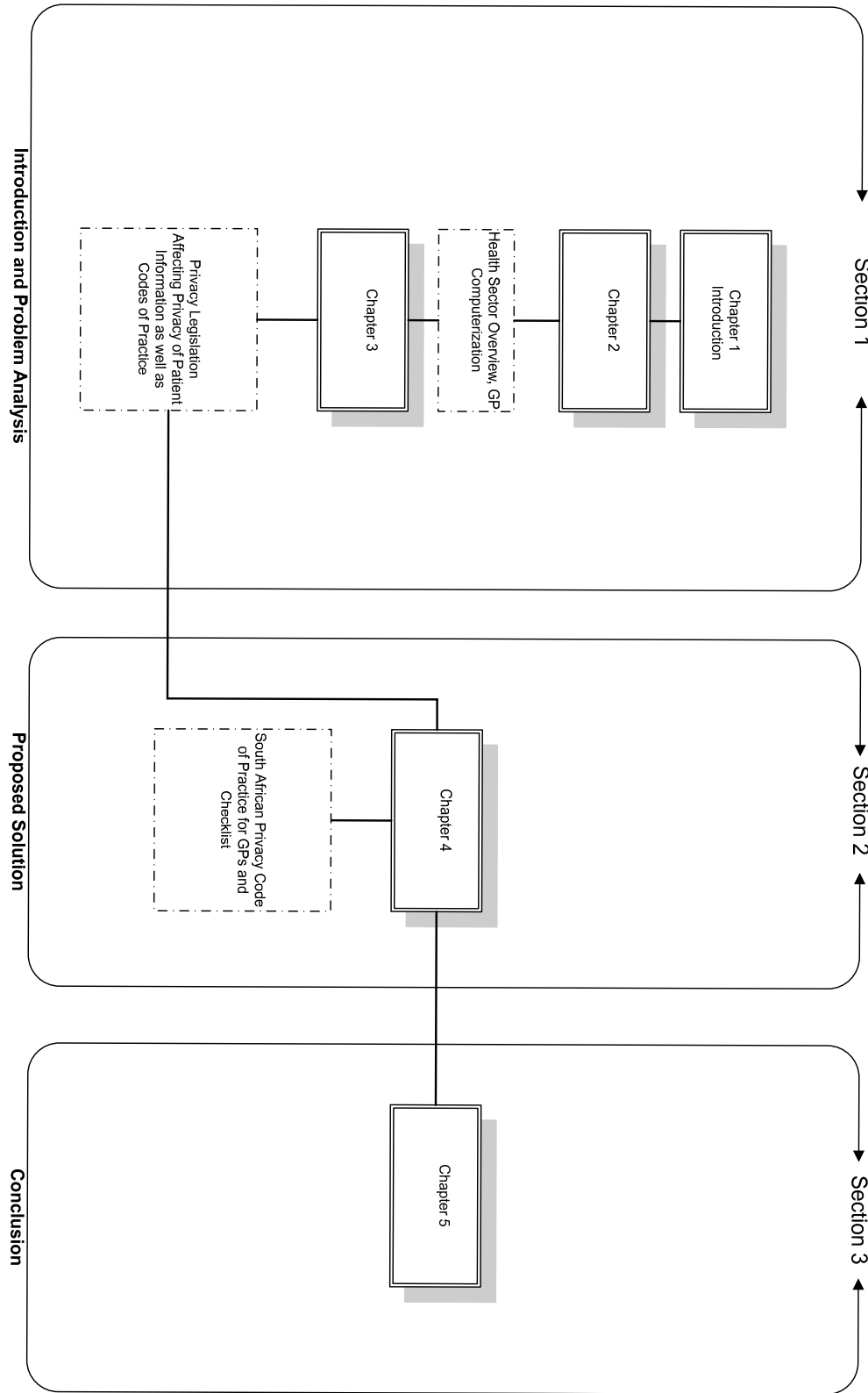
Figure 1.2: Layout of dissertation

Chapter 2: An Overview of Health Sectors in Various Countries

"*The health of the people is really the foundation upon which all their happiness and all their powers as a state depend.*" – Benjamin Disraeli

This chapter provides an in depth look at the health sectors of four different countries, namely Australia, New Zealand, Canada and South Africa. For each country, an overview of the health-care sector (public and private) is provided, and thereafter, general practitioners and their level of computer use are investigated. This will provide insight into the state of (health) affairs in each of the countries, providing an argument or reason as to why the countries are at a different level of health privacy law development, the discussion of which follows in Chapter 3.

2.1 Introduction

This chapter takes an in depth look at the health sectors of four different countries, namely Australia, New Zealand, Canada and South Africa. Australia, New Zealand and Canada were chosen because according to the World Health Organization they currently have some of the world's best run and best funded health sectors (World Health Organization Statistical Information System, 2003). For each country the following issues are investigated and discussed:

- A brief overview of the health-care sector (public and private), and

- general practitioners and their level of computer use.

This will provide better insight into the state of affairs in each of the countries' health sectors, providing an argument or reason why the countries are at a different level of Health Privacy law development (the discussion of which follows in Chapter 3).

Information in some areas for some countries was elusive. This complicated the discussion somewhat, as information focusing on a certain aspect of a country's health sector, was not available for all the countries. However, the information found was sufficient to gather an understanding of the health sector of each of the countries being investigated.

In this chapter, the terms primary, secondary and tertiary care are mentioned quite often. These three tiers of medical care provide, at a primary care level, a more generalized form of healthcare and becomes more specialized in the other tiers, where tertiary care is the most specialized kind of care (Aboriginal Health & Medical Research Council of NSW, 1999). To avoid any confusion the terms are

subsequently defined and when mentioned in the dissertation, they adhere to the definitions below.

"Primary care is a term used for a health-care provider (e.g. general practitioner (GP)) who acts as a first point of consultation for all patients. Generally, GPs are based in the community, as opposed to a hospital" ("Primary care", 2006).

"Secondary care is carried out by medical specialists who generally do not have first contact with patients (e.g., cardiologist, urologists, and dermatologists). This is very similar to tertiary care which is defined in the next paragraph (Aboriginal Health & Medical Research Council of NSW, 1999).

"Tertiary Care is specialized consultative care, usually on referral from primary or secondary medical care personnel, by specialists working in a centre that has personnel and facilities for special investigation and treatment. Specialist cancer care, neurosurgery (brain surgery), burns care and plastic surgery are examples of tertiary care services" ("Tertiary care", 2006).

2.2 The Australian Health Sector

The Australian government sets national health policies and subsidizes health services provided by state and territory governments and the private sector (The Australian Health, 2006). It subsidizes healthcare through two national subsidy schemes, Medicare and Pharmaceutical Benefits Scheme (PBS). They are funded in part through a tax levy of 1.5% of income. These schemes finance expenses for services provided by doctors and optometrists, and for most prescription medications ("Australia's …", 2004). Total expenditure on health by government and the private sector currently accounts for about 9.5 per cent of Australia's gross domestic product (GDP) ("*Health Care in Australia*", n.d.).

2.2.1 The Public Health Sector

The state and territory governments' provision of the bulk of public hospital services is the public sector's most significant health-service delivery role. State and territory governments are also primarily responsible for the delivery and organization of publicly provided community health services.

The public health-care system in Australia is almost totally funded by the government. All permanent Australian residents are entitled to free public hospital care when choosing to be public patients. The national government provides around two-thirds (68 per cent) of public-sector expenditure on health, while state, territory and local governments account for around one third (32 per cent) ("*Health Care in* Australia", n.d.). State governments offer public hospital services and work with the national government and certified bodies to ensure that quality of healthcare and suitable standards are maintained ("*Health Care in* Australia", n.d.).

Territory governments and Catholic hospitals also provide services to the public in the public hospital arena (Sperling, et al., 1999).

2.2.2 The Private Health Sector

The private sector's role in delivering healthcare is sizeable and includes, for example, provision of ("The National", 2000):

- Almost all primary and specialist medical care,

- most allied health services,

- all private hospital services, and

- some public hospital and community health services.

Private hospitals provide about a third of the total number of hospital beds in Australia ("Australian Social", 2001). Roughly just under half (43%) of all Australians are covered by private health insurance ("Private Health", 2006). Private-sector expenditure on health accounts for around one-third (32%) of total health expenditure in Australia. Of this, almost two-thirds (68%) is paid for out of the individual's own pocket, while the remainder is private health, and other insurance funds' expenditure ("*Health Care in Australia*", n.d.).

During the period 2004-05, there were 532 private hospitals in use in Australia compared with 525 in 2003-04 ("Private Hospitals,", 2006). This shows a growth of 1.3 % in private hospitals.

Below is a diagram summarizing health sector spending in Australia.

Percentage Government Expenditure on Health (of Total Government Expenditure) = 17.7%			
Total Health Expenditure			
Public Sector 67.5%		**Private Sector 32.5%**	**External resources 0.0 %**
Social Security 0.0%		**Out–of pocket 67.8%**	**Medical Aid 23.9%**	

Figure 2.1 Summary of Australian Health Expenditure (World Health Organization, 2003a)

2.2.3 General Practitioners

Government schemes meet the majority of costs, for out-of-hospital medical services, such as general practitioner and specialist consultations. The Medicare scheme's refund is 100 per cent of the fees set by the Australian government for general practitioner services and 85 per cent for other Medicare services ("*Health*

Care in Australia", n.d.). Many doctors charge more than the standard fee, and the patient pays the difference ("What do I do", n.d.).

Private medical practitioners provide most out-of-hospital medical services and perform a large percentage of hospital services alongside paid doctors in hospitals ("Orientation", n.d.). Private practitioners provide most dental services and related health services, such as physiotherapy ("*Health Care in Australia*", n.d.).

Patients must consult a general practitioner (GP) before they are admitted to a hospital, except when they need emergency care. Through this referral process, GPs play a key role in shaping demands for possible hospital services. In the public sector, GPs refer patients for evaluation by a specialist in a hospital outpatient clinic before they are admitted (Sperling, et al., 1999).

2.2.4 The Level of Computerization at General Medical Practices

Eighty-six percent of Australian practices have at least one computer. Of the remaining practices, almost half expect to acquire a computer in the next two years (48%), with the majority intending to use it for both clinical and administrative purposes (53%) (Western, Dwan, Makkai, & Del Mar, 2003).

Levels of computerization vary by state and territory (Newbury, 2001). Computers are used for both medical and administrative purposes, but are more commonly used for general and patient-oriented administration than medical reasons. Larger practices tend to use computers more for patient-oriented activities than smaller ones. Use of computers for clinical functions is less common, with the exception of script writing (used by 74% of computerized practices) (Western, et al., 2003). The popularity of script writing is not surprising, given the financial incentives provided

by the government to encourage GPs to adopt this, and the immediately realizable benefits of legibility, patient safety and time reduction (Western, et al., 2003).

Some of the key factors shaping the uptake of Information Technology (IT) in Australia are (positive) perceptions of the convenience that IT will bring to practice, and (negative) feelings of unease or apprehension surrounding computer use (Western, et al., 2003).

2.3 The New Zealand Health Sector

New Zealand's health system is predominantly public funded. In 2002, public-sector funding accounted for 78 percent of all health expenditure in New Zealand ("Health Expenditure", 2004). Other chief contributors are private insurance and out-of-pocket payments ("An Overview of the Health…" n.d.). In 2003/04, government spent just over $8.0 billion on health, 20 percent of total government-budgeted expenditure ("An Overview of the Health…" n.d.).

The Ministry of Health has a number of key functions together with providing policy advice to the Minister of Health on all aspects of the health and disability sector, such as acting as the Minister's agent and providing a relationship between the Minister of Health and District Health Boards (DHBs) (Saul, et al., 2005). In addition, the Ministry of Health provides public health supervision and information services and implements, administers and enforces pertinent legislation and regulations ("Ministry of", n.d.). The Ministry of Health has responsibility for funding some services, such as public-health and disability-support services. Over time the best part of funding for health- and disability-support services is likely to be transferred to District Health Boards (Saul, et al., 2005).

District Health Boards are accountable for the provision of health-care services in their area, including both primary care and hospital services. There are at present 22 DHBs in New Zealand ("Health and Disability", n.d.). The boards are made up of a majority of members elected by the community and a minority appointed by the Minister of Health. Central government provides broad strategy on what services the DHBs must provide, and national priorities have been identified in the New Zealand Health Strategy. Services can be purchased from a range of providers, including general practitioners, public hospitals, non-profit health agencies, or private organizations (Saul, et al., 2005).

2.3.1 The Public Health Sector

Secondary and tertiary care is provided entirely free through public hospitals. They treat the majority of acute medical and surgical conditions. A disadvantage is the waiting times for non-acute conditions (Saul, et al., 2005).

2.3.2 The Private Health Sector

This sector consists of private specialist clinics and private hospitals. Private care tends to be much quicker for non-emergencies; the patient chooses their consultant and the accommodation tends to be of much higher quality. There is a small general specialist subsidy, but otherwise the patient pays for everything. This includes specialist fees, surgical fees, theatre fees, hospital accommodation, disposable supplies and materials (Saul, et al., 2005). While the public health system focuses on acute (emergency) services, private health insurers are able to cover the cost of many semi-urgent and non-urgent procedures. In this way, the health insurance industry complements the public health system, by 'bridging the gap' between what the public health system can sustain, and what the public want ("Making Sense", 2004). Insurance companies will pay variable amounts towards

pharmaceutical costs, typically 80% of an agreed schedule. Certain companies will pay up to 100% of costs depending on circumstances for accident-related conditions. Access to specialists in their private practices is usually very good (Saul, et al., 2005).

Below is a diagram summarizing health sector spending in New Zealand.

Percentage Government Expenditure on Health (of Total Government Expenditure) = 17.2%			
Total Health Expenditure			
Public Sector 78.3%		Private Sector 21.7%	External resources 0.0 %
Social Security 0.0%		Out–of pocket 72.1%	Medical Aid 26.5%	

Figure 2.2 Summary of New Zealand Health Expenditure (World Health Organization, 2003c)

2.3.3 General Practitioners

A patient's first point of contact in case of illness is the medical practitioner. In many cases the GP will be able to diagnose and treat the condition. If not, the patient may be referred to a specialist. If the patient is covered by private insurance, they will typically be able to make an appointment with a specialist much sooner than if they go through the public system ("Specialists", n.d.).

In mid-2002, the government's plan to further transfer primary care to a wider community saw the founding of Primary Health Organizations (PHOs). Their establishment is seen as central to achieving the goal of better service delivery to the community. Although the establishment of PHOs is voluntary, it is expected that they will evolve from existing organizations that already have many of the same characteristics that PHOs feature ("Specialists", n.d.). PHOs are different from the previous system in that they are funded for each person enrolled with

them, rather than getting money every time someone visits a GP ("Primary Health", n.d.).

2.3.4 The level of Computerization at General Medical Practices

ICT efficiency in New Zealand is evidenced by 99 percent of GPs using an ICT system to manage their clinical practice, and 80 percent of these using the same system, a position that would be the envy of a number of other countries (Gauld, 2006).

Almost all practices in New Zealand are computerised to some extent. Some have only reception activities, such as a patient register, daily log, and accounts (financial statements) on a computer, but increasingly, practices have fully built-in clinical notes, integrated lab results and clinic letters, and e-mail and Internet access (Saul, et al., 2005).

The computerization rate, which is 99.8%, is very good when compared to that of other countries, and New Zealand GPs seem to have an excellent history of use of computer technology. As far back as 1996, a study conducted on a random selection of GPs in New Zealand, found that computers were used for at least one task by 84% of doctors (Didham, Martin, Wood, & Harrison, 2004).

2.4 The Canadian Health Sector

Canada's health-care system is by and large considered one of the world's best ("International", 2006), placing it in the top ten in most measures of quality. In spite of this, it does have several problems that are major political issues in Canada. Canada is seen as a country with a publicly-funded health-care system, with the

government paying about 70% of health-care costs. Canada differs from the investigated countries in that the government pays for almost 100% of hospital and physician care, but contributes very little in areas such as prescription drug costs and dental care ("Health care", 2006).

In 1957, the federal government passed the Hospital Insurance and Diagnostic Services Act (HIDS) to fund 50% of the cost of funding programmes for any provincial government that implemented them. The HIDS Act outlined five conditions that have remained the pillars of the federal Canadian Health Act ("Canada Health", 2006):

- public administration,

- comprehensiveness,

- universality,

- portability, and

- accessibility.

By 1961, all ten provinces had agreed to implement the HIDS Act ("Health care", 2006).

2.4.1 The Public Health Sector

By far the largest government health programme is Medicare, which is comprised of ten provincial programmes that are required to meet the general guidelines laid out in the federal Canadian Health Act.

Almost all government health spending goes through Medicare, but there are other smaller programmes. The largest group that the federal government is directly in charge of is the First Nations group (Native People). Native people are a federal

responsibility, and the federal government guarantees complete coverage of their health needs. First Nations people use hospitals for medical assistance, and the federal government then compensates the provincial government for the full amount. The federal government also covers any user fees the province charges. The federal government administers a network of clinics and health centres on Native Reserves. At the provincial level, there are also several much smaller health programmes alongside Medicare. The largest of these is the health-care costs paid by the workers compensation system ("Health care", 2006).

2.4.2 The Private Health Sector

The Canadian health-care system is for the most part publicly funded, yet most of the services are provided by private enterprises and corporations (Chodos & MacLeod, 2005). About 30% of Canadians' healthcare is paid for through the private sector (Fuller, 2006). This mostly goes towards services not covered, or only partially covered, by Medicare, such as prescription drugs, dentistry and optometry. Many Canadians have private health insurance, often through their employers, that cover these expenses ("Health care", n.d.).

Increasingly, there are private clinics that offer some of the same services as the public system such as hip replacements and MRI scans. These are legal; contrary to popular belief, selling private health insurance that could cover these procedures is legal in several provinces, but because they are available without charge in the public system, there has been no demand for private insurance for what the Canadian Health Act defines as "medically necessary services" ("Health care", 2006). In June 2005, the Canadian Supreme Court ruled that Quebec's (a province) ban against private health insurance for medically necessary services was unconstitutional, opening the door to much more private-sector involvement in the health system (Chiarelli, 2005).

Below is a diagram summarizing health sector spending in Canada.

Percentage Government Expenditure on Health (of Total Government Expenditure) = 16.7%			
Total Health Expenditure			
Public Sector 69.9%		Private Sector 30.1%	External resources 0.0 %
Social Security 2.1%		Out–of pocket 49.6%	Medical Aid 42.3%	

Figure 2.3 Summary of Canadian Health Expenditure (World Health Organization, 2003b)

2.4.3 General Practitioners

Canadian GPs work for profit-driven businesses and are the major gatekeepers to the whole health-care system. The GPs also have no controls placed on them by the government, and they are, therefore, in a position to easily recommend more visits and are guaranteed payment by the government ("Health care", 2006).

One concern regarding GPs in the Canadian health-care system, is that there are few newly qualifying general practitioners; almost all medical students go on to a specialty, family medicine being the most popular ("Physician Workforce", 2003). After completing four years in medical school, a resident will spend 2-3 years in an accredited family-medicine programme. Once completed, residents are suitable to be examined for Certification in the College of Family Physicians of Canada. Most hospitals now expect this certification. Some doctors then continue for an extra year of training in emergency medicine and can be additionally certified ("General Practitioner.", 2006). These additional training courses include, for example, anesthesia, surgery and obstetrics, but this is not consistent across the country ("Physician Workforce", 2003).

An imbalance between physician manpower and a mounting patient load has resulted in orphan patients who find it difficult to access primary care ("General

Practitioner.", 2006). Manpower inequities in rural areas are now being addressed with some pioneering training and incentive mechanisms ("Health Policy", 2006).

2.4.4 The Level of Computerization at General Medical Practices

Only 8% of general practitioners (out of 31,503) are clinically computerized in Canada (Shaw, 2005). This means that only 8 percent of GPs use computers to improve their ability to provide clinical care for their patients. However, as the technology of recording health-care information using computers improves, more physicians in Canada are considering using them in their daily practice (Keshavjee, et al., n.d., p. 1).

2.5 The South African Health Sector

South Africa's health system consists of a large public sector and a smaller, but rapidly expanding, private sector (Söderlund, Schierhout, & van den Heever, 1998). Healthcare varies from the most basic primary healthcare, offered free by the state, to highly specialized health services offered in the private sector for those who can afford it (*Health Care in South Africa,* n.d.).

In order to address some of the resource and personnel shortages facing the public sector, partnerships between the public and private sectors are being forged. Some private hospitals are now offering beds and providing medical care to public-sector patients ("Transforming", 2006). Post-graduate teaching facilities are being offered to university medical faculties in an effort to stem the flow of health-care professionals leaving the country (Patel, 2001-2006).

The country continues to suffer from a tremendous "brain drain" of South African doctors (especially GPs), who are highly sought after in countries like Britain and Canada, because of the high standard of training and the cutting-edge medical experience medical students receive in South Africa (Patel, 2001-2006).

Aids and other poverty-related diseases, like tuberculosis and cholera, are placing a tremendous strain on South Africa's health-care system, eroding attempts to improve the general health of South Africa's people (SouthAfrica.info reporter, n.d.).

In 1999 the Minister of Health adopted the health sector strategic framework, 1999-2004 ("Health Sector", 1999). This framework outlined 10 priorities for the health sector for this time period. In 2004, a new set of priorities was identified. This new set of priorities focuses on the promotion of building a developmental state to enhance service delivery. The new set, when compared with previous frameworks, focuses more on the promotion of good governance and a healthy lifestyle. Another priority worth mentioning is one stating that legislation needs to be prepared and implemented (Andrews & Pillay, n.d.).

2.5.1 The Public Health Sector

The public sector is underfunded and over-used, while the swiftly increasing private sector, run mostly along commercial lines, caters to middle and high-income earners who tend to be members of medical schemes (18% of the population), and to foreigners looking for top-quality surgical procedures at affordable prices (*Health Care in South Africa,* n.d.). Because of the lucrative prospects (e.g. better remuneration) in the private sector, it also attracts most of the health professionals.

Although the state contributes about 40% of all expenditure on health, the public health sector is under pressure to deliver services to about 80% of the population (*Health Care in South Africa,* n.d.). Despite this, most resources are concentrated in the private health sector, which sees to the health needs of the remaining 20% of the population (*Health Care in South Africa,* n.d.). Public health uses around 11% of the government's total budget, which is allocated and spent by the nine provinces (*Health Care in South Africa,* n.d.).

A district-based health system is being developed to ensure local-level control of public health services, and to standardize and co-ordinate basic health services around the country to ensure that healthcare is affordable and accessible to everyone (*Health Care in South Africa,* n.d.).

The South African Yearbook 2003/2004 shows these statistics about the health sector ("The South African", 2005):

- There were 357 provincial public hospitals in 2002. Funding for the Hospital Revitalization Programme increased from R717 million in 2003 by almost R200 million in 2004. This will include the construction of 18 entirely new facilities.

- In 1999, there were 200 private hospitals with 23 076 beds.

- Private hospital fees are generally higher than those of provincial hospitals.

- South Africa has 18 state mental-health institutions with 10 000 beds.

A network of mobile clinics run by government forms the backbone of primary and preventive healthcare. Between 1994 and 2003, upgrading and building resulted in 701 additional clinics ("The South African", 2005).

2.5.2 The Private Health Sector

Private health sector provision in South Africa is significant, and on the increase. There is a wide-ranging network of private hospitals, and the bulk of all categories of medical work are in the private sector (Cornell, Goudge, McIntyre, & Mbatsha, 2001). In addition, a large number of complementary and traditional medical practitioners operate entirely within the private sector. These include for example, traditional herbalists, homeopaths and traditional healers (sangomas) (Mabitsela, 2003).Where data on geographic distribution are available; these data indicate a heavy concentration of private providers in the largely urban provinces ("The South African", 2005).

It is estimated that less than 20% of the populace are covered by private medical aid and thus usually have access to the range of private-sector health services, from primary care through to specialist inpatient care ("The South African", 2005).

Below is a diagram summarizing health sector spending in South Africa.

Percentage Government Expenditure on Health (of Total Government Expenditure) = 10.2%			
Total Health Expenditure			
Public Sector 38.6%		Private Sector 61.4%	External resources 0.5 %
Social Security 4.6%		Out–of pocket 17.1%	Medical Aid 77.7%	

Figure 2.4 Summary of South African Health Expenditure (World Health Organization, 2003d)

2.5.3 General Practitioners

It is extremely difficult to obtain accurate data on health-care practitioners working in the private sector and, hence, on the distribution of practitioners between the public and private sectors. Data that are available vary widely.

The most recent, but unpublished, information on private practitioner numbers, derived from the British Health Foundation database, estimates that there are 16,982 private general practitioners, 4,247 dentists, 5,827 pharmacists and 4,286 psychologists in the private sector (Cornell, Goudge, McIntyre, & Mbatsha, 2001).

2.5.4 The Level of Computerization at General Medical Practices

Currently, there are no official statistics on the levels of computerization at South African general medical practices.

2.6 Comparative Discussion

From the facts considered in the previous sections, it is clear that Australia, New Zealand and Canada have more developed health sectors than South Africa. This can be attributed to better governance and much larger budgets with which to work. Furthermore, the problems facing third world countries such as poverty and HIV/AIDS are not highly prevalent in Australia, New Zealand and Canada.

Their health sectors are well developed and healthcare is free for any citizen of the respective countries. The unemployment rates in these countries are also very low ("Rank Order -", 2006). In SA, the public health sector is in a bad state of disrepair and in need of funding.

South Africa, being a middle-income nation, with some areas that are regarded as developing, has to deal with poverty and all the problems that come with it .South Africa has had to begin upgrading its aging infrastructure to handle the rigours of doing modern business, for example, the recent power outages in the Western Cape. The largely uneducated poor population is also being affected by the increased prevalence of HIV/AIDS.

The levels of computerization at general practices varied. A comparable study in Canada showed that only 70% of practices were computerized (had some form of computer system on which work was done) in 2002, while 8% were clinically computerized (used computers to improve their ability to provide clinical care) - as mentioned in Section 2.4.4, this number might be biased because of a low response rate (Didham & Martin, 2004). Australian practices were found to be more advanced in a 2003 study, which stated that 86% of respondents had at least one computer (Didham, et al., 2004). New Zealand is the most computerized of the countries researched, where 99 % of GPs had at least one computer in the practice. No statistics could be found at the time of writing on the levels of computerization at GPs in South Africa.

The following diagrams (Figure 2.5, Figure 2.6 and Figure 2.7) each show a comparative graph of the health expenditure statistics provided in Figures 2.1 – 2.4 of this chapter.

Comparative Health Expenditure
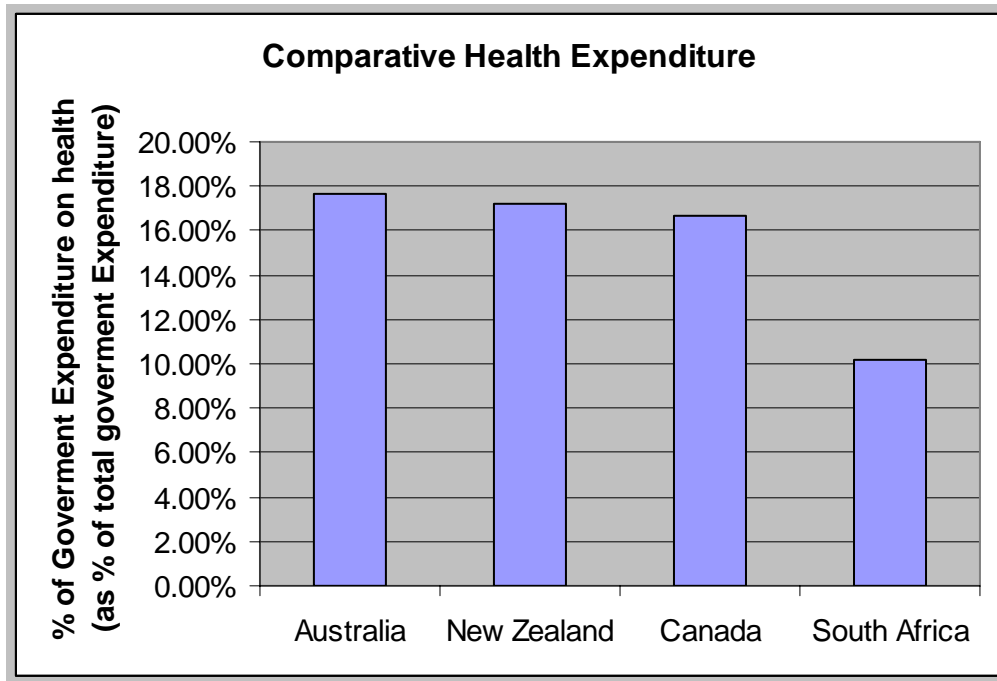
Figure 2.5 Comparative Health Expenditure

Figure 2.5 clearly illustrates that South Africa does not spend as much on the health sector as a percentage of total expenditure. This expenditure is further broken down in Figure 2.6

Health Expenditure Private/Public breakdown
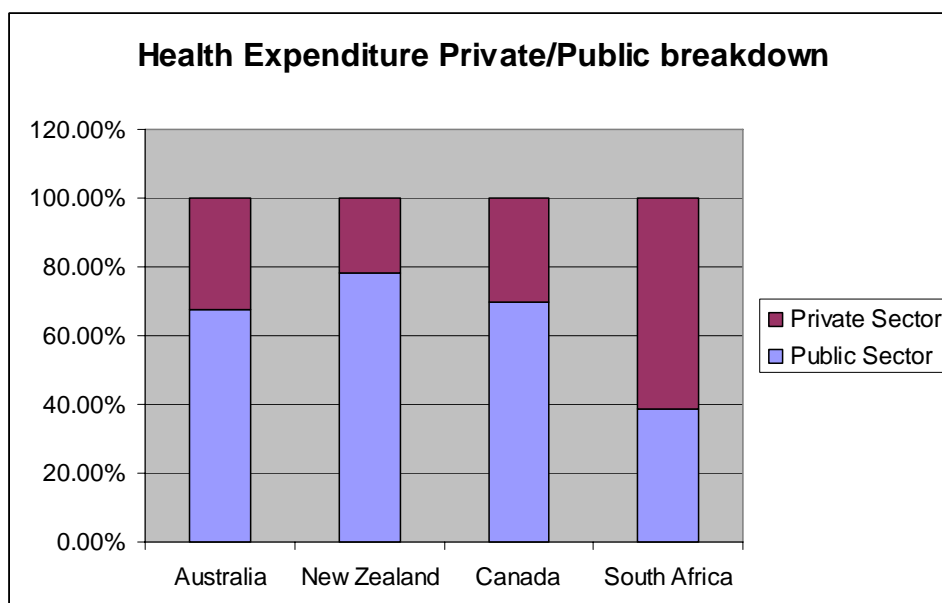
Figure 2.6: Health Expenditure, Private/Public sector Breakdown

Figure 2.6 clearly shows that the private sector plays a much greater role in health expenditure in South Africa than in the other countries .In the final figure, Figure 2.7, the private sector of each of the countries is compared to illustrate the patients' contribution to the sector, as well as medical insurance funds.
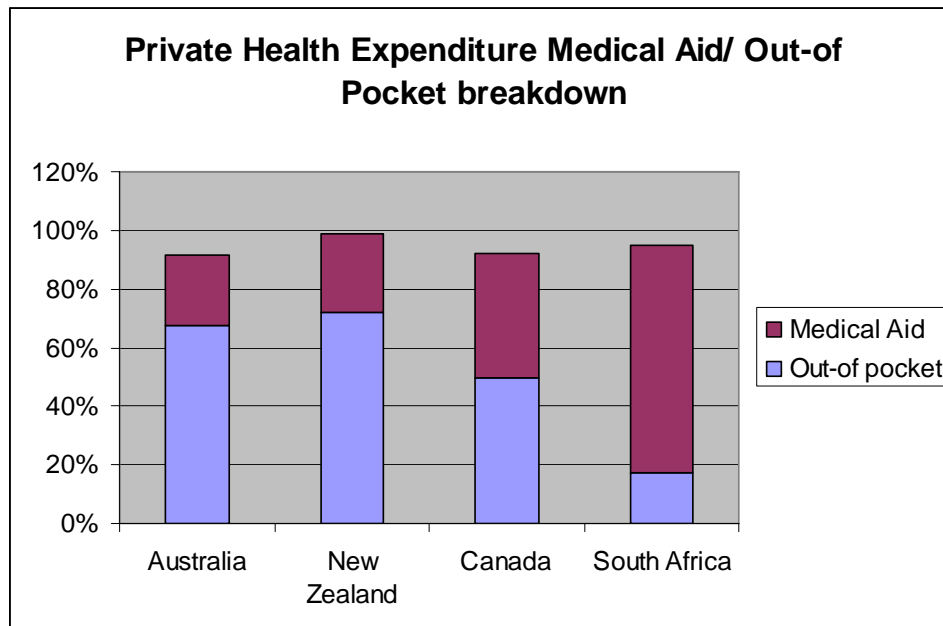
Figure 2.7: Private Health Expenditure, Medical Aid/ Out-of Pocket Breakdown

Figure 2.7 indicates that South African medical aids provide a lot more funding towards the private sector when compared to the other countries in this research.

2.7 Conclusion

Now that the different health sectors have been researched, the landscape of the health sectors, in relation to general practitioners and the levels of computerization have been laid out. This will give a better understanding as to why the privacy of patient information and the laws that govern privacy are at a different level of development in each of the countries. Additionally, this will facilitate an understanding of how the state of the health sectors affect the laws present in that specific country. Once this is understood, a proposal for a South African Code of Practice to address the privacy of patient information will be made in Chapter 4.

Chapter 3: Privacy Legislation

*"You do not examine **legislation** in the light of the benefits it will convey if properly administered, but in the light of the wrongs it would do and the harms it would cause if improperly administered."* – Lyndon B. Johnson

This chapter investigates the various laws affecting the handling of personal information in each of the countries considered, in order to gain an informed impression of the relevant legal obligations. Different privacy-related codes of practice and guidelines used by GPs are summarized, how they came about, as well as the legislation taken into account when they were compiled. This information is then used to produce a code of practice and checklist for the South African GP. These outputs are discussed in the following chapter, Chapter 4.

3.1 Introduction

The previous chapter considered the different health sectors in Australia, New Zealand, Canada and South Africa, and the levels of computerization that are prevalent among general practitioners (GPs). This was done to gauge the state of the health sectors concerned and the levels of technology adopted by GPs. This chapter now investigates the various laws affecting the handling of personal information in each of the countries considered so far, in order to get a better picture of the relevant legal obligations. Additionally, various codes of practice that are used by GPs are summarized, how they came about, as well as the legislation(s) taken into account when they were compiled.

3.2 Privacy-Related Legislation in Australia

In 1988, a Privacy Act (*Privacy Act 1988,* 2005) was enacted in Australia (Clarke, 1996). The Act provides for the protection of personal information in the hands of federal government agencies (*My Health My Privacy My Choice, 2006*). In December 2000, the Privacy Amendment (Private Sector) Act 2000 (the Amendment Act) was passed by federal parliament, which extended coverage of the Act to private sector organizations ("PHR2004 - Commonwealth", 2004).

The *Privacy Act 1988* includes ten "National Privacy Principles" or NPPs ("Privacy Laws", 2005). These principles provide a minimum standard that health service providers have to abide by when they collect, use, disclose and store health information (*My Health My Privacy My Choice, 2006*). The Privacy Act of 1988, through its ten National Privacy Principles, promotes more openness between health service providers and their customers with regards to the handling of their health information ("Guidelines on", 2001). The legislation introduces, for example, a right of access for consumers to their own health information, and health service

providers are required to have obtainable documents that clearly set out their policy for the handling of personal information ("National Privacy", 2001). The Privacy Act also realizes individuals' wishes to have their privacy protected ("Guidelines on", 2001).

Some states have implemented their own versions of the NPPs, for example: Tasmania created the Information Privacy Principles, 1997 (Thomson, 2004). The NPPs include (*My Health My Privacy My Choice, 2006*):

- What happens to an individual's health information;

- Choice and control over that information;

- The right to view it;

- If an individual deems it erroneous, the right to change it;

- Informed consent (from the individual) of why and when a health service provider may need to share that information.

A National Health Privacy Code for Australia is currently being drawn up; the proposed code is an initiative of the Australian Health Minister's Advisory Council and is in draft form (Thomson, 2004).

Regulatory schemes differ from state to state in Australia. Below is a conveniently presented Figure (Figure 3.1) showing all the schemes.

Jurisdiction	Public Sector	Private Sector (Generally)	Private Sector (Health)
Commonwealth	Privacy Act 1988	Privacy Act 1988	Privacy Act 1988
Australian Capital Territory	Privacy Act 1988 Health Records (Privacy and Access) Act 1997	Privacy Act 1988	Health Records (Privacy and Access) Act 1997 Privacy Act 1988
New South Wales	Privacy and Personal Information Protection Act 1998 Health Records and Information Privacy Act 2002 (in force 2004)	Privacy Act 1988	Health Records Information Privacy Act 2002 (in force 2004)

Jurisdiction	Public Sector	Private Sector (Generally)	Private Sector (Health)
			Privacy Act 1988
Northern Territory	Information Act 2002	Privacy Act 1988	Privacy Act 1988
Queensland	Information Standards 42 (general) & 42A (health)	Privacy Act 1988	Privacy Act 1988
South Australia	Information Privacy Principles	Privacy Act 1988	Privacy Act 1988
Tasmania	Information Privacy Principles 1997	Privacy Act 1988	Privacy Act 1988
Victoria	Information Privacy Act 2000 Health Records Act 2001	Privacy Act 1988	Health Records Act 2001 Privacy Act 1988
Western Australia	Health Act 1911 section Criminal Code sections	Privacy Act 1988	Privacy Act 1988 Confidentiality of Health Information Committee

Figure 3.1 Summary of regulatory schemes in Australia (Thomson, 2004)

3.3 Privacy-Related Legislation in New Zealand

New Zealand was one of the first countries in the world to draft health information privacy laws ("Digital Strategy:", 2004). These health laws drew upon those already in force, such as the Privacy Act of 1993 (*"New Zealand Federation Of…",* n.d.). The Privacy Act of 1993 ("Privacy Act", 2006) contained 12 "Information Privacy Principles", which govern the responsibilities towards the collection, storage or disclosure of personal information about individuals (*"New Zealand Federation Of…",* n.d.). The health laws that were based upon this Act became known as the "Health Information Privacy Code" ("Health Information", 1994). This code applies to any organization that provides health or disability services to sick or disabled citizens. These services include non-disclosure of information about the health of individuals (*"New Zealand Federation Of…", n.d.*). The code recognizes a number of situations when patient details may have to be disclosed in the public interest (NewZealand PrivacyCmr ,*1996*).

3.3.1 The Health Information Privacy Code 1994

This Code deals with health information collected, used, held and disclosed by health-care agencies ("Health Information", 2000). It applies to health information relating to identifiable individuals, and not to anonymous information, such as general statistics of a region, where the individual cannot be identified (Saul, et al., 2005).

3.4 Privacy-Related Legislation in Canada

Canada has various laws governing privacy, with different ones for each province, in the same way that Australia has an assortment of laws for each of its states. Below is a summary of the different pieces of legislation affecting privacy in Canada.

Canada has two federal privacy laws; these laws affect all the provinces in Canada. They are the *Privacy Act* ("Privacy Act", 1980-81-82-83) and the *Personal Information Protection and Electronic Documents Act* (*PIPEDA*) *("Personal Information", 2000).*

The *Privacy Act* came into effect on July 1, 1983. It requires that all government affiliates respect privacy rights by restricting the collection, use and disclosure of personal information ("Privacy Act", 1980-81-82-83). The *Privacy Act* gives persons the right to access and request correction of personal information, which pertains to them, held by these government affiliates ("Privacy Legislation", 2004).

In the private sector, protection is offered by the *PIPEDA*, which governs how private-sector organizations may collect, use or disclose personal information, while carrying out business activities (Privacy Commissioner of Canada [PCC], 2006).

The federal government may excuse organizations located in provinces that have their own privacy laws, if these laws are largely similar to the federal law ("The Canadian", n.d.). British Columbia, Alberta and Quebec are the only provinces with laws recognized as largely the same as *PIPEDA (Fekete & Wilson, 2006)*. Newfoundland and Labrador have passed legislation, but it has not yet come into effect ("Privacy Legislation", 2004). *PIPEDA* will continue to apply to the federally regulated private sector and to personal information included in inter-provincial and international transactions by all organizations engaged in commercial activities (D'Angelo & Trott, 2003).

The only provinces to have legislation that deals specifically with health information, and which are specific to the collection, use and disclosure of personal health information by health-care providers, are Alberta, Saskatchewan, Manitoba and Ontario ("Privacy Legislation", 2004).

The following figure provides a tabular summary of the various privacy laws affecting the different sectors by province or territory in Canada ("Provincial /", 2004).

Jurisdiction	Public Sector	Private Sector (Generally)	Private Sector (Health)
Alberta	Privacy Act, Freedom of Information and Protection of Privacy Act	Personal Information Protection and Electronic Documents Act (PIPEDA), Personal Information Protection Act (PIPA)	Health Information Act (came into force April 25, 2001)
British Columbia	Privacy Act; Freedom of Information and Protection of Privacy Act	PIPEDA, PIPA	

Manitoba	Privacy Act, Freedom of Information and Protection of Privacy Act	PIPEDA	Personal Health Information Act (PHIA)
New Brunswick	Privacy Act; Protection of Personal Information Act	PIPEDA	
Newfoundland and Labrador	Privacy Act; Access to Information and Protection of Privacy Act	PIPEDA	
Northwest Territories	Privacy Act; Access to Information and Protection of Privacy Act	PIPEDA	
Nova Scotia	Privacy Act; Freedom of Information and Protection of Privacy Act	PIPEDA	
Nunavut	Privacy Act; Access to Information and Protection of Privacy Act	PIPEDA	
Ontario	Privacy Act; Freedom of Information and Protection of Privacy Act, Municipal Freedom of Information and Protection of Privacy Act	PIPEDA	Personal Health Information Protection Act, 2004
Prince Edward Island	Privacy Act, Freedom of Information and Protection of Privacy Act	PIPEDA	
Québec	Privacy Act; Act Respecting Access to Documents Held by Public Bodies and the Protection of Personal Information	PIPEDA; Act Respecting the Protection of Personal Information in the Private Sector	
Saskatchewan	Privacy Act; Local Freedom of Information and Protection of Privacy Act, Freedom of Information and Protection of Privacy Act	(PIPEDA)	Health Information Protection Act (not yet in force)
Yukon Territory	Access to Information and Protection of Privacy Act	PIPEDA	

Figure 3.2 Summary of Privacy Legislation in Canada ("Provincial /", 2004)

3.5 Privacy-Related Legislation in South Africa

In South Africa the right to privacy is protected by both Section 14 of the final Constitution and by common law (Michalson, Hughes, Silber, & Finestone, 2005). In 2002, the South African Law Commission began drafting a national *Data Privacy Act ("PRINCIPLES OF", 2006)* for South Africa (Klaaren, n.d.). The Act is not law yet, and it still has to go through a long review process (Michalson & Hughes, 2005).

Because of the increasing ease with which personal information can be transmitted outside the borders of a country of origin, a concomitant effort to regulate trans-border information flows was initiated (Bennett, 2001) and two international instruments evolved:

- The Council of Europe's 1981 Convention for the Protection of Individuals with regard to the Automatic Processing of Personal Data (CoE Convention) (Council of Europe, 1981);
- The 1981 Organization for Economic Cooperation and Development's (OECD) Guidelines Governing the Protection of Privacy and Trans-border Data Flows of Personal Data ("OECD Guidelines", 2006).

These two agreements have had a profound effect on the enactment of laws around the world. The OECD guidelines have also been used widely in national legislation, even outside the OECD member countries ("Privacy and", 2003). The OECD Guidelines incorporate eight principles relating to the collection, purpose, use, quality, security and accountability of organizations in relation to personal information (Oberholzer, 2001). These eight principles were used as a base for the

eight "Information Protection Principles" ("PRINCIPLES OF", 2006) which appear in the South African Draft Privacy Act (Draft Privacy Legislation, 2005). These principles will be discussed in greater detail in Chapter 4.

Due to the lack of legislation (in South Africa) that deals with the handling of personal information, it becomes necessary to investigate other laws governing this issue. In South African healthcare, organizations are required to comply with, inter alia, the South African National Health Act (SANHA) (*SANHA, Government Gazette*), the Electronic Communications Act (ECTA) (*Electronic Communications and Transactions Act, 2002*) and the Promotion of Access to Information Act (PAIA) ("PAIA, Government", 2000; "Promotion of Access…", 2000).

SANHA

According to the SANHA, every patient is entitled to (*SANHA, Government Gazette*):

- confidentiality of health information, including health status;

- treatment in a private or public establishment;

- accommodation in a private or public establishment;

- disclosure of health information only if the user consents in writing, or if a law or a court order authorizes the disclosure.

ECT Act

Only parts of the ECT Act address the protection of the privacy of information. Chapter 8 of the Act deals with the "Protection of Personal Information" and Chapter 9 with the "Protection of Critical Databases".

PAIA

The PAIA, on the other hand, covers legislation pertaining to information access. It provides persons access to their personal information held by governmental or private bodies, the correction of personal information held by governmental or private bodies and the right to choose when to disclose that information ("Privacy And ", 2003). Personal information, according to the PAIA, does include any information relating to the medical history of a specific individual ("PAIA, Government", 2000).

3.6 Conclusion: Privacy Related Legislation

Below is a table summarizing the current trends of privacy legislation in the countries discussed.

	New Zealand	Australia	Canada	South Africa
Privacy legislation (General)	Yes	Yes	Yes	No (Pending)
Privacy legislation (Health Sector)	Yes	Yes	Yes	No
Health legislation fragmented (e.g. per state, province)	No	Yes	Yes	N/A
Other legislation affecting privacy	Yes	Yes	Yes	Yes

Figure 3.3 Summary of privacy provision per country

The state of privacy legislation varies in the countries discussed in Sections 3.2 to 3.5. New Zealand, on the one hand, seems to have the most progressive laws (from a health information privacy perspective); their laws specific to health information were drawn up as early as 1994.

Australia also has exceedingly advanced legislation when it comes to health information privacy, but it has a more convoluted situation. There are many laws specific to each state that affect health information privacy. It has been argued that this makes the retrieval of information in Australia, for research purposes, a very complicated process, as the researchers have to deal with every state separately and in a different way (Thomson, 2005). With this in mind, it can be concluded that it may impact patients and health-care workers who move around the country, as they have to deal with unique requirements in each state.

Canada's situation is very similar to that of Australia. It also has fragmented legislation for health information privacy across its various provinces. However, from the research done, no information could be found where concern is shown about the fragmented nature of the privacy legislation, as was found for Australia.

South Africa does not have laws specifically addressing either privacy or health information privacy, but it does have others (for example, SANHA, the ECT Act and the PAIA), of which certain sections address information privacy in general. Currently, health information privacy in South Africa resorts to these laws (Tuyikeze, 2006).

The establishment of a single, all-encompassing piece of legislation that deals specifically with the privacy of health information in South Africa, may not be too far off. Currently the South African Data Privacy Act is still under review. It does not deal specifically with health information, but can be considered comparable to the Privacy Act 1988 of the Commonwealth of Australia, New Zealand's Privacy Act of 1993 or the Canadian Privacy Act. Just as each of these countries used their privacy acts as a base from which to generate their health codes or acts, in the same manner South Africa can base a future Health Information Privacy Act or Code on the envisaged Data Privacy Act.

Considering the legal provisions for information privacy in the various countries however, it becomes clear that South Africa should pay attention to some lessons learnt. Currently, there are the ECT Act and the PAIA, but they do not cover health information specifically. Legislators should consider and learn from Australia, New Zealand and Canada, when deciding on how the legislative landscape regarding health information privacy should evolve. Importantly, there must be awareness of and planning around how new legislation will affect existing acts. One of the objectives should be to eliminate unnecessary redundancies in the various legislations.

The Australian and Canadian approach, being one that has different laws for each state, province or territory within their national borders, should be avoided, as the large number of laws could lead to unnecessary conflicts and legal jurisdiction / turf battles. This would cause too much confusion, and might contribute to fragmenting the health sector when it comes to privacy. In particular, South Africa should avoid the situation in Australia, where the privacy framework surrounding health information is restricting health and medical research and healthcare delivery (Thomson, 2004). South Africa should implement one piece of health privacy legislation for the whole country, similar to New Zealand. This will give a clear message to the international community about the standards that South Africa has set concerning health information privacy.

The following section now focuses on a range of codes of practice in the countries researched thus far. These codes of practice all relate to the privacy of information in the respective countries in some way or other. Because of this, they have some roots in the privacy acts, and if any, health privacy acts of the said countries.

Researching the codes of practice will enable a better understanding of the relationship between privacy legislation and how it affects codes of practice. The understanding gained from examining this relationship, will be used to formulate

the South African Code of Practice for General Practitioners, which will be dealt with in Chapter 4.

3.7 What is a "Code of Practice"?

A code of practice is "rules established by regulatory bodies or trade associations, which are intended as a guide to acceptable behavior" ("Health & Safety", 2006, p. 1). Most codes of practice do not have the same legal obligations as regulations do ("Code of Practice", 1997), but some do. When subsequently reporting on the different codes of practice, it will be indicated whether or not they are legally binding (where possible or relevant). An example of a code that is legally binding is New Zealand's Health Information Privacy Code of 1994, as discussed in Section 3.3.1.

By implementing recognized fair handling practices for personal information, organizations can essentially show their commitment to the protection of personal information ("Your Guide to", 2006). Organizations should balance their need for personal information with an individual's desire for a certain measure of anonymity ("About the Privacy", 2006).

In the private health sector, a Code of Practice and the legislation on which it is based will complement the existing culture of discretion that is essential to many health service providers' practice obligations (Hippocratic Oath) (Wikipedia contributors, 2006).

3.7.1 Australia's Privacy-Related Codes of Practice for GPs

In Australia, guidelines aim to assist health service providers to meet their obligations under the National Privacy Principles, while still providing quality medical treatment. Such guidelines aim to support the private health sector in

better understanding the application of the National Privacy Principles to its services ("Guidelines on", 2001).

Codes of practice that are used in Australia and that affect general practitioners, are subsequently discussed. Their relationship with privacy legislation in Australia will be investigated in order to gain insight on how the codes of practice where developed.

3.7.1.1 The New South Wales (NSW) Health Information Privacy Code of Practice

This is the NSW health department's chief policy document on information privacy. It covers legislation with regards to employees of the public health sector, situations where disclosure of personal information is authorized, consent for disclosure of information, safeguards that must be addressed when handling personal information, the handling of health records, data collection and the security of this data ("NSW HEALTH Information", 1998).

This code of practice applies to all those who have authorized access to personal information that is in the public health system. This includes personal health information in the possession of the Department of Health, the NSW ambulance service, NGOs receiving funding from the Health Department and private health-care practitioners ("NSW HEALTH Information", 1998).

This code of practice is presented in a written format, where different aspects of health information privacy are addressed. Issues such as access of information by a patient and disclosure are discussed in great detail, explaining what is meant and sometimes recommending what can be done to comply with the requirements.

3.7.1.2 Guidelines on Privacy in the Private Health Sector

The guideline, "Guidelines on Privacy in the Private Health Sector" ("Guidelines on", 2001), applies to private organizations that provide a health service, which includes general practitioners working in private practice The guidelines acknowledge that the health service provider's main worry is the healthcare of the patient.

This guideline basically comprises a discussion of the 10 National Privacy Principles in the Privacy Act (1988) as relevant in Australia, and how they can be applied to the privacy of health information. The document has two main sections - Section A and Section B. Section A covers the background of privacy in Australia, who the guideline is intended for, etc. Section B then focuses on fully discussing the ten National Privacy Principles and how they can be applied to Australia's health sector.

3.7.1.3 Handbook for the Management of Health Information in Private Medical Practice

The Handbook for the Management of Health Information in Private Medical Practice was produced by the Royal Australian College of General Practitioners and the Committee of Presidents of Medical Colleges, with the help of the General Practice Computing Group ("Handbook for", 2002).

The handbook covers many topics or situations that would affect the privacy of patient information. The topics covered in the handbook are:

- Quality and content of medical records
- Patient consent
- Advising patients when collecting personal health information
- Patient access to medical records
- Using and disclosing personal health information
- Medical research
- Quality assurance and continuing professional development
- Data security and retention
- Health provider identified health information
- Establishing a practice policy on personal health information

Additionally, an appendix called "Guidelines for security, storage and transfer of personal health information", is attached to the handbook. It contains procedures for handling personal health records, whether manual or computerized. These procedures are described under the following headings:

- Patient consent
- Medical record quality
- Disclosure of personal health information

Minimum procedures are provided and also optional additional safeguards.

The handbook has been developed as a best practice model, to help GPs throughout Australia in complying with obligations with regards to the confidentiality of personal health information, and to form a model for privacy compliance within the private medical practice environment.

3.7.1.4 The General Practice Computing Group (GPCG) Computer Security Self-Assessment Guideline and Checklist for General Practitioners

Two of the main reasons why data security at a general practice is so important, are:

- to keep the actual business side going (this provides income for the GP), and
- to maintain a record system (patient information).

The latter reason is much more important because if it is affected negatively, in any way, the actual treatment of the patient could be hampered ("Security Guidelines", 2005).

Therefore, this guideline has been designed with the GPs and other staff of a private practice in mind. It is intended to assist practices to put in place a series of computer security strategies. The guidelines only refer to actual computer security; in other words, they refer to the availability and integrity of data. These are some of the characteristics of data that need to be checked in order for the data quality requirements to be met; and by meeting data quality requirements, a principle of the privacy code of practice is checked.

The GPCG guidelines and checklist were developed by experts, who did not want to put a complicated guideline in place, rather one that struck a balance between detail and simplicity, considering the fact that GPs have varied ability to provide IT support ("Security Guidelines", 2005).

The guideline consists of the following sections ("Security Guidelines", 2005):

- A checklist, to help establish whether any reasonable computer security measures have been implemented;
- A guideline, where three questions are asked regarding each identified Information Technology risk category:
  - What does this risk category mean?
  - Why is it important?
  - What should be done about it?

This gives the GP a simplified way of determining whether or not they are compliant when it comes to computer security in the practice. If any further measures need to be taken to help improve the situation, the guideline can be followed and security improved upon.

3.7.2 New Zealand's Privacy-Related Codes of Practice for GPs

Codes of practice that are used in New Zealand and that affect general practitioners, are subsequently discussed.

3.7.2.1 Generic Security Policy for the Small Practice Version 1.1

This document provides direction to users of the computer systems of small medical practices. By adhering to and executing the policies, the medical practice ensures adequate security for all information collected, processed, transmitted, stored, or circulated as part of the practice's systems ("Generic Security", 2005).

The security policy covers topics such as ("Generic Security", 2005):

- General security policy and standards
- Security organization
- Asset classification and control
- Personnel security
- Physical security
- Computer systems access control
- The New Zealand Health Network
- Security in system life cycle management
- Computer integrity and incident reporting
- Malicious software
- Business continuity management
- Compliance

In each case, the requirements for each topic are stated. This gives the GPs a clear indication of what exactly is required from them with regards to security.

The security policy is consistent with New Zealand government legislation, including the ("Generic Security", 2005):

- Health Information Privacy Code 1994
- Privacy Act 1993
- New Zealand Copyright Act 1994

Relevant New Zealand standards include ("Generic Security", 2005):

- AS/NZS HB 231:2000 (Information Security Risk Management Guidelines)
- AS/NZS ISO/IEC 17799:2001 (Code of Practice for Information Security Management)
- SNZ HB 8169:2001 (Health Network Code of Practice)

3.7.2.2 Health Network Code of Practice

The Ministry of Health and Standards in New Zealand sponsored the development of a code of practice to support the Health Intranet, to establish a secure electronic environment where users throughout the health system exchange health information ("Code of Practice", n.d.).

The Health Network Code of Practice is an agreed set of rules outlining how information can be exchanged in the health sector (Health Information Strategy Steering Committee, 2005). It assists health-care providers and consumers, who need to communicate securely and with confidence, by electronic means, through a chain of trust where the level of security is maintained across all the participants ("Code of Practice", n.d.).

3.7.2.3 Guidelines for the maintenance and retention of patient records

These directives cover the maintenance of patient records, practice systems, fees and patient records, transferring patient records, retaining patient records, storage requirements and destruction of patient records (Saul, et al., 2005).

3.7.3 Canada's Privacy-Related Codes of Practice for GPs

Codes of practice that are used in Canada and that affect general practitioners, are subsequently discussed.

3.7.3.1 Guide: Privacy Requirements and Policies for Health Practitioners

This document is a basic, abridged and practical account of the requirements of the Personal Information Protection and Electronic Documents Act (PIPEDA). In other words, it uses PIPEDA as its base legislation (Steinecke, 2003).

The document features a plain description of the requirements of legislation. This is done in order to prepare for required privacy policy, which the GPs must implement by law. It has a step-by-step checklist of requirements (with supporting suggestions) needed in order to prepare the relevant policies. Above all, it has examples, especially focusing on those that relate to GPs (College of Physiotherapists of Ontario, 2003). So, in a nutshell, this document strives to bring the GPs in line with PIPEDA.

3.7.3.2 Model Code for the Protection of Personal Information

The Model Code for the Protection of Personal Information is a voluntary national standard for the protection of personal information ("Canadian Standards", 2006). The standard addresses two broad issues: the way organizations collect, use, disclose, and protect personal information; and the right of individuals to have access to personal information about themselves, and, if necessary, to have the information corrected ("Model Code for", n.d.).

Ten interrelated principles form the basis of the standard ("About the Privacy", 2006). They are:
- Accountability
- Identifying purpose
- Consent

- Limiting collection
- Limiting use, disclosure and retention
- Accuracy
- Safeguards
- Openness
- Individual access
- Challenging compliance

A workbook on the implementation of the afore-mentioned principles is available to organizations intending to adopt them (Mathers, Burford, & Martin, 1996). Organizations will be able to specify codes using the workbook as a guide.

Canada committed itself to privacy protection in 1984 by signing the Organization for Economic Co-operation and Development *(OECD) Guidelines on the Protection of Privacy and Trans-Border Flows of Personal Data* ("The Annual Report", 1985). The OECD Guidelines were used as the basis for the development of the Canadian Model Code for the Protection of Personal Information ("Organization", 2002).

3.7.4 South Africa's Privacy-Related Codes of Practice for GPs

After an extensive search for a code of practice used by GPs in South Africa, only a booklet advising doctors, dentists and medical research students on how to handle disclosure of patient information was found.

3.7.4.1 Guidelines for Good Practice in Medicine, Dentistry and Medical and Medical sciences Confidentiality: Protecting and Providing Information

This booklet (Health Professions Council of South Africa (HPCSA), 2002) is an adjusted version of a booklet under the same title issued by the General Medical Council, London, in September 2000. Since the booklet deals with access to information, it resorts under the Promotion of Access to Information Act. It discusses various topics which include:

- The patient's right to confidentiality
- Sharing information with patients
- Disclosure of information
- Disclosure of information other than for the treatment of the individual patient
- Putting the principles into practice
- Disclosure in connection with judicial or other statutory proceedings
- Electronic processing of information
- Disclosure of information about patients to driver and vehicle licensing agencies
- Frequently asked questions
- Confidentiality: key principles

The booklet gives advice on how to ensure that the requirements of each section are met by the health practitioner.

3.8 Conclusions drawn from Codes of Practice (Section 3.7)

After researching the Australian, New Zealand, Canadian and South African codes of practice and guidelines that pertain to health information privacy, the following was found:

- If a country has some form of legislation that pertains to privacy (general or specific to healthcare), for example a Privacy Act, typically the relevant codes of practice and guidelines are based on this Act.

- The privacy act in each country contains some form of base principles.

- The ensuing health privacy legislation (if any) uses the privacy legislation as a base.

- Generally, the golden thread of the base principles, is pulled through from privacy legislation, to health-specific privacy legislation, to codes of practice and guidelines.

- In all the countries excluding South Africa this is true.

- All the documents researched have sections where the requirements of the privacy they are addressing is discussed and most have suggestions on how to meet these requirements.

3.9 Conclusion

The purpose of this chapter was to obtain background knowledge of the various privacy laws that affect health information in the countries researched, and how this legislation affects the development of any codes of practice for GPs that may be available in the countries. Once the relationship between the countries' privacy legislation and codes of practice for GPs had been researched and the pertinent parts of the legislation that were used were noted, the same approach could be used in the creation of a Code of Practice for GPs in South Africa. The following chapter, Chapter 4, deals with the creation of the code of practice and a checklist that is based on this code of practice.

Chapter 4: A Code of Practice and Checklist for Practitioners in Private Healthcare

"The security checklist was the first list designed and the firewalls guidelines flowed on from that because it was clear that was an issue that needed to be addressed." – Bruce Mills

"

This chapter is dedicated to creating the outputs of this research. The first priority, therefore, is to create a Code of Practice, with the relevant legislation in mind. Since South Africa has a draft Privacy Act, the information privacy principles stated in the Act will be used as a premise for the code of practice. Once the code of practice is created, a checklist, based on the code, is developed to assist GPs to adhere to the code of practice.

The process followed to create the Code of Practice is also discussed.

4.1 Introduction

In the previous chapters the health sectors of various countries were discussed, their privacy and confidentiality legislation, and if any, legislation that is specific to personal health information. One of the main reasons that the health sectors of these countries were looked at, is because they give insight into what level of development the legislation in the sector has reached. Typically, if a country has a very well developed health environment, then the focus of development is towards improving the governance of the sector. This includes the legal side of things and how these laws should be complied with through the use of, for example, guidelines and codes of practice. This aspect (the various codes of practice and guidelines that are employed throughout the countries studied) was also investigated in Chapter 3. This provided insight into how they relate to legislation and provided an understanding of what is needed to create a similar document for South Africa.

Various examples of these codes of practice were found for the health sectors of the countries researched, specifically in the area of privacy of personal information as applied in private practice - with one exception, South Africa. When researching South Africa, one guideline for GPs and other medically-related practices entitled "Confidentiality: Protecting and Providing Information" ("Guidelines for", 2002), was found. The reason why significantly less information was found for South Africa could at least potentially be attributed to the fact that the country's health sector is less developed than that of its developed nation counterparts. Therefore, its main focus would be first and foremost the health of its citizens, the establishment and maintenance of infrastructure, etc.

South Africa does not yet have a privacy act in place that can serve as a basis for a code of practice to address the privacy and confidentiality of patient information. As established in Chapter 3, there is currently a draft Privacy Act that is under review. The growth in importance of the privacy of patient information as well as

higher levels of computerization, necessitate the creation of a code of practice for GPs in South Africa to follow with regards to maintaining their information privacy. This must include a way, for example a checklist, which GPs can use to evaluate the levels of information privacy at their practice. This chapter presents such a code of practice and checklist as developed by the researcher. The next section expands on the process followed to create these research outputs.

4.2 Process followed in creating the Code of Practice and Checklist

In Chapter 3, legislation, codes of practice and guidelines were investigated. It was observed that many of the countries researched used the privacy principles from their respective privacy acts on which to base their privacy guidelines and codes of practice. Australia, for example, used the National Privacy Principles ("National Privacy", 2001) which are found in their Privacy Act of 1988 ("Privacy Act", 2005) on which to base many of the codes of practice applicable in Australia.

In general, this seems to be a prudent approach as the resulting documents will likely conform with the legal requirements of the state. In creating the outputs of this research, it was acknowledged that following the same approach, would be advantageous. However, it should be kept in mind that neither the code of practice nor the checklist that is produced as research outputs, can claim regulatory compliance. This is due to the nature of this research project, which has its roots in the discipline of Information Technology. The research therefore does not purport to take a legislative approach to creating its outputs. Legislation is merely used as a guiding mechanism to ensure that the code of practice and checklist are aligned with the available legislation.

The first task at hand, therefore, was to create a code of practice, with cognisance of relevant legislation. Since South Africa has a draft Privacy Act, the information privacy principles stated in the Act were used as a base for the code of practice.

The "Principles of Information Protection" as they are termed in the draft act, are ("Principles of", 2006):

Principle 1: Processing Limitation

This is to ensure the fair and lawful processing of information gathered.

Principle 2: Purpose Specification

Personal information must be collected for a clearly defined and justifiable purpose.

Principle 3: Further Processing Limitation

Personal information must not be used for any other purpose other than that which was stated in Principle 2.

Principle 4: Information Quality

The accountable party must take prudent steps, given the purpose for which personal information is collected or processed, to ensure that the personal information is comprehensive, not ambiguous and accurate.

Principle 5: Openness

Notification of the data subject that information is being collected and for what purpose it is to be used.

Principle 6: Security Safeguards

Ensuring security measures are in place to establish and maintain reliability of personal information.

Principle 7: Individual participation

An individual must have access to their personal information.

Principle 8: Accountability

The data holders must be accountable for the personal information that they have collected.

From the afore-mentioned principles, a code of practice was formulated. The principles were reordered so that it would read in a logical manner. This resulted in the following:

Principle 1: Openness

Principle 2: Purpose Specification

Principle 3: Processing Limitation

Principle 4: Further Processing Limitation

Principle 5: Individual Participation

Principle 6: Information Quality

Principle 7: Security Safeguards

Principle 8: Accountability

The order in which the principles appear corresponds to the way in which a GP engages a patient when gathering patient information, and the processing thereof

thereafter. For example, the first principle addresses openness. This is how a GP must approach the information gathering session - he/she must be open with the patient and explain that information is being gathered, etc. Once openness has been established, the purpose (Principle 2) for which the information is being gathered, is explained. Once the patient understands the purpose, this sets the scope for any processing (Principle 3) and further processing (Principle 4) that may be applied to the gathered information. The fifth principle ensures that a patient can have access to his/her personal information.

Principles 6 and 7 were expanded beyond their original coverage by the draft Privacy Act. They are based on well established frameworks from the Information Technology discipline. Principle 6 (Information Quality) is based on data quality characteristics laid out by Strong, Lee and Yang (Strong, et al., 1997). Principle 7 (Security Safeguards) uses an extract from the ISO 17799 (ISO/IEC 17799, 2005) which is suitable for a small to medium enterprises (SMEs). This ensures that the resulting safeguards are based on an international standard and are all encompassing. If all the principles (Principles 1 through 7) are followed, then the GP can show that Principle 8 (Accountability) has been fulfilled.

The second part of the research output, comprises a checklist that can be used to determine observance to the code of practice. The code of practice defines a frame of reference for the development of a checklist. This checklist is presented in the form of questions requiring a simple yes or no answer. In Principle 7 of the checklist there are two sections, A and B. These are to differentiate between questions which should be answered by general practices that have a Health Information System in place, and those that do not have any such facilities. This is done because of the specialized requirements that are required at a practice that employs a Health Information System. The checklist is presented in Section 4.5.

Some of the safeguards in Principle 7, which are based on the following ISO 17799 controls, are already covered in previous overlapping principles:

- 12.2 - "Correct processing in applications",

- 15.1. - "Protection of organizational records", and

- 12.6 - "Technical vulnerability management".

To prevent this duplication of questions, they are only stated once (in the checklist).

4.3 Why a Code of Practice and Checklist?

From the conclusion drawn about the codes of practice and guidelines in the different countries in Section 3.8 of Chapter 3, it was gathered that all the countries have some form of code of practice, barring South Africa.

The countries researched all have privacy acts on which to base their codes of practice and guidelines. South Africa does not. This will pose problems as the code will not be unique to South African law if developed, based on an international code or regulations. Fortunately a draft Privacy Act is currently being reviewed in South Africa. This poses a unique opportunity to create a code of practice for privacy, based on a draft Privacy Act from South Africa.

A checklist was also added as it is seen as an innovative way in which a GP can check their level of privacy at any given time. This will facilitate the acceptance and implementation of a code of practice, since it supplements the theoretical base with a pragmatic tool.

4.4 Code of Practice

4.4.1 Introduction

The Code of Practice for GPs in South Africa has been developed to ensure that GPs are aware of the required principles in order to run a practice that maintains a high level of privacy with regards to patient information. It also serves as a basis from which a checklist to ascertain conformance to privacy requirements, has been drafted.

The Code of Practice should be viewed as a minimum set of standards or principles that a GP should follow in his/her practice to ensure that the privacy of patient information is observed. It does not claim any regulatory compliance. The code is applicable to general medical practitioners in South Africa.

The diagram in Figure 4.1 graphically represents the principles that form the core of the Code of Practice as well as the checklist that follows. The first five principles address the collection, use and updating of patient information from a process perspective. Therefore the diagram depicts Principles 1 - 5 as "process" principles.

The last three principles can be viewed as essential characteristics which apply to each of the process principles. For this reason they are depicted as running "across" each of the "Process Principles" in Figure 4.1. All eight principles together ensure the privacy of patient information.
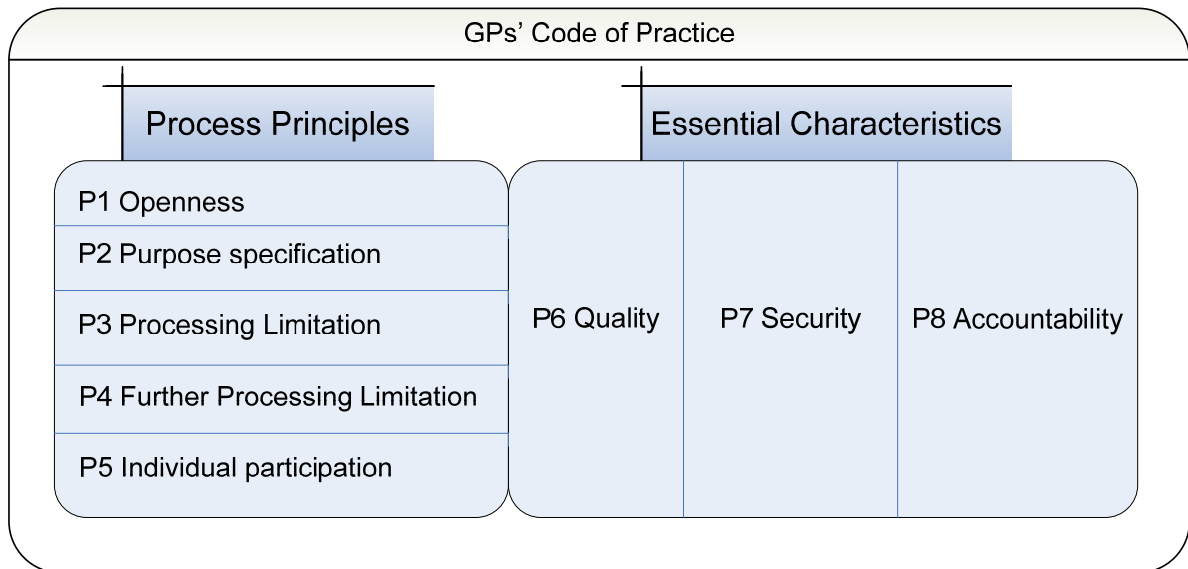
Figure 4.1: Graphical representation of the GPs' Code of Practice

The Principles of Information Protection of the Code of Practice for South African General Practitioners, are subsequently presented.

Principle 1: Openness

The data collector must ensure that the patient is notified that his/her information is being collected and recorded, and whether or not it is mandatory or voluntary for the patient to supply the information.

Principle 2: Purpose Specification

Patient information must be collected for a specific, explicitly defined purpose. Additionally, when collecting information from the patient, the data collector must ensure that the patient is informed of the purpose for which the data is being collected. This must be done unambiguously.

Principle 3: Processing Limitation

Once the data collector has collected the information from the patient, he/she must ensure that the information is processed in a fair and proper manner and that the patient has given consent for the information to be handled in such a manner. The scope of such processing is set by the purpose specification as determined in Principle 2.

Principle 4: Further Processing Limitation

Personal patient information must not be further processed in a way contrary to the purpose for which it was originally collected. Therefore the data collector collecting the data must use the data only to perform the tasks for which the data was intended, and not for any other purpose.

Principle 5: Individual Participation

The patient must have access to personal information in order to view it and make corrections. A patient who wishes to see or make corrections to his/her personal information, may do so, if they provide adequate proof of identity.

Principle 6: Data Quality (DQ)

In the general practice the data collector must take reasonable practicable steps, given the purpose for which personal information is collected or subsequently processed, to ensure that the quality of personal information is retained.

In the South African draft Privacy Act, Principle 4 of the principles of information protection ("Principles of", 2006), which is the corresponding principle to Principle 6 in this Code of Practice, covers information quality from a legal perspective. It does state some basic rules, these being:

- completeness,

- timeliness,

- accuracy, and

- ease of understanding.

However, it does little more than mention them; it is more focused on the various legal requirements that affect these rules.

Conversely, in this Code of Practice, data quality will be looked at from an Information Technology perspective, as constitutes the perspective of this research. According to Strong, Lee, and Yang (1997), high-quality data is data that is fit to be used by consumers. In our case this would mean to be viewed by GPs to make decisions about a patient's required treatment. If this is the case, then usefulness and usability are the most important aspects of quality that are needed, because if the usability or usefulness of the data is affected, then the GP is unable to carry out his work effectively (Strong, et al., 1997).

Strong, et al. (1997) present the following essential data quality categories and dimensions:

DQ Category	DQ Dimensions
Intrinsic DQ	Accuracy, Objectivity, Believability, Reputation
Accessibility DQ	Accessibility, Access Security

Contextual DQ	Relevancy , Value-added, Timeliness, Completeness, Amount of data
Representational DQ	Interpretability, Ease of understanding, Concise representation, Consistent representation

Table 4.2 DQ categories and dimensions (Strong, et al., 1997)

In a research project conducted by De La Harpe, et al., the data quality dimensions in Table 4.2 are used as a standard for measuring the quality of data in small to medium sized practices (SMMP) (De La Harpe, Parker, & Tshabalala, n.d.). The following dimensions were eliminated as they are not relevant to SMMPs (De La Harpe, et al., n.d.):

- Believability;

- Consistent representation;

- Interpretability;

- Objectivity;

- Reputation.

The resulting data quality categories and dimensions are tabularized in Table 4.3, together with definitions of the relevant data quality dimensions. The checklist questions for Principle 6 will be based on this set of amended data quality categories and dimensions.

Data Quality(DQ) Category	Data Quality(DQ) Dimensions	Definition in terms of data
Intrinsic DQ	Accuracy	The extent to which data is correct and reliable
Accessibility DQ	Accessibility	The extent to which data is available, or easily and quickly retrievable
	Access security	The extent to which access to data is restricted appropriately to maintain its security

Contextual DQ	Relevancy	The extent to which data is applicable and helpful for the task at hand
	Value-Added	The extent to which data is beneficial and provides advantages from its use
	Timeliness	The extent to which the data is sufficiently up-to-date
	Completeness	The extent to which data is not missing and is of sufficient breadth and depth for the task at hand
	Amount of data	The extent to which the volume of data is appropriate for the task at hand
Representational DQ	Ease of understanding	The extent to which data is easily comprehended
	Concise representation	The extent to which data is compactly represented

Table 4.3 Characteristics of high-quality data and dimensions with definitions (Strong, Lee, & Yang, 1997), (Pipino, Lee, & Wang, 2002)

Principle 7: Security Safeguards

The draft Privacy Act states that this principle implies that personal information should be protected by appropriate security safeguards against risks such as loss, accidental or intentional unauthorized access or disclosure, interference with, amendment of or destruction of information ("Principles of", 2006). This calls for the adoption of a recognized standard in order to ensure the security of patients' personal information.

One of the most widely referenced and often discussed security standards is the Information Technology – Code of Practice for Information Security Management, which was originally published as the British Standard BS 7799. In 2000, this Code

of Practice was adopted as an international standard framework for information security by the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) as ISO/IEC 17799 (Whitman & Mattord, 2003). The ISO 17799 (ISO/IEC 17799, 2005) identifies domains and controls that help to ensure that a high level of security is implemented. Although an organization may piece together its own security controls, for reasons of (global) acceptance, compliance and certification, the use of standards such as ISO/IEC 17799 and frameworks such as COBIT may be considered preferable.

The ISO/IEC 17799 standard is comprehensive, however, and achieving ISO/IEC 17799 compliance is considered difficult for large enterprises, let alone SMEs that may consider the process daunting and unachievable. The incremental model proposed by ISIZA (von Solms & von Solms, 2001), is thought to offer a good balance of short to medium term, attainable certification goals, while culminating in full ISO/IEC 17799 compliance and certification (Upfold & Sewry, n.d.). In order to implement these standards, a risk assessment should be conducted. On completion of the risk assessment, controls deemed irrelevant are dropped from the standards, while those controls considered necessary and inadequately addressed are then added into the standard. This way, the standards are fine-tuned and customized to meet the security requirements of the organisation (Upfold & Sewry, n.d.). This would require a full Security Systems Development Life Cycle (SecSDLC) (Whitman & Mattord, 2003) and since that is not the focus of this research, it will not be addressed.

The approach that will be used in this research is based on the controls recommended by the ISO 17799 to be "a good starting point" for implementing information security. It must be noted that this, however, does not replace the selection of controls based on a risk assessment (ISO/IEC 17799, 2005). The recommended controls are:

- Data protection and privacy of personal information (15.1.4)

- Protection of organizational records (15.1.3)

- Intellectual property rights (15.1.2)

- Information security policy document (5.1.1)

- Allocation of information security responsibilities (6.1.3)

- Information security awareness, education and training (8.2.2)

- Correct processing in applications (12.2)

- Technical vulnerability management (12.6)

- Business continuity management (14)

- Management of information security incidents and improvements (13.2)

The questions in the checklist (refer to Section 4.5) will cover the areas listed above. Some of the areas above overlap each other and therefore are addressed in one checklist question, for example:

- Protection of organizational records (15.1.3)

- Technical vulnerability management (12.6)

These two areas overlap, because if technical vulnerabilities are managed adequately then organizational records are more protected. The intellectual property rights control (15.1.2) however does not appear in the checklist as this topic does not pertain to GPs and their practices.

Since the checklist will be based on a list of recommended controls in the ISO 17799, questions asked about security safeguards at the GP will be considered to be covered to a reasonable extent. One may consider this as a baseline (minimum) approach. It cannot, however, constitute a proper and full security programme such as should be implemented.

Principle 8: Accountability

This principle refers to the duty to bear the cost for failure to perform as expected. Hence the general practice must show that it is accountable for the information that it collects and what happens to it. According to the King Report, there are seven characteristics of good corporate governance, one of them being accountability ("Executive Summary", 2002). The King Report definition of accountability is as follows ("Executive Summary", 2002):

"Individuals or groups in a company, who make decisions and take actions on specific issues, need to be accountable for their decisions and actions. Mechanisms must exist and be effective to allow for accountability."

When someone is held accountable for the privacy of personal patient information, it would be wise to show due care was taken, therefore exonerating the individual responsible for the failure (if any). Due care is when the practice ensures that all employees are aware of:

- what is acceptable and not acceptable behaviour, and

- the consequences of non acceptable behaviour.

Informing employees can be done in the form of training sessions (Whitman & Mattord, 2003).

Due diligence requires that the practice continually maintains this level of effort in protecting the privacy of patient data. Therefore if the GP shows due care and due diligence in complying with Principles 1 - 7 of the Code of Practice, it can be shown that accountability was established.

4.5 General Practitioners Information Privacy Checklist

This checklist is based on the Code of Practice from the previous section (4.4) and is to be utilized by GPs to check how compliant they are with the "Protection of Information Principles" indicated in the Code of Practice.

"Data Collector" in the checklist refers to a general practitioner, medical proxy (the person authorized to process patient data) or administrative staff member.

Principle 1: Openness

P1.1 Are patients informed that personal information is being collected from them?

Yes ☐ No ☐

P1.2 Are patients informed that the information collected will be recorded (either on paper or electronically)?

When personal information is collected from the patient, are they aware that the information they are divulging will be stored?

Yes ☐ No ☐

P1.3 Are patients informed whether or not it is mandatory or voluntary to supply the information being collected?

Yes ☐ No ☐

Principle 2: Purpose Specification

P2.1 Are patients informed unambiguously of the purpose for which the information they are divulging will be used?

Yes ☐ No ☐

Principle 3: Processing Limitation

P3.1 Will the information collected, be used for the purpose for which it was initially intended (as defined by Principle 2)?

Yes ☐ No ☐

P3.2 Is consent obtained from the patient for the processing and possible disclosure of the patient's information?

Yes ☐ No ☐

Principle 4: Further Processing Limitation

P4.1 Will the patient be asked to consent to the proposed use of their personal information for other purpose(s)?

The patient information gathered by the data collector should be justified that it will only be used for the purpose for which it was initially intended, and if not, then further consent must be obtained from the patient.

Yes ☐ No ☐

P4.2 If procedures and policies that pertain to the use of personal information change at the practice, will revised consent be obtained from the patient?

Yes ☐ No ☐

P4.3 Will the patient have given consent for his/her personal information to be disclosed as part of the amended process?

In particular, will the patient be asked whether or not they wish their personal information to be shared with other third parties (within a defined context)?

Yes ☐ No ☐

Principle 5: Individual Participation

P5.1 (Accessibility*) Do you provide patients with access to personal information gathered from them?

If a patient wishes to see the information that has been collected from them by the practice, does the practice allow the patient to do so?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P5.2 (Accessibility*) Will provision be made for attaching corrections?

If the patient wishes to change personal information such as, for example, an address or marital status, are they allowed to do so?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P5.3 (Accessibility*) Is the patient required to provide adequate proof of identity before being allowed to access and/or modify personal information?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

Principle 6: Information Quality (Data Quality)

P6.1 (Accuracy*) (Timeliness*) Does the data collector check with the patient whether or not the current information that the practice has on record, is up to date?

When a patient arrives for a consultation with the GP, does the receptionist check with the patient whether or not the patient's personal information is correct and up-to-date? All relevant categories of data should be checked. The GP should also check whether or not the patient's medical data is up-to-date.

*This refers to a Data Quality Dimension

Personal Information   Yes ☐ No ☐

Clinical data   Yes ☐ No ☐

P6.2 (Access security*) Will there be "reasonable physical security" in place to protect against loss, unauthorized access, use, modification or disclosure, and any other misuse of patient information?

Are there any physical security measures in place, for example, locks on doors or passwords-controlled door keypads, in order to prohibit entry to rooms that hold confidential information and backups of data?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.3 (Access security*) Are there technical security measures in place to protect against loss, unauthorized access, use, modification or disclosure, and any other misuse of patient information?

Does the general practice have any technical security measures in place that will ensure the security of the information if it is stored on a computer system?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.4 (Relevancy*) Is the data that is being collected relevant to the actual task that needs to be performed?

Is the data that is collected from patients relevant to the actual reason (for example, medical consultation) that the patients are present at the practice?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.5 (Value-Added*) Does the data that is captured by the data collector provide benefits or advantages for its later use?

If, for example, the data collector is collecting a patient's personal information (name, address, medical history, etc), will this information be of use to the GP (or other staff member in the practice) while carrying out his /her duties subsequent to the data collection process, or at a later stage?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.6 (Completeness*) Will steps be taken to ensure currency and completeness of patient information?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.7 (Relevancy*) Is the amount of data that is being retrieved from the system, not too little or too much for any given task?

If, for example, a GP's assistant needs to mail a prescription to a patient's address, he/she should only get access to the name of the patient and address information, and not access any other information related to that patient.

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.8 (Ease of understanding*) Will the information that is collected and entered on record (either on paper or electronically), be understood clearly and easily at a later date when it is required?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

P6.9 (Concise representation*) Is the information that is collected for recording, represented using concise language (i.e. straight to the point)?

Is the data that is being collected, recorded using as few and concise words as possible?

*This refers to a Data Quality Dimension

Yes ☐ No ☐

Principle 7: Security Safeguards

If your practice is computerized in any way, please answer both Sections A and B. If you have no form of information on a Health Information System, then answer only Section A.

Section A

P7.1 (15.1.4*) Will there be procedures in place to ensure the security and privacy of personal information during the handling of personal information?

Does the practice have any written documents that dictate how personal information should be handled and processed to ensure that it maintains security and privacy?

* Refers to an ISO control number

Yes ☐ No ☐

P7.2 (5.1.1*) Does the practice have any security policy documents?

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* Refers to an ISO control number

Yes ☐ No ☐

P7.3 (6.1.3*) Are staff members allocated particular information security responsibilities, for example, responsibility to secure patient information, or responsibility for the security of financial data?

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* Refers to an ISO control number

Yes ☐ No ☐

P7.4 (6.1.3*) Do staff have different security clearance levels for different types of information, e.g. financial data or clinical patient information?

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* Refers to an ISO control number

Yes ☐ No ☐

P7.5 (8.2.2*) Are all staff members aware of the availability of security policy documents at your practice (if available)?

* Refers to an ISO control number

Yes ☐ No ☐

Policy documents not available ☐

P7.6 (8.2.2*) Are training sessions conducted to ensure that the contents of the policy documents are known and adhered to correctly by the staff (if available)?

* Refers to an ISO control number

Yes ☐ No ☐

Policy documents not available ☐

P7.7 (12.6*, 15.1.3*) Are regular backups made of the practice's data?

Does the practice make backups of the recorded personal information, whether it be electronic records on a PC, or on paper?

* Refers to an ISO control number

Yes ☐ No ☐

Yes, but irregular ☐

P7.8 (13.2*) If the practice suffers a security breach, whether it be electronic or physical, are there procedures to record the nature of the breach, the damage it caused, possible solutions, and recommendations on how it will be avoided in future?

* Refers to an ISO control number

Yes ☐ No ☐

Section B

P7.9 (12.6*, 15.1.3*) Do staff have personal passwords to ensure unique identification?

Does each member of staff at the private practice have access to the computer records, or do they require a unique access code?

* Refers to an ISO control number

Yes ☐ No ☐

P7.10 (12.6*, 15.1.3*) Has antivirus software been installed on the computers and is it kept up to date regularly (at least weekly)?

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* Refers to an ISO control number

Yes ☐ No ☐

Yes, but irregular ☐

P7.11 (12.6*, 15.1.3*) Is the practice aware of the need to maintain confidentiality of information on computer screens?

When a computer is not being used, even for a very short period (for example, the staff member has gone out for a bathroom break), the staff member must enable some sort of feature (for example, "lock" the PC) to obscure the screen. If not, does the staff member know that he/she is violating security measures?

* Refers to an ISO control number

Yes ☐ No ☐

P7.12 (12.6*, 15.1.3*) Are screensavers and other privacy protection devices enabled (for example, firewalls)?

The screensaver would enable the sensitive personal information that is being displayed to be obscured, thereby ensuring no one passing by can view any sensitive information. Firewalls would prevent external forces from gaining access to the information on the computers.

* Refers to an ISO control number

Yes ☐ No ☐

P7.13 (12.6*, 15.1.3*) Will your system security include an ongoing audit process that can track use of the system, including backed-up data (for example, when and who accessed data, and if those processes record personal information, will they themselves have privacy protections built in)?

Does the electronic recording system log all activity performed on it, including who enters the information, who retrieves it, who updates it, when it is backed up, etc. Do these logs have access features in place only allowing authorized staff to view them?

* Refers to an ISO control number

Logging   Yes ☐ No ☐

Controls access to logs   Yes ☐ No ☐

P7.14 (12.6*, 15.1.3*) Are staff members' passwords kept secure?

Are the access codes that are issued to staff members kept in a secure place, for example, not on sticky paper on the monitor of the computer?

* Refers to an ISO control number

Yes ☐ No ☐

P7.15 (12.2*) Do the applications being used by the practice have any form of input validation controls or checking in place to prevent incorrect data entry?

Validation controls include, dropdown boxes to enter information, therefore only allowing certain approved data into the database

* Refers to an ISO control number

Yes ☐ No ☐

P7.16 (14*) If the system suffers a security breach and can no longer be of service, are there plans in place to facilitate the recovery and continuation of record keeping at the practice?

* Refers to an ISO control number

Yes ☐ No ☐

Principle 8: Accountability

P8.1 Do you hold staff training sessions or take other measures to foster a culture of accountability and transparency with regards to the gathering and processing of personal information?

Does the practice hold seminars or training sessions for its staff, to address accountability, specifically in the area of personal information?

Yes ☐ No ☐

Chapter 5   Conclusion

In Chapter 4, a privacy code of practice for GPs in South Africa, as well as a checklist, was proposed. The code was based on information protection (privacy) principles, found in the South African draft Privacy Act. The checklist then, based on the code of practice, was presented in the form of simple questions (with explanatory notes where relevant).

This chapter, Chapter 5, concludes the research project and discusses the benefits of the privacy code of practice and the checklist. It also provides an overview of the objectives of this research and how they were met throughout the dissertation. Lastly, it considers how the research can be extended in the future.

5.1   Introduction

In this research the health sectors of four different countries, namely Australia, New Zealand, Canada and South Africa were investigated. This was done, because it, would provide greater insight into issues such health expenditure, funding through the government and progress in terms of technology adoption at GPs. Government spending and overall health expenditure, in particular, was seen as a contributing factor to the status of the health sectors in the respective countries.

The knowledge gained from the afore-mentioned investigation, led to a better understanding as to why the privacy of patient information and the laws that govern this privacy, are at a different level of development in each of the countries. It was concluded that the state of the health sectors. affect the level of development of privacy laws present in that specific country. These privacy laws and any privacy-related codes of practice or guidelines that are based on them, were researched. This was to gather insight into the role of privacy laws in the compilation of codes of practice.

Once the relationship between the countries' privacy legislation and codes of practice for GPs was researched, and the pertinent parts of the legislation that were used, were noted, similar parts, found in the South African draft Privacy Act, were used in the same way, in the creation of a privacy code of practice for GPs in South Africa. This privacy code of practice was then used in the development of a checklist to be used by GPs, to evaluate their practice's level of adherence to privacy requirements.

This then basically addressed the **primary objective** laid out in Chapter 1, which was:

Primary objective: Develop a privacy code of practice and a privacy checklist for South African general medical practitioners, that can be used to address privacy issues with regard to patient information.

5.2 How the Privacy Code of Practice and Checklist will Benefit GPs

The use of this code of practice and checklist at GPs will greatly improve the levels of privacy with regards to patient information. These improvements include:

5.2.1 The GPs' ability to evaluate levels of privacy adherence

With the help of the checklist a GP can evaluate his /her own practice and then see which areas need attention in order to improve the levels of privacy. The checklist is aligned with the code of practice, therefore, any section in the checklist which appears to be problematic, can be improved at the practice by looking up the corresponding principle in the code of practice and using it to understand the requirements. The questions posed in the checklist, further provide an indication of what is required to adhere to each principle.

5.2.2 Increased trust in the GP by patients

Once the code of practice has been implemented, the privacy of patients' personal information will improve. Patients will feel more secure about the privacy of their information at the practice and may, based on this newly gained confidence, recommend others to seek treatment there. Therefore, it might lead to increased revenue for the practice. Patients will also be more comfortable divulging sensitive information to the GP, thereby improving the GP's ability to diagnose and treat the patient more effectively.

5.2.3 Improved privacy compliance in the future

Since South Africa has a draft Privacy Act that should be implemented in the not too distant future, any GP implementing this code of practice will have achieved a milestone on the road to preparing for compliance with the envisaged Act, since the code is based on the preliminary information privacy principles contained in the Act. Therefore this constitutes proactive conduct to improve the privacy levels in the practice, which should assist in future endeavors of compliance.

5.2.4 Limitations

The limitations and shortcomings of the proposed solution are:

- South Africa's draft privacy Act was used in order to derive the Privacy Checklist. Since it was not a fully passed Privacy act, the proposed solution does stand the risk of having the main piece of literature on which it was based, subject to change, which could render some of the solutions, incorrect or invalid.

- The degree of implementation of the solution is up to the GP, and there is no mechanism to ensure that it is done correctly. This means that the solutions' effectiveness cannot be guaranteed.

- The data used to determine the problems and proposed solutions was obtained by the literature survey due to time limitations. This could have been supplemented by collecting empirical data.

5.3   Chapter Overview

This section provides a summary of the research conducted in the chapters of the dissertation, and shows where the objectives set out in Chapter 1 are met.

5.3.1 Chapter 1 - Introduction

Chapter 1 commenced by highlighting the need for privacy of patient information through providing examples of situations where if privacy principles had been adhered to, infringement of privacy would not have occurred. Various concepts were introduced and discussed, these being privacy, privacy and security, governance, and privacy issues in private health-care practices. The problem statement, objectives and research paradigm of the project were presented as well as the methodology used in meeting the objectives.

5.3.2 Chapter 2 - An Overview of Health Sectors in Various Countries

Sub-objective 1: Analyze the health sectors of various countries to gain insight into the relationship between the health sector status and the level of legislative development.

This chapter provided an in depth look at the health sectors of four different countries, namely Australia, New Zealand, Canada and South Africa. For each country, an overview of the health-care sector (public and private) was provided, and thereafter, general practitioners and their level of computer use were investigated. This provided insight into the state of (health) affairs in each of the countries, providing an argument or reason as to why the countries are at a different level of health privacy law development, the discussion of which followed in Chapter 3.

5.3.3 Chapter 3 - Privacy Legislation

Sub-objective 2: Discuss privacy laws affecting the privacy of health information in various countries.

Sub-objective 3: Discuss the privacy codes of practice (and other guidelines) for GPs in various countries.

Sub-objective 4: Compare South African legislative requirements for privacy with the international scenario to determine gaps, if any.

This chapter investigated the various laws affecting the handling of personal information in each of the countries considered, in order to gain an informed impression of the relevant legal obligations. Different privacy-related codes of practice and guidelines used by GPs were summarized, how they came about, as well as the legislation taken into account when they were compiled. This information was then used to produce a code of practice and checklist for the South African GP. These outputs were discussed in the following chapter, Chapter 4.

5.3.4 Chapter 4 - A Code of Practice and Checklist for Practitioners in Private Healthcare

Sub-objective 5: Incorporate the information discussed and analyzed to propose a privacy framework for PHCPs.

Chapter 4 was dedicated to creating the outputs of this research. However, it should be reiterated that neither the code of practice, nor the checklist that is produced, can claim regulatory compliance. This is due to the nature of this

research project, which has its roots in the discipline of Information Technology. The research therefore did not propose to take a strictly legislative approach to creating its outputs. Legislation was merely used as a guiding mechanism to ensure that the code of practice and checklist are aligned with the available legislation.

The first priority, therefore, was to create a Code of Practice, with the relevant legislation in mind. Since South Africa has a draft Privacy Act, the information privacy principles stated in the Act were used as a premise for the code of practice. Once the code of practice was created, a checklist, based on the code, was developed to assist GPs to adhere to the code of practice.

5.3.5 Chapter 5 - Conclusion

The research project is concluded in this chapter. Future research directions are discussed as well as the benefits of the privacy code of practice and checklist.

5.4   Future Research

One major area of research that can be considered in the future, is a project that aims to ensure that a privacy code of practice does in fact comply with the South African Privacy Act, once it has been finalized. Research groups from various disciplines, e.g. IT, health and law can come together to ensure a comprehensive code and checklist.

Because South Africa does not have a "South African Health Privacy Code" that deals specifically with the privacy of health information, this research project can aim at supplementing the code of practice with requirements that are unique to

health-related legislation. Such requirements can be drawn from existing international legislation. This will produce a code similar to that of New Zealand's "Health Information Privacy Code" ("Health Information", 1994). Even with the creation of the current South African draft Privacy Act, many international privacy laws are being drawn upon in its creation *("PRINCIPLES OF", 2006).*

A further possible avenue of research is to attempt a more quantitative research project using surveys. The survey can be conducted at various GPs to determine their levels of privacy adherence. This can be done using a checklist similar to the one that was developed in Chapter 4. This could be useful to gather inputs into the usability of the code of practice and checklist so that future improvements can be made.

5.5 Conclusion

In today's information age, privacy is becoming more and more important as the growth of information technology increases our exposure to privacy threats (Mason, 1986). But why is privacy considered important in general? An anonymous contributor responded when asked, "Why is privacy so important?" by stating "*because it actually affects people's lives, and not in a positive way: studies have shown that if people believe they are being observed, then they tend to alter their behavior to match what they think the observer wants to see. I want people to be able to do their thing without fear of consequences from bigots or The Man or even "ordinary people". None of us are ordinary and the world will be a poorer place if we were made to be.*"("Why is Privacy", 2005).

The health sector's need for patient information privacy is of paramount importance. Therefore, the establishment of legislation and supporting codes of practice and

other guidelines to protect the privacy of patient information, will certainly improve the situation.

It is hoped that this research and its outputs have contributed in some way to improving levels of privacy at GPs in South Africa.

*"Who could deny that **privacy** is a jewel? It has always been the mark of privilege, the distinguishing feature of a truly urbane culture. Out of the cave, the tribal teepee, the pueblo, the community fortress, man emerged to build himself a house of his own with a shelter in it for himself and his diversions. Every age has seen it so. The poor might have to huddle together in cities for need's sake, and the frontiersman cling to his neighbors for the sake of protection. But in each civilization, as it advanced, those who could afford it chose the luxury of a withdrawing-place."* - Phyllis McGinley

References

A Briefing On Public Policy Issues Affecting Civil Liberties Online from The Center For Democracy and Technology. (2003, May 13). *Center for Democracy and Technology Policy Post, 9*(10), . Retrieved January 7, 2007, from http://www.cdt.org/publications/pp_9.10.shtml. Database.

Aboriginal Health & Medical Research Council of NSW. (1999). Primary, Secondary & Tertiary Health Care Services to Aboriginal Communities. *AH&MRC Monograph Series, 1*(1), 1-5. Retrieved January 9, 2007, from http://www.ahmrc.org.au/Downloads/monograph.pdf Database.

About the Privacy Code. (2006). Retrieved December 17, 2006, from http://www.csa.ca/standards/privacy/Default.asp?language=English

AIDS Law Project,Wits University. (n.d.). Retrieved January 7, 2007, from http://www.alp.org.za/print.php?sid=45&DC100SID=c85f59aabd25dd29e7a655e4fe509f40

An Overview of the Health and Disability Sector in New Zealand. (n.d.). Retrieved March 15, 2006, from http://www.moh.govt.nz/moh.nsf/0/5A93582A381ECC1CCC256B3B0007D7AD/$File/OverviewHealthandDisabilitySector.pdf

Andrews, G., & Pillay, Y. (n.d.). *Priorities for the national health system (2004-2009).* Retrieved April 10, 2006, from http://www.hst.org.za/

Australia's Health 2004. (2004). Retrieved April 13, 2006, from http://www.aihw.gov.au/publications/aus/ah04/ah04-c01-040804.pdf

Australian Social Trends. (2001, July 6). Retrieved December 12, 2006, from http://www.abs.gov.au/AUSSTATS/abs@.nsf/2f762f95845417aeca25706c00834efa/2bd114b5008474caca2570ec000c46e3!OpenDocument

Barrigar, J. (2006, January). *Is you or is you aint?* Retrieved January 7, 2007,

from http://idtrail.org/files/Is%20You%20Is%20or%20Is%20You%20Aint%20paper%20for%20posting.pdf

Bennett, C. J. (2001, June 19). What Government Should Know about Privacy: A Foundation Paper. Retrieved December 20, 2006, from http://www.accessandprivacy.gov.on.ca/english/pub/wgskap.doc

Benoliel, D. (2004, April 1). *Law, Geography and Cyberspace: The Case of On-Line Territorial Privacy.* Retrieved January 7, 2007, from http://ssrn.com/abstract=544562

Boeree, C. G. (1998). *ABRAHAM MASLOW - Biography.* Retrieved January 7, 2007, from http://webspace.ship.edu/cgboer/maslow.html

Canada Health Act. (2006, September 15). Retrieved December 14, 2006, from http://laws.justice.gc.ca/en/C-6/233402.html

Canadian Standards Association's Model Code for the Protection of Personal Information. (2006). Retrieved December 17, 2006, from http://www.media-awareness.ca/english/resources/codes_guidelines/marketing_advertising/code_advert_cma_info.cfm

Chiarelli, N. (2005, June 10). *Supreme Court ruling creates confusion; Future of medicare in doubt after decision on private insurance.* Retrieved December 14, 2006, from http://osgoode.yorku.ca/media2.nsf/83303ffe5af03ed585256ae6005379c9/649135adf0264c4c8525701c004efc33/$FILE/RulingCreatesConfusion.pdf

Chodos, H., & MacLeod, J. J. (2005). *Examining the Public/Private Divide in Healthcare: Demystifying the Debate.* Retrieved December 14, 2006, from http://www.cpsa-acsp.ca/papers-2005/MacLeod.pdf

Clarke, R. (1996, September 14). Federal Privacy Legislation in Australia. Retrieved December 15, 2006, from http://www.anu.edu.au/people/Roger.Clarke/DV/FedLeg.html

Clarke, R. (2006, June 28). *What's 'Privacy'?* Retrieved January 7, 2007, from http://www.anu.edu.au/people/Roger.Clarke/DV/Privacy.html

Code of Practice for SAFE ELECTRICAL WORK. (1997). Retrieved October 18, 2006, from http://www.ocei.vic.gov.au/downloads/CodeofPracticeSafeElectricalWork.pdf

Code of Practice. (n.d.). Retrieved November 9, 2006, from http://www.hin.moh.govt.nz/pages/standards.htm

Colbrook, P. (2005, April 9). Can you ignore guidelines? *BMJ Career Focus, 330*(7498), 143-144. Retrieved January 7, 2007, from http://careerfocus.bmj.com/cgi/content/full/330/7495/143-a Database.

College of Physiotherapists of Ontario. (2003, November). Privacy Requirements and Policies for Health Practitioners in Ontario. Retrieved December 22, 2006, from http://www.collegept.org/college/content/pdf/en/PHIPA_guide.pdf

Cornell, J., Goudge, J., McIntyre, D., & Mbatsha, S. (2001, March). *National Health Accounts: The Private Sector Report.* Retrieved December 14, 2006, from http://web.uct.ac.za/depts/heu/publications/dimac_9_1.pd*f*

Council of Europe. (1981, January 28). Convention for the Protection of Individuals with regard to Automatic Processing of Personal Data. Retrieved December 20, 2006, from http://conventions.coe.int/Treaty/en/Treaties/Html/108.htm

Creswell, J. W. (1994). *Research design: Qualitative and quantitative approaches*. Thousand Oaks, CA: Sage.

D'Angelo, C., & Trott, N. A. (2003). British Columbia Introduces Private Sector Privacy Legislation. In Privacy Legislation - May 8, 2003, from http://www.mccarthy.ca/pubs/publication.asp?pub_code=1327: McCarthy

Tétrault.

De La Harpe, R., Parker, M., & Tshabalala, T . J. (n.d.). An Investigation into the data quality issues of patient records within a SMMP. Cape Peninsula University of Technology, Cape Town.

Dekker, C. (2007). *Corporate Governance.* Retrieved January 7, 2007, from http://www.cliffedekker.co.za/literature/invest/corpgovrn.htm

Dick, B. (2001). *Maslow's hierarchy of needs examined and reformulated.* Retrieved January 7, 2007, from http://www.uq.net.au/~zzbdick/dlitt/DLitt_P02masrev.pdf

Didham, R., & Martin, I. (2004, March). *A review of computerised information technology systems in general practice medicine.* Retrieved December 20, 2006, from http://hcro.enigma.co.nz/website/index.cfm?fuseaction=articledisplay&featureid= 040302

Didham, R., Martin, I., Wood, R., & Harrison, K. (2004, July 23). Information Technology systems in general practice medicine in New Zealand. *THE NEW ZEALAND MEDICAL JOURNAL, 117*(1198), 72-88. Retrieved October 2, 2006, from NZMA Database.

Digital Strategy: A Draft New Zealand Digital Strategy for Consultation. (2004, June). Retrieved December 16, 2006, from http://www.digitalstrategy.govt.nz/upload/documents/Digital_Strategy_Draft.pdf

Draft Privacy Legislation. (2005, October 14). Retrieved November 13, 2006, from http://www.ispa.org.za/regcom/privacyindex.shtml

Electronic Communications and Transactions Act. 2002. (2002). Retrieved March 12, 2006, from http://www.acts.co.za/ect_act/

Executive Summary of the KING REPORT 2002. (2002, March). Retrieved

November 27, 2006, from http://www.corporatecompliance.org/international/SouthAfrica/KingCommitteeCorporateGovernanceExecutiveSummary2002.pdf

Fekete, M., & Wilson, P. (2006). Privacy Law In Canada. In Doing Business in Canada (pp. 34-41). : Osler, Hoskin & Harcourt LLP.

Fuller, C. (2006, December 8). *Want Runaway Health Costs? Encourage Private Surgical Clinics Grabbing for 'market share' It's public hospitals that contain spending..* Retrieved December 14, 2006, from http://thetyee.ca/Views/2006/12/08/PrivateSurgery/

Gauld, R. (2006, March 1). The Troubled History and Complex Landscape Of Information Management and Technology in The New Zealand Health Sector. Retrieved September 12, 2006, from http://hcro.enigma.co.nz/website/results/20060912224551128502429.pdf

General practitioner.. (2006, September 27). *In Wikipedia, The Free Encyclopedia..* Retrieved October 5, 2006, from http://en.wikipedia.org/w/index.php?title=General_practitioner&oldid=78088080

Generic Security Policy for the Small Practise V1.1 (Obtained Via email request). (2005, March 8). Retrieved November 9, 2006, from http://www.HISAC.govt.nz

Goede, R. (2003). A framework for the explicit use of specific systems thinking methodologies in data-driven decision support system development. (Doctoral Dissertation, 2004 University of Pretoria). (Retrieved November 15, 2006 from upetd.up.ac.za/thesis/available/etd-05132005-080727/unrestricted/00front.pdf)

Guidelines for Good Practice in Medicine, Dentistry and Medical Sciences Confidentiality: Protecting and Providing Information. (2002). Pretoria: Medical and Dental Professions Board of the Health Professions Council of South Africa.

Guidelines on Privacy in the Private Health Sector. (2001, November 8). Retrieved November 12, 2006, from http://www.privacy.gov.au/publications/hg_01.pdf

Handbook for the Management of Health Information in Private Medical Practice. (2002, October). Retrieved November 09, 2006, from http://www.racgp.org.au/Content/NavigationMenu/PracticeSupport/Privacy/Hand bookforthemanagementofhealthinformationinprivatepractice/20021014privacy.pdf

Harvey, L. (2004). *Analytic Quality Glossary.* Retrieved November 12, 2006, from http://www.qualityresearchinternational.com/glossary/codeofpractice.htm

Health & Safety Terms. (2006). Retrieved October 18, 2006, from http://www.edp-uk.com/glossaries/terms.htm

Health and Disability Sector Changes and their Implementation: Memorandum to Cabinet Business Committee. (n.d.). Retrieved December 13, 2006, from http://www.executive.govt.nz/minister/king/health_changes/03.html

Health Care in Australia. (n.d.). Retrieved March 10, 2006, from http://www.dfat.gov.au/facts/health_care.html

Health Care In Canada. (n.d.). Health Care In Canada. Retrieved October 16, 2006, from http://www.nchc.org/facts/Canada.pdf

Health care in Canada.. (2006, October 2). *In Wikipedia, The Free Encyclopedia..* Retrieved October 2, 2006, from http://en.wikipedia.org/w/index.php?title=Health_care_in_Canada&oldid=790773 02

Health Care in South Africa. (n.d.). Retrieved March 22, 2006, from http://www.southafrica.info/ess_info/sa_glance/health/health.htm

Health Expenditure Trends in New Zealand 1990–2002. (2004, April). Retrieved December 13, 2006, from http://www.moh.govt.nz/moh.nsf/0/4247633867BE05D7CC256E8A000595F0/$Fi le/HealthExpenditureTrendsTo2002.pdf

Health Information Privacy Code 1994. (1994). Retrieved December 16, 2006,

from http://www.privacy.org.nz/privacy-act/health-information-privacy-code-1994

Health Information Privacy Code 1994. (2000, July 30). Retrieved December 16, 2006, from http://www.knowledge-basket.co.nz/privacy/comply/HIPCWWW.pdf

Health Information Strategy Steering Committee. (2005). Health Information Strategy for New Zealand. Wellington: Ministry of Health.

Health Insurance Portability and Accountability Act 1996. (n.d.). Retrieved January 8, 2007, from http://www.aiim.org/chapters/olddominion/HIPAAARMA4.ppt

Health Policy Framework. (2006, February). Retrieved December 14, 2006, from http://www.uofaweb.ualberta.ca/govrel//pdfs/policy_framework.pdf

Health Professions Council Of South Africa (HPCSA). (2002). Guidelines for Good Practice in Medicine, Dentistry and Medical and Medical sciences, Confidentiality: Protecting and Providing Information. Pretoria July 2002

Health Sector Strategic Framework 1999-2004. (1999). Retrieved December 14, 2006, from http://www.doh.gov.za/docs/policy/framewrk/index.html

HIMSS CPRI Toolkit: Managing Information Privacy & Security In Healthcare. (2006, April 13). Retrieved January 8, 2007, from http://www.himss.org/asp/topics_cpriToolkit.asp?faid=78&tid=4

Hoepfl, M.C. (1997). Choosing qualitative research: A primer for technology education researchers, Journal of Technology Education, 9(1), 47-63.

Hustinx, P. J. (2005). Public Access to Documents and Data Protection. In *European Parliament* (p.). Brussels: LIBE Committee.

International View Of Canada. (2006, February 24). Retrieved December 14,

2006, from http://www.intervac.ca/why_visit_canada_int_view.htm

ISO/IEC 17799. (2005). Information Technology - Security Techniques - Code of Practice for information security Management (Edition 2). : SANS.

IT Governance Institute, 2001. *Board and Briefings on IT Governance ITGI*, USA.

Johnsen , J. R. (2006). Health Systems in Transition: Norway.. *European Observatory on Health Systems and Policies*, 8(1), . Retrieved Januar*y 8*, 2007, from http://www.euro.who.int/Document/E88821.pdf Database.

Keshavjee, K., Troyan, S., Langton, K., Holbrook, A. M., Nagji, A., Topps, D., et al. (n.d.). *Successful Computerization in Small Primary Care Practices: A Report on Three Years of Implementation Experience.* Retrieved October 16, 2006, from http://www.compete-study.com/documents/Successful_Computerization_in_Small_Primary_Care_Practises.pdf

Klaaren, J. (n.d.). The New Access to Information Regulation in South Africa. Retrieved December 16, 2006, from http://www.lawandsocietysummerinstitutes.org/workshop06/documents/klaaren.pdf

KPMG, (2001). A new covenant with stakeholders: Managing privacy as a Competitive Advantage. KPMG's Assurance & Advisory Services Center

Lee, A.S 1999. Researching MIS (In Currie, W.L. & Galliers, R., eds. Rethinking management information systems. Oxford: Oxford University Press. P. 7-27.)

Lester, S. (1999, May). *An introduction to phenomenological research.* Retrieved January 5, 2007, from http://www.devmts.demon.co.uk/resmethy.htm

Mabitsela, R. E. (2003, June). *The Handbook on African Traditional Herbal medicine.* Retrieved January 9, 2007, from http://www.anc.org.za/ancdocs/pubs/umrabulo/umrabulo18/handbook.html

Making Sense Of Health Insurance. (2004). Retrieved December 13, 2006, from http://www.everybody.co.nz/page-56d7ef0e-9e87-46ad-9ab9-843e76f8301e.aspx

Marsland, N., Wilson, I., Abeyasekera, S., & Kleih, U. (1999). *A Methodological Framework for combining quantitative and qualitative survey methods.* Retrieved January 6, 2007, from http://www.reading.ac.uk/ssc/publications/guides/qqa.pdf

Maslow's hierarchy of needs. (2006, May 24). In Wikipedia, The Free Encyclopedia. Retrieved 17:40, May 25, 2006, from http://en.wikipedia.org/w/index.php?title=Maslow%27s_hierarchy_of_needs&oldid=54970183.

Mason, J. (1996). *Qualitative researching.* London: Sage.

Mason, R. O. (1986, March). Four Ethical Issues of the Information Age. *MIS Quarterly*, pp. 4-12.

Mathers, D., Burford, G., & Martin, A. (Eds.). (1996). Model Code for the Protection of Personal Information. Ontario: Canadian Standards Association.

Michalson, L., Hughes, B., Silber, M., & Finestone, B. (2005, February 25). Guide to privacy Law in South Africa. Retrieved December 16, 2006, from http://www.privacylaw.co.za/docs/Michalsons%20Infosheet%20-%20Guide%20to%20Data%20Privacy%20in%20SA.pdf

Miles, M. B., & Huberman, A. M. (1994). Qualitative Data Analysis: An Expanded Sourcebook. *JOURNAL OF ENVIRONMENTAL PSYCHOLOGY, 14*(4), 336.

Ministry of Health - Link. (n.d.). Retrieved December 13, 2006, from http://www.justice.govt.nz/family/about/links.asp

Model Code for the Protection of Personal Information. (n.d.). Model Code for the Protection of Personal Information. Retrieved November 10, 2006, from http://www.csa.ca/standards/privacy/code/Default.asp?language=English

Moulton, R., Coles, R. (2003). *Applying Information Security governance.* Computers & Security, Elsevier Science. Vol 22 (7), pp. 580-584

Moody, D. (2002, March). *Empirical Research Methods.* Retrieved January 5, 2007, from http://www.idi.ntnu.no/~ekaterip/dif8916/Empirical%20Research%20Methods%20Outline.pdf

My Health My Privacy My Choice. (2006). Retrieved March 16, 2006, from http://www.privacy.gov.au/publications/chib.doc

Myers, M. D. (2006, November 16). *Qualitative Research in Information Systems.* Retrieved January 5, 2007, from http://www.qual.auckland.ac.nz/#Introduction

National Cyber Security Summit Task Force. (2004). *Information Security Governance: A call To action.* Retrieved January 10, 2007, from http://www.cyberpartnership.org/InfoSecGov4_04.pdf

National Privacy Principles. (2001, January 10). Retrieved August 12, 2006, from http://www.privacy.gov.au/publications/npps01.pdf

New Zealand Federation Of Voluntary Welfare Organisations. (n.d.). Retrieved March 16, 2006, from www.nzfvwo.org.nz

Newbury, J. (2001). *75+ Health Assessments: a Randomised Controlled Trial.* Doctoral dissertation, Adelaide University, Adelaide.

NewZealand PrivacyCmr 7 (1996). (1996). CASE NOTE 2049. Retrieved March 22, 2006, from http://www.privacy.org.nz/people/cn2049.html

NSW HEALTH Information Privacy Code of Practice. (1998, December). Retrieved November 08, 2006, from http://www.wsahs.nsw.gov.au/documents/doh/cir99-18.pdf

Oates, B.J. (2006). Researching Information Systems and Computing. Thousand Oaks , CA : Sage

Oberholzer, H.J. G. (2001). A Privacy Protection Model to Support Personal Privacy In Relational Databases. [Abstract]. p35. Retrieved December 21, 2006, from http://etd.rau.ac.za/theses/available/etd-03232004-112242/restricted/msc.pdf

OECD Guidelines on the Protection of Privacy and Transborder Flows of Personal Data. (2006). Retrieved December 20, 2006, from http://www.oecd.org/document/18/0,2340,en_2649_201185_1815186_1_1_1_1,00.html

Organization for Economic Co-operation and Development (OECD) Guidelines on the Protection of Privacy. (2002). Retrieved November 10, 2006, from http://www1.oecd.org/publications/e-book/9302011E.PDF

Orientation to General Practice Kit. (n.d.). Retrieved December 13, 2006, from http://www.rdgp.com.au/docs/FinalOrientationPackage.doc

Orlikowski, W., & Baroudi, J. (1991). *Studying information technology in organizations: Research approaches and assumptions* . Information Systems Research. 2(1), 1–28

PAIA, Government Gazette. (2000, February 3). Retrieved April 13, 2006, from http://www.info.gov.za/gazette/acts/2000/a2-00.pdf

*Pat*el, D. I. (2001-2006). Health Care Services and the HIV / Aids Situations in South Africa. *National Social Science Journal*

Patient Confidentiality and Health Information. (1999, August 16). Retrieved January 7, 2007, from http://www.umdnj.edu/oppmweb/Policies/HTML/HealthServ/00-01-40-60_00.html

Personal Information Protection and Electronic Documents Act. (2000, April 13). Retrieved December 16, 2006, from http://laws.justice.gc.ca/en/P-8.6/text.html

PHR2004 - Commonwealth of Australia. (2004, November 16). Retrieved April 13, 2006, from http://www.privacyinternational.org/article.shtml?cmd%5B347%5D=x-347-83507

Physician Workforce in Canada: Literature Review and Gap Analysis. (2003, January). Retrieved December 14, 2006, from http://www.physicianhr.ca/reports/literatureReviewGapAnalysis-e.pdf

Pipino, L. L., Lee, Y. W., & Wang, R. Y. (2002, April). Data Quality Assessment. Communications of the ACM, 45(4), 212.

Primary care - In Wikipedia, The Free Encyclopedia.. (2006, September 19). Retrieved December 13, 2006, from http://en.wikipedia.org/w/index.php?title=Primary_care&oldid=76549987

Primary Health Organizations. (n.d.). Retrieved December 13, 2006, from http://www.ethnicvoice.co.nz/Primary%20Health%20Organization.htm#Q2

Principles of Information Protection. (2006). Retrieved November 8, 2006, from http://www.ispa.org.za/regcom/privacyindex.shtml

Privacy Act 1993. (2006, October 2). Retrieved December 16, 2006, from http://www.legislation.govt.nz/browse_vw.asp?content-set=pal_statutes

Privacy Act of 1988. (2005, December 2). Retrieved April 2, 2006, from

http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/framelodgm
entattachments/6BD809D508C0AF75CA2570CA0011DAF1

Privacy Act. (1980-81-82-83). Retrieved December 16, 2006, from
http://lois.justice.gc.ca/en/P-21/text.html

*Privacy and Human Rights 2003: An International Survey of Privacy Laws and
developments.* (2003). (1st). U.S.A: Electronic Privacy Information Center and
Privacy International.

Privacy Commissioner of Canada. (2006, September 8). Protection of Personal
Information - Your Responsibilities. Retrieved December 16, 2006, from
http://www.cbsc.org/servlet/ContentServer?pagename=CBSC_ON%2Fdisplay&la
ng=en&cid=1081945203948&c=Regs

Privacy Laws - Overview. (2005, July). Retrieved December 15, 2006, from
http://www.latrobe.edu.au/records/ltuonly/privacy_laws_overview.pdf

Privacy Legislation in Canada. (2004, December 17). Retrieved October 26,
2006, from http://www.privcom.gc.ca/fs-fi/02_05_d_15_e.asp

Private Health Insurance Administration Council. (2006, September 30).
Retrieved December 12, 2006, from
http://www.phiac.gov.au/statistics/membershipcoverage/hosquar.htm

Private Hospitals, Australia. (2006, July 14). Retrieved December 12, 2006, from
http://www.abs.gov.au/AUSSTATS/abs@.nsf/ProductsbyTopic/EEEB143EAFB2
D027CA2568A9001393FA?OpenDocument

Promotion of Access to Information ACT. (2000, February 3). Government
Gazette, 416(20852), 33.

Provincial / Territorial Privacy Laws, Oversight Offices and Government
Organizations. (2004, March 1). Retrieved December 16, 2006, from

http://www.privcom.gc.ca/prov/index_e.asp

Rank Order - Unemployment rate. (2006, December 12). Retrieved December 20, 2006, from https://www.cia.gov/cia/publications/factbook/rankorder/2129rank.html

Recommendations of the Committee on Standardisation of Data and Billing Practices, (2003, February), Retrieved March 23, 2006, from http://www.medicalschemes.com/publications/ZipPublications/Presentations%20And%20Reports/StandardisationManual.pdf

Rindfleisch, T.C. (1997). Privacy Information Technology and Healthcare. ACM Press V 40(8), 92 – 100.

SANHA,Government Gazette. (2004, July). Retrieved March 22, 2006, from http://www.info.gov.za/gazette/acts/2003/a61-03.pdf

Saul, L., Crengle, S., Abdul-Ridha, S., George, I. S., Hague, I., Hancock, S., et al. (2005, July 3). Your guide to New Zealand general practice. Retrieved September 21, 2006, from http://www.rnzcgp.org.nz/membership/docs/nz_guide_general_practice.pdf

Security Guidelines for General Practitioners. (2005, February). Retrieved November 09, 2006, from http://www.gpcg.org.au/index.php?option=com_content&task=view&id=128&Itemid=38

Shaw, N. T. (2005, March 30). *English, American, Australian or Canadian: Facing the same challenges in primary care informatics.* Retrieved October 16, 2006, from http://web.his.uvic.ca/chpstp/RLE01/ShawChallenges.pdf

Shaw, R. L. (2001). Why use interpretative phenomenological analysis in Health Psychology? Health Psychology Update, 10(4), 48-52.

Shaw, R., & Dhillon, C. (2002). *Revalidation in Obstetrics and Gynaecology, Royal College of Obstetricians and Gynaecologists*. London: RCOG Press.

Simons, B. (1997, June 4). *Testimony on medical privacy before the National Committee on Vital and Health Statistics.* Retrieved January 7, 2007, from http://www.acm.org/usacm/privacy/simons_medical.html

Söderlund, N., Schierhout, G., & van den Heever, A. (1998). *Private Health Care in South Africa.* Retrieved December 14, 2006, from http://www.hst.org.za/uploads/files/private_98.pdf

SouthAfrica.info reporter. (n.d.). *Poverty, Aids, TB, malaria.* Retrieved April 13, 2006, from http://www.southafrica.info/ess_info/sa_glance/health/923087.htm

Specialists. (n.d.). Retrieved September 21, 2006, from http://www.southerncross.co.nz/index.cfm?BA6B2FF7-76FC-491C-AA20-B1451E1CFC9B&upage_uuid=DFD6E38B-C6AC-471B-9344-95627FA1A98A&ucircuit_uuid=EC3A66DC-4B87-4EFA-8E7C-5393FF5C2FC2&upage_title=Specialists&upage_template=standard&uhomecircuit=17672C7D-8308-4455-8A90-76A3C206E563

Sperling, P., Parslow, R., Asman, J., Badham, J., Azmi, S., Cass, Y., Murat, F., Rogers, P.,. (1999, December). *Public and Private - In partnership for Australia's Health.* Retrieved September 12, 2006, from http://www.health.gov.au/internet/wcms/publishing.nsf/Content/2A453BB3A6A52328CA256F18005750C0/$File/ocpahfsv4.pdf

Steinecke, R. (2003, September). Guide: Privacy Requirements and Policies for Health Practitioners. Retrieved November 9, 2006, from http://www.ocpinfo.com/client/ocp/OCPHome.nsf/object/PIPEDA+guidelines/$file/PIPEDAHealth_Guide.pdf

Strong, D. M., Lee, Y. W., & Yang, R. Y. (1997, May). Data Quality in Context. Communications of the ACM, 40(5), 103-110.

Tertiary care. (2006, March 12). *Tertiary care - In Wikipedia, The Free Encyclopedia.* Retrieved December 13, 2006, from http://en.wikipedia.org/w/index.php?title=Tertiary_care&oldid=43388911

The Annual Report Privacy Commisioner 1984-85. (1985, July). Retrieved December 17, 2006, from http://www.privcom.gc.ca/information/ar/02_04_01i_e.pdf

The Australian Health System. (2006, March 28). Retrieved March 29, 2006, from
http://www.medicareaustralia.gov.au/about/about_us/aus_health_system.htm

The Canadian Privacy Institute. (n.d.). Retrieved December 16, 2006, from http://www.canadianprivacyinstitute.ca/news.html

The National Strategy for an Ageing Australia. (2000, April). Retrieved December 11, 2006, from http://www.aodgp.gov.au/internet/wcms/publishing.nsf/Content/ageing-ofoa-healthcare-wcchilite.htm-copy3/$FILE/world1.pdf

The South African Yearbook 2004/2005. (2005, October 12). Retrieved October 2, 2006, from http://www.info.gov.za/aboutsa/health.htm

Thomson, C. (2004, January). The Regulation of Health Information Privacy in Australia. Retrieved April 12, 2006, from http://www.nhmrc.gov.au/publications/_files/nh53.pdf

Thomson, C. JH. (2005, September 19). Protecting health information privacy in research: How much law do Australians need? MEDICINE AND THE LAW, 183(6), 315-317.

Transforming the health sector. (2006, October 9). Retrieved December 14, 2006, from http://www.southafrica.info/ess_info/sa_glance/health/923086.htm

Tuyikeze, T. (2006). *A Model for Information Security Management and Regulatory Compliance In SA Health Sector.* Master's thesis, Nelson Mandela Metropolitan University, Port Elizabeth, South Africa.

Tuyikeze, T., Pottas, D. (2005). Information Security Management and Regulatory Compliance in the South African Health Sector. Proceedings of the 5th Annual Information Security South Africa Conference, 29-01 July 2005, Sandton, South Africa, pp. 3-12.

Upfold, C. T., & Sewry, D. A. (n.d.). An Investigation of Information Security in Small And Medium Enterprises (SME'S) in the Eastern cape. Rhodes University, Grahamstown.

von Solms, B., & von Solms, R. (2001). Incremental Information Security Certification. Computers & Security, 20(4), 308-310.

Western, M. C., Dwan, K. M., Makkai, T., & Del Mar, C. (2003, March 3). Computerisation in Australian general practice. *Australian Family Physician, 32*, . Retrieved September 11, 2006, from Regulatory Institutions Network Database.

What do I do If I need Medical Treatment? (n.d.). Retrieved December 13, 2006, from https://www.oshcworldcare.com.au/about_oshc.aspx

Whitman, M. E., & Mattord, H. J. (2003). Principles of Information Security. Canada: Thomson Course Technology.

Why is Privacy so Important. (2005, December 17). Retrieved January 11, 2007, from http://www.symphonious.net/2005/12/17/why-is-privacy-important/

Wiebe, C. (2003, May 19). *Medical Privacy Protections Still Uneven.* Retrieved January 10, 2007, from http://www.medscape.com/viewarticle/455834

Wikipedia contributors. (2006, November 4). Hippocratic Oath, Wikipedia, The Free Encyclopedia.. Retrieved November 08, 2006, from

http://en.wikipedia.org/w/index.php?title=Hippocratic_Oath&oldid=85723191

Wilson, C. (2005, April 1). *Computer Attack and Cyberterrorism: Vulnerabilities and Policy Issues for Congress.* Retrieved January 7, 2007, from http://www.fas.org/sgp/crs/terror/RL32114.pdf

World Health Organization Statistical Information System. (2003). *Core Health Indicators.* Retrieved January 9, 2007, from http://www3.who.int/whosis/core/core_select.cfm

World Health Organization. (2003a). *Australia - Health Expenditures.* Retrieved December 20, 2006, from http://www.who.int/countries/aus/en/

World Health Organization. (2003b). *Canada - Health Expenditure.* Retrieved December 20, 2006, from http://www.who.int/countries/can/en/

World Health Organization. (2003c). *New Zealand - Health Expenditure.* Retrieved December 20, 2006, from http://www.who.int/countries/nzl/en/

World Health Organization. (2003d). *South Africa - Health Expenditures.* Retrieved December 20, 2006, from http://www.who.int/countries/zaf/en/

Your Guide to the CSA's Privacy Code. (2006). Retrieved December 17, 2006, from http://www.media-awareness.ca/english/resources/educational/handouts/privacy/csa_privacy_code_guide.cfm

Appendix A

THE STATUS OF PRIVACY LEGISLATION IN THE SOUTH AFRICAN HEALTH SECTOR

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ABSTRACT

In general, the requirements pertaining to the privacy of patient information are controlled through the adoption of legislation by the governing body of a country. Compared with developed nations South Africa has limited legislation or governance policy to help enforce privacy in the health sector. Conversely, Australia and New Zealand have of the most advanced legislative frameworks when it comes to the privacy of patient health information.

The objective of this paper is to determine the status of privacy legislation in the South African health sector, as compared with the best (Australia / New Zealand) and a third-world country we consider as a peer in this sector (India). This is done from an information security governance perspective rather than a legal perspective. The status of the relevant South African legislation will be highlighted and recommendations made towards improvement.

KEY WORDS

Health sector, privacy legislation, health information privacy

THE STATUS OF PRIVACY LEGISLATION IN THE SOUTH AFRICAN HEALTH SECTOR

1 INTRODUCTION

Whereas there are various initiatives to standardize the storage, processing and use of electronic patient information in the South African health sector, the sector is fragmented through the adoption of various approaches on national, provincial and district levels. Divergent IT systems are used in the public and private health sectors ("*Recommendations of the Committee on …*", 2003). Furthermore, hospitals and general practitioners in some parts of the country still use paper as a primary means of documentation and storage. Nonetheless, the use of computerized systems is increasing, even in the most remote rural areas. This leads to the exposure of patient information to various threats that are perpetuated through the use of information technology.

Irrespective of the level of technology adoption by health care providers, the security and privacy of patient information remains of critical importance. For example, the disclosure of patient information can have dire consequences for a patient. In general, the requirements pertaining to the privacy of patient information are controlled through the adoption of legislation by the governing body of a country. Compared with developed nations South Africa has limited legislation or governance policy to help enforce privacy in the health sector. Conversely, Australia and New Zealand have of the most advanced legislative frameworks when it comes to the privacy of patient health information. In this paper, the Australian and New Zealand health sector and the legislation they have in place to ensure the privacy of health information will be investigated. New Zealand began implementing laws to deal with information in the health sector in the early 90's before any other country had any comparable framework for the health sector. Many other countries have drawn upon their pioneering legislation and today have similar frameworks in place.

In addition to the afore-mentioned countries, the health sector and privacy legislation as adopted in India will be investigated. The health sector in India is comparable to that of South Africa. They have a worsening AIDS problem and the country's infrastructure is similar to our own. The country also has a very large gap between rich and poor. India's increasing interaction with western companies, specifically in the IT sector has forced them to begin implementing standards and

policies to ensure compliance with international best practices. This provides a suitable base for comparison with SA.

The objective of this paper is to determine the status of privacy legislation in the South African health sector, as compared with the best (Australia / New Zealand) and a third-world country we consider as a peer in this sector (India). This is done from an information security governance perspective rather than a legal perspective. The status of the relevant South African legislation will be highlighted and recommendations made towards improvement.

2   OVERVIEW OF THE ECONOMY AND HEALTH SECTOR

2.1   Australia

2.1.1   Economy

Australia has had one of the better performing economies in the world during recent times (Australia Today, n.d.).It has a high-growth, low-inflation, low interest rate economy (Economy of Australia, Wikipedia contributors) [a]. With its abundant physical resources, Australia has had a high standard of living since the nineteenth century. It has made a significant investment in social infrastructure, including education, training, health and transport (Australia Today, n.d.).

Australia has one of the more stable economic, political and social environments in the region, which has led to increased investment from overseas in recent years. As a result of major diversification in Australia's export base, Australia is now not only a commodity exporter; it also has sophisticated manufacturing and service industries (Australia Today, n.d.).

The Australian economy performed solidly in 2002-03. In contrast with weaker global markets, Australia's economy was one of the strongest in the developed world, recording 2.7 per cent growth. The outlook remains positive for increased growth in future. A recent OECD (Organisation for Economic Co-operation and Development) study suggests that Australia is ranked as one of the six fastest-growing successful new economy traders ("OECD Economic Outlook", n.d.). This means that Australia has a strong telecommunications infrastructure, business environment and human resource development (*"Definition of The New Economy"* n.d.). Australian investment in telecommunications as a percentage of GDP is the third highest of OECD countries ("OECD Economic Outlook", n.d.).

2.1.2 Health Sector

The Australian Government sets national health policies and subsidizes health services provided by State and Territory governments and the private sector (The Australian Health, n.d.). It subsidizes health care through two national subsidy schemes, Medicare and Pharmaceutical Benefits Scheme (PBS). They are funded in part through a tax levy of 1.5% of income. These schemes finance expenses for services provided by doctors and optometrists, and for most prescription medications ("Australia's …", 2004). Total expenditure on health by government and the private sector currently accounts for about 9.5 per cent of Australia's gross domestic product (GDP) ("*Health Care in Australia*", n.d.).

Under Medicare (government scheme), all permanent Australian residents are entitled to free public hospital care when choosing to be public patients. The Australian Government provides around two-thirds (68 per cent) of public sector expenditure on health while state, territory and local governments account for around one third (32 per cent) ("*Health Care in Australia*", n.d.).

Private hospitals provide about a third of hospital beds in Australia. Roughly half of all Australians are covered by private health insurance. Private sector expenditure on health, accounts for around one-third of total health expenditure in Australia. The rest, almost two-thirds, is paid for out of the individuals own pocket, while the remainder is private health, and other insurance funds' expenditure ("*Health Care in Australia*", n.d.).

2.2 New Zealand

2.2.1 Economy

Over the last two decades, the New Zealand economy has gone from being one of the most regulated in the OECD to one of the most deregulated ("*New Zealand, Financial…*" n.d.).

The New Zealand economy expanded rapidly in the mid-1990s. Over the latter half of 1997 and early 1998, however, the economy slipped into recession with the twin "shocks" of the Asian economic downturn and a summer drought occurring at the same time as the economy was slowing ("*New Zealand, Financial…*" n.d.).This recession did not last long and began to recover through the second half of 1998 and 1999. The economy grew 4.4% in 1999 and 3.5% in 2000 ("*New Zealand, Financial…*" n.d.).

In the context of international developments, the economy performed well in 2001, and growth accelerated in 2002 and became more broad-based. Economic growth eased in the first half of 2003 due to a number of temporary setbacks. These included travel disruptions and uncertainty due to the war in Iraq, the outbreak of Severe Acute Respiratory Syndrome (SARS) and the effect of dry weather on hydro-electricity production and farm output. Despite these setbacks, growth remained on the increase with GDP of 3.4% recorded for 2003 (*"New Zealand, Financial…" n.d.*).This strength continued into 2004 with annual average growth of 4.6% recorded in the 12 months to September 2004, making New Zealand one of the faster growing economies in the OECD ("OECD Economic Outlook", n.d.).

New Zealand has strong trade relations with Australia. They have agreed on a partnership which allows for free trade in most goods and services. This gives businesses operating from New Zealand free access to more than 22 million extra people (Economy of New Zealand, Wikipedia contributors) [b] .

2.2.2   Health sector

New Zealand's health system is predominantly public funded. In 2002, public sector funding accounted for 78 percent of all health expenditure in New Zealand. Other chief contributors are private insurance and out-of-pocket payments ("An Overview of the Health…" n.d.). In 2003/04, government spent just over $8.0 billion on health, 20 percent of total government-budgeted expenditure ("An Overview of the Health…" n.d.).

Most health care in New Zealand is provided without charge. In addition, individuals may also use private health insurance if they wish. Most private sector funding of health comes from out-of-pocket expenditure by private individuals. This private funding, accounted for 16.8 percent of total health expenditure in 2000/01, while health insurance accounted for 6.2 percent. Between 1989/90 and 2000/01 the percentage of health spending financed privately rose 22.1 percent to 23.3 percent of total health funding. ("An Overview of the Health…", n.d.).

2.3   India

2.3.1   Economy

India's GDP at factor cost has been rising steadily since 1990-91. It is estimated to have accelerated by 6.6 per cent to US $82 billion in 1995-96 from 0.8 per cent in 1991-92. GDP growth for 1997-98 has been estimated at 5.1 per cent (US $83 billion

at 1980-81 prices) and for 1998-99 at 4.9 per cent. The contribution of the industry and services sectors to GDP has been showing a steady increase over the years. If GDP is calculated in terms of purchasing power of Rupee, then the actual GDP of India in the year 1996 was projected to be nearly US $1.5 trillion ("*India Core: Information...", n.d*). Currently it is the second fastest growing major economy in the world, with a GDP growth rate of 8.1% at the end of the first quarter of 2005–2006. (Economy of India, Wikipedia contributors) [c].

India operates one of the largest telecom networks in Asia and the 12th largest in the world. Fully automatic International Subscriber Dialing (ISD) service is available to almost all the countries. The total number of stations connected to National Subscriber Dialing (NSD) is over 13,220 and this is increasing fast. The present tele-density is about 1.72 per hundred persons. In the field of International communications, progress has been made by the use of satellite communication and submarine links ("*India Core: Information...", n.d.*). With this rapidly expanding infrastructure, technology usage is increasing at a rapid rate.

The awareness of the benefits of economic reforms has gained currency among the Indian public following the achievements of macro economic stability, accompanied by economic growth ("*India Core: Information...", n.d.*).

2.3.2   Health Sector

India has a vast health care sector, estimated at Rp 126.27 billion in 1998 (*Health, Background & Perspective,* Srinivasan S). This health care sector is roughly divided into a public and private sector. Public health services are made up of primary health centres, community health centres and district hospitals. In the urban areas, this consists of urban family welfare centres for contraceptives, urban health posts and hospitals (*Health, Background & Perspective,* Srinivasan S).

Infrastructure is mainly in the private sector, which provides about 80 per cent of health services in the country. The role played by non-governmental organizations (NGO's) working in health is also considerable. India is believed to have one of the largest private health sectors in the world. Varying estimates place private spending at between 75 and 85 per cent of health care expenditure (*Health, Background & Perspective,* Srinivasan S).

In 1991, the Indian government's health care expenditure was less than two per cent of its gross domestic product, and just 21.7 per cent of total health expenditure -- one of the lowest proportions in the world. Over the years, it has made further

cutbacks in its commitment to public health services. Currently, total expenditure on health is 5.2 per cent of the GDP, but of this, only 13 per cent is spent by the government. Health accounts for only 3.9 per cent of total public expenditure. (Healthcare in India, Wikipedia contributors) [e] .

"HIV affected 3.5 million Indians in 1998, according to UNAIDS estimates, though the overall prevalence of HIV in India is still low. It has also been argued that the HIV epidemic should be seen in the context of other conditions such as diarrhea, respiratory infections and tuberculosis, which have a higher morbidity and mortality." (*Health, Background & Perspective,* Srinivasan S).

2.4   South Africa

2.4.1   Economy

South Africa's economy has been on an upward turn since September 1999 - the longest period of economic growth in the country's recorded history. During this upswing the annual economic growth rate averaged 3.5 (*South Africa: economy overview,* SouthAfrica.info reporter).

According to the South African Reserve Bank, there is no sign of this period of expansion ending. Gross domestic product (GDP) growth was running at an annualized 4.8% in the second quarter of 2005 (compared to 3.7% in 2004 and 2.8% in 2003).(The South African Reserve Bank, 2006). Consumer inflation has been on a downward trend since 2002, when consumer prices increased to an average 9.3% following the September 11 tragedy in New York. Consumer inflation averaged 6.8% in 2003 and 4.3% in 2004 - compared to 9.8% in 1994 (*South Africa: economy overview,* SouthAfrica.info reporter).

At the same time, prudent fiscal management has seen South Africa's budget deficit come down from 5.1% of GDP in 1994 to 2.3% of GDP in 2004. In the first quarter of 2005, this figure fell to 1.6%, with the SA Revenue Service collecting nearly US$3.5-billion more than expected. (The South African Reserve Bank, 2006)

South Africa is the economic powerhouse of Africa, with a GDP four times that of its southern African neighbors and comprising around 25% of the entire continent's GDP. The country leads the continent in industrial output (40% of total output) and mineral production (45%) and generates most of Africa's electricity (over 50%) (*South Africa: economy overview,* SouthAfrica.info reporter).

South Africa's economy has two sides to it. The one "first economy" comprised of sophisticated financial and industrial sectors. This has developed alongside the "second economy", a largely underdeveloped informal sector (*South Africa: economy overview,* SouthAfrica.info reporter). While SA's financial and industrial "first economy" has an established infrastructure and economic base with great possibility for growth and development, its informal "second economy" presents an untapped potential and a developmental challenge for the country (*South Africa: economy overview,* SouthAfrica.info reporter).

2.4.2   Health Sector

South Africa's health system consists of a large public sector and a smaller but rapidly expanding private sector. Health care varies from the most basic primary health care, offered free by the state, to highly specialized health services offered in the private sector for those who can afford it (*Health Care in South Africa,* n.d.).

The public sector is under-resourced and over-used, while the rapidly increasing private sector, run mostly along commercial lines, caters to middle- and high-income earners who tend to be members of medical schemes (18% of the population), and to foreigners looking for top-quality surgical procedures at affordable prices(*Health Care in South Africa,* n.d.). Because of the money involved in the private sector, it also attracts most of the health professionals.

Although the state contributes about 40% of all expenditure on health, the public health sector is under pressure to deliver services to about 80% of the population. Despite this, most resources are concentrated in the private health sector, which sees to the health needs of the remaining 20% of the population (*Health Care in South Africa,* n.d.). Public health uses around 11% of the government's total budget, which is allocated and spent by the nine provinces (*Health Care in South Africa,* n.d.).

A district-based health system is being developed to ensure local-level control of public health services, and to standardize and co-ordinate basic health services around the country to ensure that health care is affordable and accessible to everyone (*Health Care in South Africa,* n.d.).

The country continues to suffer from a tremendous "brain drain" of South African doctors who are highly sought after in countries like Britain and Canada because of the high standard of training and the cutting-edge medical experience they receive here ("*Health Care Services and...",* Patel, D. I.).

To tackle some of the resource and personnel shortages facing the public sector, partnerships between the public and private sectors are being forged. Some private hospitals are now offering beds and providing medical care to public sector patients. Post graduate teaching facilities are being offered to university medical faculties in an effort to stem the flow of health care professionals leaving the country ("*Health Care Services and...", * Patel, D. I.).

"Aids and other poverty-related diseases like tuberculosis and cholera are placing a tremendous strain on South Africa's health care system, eroding attempts to improve the general health of South Africa's people" (Poverty, Aids, TB, malaria, SouthAfrica.info reporter).

HIV/Aids poses the principal threat by far, with a projected six million South Africans expected to die from Aids-related diseases over the next 10 years. Government and NGO's have begun with massive awareness programs, to educate the people on preventative measures. The roll-out of Anti-Retrovirals has also begun, but only at certain pilot centers (*HIV and AIDS in South Africa,* Berry).

In 1999 the minister of health adopted the health sector strategic framework, 1999-2004. This outlined 10 priorities for health sector for this time period. In 2004 a new set were identified. This new set focuses on the promotion of building a developmental state to enhance service delivery. The new set, when compared with previous frameworks, focuses more on the promotion of good governance and a healthy lifestyle. Another priority worth mentioning is one stating that legislation needs to be prepared and implemented (Andrews & Pillay, n.d.).

2.5 Comparison

From the facts looked at above, it is clear that Australia and New Zealand have more developed health sectors and economies when compared with either India or South Africa. This can be attributed to better governance and much larger budgets with which to work. Furthermore, the problems facing third world countries such as poverty and HIV/AIDS, are not highly prevalent in Australia and New Zealand. Their economies are very transparent and appear not to be dominated by politics.

Australia and New Zealand are perfectly situated - they are surrounded by ocean, therefore they can control who and whom enters their borders, making them more stable. The business partnerships formed with China, Japan, Korea and other economic giants in the region ensure business growth. All these factors are very appealing to any investor and ensure the economic dominance of both countries. Their health

sectors are well developed and health care is free for any citizen of the respective countries. The unemployment rates of both countries are also very low.

South Africa and India, being 3rd world countries, have to deal with poverty and all the problems that come with it. India has had to begin upgrading its aging infrastructure to handle the rigors of doing modern business. South Africa has seen similar problems emerging with for example the recent power outages in the Western Cape. The largely uneducated poor population in both countries are also being affected by the increased prevalence of HIV/AIDS, although currently the problem seems to be far greater in South Africa. South Africa's "first" economy is doing very well, but its fruits do not seem to be filtering down to the majority of the population.

South Africa and India are both in the process of upgrading their telecommunications infrastructure to world-class standards. SA has just announced the SNO (Second National Operator) to compete with the current parastatal, which holds the monopoly.

India has a very large private health sector, as there is not much funding for public health. In SA, the situation is reversed; the public health sector however is in a bad state of disrepair and in need of funding.

In order to gather an idea of how the countries compare from an economic point of view, the following comparison of GDP per capita (2002 – 2006) is provided.

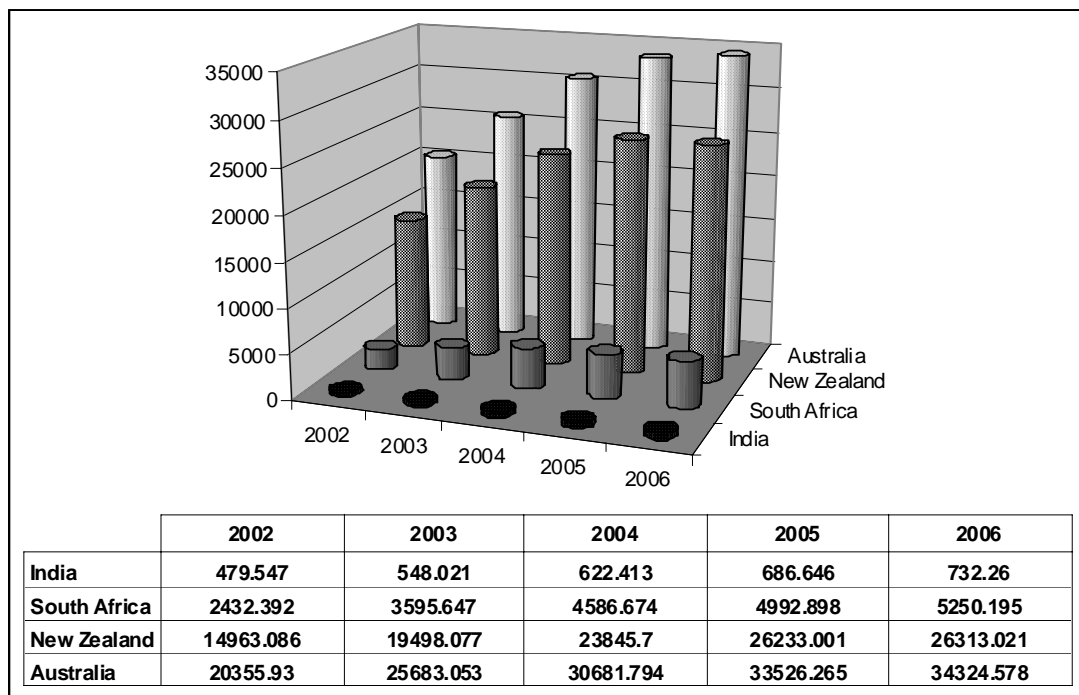|	2002	2003	2004	2005	2006
India	479.547	548.021	622.413	686.646	732.26
South Africa	2432.392	3595.647	4586.674	4992.898	5250.195
New Zealand	14963.086	19498.077	23845.7	26233.001	26313.021
Australia	20355.93	25683.053	30681.794	33526.265	34324.578

Figure 1: Comparison of GDP per capita (US dollars), 2002 - 2006

The data depicted in Figure 1, was extracted from the International monetary fund website. The information is valid as of September 2005 (*WORLD ECONOMIC OUTLOOK Database,* 2005).

From the table above it can be seen that the GDP per capita for Australia and New Zealand is much higher than either South Africa or India. This clearly points out the superior economies of these countries. As for South Africa and India it can be seen that they have grown over time and are improving their GDPs along with the more developed nations.

3   OVERVIEW OF LEGISLATION AFFECTING PRIVACY

3.1   Australia

In 1988, the Privacy Act was enacted in Australia. The *Privacy Act 1988* includes ten National Privacy Principles or NPPs. These principles provide a minimum standard that health service providers have to abide by when they collect, use, disclose and store health information (*My Health My Privacy My Choice, 2006*).

These standards include what happens to your health information, choice and control over your information, the right to view health information and if an individual deems it erroneous, has the right to change it. The individual should also be informed why and when a health service provider may need to share your information (*My Health My Privacy My Choice, 2006*).

The act provides for the protection of personal information in the hands of federal government agencies (*My Health My Privacy My Choice, 2006*). In December 2000, the Privacy Amendment (Private Sector) Act 2000 (the Amendment Act) was passed by federal Parliament and extended coverage of the Act to private sector organizations ("PHR2004 - Commonwealth", 2004). The NPPs only apply to 'organizations' - Section 6C of the Privacy Act states that entities which are State or Territory authorities or prescribed instrumentalities of a State or Territory (which include local councils) are not organizations (*Privacy Act 1988).* They are therefore exempt from the NPP's.

Regulatory schemes differ from state to state in Australia. Below is a conveniently presented table (Table 1) showing all the schemes.

Table 1: Summary of regulatory schemes in Australia (Thomson, 2004)

Jurisdiction	Public Sector	Private Sector (Generally)	Private Sector (Health)
Commonwealth	Privacy Act 1988	Privacy Act 1988	Privacy Act 1988
Australian capital Territory	Privacy Act 1988 Health Records (Privacy and Access) Act 1997	Privacy Act 1988	Health Records (Privacy and Access) Act 1997 Privacy Act 1988
New South Wales	Privacy and Personal information Protection Act 1998 Health Records and Information Privacy Act 2002 (in force 2004)	Privacy Act 1988	Health Records Information Privacy Act 2002 (in force 2004) Privacy Act 1988
Northern Territory	Information Act 2002	Privacy Act 1988	Privacy Act 1988
Queensland	Information Standards 42 (general) & 42A (health)	Privacy Act 1988	Privacy Act 1988
South Australia	Information Privacy Principles	Privacy Act 1988	Privacy Act 1988
Tasmania	Information Privacy Principles 1997	Privacy Act 1988	Privacy Act 1988
Victoria	Information Privacy Act 2000 Health Records Act 2001	Privacy Act 1988	Health Records Act 2001 Privacy Act 1988
Western Australia	Health Act 1911 section Criminal Code sections	Privacy Act 1988	Privacy Act 1988 Confidentiality of Health Information Committee

3.2   New Zealand

New Zealand was one of the first countries in the world to draft health information privacy laws. These health laws drew upon the already in force, Privacy Act of 1993 (*"New Zealand Federation Of…"*, n.d.). The Privacy act governs the responsibilities towards the collection, storage or disclosure of personal information about individuals

(*"New Zealand Federation Of…"*, n.d.). The Health Laws that were based upon this act became known as the "Health Information Privacy Code". This code applies to any organization that provides health or disability services to sick or disabled citizens. These services include non-disclosure of information about the health of individuals (*"New Zealand Federation Of…"*, *2006*). The code recognizes a number of situations when patient details may have to be disclosed in the public interest (*CASE NOTE 2049*, NewZealand PrivacyCmr 7).

3.3 India

In 2000, India enacted The Information Technology Act. Unfortunately, the Act does not address the issue of health information privacy specifically, although there are provisions relating to breach of confidentiality and privacy (*Information Technology Act 2000 (Section 72))* ("*The Information Highway…*" Verma, S. K.).

3.4 South Africa

In South African Healthcare, organisations are required to comply with (inter alia) the South African National Health Act (SANHA) (*SANHA, Government Gazette*), the Electronic Communications Act (ECTA) (*Electronic Communications and Transactions Act, 2002*) and the Promotion of Access to Information Act (PAIA) ("PAIA, Government", 2000).

Only parts of the ECT act address the protection of the privacy of information. Chapter 8 of the act deals with the Protection of Personal Information and Chapter 9 with the Protection of Critical databases.

According to the SANHA, every patient is entitled to the confidentiality of health information, including health status, treatment or stay in a private or public establishment. This information is only to be disclosed if the user consents in writing or if a law or a court order authorizes the disclosure (*SANHA, Government Gazette*).

The PAIA on the other hand covers legislation pertaining to information access. It provides persons access to their personal information held by private bodies, the correction of personal information held by governmental or private bodies and to choose when to disclose that information. ("Privacy And ", 2003). Personal information according to PAIA does include any information relating to the medical history of a specific individual ("PAIA, Government", 2000).

In 2002, the South African Law commission began drafting a national Data Privacy Act for South Africa. The Act is not law yet and it still has to go through a long review process (Michalson & Hughes, 2005).

4   PRIVACY LEGISLATION - HOW DOES SOUTH AFRICA COMPARE

The state of privacy legislation varies in the countries discussed in Section 3. New Zealand on the one hand seems to have the most progressive laws (from a health information privacy perspective); their laws are specific to health information. The law also is valid for the whole country. No other laws can undermine it (eg state laws).

Australia also has very advanced legislation when it comes to health information privacy, but they have a more convoluted situation. There are many laws specific to each state that affect health information privacy. It has been argued that this makes the retrieval of information in Australia, for research purposes, a very complicated process, as the researchers have to deal with every state separately and differently (Thomson, 2005). With this in mind, it can be concluded that it may impact patients and health care workers who move around the country as well, as they would have to deal with unique requirements in each state.

India on the other hand does not have any legislation pertaining to information privacy in place. It has only recently enacted the Information Technology Act, but this does not address health information privacy specifically. Similarly, South Africa does not have a law specifically addressing health information privacy, but it does have others that address information privacy in general. Currently health information privacy in South Africa resorts under these laws.

The establishment of a single all-encompassing piece of legislation that deals specifically with the privacy of health information in South Africa may not be too far-off. Currently the Data Privacy Act is still under review in South Africa. This does not deal specifically with health information, but can be considered comparable to the Privacy Act 1988 of the commonwealth of Australia or New Zealand's' Privacy Act of 1993. Once this has been implemented it would provide a good foundation for any future health information privacy laws to be based on.

However, considering the legal provisions for information privacy in the various countries, it becomes clear that South Africa should pay attention to some lessons learnt. Currently there are the ECT act and PAIA, but they do not cover health information specifically. Legislators should consider and learn from Australia and New Zealand, when deciding on how this should be done. Importantly, there must be

awareness of and planning around how new legislation will affect existing acts. One of the objectives should be to eliminate unnecessary redundancies in the various legislations.

The Australian approach should be avoided, as they have too many laws. This would cause too much confusion, and might contribute to fragmenting the health sector when it comes to privacy. In particular, South Africa should avoid the situation in Australia, where the privacy framework surrounding health information was restricting health and medical research and health care delivery (Thomson, 2004). South Africa should definitely implement one piece of legislation for the whole country, the way New Zealand did. This gives a clear message to the international community about the standards that SA has laid down concerning privacy.

Below is a table summarizing the current trends of privacy legislation in the countries discussed.

Table 2: Summary of privacy provision per country

	New Zealand	**Australia**	**India**	**South Africa**
Privacy legislation (General)	Yes	Yes	No	No (Pending)
Privacy legislation (Health Sector)	Yes	Yes	No	No
Health legislation fragmented (e.g. per state, province)	No	Yes	N/A	N/A
Other legislation affecting privacy	Yes	Yes	Yes	Yes

5 CONCLUSION

This paper showed that Australia and New Zealand have a much better situation concerning both their general economies and health sectors. This allowed them to focus on factors like the development of their privacy legislation and to conform better to international best practises. India and South Africa, having less developed infrastructure and health care facilities coupled with the prevalence of HIV/AIDS and

other mostly third world problems, have been preoccupied with solving them. This has allowed for the neglect of legislation that governs health information.

Legislation in New Zealand and Australia is at the forefront in the developed world, especially New Zealand. They have one law that governs health privacy for the whole country. Australia on the other hand has a plethora of health privacy laws, but they are fragmented between the different states. This can cause problems with information exchange between states and standardization. India and South Africa do not have any specific health information privacy laws in place, but they do have laws that are non-health related that regulate the privacy of information. There has, however, been a move towards bringing the legislation up to speed with international standards, especially in South Africa.

In the near future, South Africa must ensure that a comprehensive privacy framework is put in place to regulate health information privacy. This should be considered a necessity rather than an option.

6   REFERENCES

Adelman, I., & Yeldan, A. E. (1999, May). *THE END OF THE DEVELOPMENTAL STATE?* Retrieved April 3, 2006, from http://are.berkeley.edu/~adelman/acrisis.pdf

An Overview of the Health and Disability Sector in New Zealand. (n.d.). Retrieved March 15, 2006, from http://www.moh.govt.nz/moh.nsf/0/5A93582A381ECC1CCC256B3B0007D7AD/$File/OverviewHealthandDisabilitySector.pdf

Andrews, G., & Pillay, Y. (n.d.). *Priorities for the national health system (2004-2009).* Retrieved April 10, 2006, from http://www.hst.org.za/

Australia Today. (n.d.). Retrieved March 15, 2006, from http://www.skmconsulting.com/NR/rdonlyres/851FBAD1-66D8-4118-A0A5-55239453FB8C/3978/AustraliaTodayD2Aug04.pdf

Australia's Health 2004. (2004). Retrieved April 13, 2006, from http://www.aihw.gov.au/publications/aus/ah04/ah04-c01-040804.pdf

Berry, S. (2004, September). *HIV and AIDS in South Africa.* Retrieved March 12, 2006, from http://www.avert.org/aidssouthafrica.htm

"Definition of The New Economy". (n.d.). Retrieved April 7, 2006, from http://economics.about.com/cs/economicsglossary/g/new_economy.htm

Electronic Communications and Transactions Act. 2002. (n.d.). Retrieved March 12, 2006, from http://www.acts.co.za/ect_act/

Health Care in Australia. (n.d.). Retrieved March 10, 2006, from http://www.dfat.gov.au/facts/health_care.html

Health Care in South Africa. (n.d.). Retrieved March 22, 2006, from http://www.southafrica.info/ess_info/sa_glance/health/health.htm

India Core: Information On Indian Infrastructure and Core Sectors. (n.d.). Retrieved March 15, 2006, from http://www.indiacore.com/overview-main2.html

INFORMATION TECHNOLOGY ACT, 2000 (Section 72). (2000, June 9). Retrieved March 22, 2006, from http://www.indialawinfo.com/bareacts/ift.html

Michalson, L., & Hughes, B. (2005, February 25). *Guide to Data Privacy Laws in SA.*

Retrieved April 10, 2006, from http://www.michalson.com/docs/Michalsons%20Infosheet%20-%20Guide%20to%20Data%20Privacy%20in%20SA.pdf

My Health My Privacy My Choice. (n.d.). Retrieved March 16, 2006, from http://www.privacy.gov.au/publications/chib.doc

New Zealand Federation Of Voluntary Welfare Organisations. (n.d.). Retrieved March 16, 2006, from www.nzfvwo.org.nz

New Zealand, Financial And Economic Overview. (n.d.). Retrieved March 15, 2006, from http://www.nzdmo.govt.nz/nzefo/2004/nzefo-04.pdf

NewZealand PrivacyCmr 7 (1996). (n.d.). *CASE NOTE 2049.* Retrieved March 22, 2006, from http://www.privacy.org.nz/people/cn2049.html

OECD Economic Outlook No. 78 - Country summaries. (n.d.). Retrieved April 2, 2006, from http://www.oecd.org/document/52/0,2340,en_2649_201185_19726196_1_1_1_1,00.html

PAIA, Government Gazette. (2000, February 3). Retrieved April 13, 2006, from http://www.info.gov.za/gazette/acts/2000/a2-00.pdf

Patel, D. I. (n.d.). *Health Care Services and the HI V/AIDS Situations in South Africa.* Retrieved March 22, 2006, from http://www.nssa.us/27_1/27-1%2015%20PatelHealth.htm

PHR2004 - Commonwealth of Australia. (2004, November 16). Retrieved April 13, 2006, from http://www.privacyinternational.org/article.shtml?cmd%5B347%5D=x-347-83507

Privacy Act 1988. (n.d.). Retrieved April 2, 2006, from http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/framelodgmentattachments/6BD809D508C0AF75CA2570CA0011DAF1

Privacy And Human Rights 2003. (2003). Retrieved April 13, 2006, from http://www.privacyinternational.org/survey/phr2003/countries/southafrica.htm

PROMOTION OF ACCESS TO INFORMATION ACT. (n.d.). Retrieved March 16, 2006, from http://www.polity.org.za/html/govdocs/legislation/2000/act2.pdf

Recommendations of the Committee on Standardisation of Data and Billing Practices, (2003, February), Retrieved March 23, 2006, from http://www.medicalschemes.com/publications/ZipPublications/Presentations%20And%20Reports/StandardisationManual.pdf

SANHA,Government Gazette. (2004, July). Retrieved March 22, 2006, from http://www.info.gov.za/gazette/acts/2003/a61-03.pdf

SouthAfrica.info reporter. (n.d.). *Poverty, Aids, TB, malaria.* Retrieved April 13, 2006, from http://www.southafrica.info/ess_info/sa_glance/health/923087.htm

SouthAfrica.info reporter. (n.d.). *South Africa: economy overview.* Retrieved March 13, 2006, from http://www.southafrica.info/doing_business/economy/econoverview.htm

Srinivasan, S. (n.d.). *Health, Background & Perspective.* Retrieved March 12, 2006, from http://www.infochangeindia.org/HealthIbp.jsp

The Australian Health System. (2006, March 28). Retrieved March 29, 2006, from http://www.medicareaustralia.gov.au/about/about_us/aus_health_system.htm

The New Australia. (n.d.). Retrieved March 10, 2006, from http://www.dfat.gov.au/facts/new_aust.html

The South African Reserve bank. (n.d.). Retrieved April 5, 2006, from http://www.reservebank.co.za/

Thomson, C. (2004, January). *The Regulation of Health Information Privacy in Australia.* Retrieved April 12, 2006, from http://www.nhmrc.gov.au/publications/_files/nh53.pdf

Thomson, C. JH. (2005, September 19). Protecting health information privacy in research: How much law do Australians need? *MEDICINE AND THE LAW, 183*(6), 315-317.

Verma, S. K. (2001, August). *The Information Highway: A Threat to Medical Confidentiality.* Retrieved March 18, 2006, from http://www.indianpediatrics.net/aug2001/aug-884-888.htm

[a]Wikipedia Contributors. (2006, April 6). *Ecomony of Australia, Wikipedia the free Encyclopedia.*
Retrieved April 8, 2006, from http://en.wikipedia.org/w/index.php?title=Economy_of_Australia&oldid=47177841

[b]Wikipedia contributors (2006). (n.d.). *Economy of New Zealand. Wikipedia, The Free Encyclopedia.* Retrieved April 7, 2006, from http://en.wikipedia.org/w/index.php?title=Special:Cite&page=Economy_of_New_Zealand&id=44848791

[c]Wikipedia contributors (2006). (n.d.). *Economy of India. Wikipedia, The Free Encyclopedia.* Retrieved March 22, 2006, from http://en.wikipedia.org/w/index.php?title=Economy_of_India&oldid=46585383

[d]Wikipedia contributors (2006). (n.d.). *Economy of South Africa. Wikipedia, The Free Encyclopedia..* Retrieved April 2, 2006, from http://en.wikipedia.org/w/index.php?title=Economy_of_South_Africa&oldid=46027033

[e]Wikipedia contributors (2006). (n.d.). *Healthcare in India. Wikipedia, The Free Encyclopedia.* Retrieved April 6, 2006, from http://en.wikipedia.org/w/index.php?title=Healthcare_in_India&oldid=37832902

WORLD ECONOMIC OUTLOOK Database. (2005, September). Retrieved March 16, 2006, from http://www.imf.org/external/pubs/ft/weo/2005/02/data/dbginim.cfm