NURSING STRATEGIES TO FACILITATE SELF-MANAGEMENT IN PERSONS LIVING WITH DIABETES MELLITUS TYPE 2

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Submitted in fulfillment of the requirements for the degree DOCTOR PHILOSOPHIAE in the Faculty of Health Sciences at the Nelson Mandela Metropolitan University 2011

Promoter: Prof RM van Rooyen Co-Promoter: Dr E Ricks
“Learn as if you are to live forever,
Live as if you are to die tomorrow”

Archbishop of Seville, circa 570-636

Favourite quote of Elliot P. Joslin, MD
Pioneer in diabetes education and
initiator of Diabetes Nurse Educators
ACKNOWLEDGEMENTS

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**ABSTRACT**

The growing pandemic of diabetes mellitus (DM) is continuing to spread around the world with developing countries being most vulnerable. Diabetes mellitus is the direct cause of 5% of deaths worldwide at present, with an expected increase of 50% in the next 10 years. Diabetes mellitus was virtually unknown in Africa at the start of the 20th century but the incidence is expected to increase by 80% by 2025. South African estimates indicate that at present there are up to four million people living with DM in South Africa, with an expected rise of 25% by 2020.

If DM is not adequately controlled, life-threatening complications ensue, resulting in financial, physical and emotional costs both for people living with the condition and for their families. There is also a great financial burden on the state, both directly due to the cost of providing health care and indirectly due to loss of productivity and a reduced tax base. Global initiatives against DM include the Diabetes Strategy for Africa compiled by the International Diabetes Federation and World Health Organization.

There are several forms of DM with Type 2 being the most common with an estimated 95% of cases. Optimal glycaemic control is essential for the management of DM, potentially allowing the course of the disease to be slowed or halted.

The previous medical model of management of chronic disease has changed to an empowerment approach where the person living with the condition is a partner in the management process. This is particularly true of DM where all aspects of life are affected by the condition.

During Phase One of this study, a qualitative, exploratory, descriptive, contextual approach was utilized to explore and describe the experiences of persons living with DM and of diabetes nurse educators who assist them in Nelson Mandela Bay. During Phase Two, a conceptual framework was created and utilized to develop strategies which professional nurses may use in facilitating self-management by persons living with DM.

Persons living with DM experience a definite initial experience on diagnosis of DM but gradually gain an acceptance and acknowledgment of their condition. They have definite views on the concept of self-management and experience both positive and negative factors influencing self-management. They also have definite ideas on how professional nurses may assist them in achieving self-management. These findings were confirmed...
by the experiences of the diabetes nurse educators who formed the second group of participants in this study.

The ACE approach to self-management of DM consists of an Action Strategy, a Coordination Strategy and an Education Strategy. The ACE approach makes use of grand and functional strategies implemented on the macro (national), meso (provincial) and micro (local) levels to enable the professional nurse to assist persons living with DM to achieve self-management of their condition. Grand strategies need to be implemented on a macro or meso level to enable the professional nurse to function effectively on a micro level.

Assisting the patient has to go beyond merely improving knowledge about the condition but has to include individual goal setting as well as problem solving skills and coping strategies as part of a therapeutic relationship between the professional nurse and the person living with DM. The level of personal responsibility achieved by persons living with DM is affected by the memes which they hold regarding their level of health and their ability to address any barriers to self-management which they may experience. Making use of the process of the therapeutic relationship, the professional nurse is able to positively influence the memes held by persons living with DM and assist them in achieving a greater level of personal responsibility. The therapeutic relationship is potentially influenced by all three of the strategies described above.

This study provides insight into the experiences of persons living with DM and of the diabetes nurse educators who assist them in Nelson Mandela Bay. Recommendations regarding the implementation of a National Diabetes Policy on a macro level are made, as well as recommendations for nursing practice, education and research. The strategies which were evaluated by an Expert Panel provide a tool for the professional nurse to use while assisting persons living with DM by facilitating the growth of personal responsibility leading to self-management.
KEYWORDS

Diabetes Mellitus type 2
Diabetes self-management
Diabetes self-care
Diabetes Nurse Educators
Memes
Nelson Mandela Bay
Personal responsibility
Professional nurses
Social marketing
ACRONYMS USED IN THIS STUDY

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<td>ANC</td>
<td>African National Congress</td>
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<td>African Union</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
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<td>CDE</td>
<td>Centre for Diabetes and Endocrinology</td>
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<td>DAWN</td>
<td>Diabetes Attitudes, Wishes and Needs study</td>
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<td>DESSA</td>
<td>Diabetes Education Society of South Africa</td>
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<td>DM</td>
<td>Diabetes Mellitus (refers to Diabetes Mellitus type 2 for the purpose of this study)</td>
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<td>Diabetes Nurse Educator</td>
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<tr>
<td>DOH</td>
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<tr>
<td>GEMS</td>
<td>Government Employee Medical Scheme</td>
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<td>GP</td>
<td>General Practitioner</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>ICN</td>
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<td>IDF</td>
<td>International Diabetes Federation</td>
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<td>LIMS</td>
<td>Low Income Medical Scheme</td>
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<td>MODY</td>
<td>Maturity Onset Diabetes of the Young</td>
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<td>MPP</td>
<td>Mass Participation Programme</td>
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<td>NGO</td>
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<td>NHI</td>
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<td>PMB</td>
<td>Prescribed Minimum Benefits</td>
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<td>RSA</td>
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<td>SANC</td>
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<td>SEMDSA</td>
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<td>SMBG</td>
<td>Self-monitoring of blood glucose</td>
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- Nurses should acknowledge a patient's achievements when small gains in self-management are achieved
- Nurses should practise patient advocacy
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- Nurses should ensure that culturally sensitive information is made available

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• Nurses must educate themselves on all aspects of DM management and related pharmacology
• Nurses should be constantly aware of the financial implications of DM and refer patients to appropriate support agencies where possible
• Medical practitioners should be encouraged to obtain further education on DM
• Diabetes Nurse Educators would like to have facilities made available to allow them to educate the patients and the public
• All nurses must be empathetic towards the patient when counseling particularly with regard to personal problems experienced by the patient
• Nurses must be aware of the importance of referring patients for psychological assistance when required
• Formal diabetic education programmes should be made available at university level
• Communities must be made more aware of the implications of diabetes
• Diabetes Nurse Educators wish to advocate for diabetes to receive the same recognition as other chronic diseases

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<tr>
<td>1.2</td>
<td>6</td>
</tr>
<tr>
<td>2.1</td>
<td>40</td>
</tr>
<tr>
<td>4.1</td>
<td>175</td>
</tr>
<tr>
<td>4.2</td>
<td>177</td>
</tr>
<tr>
<td>4.3</td>
<td>193</td>
</tr>
<tr>
<td>4.4</td>
<td>200</td>
</tr>
</tbody>
</table>

1.1 Production and action of insulin in the body
1.2 Sites of potential major complications due to Diabetes Mellitus
2.1 Summary of Research Design and Method
4.1 Cogitation map for development of conceptual framework
4.2 Role of the professional nurse in relation to self-management of Diabetes Mellitus type
4.3 Process of the therapeutic relationship between the professional nurse and person living with Diabetes Mellitus type 2
4.4 Cogitation map on conceptual framework to facilitate self-management in persons living with DM
CHAPTER ONE

OVERVIEW OF THE STUDY

"Diabetes is a remarkable affliction, not very frequent among men, being a melting down of the flesh and limbs into urine – life is short, disgusting and painful, thirst unquenchable, death is inevitable" 

Areteaus the Cappadocian (2nd century AD) 
(Thomas, 2000)

1.1 INTRODUCTION AND BACKGROUND

Diabetes Mellitus, a life-threatening medical condition which is currently reaching pandemic proportions around the world, is the direct cause of significant health and economic problems for both governments and the individual. Diabetes Mellitus is not a new phenomenon as it has been known from early recorded history. The first available description of Diabetes Mellitus, which dates from 1552 BC, was recorded on a papyrus by an Egyptian physician named Hesy-Ra who lived during the 3rd Dynasty (Canadian Diabetes Association: 2007).

Diabetes Mellitus (which will be referred to in this study as DM) has been a significant health problem through the centuries as there was no hope for a cure or for relief from the debilitating symptoms. Researchers had little knowledge of the complexity of the condition. For example, in the 5th century BC the Greek physician, Galen, whose work formed the basis of medical knowledge in the known world for over a thousand years, described DM as a condition of the kidneys (King and Rubin, 2003: 1091; Los Angeles Chinese Learning Centre: History of diabetes). It was only in the 16th century AD that researchers were able to prove that the deductions Galen derived from his meticulous research were often incorrect (Eknoyan and Nagy, 2005: 224; Random History: 2009).

During the 19th and 20th centuries, the knowledge base of medicine increased dramatically as medical research was conducted enthusiastically by many
physicians and scientists. Their discoveries were often helpful in furthering knowledge about the causes and management of DM. The discovery of the role of insulin by Banting and Best in the 1920s was historically the most significant event in the approach to diabetes management, giving hope to all those living with the condition (Canadian Diabetes Association: 2007).

1.1.1 A brief overview of Diabetes mellitus

Diabetes mellitus is a group of metabolic disorders characterized by raised blood glucose levels resulting from insulin deficiency or insulin resistance (Smeltzer and Bare, 2004: 1150, Dunning, 2003: 1). The following figure illustrates the production and action of insulin in the body.

![Figure 1.1 Production and action of insulin in the body](image)

**Figure 1.1 Production and action of insulin in the body**

The most common forms of DM are Type 1 and Type 2. Type 1 diabetes was formerly known as insulin-dependent diabetes while Type 2 diabetes was known
as non-insulin dependent diabetes (Smeltzer and Bare, 2004: 1150). The older World Health Organization (WHO) classification of DM into insulin-dependent (IDDM) and non-insulin dependent (NIDDM) was changed by the American Diabetes Association (ADA) in consultation with WHO in 1997-1998 (Levene and Donnelly, 2008: 6). Other types of diabetes such as gestational diabetes and maturity onset diabetes of the young (MODY) also occur. Diabetes mellitus may also be linked to endocrine conditions, genetic syndromes, infections (e.g. congenital rubella, cytomegalovirus), pancreatic conditions or it may be drug or chemical induced (for example by steroids) (Drury and Gatling, 2005: 4).

The following table (Dunning, 2003: 2, Levene and Donnelly, 2008: 6) lists the different forms of DM according to the ADA and WHO classification of 1997-1998:

**Table 1.1 1997-1998 ADA and WHO classification of Diabetes Mellitus**

<table>
<thead>
<tr>
<th>Type 1</th>
<th>Type 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Immune-mediated DM from autoimmune destruction of the pancreatic beta cells</td>
<td>• Diseases associated with relative insulin deficiency and insulin resistance</td>
</tr>
<tr>
<td>• Idiopathic DM – has no known aetiology</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impaired glucose homeostasis</td>
</tr>
<tr>
<td></td>
<td>• Impaired fasting glucose – fasting plasma glucose higher than normal but lower than the diagnostic criteria</td>
</tr>
<tr>
<td></td>
<td>• Impaired glucose tolerance – plasma glucose higher than normal and lower than the diagnostic criteria after a glucose tolerance test</td>
</tr>
<tr>
<td></td>
<td>Gestational DM</td>
</tr>
<tr>
<td></td>
<td>• Occurring in pregnancy</td>
</tr>
<tr>
<td></td>
<td>• Includes gestational impaired glucose tolerance</td>
</tr>
<tr>
<td></td>
<td>Other specific types</td>
</tr>
<tr>
<td></td>
<td>• Genetic defects of beta-cell function e.g. MODY</td>
</tr>
<tr>
<td></td>
<td>• Genetic defects in insulin action</td>
</tr>
<tr>
<td></td>
<td>• Diseases of the exocrine pancreas e.g. cancer and pancreatitis</td>
</tr>
<tr>
<td></td>
<td>• Endocrine disorders e.g. Cushing’s disease and acromegaly</td>
</tr>
<tr>
<td></td>
<td>• Drug- or alcohol-induced</td>
</tr>
<tr>
<td></td>
<td>• Infections</td>
</tr>
<tr>
<td></td>
<td>• Uncommon forms of immune-mediated diabetes</td>
</tr>
<tr>
<td></td>
<td>• Other genetic syndromes sometimes associated with diabetes</td>
</tr>
</tbody>
</table>

In this research study, the researcher will concentrate on patients living with Diabetes mellitus type 2 which is the most common form of diabetes as 95 per
cent of people living with DM have type 2 (Barnes, 2004: 3). Although the condition cannot be cured, the progression of the disease process in DM type 2 together with the risk of developing life-threatening complications may be limited by lifestyle changes in some people, allowing the patient to enjoy a productive life (Drury and Gatling, 2005: 14). Adopting lifestyle changes as for diabetic patients in those patients at risk and with impaired glucose homeostasis may also prevent or delay the onset of DM type 2.

Diabetes mellitus is diagnosed by means of blood tests which should be done if the patient complains of symptoms such as tiredness, frequency of urination, excessive thirst, weight loss or blurred vision (Catsicas, 2009: 12; Dunning, 2003: 8). Screening may also be done in persons who are in at-risk groups such as:

- Age > 55 years
- High-risk ethnic groups
- Polycystic disease of the ovary
- Previous gestational diabetes
- Family history of diabetes
- People with symptoms
- The elderly
- Those with known diabetes complications such as cardiovascular and renal disease.

The most accurate measure of the presence of DM is by fasting blood tests. Urine tests and fingerprick (capillary) blood tests are often used as screening methods, particularly in developing countries. However, if the person being assessed has an elevated reading, a fasting blood test must be done for accurate diagnosis. Those persons who may have borderline readings may be required to undergo an oral glucose tolerance test (OGTT) to assess their risk for diabetes-related complications (Dunning, 2003: 8).

The following table (Catsicas, 2009: 10) shows the criteria used for the medical diagnosis of DM:
Table 1.2  Medical diagnosis of Diabetes Mellitus

<table>
<thead>
<tr>
<th>Medical status</th>
<th>Fasting (mmol/l)</th>
<th>2-hour glucose load (mmol/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal</td>
<td>&lt; 5.6</td>
<td>&lt;7.8</td>
</tr>
<tr>
<td>Diabetes</td>
<td>&gt;7</td>
<td>&gt;11</td>
</tr>
<tr>
<td>Impaired glucose tolerance</td>
<td>-</td>
<td>7.8-11</td>
</tr>
<tr>
<td>Impaired fasting glucose</td>
<td>6.1-7</td>
<td>-</td>
</tr>
</tbody>
</table>

Persons living with DM are dealing with a chronic condition which has an extremely high rate of morbidity and mortality. Because of the nature of the condition where all parts of the body may potentially be affected, patients with DM who do not achieve optimal glycaemic control have a significant chance of developing other conditions and complications such as nephropathy, retinopathy, neuropathy and coronary artery disease (American Diabetes Association, 2002: 215; Henrichs, 2009: 3). They are also at greater risk for lower limb amputations, which as most of those living with DM are found in developing countries, have the potential of catastrophic consequences for the individual, the family of the person living with DM and for the states which have to provide for their citizens (Henrichs, 2009: 3). The following figure from the Diabetes Atlas (International Diabetes Federation, 2009a) illustrates areas of potential complications.
Living with DM may have a severe impact on the lifestyle enjoyed by any individual as it affects every aspect of the life of both the patient and those around him (National Institutes of Health, 2000; Drury and Gatling, 2005: 172). Persons living with DM can also expect a “substantially reduced life expectancy” as a result of the progression of the disease process (Hjelm, Mufunda, Nambozi and Kemp, 2003: 426). Diabetes mellitus is a progressive disease which has the potential of negatively affecting virtually all the systems of the body and causing debilitating and life-threatening complications if blood glucose levels are not
controlled. It was estimated that during 2010 more than 10,000 people a day around the world – a total of 4 million in 12 months - will die from diabetes-related complications (Mbanya, 2009: 2).

1.1.2 Growing incidence of Diabetes mellitus worldwide

Available medical research resources (together with the resulting publicity) are perceived by many to be focused mainly on infectious diseases such as malaria, tuberculosis (TB) and HIV/AIDS which create so much devastation and heartbreak particularly in developing countries. However, there is a steadily increasing rise in the global rate of non-infectious disease with DM playing a significant role in this growth. Diabetes mellitus is the direct cause of 5% of deaths around the world at present. This figure is expected to rise by more than 50% in the next 10 years (World Health Organization, 2007).

The present significant increase in the global incidence of non-infectious diseases with high morbidity and mortality rates has far-reaching consequences for health care services around the world. Worldwide, 60% of deaths are caused by chronic disease with an expected rise to 73% of all deaths by 2020 (World Health Organization, 2010). In South Africa, deaths related to chronic diseases rose from 565 daily in 2000 to 666 daily in 2006, a rise which is expected to increase exponentially in the future (Health Systems Trust, 2006).

The cost of treating these diseases and their complications, together with the fact that people affected may become unable to contribute to the work force due to continuing ill health, has significant economic implications for governments worldwide. Families may also be condemned to perpetuation of poverty if the breadwinner becomes disabled and unable to provide an improved lifestyle, especially for those living in developing countries. However, DM is one of the chronic diseases in which utilisation of careful self-management strategies may delay the onset of complications and limit the progression of the disease. It is therefore possible to reduce the economic burden for both patient and state. It is estimated that up to 80% of DM type 2 is “preventable by adopting a healthy diet and increasing physical activity” in some individuals (Health Systems Trust, 2007).
In 1998, the World Health Organization estimated that 150 million people were suffering from DM globally and predicted a global increase of 122% in the number of diabetic patients between 1995 and 2025 with up to 170% increase in developing countries around the world (King, Aubert and Herman, 1998: 1417; Rotchford and Rotchford, 2002: 60). By 2007, the estimated incidence was 246 million people globally, comprising more than “5% of the entire global adult population”, and the International Diabetes Federation expected an incidence of over 380 million people by 2025, indicating a higher rate of increase than previously predicted (Health Systems Trust, 2007; Lenz, 2007). The 4th edition of the IDF Diabetes Atlas, launched at the 2009 World Diabetes Congress in Montreal, showed that the worldwide figure of people currently living with DM is 285 million with an expected increase to 440 million by 2030 if nothing is done to reverse or halt this trend (Mbanya, 2009: 2).

The rising incidence of DM cannot be blamed on any single particular cause as it is a result of the complex relationship between genetic, social and environmental factors in both affluent and developing countries (Diabetes – epidemic out of control, 2007: 30). Decreasing physical activity, obesity, an ageing population and greater ethnic diversity has been shown to have an influence on the rise in the incidence of DM in developed countries such as the USA (Safran, Mukhtar and Murphy, 2003: 58). These trends have also been reported in other countries, particularly in areas where the higher incidence of an ageing population has been shown to result in a higher prevalence of DM (Tannis, 2004). Developing countries are particularly affected with seven of the ten countries with the highest incidence of DM falling into this category (Diabetes – epidemic out of control, 2007: 30). India and China lead the top ten countries with the largest number of people diagnosed with DM (Diabetes – epidemic out of control, 2007: 30). In 2005 it was noted that, if the current trends continue, 25% of the Mexican population would be diabetic within the next 10 years (Guthreau and Chávez, 2005: 38). However, the small Pacific island state of Nauru has the dubious distinction of having the highest prevalence of DM with a third of the population being diagnosed with the condition (Diabetes – epidemic out of control, 2007: 30).
1.1.3 Diabetes mellitus in Africa

Diabetes mellitus was virtually unknown in Africa at the start of the 20th Century. However, Rotchford and Rotchford (2002: 60) found that there is a higher incidence of DM in Africa than was previously thought, with an estimate of 8% in sub-Saharan Africa. The Diabetes Atlas 2nd edition of the International Diabetes Federation showed an expected estimated escalation of up to 20% in African countries by 2025 (International Diabetes Federation, 2003). However, further research reported at the 19th World Diabetes Congress in Cape Town in 2006 changed the estimate to an increase of 80% by 2025 (Mash, De Vries and Abdul, 2007: 44). This has severe economic implications for the region as "overburdened health care systems are ill-equipped to diagnose the disease and the majority of the poor cannot afford the cost of treatment" (Tsiko, 2006).

The health care systems in most African countries are burdened by a range of communicable and non-communicable diseases, the management of which drains the available public health care resources. Most of the health care budgetary resources of these countries are focused on life-threatening infectious diseases such as tuberculosis, malaria and HIV/AIDS which are rife throughout Africa (De Clerck, 2005: 12). Drugs used in the medical management of other diseases affecting the population may have unexpected effects. The antiretroviral drugs used in the management of HIV/AIDS may have a direct influence on the rising incidence of DM in the region. The action of these drugs may “contribute to dyslipidaemia and insensitivity to insulin” which in turn increases the risk of cardiovascular disease and DM (Van Vugt, Hamers, Schellekens, De Wit and Reiss, 2007: 24).

There is a further link with the spread of HIV/AIDS together with high levels of unemployment resulting in a negative attitude in people as their hope for future well-being is slowly eroded. Poverty and lack of information resources together with the environment in which they live lower the morale of people and encourage “negative lifestyle choices” including a lowering of moral standards in individuals, assisting the spread of HIV/AIDS (Pullen, 2006: 37). The same negative lifestyle choices may also result in a sedentary lifestyle with poor nutrition choices thus pre-disposing these people to the development of DM.
The level of poverty and the after-effects of famine experienced by people living in the developing countries in Africa also may play a role in the rising incidence of DM. A malnourished mother will be likely to give birth to a low birth weight baby who may be born with insulin resistance. Researchers from Denmark suggest that a child born to a mother living under these circumstances will be more susceptible to developing DM even when later living in improved conditions with a regular and adequate food supply (World Diabetes Foundation, 2009). This is a significant issue to consider when planning and implementing feeding programmes for the poor in developing countries.

In 2010, Kenya became the first African country to implement a National Diabetes Strategy with the assistance of the World Diabetes Foundation (World Diabetes Foundation, 2010a). Ghana and Uganda are in the process of developing National Diabetes Strategies, also with the support of the World Diabetes Foundation (World Diabetes Foundation, 2010a). Implementation of these strategies is expected to assist in maximizing the use of scarce health care resources for maximum effect, prevention or delay of onset of the condition in those at risk as well as reduction in complications and improved quality of life in those already affected (World Diabetes Foundation, 2010a).

1.1.4 Diabetes mellitus in South Africa

In South Africa in 2000 there were estimated to be 814 000 people with DM with a projected figure of 1 286 000 by 2030 (World Health Organization, 2007). Some estimates indicate that at present there are up to four million people living with DM in South Africa and this is expected to rise by 25% by 2020 (Living with diabetes, 2008: 58). A high percentage of these patients are undiagnosed and more than 90% have DM type 2 (Nevin, 2007: 11). According to Statistics South Africa, DM is the “6th leading cause of natural death while HIV disease was the tenth” (Statistics South Africa, 2007). HIV/AIDS and DM showed the highest increase as cause of death between 2004 and 2005 (Statistics South Africa, 2007).
As a result of the rise in the incidence of DM, and of the cost to the economy of the potential complications of the condition, national guidelines for the management of DM type 2 were introduced in South Africa in 1997 and have been updated several times since then (Leuner, 2000: 410). The national guidelines, which are based on international research which resulted in the creation of global guidelines for the management of DM, emphasise the importance of self-management in obtaining an optimal level of health in patients living with the condition (Leuner, 2000: 410). Unfortunately, there are a number of barriers to the implementation of the guidelines. These barriers include “insufficient dissemination and a lack of monitoring and assessment” (Mayosi, Flisher, Lalloo, Sitas, Tollman and Bradshaw, 2009).

In a survey on chronic diseases, it was shown that DM is second (19.9%) on the list of “other non-communicable diseases” which are causes of “years of life lost” in South Africa (Bradshaw and Steyn, 2001: 51). If the principles of self-management as described in the national guidelines are applied effectively, the impact of DM on “years of life lost” can be reduced which will also have a positive effect on the incidence of other related conditions such as cardiovascular and renal disorders which may occur as complications of poorly managed DM. An improvement in the statistics related to people suffering from DM and for the conditions related to it has positive implications for the economy of South Africa as the burden of disease on the economy will be eased.

1.1.5 Management of Diabetes mellitus

There has been a significant change in emphasis in the approach taken for the management of chronic diseases such as DM in the past 20 years. The previous medical model of management of chronic diseases such as DM was authoritative in approach with the medical practitioner as an authority figure, dictating the terms of treatment to the patient. The medical model of management concentrates on clinical issues but does not recognize the impact of diagnosis on the life of the patient (Meetoo, 2004: 649). The main focus of management was to “get patients to change” (Funnell and Anderson, 2004: 124). However, the
medical model of management has not been effective as the rate of complications continues to increase with diabetic patients not achieving their treatment goals.

The patient confronted with the reality of dealing with the diagnosis of DM will find that decisions have to be made regarding lifestyle choices such as dietary management, glucose monitoring, exercising, management of acute complications and normal health management. The patient is now given the responsibility of making the correct choices in controlling DM (Funnell and Anderson, 2004: 124). In order to achieve optimal glycaemic control, the patient has to accept the responsibility for the management of the condition, potentially allowing the course of the disease to be slowed or halted (Bonds, Carvacho, Bell, Duren-Winfield, Andersen and Goff, 2004). Patients must be made aware that DM cannot be cured but has to be managed optimally in order to prevent life-threatening complications (Nevin, 2007:12). It is possible for the diabetic patient to enjoy a healthy lifestyle in spite of the condition if certain limitations are accepted. DM requires a high level of self-management along with intensive medical care to reduce the incidence of complications (American Diabetes Association, 2002: 214).

In order for optimal self-management to occur, effective patient education is essential. A good rapport between the patient and the primary diabetes nurse educator will assist in encouraging optimal adherence to self-management measures introduced during education sessions, resulting in good glycaemic control (Bonds et al, 2004; Rollnick, Mason and Butler, 2003: 45). Good communication and empathy between the parties together with a high level of trust have been shown to be essential (Bonds et al, 2004; Anderson and Funnell, 2005: 40).

However, non-compliance with treatment regimens is a common trait among patients particularly if there is little understanding of the underlying disease process (Richman, 2002: 102). Making use of the Empowerment Model in diabetes patient education will assist in informing patients and “help patients make decisions about their care and obtain clarity about their goals, values and motivations” and thus enhance the level of self-management achieved (Funnell
and Anderson, 2004: 124). The patient takes a leading role in deciding on specific goals and the means of their implementation.

For a diabetic patient, self-management forms the core of any effective treatment regime. In order to achieve optimal self-management, the patient has to implement a number of strategies which include the responsibility to monitor blood glucose levels, adjust the diet appropriately, adjust medication doses according to requirements and exercise regularly (Sigurdardottir, 2005: 301). Self-management is the total responsibility of the patient in every way and rests on the characteristics of choices, control and consequences (Anderson and Funnell, 2005: 13). To facilitate self-management effectively, holistic care is essential right from the time of diagnosis. Physical, emotional and spiritual aspects have to be taken into account when informing the patient of his condition for the first time and in educating the patient living with DM. The quality of life experienced by the diabetic patient is directly linked to the degree of self-management achieved. If patients are empowered to deal with their condition in a positive manner, they will experience a greater control of their lives and a higher level of quality of life (Henshaw, 2006: 1).

There are several factors which may affect the patient’s perception of control of their own lives and the quality of life achieved. Patients often have difficulty in dealing with the variety of lifestyle changes which are required in order to achieve optimal glycaemic control and to prevent complications (Bonds et al, 2004). There are both internal and external factors which may contribute to this perception. Examples of internal factors include various psychosocial aspects affecting patients. Patients may regard the necessity for lifestyle changes as an invasion in their lives which they find difficult to deal with (Bonds et al, 2004). Some patients may feel that they do not have the education, knowledge, resources or ability to deal with the situation adequately (Bonds et al, 2004).

Several external factors may affect the ability of diabetic patients to achieve optimal self-management of their condition. An example is the level of communication skills demonstrated by health care professionals which can play an important role in the empowerment of the diabetic patient. If the patient does
not feel a bond with the physician and/or diabetes educator, achieving an adequate level of self-management may be difficult (Bonds et al, 2004).

Family support is very important due to the nature of the condition with the possibility of life-threatening complications being experienced by the patient living with DM. If the patient becomes hyper- or hypo-glycaemic, for example, it is imperative for family members to be aware of the steps which they should take to rectify the situation and to obtain medical assistance as soon as possible. Regular mealtimes are another area in which family support could be important. Family members may be unwilling or unable to give the required support for various reasons. In society generally, there has been a breakdown of the traditional extended family system which would have previously provided the patient with a possible support system. In many cases, family members who would previously have been expected to provide support may now be living in other towns or even other countries and therefore be unable to assist.

1.1.6 Role of medical aid schemes/Health insurance in diabetes care

Financial aspects are very relevant in the creation of possible barriers to optimal self-management for many patients. Diabetes mellitus can be expensive to manage optimally with the blood glucose testing, medication and diet required. All the complications of DM which may occur are expensive to treat and may also affect the earning capacity of the patient who may become disabled for a short period or permanently (Drury and Gatling, 2005: 39). This may result in severe financial hardship for the patient as well as family and dependants, particularly if they have no access to medical aid schemes or other forms of medical insurance.

Another example of how financial issues may affect the patient living with DM is whether treatment is managed in the private or public health sector. If the patient receives treatment in the private sector, the affordability or otherwise of medical aid schemes or insurance and the limitations imposed by a particular scheme will affect the level of management experienced by the patient. According to Distiller (2004: 16), 20% of the population of South Africa is treated in the private sector. Medical aid/insurance has traditionally only been available to people in high or
middle income groups in South Africa (Dreschler and Jutting, 2005). The creation of Low Income Medical Schemes (LIMS) for the benefit of people in lower socio-economic groups has, however, increased the number of members who are now able to access private health care (Mafu, 2007). The LIMS schemes have a much lower premium than the traditional medical aid schemes which has made them more attractive and attainable for lower income groups.

Medical aid schemes in South Africa play a pivotal role in the level of treatment received by patients in the private sector (Williams, 2006). The individual medical aids have different rules for the various packages of medical care they offer the public. Diabetes mellitus is one of the 25 chronic conditions named as Prescribed Minimum Benefit (PMB) conditions in the Medical Schemes Act 131 of 1998 (Council for Medical Schemes [SA]). As a PMB condition, all treatment required for the management of the condition must be funded by the medical aid. However, there is no obligation on the medical aid to provide the latest treatment or technology (Du Preez, 2009). The patient may be covered by a medical aid option that is not adequate for his needs as a diabetic patient and may not be in a financial position to cover the shortfall (Williams, 2006). This can lead to erratic glycaemic testing, for example, if the patient is unable to finance an adequate number of testing strips or lancets for regular testing. Efficacy of prescribed medication may also be affected if the patient decides to lower the dosage in order to make the medication last longer (Williams, 2006). The patient may also not be able to afford access to medical services if the limit of their medical aid plan is exceeded during the financial year. This will affect the continuity of treatment as they may not be in a financial position to cover the required shortfall particularly if they have other conditions not covered by PMBs.

A Preferred Provider Network of diabetes centres around South Africa has been formed where facilities are available to deliver minimum services to members of certain medical aid schemes but not all patients have access to this service (Distiller, 2004: 16). At present, there are over 230 Centres for Diabetes and Endocrinology around South Africa, providing holistic management of DM (De Mendonca, 2009: 91; Centre for Diabetes and Endocrinology (CDE), 2009a).
Financial aspects also affect the type of diet enjoyed by the patient. If patients are in a lower socio-economic group, they may not be able to afford the healthy diet required for effective management of DM. This is a particular problem for the patient living with DM if their medical aid scheme does not allow for the services of a dietitian.

The public sector forms the largest health care sector in the country with 80% of the public attending public hospitals or clinics (Distiller, 2004: 16). In the public sector, political and economic factors such as lack of human and material resources prevent many patients from receiving optimal care and medical supplies (Cullinan, 2004; BMJ, 2000: 78). Staff shortages occur at all levels and access to required medical supplies can be hampered due to budgetary constraints. Budgetary constraints also limit the number and type of medications available as well as supplies of items such as lancets and glucose testing strips.

However, as previously mentioned, there is a rise in the number of people, particularly in the lower economic sector, obtaining access to private medical care in South Africa because of increasing access to low income medical aids. The number of patients able to access private health care will double from 7 million in a short space of time, according to estimates published by Netcare, the largest private hospital group in South Africa (Mafu, 2007). This rapid growth in the patient base for the private sector has serious implications as the quality of care has to be maintained for all patients.

The proposed National Health Insurance (NHI) will require closer co-operation between private and public health care providers in order to provide more cost-effective and efficient health care services for all South African citizens. One of the intentions of the proposed NHI scheme is to channel funds from the private health care sector to assist public health care facilities which are cash strapped and struggling (Sidley, 2000: 78). The final proposal has not yet been published but the aim of the new policy is to replace the present dual private and public health care system (Philp, 2009). The provisions of the new policy document, as shown in an earlier draft, include removing tax deductions from medical aid payments and shifting them to the new health insurance, registration for all South
Africans at a health care provider nearest their home and mandatory payments from all those in formal employment as well as from their employers into a central fund (Philp, 2009). Some have suggested that the scheme is too ambitious in its present format and that the proposed initial roll out period of five years is unrealistic with a period of fifteen years appearing more realistic (Philp, 2009). Consultation between policy-makers and international health experts in order to seek ways to improve quality of care as part of the introduction of the NHI has commenced with an international workshop on quality improvement (National Department of Health, 2010). Whatever takes place during the consultative process, the proposed NHI policy will require greater co-operation between the public and private health care sectors in the interest of the patients served.

Unfortunately, whether the patient is treated in the private or public sector, financial factors have a significant influence on the quality of the care provided. Patients with chronic conditions such as those with DM will be at particular risk for the development of complications if quality of care deteriorates and therefore must be empowered to take a leading role in the management of their own condition (Epping-Jordan, Pruitt, Bengoa and Wagner, 2004: 299).

Diabetes mellitus, therefore, is a serious life-threatening condition which is rapidly growing in incidence worldwide. The risk of complications due to bad management or late diagnosis is extremely high. The complications found in patients with DM are potentially life-threatening and extremely expensive to treat, both for the person living with the condition, their families and for the government which has to ensure that health care services are available to all. If, however, the condition is managed well, the course of the condition and the onset of complications may be delayed or prevented. In order for this to happen, the person living with the condition has to take full personal responsibility for his/her own care. The professional nurse is in a position to provide the necessary assistance to the person living with DM for self-management strategies to be implemented.
1.2 PROBLEM STATEMENT

Patients diagnosed with DM will face an uncertain future if they are unable to obtain assistance in learning about the principles of self-management. They require education on all aspects of DM in order to be fully empowered to manage their own health. Emotional and physical effects of the condition on the patient and family members need to be addressed in a practical manner in any educational intervention (Weiss, 2007: 17).

The professional nurse has a potentially valuable role to play as diabetes educator. Studies which were reviewed by Renders, Valk, Griffin, Wagner, Van and Assendelft (2001: 1983) showed that a greater involvement by professional nurses in diabetes management had a positive effect on the outcomes of management programmes. There is a shortage of health professionals in all categories but professional nurses form more than 60% of health care workers in South Africa (Muller, 1998: 122; Roodt and Eddy, 2010: 6). Statistics published by the South African Nursing Council (SANC) in 2008 show that the ratio of population per qualified nurse is 451:1 nationally, while in the Eastern Cape the ratio is 497:1 (South African Nursing Council, 2008). The growing shortage of nurses is experienced on a global as well as a local basis. Media reports have depicted a bleak picture in local health care services (SA’s nurses in crisis with patient ratios well over twice the norm, 2005: 2; Van Rooyen, 2005: 4; De Kock and Butler, 2009: 1). However, the National Department of Health has implemented a Nursing Strategy for South Africa, which will serve as a framework for the introduction of nursing reforms designed to address this issue (National Department of Health, 2008: 7).

Nursing staff are dealing with the majority of the large number of patients being seen at hospitals and clinics around South Africa. Because of the nature of work done by nurses, they experience more patient contact than other health professionals. Patients often feel more at ease when speaking to nurses than to other health professionals about problems and symptoms they experience so the professional nurse is in an ideal position to educate patients on all aspects of DM, and particularly on the importance of self-management (Strauss, 2007: 2). This was recognized by Dr Joslin, who initiated the role of diabetes teaching nurse or
nurse educator, when he stated that “A well trained nurse is of more value than the patient's doctors” (Joslin Diabetes Center, 2008c).

Persons living with DM who do not achieve optimal levels of self-management run the risk of developing complications which are potentially life-threatening and will adversely affect their quality of life (Drury and Gatling, 2005: 38). These complications include nephropathy, retinopathy, cardiovascular conditions, neuropathy and lower limb amputations. In order to prevent these complications from occurring and to ensure a good quality of life, the patient should be empowered to take control of their own condition with “personal and individualized goal setting and teaching problem solving techniques and coping strategies” (Henshaw, 2006: 3).

Although the concept of patient empowerment is recognized as being effective in achieving optimal self-management for patients with DM, studies have shown that possible barriers to empowerment exist, both internal and external, and that adequate empowerment of patients may not be taking place (Henshaw, 2006: 4). Internal barriers may include factors such as a feeling of powerlessness or lack of motivation while external barriers include factors such as cost of medication and foodstuffs, cultural traditions or lack of opportunity to exercise (Chlebowy, Hood and LaJoie, 2010: 2). Making use of adequately trained and skilled professional nurses as patient educators will help in facilitating self-management skills in these patients.

1.3 RELEVANCE OF THE STUDY

The fight against the diabetes pandemic is receiving attention at the highest level internationally. World attention was focused on the importance of the fight against diabetes by the United Nations Resolution on Diabetes passed in 2006 (United Nations General Assembly, 2006; International Diabetes Federation, 2007a). In 2010, the United Nations General Assembly passed resolution 265, “Prevention and control of non-communicable diseases” including DM, which is intended to
make chronic non-communicable diseases a “global priority among international leaders” (Alleyne, Stuckler and Alwan, 2010: 15).

Acknowledgement of the potentially disastrous effects of the pandemic and the lack of sufficient management was made when the Diabetes Strategy for Africa was launched at the 19th World Diabetes Congress held in Cape Town in December, 2006 (International Diabetes Federation, World Health Organization – African Region and African Union, 2006). All the negative effects of the pandemic experienced worldwide are felt in the countries of Africa such as the rising mortality rate due to complications and their economic effects. As so much poverty is prevalent in Africa, governments and individuals experience difficulty in finding the means to manage the condition. The launch of the Diabetes Strategy for Africa was aimed at raising the consciousness about the condition amongst policy creators both in Africa and in the developed world. South Africa, as a signatory to the Diabetes Strategy for Africa, has to find ways to implement the Strategy.

Self-management is recognized in the Diabetes Strategy for Africa as fundamental both for lowering the incidence and for the prevention of expensive complications. Strategies which are utilized should be relevant and achievable in the local area where the patients reside.

It is hoped that the findings of this study will assist health care providers in both the public and the private health care sectors to become aware of the expressed needs of people living with DM and to find ways in which they may be assisted in reaching optimal levels of self-management. These research findings should also assist professional nurses to find and implement strategies to assist the diabetic patients in their care to achieve their goals of self-management.

1.4 PURPOSE OF THE STUDY

In view of the importance of self-management in DM, the intention of the researcher is to explore and describe the experiences of persons living with DM,
as well as those of professional nurses who assist them. The purpose of the study is to develop strategies which professional nurses may use to facilitate self-management of the condition. In order to achieve this purpose, the following research questions were proposed and research objectives identified.

1.5 RESEARCH QUESTIONS

The research questions which the researcher wishes to answer are:

- What are the experiences of persons living with DM related to self-management?
- What barriers to optimal self-management of DM are experienced by persons living with DM?
- What are the experiences of professional nurses working with persons living with DM in relation to diabetic self-management?
- What strategies should be available to assist professional nurses to facilitate self-management in persons living with DM?

1.6 RESEARCH OBJECTIVES

The research objectives for this study are:

- To explore and describe the experiences of persons living with and managing DM
- To explore and describe the experiences of professional nurses assisting persons living with DM in the management of their condition
- To create a conceptual framework for the facilitation of self-management by persons living with DM
- To develop strategies which the professional nurse may use in the facilitation of self-management by persons living with DM.
1.7 CONCEPT CLARIFICATION

Several concepts have been identified as requiring clarification for this study:

1.7.1 Diabetes mellitus type 2

Diabetes mellitus is a group of metabolic conditions characterized by chronic elevation of blood glucose levels and glycosuria (Smeltzer and Bare, 2004: 1150). In the patient with DM, the metabolism and utilization of glucose, fat and protein are disturbed (Dunning, 2003: 1; Levene and Donnelly, 2008: 6). This may be caused by either insulin deficiency or insulin resistance. DM type 2 results mainly from insulin resistance and is typically, but not exclusively, found in older people (Dunning, 2003: 1).

1.7.2 Professional nurse

The professional nurse is someone who has undergone training as set down by the South African Nursing Council, has met the requirements for registration as a professional nurse and practises comprehensive nursing in the manner and to the level prescribed (Nursing Act No. 33 of 2005). Nursing professionals meeting these requirements act as independent practitioners in their own right and are expected to accept full responsibility and accountability for their actions.

1.7.3 Diabetes nurse educator

A diabetes nurse educator is a professional nurse who is specifically trained in the management of diabetes mellitus and in the education of the diabetic patient (Drury and Gatling, 2005: 147).

1.7.4 Self-management

The diabetic patient has to accept a great degree of responsibility in the management of the condition. All aspects of care are related to lifestyle choices which must be made by the patient. Self-management in DM consists of the
activities of self-monitoring of blood glucose, dietary control, adjustment of insulin
dose to actual needs/correct administration of medication, weight control and
regular exercise. The concept of self-management also includes the
interrelationships between these activities and the ability to implement
appropriate changes when required (Sigurdardottir, 2005: 301).

1.7.5 Strategy

A strategy is “a comprehensive plan designed to achieve a particular long-term
aim” and should relate to purposeful action (Soanes and Stevenson, 2004: 1435).
There are several types of strategies including grand and functional strategies.

Grand strategies are those implemented on the macro or meso level, e.g. national
strategies implemented by government or those designed for a large corporation.

Functional strategies are implemented on a micro level, e.g. by a professional
nurse working at grassroots level or by a business unit in a corporation.

1.7.6 Nursing strategy

A nursing strategy defines and describes the nursing goals of a plan designed to
achieve a positive patient experience, in this case for persons living with DM.

1.7.7 Facilitation

Facilitation is a tool which may be used to actively direct and guide an
educational, empowering process allowing a person living with DM to identify
personal goals, formulate action plans and evaluate the outcomes of
implementation.
1.8 PARADIGMATIC PERSPECTIVE

A paradigmatic perspective provides a theoretical framework for the development of a research study. A paradigm is regarded as a “worldview that is essentially an interrelated set of beliefs shared by scientists (for our purposes, health care professionals) – namely a set of agreements about how problems are to be understood” (Anderson and Funnell, 2005: 253). Paradigms are the tools providing the basis of the worldview by which the researcher organizes the observations and findings (Ricks, 2008: 14). The theoretical framework used in this study was the Empowerment Model advocated by Anderson and Funnell (2005: 9) who attribute the roots of their philosophy of care to counselling psychology and community psychology. Funnell and Anderson (2004: 124) define empowerment as a “patient centred collaborative approach tailored to matching fundamental realities of diabetes care”. They describe the process of patient empowerment “as the discovery and development of one’s inborn capacity to be responsible for one’s own life” (Anderson and Funnell, 2005: 9).

1.8.1 Meta-theoretical assumptions

In a review article on empowerment, Gibson (1991: 354) points out that the concept of empowerment, which may be viewed “either as a process or as an outcome”, has been applied to many different phenomena such as the women’s movement, gay rights, black power, people living with HIV/AIDS, empowerment of teachers and of nurses (Gibson, 1991: 354). The word empowerment is derived from the Latin word ‘potere’ which means ‘to be able’ (Gibson, 1991: 355). In the descriptions of the Empowerment Model provided by Funnel and Anderson (2004: 123; 2005: 36), the concept of empowerment is shown as a process in which the patient living with DM and the professional nurse work together to achieve an optimal level of self-management for the patient. The desired outcome is for the patient to be empowered to take decisions regarding his own management and to implement those decisions on his own, achieving optimal glycaemic control and reducing the incidence of potentially life-threatening and expensive complications. The desired outcome, therefore, is reflected in the Latin root of the word as the patient should be ‘enabled’ to achieve self-management. However, the professional nurse has to accept the decisions taken by the person.
living with DM even if they do not lead to optimal care levels (Dunning, 2003: 234).

When describing a paradigmatic perspective in a research study, it is necessary to ascertain the assumptions made regarding man, nursing, health and the environment.

- **View of man**
  Man has been defined by Orem, 1980 (cited by McKenna, 1997: 4) as “A functional integrated whole with a motivation to achieve self-care”. The Empowerment Model recognises man as an autonomous being able to take personal decisions regarding health issues while accepting personal responsibility for the consequences of the decisions (Anderson and Funnell, 2005: 9; Dunning, 2003: 234). The Empowerment Model allows patients to make informed choices while retaining ultimate control over their own lives and lifestyles (Anderson and Funnell, 2005: 36).

- **Nursing**
  Nursing has been described by Orem, 1980 (cited by McKenna, 1997: 4) as “A human service related to the clients’ need and ability to undertake self-care and to help them sustain health, recover from disease and injury or cope with their effects”. However, the traditional training provided to health care professionals of all levels is embedded in the needs of acute care which does not always recognize the autonomy of the patient (Anderson and Funnell: 2005: 258). As patient advocates, nurses are in an ideal situation to implement the process of the Empowerment Model. They are also invited by the implementation of this model to make use of reflective practice in order to provide a service which will empower the “diabetes educators as much as it does patients” (Anderson and Funnell, 2005: 261).

- **Health**
  Health in persons living with DM may be regarded as an optimal state of well-being in spite of living with a chronic condition. Persons living with DM have a condition which is potentially debilitating and life-threatening. However, by making optimal use of the Empowerment Model, health levels can be maintained and, in
some cases, improved by taking greater care of themselves and implementing lifestyle changes (Anderson and Funnell, 2005: 230).

- **Environment**

The environment consists of circumstances which affect the individual at all stages of life (McKenna, 1997: 5). The environment experienced by persons living with DM may be physical, social, political or geographic. The concept of the Empowerment Model is not limited to the individual alone but also includes the effect of the social environment and community influences on the ability of the individual to attain an optimal level of personal health (Gibson, 1991: 356). In order for effective self-management to occur in persons living with DM, it is necessary for strategies to address environmental issues on both grand and functional levels.

### 1.8.2 Theoretical assumptions

The overall aim of diabetes management is for the patient to achieve a good quality of life together with optimal glycaemic control and for the risk of complications to be reduced as far as possible (Sigurdardottir, 2005: 301). Achievement of optimal glycaemic control can only be attained when the patient plays an active role in the management of DM. The patient has to accept the need for various lifestyle changes and take steps to implement these changes while coping with everyday activities (Whittemore and Roy, 2002: 311). The importance of self-management in diabetic patients is reflected in the theoretical perspective chosen for this study.

Previously, the medical model of management allowed the health professional to set prescriptive treatment goals for management of disease but it is now generally recognized that this approach is no longer adequate for the management of chronic diseases such as DM (Funnell and Anderson, 2004: 123). Patients are in ultimate control of their lifestyle and choose whether or not they will follow any advice given by the health professionals. The health professional has to recognize and respect the right of the patient to make such a choice. The new role of the health professional is as a partner in a process which allows the
patient to be empowered to take charge of the management of the condition by “helping patients discover and develop the inherent capacity to be responsible for one’s own life” (Funnell and Anderson, 2004: 124). Assisting the patient has to go beyond merely improving knowledge about the condition but has to include individual goal setting as well as problem solving skills and coping strategies (Henshaw, 2006).

Five steps are used in the implementation of the Empowerment Model (Anderson and Funnell, 2005: 152):

- Identify the problem
- Explore feelings
- Set goals
- Make a plan
- Evaluate the result.

These steps form part of a cyclical process of experiential learning which uses a process of recognition of an experience, reflecting on the experience to gain insight, identification of the need for change and then implementation of the required change (Anderson and Funnell, 2005:43). The cyclical process is carried out by consultation between the professional nurse and the person living with DM. During the consultation sessions, a therapeutic relationship is formed which is used to mutually build up trust and understanding between the professional nurse and the person living with DM. The therapeutic relationship is discussed fully in Chapter Four of this study.

1.8.3 Research approach

The approach chosen for a research study should be guided by the nature of the research carried out. The Empowerment Model emphasises the need for autonomy of the individual and therefore is suited to a qualitative study. A qualitative, exploratory, descriptive and contextual approach was used to explore and describe the experiences of persons living with DM as well as those of professional nurses working with them. After analysis of data obtained during the research process, the Empowerment Model formed the basis of the conceptual
framework and the development of strategies which the professional nurse may utilize while assisting persons living with DM type 2 to implement self-management strategies.

Polit and Beck (2010: 549) describe concepts as an abstraction based on observations of behaviours and characteristics offering ways of looking at the world which are essential in defining a research problem. The conceptual framework is the systematic and methodical arrangement of concepts or themes identified in a research project during data analysis in order to create a structure to assist in the implementation of the findings of the research and to measure the findings against the existing literature (Wisker, 2001: 203; Burns and Grove, 2009: 155; Polit and Beck, 2008: 143).

In summarizing this section, the theoretical framework utilized for this study was the Empowerment Model which is rooted in counselling psychology and community psychology (Anderson and Funnell, 2005: 253; Anderson and Funnell, 2005: 9). The aim of diabetes management is to achieve optimal glycaemic control, which can be achieved most effectively if persons living with DM are empowered to take an active role in the management of their condition. The Empowerment Model, by its nature, is suited to a qualitative, exploratory and descriptive study.

1.9 RESEARCH DESIGN AND METHOD

As this study was used to create knowledge about a particular human experience, a qualitative research design was adopted. The researcher planned to describe and explore the experiences of the patient living with DM type 2 in the Nelson Mandela Bay municipal area and therefore a descriptive, exploratory and contextual study was utilized. The research design and method will be briefly discussed in this chapter with a more comprehensive discussion in Chapter Two.
1.9.1 Research design

A research design is a blueprint or plan of how the research study will be conducted (Babbie and Mouton, 2008: 72). The design chosen must be appropriate to the subject and the intention of the study.

1.9.1.1 Qualitative research

Qualitative research, with its roots in anthropology, philosophy and sociology, is used as a method of studying the ways by which people make sense of their world and their experiences (Holloway and Wheeler, 2002: 8). Qualitative research is an umbrella term for a number of different approaches but each of them is based on interpreting social reality and the lived experience of the human being (Holloway and Wheeler, 2002: 3). The social, cultural, political and physical environments may be similar for many people but will affect each person in an individual way (Ulin, Robinson and Tolley, 2005: 18). A researcher making use of qualitative methods is able to explain the relationships between these environments and the individual by analysis of the stories they tell. Descriptions given by humans are used as a way of increasing knowledge of the human experience (Parse, 2001: 4). In this research study, persons living with DM type 2 described their experiences of living with the condition in their own particular social, cultural, political and physical environment. Professional nurses working as diabetes nurse educators were asked to describe their experiences of working with persons with DM type 2 in the Nelson Mandela Bay municipal area.

- Exploratory study

An exploratory study is used to explore areas in which new information is required. The focus may be on a situation, phenomenon, community or individual (Fouche in De Vos, Strydom, Fouche and Delport, 2002: 109). An exploratory study may be used to gain insight in an area for which there is little available information or to formulate a problem or develop a hypothesis. The exploratory study is often used to obtain a better understanding of a phenomenon (Babbie, 2005: 89). Research on DM in the Eastern Cape has not in the past focused on the experiences of patients regarding the self-management of DM type 2. A study such as this explores the situation in the Nelson Mandela Bay municipal area with
regard to levels of self-management experienced by persons living with DM type 2 and the experiences of the professional nurses working with them.

• Descriptive study
Descriptive research is designed to provide a complete and accurate description of a particular situation, social setting or relationship (Fouche in De Vos et al, 2002: 109). In order to provide a deeper understanding of a particular topic, the study should not stop at mere description (Babbie, 2005: 91). The “how” and “why” questions regarding a topic must be considered, so that a more detailed understanding of the situation or relationship can be obtained (Fouche in De Vos et al, 2002: 109). In this study, the experiences of persons living with DM, as well as the relationship of factors contributing to or hindering the optimal self-management of DM type 2 for those living in the Nelson Mandela Bay municipal area were described. Input from professional nurses working with these people added depth to the description of their experiences.

• Contextual study
The context of participants’ lives affects the findings of the study and so requires consideration particularly with regard to the interpretation of the findings (Holloway and Wheeler, 2002: 11; Burns and Grove, 2009: 178). The social, environmental, physical and cultural contexts of the lives of the participants will all affect their views and outlook on life as well as their experiences (Clare and Hamilton, 2003: 87; Flick, 2009: 12; Babbie and Mouton, 2008: 272). The participants in this study, who were persons living with DM type 2 and professional nurses working with them, all experience the context of living in the Nelson Mandela Bay municipal area. However, as they came from differing backgrounds, social and economic groups and cultures, and made use of both the public as well as private health care facilities, their experiences varied, adding to the richness of the findings.
1.9.2 Research method

A qualitative study is used to identify patterns and themes in the life experiences of a particular group or community. These patterns and themes are used to create a better and deeper understanding of the particular circumstances of the group or community being studied. The research method used must be relevant to the information being sought as well as to the population being studied.

The research process was carried out in two phases. The first phase included the sampling procedure and selection of participants, the data collection process, data analysis and literature control. During Phase Two, a conceptual framework was compiled which was utilized in the development of strategies to assist the professional nurse in the facilitation of self-management by persons living with DM type 2. Themes identified during data analysis and a literature review underpinned the compilation of the conceptual framework and of the strategies.

1.9.2.1 Phase One

During Phase One, data from two groups of research populations were collected and analysed.

- Research populations
  The first research population consisted of persons living with DM type 2 accessing both private and public health care facilities. The second research population consisted of professional nurses who had received additional training as diabetes educators. The criteria used for participant selection will be discussed in detail in Chapter Two.

- Sampling procedure
  In qualitative research, the researcher wishes to select participants who will be able to shed light on the research question and provide rich information (Ulin, Robinson and Tolley, 2005: 56). Barbour (2000: 1116) states “Rather than aspiring to statistical generalisability or representativeness, qualitative research usually aims to reflect the diversity within a given population”. Therefore purposive sampling was used to select persons living with DM type 2. Purposive
sampling was also be used to identify diabetes nurse educators willing to take part in this research study. The sampling method will be discussed in greater detail in Chapter Two.

- **Data collection method**

  Data from diabetic patients were collected by means of recorded semi-structured individual interviews using an interview schedule. Willing participants were asked to keep a reflective journal for a short period, up to a week, in order to record further thoughts and impressions on the subject. The intention was to add to the richness of the data gathered (Pope, Ziebland and Mays, 2000: 114; Polit and Beck, 2010: 355).

  A focus group of professional nurses working as diabetes nurse educators was asked to meet in order to provide input on their experiences of dealing with persons with DM type 2. Focus groups are often used in an exploratory study to identify relationships between concepts and ideas (Seale, Gobo, Gubrium and Silverman, 2005: 65). In this study, the focus group played a valuable role in clarifying issues regarding self-management raised by Group One participants during the semi-structured interviews. They were also able to give further insight into the barriers to self-management experienced by Group One participants.

  Data were gathered until saturation stage was reached which was when no new information was being obtained. Field notes were made after each interview while the events were still clear in the mind of the researcher. Field notes enhance the richness of the data gathered by creating a detailed record of all occurrences during the interviews (Holloway and Wheeler, 2002: 86). The reflective journals, when added to the transcribed interviews and field notes as well as the data from the focus group of diabetes nurse educators, added to the depth and richness of the data obtained, resulting in thick description in the written report (Holliday, 2002: 113; Polit and Beck, 2010: 355).

- **Data analysis**

  The individual interviews and the focus group session were tape-recorded and transcribed, producing a verbatim report of the proceedings for analysis. By
combining the data from the transcripts with the field notes, a rich source of information was created which was used to provide an in-depth picture of the experiences of the diabetic patient (Holloway and Wheeler, 2002: 236; Polit and Beck, 2010: 355).

The data were analysed using Tesch’s method of identifying themes in the data which allows a structured organization of data to take place (Cresswell, 2003: 192). Coding allows insight into the data which may not have been obvious at first glance by examination, analysis and sorting into categories (De Vos, in De Vos, Strydom, Fouche and Delport, 2002: 345). In order to ensure trustworthiness, the data were sent to an independent coder who analysed the data, identifying the themes and sub-themes. The data analysis will be discussed in detail in Chapter Two.

- **Literature control**

  Literature control is an important phase of the study in which the data collected are compared with existing research findings. This enables the researcher to place the results in the context of general scientific knowledge. Analysis of the literature on the subject takes place together with or following data analysis, assisting in the interpretation and validity of the findings (Streubert and Carpenter, 1995: 158; Burns and Grove, 2009: 91).

### 1.9.2.2 Phase Two

During Phase Two of the study, a conceptual framework was developed. A conceptual framework is used to clarify the relationships of concepts and themes identified during the research process and to link the gathered data to previously established models or theories (Wisker, 2001: 203; Schneider, Elliott, Beanland, LoBiondo-Wood and Haber, 2004: 133; Burns and Grove, 2009: 39). The results of data analysis guided the development of the conceptual framework for the facilitation of self-management in persons living with DM type 2 and also indicated strategies to be used in the facilitation of self-management of DM type 2.
Strategies were developed by identifying needs related to self-management of DM from the themes which arose during data analysis. A literature review validated the findings and proposed outcomes were identified. Implementation activities designed to achieve the proposed outcomes were formulated.

Strategies were developed on both grand and functional levels. Grand strategies, which may be developed and implemented on a national or provincial level, are required to provide the resources required for the functional strategies to be carried out effectively (Hellriegel, Jackson, Slocum, Staude, Amos, Klopper, Louw and Oosthuizen, 2010: 141). Functional strategies are those strategies which are utilized at grassroots level (Hellriegel et al, 2010: 144). The functional strategies developed in this study are designed to assist the professional nurse to facilitate self-management in persons living with DM.

1.10 TRUSTWORTHINESS

Trustworthiness is established by a variety of constructs or criteria of evaluation to ensure that the information gathered is both credible and valid for professional practice (Holloway and Wheeler, 2002: 250; Polit and Beck, 2008: 537). These constructs are credibility, transferability, confirmability and dependability. The subject must be accurately identified and described, and the findings should be transferable to other similar situations. Regular auditing is required and the findings should be consistent and accurate. Guba’s model of trustworthiness as described by Krefting (1991: 215) was used to ensure that a high level of trustworthiness was achieved. The strategies used to ensure that the study reaches and maintains that level will be described in greater detail in Chapter Two.
1.11 ETHICAL CONSIDERATIONS

Ethical considerations are of paramount importance in any type of research as they are intended to prevent any harm, emotional or physical, knowingly befalling any participants in a research study. Ethical guidelines are standards which are used to judge the conduct of the researcher and assess the extent to which ethical principles are adhered to (Strydom in De Vos et al, 2002: 63; Polit and Beck, 2008: 168; Burns and Grove, 2009: 185). The ethical standards which must be adhered to at all times during a research study are: no harm to participants, informed consent, no deception and no violation of privacy or confidentiality. These will be discussed in detail in Chapter Two. Ethical guidelines laid down by the University were adhered to during this study. Prior to commencing this study, approval was obtained from the Ethics Committee of the Nelson Mandela Metropolitan University.

1.12 CHAPTER HEADINGS

The research findings are presented in the following chapters:

Chapter 1: Overview of the study
Chapter 2: Research design and method
Chapter 3: Discussion of findings and literature control
Chapter 4: Development of a conceptual framework for nursing strategies to facilitate self-management in persons living with DM type 2
Chapter 5: Strategies for the facilitation of self-management in persons living with DM type 2
Chapter 6: Conclusion, limitations and recommendations

1.13 CHAPTER SUMMARY
In this chapter, an overview of the study was given. The subject was introduced and a problem statement formulated. The research objectives and research questions were identified. The paradigmatic perspective used in this study was briefly described. Some concepts used in the study were defined and clarified. A brief description of the research design and method was given. The research population and sampling method were identified. The data collection method to be used was described. The importance of trustworthiness and ethical considerations were also briefly discussed. In Chapter Two, a fuller description of the research design and method will be given.
2.1 INTRODUCTION

In Chapter One, the researcher presented an introduction to the research problem together with an overview of the study and a description of the research problem and research objectives. A brief orientation on the research design and method was also provided.

In this chapter, the purpose of the study together with the research method and design will be further elaborated. A description of the research strategy, the data collection process and sampling method, data analysis and ethical considerations as well as trustworthiness will be provided in greater detail.

2.2 BACKGROUND TO STUDY

Diabetes mellitus is a condition which has been recognized for centuries but was considered to be relatively rare, particularly in Africa. However, the growth in the incidence of this potentially debilitating condition has increased exponentially over the past century with an expected 23.9 million diabetics in Africa by 2030 (International Diabetes Federation, 2009a). The increase in incidence has far-
reaching consequences for the individual patients and for their family members who have to cope with significant lifestyle changes, physical and psychological issues, severely impaired quality of life and also the prospect of the financial burden imposed by DM. There are also significant implications, mainly financial, for the state. The population affected by the condition is becoming younger, thus affecting the size of the economically active population which is an important issue in all developing countries. People developing DM at a younger age are more likely to present with complications as they will live with the condition for a longer period than in the case of those patients who become diabetic later in life. This, in turn, increases the financial burden on both the individual and the state. As there is a strong link with cardiovascular and other chronic diseases, DM has the potential to create a major financial crisis for the health care sectors in Africa, including South Africa. However, careful self-management has been shown to reduce the incidence of complications and to slow the progression of the condition. If persons who are at risk of developing the condition implement the correct lifestyle changes it is possible to delay the onset of DM (Drury and Gatling, 2005: 14).

Although some research has been done on various topics related to DM in South Africa, there have not been many studies done focusing on the Eastern Cape Province and Nelson Mandela Bay in particular. The studies which have been carried out in Nelson Mandela Bay have dealt with various topics related to DM such as medication, exercise and the role of traditional healers but the researcher is not aware of another study which deals with the requirements of the individual persons living with DM or the topic of self-management (Van Huyssteen, Reddy, Naidoo, Boschman, McCartney and Van de Venter, 2004: 27; Gericke, 2008; Levendal and Frost, 2006: 1).

As there is a steady urbanization process of people moving from rural areas to the metropolitan area in search of employment, there is no reason to assume that the risk factors experienced in other countries due to rapid urbanization will not be experienced in this area. For example, people who were previously physically active while working in their fields in the rural areas are now exposed to a western lifestyle with all its risk factors. The rising incidence of HIV/AIDS is also
predisposing those patients to the risk of drug-induced diabetes due to the side-effects of anti-retroviral medications.

A research study such as this, in which the participants were asked about their experiences in implementing self-management strategies, has the potential to make stakeholders in both the public and private health care sectors aware of the expressed needs of persons living with DM. Because of the links to other life-threatening conditions such as cardiovascular and renal disease, the care required by persons living with DM has the potential to become prohibitively expensive in both monetary and humanitarian terms, so it is in the interest of all to promote the concept of self-management.

2.3 PURPOSE OF THE STUDY

This study explores and describes experiences with regard to self-management by persons living with DM type 2 in Nelson Mandela Bay as well as the professional nurses who assist them. The purpose of the study is to develop strategies to assist the professional nurse in facilitating self-management in persons living with DM.

2.4 RESEARCH OBJECTIVES

In order to obtain the answers to the research questions described in Chapter One, the following objectives for the study were decided on:

- To explore and describe the experiences of persons living with and managing DM
- To explore and describe the experiences of professional nurses assisting persons living with DM in the management of their condition
- To create a conceptual framework for the facilitation of self-management by persons living with DM
To develop strategies which the professional nurse may use in the facilitation of self-management by persons living with DM.

Figure 2.1  Summary of Research Design and Method
2.5 RESEARCH DESIGN

The researcher chose to utilize a qualitative framework for this study as it was designed to create further knowledge about a particular human experience. Qualitative studies are designed to make sense of the meaning that people give to their everyday lived experiences in their own naturalistic settings (LoBiondo-Wood and Haber, 2010: 86). The aim of this study was to describe and explore the experiences of persons living with DM type 2 in Nelson Mandela Bay together with those of the professional nurses assisting them and so a descriptive, exploratory, and contextual approach was used.

The research design forms the plan to be used to conduct the study. The choice of research design must be appropriate to the type of study being conducted. The research design chosen acts as a blueprint for the research activity by guiding the planning and the implementation of the plan in such a way as to achieve the intended goal (Burns and Grove, 2009: 218). The design which is used for a research study should provide a systematic approach as well as order and clarity in the research process (Sarantakos, 2005: 106). The particular plan or design chosen for a research study must be appropriate to the subject and intention of the study. It should also make replication easier, enable assessment of trustworthiness of the study and assist with accurately assessing the costs and required resources for the study (Sarantakos, 2005: 106).

2.5.1 Qualitative research

Qualitative research focuses on understanding the reality of the world as experienced by the participants in a study. There are a number of different approaches which may be used in a qualitative research study but all are designed to create a deeper understanding of the lived experience of human beings (Holloway and Wheeler, 2002: 3; Flick, 2009: 16). The qualitative researcher in the health field, when researching aspects of patient behaviour, "seeks to identify what they do know, how they maintain their health, and what the underlying rationality of their behaviour is" (Green and Thorogood, 2005: 20).
Qualitative research designs are focused on experiences and observations of the real world and do not require any manipulation or experimentation to achieve insight into the life world of the participant in a study. In this type of study, the researcher makes use of the identified patterns in collected data to gain insight and understanding regarding the realities and experiences of the participants. The data are not used to confirm preconceived hypotheses and theories. As people view the world that they experience in an individual way, their realities are also individual and subjective (Sarantakos, 2005: 41). However, by analysis of the data, certain themes common to the participants may be identified and used to create a picture of the reality of the investigated life experience, in this case of living with DM. Qualitative research is valuable for providing the evidence for evidence-based practice (Portney and Watkins, 2009: 306).

A qualitative design was chosen for this study as the researcher wished to explore and describe the experiences of persons living with DM type 2 in Nelson Mandela Bay. In a qualitative study, the participants are recognized as the primary focus and an attempt is made to understand their actions in terms of their “own beliefs, history and context” (Babbie and Mouton, 2008: 271). All human beings share an intersubjective world of daily life which is made personal by their own experience and interpretation of life events affecting them either directly or indirectly. This study is about people who are trying to make sense of their life world as persons living with DM type 2 and the changes in lifestyle required in attaining an optimal level of self-management. The experiences of the professional nurses working with these patients were also explored and these findings added to gain a deeper understanding of the experience of the patient.

Persons living with DM often experience many problems related to self-management as the condition affects so many aspects of their lives. Patients are required to make a concerted effort to implement lifestyle changes which can delay the progression of the condition and prevent the occurrence of possibly life-threatening complications. Many people find implementation of these lifestyle changes difficult. A qualitative research design allows the patients to express their feelings and perceptions about the process of self-management. It also assists in
the identification of strategies which the professional nurse may use to facilitate self-management by these patients.

2.5.2 Exploratory study

The main aim of exploratory research is to gain a deeper understanding of a person, situation or phenomenon or to gain a basic familiarity with the subject of study (Babbie and Mouton, 2008: 80). Exploratory studies are valuable for obtaining new insights into a particular subject. It is possible to obtain new knowledge, insights, understanding and meanings regarding a subject which may, at first glance, appear to be familiar such as DM (Brink and Wood, 1998: 312; Polit and Beck, 2010: 22). The new insights obtained may apply to an entire subject or to only one aspect of a subject. As new knowledge is gained, an exploratory study may also guide the researcher to identify further aspects of the subject which may require investigation and research. Part of the process of exploration is the use of a literature review to allow the contextualization of the identified themes in the literature already published (Sarantakos, 2005: 137). The role of the literature review is important in the development of the trustworthiness of the study as it places the findings of a study in the context of published research. There may be little available material on the subject as a whole or in the particular context in which it is applied. Although there has been research conducted on the self-management of DM type 2, there has not been a similar study on the situation in Nelson Mandela Bay with regard to the experiences of persons living with DM type 2 and the professional nurses who assist them. The researcher wished to explore these experiences in order to gain a deeper insight enabling the development of nursing strategies to assist the professional nurse to facilitate self-management of the condition.

2.5.3 Descriptive study

Descriptive research studies may be used to “describe social systems, relations or social events” in real life situations (Sarantakos, 2005: 10; Burns and Grove, 2009: 45). With this type of study, it is possible to find evidence of interesting and significant patterns or new trends and relationships in either existing or new data (Mouton, 2003: 113; Polit and Beck, 2008: 275). This type of study may, therefore, be of value in presenting a fresh insight into a familiar subject. A
descriptive study adds richness to the results of a research study as it adds to the understanding of the particular subject because the researcher often goes on to explain the reason for the particular phenomenon observed and its implications (Babbie and Mouton, 2008: 81). This is of particular value in a situation where the health state of a particular population is being investigated. A descriptive study may assist in identifying the needs of the particular research population and thus assist in the decision making process for the provision of relevant health care facilities.

In this particular study, the participants described in their own words their experiences of living with DM. The professional nurses were also able to describe their experiences in dealing with these patients which gave added richness to the findings. The need for further action in the struggle against all forms of Diabetes Mellitus was emphasized in the United Nations Resolution on Diabetes and the Diabetes Strategy for Africa and a study such as this can assist in clarifying the situation regarding self-management of DM in a local context.

### 2.5.4 Contextual study

In a qualitative study, an understanding of the background and the natural context in which the participants find themselves, adds greater meaning to the phenomena observed (Babbie and Mouton, 2008: 272). Attention must be given to the views of the participants regarding the environment – which may be physical, geographic, economic, political, social or cultural - in which they live and the way this affects their own behaviours and values. This approach is also referred to as holistic research as the background and context of the study plays an important role in the interpretation of the results obtained during the research process (Holloway and Wheeler, 2002: 11, Babbie and Mouton, 2008: 272). Social, environmental, physical and cultural contexts all play a role in the lived experiences of the participants and thus affect their outlook on life, their ability to cope with their life experiences and the views they express during interviews or focus group sessions (Clare and Hamilton, 2003: 87).
This research study intended to describe and explore the experiences of persons living with DM in the specific context of Nelson Mandela Bay. Nelson Mandela Bay (formerly known as the Nelson Mandela Metropole) lies in the Western region of the Eastern Cape Province. Most of the Eastern Cape is rural with only a few larger towns and cities. The legislative capital of the Eastern Cape Province is Bhisho which is 240km away but Nelson Mandela Bay is commonly regarded as “the economic capital of the region” (South African cities network, 2004). Port Elizabeth, which forms part of Nelson Mandela Bay municipality, is a sea-port on Algoa Bay while Uitenhage and Despatch, the other towns incorporated in the municipality are industrial towns inland.

A number of major industries are found in the Nelson Mandela Bay municipal area with manufacturing providing 34% of formal employment in the area (Eastern Cape Development Corporation, SA). The automotive and related industries are the major employers in the area with two of the six major manufacturers situated in Nelson Mandela Bay, namely Delta Corporation and Volkswagen. Other industries such as clothing and textiles, leather and leather goods, metals and engineering, electronics and pharmaceuticals are all found in Nelson Mandela Bay (Eastern Cape Development Corporation, SA). Nelson Mandela Bay is also recognized as the mohair capital of the world.

In Nelson Mandela Bay, there are a wide variety of socio-economic and demographic factors which influence the lifestyles of the inhabitants. Three of the 11 official languages of South Africa are commonly spoken in the area, namely isiXhosa, Afrikaans and English. Some sections in the municipal area have high rates of unemployment and resulting poverty. A study on the urban environment in Port Elizabeth undertaken by researchers from the Medical Research Council of South Africa, the University of Port Elizabeth and the Stockholm Environment Institute in 1999 showed that there is a wide disparity in the availability of and access to basic services in the area (Thomas, Seager, Viljoen, Potgieter, Rossouw, Tokota, McGranahan and Kjellen, 1999). This has a major impact on the provision of health services in the area, particularly in the public health care sector. The health services in Nelson Mandela Bay will be discussed more fully in Chapter Four.
As Group One participants all had differing social, economic and cultural backgrounds, the resulting data should create a rich and diverse picture of their experiences as persons living with DM. The professional nurses taking part in this study also came from differing socio-economic and demographic backgrounds which added to the richness of the findings.

2.6 RESEARCH METHOD

The research method chosen for a particular project must be appropriate to the information being sought and to the population being studied. It must also allow the creation of a deeper understanding of the particular research population being studied. The research process consists of two phases which cover all aspects of collecting the data, the analysis of the data and the creation of the conceptual framework and strategies which the professional nurse may use in the facilitation of self-management in persons living with DM.

2.6.1 Phase One – Data collection and analysis

Data collection forms the basis of a research study and should be done as methodically and precisely as possible in order to obtain the most reliable results. The data collected must be relevant and focused on the purpose of the study. The data collection process should be recorded in detail to provide an historical record and as a form of quality assurance (Mouton, 2003: 107; Polit and Beck, 2010: 340). In a qualitative study, field notes assist in quality assurance as well as increasing the richness of the data collected (Mouton, 2003: 107; Polit and Beck, 2008: 406).

In this study, data were collected and analysed from two research populations. The first research population consisted of persons living with DM type 2 while the second research population consisted of professional nurses working as diabetes educators in Nelson Mandela Bay. These professional nurses will be referred to as diabetes nurse educators in this discussion. The data collection methods used were individual interviews and a focus group session.
2.6.1.1 Data collection for group one – Persons living with DM type 2

As there are two distinct research populations, each one will be discussed separately in Phase One of this study.

- **Research population – Group One**
  Group One consisted of persons living with DM type 2 in Nelson Mandela Bay. These participants make use of both private and public health care facilities in the area. The experiences of patients accessing the different health care facilities vary widely, which increased the range of the data obtained.

Criteria for inclusion in this study were:
- Persons who have been diagnosed with DM type 2
- Minimum of six months since diagnosis of DM type 2
- Able to communicate in English
- Age ranging from 25 to 75 years of age
- Accessing private or public health care facilities in Nelson Mandela Bay.

The researcher wished to concentrate on DM type 2 as it has been shown that lifestyle changes may limit the progression of the condition and also reduce the development of complications (Drury and Gatling, 2005: 15).

**Table 2.1 Demographics of participants in group one – people living with DM**

<table>
<thead>
<tr>
<th>GENDER</th>
<th>AGE</th>
<th>ETHNICITY</th>
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<td>X</td>
<td>64</td>
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<td>23 Y</td>
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<td>X</td>
<td>48</td>
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<td>62</td>
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Group One consisted of 19 diabetic patients. The gender division was 13 female and six male. The age range of the patients who were interviewed was from 44 to 74 years of age. Younger patients are more likely to have DM type 1 which is not the focus of this study. Older patients may be affected by other chronic medical conditions which may affect the accuracy of the data obtained.

During the recruitment phase of the study, a number of younger individuals living with DM type 2 were identified but, for various reasons, declined to take part in the study. One individual, aged 26, agreed very enthusiastically to take part in the study but, when approached a number of times, was not available for an interview. Another individual who agreed to take part in the study, confirmed availability for several appointments but was out of town whenever the interview was supposed to take place.

As the focus of the study is on DM type 2, patients with DM type 1 were excluded. A minimum of six months after the time of diagnosis was required which would allow the patients in the study group time to implement any self-management regime recommended by their health care practitioner and to assess its effectiveness in achieving optimal glycaemic control. In the participant group, there was a wide range of time since diagnosis. One participant had been diagnosed eight months prior to the interview while others had been living with DM for up to 30 years.

All participants were able to communicate in English. If required, they would have been offered the opportunity to make use of the services of a translator, to ensure they understood clearly what was required and that they could tell their story without the hindrance of language incompatibility. The use of a translator, if

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| Group One consisted of 19 diabetic patients. The gender division was 13 female and six male. The age range of the patients who were interviewed was from 44 to 74 years of age. Younger patients are more likely to have DM type 1 which is not the focus of this study. Older patients may be affected by other chronic medical conditions which may affect the accuracy of the data obtained. |
necessary, can ensure that sufficiently rich data are obtained during the interview process. During this study, all participants were able to communicate adequately in English. One participant felt that, although she spoke English fluently, she could express some of her comments better in her home language of isiXhosa. A language teacher who specializes in isiXhosa translated those passages into English. The resulting data were later checked with the participant for veracity.

- **Sampling procedure – Group One**

As the aim of this research study is to describe and explore the experiences of persons with DM type 2, purposive sampling was used to select persons living with DM type 2 who were willing to take part in this study. In purposive sampling, the participants are chosen as those representative of and relevant to the stated aims of the research study (Sarantakos, 2005: 164). The participants must be able to shed light on the research question and provide rich information which is essential in qualitative research (Ulin et al, 2005: 56).

During the course of this study, the researcher made use of purposive sampling in order to select patients who are specifically living with DM type 2. Babbie (2005: 189) states that one “may wish to study a small subset of a larger population in which many members of the subset are easily identified, but the enumeration of them all would be nearly impossible”. As it is not possible to interview all persons living with DM type 2 in Nelson Mandela Bay, purposive sampling allows a small sample of the research population to be interviewed. Although there is a rising incidence of patients with DM type 2, it may not be possible to identify them without referrals from appropriate health professionals such as a specialist physician or diabetes nurse educator. The researcher had informal discussions with a specialist physician and with diabetes nurse educators as a result of a previous research project and also at meetings of the Diabetes Association of South Africa. The specialist physician and diabetes nurse educators indicated their willingness to refer patients, with their consent, to take part in this research study after discussion on the research criteria. As the persons who referred the patients work in both the private and public sector, it was possible to obtain access to participants from a wide range of economic, social and cultural groups which provided rich data for analysis. Unfortunately,
some diabetes nurse educators working in the public sector who were approached to assist with referrals did not feel comfortable referring patients for a research study, resulting in a predominantly white group, managed mainly in the private healthcare sector. However, a number of the participants are members of low income medical aid schemes, limiting their access to a wide range of management options, similar to those persons being managed in the public sector.

Another source of referrals was by the owner/manager of a local business catering for the special needs of diabetic patients. The aim of the business was to create a one-stop centre for diabetics with a diabetic-friendly food shop, a diabetic-friendly restaurant and consultation facilities for a podiatrist, optician, diabetes educator and psychologist. However, since the interviews were conducted, this centre has no longer been operational. Once again, the research criteria were carefully discussed. Some participants were very enthusiastic about referring other diabetic patients amongst their friends and family to the researcher (Flick, 2009: 110). When making contact with potential participants, the researcher made enquiries to determine if the individual met the research criteria. It was unfortunately necessary to decline the inclusion of some potential participants as they did not meet all research criteria.

- **Data collection method – Group One**

Semi-structured interviews with an interview schedule were used to obtain data from persons living with DM type 2. Holstein and Gubrium (2002: 112) describe an interview as “a pipeline for transmitting knowledge”. During an interview, the researcher faces the challenge of “extracting information as directly as possible” without distorting or contaminating the data (Holstein and Gubrium, 2002: 114). One method of doing this is by use of the semi-structured interview (Merriam, 2009: 90).

Semi-structured interviews are often used in qualitative research as the focus remains on the areas being investigated but the participants are allowed to give their own perspectives freely (Holloway and Wheeler, 2002: 82; Polit and Beck, 2008: 394; Merriam, 2009: 89). The use of an interview schedule, where all
participants are asked the same questions, provides some form of control and ensures that all relevant and required aspects of the research are dealt with. The participants, however, had the freedom to explore their experiences fully during the interviews (Holloway and Wheeler, 2002: 82; Polit and Beck, 2008: 394; Bowling, 2009: 285). All participants were very willing to take part when approached but, while being interviewed, some appeared to feel unsure of how much information was required for the study. These participants were not very forthcoming with information at times and it appeared difficult for them to share real feelings or emotions.

When making arrangements to meet, the researcher must take into account the time, place and context of the interview (Wengraf, 2001: 191). The setting should be free from interruption and comfortable for the participants. Most of the interviews were conducted at the homes of the participants. The participants were in a familiar environment and could be more relaxed about the interview process. Some interviews were conducted at the participants' place of work. This was done at their request as it was more convenient for them. Two interviews were conducted at the researcher’s home at the request of the participants.

All interviews were arranged telephonically in good time at a date and time convenient to both the participant and the researcher (Wengraf, 2001: 191). Before going to an interview, the researcher would once again confirm telephonically that the time was convenient with the participant. On arrival at the interview venue, the researcher would spend some time talking to the participant to set his/her mind at ease. Prior to commencing the interviews, the researcher explained the purpose of the study and how the research process would unfold. Each participant was requested to complete an informed consent form which gave relevant information regarding ethical considerations such as confidentiality. Participants were given the opportunity to withdraw if they wished to do so. No participants withdrew at this stage. Permission was also asked to make use of a tape-recorder in order to create a record of the interview. The tape-recorder was tested before each interview to ensure that it was working correctly. Enough tapes were available and extra batteries were also at hand (Wengraf, 2001: 191).
The interviews were tape-recorded for later transcription. Tape recording a naturally occurring conversation enables the researcher “to focus on the ‘actual details’ of one aspect of social life” (Silverman, 2001: 161; Flick, 2009: 294; Wengraf, 2001: 191). The use of tape recordings has the following advantages over other forms of collecting qualitative data:

- Tapes are a public record
- Tapes can be replayed and transcriptions improved
- Tapes preserve sequences of talk (Silverman, 2001: 162)

The interview times ranged from approximately 30 minutes to 60 minutes. The tape recordings were transcribed verbatim by an independent typist. All tapes were marked with the patient code to ensure confidentiality. After transcription, the researcher checked the transcripts with the recordings to ensure accuracy of the data. The resulting data were coded by the researcher and by an independent coder.

The following questions were used for the individual patient interviews:

- Tell me about your experiences of living with DM
- Tell me about what you perceive as achieving self-management of DM
- Tell me about factors that contribute towards your being able to manage your disease
- What factors hinder you in the management of your disease?
- How can professional nurses assist diabetic patients in enhancing self-management of DM?

Participants were also asked to provide extra data in the form of a reflective journal in which they recorded, for a short period, further thoughts and impressions on their experiences of living with DM type 2 (Poggenpoel, 1997: 28). However, not many participants wished to make use of this journal as they felt that they had already given all the information which they could during the interview and had nothing to add. Of those who made use of the journal, only a few provided a real reflection on their condition. Others made simple notes on the points discussed. Some participants who had agreed to make use of the reflective journal never actually carried out the task and returned blank notebooks.
After the completion of all interviews, the researcher ensured that the participant was given her contact details and was encouraged to contact her if any other information or queries came to mind. Arrangements were also made for the collection of the reflective journal in one week.

Field notes made by the researcher directly after the interviews were also analysed and added to the data collection. Field notes assist in the creation of a complete picture of what occurs during the interview process. Field notes must be made after each interview while the events are still clear in the mind of the researcher. The use of field notes enhances the richness of the data gathered by creating a detailed record of all occurrences during the interviews (Merriam, 2009: 131). A researcher must always bear in mind that taking of notes must be handled in a sensitive manner as note-taking during an interview can disturb the participant (Holloway and Wheeler, 2002: 86; Polit and Beck, 2008: 409). The researcher tried to make the note-taking during the interview as unobtrusive and as minimal as possible so as not to interrupt the thought processes of the participant. After the interview, the researcher made an opportunity to have some time of reflection on what had transpired during the interview and recorded these thoughts as part of the field notes to be used during analysis.

The reflective journals which were completed and the field notes added to the depth and richness of the data gathered and assisted in creating a more detailed picture of the experiences of the persons living with DM type 2 (Pope, et al, 2000: 114; Holliday, 2002: 113; Polit and Beck, 2008: 407).

Data collection continued until saturation stage was reached. This occurred after 19 interviews. Data saturation occurs when no new information is being obtained. Data saturation was confirmed by the independent coder and by the promoters of this study.

2.6.1.2 Data collection for group two – Diabetes nurse educators

Professional nurses working with diabetic patients as diabetes nurse educators formed the second group of participants in this study.
- **Research population – Group Two**

The second research population consisted of professional nurses who work as diabetes nurse educators in Nelson Mandela Bay. They were asked to share their experiences in facilitating the concept of self-management in persons living with DM type 2.

Inclusion criteria for this group were:

- Formal registration with SANC as a professional nurse
- Minimum of one year of experience as a diabetes educator
- Ability to communicate in English
- Additional training or courses completed in diabetes education.

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<td></td>
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<td></td>
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<td></td>
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<tr>
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<td>X</td>
<td>2 Y</td>
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<td>X</td>
<td>3 and a half Y</td>
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<td>X</td>
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The diabetes nurse educators in the Nelson Mandela Bay Metropolitan area may be found in both private and public sector health care facilities and so have contact with a wide range of patients living in a variety of socio-economic groups.

A focus group session was held at the hospital where the researcher is employed with three diabetes nurse educators from other health care centres. Twelve participants were originally invited to take part in the focus group and all had accepted the invitation. Due to unexpected work commitments, the other invited participants were unable to take part and had to cancel, some at the last minute. Two of the participants were deeply disappointed at their need to cancel and indicated their willingness to be interviewed separately, which was done as soon as possible after the focus group session. These participants were all, at the time of the study, working with diabetic patients and were employed either by
specialist physicians in Nelson Mandela Bay or in local diabetic clinics or Diabetic Centres of Excellence. One participant worked with patients in both the public and private sector. The other participants have had experience of working in the public health sector in the past but are now working in the private health sector. Their experience of working specifically with diabetic patients varies greatly, ranging from 19 months to 16 years. Valuable information was obtained from these professional nurses owing to their wide range of experience.

- **Sampling procedure – Group Two**
  As there are a limited number of professional nurses in the Nelson Mandela Bay metropolitan area who meet all the above-mentioned criteria, purposive sampling was used (Merriam, 2009: 94). A diabetes nurse educator working with a specialist physician at the hospital where the researcher is employed acted as a gatekeeper by providing contact information for other diabetes nurse educators working in Nelson Mandela Bay.

Twelve diabetes nurse educators working in public and private sector diabetic clinics or medical practices were invited to take part in a focus group session. During this session, the participants who attended were asked to share their experiences in dealing with the facilitation of self-management in persons living with DM type 2.

- **Data collection method – Group Two**
  The diabetes nurse educators were asked to meet in a focus group session to discuss their experiences in dealing with persons living with DM type 2. A focus group can be described as “a loosely constructed discussion with a group of people brought together for the purpose of the study, guided by the researcher and addressed as a group” (Sarantakos, 2005: 194). The researcher acts as a facilitator for the ensuing discussion among the participants.

When arranging and conducting a focus group session for research purposes, the researcher has to remember to act as a facilitator and not as an interviewer (Sarantakos, 2005: 195). Sarantakos (2005: 195) gives the following summary of a focus group session as a research method:
- Select participants with a particular interest, expertise or position in the community
- Form the group by arranging for them to meet at the same venue
- Introduce the discussion topic
- Guide the discussion in order to address the research topic
- Encourage discussion between members of the group
- Observe and record the discussion.

The researcher has to act as facilitator and arbitrator, if necessary, throughout the discussion, without actively taking part in the discussion on the topic. The role of observer is very important with this type of data collection method as it gives added richness to the data collected (Holloway and Wheeler, 2002: 111). Focus group sessions may be unstructured or semi-structured and can be used in both qualitative and quantitative research designs.

During a focus group session, the group dynamics experienced can be useful in highlighting certain topics of information (Greeff, 2002: 291; Burns and Grove, 2009: 513). This type of data collection can be valuable in evaluating different points of view on a particular topic as well as judging arguments for or against various viewpoints (Holloway and Wheeler, 2002: 113; Sarantakos, 2005: 196). Holloway and Wheeler (2002: 117) give the following advantages of focus groups:

- Data are produced through social interaction which stimulates the thoughts of the participants
- Participants may produce new, spontaneous ideas in response to others’ comments
- All participants as well as the interviewer are given the opportunity to ask questions
- The interaction between participants may empower them to discuss sensitive topics more freely as they feel that they are more able to express their views
- Focus groups are time saving as more data are produced in the same amount of time.
There are also disadvantages to focus groups which Holloway and Wheeler (2002: 118) described as follows:

- The researcher may have less control over the discussion than in individual interviews
- One or two participants may dominate the group which may produce bias in the recorded data
- If participants feel insecure, they may unconsciously or consciously censor their responses to the questions
- Logistical difficulties regarding date and time may make organization difficult
- Transcription may be difficult particularly in a large group as voices may be similar or the participants may not be close enough to the microphone for clarity.

When arranging the focus group session, the researcher asked the possible participants to nominate a day and time which would be most convenient for them. A specific day which was convenient for most participants was decided on and each person was contacted telephonically and by written invitation to confirm the date and time. Reminder telephone calls were also made to all participants who had confirmed attendance. A meeting room at the hospital where the researcher works was booked timeously to provide a venue for the session. As the focus group session was planned for early afternoon and there would possibly be no time for the participants to have lunch due to travelling time from their places of work, refreshments were arranged. Taking time to have a snack before starting the session, allowed the participants to relax and interact with each other informally.

The researcher used that time to explain the research objectives and process to the participants. Ethical considerations were also explained and the participants were given the opportunity to withdraw if they wished to do so. Each participant who attended was asked to complete an informed consent form as for the Group One participants. The participants were also asked to give permission for the session to be recorded which they gave willingly. The tape recorder was tested and extra tapes and batteries were available in case of need as for the Group
One interviews. The participants sat around a table and the tape recorder was placed in a central position to ensure that the sound level was of an adequate quality.

The main topic of the focus group session was the facilitation of self-management in these patients. The following questions formed the semi-structured interview guide for the focus group session:

- What do you perceive as effective self-management in patients with DM?
- What factors do you think assist patients in managing their disease?
- What factors do you think hinder patients in the management of their disease?
- How can professional nurses assist diabetic patients in enhancing self-management of DM?

The participants entered the discussion enthusiastically and their passion for their work and their patients was obvious. Some issues regarding self-management raised by the patients during their interviews was raised with the diabetes nurse educators during the focus group session and they were able to clarify the issues or give further input and insight into them.

Two of the invited participants who were unable to attend due to unexpected work constraints, indicated their willingness to take part in an individual interview session in order to provide their input on the subject. One interview was conducted at the participant’s home while the other participant preferred to meet at the researcher’s home. The interview process was the same as for the individual interviews for the Group One participants. The interviews were also tape-recorded and transcribed verbatim. The participants were asked the same questions that were used in the focus group session.

2.6.1.3 Data analysis

During the research process, a large amount of information is collected which requires organization to give meaning and create order to provide fruitful material for the study. The data analysis process is designed to provide the organization of
the data. This is a complex, time-consuming but necessary process which has to be carried out systematically to ensure that the value of the data is maintained (Holloway and Wheeler, 2002: 235; Moule and Goodman, 2009: 346). During the data analysis procedure, all records of the interviews including field notes are combined to create a picture of the reality experienced by the participants (Holstein and Gubrium, 2002: 124; Polit and Beck, 2010: 354).

The interviews with the patients and the focus group session were tape-recorded with the permission of the participants. The tape-recordings were transcribed verbatim, giving a complete record of the interviews. The transcriptions, when combined with the field notes and the reflective journals provided by the patients, were used to provide an in-depth picture of the experiences of the participants as diabetic patients in the Nelson Mandela Metropole.

Analysis of the data in a qualitative study commences during the interview process as the researcher reflects on each step taken (Holloway and Wheeler, 2002: 235). Immediately after the transcriptions are completed, the coding process begins (Wengraf, 2001: 209; Moule and Goodman, 2009: 349). The data were analysed by the researcher as well as by an independent coder. Using the services of an independent coder assists in ensuring trustworthiness of the research findings. The process of coding was undertaken using Tesch’s method of identifying themes in the data which allows a structured organization of data to take place (Cresswell, 2003: 192).

The steps which have been identified by Tesch as the most useful method of providing data analysis are:

- Read all transcriptions carefully to get a sense of the whole
- Choose one document for further analysis of underlying meanings
- Continue this process for several documents and then make a list of topics, clustering those which are similar
- Assign codes to the topics. Return to the data and assign codes to the appropriate segments
- Assign categories to the topics, grouping them and indicating interrelationships
• Decide on an abbreviation for each category
• Perform a preliminary analysis by assembling the data for each category together
• If necessary, recode existing data.

Coding allows insight into the data which may not have been obvious at first glance by examination, analysis and sorting into categories (De Vos, in De Vos et al, 2002: 345; Moule and Goodman, 2009: 354). During coding, themes which are repeated throughout the data collection process are identified. These themes are used to provide the story told by the participants and create a picture of their experiences. They also form the basis of any strategies and recommendations which may be made.

Consensus on the findings was obtained in discussion between the researcher, the independent coder and the promoter of the study.

2.6.1.4 Modified participatory observation

Participatory observation allows the researcher to gain direct experience of the lives of participants thus drawing on firsthand knowledge during data analysis (Patton, 2002: 263; Mack, Woodsong, MacQueen, Guest and Namey, 2005: 14). It is possible to utilize personal contact and observation to see things that “may routinely escape awareness among the people in the setting” (Patton, 2002: 262). There is a further advantage in that people being observed may disclose information in an informal setting which they would not be willing to talk about during a personal interview (Patton, 2002: 263). Disadvantages of this method of data collection include loss of objectivity if the researcher becomes too immersed in the situation and difficulty with recording observations and field notes (Botma, Greeff, Mulaudzi and Wright, 2010: 217; Mack, et al, 2005: 15). There are also ethical issues regarding privacy and protection of research subjects connected to this approach, especially if the subjects are not aware that they are being observed (Merriam, 2009: 125). As a data collection method, participatory observation is time-consuming and may not be practicable under certain circumstances (Mack, et al, 2005: 15).
The researcher made use of modified participatory observation to gain further insight into the experiences of persons living with DM by joining the Diabetes Association of South Africa at the start of the research study and attending the meetings when able to do so. Unfortunately, this has not always been very regular due to the erratic shifts worked by the researcher. However, when able to attend, information from the guest speakers and from the members at the meetings has been invaluable in giving the researcher further insight into the difficulties faced by persons living with DM. At the meetings, the researcher was also able to interact with some Group One participants, gaining their trust thus easing the interview process. Some Group One participants became interested in the study and requested to be kept informed about the results of the study.

The researcher also attended the national conference of Diabetes South Africa during August 2009. Held at a hotel in Port Elizabeth, it was a gathering of persons living with DM, their families, researchers and other interested parties. The presenters at the conference delivered presentations which were invaluable and interesting. The guest speaker, Doug Burns, a former Mr Universe who has been living with DM type 1 since the age of seven, gave an inspiring talk which was based on his difficulties and triumphs in implementing self-management strategies (Burns, 2009). Many of the difficulties which he described are similar to those experienced by persons living with DM type 2.

These experiences added to the level of understanding gained during the research process and to the richness of the data collection.

2.6.1.5 Literature control

Literature control is an important phase of the study in which the data collected are compared with existing research findings. This enables the researcher to place the findings in the context of general scientific knowledge (Flick, 2009: 49). Holloway and Wheeler (2002: 30) state that researchers review literature for the following reasons:

- To find out what is already known about the subject and identify gaps in knowledge
• To describe how the study contributes to existing knowledge of a topic area
• To avoid duplicating other people’s work.

Analysis of the literature on the subject takes place together with or following data analysis, assisting in the interpretation and validity of the findings (Burns and Grove, 2009: 91; Polit and Beck, 2010: 172). In a qualitative study, the literature review should be an ongoing process as researchers use existing studies to compare or contrast their own findings and add to the body of knowledge on a particular subject (Holloway and Wheeler, 2002: 31).

During the literature review process, the researcher should make use of both theoretical and empirical sources (Burns and Grove, 2009: 92; Polit and Beck, 2010: 171). Theoretical literature sources deal with the models and theories which support the “selected research problem and purpose” (Burns and Grove, 2009: 93; Polit and Beck, 2010: 171). Relevant studies which may be found in journals or books are included in the empirical literature sources.

Literature searches may be conducted by means of electronic databases which contain references to a wide variety of information (Burns and Grove, 2001: 95; Polit and Beck, 2010: 173). Choosing the most relevant keywords when implementing a search strategy is vital to ensure that searching is carried out as effectively and efficiently as possible. Internet searching may lead one to relevant studies which may be more current than published material but information obtained via the internet has to be carefully evaluated as to its validity (Burns and Grove, 2009: 92; Polit and Beck, 2010: 172; Bowling, 2009: 145). The original source must be consulted so that an informed evaluation may be made.

2.6.2 Phase Two

Phase Two of the study took place in two steps, the first step being the compilation of a conceptual framework and the second step the development of the nursing strategies to facilitate self-management in persons living with DM.
Consensus on themes identified during data analysis was reached between the researcher, promoters and independent coder. The resulting themes were utilized in the compilation of a conceptual framework in Phase Two of this study.

A conceptual framework defines the main areas of the research study and clarifies the relationships between the concepts and themes identified during the research process (Holliday, 2002: 52, Wisker, 2001: 203; LaBiondo-Wood and Haber, 2010: 58; LaBiondo-Wood and Haber, 2010: 61). It defines the ideology used in the study and aligns it with the methodology and the research setting. The conceptual framework also helps depict the relationship between the methodology and research setting and participants (Holliday, 2002: 53). The conceptual framework is also used to link the gathered data to previously established models or theories (Schneider et al, 2004: 133).

When creating a conceptual framework, the researcher has to depend on the results of the data analysis. The data analysis will also give an indication of suggested strategies which a professional nurse may use to assist persons living with DM.

### 2.6.2.1 Step One of Phase Two

Step One of Phase Two consisted of the development of a conceptual framework. In the development of a conceptual framework, the researcher made use of the six vantage points of surveying activity together with the six aspects of activity as listed by Dickoff, James and Weidenbach (1968: 422):

- **Agency** - *Who or what performs the activity?*
- **Patiency or recipiency** - *Who or what is the recipient of the activity?*
- **Framework** - *In what context is the activity performed?*
- **Terminus** - *What is the end point of the activity?*
- **Procedure** - *What is the guiding procedure, technique or protocol of the activity?*
- **Dynamics** - *What is the energy source for the activity?*
The steps described above are used as a survey list when describing a particular situation or problem and to give direction for the activities or strategies required to address that problem. The survey list is used to identify the agent who carries out the strategies, who are the recipients of the strategies and in what context they will be carried out. In this study, a sub-agent, the Expert Patient, was identified. The concept and role of the Expert Patient will be discussed in detail in Chapter Four. The survey list is also used to identify the guiding procedures and dynamics of the strategies as well as the proposed outcome which is for persons living with DM to accept personal responsibility for the implementation of self-management strategies. By making use of the survey list, it is possible to identify what dynamics are required for activities to take place as well as the procedures which are required to guide them. When presenting the conceptual framework in Chapter Four, the researcher will make use of the survey list as a cogitation map to aid the description.

2.6.2.2 Step Two of Phase Two

Step Two of Phase Two consists of the compilation of strategies to assist professional nurses working with diabetic patients. These strategies were created using the conceptual framework established in Step One as a guideline.

On completion of Phases One and Two of the research process, the collected data were analysed and interpreted, resulting in the compilation of a conceptual framework. Strategies were then compiled to assist the professional nurse in the facilitation of the process of self-management in the patient living with DM type 2. The recommended strategies were based on data obtained during the interviews conducted with the participants in the study and from examination of the reflective journals. The strategies were dependent on the themes which were identified in the data. During the research process, it became apparent that, for the professional nurse to optimally implement strategies at a functional level, certain prerequisites had to be in place on a grand strategy level. The resulting strategies are, therefore, presented on both grand and functional levels. The strategies were submitted to an Expert Panel consisting of a specialist physician, diabetes nurse educators and a nursing academic with research experience in diabetes for
evaluation and critical comment. The critical comments of the Expert Panel were included in Chapter Five.

2.7 TRUSTWORTHINESS

Trustworthiness in qualitative research is essential in establishing the validity and reliability of a study. A qualitative research study may be regarded as trustworthy when the experience of the study participants is “accurately represented” (Babbie and Mouton, 2008: 276). Trustworthiness is established by a variety of constructs or criteria of evaluation to ensure that it is both credible and valid for professional practice (Holloway and Wheeler, 2002: 250; Polit and Beck, 2008: 537). Submitting the strategies to an Expert Panel assisted in enhancing the trustworthiness of the study as the members of the panel addressed the following criteria in their criticism.

2.7.1 Credibility

This construct is used to prove that the subject of the study is accurately identified and described (De Vos, in De Vos et al, 2002: 351). The parameters must be clearly defined in a study as the findings are valid within that setting (Holliday, 2002: 8; Polit and Beck, 2010: 492). Accuracy in description is essential for the findings to be found to be credible in a qualitative study (De Vos, in De Vos et al, 2002: 351). Some ways suggested by Babbie and Mouton (2008: 277) in which credibility may be enhanced are by:

- Prolonged engagement – stay in the field until data saturation occurs
- Persistent observation – use multiple sources to obtain information
- Triangulation – make use of different points of view such as making use of private and public sector patients and also obtain data from professional nurses working with diabetic patients
- Referential adequacy – use different materials such as tape recordings and written naïve sketches
• Peer debriefing – share the experience of the data collection with a peer who acts as “devil’s advocate” while questioning each stage of the research
• Member checks – ask participants to check the transcripts to ensure that they agree with what has been recorded.

Sufficient evidence must be collected to create a rich, deep description of the experiences of the participants of both groups and to provide adequate credibility (Seale et al, 2005: 414). In this study, enough time was spent with each participant to establish a relationship which, it was hoped, would enable the collection of more sensitive information (Krefting, 1991: 218). The use of a semi-structured interview schedule enhanced the credibility of the study as all the participants were asked the same questions (Krefting, 1991: 220). The interview process was continued till data saturation was obtained. Added data obtained from the field notes of the researcher and from the reflective journals provided by the Group One participants added to the richness of the findings. The use of a semi-structured interview schedule ensured that all participants were asked the same questions (Krefting, 1991: 220). All aspects of the analysis process were documented by the researcher (Holstein and Gubrium, 2002: 125). All themes and sub-themes identified during the data analysis process were confirmed by discussion with the independent coder and the promoter of the study.

2.7.2 Transferability

Transferability is an important construct in ensuring trustworthiness of the findings of the research study. The findings in a specific context should be able to be transferred to similar situations or participants (Holloway and Wheeler, 2002: 255; Polit and Beck, 2010: 493). As the Group One participants who were interviewed all have the common experience of living with DM in a metropolitan area, the themes identified should be able to be transferred to other persons living with DM in other cities in South Africa. Similarly, the experiences of the diabetes nurse educators interviewed in this study should be transferable to those working in similar situations in other areas of South Africa.
As several sources of data were used, rich thick data were available for analysis (Babbie and Mouton, 2008: 277). This allowed for a detailed description of the particular context of the study and enhanced the level of transferability.

2.7.3 Confirmability

The findings of the study should reflect the views of the participants and not the “biases of the researcher” (Babbie and Mouton, 2008: 278). The confirmability of the research findings was ensured by the provision of rich thick data obtained from the semi-structured interviews, the field notes of the researcher, the reflective journals provided by some participants and the transcript of the focus group session of professional nurses. The resulting documentation which was created allowed the details of the research process to be traced, if required. Continuous discussions held with the promoters confirmed the rigour of the research study (Holloway and Wheeler, 2002: 221; Polit and Beck, 2010: 499). This concept is related to objectivity in quantitative research.

Cross-validation or triangulation, one of the ways to promote rigour in qualitative research, is used to promote trustworthiness of a research study. One of the methods of cross-validation or triangulation is the use of more than one method of data collection (Brookes, 2007: 32). More than one method of data collection was utilized for this study, namely individual interviews and reflective journals. Data gathered during the focus group session with professional nurses working as diabetes nurse educators also assisted in cross-validation of the findings. Multiple coding is also used to promote rigour in a qualitative study (Brookes, 2007: 32). Coding by the researcher and an independent coder took place. The analysis and interpretation of findings were supported by documentation from at least two sources in the report of the research findings (Krefting, 1991: 221). This process of triangulation together with dense description provided by the reflective journals assisted in increasing the level of confirmability of the research findings.
2.7.4 Dependability

The findings of the study need to be consistent and accurate in order to be found dependable (Holloway and Wheeler, 2002: 255; Babbie and Mouton, 2008: 278). The context of the research has to be described in detail to enhance the degree of dependability. Dependability of the research findings was obtained by ensuring the credibility of the findings (Polit and Beck, 2010: 449). The findings should be similar if the study is replicated in another centre or with another group of participants (Babbie and Mouton, 2008: 278). The audit trail created during the research process enhanced the level of dependability of the study. The rich dense descriptions obtained by use of the transcribed interviews, the reflective journals, the field notes of the researcher and the results of the focus group session were used to prove the dependability of the findings. Coding was carried out by an independent coder. The promoter conducted regular audits during the research process, checking the research plan repeatedly, in order to ensure dependability of the findings (Krefting, 1991: 221).

2.8 ETHICAL CONSIDERATIONS

Ethical considerations are inherent in any type of research as they are intended to prevent any harm, emotional or physical, knowingly befalling any participants in a research study. Any activity which focuses on any aspect of human welfare has to give due consideration to ethical issues linked to basic human rights (Pera and Van Tonder, 1996: 4; Burns and Grove, 2009: 185; LaBiondo-Wood and Haber, 2010: 254). Ethical guidelines are provided for researchers in all fields of research.

Ethics, as a concept, has several meanings. Practices and beliefs of a certain group and the standards and behaviour of a group or individual such as medical or nursing staff are examples of ethics relevant to this study (Pera and Van Tonder, 1996: 4; LaBiondo-Wood and Haber, 2010: 247). Another meaning which is relevant to this study concerns ethics as an activity which investigates particular aspects of human welfare (Pera and Van Tonder, 1996: 4). Ethical
guidelines are standards which are used to judge the conduct of the researcher and assess the extent to which ethical principles are adhered to (Strydom in De Vos et al, 2002: 63; LaBiondo-Wood and Haber, 2010: 251). Ethical guidelines laid down by the university were adhered to at all times during this study. Permission was sought for and obtained from the Ethics Committee of the Nelson Mandela Metropolitan University prior to commencing the research study.

2.8.1 No harm to respondents

All participants must be protected from both physical and emotional harm at all times (Babbie and Mouton, 2008: 522). All aspects of the research study must be discussed with the participants in order to ensure that they understand the research process. All interactions with the participants must be handled with sensitivity and tact (Babbie and Mouton, 2008: 523). Participants must be well informed about the possible impact of the study and given the choice of withdrawing at any stage, if they wish to do so. If the researcher becomes aware of any prospect of physical or emotional harm befalling the participants, there is an ethical duty to change the focus of the study to reduce the risk of exposure (Strydom, in De Vos et al, 2002: 64; LaBiondo-Wood and Haber, 2010: 264). The procedure and implications of the study were explained to each participant before any interviews were commenced.

2.8.2 Informed consent

All participants must be given the opportunity to make an informed decision about whether to take part in a research study and also to withdraw at any stage as it is unethical to include anyone who is unwilling in any type of research study (Seale, 2005: 396; Merriam, 2009: 31; Polit and Beck, 2010: 127). The participants must be legally and psychologically able to make their own decision regarding informed consent (Strydom, in De Vos et al, 2002: 65; Polit and Beck, 2008: 176; LaBiondo-Wood and Haber, 2010: 259). Language used in explaining the research process to the participants must be of such a nature that it is easily understandable by every individual concerned. The informed consent must be documented and kept on record throughout the research process. As part of the
informed consent, the participants must be told about the possibility of withdrawal at any stage.

In this research project, all information regarding the aims of the study and the procedures to be followed as well as any possible advantages of the study was made known to the participants prior to their interviews. They were given information on the reasons for their selection, the duration of the study and how the results would be used and published. Permission to tape-record the interviews was obtained specifically. All participants were also given the opportunity to consent or decline to take part in the study. Written informed consent was given by all participants. The informed consent documents were kept separate by the researcher from the interview documents to prevent any accidental disclosure of the identity of the participants. Samples of informed consent documents used in this study may be found at Annexures D and E.

2.8.3 No deception of subjects

Deliberate misrepresentation of information or the giving of incorrect information in order to make another person believe what is not true is a violation of the respect to which each person is entitled and a direct violation of ethical standards in research (Strydom in De Vos et al, 2002: 66). The researcher has a duty to ensure that the participants receive the correct information and are not misinformed at any stage during the research process. There is a further obligation on the researcher to inform the participants immediately if there is any material change or development which affects the veracity of the information given to the participants at the outset of the study (Strydom in De Vos et al, 2002: 67).

In this study, the participants were given the opportunity to ask for further information if they wished to do so. Participants were also given the contact details of the researcher if they wished to obtain further information about the progress of the research project.
2.8.4 No violation of privacy and confidentiality

Privacy has been defined by Sieber (in De Vos et al, 2002: 67) as "that which normally is not intended for others to observe or analyse". Confidentiality ensures that the right to privacy of the individual is maintained (Polit and Beck, 2010: 129; LaBiondo-Wood and Haber, 2010: 252). Confidentiality is an extremely important ethical issue as the participants will have to trust the researcher implicitly in order to give their honest answers which are required for the study to reach valid and reliable conclusions. All data collected must be treated as strictly confidential at all times. During the research study, the data collected were handled in such a way that the privacy and confidentiality of the participants was maintained at all times. No names appeared on any documents used in the study except for the essential personal details documents which are kept totally separate from other documentation. The tape-recorded Interviews were transcribed using an individual code for the participant known only to the researcher. The resulting data could not be linked to the identity of any individual in any way. Interview tapes are being kept in a locked safe to which the researcher has sole access for a period of three years in case of any queries by participants. The interview tapes will then be destroyed. In the informed consent form, special mention was made of the measures used to ensure confidentiality and anonymity in the research process.

2.9 CHAPTER SUMMARY

In this chapter, the research methodology and design used in the study have been discussed. The exploratory, descriptive and contextual aspects of this qualitative study have specifically been discussed. An explanation of the phases of the research method has also been given. Two participant groups with differing sampling and data collection methods took part in the study. The data analysis phase has been explained together with Phase Two. The importance of the various constructs which ensure trustworthiness and the ethical considerations for research have also been discussed.
In Chapter Three, the themes which were identified during the data analysis process will be presented together with findings from relevant literature sources.
CHAPTER THREE

DISCUSSION OF FINDINGS AND LITERATURE CONTROL

3.1 INTRODUCTION

In Chapter Two the purpose of the study was discussed together with the research design and method. Chapter Three will present the analysis of the data collected by means of individual interviews and a focus group session. The results of notes made in reflective journals by some participants in Group One as well as field notes made by the researcher soon after completion of the interviews will be added to the data.

The researcher will briefly describe the participants of each group with their inclusion criteria and semi-structured interview schedule as a reminder to the reader. The themes identified for each group are presented in tabular form. The themes of each group are discussed separately with the data presented as direct quotations to illustrate the identified themes. The discussion of each theme will include the results of a literature control which was conducted by the researcher. The aim of the literature control is to contextualize the identified themes in the existing literature.

3.2 GROUP ONE

Nineteen diabetic patients were interviewed as participants in the first group of the study. The participants ranged in age from 44 to 74. During the recruitment phase of the study, some potential younger participants were identified but

“In nature there are neither rewards nor punishments – there are consequences”
Robert G. Ingersoll
declined to take part in the study. Most participants were from the private sector with five attending clinics at public health care facilities. Two of these participants had experience of being treated at both public and private health care facilities. One participant had been treated at public health care facilities for many years but is now on a private medical aid paid for by his children. There was a wide range of time since diagnosis. One participant had been diagnosed 18 months previously, while others had been living with DM for up to 30 years. The gender division of the group was 13 female and six male.

Inclusion criteria for the participants were:

- People who have been diagnosed with DM type 2
- Minimum of six months since diagnosis of DM type 2
- Able to communicate in English
- Age range from 25 to 75 years
- Accessing private or public health care facilities.

All participants in this group were very willing to take part when approached but, while being interviewed, some appeared to feel unsure of how much information was required for the study. Some participants were not very forthcoming with information at times and it appeared that they did not wish to have too much invasion of their privacy.

The following questions were used for the individual patient interviews:

- Tell me about your experiences of living with DM
- Tell me about what you perceive as achieving self-management of DM
- Tell me about factors that contribute towards your being able to manage your disease
- What factors hinder you in the management of your condition?
- How can professional nurses assist diabetic patients in enhancing self-management of DM?

Participants were also asked to make use of a reflective journal to provide further information on the topics discussed. However, as reported in Chapter Two, not many participants made use of this journal, feeling that they had already given
sufficient information during the interview. A few participants gave a real reflection on their feelings about their experiences of living with DM while others only made simple notes on the points discussed or returned blank notebooks.

The independent coder who was approached to assist with identifying themes occurring in the data obtained from the interviews, the reflective journals and the field notes produced an in-depth report on the themes and sub-themes identified by him. These themes were in agreement with the themes identified by the researcher which were verified and checked by the promoters.

The themes and sub-themes identified during the coding process are presented in Table 3.1.

Table 3.1  Themes identified in interviews with people living with DM

<table>
<thead>
<tr>
<th>THEMES</th>
<th>SUB-THEMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. People living with DM have a definite initial experience on being diagnosed with DM</td>
<td>1.1 Participants experience a variety of negative emotions after diagnosis:</td>
</tr>
<tr>
<td></td>
<td>• Shock due to unexpected diagnosis</td>
</tr>
<tr>
<td></td>
<td>• Anger directed at themselves (blaming themselves) or at others (blaming others for their condition)</td>
</tr>
<tr>
<td></td>
<td>• Denial about the gravity of the condition</td>
</tr>
<tr>
<td></td>
<td>• Resentment at having to make unwelcome lifestyle changes</td>
</tr>
<tr>
<td></td>
<td>• Anxiety about what the future holds</td>
</tr>
<tr>
<td>1.2 Some participants experienced relief on diagnosis as they had expected a worse condition</td>
<td></td>
</tr>
<tr>
<td>2. People living with DM gradually experience an acceptance and acknowledge-ment of their condition</td>
<td>2.1 Lifestyle changes are implemented when a deeper understanding of the condition is achieved</td>
</tr>
<tr>
<td>3. People living with DM have definite views on the concept of self-management</td>
<td>3.1 Participants experience that lifestyle changes in relation to the following are required:</td>
</tr>
<tr>
<td></td>
<td>• Dietary changes need to be made</td>
</tr>
<tr>
<td></td>
<td>• Prescribed medication needs to be taken regularly</td>
</tr>
<tr>
<td></td>
<td>• Exercise needs to be included on a regular basis</td>
</tr>
<tr>
<td>3.2 Self-discipline is required to implement these lifestyle changes</td>
<td></td>
</tr>
</tbody>
</table>
### THEMES

4. People living with DM acknowledge both positive and negative factors which influence self-management

<table>
<thead>
<tr>
<th>SUB-THEMES</th>
<th>4.1 Participants experience the impact of both positive and negative factors in a variety of ways depending on their personal circumstances and socio-economic situation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Participants experience both positive and negative levels of support from family and friends</td>
</tr>
<tr>
<td>4.1</td>
<td>Most participants appreciate their mental and their physical competency which enable them to implement an exercise regime while others experience difficulty in obtaining sufficient exercise</td>
</tr>
<tr>
<td>4.1</td>
<td>Participants appreciate having the facility and knowledge allowing them to assess their own blood sugar levels</td>
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<tr>
<td>4.1</td>
<td>Participants appreciate the positive support they receive from the medical team but some experience a certain lack of knowledge in some members of the medical team, both doctors and nurses</td>
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<tr>
<td>4.1</td>
<td>Participants experience a widely diverse range of availability and access to topical and current information regarding DM</td>
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| 4.2 Financial issues play a significant role in attaining optimal self-management: |
|---|---|
| (a) Some participants have | Adequate funding for medication and other treatment |
| (a) Some participants have | Adequate funding for a correct diet |
| (b) Other participants experience negative financial issues | Medical aids dictate level of care |
| (b) Other participants experience negative financial issues | Low income levels result in lower levels of medical aid or use of state facilities |
| (b) Other participants experience negative financial issues | Low income makes it difficult to afford a healthy diet |
| (b) Other participants experience negative financial issues | High cost of diabetic related medication, foods and related supplies |
| (b) Other participants experience negative financial issues | There is a lack of government support for people living with DM |

| 4.3 Participants feel that stress-related factors affect self-management |
| 4.4 Participants describe various cultural aspects which influence management of DM, particularly regarding diet |
| 4.5 Some participants experience difficulties due to other medical conditions which affect their ability to achieve optimal self-management |
5. People living with DM have definite ideas on how professional nurses can assist them in achieving self-management

5.1 Participants had strong feelings on the following aspects:
- Nurses need to be informed about all aspects of DM themselves
- Nurses need to be sensitive about the timing and manner in which information is presented
- Nurses should be available and approachable
- Nurses should acknowledge a patient’s achievements when small gains in self-management are achieved
- Nurses should practise patient advocacy
- Nurses to be encouraged to promote self-management by implementing diet and exercise strategies themselves
- Nurses should ensure that culturally sensitive information is made available

3.3 GROUP TWO

Data for the Group Two participants were derived from a focus group session as well as individual interviews held with diabetes nurse educators. The participants in Group Two are all currently working with diabetic patients and are employed either by specialist physicians in Nelson Mandela Bay or in local diabetic clinics or Diabetic Centres of Excellence. One participant works with patients in both the public and the private sector. Their experience of working specifically with diabetic patients varies greatly, ranging from 19 months to 16 years.

The inclusion criteria for the participants were as follows:
- Formal registration with SANC as a professional nurse
- Minimum of one year of experience as a diabetes educator
- Ability to communicate in English
- Additional training or courses completed in diabetes education.

The following questions were asked during the focus group session:
- What do you perceive as effective self-management in patients with DM?
- What factors do you think assist patients in managing their disease?
- What factors do you think hinder patients in the management of their condition?
• How can professional nurses assist diabetic patients in facilitating self-management of DM?

The individual interviews followed the same format with the same questions asked as in the focus group session. The focus group session and the individual interviews were also recorded and transcribed verbatim as was done for the Group One participants.

Field notes were also used to add any points of interest to enrich the data. The data contained in the transcripts of the individual interviews were combined with those of the focus group session and the field notes for coding purposes. Coding was carried out by an independent coder and the researcher as previously described. The following themes as described in Table 3.2 were identified.

Table 3.2  Themes identified in interviews with diabetes nurse educators (DNE)

<table>
<thead>
<tr>
<th>THEMES</th>
<th>SUB-THEMES</th>
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<tr>
<td>1. Diabetes nurse educators have definite perceptions about the</td>
<td>1.1 Diabetes nurse educators acknowledge the importance of:</td>
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<tr>
<td>importance of self-management of DM</td>
<td>• Patient education</td>
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<td></td>
<td>• Motivation of patients</td>
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<td></td>
<td>• Empowerment of patients</td>
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<td>2. Diabetes nurse educators have definite views on factors which both</td>
<td>2.1 Diabetes nurse educators often find that some doctors are reluctant to</td>
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<td>assist and hinder patients in self-management</td>
<td>refer patients when it becomes necessary</td>
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<td>2.2 Diabetes nurse educators experience that financial factors play a</td>
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<td>significant role in the level of management achieved by the patient.</td>
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<td>• Diabetes nurse educators experience that some patients have a lack of</td>
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<td>resources which may make self-management difficult</td>
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<td>• There are discrepancies between services offered to patients with high</td>
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<td>and low income levels:</td>
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<td>o Private health care facilities</td>
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<td>o Low income medical aids</td>
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<td>2.3 Diabetes nurse educators experience:</td>
<td>2.4 Diabetes nurse educators experience that some patients find that</td>
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<td></td>
<td>physical problems may make self-management difficult</td>
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<td>2.4 Some patients do not accept responsibility for their own</td>
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<td>condition and management</td>
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<td></td>
<td>Some patients remain in denial</td>
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</table>
2.5 Diabetes nurse educators experience that there are certain cultural aspects which may affect self-management of DM

2.6 Diabetes nurse educators experience that the technology of medical services provided in South Africa often lags behind technology available in other countries

3. Diabetes nurse educators expressed similar views to people living with DM on ways in which nurses can assist patients in the self-management of their condition

3.1 Diabetes nurse educators, based on their experiences, are of the opinion that:
- Nurses must educate themselves on all aspects of DM management and related pharmacology
- Nurses should be constantly aware of the financial implications of DM and refer patients to appropriate support agencies where possible
- Medical practitioners should be encouraged to obtain further education on DM
- DNEs would like to have facilities made available to allow them to educate the patients and the public
- All nurses must be empathetic towards the patient when counselling particularly with regard to personal problems experienced by the patient
- Nurses must be aware of the importance of referring patients for psychological assistance when required
- Formal diabetic education programmes should be made available at university level
- Communities must be made more aware of the implications of diabetes
- Diabetes nurse educators wish to advocate for diabetes to receive the same recognition as other chronic diseases

Verbatim quotations from the recorded interviews are used to illustrate the themes which were identified during the process of analysis. These themes are also re-contextualized within the framework of the existing literature to provide a literature control.

3.4 DISCUSSION OF THEMES

The themes and sub-themes identified for Group One and Group Two will be discussed separately. Each theme will be explained with quotations illustrating the explanation. The themes will then be re-contextualized with the existing literature on the subject.
3.4.1 Group One – people living with DM

The following themes and sub-themes were identified when the researcher requested participants to give information on their experiences of living with DM.

3.4.1.1 Theme 1

*People living with DM have a definite initial experience on being diagnosed with DM*

The participants in this study all expressed a wide range of emotions when describing their experiences of initially being diagnosed as suffering from DM. The emotional reactions which most of the participants describe are similar to the descriptions given by Kubler-Ross (2003: 51) on experiencing and adjusting to loss. Although there has been some criticism of the research presented by Kubler-Ross over the years since initial publication, the pattern of emotions which she presented as the Cycle of Grief can be applied to many other situations and is not limited to a reaction to death or dying but also to loss (Bolden, 2007: 237).

People generally are positive about their health and do not realize that there is a connection between their present behaviour and developing a chronic condition later in life (Clarke, 2003). They may be aware of diabetes mellitus as a condition but do not relate it to themselves. This situation may be exacerbated if the treating physician or health care worker does not acknowledge the gravity of the diagnosis and describes it, for example, as “a touch of sugar” (Part 1 – Dealing with the diagnosis of diabetes). The attitude of the physician towards the condition and the patient at the time of diagnosis has been shown to have “crucially impacted on their subsequent compliance” (Peel, Parry, Douglas and Lawton, 2004: 269).

It has been demonstrated in a number of studies that the period after being diagnosed with any chronic condition is an extremely emotional time for patients (Peel et al, 2004: 269). As emotions and feelings affect each aspect of one’s life and could have a profound effect on the later achievement of optimal self-management, all health care workers have to be aware of the possible impact of
the diagnosis on the mental status of the patient (Peres, Franco and Dos Santos, 2008: 102).

3.4.1.1(a) Sub-theme 1.1

Participants experience a variety of negative emotions after diagnosis

A diagnosis of a chronic, life-changing disease may be expected to result in an extremely negative experience for the person concerned. The resulting emotions experienced by the newly diagnosed diabetic patient, when contemplating the new demands on time, effort, finances and lifestyle required for achieving control of the condition, may be overwhelming. These emotions and feelings are not, however, part of a set pattern or sequence. Some people may experience the entire gamut while others may experience only a few. As there is no specific sequence, people may re-experience some feelings after thinking that they had moved on or they may settle into their new lifestyle fairly quickly and relatively unscathed. The negative feelings experienced by participants in this study may possibly be equated with those described by Kubler-Ross (2003: 52) as buffers which people employ to deal with the shock of a situation before they are able to cope with a new reality.

A model of a ‘diabetic grief cycle’ based on the Kubler-Ross model of dealing with death and dying is described by Dunning (2003: 223). In this model, diagnosis leads to feelings of shock, denial and depression which then lead to revolt. The bargaining stage then follows with depression and then hope and acceptance completing the cycle. As DM is a progressive condition, complications may develop which initiate the cycle again from the beginning. The grief and denial experienced are normal and the person should be allowed to deal with the conflicting emotions with support and understanding. The time-frame required for the patient to go through the grieving process will vary from person to person (McDowell, Matthews and Brown, 2007: 45).

Diagnosis of DM may also lead to depression which will affect the self-management of DM as the person living with DM may lack the motivation required to exercise, implement dietary changes and continue correct self-

Persons living with DM may feel that the struggle to achieve glycaemic control indicates that they are inadequate in some way and often try to work out these feelings alone without consulting health care service providers for support (Rayman and Ellison, 2004: 905). These feelings of inadequacy and the fact that these people do not readily communicate their needs may make it difficult for health care service providers to realize that they require extra care and attention to lessen the initial negative reaction.

• **Shock due to unexpected diagnosis**

Shock is an emotion experienced by anyone who receives negative news which is totally unexpected, particularly when the news has life-changing implications. The typical initial reaction described by most of the participants was shock and horror. The shock of diagnosis has been described as an arrow out of the blue (Joslin Diabetes Center, 2008a).

"I think you know if you’re diagnosed as being a diabetic, the first thing you have to do is accepting it, because if you don’t know anything about diabetes, you’re absolutely shocked and horrified"

"Well, it came as a shock when I was first diagnosed"

"And I got quite a shock when I was diagnosed with diabetes"

"when I first heard I have the diabetes, I just felt blank, yes, I felt hot".

"Horrified! ... I mean we were all like shocked, because where did I get it from?"

Studies have indicated that the level of shock experienced by the patient on diagnosis is higher in a younger mean age group (Clarke, 2003). The level of shock of diagnosis experienced by the patient may be extreme. In one study, a participant “described his diagnosis as dramatic, painful and sudden: ‘like being hit on the back of the head with a sledge hammer’; with associated feelings of being ‘shocked and numb’” (Peel et al, 2004: 272). In another study, a participant was frightened at the prospect of driving home to collect his personal belongings prior to admission to hospital and was later told by his doctor that had his blood
sugar levels been higher, he may have died (Phillips, 2007: 38). This experience worsened the “horrible shock” of diagnosis for this person.

The attitude of doctors when presenting the diagnosis to patients can affect the level of self-management achieved later as well as the level of shock experienced. This reaction is not limited to initial diagnosis as conversion from oral medication to insulin therapy at a later stage may also cause a shock reaction, especially if the physician does not handle the situation well as described by a participant in another study – “He didn’t discuss with me the pros or cons. He marched me down to the nurse’s office and said ‘She will sort you out’. He was very abrupt, it wasn’t handled the right way” (Phillips, 2007: 39).

- **Anger directed at themselves (blaming themselves) or at others (blaming others for their condition)**

  Anger is a common feature in response to loss and leads to revolt against the situation. The anger may be directed at oneself or may be projected against anyone perceived as being responsible for that loss. Newly diagnosed diabetics may perceive the diagnosis as a threat as they are confronted with the possibility of the myriad of complications which may occur, leaving them feeling that their entire comfortable lifestyle is threatened because of the condition and, as a result, they may react with anger (American Diabetes Association, Anger [SA]).

  One participant in this study had a reaction of anger for a particular reason. During the interview, he described how treatment given by a medical doctor actually induced his DM:

  “In fact, I was very angry. I was very angry and I actually took him to Dental Council”

  This participant had been ill with a rheumatic condition (*polymyalgia rheumatica*) which was treated by his medical practitioner with high doses of steroids. His condition continued to worsen until he was admitted to an Intensive Care Unit on the brink of a coma and preparing himself for death. When seen by a colleague because his own doctor was off for the weekend, the colleague realised that the participant had become diabetic and stopped the steroid treatment immediately.
"So yes, it made me feel very angry and also, not understanding anything about diabetes, all you’ve seen is some of your members have suffered from diabetes and the dire consequences that they found themselves in."

Anger may be directed against those around the person living with DM, either friends or family, or against the medical professionals who give the instructions for the medication and lifestyle changes which have to be implemented. The person living with DM may express excessive levels of anger and hate as the realization of the implications of the diagnosis of DM sinks in. If deep rage is experienced, this may affect the level of support from those close friends or family members who find it extremely difficult to tolerate the anger and hostility expressed towards them or in their presence (Peres et al, 2008: 105). Family members may be blamed for not helping the person with achieving their goals or actively sabotaging any efforts for a healthy lifestyle (Rapaport, 2000). Excessive anger can be extremely detrimental as it may have an adverse effect on blood sugar levels (Coping with diabetes diagnosis, 2007: 7).

Anger can, however, become a positive response as it may give the person living with DM the energy and purpose to fight back against the condition (Vancouver Coastal Health, 2006). The American Diabetes Association website advises that anger can be a force for good, if used positively, as it can lead to “action, change and growth” (American Diabetes Association, Anger: [S.a.]).

- Denial about the gravity of the condition
Denial occurs when a person living with DM does not or cannot assimilate all the implications of the initial diagnosis of DM and refuses to admit the severity of the condition. A shock reaction is closely followed by denial in the ‘diabetic grief cycle’ as described by Dunning (2003: 223). The concept of denial as an “unconscious mechanism for psychological defense or a mental barrier established by the ego between instinctual drives and external reality” was introduced by Freud (Garay-Sevilla, Malacara, Gutierrez-Roa and Gonzalez, 1999: 238). The initial shock and denial response after diagnosis of DM does not necessarily evaporate quickly.

"The diagnosis was six years ago and I think I’m still in denial, and I think probably the whole thing is that you don’t perceive it as being related to yourself."
"From a mental point of view it was denial. Denial I think is the biggest problem that I’ve experienced”

"You know in the beginning, I suppose in a way I didn’t believe”

A period of denial often forms part of the normal response to a diagnosis of diabetes. People diagnosed with DM may continue living as if they do not have the condition (Peters, 2006: 144). They continue with their pre-diagnosis eating habits, do not increase their exercise levels and may take their medication irregularly, if at all (Peres et al, 2008: 106).

"You actually don’t feel sick because the disease creeps up slowly on you, you actually don’t know and realize you’re ill until it’s too late”

Denial can continue for many years after diagnosis and can cause a dangerous situation for the person living with DM as he will be less likely to implement the required lifestyle changes, eat a healthy diet or take the correct dosage of the prescribed medication.

Some participants in this study acknowledged that they personally experienced a great deal of denial, particularly in the initial period after diagnosis as they felt vulnerable and avoided facing the consequences of the condition.

"… you become vulnerable, you do become angry, you’re ignoring it and avoiding it, and I think avoidance is the dangerous part, in the process of avoiding it, you’re the one who is actually causing damage to yourself”

“I think if the attitude doesn’t change, you can have the best educational programmes, the best dieticians but if the attitude of the individual is not correct, you’re not going to change the perception and the approach to the disease process”

Denial has been described as a “defence of the individual’s self-esteem, threatened by the irruption of the disease” (Peres et al, 2008: 106). The diagnosis of DM may affect the perceptions persons living with DM have of themselves, making them feel different to other people and may lead to feelings of isolation which are relieved by denying the condition (Rayman and Ellison, 2004: 906).
In a world which places such value on appearance, there is also the possibility of persons living with DM denying the condition because of the fear of their friends and family stigmatizing them as diabetic due to the link with obesity (Wolfer, 2003: 30). The denial phase may assist the person living with DM in coming to terms with the condition by creating a defense system for their self-esteem (Peres et al, 2008: 106). Denial creates a delay in acceptance of the situation which may, in fact, protect the person living from DM from the initial pain and shock until they are psychologically better able to deal with the situation (Coping with diabetes diagnosis, 2007: 6).

Denial can be dangerous when it continues for too long, however. Some studies have shown that persons living with DM may continue with denial as they do not wish to acknowledge the severity of the condition (Clarke, 2003). As the period of denial continues, they may find it increasingly difficult to make the required lifestyle changes (Peres et al, 2008: 106). If the person living with DM does not accept the diagnosis and take appropriate action, complications which could have been prevented may occur (Coping with diabetes diagnosis, 2007: 6).

- **Resentment at having to make unwelcome lifestyle changes**

  When diagnosed with DM, persons living with DM have to be prepared to make lifestyle changes which affect every aspect of their lives. These changes are not always welcome to the person in question, even if they are aware that the changes are for their own benefit. This can lead to persons living with DM experiencing varying levels of resentment when they realize the extent of the changes.

  Some participants in this study experienced feelings of resentment at the thought of the required change of lifestyle.

  "Well, when I was first diagnosed I was sort of resentful, and I mean I thought now this is now the end of the good times type of thing and I can't do this and I can't do that."

  Resentment is often caused by the required changes in diet experienced by the newly diagnosed diabetic patient (Lehnert, 2007). As the person living with DM
feels guilty about eating a slice of cake or becomes angry at not being able to eat favourite food items, the level of resentment may deepen. This will also apply to other aspects of the required lifestyle changes such as exercise or blood glucose testing. If the person living with DM ignores these important changes because of experiencing resentment at having diabetes, the chance of complications increases and may become life-threatening (McDowell et al, 2007: 49).

Persons living with DM may also experience resentment because of pity expressed by other people when they are informed about the diagnosis (Yu, 2008).

The resentment experienced is often worsened when the person living with DM has to commence treatment with insulin (Muralidharan, 2007). They may feel inadequate in practical aspects of dealing with the administration of insulin. Moulton (1984: 84) describes a person living with DM who did not want to request assistance from any friends or family as she felt they had “their own problems”. However, she found it difficult to administer insulin correctly due to poor eyesight and difficulty with handling the syringe. As a result, her resentment regarding the necessity for insulin administration grew. However, she was able to achieve her self-management goals after a short period of time with assistance from a home nurse which included positive strategies for dealing with her resentment as well as the practical issues involved.

- **Anxiety about what the future holds**

When confronted with any major change in life, particularly when it is a disease or condition which impacts on all aspects of one’s life, anyone is likely to experience extreme anxiety and fear. The future will look bleak at that point in time and they may feel extremely vulnerable and that there is no hope for them.

Several participants expressed some form of fear and anxiety in facing the future as a diabetic.

"It also brings you very close to, or reminds you quite a bit about mortality. You become vulnerable in the sense that you realize that you are in the process of decaying, or being destroyed subtly physiologically, meaning that things start
ceasing to function, and I think you probably get reminded constantly about your vulnerability as a person and what can go wrong and what can happen to you.”

One participant spoke about the effect that a change of medication had on his attitude towards his condition. He had not been particularly worried while on oral medication but his blood sugar levels were not controlled. He was then put on insulin which made him fearful about his future.

“So they put me on insulin and then I got scared because I thought now, this has gone bad now, so I’ll have to do something about it.”

In another study, some participants expressed anxiety about the possible interaction between the DM and other conditions which they had such as arthritis (Peel et al, 2004: 272). They felt that there was a possibility that the treatment for one condition may worsen the other or make it difficult to manage.

Anxiety and fear may lead to depression which forms part of the ‘diabetic grief cycle’ (Dunning, 2003: 223). As such, it is part of the normal process leading to eventual acceptance of the condition. However, if the depression lasts for an extended period of time or becomes a controlling influence in the life of the person living with DM, it may interfere with attaining optimal self-management and the person should be referred for treatment (Coping with diabetes diagnosis, 2007: 7).

Health professionals may induce more fear and anxiety in a patient when giving information on DM in a manner which does not recognize the autonomy of the patient and may be perceived as a threat (Rollnick et al, 2003: 26). A respectful approach by the health care worker, offering support and information in a non-judgmental way can go a long way in alleviating fear and anxiety (Peres et al, 2008: 106).

3.4.1.1(b) Sub-theme 1.2

Some participants experienced relief on diagnosis as they expected a worse condition

Not all people, however, display a negative response to life-changing experiences. The change may have been expected, perceived as beneficial in
some way or may be welcomed for some other reason. This may be particularly true when someone is expecting to be told that they have some form of terminal illness which they perceive as being worse than a diagnosis of DM.

Some participants, during their interviews, referred again to their initial shock response but also described some relief as they now had an explanation as they realized why they had been feeling so “rotten” lately.

“*Well, I mean you are quite shocked when you first hear, I can just remember being so shocked that this is what, and perhaps relief because I’d been feeling so rotten for so long and then eventually I had a fasting blood sugar and then I was diagnosed as a diabetic.*”

Another participant experienced a great deal of relief when diagnosed with DM as he had been expecting something worse:

“*It was a relief, because I thought I’d had a heart attack. So that was a nice thing. You know, when you think you’ve had a heart attack and somebody, ‘Oh, you’re just diabetic!’ you say ‘oh, well, thank goodness for that!’”*

In another study, some participants reacted in a similar manner (Peel et al, 2004: 271). One participant in this study described his diagnosis as “the best thing that has happened to me for ages because it’s brought around so many other changes and benefits” (Peel et al, 2004: 271). Another participant was relieved about her diagnosis as it “confirmed that she had not ‘been imagining this’ while another was pleased that she knew what was causing her symptoms (Peel et al, 2004: 271).

Some participants in other studies have expressed their relief at the diagnosis of DM as they were fearful about having another condition which was worse and felt that DM was the lesser of two evils as it could be controlled. Some participants in the previously mentioned study experienced relief because they were not “suffering from a condition which they felt was ‘worse’, such as ‘an inoperable tumour’” (Peel et al, 2004: 272). In another study, some participants had felt “very ill” prior to diagnosis and were “relieved that they did not have cancer” (Phillips, 2007: 38).
3.4.1.2 Theme 2

*People living with DM gradually experience an acceptance and acknowledgement of their condition*

When dealing with any major lifestyle changes, people may often react in an extremely negative manner and experience all the negative emotions as described above. However, as time passes, most people become accustomed to the changes and manage to deal with the negative feelings and emotions which eventually leads to an acceptance and acknowledgement of the cause of the changes. In dealing with a diagnosis of DM, most people do eventually reach a level of acceptance, making them more open to the possibilities of attaining an optimal level of self-management of their condition.

Most participants in this study have reached a stage of acceptance of the condition and of the required changes in lifestyle. However, it is not an easy journey to acceptance and most participants acknowledged that they had had some difficulty in reaching that level.

Acknowledgement of the condition is a pre-condition for acceptance as shown in the following quotation from a participant:

"You've got to acknowledge your illness. You've got to! If you don't acknowledge your illness, things won't go right, it will go wrong."

The importance of a change of personal attitude is emphasized in the following quotations.

"... but once you've accepted it and realized that life does go on quite normally, um, you know it gets easier"

"... as far as I'm concerned it's more, you've got to take control of it and handle it. You know you've got to live with it, so you've got to get on with it!"

Achieving the goal of self-management does not come easily or quickly as shown in the following quotation:

"Self-management to me has only come over the years"
Previous studies have shown that some participants are grateful that their DM has been picked up at an early stage which would help prevent later complications (Peel et al, 2004: 272). This made it easier for these participants to achieve a positive level of acceptance and to take charge of their condition.

3.4.1.2(a) Sub-theme 2.1

_**Lifestyle changes are implemented when a deeper understanding of the condition is achieved**_

It is difficult for anyone to understand the need to implement lifestyle changes if they do not understand the reason for those changes. This applies to any situation in which a person experiences life-changing circumstances. People dealing with the diagnosis of any chronic disease or condition have to be given the opportunity of receiving enough appropriate education which will allow them to understand the need for the required changes and empower them to implement the principles of self-management as equal partners in the treatment process.

Many of the participants felt that when they obtained a deeper understanding of DM, they were able to feel more in control and to implement the changes necessary to allow a better standard of living:

Participants felt that the person living with DM had to take sole responsibility for managing the condition which invariably led to a deeper understanding of the condition.

"I've made it my sole goal to understand the disease and how I am going to manage it because if I don't manage it, nobody else can manage it for me."

Taking responsibility for the management of a condition as complex as DM can be very daunting, especially for people who have no medical background or previous experience of coping with a chronic disease.
It is important to take both the biomedical and psychosocial paradigms into account when dealing with any chronic illness (Dunning, 2003: 223). Some people may be more compliant with one particular aspect of self-management than another (Unger, 2007: 410). For example, a person living with DM may implement a lifestyle change such as increased exercise levels more readily than frequent monitoring of their blood glucose levels (Unger, 2007: 410). However, as their understanding of the various aspects of DM deepens, they may find it easier to implement other tasks more readily and to take more personal responsibility for their condition.

3.4.1.3 Theme 3

People living with DM have definite views on the concept of self-management

The concept of self-management is of particular importance in the management of chronic diseases such as DM. The person living with DM has to take full responsibility for the management of DM due to the particular lifestyle changes required to attain optimal glucose levels.

All participants acknowledged the importance of life-style changes in reaching optimal levels of self-management:

“... it’s a total life-changing scenario and it takes a lot of working on from a personal point of view and from a support point of view from family, colleagues, friends, associates who stand by and actually understand that you’re not going to be better tomorrow morning and you never will be 100% right again. And you have to accept that, that and adapt your life and your lifestyle to the change that you have to go through.”

It has been indicated that people who have a strong internal health locus of control fare better in rehabilitation programmes which emphasize the importance of the patient taking ultimate responsibility for their own illness or injury (Norman and Norman, 1991: 27). Several lifestyle changes have to be made by the patient to obtain optimal self-management levels. In order to implement these lifestyle changes, the person living with DM has to take full personal responsibility for the management of the condition. This will be achieved more readily if the person
involved has a strong internal locus of control and does not shift the responsibility to others.

### 3.4.1.3(a) Sub-theme 3.1

*Participants experience that lifestyle changes in relation to the following are required:*

Lifestyle changes regarding diet, exercise and medication are the most important factors in dealing with DM. These changes have to be implemented by persons living with DM, who are ultimately responsible for their own health. The health care workers dealing with these people are not in a position to force the required changes on an unwilling patient.

In the initial period of shock, some participants were bewildered when confronted with the necessary lifestyle changes as they had had no previous experience with DM:

"... you have to accept that you have to be taught ...

"It is a massive change in lifestyle."

Many people around the world, on initial diagnosis, have no idea of what lifestyle changes are required. They may not know where to obtain accurate and current information on the matter or else they may be bombarded with conflicting messages via the media (Nathan and Delahanty, 2005: xiii). They may also find it difficult to accept assistance from others in making the required changes. However, active participation by the person living with DM in the process of self-management is recognized by participants in various studies as an essential factor in achieving success (Utz, Steeves, Wenzel, Hinton, Jones, Andrews, Murphy and Oliver, 2006: 199).

- **Dietary changes need to be implemented**

Diet is one of the most important aspects of dealing with DM. Persons living with DM may feel that they have been following a healthy diet and cannot understand why they are now confronted by a diagnosis of DM. Others will admit that they
have not had a healthy diet due to various factors ranging from cost, convenience, simple likes and dislikes or laziness.

Food is a basic need for anyone, so changes in diet could be regarded as a threat to an enjoyable lifestyle. However, some participants stated that a positive attitude towards dietary changes was beneficial as there was a wide variety of foodstuffs available that they could still enjoy:

”… you learn what you can have and you enjoy what you can have, and there’s a lot of things you can have, it’s not a case of you’ve got to live on bread and water basically kind of thing! You’re allowed, I mean there are a lot of things you can have and then you know what you can have.”

A common misconception many people have is that there is a specific “diabetic diet” when, in reality, a wide variety of foods can be enjoyed by people living with DM (Ford-Martin and Blumer, 2004: 133). The best type of eating plan for anyone living with DM is a personal plan drawn up by a dietitian, taking into account the lifestyle of the patient (Lategan, 2010: 20). Attention should also be given to factors such as the cooking methods implemented when preparing food. Once again, the person living with DM should understand “how food affects diabetes control and overall health” (Austin, 2005: 16). When implementing dietary changes in a multi-cultural society, attention must be given to providing culturally tailored material with particular attention to relevant ethnic recipes (Funnell, Nwankwo, Gillard, Anderson and Tang, 2005: 56).

- **Prescribed medication needs to be taken regularly**
  Some people are able to control their blood sugar levels by diet and exercise alone. Others, however, have to take some form of medication. Medication therapy may begin with simple oral medication which may need to be increased as the disease progresses. Some persons living with DM have to commence with insulin therapy at the time of diagnosis while others may start insulin injections at a later stage, if the oral medication regime is not effective. The medication has to be taken regularly and it can be extremely dangerous for the person living with DM to forget to take a dose or for the medication to be taken at the incorrect time.
Most participants were taking prescribed medication, either oral diabetic therapy or insulin injections. Some of them thought of their doctor as the leader in the management programme with regard to medication as they felt unsure of how to adjust their medication themselves.

"You comply with the medication because that’s what the doctor prescribed. He should be superior in knowledge and he probably knows what is right."

"… it’s extremely dangerous and I don’t mess about with my units…I don’t take extra or less or whatever, I stick to that amount that I’m supposed to."

However, another participant felt that it was necessary to take an active role in the management of medication dosages as this could prevent further highs and lows in blood sugar, leading to better glycaemic control.

"If you leave it to other people to manage it and you won’t change your pills depending on what happens to you, then you wait a month before you go and see the doctor again and say, ‘Well, I’ve been getting some highs’ and then he will change your medication and then by the time you get back to him you’ve had a couple of lows and this sort of thing, and then he changes them. You must be prepared to change it yourself, to manage your own diabetes, if you don’t do that, you’re sunk."

There is a wide spectrum of medication which may be used in the management of DM. Some medications may be more effective than others in achieving optimal glycaemic control in the individual patient so the medication regime has to be compiled by the medical practitioner on a personal basis in consultation with the patient (Peters, 2005: 190). If people living with DM are able to understand the rationale of the medication regime, they may enjoy a certain amount of flexibility with regard to their medication and diet. However, in her book on diabetes management, Dr Peters emphasizes that people living with DM “have to remember to follow the plan” (Peters, 2005: 191).

- **Exercise needs to be taken on a regular basis**

Exercise may be regarded as the most important, yet the most difficult to implement, lifestyle change required in the self-management of DM. Some people are more naturally disposed to exercise while others will do anything to avoid it.
Some participants were very open to exercise as a change in lifestyle but others were not so receptive. All however recognized the importance of exercise in the management of DM.

“I realize that I’ve got to keep fit. I’ve got to exercise. I don’t need to go to a gym, I can exercise at home too but I’ve got to keep fit. It’s one big thing that helped me in my lifetime of diabetes you know, exercising.”

“of course, the other one is that you should run around the block and exercise and whatnot, but I must confess that’s a bit of a’ no-no’. I’d rather suffer with sugar than run around blocks!”

Persons living with DM may be overwhelmed by the various lifestyle changes being introduced and, particularly if they are not used to exercising on a regular basis, will find it difficult to implement an exercise regime. They are, therefore, encouraged to set individual target goals to increase physical activity (Unger, 2007: 412). This will allow the person living with DM to develop confidence in their ability to improve their glycaemic control by increased regular physical activity.

3.4.1.3(b) Sub-theme 3.2

Self-discipline is required to implement these lifestyle changes

In order for the required lifestyle changes to be implemented and optimal glycaemic control achieved, the person living with DM has to take personal responsibility in the practice of strict self-discipline. Self-discipline is essential in the achievement of optimal blood sugar levels which, in turn, prevents the onset of life-threatening complications of DM. This may be very difficult for some people particularly if they lead a very busy and stressful lifestyle with erratic opportunities for meals and little opportunity for exercise. Even if the person living with DM does not lead a particularly busy lifestyle, they may not have the inherent self-discipline required to implement the various lifestyle changes themselves and may rely on others to remind them of various aspects and to coerce or encourage them. There are people lacking the required self-discipline who have great difficulty in accepting the responsibility of self-management.
The participants acknowledged the importance of self-discipline in achieving optimal self-management. When they encounter problems with blood sugar control, some do feel that it is their own fault that it has happened. Some participants also admitted that they relied on their spouse to take a certain amount of responsibility particularly regarding diet.

"That’s the whole secret – it’s to have the will to do that right, … if you let it run away with you, you’ve got problems and we don’t want any problems in our lives."

"My wife is a very diet-conscious person, she’s very in, you know, she likes us to eat good although sometimes I go wrong and things like that, so it’s only me to be blamed because why, she tried to keep it you know, the best that she can."

Although they acknowledged the condition and had the knowledge required for achieving an optimal level of glycaemic control, some participants admitted that they did not seem to have adequate self-discipline to implement all that they had learnt.

"... educating somebody is one aspect but getting them to do it is another aspect. And I think there must be a control."

"I’ve got this ‘don’t care’ attitude related to this condition. I don’t know why it’s like that. And it’s quite sad because I know about everything, I know what’s right."

People who do not possess a powerful internal locus of control find it difficult to implement the requirements of self-management of DM (Thomas, Kamalanabhan and Vasanthi, 2004: 222). These patients may have all the knowledge and information resources that they require to achieve optimal glycaemic control but simply do not have the will to carry out the requirements. Some patients are highly dependent on the input from health care providers, requiring high levels of support (Veg, Rosenqvist and Sarkadi, 2006: 49).

In a study undertaken with a group of rural African Americans, participants felt that they had to “work hard at it” and must “‘take control’ or ‘be in charge’ in order to be successful” (Utz et al, 2006: 199). These participants were very emphatic in their view that ultimate responsibility for the management of the condition rests with the patient. In order to take on that responsibility, the person living with DM requires a high level of self-discipline and a strong internal locus of control.
3.4.1.4 Theme 4

*People living with DM acknowledge both positive and negative factors which influence self-management*

Not all aspects of being diagnosed with DM are negative. People who have been diagnosed with DM have often found that there are many factors which positively assist them in the process of self-management.

The participants interviewed acknowledged the fact that experience has made self-management easier over the years.

"I think the big thing is experience, you know if you're getting a new diabetic, he needs a lot of guidance and a lot of help until he can sort of adjust himself to his new condition, and as he adapts to his new condition, he sort of manages it better and better all the time."

In the following discussion, participants describe their experience of both the positive and the negative factors related to self-management.

3.4.1.4(a) Sub-theme 4.1

*Participants experience the impact of both positive and negative factors in a variety of ways depending on their personal circumstances and socio-economic situation*

Recognition of the positive factors in experiencing being diagnosed with DM occurs on a very individual basis. Some persons living with DM may find recognizing the positive factors very difficult while others may find them easier to accept. Most persons living with DM experience a range of both positive and negative factors.

A positive attitude and acceptance is regarded by the participants as a basic prerequisite for self-management of DM.

The results of a study carried out in Auckland, New Zealand, showed that patient attitudes reflected a significant positive shift over a 5-year period (Kenealy, Kyle and Simmons, 2007: 21). Other studies have shown that attitudes towards the
diagnosis of DM often develop more rapidly when the person living with DM perceives that they have the knowledge and support to deal with the condition (Sprague, Schultz and Branen, 2006: 250; Peel et al, 2004: 273).

- **Participants experience both positive and negative levels of support from family and friends**

Anyone suffering from any chronic disease or condition requires the support of family and friends in dealing with the condition. A person diagnosed with a chronic illness of any kind will feel isolated and alone when faced with the prospect of an uncertain future. Support is required in the initial stages when the individual is coming to terms with the diagnosis of DM and the implications of the new lifestyle required. It is also required on an ongoing basis as the person living with DM goes through the process of the grief cycle and grows to gradual acceptance of the condition. Positive support from family and friends is a major factor for the mitigation of the feelings of isolation experienced by these people.

Some participants receive a great deal of support from family and friends which they appreciate very much:

"… well, I mean your family are supportive, they know, they won’t offer you a big cream cake because they know you’re not going to be able to eat it. I think it’s sort of support from family and friends, that sort of appreciate what you can eat and what you can’t eat.’’

One participant described how he receives support from his sister who is also a diabetic patient.

"We always watch other, she phones me regular [telling him about] what is new on the market … We go together to the Diabetic Association. So she worries about me.”

The support of fellow diabetics was also regarded as an important factor. Participants felt that a fellow diabetic would be more understanding about how they felt than the doctors and nurses treating them.

"… it’s very good to talk to people because a lot of the doctors and nurses … they don’t know and they don’t feel what you feel, so they can’t understand when you suddenly, let’s say, have a hypo.”
Several studies have shown that family and friends play a pivotal role in the support structure of the person living with DM. In an American study, “social and family support was identified as a key area” particularly with regard to adhering to dietary requirements (Vijan, Stuart, Fitzgerald, Ronis, Hayward, Slater and Hofer, 2004: 35). It is also possible for the diagnosis of DM to “trigger positive feelings and bonding with others, strengthening ties of solidarity or support” (Peres et al, 2008: 106). The support system experienced by persons living with DM may be culturally based such as the Talking Circles which emphasize the connectedness between people which is a “fundamental focal point of American Indian culture” (Struthers, Kaas, Hill, Hodge, DeCora and Geishirt-Cantrell, 2003). All these studies have emphasized the importance of support for the person living with DM.

Unfortunately not all persons living with DM have the support of family and friends which they require. Many people are not aware of the implications of a diagnosis of DM and do not possess the necessary insight to understand what the persons living with DM are going through both physically and mentally.

Some participants experience a sad lack of support from both family members and from friends who are often insensitive to their needs as diabetics.

"I hate it when I go anywhere and people force you, 'you must have this or you must have that'. You just have to be strong and say, 'no, well, I don't."

There are occasions when people are simply uninformed and will give support when they realize the truth of the situation.

"… especially in my work, I end up in the bundu in Transkei somewhere and folks would go out of their way to prepare what they considered to be the best they could have prepared for me, and it may just be the worst meal, and then sometimes you kind of compromise, you know. I would eat and I would [explain to them] and then of course, they would be very understanding … but of course I already compromised and this creates problems."

Lack of support often is experienced related to diet as the person living with DM may be coerced into eating something that they should not as they do not wish to offend someone.
"I had that problem too now, at prayer meetings …. I might have a savoury but I won’t touch anything sweet. I’ve been doing that now, and I mean some of the ladies were upset with me at some of our meetings, saying ‘Oh, just one small piece and kind of things like that and I say, ‘No, no, no, I don’t want’ you know, and I’ve been keeping that now recently … and they’re getting used to it now."

Some people may be expected to prepare two sets of meals if their families are unwilling to adjust to sharing their diet (Rayman and Ellison, 2004: 907). Family and friends may be unable to give the required support if they themselves have limited knowledge about the condition and do not know how to assist the person living with DM (Glasgow, Toobert and Gillette, 2001: 36). They may inadvertently create potential harm for the person living with DM through lack of knowledge, for example by always supplying fried food instead of using healthier cooking methods (Utz et al, 2006: 200). Fear of having to deal with hypoglycaemic attacks may adversely affect family relationships (Glasgow et al, 2001: 36).

Paradoxically, it is possible for the person living with DM to receive “too much social support” from family and friends and to perceive the support as interference and nagging (Glasgow et al, 2001: 36). People who are trying to help someone living with DM have to find the fine line between what is perceived by the recipient of the attention as assistance and what may be interpreted as interference.

- Most participants appreciate their mental and their physical competency which enable them to implement an exercise regime while others experience difficulty in obtaining sufficient exercise

Physical activity is a prerequisite in maintaining adequate glycaemic control in diabetic patients. In order to be able to follow an exercise regime or to increase the level of physical activity enjoyed by the person living with DM, they must have the mental and physical ability to be able to carry out the activities.

All participants in this study are very aware of the importance of exercise and some made the most of every opportunity they had to exercise.

"And the other thing is exercise … we go to the gym three times a week."

A participant who is a domestic worker living in a township area was very aware of the importance of exercise. Personal safety is a major issue in the area where
she lives but she made the opportunity to exercise on a daily basis by walking around her garden for half an hour each morning.

"Every day I wake up in the morning, I get up and take a walk, every day – five days."

Another participant leads an extremely busy life as a pastor in a local church and finds it difficult to exercise normally. However, when on an overseas trip, he was forced to use public transport and to walk a lot. This had an extremely beneficial effect on his blood sugar levels although he had no real control over his diet due to travelling in a foreign country.

"When we were in Korea we were without transport and we were forced to use the public transport. Now if you know a little about Korea you will know there is one thing that they certainly do not lack and that’s stairs. Every station you go to has stairs and has a few flights of them. Wherever we went we had to use stairs … I was not able to control my diet because of the type of food in Korea – it’s totally different … And in spite of that, in spite of the diet that I followed, every morning my sugar was perfect. So the exercise made all the difference."

There are those who may wish to follow an exercise programme for themselves but due to various factors, are unable to do so. A number of participants in this study stated that, although they may wish to exercise, they experience difficulty in obtaining sufficient exercise to assist in maintaining their blood sugar levels within normal limits. The difficulties may be caused by physical problems. One participant described her frustration at not being able to do yoga which she loved due to problems with her knee and shoulder.

"Dr J said he doesn’t want me to do it because everything is on the knees … but if I have to have a knee replacement which he says it will be on the cards for me, then after that I could basically quite possibly go back to yoga because I did yoga for like 30 years, you know. And I loved it."

Not all difficulties are due to physical problems, however. Another participant in the study mentioned having a gym membership which was not utilized at all as she found excuses not to attend the gym. This, once again, was linked to the concept of self-discipline and lack of personal responsibility.

“… and another thing, I had membership for a year at Virgin Active and I went three times. So, it is bad, it’s a waste of money, because I was not right … and I see this
People who are not interested in exercise will find it difficult to raise enough enthusiasm to adhere to an exercise programme which will assist them in maintaining their blood glucose levels. Various barriers which they will use as an excuse include lack of time, being too tired, fear of hypoglycaemia during or after an exercise session, being unable to afford the gym fees or equipment or finding exercise boring (Buynak, 2006: 130). Some people may also suffer from another chronic condition such as arthritis which makes it more difficult to exercise (The diabetes dilemma, 2008: 9).

Studies have shown that even if minimal adherence to the recommended guidelines for physical activity is achieved, there is a significant reduction in mortality rates for persons living with DM. “Shifting even late in life from a sedentary lifestyle to a more active one confers a reduction in mortality from coronary heart disease” which is one of the most significant complications of DM (Gaziano, Galea and Reddy, 2007: 1941).

- **Participants appreciate having the facility and knowledge allowing them to assess their own blood sugar levels**

Diabetic patients, especially if they are on insulin, should have the facility to allow them to assess their own blood sugar levels (Farmer, 2009: 15; IDF guideline on self-management of blood glucose: 19). They should also possess the knowledge which allows them to interpret the results and to act upon any problems which they may encounter, including making use of health care services, if required.

Several participants mentioned the fact that having the facility to assess their blood sugar levels when necessary was an important factor in obtaining glycaemic control.

"I didn’t know what hypos were until I had the experience of it myself"

"I think what I found the last few months, is actually taking my blood sugar, because then if I have been eating the wrong food, then I am very aware of it."

"as a weakness within myself. Nobody can help me with this. It’s only me that can help me in this case – only me."
The majority of participants in the study conducted by Sprague et al (2006: 251) made use of their blood sugar levels in determining their diabetes control. The participants in the study by Peel et al (2004: 273) also emphasized the importance of knowing how to test themselves to determine their blood sugar levels. Unfortunately, this facility is not available to all persons living with DM in South Africa, as will become evident in later discussions regarding financial aspects, utilization of public health facilities and the role of medical aid schemes.

- Participants appreciate the positive support they receive from the medical team but some experience a certain lack of knowledge in some members of the medical team, including doctors and nurses

People who have been diagnosed with a chronic illness have more opportunity to make use of the services of various members of the medical team than the general population. Each member of the multi-disciplinary team treating these patients will affect the perception of the patient about the level of support received in either a positive or a negative manner.

A participant found a great deal of support from the staff and students working at the Biokinetic Centre at the local university.

"I find they’re just fantastic people. I mean, I see them there working with people who’ve had debilitating strokes and it’s unbelievable the way those youngsters work with those people."

During the interviews, many participants mentioned the support and understanding provided by various members of the medical team.

"My doctor keeps a tight rein on me, every time I go to him for anything he checks up on my diabetes."

"Shame, the nurses they tell you every time when you come to fetch our medications, they explain to us what we must do, everything."

"so he introduced me to a sister who provided a machine for me, free of charge – a glucometer."

"There was one lady there, she was excellent … She takes no nonsense. You can’t come there with your stories and try to tell her that … she’ll make you drink water, she’ll make you walk."
"I actually had a dietician that came to see me and she was excellent, she had spoken at the Diabetic Association and they do help you a lot, they show you how to substitute."

In several studies, persons who have been diagnosed with DM mention the positive effect of members of the medical team on their progress in attaining an optimal level of self-management. It is important for members of the medical team to be aware of the importance of all aspects of support, including emotional support for these people as “simply offering information is not enough” (Peres et al, 2008: 107). Some medical and nursing staff members have demonstrated a special affinity for persons living with DM, giving unstintingly of their time and knowledge. An effective team which communicates well can have a major beneficial effect on the metabolic control achieved by the patients in their care (Canadian Diabetes Association, 2003: S14). However, it must be remembered that certain people, depending on their personal locus of control, have high expectations of their health care providers which may lead to disappointment if their expectations are not met (Veg et al, 2006: 51).

DM is an extremely complex condition which affects all aspects of health and wellbeing. Research is conducted on an ongoing basis to improve the understanding and management of DM and to lessen the risk of complications experienced by the patients. Over the years, the management of DM has changed as new facts regarding the condition come to light as a result of the research and new types of medication are manufactured. Unfortunately, not all doctors and nurses are able to keep up with the new developments, leaving them with a serious knowledge deficit about DM and often using outdated treatment methods.

Many participants expressed the view that the majority of the doctors and nurses they had contact with, did not have an adequate understanding of the intricacies of DM.

“… the general medical fraternity is actually not sure of what diabetes is about. So you get a tremendous amount of conflicting advice, information and guidance. And my brother’s one of the top GPs in Bloemfontein, you know he’s very, very sought after and highly respected in Bloemfontein, and he’s not a fool. Yet he knows nothing about diabetes and it’s a pity.”
They also felt that some members of the medical and nursing staff do not necessarily take enough notice of their condition and their needs.

"... another thing is the psychological side of it which is very, very important because most of them feel that they are being shunted through the system instead of being taken notice of."

These perceptions of participants have been confirmed in a number of studies which have been conducted both in South Africa and in the USA (Haque, Emerson, Dennison, Navsa and Levitt, 2005: 798; Klisiewicz and Raal, 2009: 16; Steyn, Levitt, Patel, Fourie, Gwebushe, Lombard and Everett, 2008: 618; Daniels, Biesma, Otten, Levitt, Steyn, Martell and Dick, 2000: 1206; Mohammed, 2001). An example is a study which was conducted at Kalafong Hospital where the knowledge of both doctors and nurses was found to be inadequate with particular regard to the use of diabetic medication, the use of insulin and dietary knowledge (Van Zyl and Rheeder, 2008: 96). Guidelines for chronic disease management are not necessarily utilized in practice even when available (Gabbay and Le May, 2004: 1018).

- **Participants experience a widely diverse range of availability and access to topical and current information regarding DM**

Information resources are an important factor in assisting patients in the process of achieving optimal levels of self-management. Knowledge gives the person living with DM power to be able to act confidently when making decisions regarding their management. There is a wealth of information available for anyone wishing to research the topic of DM. However, persons living with DM are often not aware of what information is available or how to gain access to the information which they require.

All participants mentioned the fact that access to information is vital to obtain a deeper understanding of DM and thus provide a way to reach a level of acknowledgement and acceptance of the condition.

"... maybe attending as many of these seminars and things like shop tours for diabetics."
“... if you sort of read articles on it, and you read well, this person did this, and that one did that, maybe I should try that, it might work for me.”

“... a new diabetic, he needs a lot of guidance and a lot of help until he can sort of adjust himself to his new condition, and as he adapts to his new condition, he sort of manages it better and better all the time.”

Diabetes South Africa was a venue mentioned by several participants as a source of information and support for patients with DM, particularly when newly diagnosed.

“When I joined that [referring to the Diabetic Association] from there onwards I learned about my illness ... I really find that the Diabetic Association ... I feel that it’s been excellent. At the Diabetic Association, what I’ve learned there in this time, now they really helped me a lot with all the literature they gave me and all the different speakers and all that.”

In her book, Peters advises patients to “read everything you can, from books to newspapers, magazines to internet posts, and make sure that your treatment is as current as possible” (Peters, 2005: 325). She reminds us that medicine is constantly changing as new discoveries are being made. However, it is important to remember that not everything published is correct or true so the information source should be evaluated prior to making any drastic changes to a management regime.

Persons living with DM are able to make use of the internet to obtain information but often do not know how to evaluate the veracity of the often conflicting information sources available. Older persons and those in lower socio-economic groups are not necessarily computer literate or may not be in a position where they are able to obtain access to the internet as an information tool.

Magazine articles on various aspects of DM may often be found in the popular press but do not necessarily provide enough detail for the particular information requirements of the individual patient. Some of the articles which are published in the popular media may also be in the form of advertorials in which a specific product is being promoted. Pamphlets and booklets may also be obtained at pharmacies, especially where a primary health care service is provided, or at
doctors’ rooms. These are usually produced by pharmaceutical companies and, once again, may be promoting a specific product or medication.

Some participants felt that the available information resources are not adequate and are not readily available to those who need them. One participant in particular had the perception that there are no information resources available to those living with DM regarding self-management issues and other aspects of the condition:

“...but because there’s no information out there, there is no actual source of information that’s consolidated at one point, it makes it extremely difficult.”

Information sources are a necessary part of diabetes education as they assist the person living with DM in reinforcing the information given during an education session with a medical practitioner or a nurse educator. Part of the patient education should, therefore, be a referral to information sources which are available. A study on a group of rural African American women showed that they made use of diabetes education sources when they could find them (Utz et al, 2006: 200). Some of these women made an effort to obtain information from case managers employed by their medical insurance programme, from the internet and from support groups (Utz et al, 2006: 200).

3.4.1.4(b) Sub-theme 4.2

Financial issues play a significant role in attaining optimal self-management

In order to maintain adequate glycaemic control, persons living with DM are confronted with potentially expensive medication regimes and may find that they have to spend a higher proportion of the family budget on healthier food options, if they previously followed an unhealthy diet.

Those participants who were financially stable, were grateful for the fact as it meant that several aspects which were a challenge for poorer patients were less of an issue for them.

"I think for us, as opposed to someone who’s living on the breadline, these kinds of things and people [podiatrists and dieticians] are available to us, for people who’re
living on the breadline or below the breadline, obviously that kind of assistance and help is not available to them."

The main areas which the participants mentioned as being particularly affected by their financial status are the affordability of the chronic medication which they require, access to other forms of medical treatment and being able to afford to eat a healthy diet.

3.4.1.4(b) (i) Sub-theme 4.2(a)

Some participants have

- adequate funding for medication and other treatments

The cost of medical treatment for DM can be exorbitant if the patient does not have adequate medical cover. However, several of the participants felt that they were lucky as they received adequate funding for their condition from their medical aids. Some medical aids, in fact, appear to adopt a preventative approach by providing funding for required visits to eye specialists, podiatrists and dieticians so that complications can be identified at an early stage.

"I've got to see the podiatrist once a year in December, the medical aid have also got me on, I can see a general practitioner about anything to do with my feet or diabetes-related sores or anything, they also pay for that and other that they pay for all my medication that I’m on."

"I've been very fortunate because I belong to S… and I think S… medical aid would rather see that you’re put onto a good programme than for it to cost them a lot of money."

The World Health Organization lists insulin and oral glucose-lowering medications as essential medicines which should “be provided to the user free of charge or at a substantially reduced cost, and be made available in all public health care centres and hospitals” (Ogle and Raab, 2006: 35). In South Africa, patients making use of the private health care sector do not enjoy this privilege. However, DM is a condition which falls under the umbrella of the Prescribed Minimum Benefits (PMB) which is featured in the Medical Schemes Act as an attempt to make essential health care more affordable to patients suffering from specified chronic conditions (Council for Medical Schemes [SA]). Diabetic patients should,
therefore, be able to obtain their medication if they have registered their condition according to the rules of their particular medical aid scheme.

- **Adequate funding for a correct diet**

A correct diet is of utmost importance in maintaining good glycaemic control. Although it is not necessary to implement a “diabetic diet” a healthy eating plan making use of fresh fruit and vegetables is required.

Most participants also recognized the necessity for a healthy diet but acknowledged that it could become expensive and could be difficult to achieve.

"I think maintaining a diet, a specific diet, is an expensive commodity in itself … Fresh fruits, fresh vegetables, you know a lot of times it goes off before you get to it."

However, those who were in a more stable financial position were grateful that they could afford to purchase the correct foodstuffs and enjoy a relatively healthy diet.

A healthy diet, including micro-nutrients and an adequate protein intake, is of utmost importance in the prevention of long-term complications of DM, especially regarding cardio-vascular conditions (Dunning, 2003: 53). Obesity is often closely linked with DM so over-nutrition, resulting from incorrect eating habits, may play a role in the development of the condition (Dunning, 2003: 53). Affordability of a correct diet varies according to the socio-economic status of the patient.

**3.4.1.4(b) (ii) Sub-theme 4.2(b)**

*Other participants experience negative financial issues*

The financial aspects of suffering from a chronic medical condition may have a severe negative influence on the ability of the patient to implement all the required standards of self-management as all levels of care are affected by the socio-economic status of the individual concerned.

Participants with limited income felt the financial burden of the condition affected their ability to achieve optimal levels of self-management. These participants
experienced an expectation that they should be in a position to make use of the services of other members of the multi-disciplinary team for more in-depth evaluations and examinations in order to prevent the onset of complications. There were those who also expressed a wish to be able to attend a gym in order to meet the exercise requirements of a self-management programme.

“It can be very expensive for people that don’t have a lot of money, because to go to all these different people [referring to eye specialists and podiatrists].”

“I know diet and exercise is so important but I don’t have money to go to Virgin Active any more …. I go for walks but this is also a problem nowadays because the environment where you live in, it’s not safe to go for walks.”

Participants with limited income experienced financial constraints particularly in the following areas:

- Medical aid schemes dictate level of care

In South Africa, most patients making use of the private health care sector are insured by some form of medical aid scheme. There are medical aid schemes available for different income groups, all with varying levels of cover depending on the monthly levy paid by the individual. As medical aid schemes are usually expensive, new schemes for people in lower income groups have been introduced (Wadee, Gilson, Thiede, Okorofor and McIntyre, 2003: 12). The introduction of these new low-income schemes is intended to reduce the load on state facilities and to allow people who would otherwise not be able to do so, to access the private hospital system.

Although the concept of Prescribed Minimum Benefits (PMBs) has been introduced in South Africa, the actual care received by the person living with DM depends on the level of care provided by the particular medical aid scheme. In the past, some medical aids did not cater for all the medical expenses relating to diabetes and the high costs of consulting specialists. The medical aids imposed limits for different categories of claims such as doctor’s visits, chronic and acute medication, radiography, pathology and in-patient costs while in hospital. Depending on the requirements of a particular medical aid, patients could run out of funds very rapidly as the costs of medical services accessed depleted their funds. As DM type 2 is one of the PMBs, all medical aid schemes have to cover
related expenses. However, the individual medical aid schemes may make use of a formulary with generic medication and are not obliged to offer the latest treatment for any particular condition (Du Preez, 2009).

"I have been going to a diabetic specialist ... but I mean that too is very expensive now ... the thing is, it costs. I mean every time you go, you've got to have this test, that, that, that and it's a heck of a lot, and now I'm afraid I've left it and depend on my doctor or whatever."

"Now you only have one visit allowed a year, so if you have to go again it's another four or five hundred rand out of your pocket you see."

Many of the available medical schemes in South Africa have varying levels of care, giving patients the choice of a scheme which is affordable for them. The Government Employees Medical Scheme (GEMS), for example, has five different benefit plans which differ in the level of care offered (Paying their medical bills, 2007: 55). The category of service such as radiology, pathology or medication (acute or chronic) has a monetary limit imposed by the service provider. Both the limit and the type of procedure allowed may be dictated by the service provider and will be reviewed on an annual basis (Selfmed: Why have medical aid in South Africa? [SA]). As a result of the limits imposed, persons living with DM may not be able to afford a medical aid scheme with an adequate level of care for their particular condition especially if complications and co-morbid conditions which are not regarded as PMB are experienced.

- **Low income levels result in lower levels of medical aid or use of State facilities**

The socio-economic status of the majority of citizens of South Africa precludes them from enjoying the benefits of a medical aid scheme and they have to make use of state health facilities. Many people in comparatively more affluent socio-economic groups, particularly pensioners from these groups, who have enjoyed the benefits of a medical aid scheme in the past, are now finding it difficult to cope financially with the rising costs of monthly premiums and have to reduce the amount of medical aid cover available to them. This is unfortunate as it usually happens at a time when they require comprehensive cover to cope with failing health due to the manifestation of chronic diseases such as DM. The limits imposed by the medical aid schemes for various categories of claims may be
exhausted within a few months, leaving these patients with the choice of having to pay cash for their medication and other medical costs such as doctor’s visits, or else to make use of the state health facilities. The introduction of PMBs was intended to prevent the use of state health facilities by those who are able to afford the cost of a medical aid scheme (Taylor, Taylor, Burns, Rust and Grobler, 2007: 447). However, some people with more than one chronic condition may find that they are unable to obtain medical care without making use of state health facilities. In fact, there are medical aid schemes which specify state hospitals as designated service providers, including for PMB conditions.

Some participants experience financial difficulties and, as a result, have had to reduce the level of medical aid available to them or to change to cheaper medical aid schemes. Some participants had also had to make use of alternative methods of obtaining their medication. The alternative methods are not always satisfactory and do not necessarily lead to better service.

"I get my medication through Telemed via the post. It comes through the post and then I only get the script every second month, so every other month I’ve got to get it from my chemist and that’s quite expensive then. It’s quite expensive getting it from your chemist but they refuse to send it to me every month ... I’m not employed, so it’s difficult but they don’t understand.”

“And a couple of times I went to Provincial and that Outpatients hasn’t changed in 45 years, exactly the same.”

Some participants have experienced problems caused by abuse of the services offered by the public health sector by a certain sector of the population which has resulted in curtailment or restriction of services.

“That’s a very sore point, those testing strips. I think that is so stupid because with patients like me, I control my whole diet by those strips ... but you get those people who have ruined it. At one time there were people picking up these little cartons of strips and selling them for R5 a time and whatnot. But now everybody’s going to suffer.”

This phenomenon is not limited to South Africa as people in lower socio-economic groups world-wide find it difficult to afford medical care. Even in a first world nation such as the United States of America, there are many instances of patients being unable to afford adequate health care. This is not limited to people
from low socio-economic groups as the global recession increases the number of previously high income earners being retrenched and unable to find employment. A diabetic patient living in Michigan and working in the Information Technology industry, described how he had suffered several periods of unemployment due to retrenchment which negatively affected his health care but was unable to afford adequate health care during the periods when he was employed because of the rising level of debt he experienced (McMahon, 2006: 15).

In an American study on barriers to diabetes self-management, cost of resources was an important barrier for some of the participants (Nagelkerk, Reick and Meengs, 2006: 154). One participant spoke about her husband who should have retired but could not due to the fact that “he has no drug coverage” while another participant stated that “We should not have to put everything away and live in a cave just to have our medicine to keep us alive” (Nagelkerk et al, 2006: 154).

- **Lower income makes it difficult to afford a healthy diet**

The rising cost of living plays an important role in the ability of people to maintain a healthy diet. Foodstuffs seem to escalate in price continuously which means that people in lower income groups often have to pay an increasing proportion of their income on food.

Several participants mentioned the price of foodstuffs as a factor which could hinder a healthy diet. One participant, although he does not have this problem personally, works in a low-income community on a daily basis and finds the nutrition levels in this community a major problem.

“One of the greatest problems I find in this community, not only in the area of diabetes, also in the area of TB, HIV, is nutrition. They just don’t have food and they live like that for days, without food. Whether you’re a TB patient or whether you’re a diabetic or an HIV patient, if you don’t have the necessary nutrition, you’re in trouble.”

Poverty is one of the major barriers to attaining optimal self-management throughout the world. Developed countries are not immune to the effects of poverty on health care services and the management of chronic conditions. The rising cost of living has the effect of reducing the disposable income of rapidly
aging populations which in turn affects the affordability of a diet rich in fresh fruit and vegetables (Vijan et al, 2004: 22). A participant in one study stated that “Being on a fixed budget like I am, I have to think about what will last, what I can carry with me when I walk from the store, what the coupons cover and all that. I’d like to fill my shopping cart full of fruits and vegetable and all, but that stuff’s high! High! So, looks like I stick to the breads, soups, crackers and all” (Schoenberg and Drungle, 2001: 457).

People living in developing countries often experience poor economic conditions which affect their ability to enjoy a healthy diet. This may result in an unexpectedly high frequency of diabetes such as found in some communities in Cambodia (King, Keuky, Seng, Khun, Roglic and Pinget, 2005: 1639). The countries which make up what was previously known as French Indochina were thought to be at less risk of DM than other Asian countries because of the political and historical factors which prevented their Westernization till late in the 20th century. However, a study conducted in rural communities which were thought to enjoy a typical “traditional Khmer-Melanesian culture and lifestyle” found that the participants had a much higher incidence of DM and impaired glucose tolerance than was previously expected (King et al, 2005: 1633). One explanation which the researchers proposed was the possibility of a genetic influence due to the historical invasions from the Indian sub-continent where there is a high incidence of DM (King et al, 2005: 1639). The researchers in this study also suggested that, as the present population had suffered severe nutritional deprivation during the rule of the Khmer Rouge regime, the unexpectedly high incidence of DM was due to the link between nutritional deprivation during fetal life and infancy and the later development of DM (King et al, 2005: 1639).

As a healthy diet is a mainstay of management of DM, it is essential for people diagnosed with the condition to make use of every opportunity to eat correctly. However, for various reasons, it may not always be easy for a person living with DM to maintain a healthy diet. These reasons may not always be related to finances.
Some participants felt that the correct diet was boring and could become repetitive and repulsive.

"You kind of get sick of the TLCs (the tomatoes, lettuces and cucumbers). It becomes repulsive, because it is a repetitive type of diet."

One participant admitted that she did not enjoy cooking and that this factor was linked to the concept of self-discipline or lack thereof.

"I don't like making food."

Related to this sub-theme, some persons living with DM find that it is difficult to keep to their diet because of the influence of family or friends. This was discussed in sub-theme 4.1

Some problems may be experienced with a recommended diet if the person living with DM does not enjoy the food stipulated in the meal plan (Schultz, Sprague, Branen and Lambeth, 2001: 110). This is the reason that an individual diet plan should be worked out for each patient.

Diet-related issues are not limited to the types of food consumed but also include the difficulties some people experience in maintaining a regular eating pattern due to pressures of their particular lifestyle and work. A busy lifestyle may be detrimental to the person living with DM as it may be difficult for some individuals to implement a schedule of regular meals. Diabetic patients have to remember to eat their meals on a regular basis in order to maintain optimal blood sugar levels (Buynak, 2006: 89). This also helps prevent hunger when meals are delayed followed by binging when food is available. In one study, some participants stated that they remember to eat when they experience symptoms with one participant stating that “I remember to eat when I get jittery” (Rayman and Ellison, 2004).

Many people, including persons living with DM, experience difficulty in adhering to a correct diet or meal plan for various reasons not only related to financial aspects. In a study on goal-setting amongst diabetic patients conducted in the USA, only 51% of respondents had a prescribed meal plan and, of those
respondents, 68% had adhered to the plan for the previous month (Sprague et al, 2006: 252).

- **High cost of diabetic related medication, foods and related supplies**

  There are many diabetic-related products available in stores or pharmacies. Some of these products may be various forms of medication which may be either prescribed by medical practitioners or may be over-the-counter items. Supermarkets are carrying an increasing number of foodstuffs which are marketed as being made especially for diabetics and which are normally much more expensive than similar non-diabetic items. There is a myriad of other supplies such as special socks, cool boxes or bags for carrying insulin, books or other items which are marketed as being produced for diabetics. Most of these items are very expensive.

  Many participants mentioned the high price of diabetic-related products in the shops:

  "One thing about diabetic products, they are very expensive."

  Some participants felt that the products marketed for diabetics, besides being expensive, are not necessarily a healthier option.

  "She warned me a few times … because something's got ‘Light’ on the box, it’s not necessarily light. There are other things that you have to look at, you know, what is the fat content, what are the calories that they’ve got on there, because you can fool yourself quite nicely if you simply go on what is advertised on the box."

  There was also mention of the lack of variety of foodstuffs for diabetics which affected the level of patient compliance regarding diet although a participant did acknowledge that the situation is better now than in the past.

  "I am a sweet tooth and I like some jams, but that is a difficult thing not always having, you want a better variety but on the other hand we’ve come a long way, because my mother and grandmother were diabetic … and I remember that there was absolutely nothing that she enjoyed. Now today, we do have some jams, some of them are nicer than others."
The high cost of diabetes-related medications and other products has long been recognized as a very real problem for all those living with DM. The wide array of available drugs, with constant development of new drugs, means that advertising costs are added to the cost of the drug (Beaverson, 2000). Research costs may account for two-thirds of the price of a newly manufactured drug (Beaverson, 2000). As the required drugs and equipment such as syringes, glucometers and lancets are produced by companies based in developed countries, an unfavourable exchange rate will adversely affect the cost of the products. However, some products advertised in local journals and magazines are manufactured locally and are still unaffordable for many persons living with DM.

- **There is a lack of government support for people living with DM**

When mentioning the lack of government support for persons living with DM, the participants referred mainly to easy access to health care facilities as well as the provision of supplies of required medication and equipment such as syringes, lancets, testing strips and glucometers.

Access to adequate medical care is entrenched in the Bill of Rights which forms part of the South African Constitution (Act No. 108 of 1996) where it is stated that:

27. Health care, food, water and social security

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

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

As the right of access to health care services is entrenched in the Constitution, many citizens of the country have high expectations of being able to make use of these services, particularly when diagnosed with a chronic condition.
However, as stated in section 2 of the above quotation from the Constitution, the provision of these services depends on the available resources. The opinion is often expressed that the state is not taking enough reasonable measures to provide adequate health care facilities. Clinics are not always easily accessible to potential patients, may be short staffed or may be inadequately supplied with the needed supplies and equipment.

Some participants who make use of the public hospitals and clinics in Nelson Mandela Bay complained of the closing of clinics in some areas and the staff shortages in the public hospital sector.

"I never saw the doctor, but they were so short of staff there… so now they closed it down, they closed it up now. They moved from there now. They’re no more there now. They told everybody to go to different clinics."

In Nelson Mandela Bay, the conditions in local hospitals, the closing of clinics and the shortage of staff are topics which have been reported extensively in the local press (Capazorio, 2006: 1, Rank, 2006: 1, Jack, 2009: 1, Vermeulen, 2009: 1). This is a factor which has been experienced throughout the Eastern Cape. Rural clinics are also being closed as the nurses staffing them resign (Jack, 2008: 4). Measures to attract or retain nurses have been adopted but with limited success (Bateman, 2002: 107; Chauke, 2005: 3). The worldwide shortage of nurses is also being felt in the Eastern Cape and in Nelson Mandela Bay (Chauke, 2005: 3).

The problems are not limited to the number of available nurses but also include the quality of service provided and the availability of medication (Vermeulen, 2009: 1; Jack, 2009: 1). The perceptions created by news reports on problems experienced in the local hospitals and clinics are that little is being done at the various levels of government to improve the situation.

3.4.1.4(c) Sub-theme 4.3

Participants feel that stress related factors affect self-management
Stress is an all-pervasive influence in modern life which affects all levels of society and all aspects of life. The stress experienced by any individual may be related to their work, their family or other aspects of their lives. Being diagnosed with diabetes adds to the stress levels that they experience.

A participant mentioned the fact that work-related stress had made it difficult for her to give adequate attention to her diet.

“… stress and I know sometimes I work 12 hours a day here at work and I counted the other day, I was working 66 hours a week but I prefer to be ahead in my work but sometimes I do get very tired, then I went to bed that night at 9 o’clock so did not eat.”

Another participant felt that her diabetes was brought on through stress at work. Her mother, who insisted on being present during the interview, described her dilemma as follows:

“… at her work, you know, she was on a telephone exchange and then you get these people phoning in and swearing at her … and you can’t take it, you see …”

A participant mentioned that he definitely found a direct link between stress and his glycaemic control.

“That I found a very big fact with diabetes is stress. Stress and diabetes go hand-in-hand. If I’m under stress, I’ve got to lay right off, watch my diet very, very carefully. But if I’m relaxed and I’m not under any stress at all, I find I can ease off on a lot of things and get away with it.”

Stress is recognized as a contributor to erratic blood glucose control in the diabetic patient, both type 1 and type 2 (Drury and Gatling, 2005: 174). Some research studies have also shown that the manifestation of DM type 2 may be related to stress and is described as “chronic stress associated with insulin resistance” (Naude, 2006: 10).

As the person living with DM has to deal with necessary lifestyle changes while trying to lead a normal family life and to hold down a job, all of which have their own stress factors, stress levels experienced by the individual may increase over a long period of time. People often overeat or may feel less inclined to exercise.
when stressed which will have a detrimental effect on blood glucose control (Nathan and Delahanty, 2005: 178).

3.4.1.4(d) Sub-theme 4.4

Participants describe various cultural aspects which influence management of DM, particularly regarding diet

South Africa, being the Rainbow Nation, has a mixture of cultures, both indigenous and imported from other countries. Many people living in South Africa do continue to honour the culture and customs of their particular cultural group, whether from Europe, Asia and other parts of Africa or indigenous African groups. This particularly applies to the diet enjoyed by these groups. Some cultures stigmatize diabetics for various reasons such as a perceived link between DM and obesity or because they may consider someone who is dependent on medication to be weak. People from these communities, who are diagnosed with DM, may not, as a result, want to make their status public.

Some participants pointed out cultural problems that they had noticed in relation to members of other cultural groups with which they had contact.

"... with people of other races, their racial groups look upon it as a stigma, particularly with the Asians. I don't know what the African system is but Africans don't seem to want to talk about their diabetes either."

If persons living with DM are unwilling to admit their diabetic status, others around them will be unable to help them in a time of need, for example if they become hypoglycaemic, so this attitude can be life-threatening.

"... and it's important that everybody, that everybody you know, knows that you're diabetic so that if you do have a problem they can help you."
These people suffer unnecessary hardship when trying to manage their condition on their own without the assistance of those around them due to the fear of being stigmatized.

"... and yet these people won’t tell anybody that they’re diabetic and then they struggle on their own. And then diabetes becomes a big burden and a disease instead of just being something to live with."

In a study in the United kingdom, based on a comparison of attitudes between participants of Caucasian and South Asian origins, one participant spoke of the embarrassment she felt when she attended the diabetes clinic by saying “I go in and say ‘I’m diabetic’, n’ I think, ‘look at myself, no wonder you’re diabetic ‘cos you’re fat” (Lawton, Ahmed, Peel and Hallowell, 2007: 897). Another participant in the same study also spoke about the fact that he did not tell his friends he was diabetic until he had lost weight as he felt that they would judge him too severely (Lawton et al, 2007: 897). Several participants of South Asian origin linked the onset of their diabetes to “culturally-dictated circumstances” over which they had little or no control (Lawton et al, 2007: 899).

In a group of Aborigines and Torres Strait Islanders, some of the participants did not perceive DM as an individual illness but part of “what their social and cultural identity is experiencing in light of being part of the dominant Australian society” as they deal with various social issues affecting their communities (Tamwoy, Haswell-Elkins, Wong, Rogers, d’Abbs and McDermott, 2004: 233).

There may be religious implications for patients living with DM, for example Muslims who are expected to fast during the month of Ramadan. Although the Qur’an has a specific exemption from the duty of fasting for people with a chronic medical condition, some patients may wish to continue to fast in spite of the risk involved (Ibrahim, 2007: 19).

3.4.1.4(e) Sub-theme 4.5

Some participants experience difficulties due to other medical conditions which affect their ability to achieve optimal self-management
Hypertension, cardio-vascular disease, obesity, retinopathy and renal disease are among the many chronic conditions which the person living with DM may suffer from concomitantly, resulting in difficulty in maintaining optimal glycaemic control. As DM is such a complex disease, it may be impossible to ascertain if the other chronic condition caused the onset of DM or if the other chronic condition is presenting as a complication of DM as a result of continuously raised blood sugar levels.

Health problems caused by these other medical conditions can lead to an increased frequency of sick days which will have a negative effect on blood sugar levels as the metabolism of the person living with DM is affected, possibly by not eating correctly, nausea and vomiting, fever or other symptoms. Medication prescribed for one condition may clash with the medication prescribed for DM, particularly if the person living with DM has different medical specialists treating each condition.

One participant described the difficulty she experiences in exercising due to arthritis:

“… exercising for me is very difficult with my arthritis. I can't walk around the block because I find it very difficult and I have it in my back and my hips …”

A participant who has severe kidney disease as well as recently diagnosed diverticulosis, complained about the diet that she has to follow:

“… very horrible. Very little meat and I can't eat any salads or tomatoes, cucumbers, no green veggies, no leafy veggies. So it’s actually b-o-o-o-r-i-n-g!”

This participant felt that diagnosis of the kidney disease was more worrying to her than the diabetes:

“… that was to me worse than the diabetes because I know that the diabetes if you look after yourself you can control it and you can really uh, uh, you know, it doesn’t have to be a death sentence but the kidneys make me very uh, you know I worry about that because that is ... and also I was told I was too old to have dialysis.”
Many of the conditions which may occur in a person living with DM may be complications caused by poor blood glucose control and are often due to damage to the circulatory system. Macrovascular conditions affecting major blood vessels such as myocardial infarction, cerebrovascular accident or intermittent claudication may occur (Dunning, 2003: 17). Microvascular conditions affecting small blood vessels may affect the eyes causing retinopathy or the kidneys causing nephropathy (Dunning, 2003: 18). Damage to the nervous system supplying various parts of the body may occur, causing diabetic neuropathy. This may be evident in decreased sensation in the hands and feet which, in turn, may lead to ulcers and amputation. Damage to the autonomic nervous system may lead to conditions such as erectile dysfunction, atonic bladder and gastroparesis (Dunning, 2003: 18). The person living with DM may also develop other diseases or conditions not related to diabetes that may lead to difficulty in self-management.

3.4.1.5 Theme 5

*People living with DM have definite views on how professional nurses can assist them in achieving self-management*

Professional nurses have an important role to play in assisting and motivating patients suffering from chronic conditions as they form more than 60% of the health care workforce in South Africa and therefore experience more direct contact with the patient than other health care workers (Muller, 1998: 122). Patients often feel more at ease while talking to professional nurses than to other health care professionals about any medical problems or symptoms which they may experience.

Most participants in this study have had positive experiences of the professional nurses whom they have encountered since they were diagnosed as diabetic. However, some participants have had some negative experiences in dealing with professional nurses. All participants gave suggestions on how professional nurses may assist the DM patient with their self-management.
Most participants had strong feelings on the following aspects:

- **Nurses need to be informed about all aspects of DM themselves**
  DM is a highly complex condition which requires intensive management. Although the patient has to take ultimate responsibility, the professional nurse has to be aware of the importance of correct and comprehensive patient education in the achievement of optimal self-management. As research continues, new information or management methods may be introduced which can result in better care for the patient.

Some nurses are not aware of the ramifications of the condition and may give conflicting or incorrect information to patients. This was described by some participants who felt disappointed with the services offered by some of the professional nurses whom they encountered.

"Ja, get the facts right themselves first, because a lot them haven't got a clue … and I think they need to have a little more lectures in diabetes than what they do get."

Participants pointed out that nurses are at the forefront in caring for the patient and should be given improved training on all aspects of DM

"I think from a nursing point of view, is that your nurse is your front line in any medical scenario. Your doctor basically does the analysis, your nurse actually does the caring. The nurse is in the face of that patient on a daily basis and … it should become part of their curriculum."

Studies have shown that nursing staff are not always knowledgeable about the ramifications of the management of DM which is a highly complex condition. In the previously mentioned study undertaken at Kalafong Hospital, both doctors and nurses were aware of their lack of knowledge and the need for special training (Van Zyl and Rheeder, 2008: 96).

- **Nurses need to be sensitive about the timing and manner in which information is presented**
Comprehensive information regarding any chronic condition is important for patients as it will allow them to develop an understanding of what is happening to them and also assist them in managing their health.

The participants felt that the professional nurse must be sensitive about presenting the information required by the patient in an empathetic manner and at a time when they are most receptive.

"...is he ready for that? Is the patient at that stage when he is newly diagnosed, is that the right time for them to educate them about all these things? So it goes about the right time, educating a person at the right place when he’s ready for it, not when the nurse is ready for it."

On diagnosis, basic education should be given to the person living with DM (Naude, 2006: 1). At all times, the person living with DM should be recognized as an individual and the method, timing and type of information given should be adapted to suit the person’s needs at that particular time (Dunning, 2003: 231). The process of reflection together with the person living with DM will enable the nurse to take the appropriate action regarding the supply of information as required. All nurses dealing with diabetic patients should also be observant and make use of teachable moments as they arise in order to ensure that the teaching is carried out at the appropriate moment for the individual when they are ready to receive and internalize the information given (Dunning, 2003: 236). An example quoted by Dunning (2003: 236) is when blood glucose testing is carried out as part of the normal ward routine.

- **Nurses should be available and approachable**

Unfortunately, large patient loads are the usual experience in both the public and private sector. As nursing staff are expected to deal with the patient load as quickly as possible, they become less available to the individual patient. The patient may also perceive the nursing staff as unapproachable as they try to cope with the excessive flow of patients.

Some participants felt that it was necessary to create a user-friendly environment in which they could consult the professional nurse about any problems that they may experience from time to time.
"… you’re in a terrible environment to try and talk about because it’s too clinical. You really need to have a nice room aside, just for talking to diabetics – they must realize that you’re willing to spend two hours with them."

The nurses must also be aware of what the patient is going through and take that into account when dealing with them.

"The nurse needs to be aware of what the patient is going through, not just physically."

"One of the things that I really think people must also give quite a lot of attention to is actually the emotional reaction of the patient."

When persons living with DM are experiencing problems, the professional nurse must be sensitive when addressing a particular problem.

"I think sharing that information is not always a great thing for a patient and I think a nurse needs to be really conscious of that fact."

Some participants felt, even if they had been diabetic for a long time, it would be very helpful to be able to meet with a professional nurse on occasion to discuss any new developments in the management of DM.

"I've had it for over 20 years and I've learnt to live with it … there’s nothing very much that a professional nurse can really do for me. It would be nice to meet every six months or so and have a chat, you know, and catch up on the latest developments. There’s always new ideas coming in with these things, all the time."

Holistic nursing care is especially important in the management of a chronic condition such as DM where it can assist in diminishing the effect of the adaptation to a new lifestyle on the patient (Hjelm et al, 2003: 431). Professional nurses who are perceived by the patient to be addressing societal and psychological aspects of health care management as well as the physiological aspects will be considered to be more approachable. Unfortunately there is a recognized shortage of professional nurses which affects the level of services offered in both the private and public health care sectors on a worldwide basis (Workforce crisis, 2006: 31). In 2006, figures derived from the SANC register showed that the “production of nurses has not been sufficient to expand and strengthen the numbers in the profession” which has serious implications for the
availability of the professional nurse in direct patient care (Where are the nurses? 2006: 43).

- **Nurses should acknowledge a patient’s achievements when small gains in self-management are achieved**

Persons living with DM are in a learning curve and each step along the way is an achievement for that particular person. The professional nurse should be aware of the importance of acknowledging the achievements of the patient.

The participants felt that not all nurses are aware of the importance of acknowledging the gains they made as they learnt more about their condition.

“... every step in achieving control over his glucose levels is a massive achievement for every patient, and he should be recognized for that. Each achievement should be given credit for what it stands for …”

As an empowering process takes place during patient education sessions, the nurse should make use of each opportunity to acknowledge any gains made by the patient in achieving the set goals. The learning process is more effective when the patient “has feedback on what they can do” (Naude, 2006: 12). Funnell and Anderson (2004: 125) state that “we also need to spend more time listening and less time offering advice”. Active and attentive listening is an important part of the empowerment process, giving the professional nurse an indication of what gains have been made and allowing acknowledgement to take place.

- **Nurses should practise patient advocacy**

Professional nurses are expected to act as an advocate for their patients, particularly when they are unable to act for themselves or do not know the correct procedures to follow in obtaining health care services.

Participants felt that the professional nurse plays a very important role in patient advocacy. The nurse dealing with diabetic patients has an important role as a counsellor and is in a position to refer patients to the correct services which they require.
"… diabetic nurses need to be supportive with patients, actually you must be a
 counsellor also, because you don’t know why they are diabetic, what happened in
 their lives …"

“… so you have to be more than a professional nurse, you need also to be a
 confidante and then also refer these patients and financially it’s also important to
 refer patients to social work services when necessary and you must be a very
 enthusiastic kind of person – non-judgemental.”

The patient education process should be regarded as a partnership and the
 nurses dealing with these patients must be aware of the “powerful influence” they
 may have on the “beliefs and attitudes of their patients” (Dunning, 2003: 231). As
 part of this relationship, nurses must also be aware of their role as patient
 advocate by allowing them to participate in any decision making regarding their
 own treatment whether in hospital or at home (Dunning, 2003: 236).

- **Nurses to be encouraged to promote self-management by implementing
  diet and exercise strategies themselves**

A participant felt that nurses had the potential to be an example to the patients in
 their care if they could be seen to implement their own advice. He felt that it was
difficult to heed advice to lose weight, for example, given by someone who was
very overweight.

“They are often so big. Makes you wonder why they don’t take their own advice?”

Another participant who had a great deal of experience in assisting and
 counselling fellow diabetics was very vocal in his feelings regarding the role
 nurses who are themselves diabetic could play in the community. He felt that they
could play an important role in promoting self-management strategies amongst
 persons living with DM.

“You’ll find in the nursing community that there are diabetics, there’s many nurses
 that are diabetic. Take them, let them become spokespeople out there. Let them
 speak to their colleagues, use them in the morning meetings, the staff meetings, the
 congregations that you have in your hospitals, in your private centres, let these
 people stand up and talk about it. Give them the opportunity to air their personal
 views.”

The Agents for Change programme which has been implemented in some rural
 areas such as in Mpumalanga, recognizes the value that nurses can have in
advocating healthy lifestyles. In implementing this programme, the approach taken “is to engage a group of rural health care workers in a behavioural health education course in order to provide them with an experiential model, thereby engendering empathy and enhancing communication with the people in their community” (Pullen, 2009: 20). Pullen (2009: 21) points out that many health care workers in South Africa are overweight or obese and that “it has been noted widely that the power of their behavioural and dietary recommendations is impaired by their own lack of attention to healthful lifestyle choices”. The Agents for Change programme addresses these issues during two intensive two-day workshops held six months apart and also provides ongoing support to these workers in implementing healthy lifestyles for themselves and for their patients.

- **Nurses should ensure that culturally sensitive information is made available**

The availability of health care information has been discussed previously. However, attention should also be given to the type of information which is available. It should be accessible to all those who require it and should be culturally sensitive, making it relevant to the members of the various cultural groups in South Africa.

Participants felt that access to information was vitally important for assisting in the self-management of DM. Some participants felt that the clinics at the state hospitals should have information available to their patients as it may be more difficult for those patients to have access to relevant information sources. The information available should address the issues experienced by the relevant cultural groups making use of the health care facilities, whether private or public.

"What can help is, especially in OPD clinics is [providing information] by way of posters, reading material that is freely available for people to read. When I go to Dr P he’s always got nice articles, brochures that you can read, so that must be more available to the poorer people, to the people that’s visiting diabetic clinics at hospitals."

"I think if there was pamphlets or information to educate people on how to control it and what to do, they wouldn’t get to the problem of losing limbs and stuff. Especially the black people you know, they haven’t got access like we do. They seem to be the ones suffering more, because I’ve heard that they go to the doctor when it’s just about too late and then they’ve got to amputate. So they’re not aware of their conditions.”

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The Global Guideline for Type 2 Diabetes published by the International Diabetes Federation (2005: 16) states that as part of the Standard Care levels, health care providers should “ensure that education is accessible to all people with diabetes, taking account of culture, ethnicity, psychosocial and disability issues, perhaps delivering education in the community or at a local diabetes centre, and in different languages”. It further states that there is a “need to develop structured education programmes for people with diabetes, supported by suitable education materials matched to the culture of the community served” (International Diabetes Federation, 2005: 17). This emphasizes the important influence of culture when providing information to persons living with DM in South Africa.

Pharmaceutical companies do provide information for educators to distribute to the patients they counsel such as “Your personal guide to living with diabetes” produced by Novo Nordisk (SA). However, apart from the cover, the illustrations do not adequately reflect the multicultural aspects of South Africa. This may be due to the fact that it may not be financially viable to produce a separate publication for each population group.

Diabetes South Africa has produced a guide called “Diabetes and You” which gives detailed explanations of self-management of DM in comic book format in several South African languages such as English, Zulu, Sesotho and Xhosa which can be very useful in dealing with patients from these language and cultural groups (Shopwindow, 2007: 52).

3.4.2 Group Two – Diabetes nurse educators

The second research population consisted of professional nurses working as diabetes educators in Nelson Mandela Bay. This research population has been discussed previously in this chapter.

3.4.2.1 Theme 1
**Diabetes Nurse Educators have definite perceptions about the importance of self-management of DM**

The diabetes nurse educators who took part in these discussions have a great deal of experience in dealing with diabetic patients. As a result, they have definite perceptions of the importance of self-management in diabetic patients.

3.4.2.1(a) Sub-theme 1.1

**Diabetes Nurse Educators acknowledge the importance of:**

- **Patient education**

  Patient education, which forms the basis of dealing with persons living with DM as knowledgeable patients, has the potential of reducing the risk of complications significantly.

  The participants recognised the need for knowledge in a person living with DM which would facilitate self-management. They all felt that patient education was one of the most important aspects of their work.

  "Knowledge is really power and knowledge makes management so much better."

  One participant described a person living with DM achieving optimal self-management as follows:

  "It is a patient that is well-educated, he is well-motivated, he’s got his goals set and he is trying to reach them."

  Lack of knowledge has been shown to be one of the most frequently reported barriers to achieving optimal self-management in DM (Nagelkerk et al, 2006: 152). Although an information overload is counter-productive, the person living with DM should be given the opportunity to take part in an educational process which takes into account the needs of the individual (Naude, 2006:12). Patient
education can take place on an individual or a group basis but should be directed at setting goals which will assist behaviour change and encourage the patient to adhere to the principles of self-management (Sprague et al, 2006: 252).

- **Motivation of patients**

  Patients will require motivation to implement the required lifestyle changes, whether they are newly diagnosed or have been diabetic for many years. This is an important role for professional nurses as they are in a position to affect the level of self-management achieved by the patient in a positive manner and to prevent burnout resulting from the burden of living with DM.

  Some participants described some persons living with DM as requiring coercion into achieving self-management.

  "It is a big struggle for those other type of patients that I'm getting, because you need to convince them."

The link between education and motivation was acknowledged by the participants during the focus group session.

  "... the thing is, the more knowledge [about how to take care of themselves], the more eager they are to comply. If nobody tells them why they need to do a thing, they're not interested in it, but if you sit down and talk to them, they really do, and there to me education is number one."

In a study conducted by Sprague et al, (2006: 252) participants found that goals set during education sessions motivated them into adjusting behaviours and improving their adherence to a self-management programme. As barriers to self-management often appear to be daunting to the individual patient, the professional nurse has the potential to perform an important motivational role if the suggested means of surmounting such perceived barriers is found in an education programme which addresses the needs of the individual (Naude, 2006: 11).

- **Empowerment of patients**

  Empowerment of patients forms the basis of implementation of the principles of self-management. Over the years, studies have shown that efforts to empower persons living with DM to be able to take responsibility for their own self-management have many positive effects. The positive effects include better
glycaemic control with related health benefits as well as major cost savings for all concerned such as the state, the medical insurer and the patients themselves (Salman, 2005: 1).

Participants encourage the persons living with DM they deal with to take responsibility for their own management, thus empowering them to take control over their own lives.

“… right from diagnosis, they must look after themselves, they must learn about diabetes, they must know what the complications are …”

Persons living with DM are in a position to implement the recommendations provided by the professional nurse or to ignore them (Funnell and Anderson, 2004: 123). By giving persons living with DM the required information and guidelines they need to implement optimal self-management principles, the professional nurse assists them in becoming empowered and able to take informed decisions about their own care. As the person living with DM has to deal with the condition on a daily basis, the empowerment process is extremely important. However, the professional nurse has to realize that not all persons living with DM are able to or want to take control of their own management and the education process has to be adjusted accordingly (Dunning, 2003: 234).

3.4.2.2 Theme 2

*Diabetes Nurse Educators have definite views on factors which both assist and hinder patients in self-management*

The diabetes nurse educators participating in this study all identified a number of factors which may assist or hinder persons living with DM in the process of achieving optimal levels of self-management.

3.4.2.2(a) Sub-theme 2.1

*Diabetes Nurse Educators often find that some doctors are reluctant to refer patients when it becomes necessary*
Patients who make use of services in the private sector usually consult their general practitioner (GP) who often makes the initial diagnosis of DM. The GP may or may not have a particular interest or experience in the management of DM (Daniels et al, 2000: 1208). Participants stated that it appeared that some GPs seem to find it difficult to refer their patients to another medical practitioner or specialist. The participants also found that some GPs also do not appear to understand the value of other members of the health care team such as dietitians or diabetes educators.

Participants expressed their frustration with doctors who do not wish to refer their patients even when they are not achieving optimal patient outcomes.

"GPs in general ... at the present moment they're not very keen on referring and the minute they do refer is when the patient's got complications already and that's the heart-sore part about it."

“And they don’t make use of the other team like dieticians and educators and things like that, they just carry on. A patient will come with a blood sugar of 18 and he will go home with the same medication.”

One participant mentioned a recent incident where she had contact with a person living with DM who was being managed by a local GP and presented with sub-optimal glycaemic control.

“And he said ‘No, it’s okay if your blood sugars are 24, it’s quite all right, just drink your tablets, it’s fine’ and when I said to the person ‘It’s an unacceptably high blood sugar, you’re damaging your organs’ she said, ‘But my doctor said so’. Whether the doctor really said so, I don’t know because I was just asked to go and help her with her insulin. But as I say, I say that she was quite happy with 24.”

A person living with DM who has undergone an appropriate education programme and has developed a high level of personal responsibility should be empowered enough to request a referral to an appropriate multi-disciplinary team member if required. Patients in general are becoming more knowledgeable, making use of resources such as the internet to find out more about their conditions. They are questioning their medical practitioners more often regarding proposed treatment.
Medical aid schemes are also in a position to encourage referral when appropriate by the introduction of care pathways and protocols for various conditions. Examples may also be found in many countries such as the United Kingdom where Integrated Care Pathways have been introduced by the various trusts forming part of the National Health Service (NHS). In the Diabetes Mellitus Integrated Care Pathway adopted by Bristol, North Somerset and South Gloucestershire (2006: 28), specific indications are given for specialist referrals whether they are urgent or for seeking advice.

3.4.2.2(b) Sub-theme 2.2

*Diabetes Nurse Educators experience that financial factors play a significant role in the level of management achieved by the patient*

As discussed previously, patients diagnosed with DM are faced with an ever-increasing financial burden which can become crippling, particularly if the person is from a lower socio-economic group.

Participants acknowledged that the financial implications of DM can be overwhelming for the patient. In their practice, they need to know where to refer persons living with DM who require extra assistance.

Some persons living with DM on low income medical aid schemes can access the facilities offered by the CDE for assistance. This is, however, only possible if the particular medical aid scheme is contracted to the CDE.

“There they can get as many sticks as they want, they can get as many visits as they want, they get the best insulin but then they have to go via that clinic.”

Participants often have to deal with administrators at the various medical aid schemes when trying to obtain assistance for their patients with DM.

“What actually also is a big help for a patient managing is because of the legislation about prescribed medical benefits for certain 25 diseases and diabetes obviously being one of them, at least you've got some foot to stand on, at least you can say to the medical aid … At least you can try and motivate them, a lot of my time is going in dealing with medical aids.”
Management of DM is an expensive process for patients in both the public and private sectors. As DM is a progressive condition, the medication required may become more expensive as higher doses are required to maintain adequate glycaemic control.

Diabetes drugs are on the Essential Drugs List (EDL) which is a list of drugs which should be available in all state primary health care clinics (Leuner, 2000: 412). Similar provision is made for private patients as DM is a chronic condition which has to receive Prescribed Minimum Benefits (PMB) on all medical aid schemes. As previously mentioned, however, the medical aid schemes are not required to supply the latest medication or treatment for PMBs.

The professional nurse dealing with persons living with DM must be aware of the limitations imposed by the medical aid schemes and may assist the person by working within those limitations as far as possible. The professional nurse should also be aware of other resources which may assist the person living with DM such as support groups.

- **Diabetes Nurse Educators experience that some patients have a lack of resources which may make self-management difficult**

Not all persons living with DM have access to all the required resources which assist in self-management. The lack of access to resources may be due to a variety of problems such as transport difficulties, being unaware of the availability of a particular resource or to limitations imposed by medical aid schemes. Some participants felt very strongly about the fact that many persons living with DM are not able to gain access to resources which could assist them.

An example is the service offered by CDE which is very comprehensive but not all persons living with DM are able to access the facility.

“The service is only available to the people that are on certain medical aids.”

“They then have to pay out of their funds or privately when we send them to the podiatrist or the dietician … There should be more centres like that.”
Support groups for persons living with DM were also mentioned as an important resource which is not always available to the individual. Due to the breakdown in the traditional family structures which has taken place in society, not all persons living with DM have the family support that they may have enjoyed in the past.

“… there must be a support group …”

"Lack of support. Lack of family support …"

Information sources relevant to the conditions experienced in South Africa was another important resource for the individual person living with DM.

“… because in the libraries and the bit of information that’s there, is so outdated and your um, Internet’s very good but most of the products that are there on the internet is not available in South Africa.”

“We have very little South African information that actually comes out. We don’t have enough South African information that is available to patients.”

Access to health care resources is a common denominator amongst health service providers around the world. In a study undertaken in El Salvador, accessibility to health care resources was determined by both physical and financial factors (Lewis, Eskeland and Traa-Valarezo, 2004: 312). Cost, convenience of use and the quality of the service offered determined the extent to which the services were utilized. If the person living with DM is unable to access the health care services for whatever reason, resources may be said to be wasted. If the potential client or user is unaware of the availability of resources, once again, they may be said to be wasted. The DNEs interviewed in this study were of the opinion that accessing health care resources may be a significant problem for many people in the Nelson Mandela Bay area, thus affecting the level of self-management achieved by those persons living with DM.

- There are discrepancies between services offered to patients with high and low income levels:
  - Private health care facilities
  - Low income medical aid schemes
  - Public health care facilities.

The experiences of Group One participants regarding discrepancies between the service levels received by patients from varying socio-economic groups have
been discussed in Section 3.4.1.4(b). The participants in Group Two agreed with the Group One participants about the fact that those making use of public health care facilities did not have access to a wide variety of medication and supplies. The Group Two participants also agreed that those persons living with DM who had access to a medical aid scheme were not always better off as the coverage offered by some medical aid schemes was not always sufficient for the needs of the particular patient.

These discrepancies in levels of supplies and service were a constant source of frustration to the diabetes educators. They also resented the fact that medical aid schemes often dictate the treatment to be offered to the patients in their care.

“Medical aids these days prescribe to the doctors and I don’t know how they work it but if a doctor decides which insulin would be better for the patient, the medical aid will disagree.”

The limitations imposed by some medical aid schemes and also by the public health services particularly apply to the supply of insulin in vials to be used with syringes and needles instead of the more easily used insulin pens.

“It’s not cost-effective ... because they need a syringe plus the vial - Whereas, if they’ve got the pen ... and there’s not that much difference in price.”

However, the participants did recognize the positive role played by some medical aid schemes which recognized the value of the prevention of complications when managing persons living with DM.

“There are medical aids who actually force their patients to come. They are forced to go on [the programme] because they’re saving a lot of money.”

“I think the medical aid in some way with this disease management programmes, is also trying to contribute. I don’t know how they get to everybody but I find that patients will say, my medical aid actually phoned and asked me this or asked me that about my diabetes – uh, so in a small, very small way, but it’s there – it’s there”.

One participant mentioned that, for patients who had difficulties with funding from their medical aids, the doctor she worked with would refer the patient to a diabetic clinic at a local public hospital. As the doctor was also working at the diabetic
clinic, the patient was able to continue to see the same doctor but without the cost constraints.

“I'm working with the doctors that work at … Hospital at the diabetic clinic, so a patient gets referred from there to, he's then patient at the hospital … So they still see him, but they see him at … Hospital.”

The provision of adequate health services for all citizens is a challenge for all governments around the world. The dichotomy in the availability of health services is also evident between developed countries where it is relatively easier to access health care and the position in low and middle-income countries where a diagnosis of DM “is a potential catastrophe” (Diabetes goes global at IDF’s mega-congress in Montreal, 2009: 5). When health services are paid for out of taxation revenue in a ‘free at the point of delivery’ model, access to those services may be limited by factors such as “staff shortages, slow delivery and waiting periods” (Still, 2007: 20). On the other hand, a private health care model is expensive and “many people are excluded because they do not have enough money” (Still, 2007: 20). The proposed National Health Insurance scheme which is due to be introduced shortly in South Africa is an attempt to address these issues and to make higher quality health services more accessible to all.

3.4.2.2(c) Sub-theme 2.3

Diabetes Nurse Educators experience:

- Some patients do not accept responsibility for their own condition and management

Responsibility is a personal value which is very important in achieving optimal self-management of any chronic disease. However, not all people are psychologically able to accept responsibility for themselves or for their own health.

All participants mentioned that they experienced that some persons living with DM do not wish to accept responsibility for their own self-management. One example quoted is their tardiness in collecting repeat medication.
"But you get defaulting patients quite often; if they come you can see they didn’t come for their repeat medications ... They always have a story."

Another example is the fact that persons living with DM often default in taking their medication if their medical aid is exhausted.

“And then they’ll rather go for the blood pressure tablets and the other tablets and leave the diabetic tablets because that’s not so important. They’ll rather drink the other tablets, so that we do find, that once the medical aids are exhausted their tablets they do not comply as well, to get the medication.”

Although the person living with DM may receive adequate patient education on all aspects of DM and be fully aware of the risk of complications which will effectively reduce the quality of life experienced, compliance and adherence to lifestyle changes is not automatic. This may be very frustrating for the professional nurse who may feel individually responsible for the behaviour change and progress experienced by the patient (Charman, 2000: 609).

However, some people are unable to or refuse to acknowledge that being diagnosed with DM has serious implications and do not wish to take responsibility for implementing the required lifestyle changes. Some persons living with DM may prefer to revert to the medical model of health care management and accept the decisions made for them by their medical practitioner (Thomas et al, 2004: 222).

- **Some patients remain in denial**

Denial is a normal part of the initial reaction of the patient to a diagnosis of DM as discussed previously. As the patient grows used to the idea of being diabetic, denial normally begins to fade as acceptance of the condition is achieved.

However, the diabetes nurse educators experienced that some persons living with DM remain in denial which makes self-management a difficult goal to achieve.

“On an emotional level, they’re not taking it, they’re in denial, they don’t take it right, and so they can refuse it with certain things.”
Denial in persons living with DM is an issue which has to be addressed by the professional nurse when counselling sessions take place. As previously stated, denial can lead to the development of life-threatening complications in these patients.

3.4.2.2(d) Sub-theme 2.4

*Diabetes Nurse Educators experience that some patients find that physical problems may make self-management difficult*

As previously stated, persons living with DM may have other medical conditions which may influence their ability to achieve optimal levels of self-management. Personal experiences of the effects of some of these conditions, such as arthritis and kidney disease, have been discussed in Section 3.4.1.4(e) where similar findings were mentioned by Group One participants.

Bad eyesight was mentioned by some participants as an example of a physical problem which makes self-management difficult.

"They can’t see most of them because they’ve got eye problems so they don’t know how much to draw up … patients that can’t afford the pen or the cartridges, they still have to go for the vials and having bad eyesight, they battle …"

A person who has been diagnosed with DM is very likely to have more than one chronic illness. A study has shown that about 60% of diabetic patients have another chronic illness in addition to DM (Charman, 2000: 609). Possible co-morbid conditions which may occur together with or as a complication of DM include blindness, retinopathy, nephropathy, diabetic neuropathy, angina, stroke and micro-vascular conditions which may lead to amputation. These conditions may have a seriously detrimental effect on the quality of life experienced by the person living with DM as well as on any attempts to maintain an optimal self-management programme (Huang, 2008: 34).

3.4.2.2(e) Sub-theme 2.5

*Diabetes Nurse Educators experience that there are certain cultural aspects which may affect self-management of DM*
The fact that there are important cultural aspects to be considered when approaching the concept of self-management of DM has been discussed previously in Section 3.4.1.4(d). All participants deal with patients from many cultural groups and so have first-hand experience of this.

Some cultural groups regard diabetes as a curse. This knowledge often has a severe psychological effect on the person living with DM and keeps them in denial about the condition.

“In the Indian community, the main thing that they’re saying it’s a curse. It’s a curse that’s been put on them … so it has a huge psychological impact on patients.”

Other communities are influenced by their own cultural traditions and practices which may hinder patients from those communities in achieving optimal self-management of DM.

“They do go to sangomas, my dear. You are the last door that they knock at, but the first step is to sangomas. It’s gonna take you a long, big guts you know, to win that person to come over. It’s not an easy thing because the cultural thing is just here.”

One participant in the focus group session asked another participant about this aspect of self-management in the following terms:

“There was a stage when Xhosa males, especially don’t want insulin because they say ‘It’s a weak man that must inject to live’. It’s a sign of weakness if you have to inject. Is it a thing that’s still alive?”

The other participant answered:

“… you still find it in most of the patients … they believe in taking the tablets but when it comes to insulin, it’s not so easily acceptable. ‘I don’t want to, I’m going to die. People that use insulin die’. That’s what they believe in but a person can tell them your sugar must be controlled, those people die because their sugar wasn’t controlled.”

In a study conducted amongst an Italian community of migrants in Canada, several interesting points were made regarding the effect of culture on self-management of DM. Many of the immigrants originated in underprivileged areas in Italy and had experienced food scarcity, especially during the two World Wars
(Ponzo, Gucciardi, Weiland, Masi, Lee and Grace, 2006: 158). As a result, it appeared that people from this community often found it difficult to limit their food consumption, linking the limitation with the deprivation they had suffered in the past. Celebrating special occasions and festivals with family and friends is an integral part of this community which leads to “excessive consumption of food” (Ponzo et al, 2006: 158).

In many other cultures, there are traditions that are linked to food including rites of passage such as those experienced by girls from the Efik tribe in Nigeria who are literally “fattened up” to make them more attractive (Oe, 2009: 40). In this area, many regard “a corpulent female figure [as] alluring, and a sign of good health and prosperity” so girls aged between 15 and 18 go through a rite of passage in which they are placed in secluded rooms and fed a “rich traditional diet” (Oe, 2009: 40). During this period, the girls are also taught traditional etiquette and culture. This practice has the benefit of preserving certain cultural traditions and knowledge but has obvious health risks. It is falling out of favour as people become more westernized but as a modern high-fat diet becomes more common, women are still at increased risk of obesity and DM.

In South Africa, in certain communities, having a fat wife is a sign of prosperity which may make diabetes education and the promotion of healthy eating habits very difficult. People who are slim or who lose weight are often also stigmatized in South Africa as the community members may think that they have been infected with HIV/AIDS.

3.4.2.2(f) Sub-theme 2.6

*Diabetes Nurse Educators experience that the technology of medical services in South Africa often lags behind technology available in other countries.*

Technological advances made in other countries may often take some time before being introduced in South Africa. This may often be due to financial constraints particularly with regard to the services offered at public health care facilities.
Some participants had attended the International Diabetic Conference in Cape Town which had been an eye-opening experience.

“It was an eye-opener because there were stalls from every country and South Africa is far behind, very far behind and we should really try and do something about that.”

“South Africa ... we’re far behind when it comes to our medical technology and things if you really come to think of it.”

Particularly in the public sector health care services, the provision of adequate and up-to-date equipment can be very erratic. In some facilities, one may find state of the art equipment but in others, even basic equipment such as sphygmomanometers may be in short supply (O’Brien, Van Rooyen and Carlson, 2006: 38).

3.4.2.3 Theme 3

Diabetes Nurse Educators expressed similar views to people living with DM on ways in which nurses can assist patient in the self-management of their condition

The themes identified in the discussions with the diabetes nurse educators were to a large extent in agreement with the themes identified in the interviews conducted with persons living with DM.

3.4.2.3(a) Sub-theme 3.1

Diabetes Nurse Educators, based on their experiences, are of the opinion that:

- Nurses must educate themselves on all aspects of DM management and related pharmacology

It is the responsibility of each professional nurse to ensure that they continue to educate themselves about new developments and technology. As stated previously, DM is a highly complex condition which is continuously being researched. As a result, more recent information is published which may often change the way of doing things.
As discussed previously, research on DM is a continuous process which adds to the knowledge about the condition and the methods of managing it. Information sources increase exponentially as the results of research projects are published. New technology is also continuously being produced which may assist the person living with DM in reducing the burden of the condition.

Participants were emphatic about the need for nurses to be kept up to date on the developments and technology in managing diabetes. One participant stated:

“The nurses must educate themselves first, before they can educate patients … Because if you don’t have the knowledge you can actually do more harm to the patient than to help them.”

As the global incidence of DM increases, the effect on society as a whole makes it imperative for nurses to be trained in all aspects of DM and management of the condition (Hjelm et al, 2003: 431). New equipment and devices can improve the services offered to patients as well as assist in the prevention of complications such as diabetic neuropathy (Bateman, 2007: 86). However, the professional nurses who are expected to make use of the new devices require training in order to obtain maximum benefit from them.

All participants were in agreement that the professional nurse requires extra training on all aspects of DM which would enable them to be more effective in assisting the patient with DM.

“… they must first educate themselves, because if you think back about training, how much diabetes did we do?”

“So much changed in the field of diabetes since we did our training.”

“Look you must first of all understand diabetes – Number one. Number two – there are short courses that you can take, like at the CDE in Joburg.”

One of the major responsibilities of a professional nurse practising holistic care is to ensure that relevant and up-to-date patient education takes place when required. In order to provide the required patient education, the professional nurse has to take the responsibility to remain up to date with modern practice methods.
As chronic diseases such as DM “account for more than half of the global disease burden” training in the ongoing care of these patients is essential and must be made available (Pruitt and Epping-Jordan, 2005: 637).

Pharmacology is a highly specialized area of expertise. Professional nurses are educated on the subject during their training and are expected to remain updated about new developments in this field, as it affects their practice. Particular attention should be given to interactions of medications, especially when the person living with DM suffers from more than one chronic condition. All participants acknowledged the need for extra training on the pharmacological aspects of self-management so that they would be able to assist persons living with DM in making correct use of their medication.

"Because 95% or 98% of the staff, trained staff that’s working with diabetes, hasn’t got the vaguest idea of what’s really going on. How to know the action of the medication and things like that … They just hand it out."

“You need a better insight in what diabetes is and the action of the stuff (medication) and the different types of diabetes.”

“Not all medication is for the same person, like if you’re going to put somebody on insulin, they’ve got to know how it works and they’ve got to know the pros and cons of insulin. Also with your tablets, if they’re not taken at the right time … I had a guy the other day that came to me, he’s on insulin. He’s been on it for six months, so I said, ‘Right where do you give it?’ ‘Oh, no, I spray it in my mouth’. He didn’t know! He was always taking his tablets, nobody said to him “This is now an injection, you’ve got to inject yourself”. So he’s been drinking his insulin … Nobody bothered to tell him what to do with it.”
The mechanism of action of the available antidiabetic medications varies according to the different drug classes which have been developed as a result of research projects over a period of time. As each class of drugs acts on the body in a different manner, the effects, potential complications and side-effects will also differ (Bösenberg and Van Zyl, 2008: 80). The professional nurse must be aware of the action of the drugs used, as well as any potential dangers and contraindications such as pregnancy, renal disease and liver disease of certain of the drugs to assist in assessing the individual needs of the person living with DM (Dunning, 2003: 60).

- **Nurses should be constantly aware of the financial implications of DM and refer patients to appropriate support agencies where possible**

The financial implications of DM and the need for support for persons living with DM have been discussed previously in this chapter. This sub-theme is included here because it is a suggestion made by the participants of Group Two when requested for ways in which professional nurses may assist persons living with DM.

- **Medical practitioners should be encouraged to obtain further education on DM**

Medical practitioners are expected by their registering authority, the South African Medical and Dental Council, to take part in Continuing Education programmes as a prerequisite for re-registration. They should be encouraged to attend such programmes dealing with DM in order to remain informed about recent developments in treatment.

All participants recognized the need for further training for the doctors dealing with diabetic patients.

“GPs should be encouraged to know more about diabetes.”

Doctors are expected to take part in continuing education programmes in order to remain registered with the South African Medical and Dental Council. Educational seminars and conferences which allow them to gain the required points for them to fulfil this requirement take place on a regular basis.
However, as the care of patients with chronic diseases differs from that of patients suffering from acute conditions, there is a growing shift in emphasis to long-term care (Pruitt and Epping-Jordan, 2005: 637). New core competencies are being developed by WHO for training all health care workers dealing with patients suffering from chronic conditions (Pruitt and Epping-Jordan, 2005: 637). All members of the multi-disciplinary medical team must be expected to maintain their level of knowledge about DM.

- **Diabetes Nurse Educators would like to have facilities made available to allow them to educate the patients and the public**

Diabetes nurse educators have a potentially important role to play in educating both patients and the public about DM. However, it is not always possible to fulfil this role adequately, particularly with regard to educating the public, as there are not enough suitable facilities which could provide such a service.

Some participants suggested that facilities should be made available to allow nurse educators to educate both patients and the public.

“There should be facilities, even in your public hospitals: you should have facilities where you’ve got diabetic educators, where they can teach the patients what to do.”

Some participants had suggestions about other facilities which could be utilized as educational venues where people could be educated on all aspects of DM.

“... for that reason I would think that public should really do a little more, to have educators like us. Even in the factory, there in the factories they’ve got a clinic. Shouldn’t they have the nurse diabetic trained, especially diabetic trained? She teaches the patient how to handle it ... so you can do it in the factories, public sector can do it. Doctors at their surgeries need to do more.”

An example of an attempt in making diabetes education more accessible to the community is the project in Khayelitsha, Cape Town, in 2003 (When showbiz comes to Khayelitsha, 2004: 24). A group of community health workers, researchers and health service staff collaborated in producing a drama depicting some of the problems faced by diabetic patients and how they overcome them. The show had its debut on Diabetes Day 2003 and had several successful
performances in the area and neighbouring communities. This had the desired effect of making the communities where it was presented more aware of the complexity of DM together with the importance of lifestyle changes, as well as the importance of taking medication correctly and not sharing the medication with others.

- **All nurses must be empathetic towards the patient when counseling particularly with regard to personal problems experienced by the patient**

Empathy is recognized as a most important personal value for the professional nurse when dealing with persons living with DM. The professional nurse is expected to fulfil the role of counsellor. In order to do so, an empathetic attitude is essential.

The participants acknowledged that the attitude of the educator is very important when approaching a person living with DM for counselling. An empathetic attitude is most important especially when the person is still in denial. Each person living with DM has to be treated as an individual when approaching them.

“I think you’ve got to leave them. You can guide them but, I think it’s something that they have to work through because they’re the one who’s got diabetes after all, so you can say encourage them as much as you like, if they’re in denial there’s no way that even what you say is going to get through.”

Some professional nurses may experience problems in dealing with and communicating with their patients for various reasons. These may include inadequate coping skills especially when a lack of time, combined with a large patient load, makes effective communication between nurses and their patients very difficult (Poggenpoel, 1997: 31). The professional nurse dealing with these patients should approach them in a non-judgmental and empathetic manner for effective education and counselling to take place.

Persons living with DM may experience myriad personal problems which will possibly affect their ability to attain optimal self-management levels. The professional nurse is expected to maintain an empathetic approach at all times. Participants acknowledged the need for an empathetic approach particularly when dealing with personal problems experienced by the person living with DM.
One aspect which requires empathetic handling is sexual dysfunction which may occur due to complications of DM.

"I found the one thing that drives men back to the specialist is sexual dysfunction … With the barrier of being a female talking to a Xhosa male, I can’t go directly there but in visiting him in hospital for two or three sessions, I can get to that by asking ‘Are you still okay, is there anything else?’ and then they come with ‘No, but I’m not, I’m not with the wife’. I try to get to that so I can tell him, ‘Listen, I promise you if you use that injection, your sugar will be better and you will be a man to your wife’. Some, I must say, believe that insulin acts as an aphrodisiac.”

This delicate area may not be addressed by the professional nurse due to personal or cultural beliefs particularly when a male patient is being counselled by a female professional nurse as, in some cultures, sexual matters are not discussed between the sexes. However, it is important for the professional nurse to make the person living with DM feel that this is a matter which can be discussed as it may “have a direct impact on significant others” (Charman, 2000: 608). Sexual difficulties may arouse suspicions of infidelity in a spouse, with serious negative effects on the relationship.

Other personal matters such as interpersonal relationships or financial difficulties may have an effect on the psychosocial well-being of the patient, affecting the level of self-management attained. An empathetic non-judgmental attitude from the professional nurse is important in assisting and motivating the person living with DM to find a solution or to deal with any problems which may occur.

- **Nurses must be aware of the importance of referring patients for psychological assistance when required**

Depression and other psychological conditions may influence the level of self-management achieved by a particular person living with DM. Depression is a common occurrence particularly when a person living with DM has difficulty in accepting the diagnosis.

Psychological aspects were mentioned by several participants as an important factor in achieving self-management of DM.

"You get a lot of patients that hasn’t accepted the fact that they’re diabetics, but then I immediately ask doctors to refer them to a psychologist because unless they’ve accepted the fact that they’re diabetic, they won’t get compliance.”
"They must first accept that they’re diabetic. It’s no good if they’re in denial … I often ask them ‘If I can give you a choice of diabetes or one of the other dread diseases, which one would you choose?’… The ones that choose diabetes you ask ‘Why?’ and they say ‘Because I am in control.’”

Persons living with DM who suffer from depression also run the risk of poorer glycaemic control and a higher risk of suffering from complications related to DM (Lin, Katon, Rutter, Simon, Ludman, Von Korff, Young, Oliver, Ciechanowski, Kinder and Walker, 2006: 46). There is also a persistent decrease in the quality of life experienced by these persons living with DM (Delamater, Jacobson, Anderson, Cox, Fisher, Lustman, Rubin and Wysocki, 2001: 1288). The professional nurse dealing with persons living with DM who present with symptoms of depression should refer them for appropriate treatment as soon as possible to prevent further risk of complications.

- Formal diabetic education programmes should be made available at university level

Diabetes educators play an important role in the management of DM as they educate patients and the public on all aspects of the condition. It is a specialized area of expertise and should be recognized as such in South Africa.

One participant suggested a university level course for nurses which would allow them to become more effective nurse educators. It would give added recognition to diabetes education as a specialty.

“I would just like to see that the university encourages more diabetic educators. I really do … because if nurses are told right … it’s a lovely field to be in … I think that we, the nurses, have got more empathy than the doctors. I think this is here we can play a major role. To be there and to be more empathetic to them and to encourage people.”

In South Africa, the South African Nursing Council (SANC) does not recognize any accredited courses on the management of diabetes (De Medonca, 2009: 92). Courses which are available in South Africa are short and intensive such as the five-day course offered by CDE in Johannesburg (Centre for Diabetes and Endocrinology, 2009b). De Mendonca (2009: 92) mentions two available courses, namely “the DESSA KZN Basic Diabetes Management and Skills course (2 days)
for health personnel and the “KAB” (Knowledge, Skills and Attitude) course aimed at teachers and caregivers of diabetics”. She also states that there are plans to implement degree and certificate courses at the Pharmacology Department at Rhodes University, Grahamstown, Eastern Cape. On occasion, pharmaceutical companies may present attendance courses such as one attended by the researcher in 2005 (Nagel, 2005). There is, therefore, a dire need for further education opportunities on the subject.

McDonald et al (1999: 429) found in their study of nurses dealing with diabetic patients that there appeared to be a higher incidence of “awareness and sensitivity to patient’s needs” in nurses with bachelor’s degrees compared with those with a lower education level. As there is a significant shortage of nurses worldwide, these findings suggest that it is essential for the implementation of specifically focused educational programmes at a higher level to provide more cost-effective patient care (McDonald et al, 1999: 429).

A competency framework for diabetes nursing has been developed in the United Kingdom which could be a useful tool in planning and developing an educational programme specifically for professional nurses with a special interest in diabetes (Davis, Turner, Hicks and Tipson, 2007: 173). The levels of competency include Competent Nurse, Experienced Nurse, Senior Practitioner and Consultant Nurse which allow the professional nurse to follow a designated pathway for development of clinical expertise in a specialized field.

- **Communities must be made more aware of the implications of diabetes**

There is wide-spread ignorance of the medical, psychological and economic consequences of DM in all communities and all socio-economic groups in South Africa. People may be aware of the presence of DM but, unless affected personally, do not have any knowledge about the implications of a diagnosis of the condition for the patient, the family and the community.

Participants felt that community awareness would assist in making self-management of DM simpler for the patient and would also assist the acceptance of the condition in those communities which stigmatize it.
“Awareness in the community, you must try and promote at all five hospitals, in the churches, in the schools, wherever you can. I think that’s something that we really have to look at.”

This can be a valuable exercise as there are different cultural and socio-economic groups in South Africa, each with different ideas, beliefs and understanding regarding health and illness (Hjelm et al, 2003: 431). Creating a greater understanding of the functioning of the human body and the effects of disease could assist in lifting the stigma which is attached to DM in some communities for various reasons.

- **Diabetes Nurse Educators wish to advocate for diabetes to receive the same recognition as other chronic diseases**

There are many chronic conditions which require attention and recognition in order to raise the level of public awareness. DM is a major worldwide pandemic which is growing all the time. It has major financial implications and it can also lead to many other chronic life-threatening conditions affecting the quality of life experienced by the patient.

All participants were adamant that diabetes should receive the same recognition as other chronic conditions such as HIV/AIDS. They felt that so much money is being spent on HIV/AIDS whereas diabetes is also at epidemic proportions and can be prevented or controlled if given enough recognition and support. They all expressed the view that HIV/AIDS is often contracted due to unfortunate lifestyle choices made by the patient whereas DM has a strongly genetic element.

“But my argument here is, they pay for AIDS counselors by the hundreds, by the thousands of rand - why don’t they pay for diabetic counsellors? If you look at our people in government, Buthelezi is a diabetic, a very bad diabetic. The Minister of Correctional Services, he’s an insulin-dependent diabetic. Winnie Mandela is a diabetic and I’m sure our Minister of Health could be, if she’s not a diabetic, she’s obviously insulin resistant, if you look at the size of her. I feel they’re all probably insulin-resistant. They’re not doing anything about diabetes – nothing.”

“I want the government to be more for diabetics and to be more interested in training people to work with diabetics, because what’s heart sore for me is - HIV is a very important thing, né, there’s how many firms and overseas firms sponsoring programmes for them but a lot of them have become HIV positive due to a lifestyle, especially the young. How many of our diabetics, what have they done wrong to
become a diabetic? If you look at the world stats, I'm sure you agree it's just the same but I mean how much money gets really spent on diabetics? It just gets treated as a by-the-way thing, and not the big fuss they make about HIV. And what's heart sore, I say it again, is what have that people, most of them done wrong to become diabetic?"

Chronic diseases are on the increase around the world with 86% of the disease burden in sub-Saharan Africa consisting of chronic conditions (Pruitt and Epping-Jordan, 2005: 638). This creates a major economic challenge for governments around the world but particularly in developing countries where the expenditure on health care services may be disproportionately large compared with other public sector expenditure.

The media exposure given to HIV/AIDS places an undue burden on available resources as the expenditure on research and management of the condition outstrips that on other conditions. However, it is expected that the health care services will be confronted with a double burden as patients present with HIV/AIDS together with other chronic non-communicable diseases such as DM and related conditions, including cardiovascular disease (Pruitt and Epping-Jordan, 2005: 638).

3.5 CONCEPTS ARISING FROM THEMES

Attitudes and beliefs of the individual have a significant influence in the themes described above. The importance of the need for taking personal responsibility for one's own actions was also emphasized by the participants of both groups in this study. Personal responsibility is the degree to which the individual holds him or herself responsible and accountable for their reactions to their environment and to the life events which they experience (Anderson and Funnell, 2005: 13; Veg et al, 2006: 51). This is often dependent on and influenced by the memes which the individual carries in their mind. The attitudes and beliefs which influence the actions of people are examples of memes which have been described by Brodie (2009: 11) as “a unit of information in a mind whose existence influences events such that more copies of itself get created in other minds”. Memes evolve through repetition from mind to mind and influence the way that people react to their particular living circumstances and conditions. As memes are attitudes, beliefs and ideas which are spread from one mind to another as people communicate,
they will influence all aspects of life including the perceptions which a person has about their own abilities to deal with any problems which come their way. In this study, the themes which were identified gave examples of a number of memes held by persons living with DM. These memes are related particularly to the required lifestyle changes and to the positive and negative factors which influence self-management. Some of the themes, especially those related to practical issues such as opportunities or lack thereof to implement an exercise programme, are directly influenced by the belief system of the individual. For example, some people described their difficulties in obtaining sufficient exercise while others, who may be expected to have insurmountable difficulties such as the lady living in the township, found a way around a perceived obstacle and walked in her garden. Other examples of memes which were mentioned by participants in the study were making use of cinnamon on food to aid blood sugar control, the need to go to a gym to exercise, the notion that lettuce and tomatoes are the only salad vegetables available and cultural views from different ethnic groups regarding DM. The memes held by an individual thus may have a significant influence on their perceived level of personal responsibility.

A person who is influenced by a meme to achieve a high internal locus of control will display a higher sense of personal responsibility in dealing with the pressures of everyday life (Sarafino, 2002: 179). The goal of attaining a high level of self-management in a person living with DM is easier to achieve in persons who display a high internal locus of control and a well-developed sense of personal responsibility. However, as memes become established in our minds, they force us to “pursue its logical consequences to the bitter end” and may result in a negative effect (Csikszentmihalyi, 1994: 124, Blackmore, 2000: 111).

Brodie (2009: 72) suggests that natural selection has assisted the development and spread of memes in a similar manner to the evolution of DNA over the centuries. Memes related to crisis, mission, problem, danger and opportunity have, according to Brodie (2009: 72), played an important role in the survival and reproduction of humankind. As humanity has developed to higher levels of consciousness, memes have become increasingly more sophisticated (Brodie, 2009: 76).
According to Brodie (2009: 84), “ideas are infectious” and are spread by observing the behaviour of other people and their reactions to cultural aspects of their surroundings. The ideas or memes may have a positive or negative influence on people but are essentially concerned with their own (i.e. the meme’s) survival and replication. Because of modern day technology, memes are being spread further and faster than before and not necessarily to the benefit of humans (Brodie, 2009: 86). However, the concept of memes may be utilized to spread positive messages related to various aspects of our lives, including health care. Social marketing is one of the methods which can be used to spread positive memes regarding health care. Social marketing has great value in reinforcing messages regarding positive memes disseminated by the health care team (Thackeray and Neiger, 2002: 538). The spread of positive memes can be of great value in disseminating information on aspects of health care and in positively influencing the level of self-management enjoyed by the person living with DM.

3.6 CHAPTER SUMMARY

In Chapter Three, Phase One of the study was concluded. In this chapter, the researcher explored the experiences of persons living with DM in Nelson Mandela Bay as well as the experiences of diabetes nurse educators who assist diabetic patients in the process of attaining self-management. Themes which were identified by analysis of the data obtained during individual interviews and a focus group session with the participants of both research groups were discussed. The themes were illustrated with direct quotations from the interviews which had been recorded and transcribed. Illustrations from the literature were also given to re-contextualise the themes within the existing knowledge and research. The following two chapters will cover Phase Two of this study by the development of a conceptual framework and strategies to assist the professional nurse to facilitate self-management in persons living with DM.
4.1 INTRODUCTION

In the previous chapter, the researcher discussed the findings which emerged from the individual interviews conducted with people living with DM together with the focus group session and individual interviews conducted with diabetes nurse educators. The resulting themes and sub-themes describe the experiences of the participants in either living as a patient with DM or else assisting these patients in the role of a nurse. The themes identified in the interviews with Group One participants (people living with DM) can be summarized as follows. People living with DM:

- have a definite initial experience on being diagnosed with DM
- gradually experience an acceptance and acknowledgement of their condition
- have definite views on the concept of self-management
- acknowledge both positive and negative factors which influence self-management
- have definite ideas on how professional nurses can assist them in achieving self-management.
Group Two participants were diabetes nurse educators. The themes which were identified in this group were similar to those identified by the members of Group One and may be summarized as follows. Diabetes nurse educators:

- have definite views about the importance of self-management of DM
- have definite views on factors which both assist and hinder patients in self-management
- expressed similar views to people living with DM on ways in which nurses can assist patients in the self-management of their condition.

During the analysis of the themes cited above, the concept and importance of personal responsibility was identified in the individual and focus group interviews of both the people living with DM and the diabetes nurse educators who assist them. The importance of personal responsibility is also regularly emphasized at the meetings of the local Diabetes South Africa group attended by the researcher to gain further insight into the life experiences of persons living with DM. Personal responsibility was also an integral part of the presentation given by Doug Burns, former Mr. Universe and Type 1 diabetic, at the National Conference of Diabetes South Africa held in Port Elizabeth during August 2009 (Burns, 2009). Chapter Four focuses on the description of the Diabetes Strategy for Africa, the concept of personal responsibility and the development of a conceptual framework to assist in the creation of strategies to facilitate the self-management of DM.

4.2 DIABETES STRATEGY FOR AFRICA

As the worldwide growth of the diabetes pandemic has serious implications for all developing countries including those in Africa, the researcher will briefly describe the call to action of The Diabetes Declaration and Strategy for Africa (International Diabetes Federation et al, 2006). This strategy which details the plan of action for dealing with the prevention and control of diabetes and related chronic diseases in Africa was launched at the 19th World Diabetes Congress held in Cape Town in December 2006 by the International Diabetes Federation Africa Region (IDF) in collaboration with the World Health Organization – African Region (WHO) and the African Union (AU) (International Diabetes Federation et al, 2006). As South Africa is a signatory to the Strategy, any action plans dealing with DM should be drawn up with the Strategy in mind.
The development of the Diabetes Strategy for Africa is based on three previous diabetes declarations made by the IDF in collaboration with the WHO, namely the St Vincent declaration of 1986 for Europe, the Declaration of the Americas in 1996 and the Western Pacific Declaration in 2000 (Ramaiya, 2004: 34). As previously shown in this study, DM is a global pandemic with severe personal and national implications. Africa is not exempt from the growth in the numbers of people living with DM and the potentially catastrophic consequences and complications which ensue. As the affected age group is becoming younger, the financial implications are harsh, both on a personal and a national level as people who are expected to be economically active are being disabled due to the complications of DM type 2. As described in the Strategy document, “A diagnosis of diabetes can spell death to individuals, a lifetime – possibly even generations – of poverty to families, decimate the workforce and cripple a nation’s economy BUT Diabetes and related chronic diseases can be prevented and treated successfully with a relatively small investment” (International Diabetes Federation et al, 2006: 3).

The African Diabetes Declaration is a call to all concerned persons and organizations in Africa to improve access to health care in all African countries. The persons and organizations called upon include “governments of African countries, non-government organizations, international financial institutions and donor agencies, industry, business, unions, citizens, health care providers and all partners and stakeholders in diabetes and related chronic diseases” (International Diabetes Federation et al, 2006: 3). The IDF (2006: 4) includes the following criteria in the call to action:

- Adequate, appropriate and affordable medications and supplies for people with diabetes
- Earlier detection and optimal quality of care of diabetes
- Effective efforts to create healthier environments and prevent diabetes
- The identification and dissemination of information, education and communication to empower people with diabetes to access appropriate diabetes services and improve self care
- Equitable access to care and prevention services for people with or at risk of diabetes
- Awareness of diabetes in the community and among health care providers
- A truly integrated approach which utilizes the whole health workforce to address infectious and non-communicable diseases simultaneously
- Government commitment to reducing the personal and public health burden of diabetes
- Partnerships and collaboration within and between government sectors, private sectors, non-government organizations and communities to create community and workplace environments that promote better health.

The call to action will have far-reaching consequences if implemented optimally in the countries of sub-Saharan Africa (Azvedo and Alla, 2008: 104). The life-expectancy and quality of life of people living with DM may be expected to improve exponentially and the looming financial burden imposed by the consequences of the expected complications on the personal and national budgets of the affected people and countries will be eased. According to the IDF, “everyone from the village health worker to a large corporation can do something about it” (International Diabetes Federation et al, 2006: 18). The strategy document also emphasizes the fact that the cost of intervening and helping reduce the burden of DM is much less than the projected cost of dealing with an ever-increasing number of people with the condition. A reduction in the incidence of DM will also positively affect the incidence of other closely related chronic diseases (International Diabetes Federation et al, 2006: 19).

The conceptual framework described in this chapter will be developed in the unique context of patients living with DM and being treated in both the private and public health care sectors in Nelson Mandela Bay. As pointed out by participants in both groups, there are gaps in the provision of health care services to persons living with DM in the area which can be addressed. However, participants in both groups also pointed out that persons living with DM should be able to take responsibility for their own self-management. The aim of this conceptual framework is to assist in facilitating the growth of personal responsibility in persons living with DM, enabling them to successfully implement self-management strategies.
A critical concept which was identified in the data obtained during the individual interviews and focus group sessions with the participants in this study will be described prior to the development of the conceptual framework. The critical concept is that of personal responsibility and it can be applied both to patients living with DM and to the professional nurses who deal with these patients on a daily basis. In order for any strategy to facilitate the self-management of DM to be successfully implemented, the person living with the condition has to take ownership and to accept personal responsibility for self-management of DM. The professional nurses who deal with these patients also have to recognize the need for a high level of professional responsibility for their actions in implementing the strategies and in remaining abreast of the latest developments in research and education. However, as the degree of personal responsibility achieved is strongly affected by memes which are held as truth and influence behaviour patterns in the individual, the role of memes in influencing behaviour will be initially discussed.

4.3 THE ROLE OF MEMES IN INFLUENCING BEHAVIOUR

The term memes was initially coined by Dawkins in 1976 when describing cultural transmission of concepts such as “tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches” (Dawkins, 1999). When the term was coined, it was intended to sound like genes to illustrate the fact that as genes are replicated from person to person via DNA, ideas are replicated from one mind to another in a form of cultural evolution which can influence human behaviour (Dawkins, 1999). Ideas and values shared by cultural groups are passed on to younger generations and become the memes affecting their outlook on life and their attitude to the world around them (Brodie, 2009: 28). Some memes are stronger or “fitter” than others and, as a result, spread more readily. Urban legends and superstitions are examples of rapidly spreading memes (Blackmore, 2000: 14). As memes are replicated by transmission from person to person, they evolve and grow, affecting the perceptions which people have about the world around them.
The qualities which allow the replication of genes in the process of natural selection are longevity, fecundity and copying-fidelity (Dawkins, 1999). Memes which are passed on successfully also have these characteristics to some extent. As fashions in clothing change, for example, a meme may spread rapidly but be relatively short-lived, surviving for only a limited period. An example of a meme which spreads rapidly but is relatively short-lived is a yo-yo craze which spreads throughout schools in a short space of time but is then forgotten as the next craze takes over. Memetic selection decides which memes spread and evolve while others die very quickly (Blackmore, 2000: 14). Those memes which involve risk of danger or are related to food or to sex spread more rapidly than others as they relate to fundamental needs (Brodie, 2009: 72). Brodie (2009: 73) states that memes originally assisted in the development of humans as they involved communicating danger in a crisis situation, allowing groups of people to act together on some form of mission, identifying and solving problems, alerting people to danger or acting quickly to make the most of an opportunity. These attributes are used to good effect by people who wish to influence others to act in a certain way such as those in the advertising industry or politicians.

Because of the effect of modern technology and methods of communication, the fittest memes are spread exponentially and into unexpected areas. Houses built on rafts gathered in floating villages on Cambodia’s Tonle Sap, the largest freshwater lake in South East Asia, have satellite dishes which enable the occupants to have access to up–to-the-minute news and programmes in spite of living in such isolation, exposing them to memes which they would not normally have encountered.

Memes enter the consciousness of humans in a number of ways. Conditioning or repetition is used effectively by the advertising and sales industries to instil the idea that one has to possess the latest products and technology which in turn is used to further the spread of newer memes (Brodie, 2009: 126; Blackmore, 2000: 204). Conditioning is also used in a political context when people are persuaded to vote for a particular political party. Religious beliefs are also spread by conditioning. Cognitive dissonance is another way of spreading memes. If people are affected by conflicting memes, they rearrange their responses, thus creating
new memes in order to make sense of a situation (Brodie, 2009: 126). An example is the brainwashing methods used to convert prisoners of war to the opposing side or the techniques used by high pressure salespeople. The third method in which memes are spread is the Trojan horse where a basic idea is promoted as a meme but a number of other memes are included as a bundle (Brodie, 2009: 132). Political leaders use this method effectively by adding their own policies and aims while promoting freedom and democracy amongst their followers. People are lulled into security by absorbing the “acceptable memes” along with the personal aims of the politicians (Brodie, 2009: 133).

Copying fidelity or the accuracy of transmission is the most important quality which ensures the continuing survival of a meme. Belief in tradition allows the spread and replication of certain memes but copying may not be accurate. Traditions sometimes change as they pass down through generations. However, the basic idea behind the tradition often remains. Religions pass on their memes by claiming that they are the Truth (Brodie, 2009: 144). Faithful and accurate copying may be carried out in certain structures such as the military where strict structures are in place to ensure the survival of the relevant memes (Brodie, 2009: 144).

According to proponents of memetics, memes affect every aspect of one’s life and are driven by basic human needs. Memes are spread involuntarily from mind to mind and affect one’s reactions to everyday experiences thus influencing human behaviour. Making use of memes can be an effective method of spreading health messages and encouraging positive health-related behaviour.

4.4 THE CONCEPT OF PERSONAL RESPONSIBILITY

A concept is a representation of meaning of a particular term or phrase in the particular context of the research being undertaken. In the context of this study, the concept of personal responsibility has a strong influence on the development of the conceptual framework which will be described in this chapter.

Responsibility has been described by Fritz Perls (Sklare, 2005), the father of gestalt therapy, as “response-ability”. This means that people have to be aware of
their own ability to respond to the situation in which they find themselves (Sklare, 2005). The concept of personal responsibility affects all areas of one’s life as it relates to every aspect of one’s relationship to the environment in which one lives (Russell, 2005: 147; Burns, 2009). Responsibility and accountability go hand in hand as people are accountable for their reactions to situations which they encounter in their everyday lives. These situations range from national or international political occurrences to family and work relationships. Nurses should be aware that there is a danger of having a simplistic attitude towards this concept as there are some schools of thought which aver that people who develop dread diseases such as cancer are responsible for their own condition as they may have wished it on themselves or else it may be a retribution for past offences from this or from previous lives such as in the concept of ‘karma’ (Lawton, 2008). Although people should be aware that they are responsible for their reactions to situations they encounter in everyday life, they also need to be aware that there are some situations which they can not control (Burns, 2009). When people feel trapped in a situation which has constant negative outcomes, they may become apathetic and stop trying to overcome any obstacles, even if it is possible to do so (Sarafino, 2002: 107). These people are influenced by a meme of learned helplessness leading to low self-esteem and contributing to difficulty with development of coping skills. They are programmed for failure by a meme which becomes a self-fulfilling prophecy (Brodie, 2009: 28).

The concept of personal responsibility has far-reaching consequences for society as a whole. “The idea of personal responsibility lies at the heart of a free society. When responsibilities are shunned at the individual level, there is an eventual impact on all those around us” (Huff, [S.a.]). In countries such as Australia and Canada, the political climate emphasizes personal responsibility, encouraging the development of participative health care services and the use of self-management (Bell and Orpin, 2006: 34). The type of impact on a society when negative memes regarding concepts such as the need for personal responsibility are spread may be demonstrated by lowering educational standards or by rising crime levels when individuals have not taken personal responsibility for their actions in these areas. These results are examples of memes which Brodie
describes as viruses of the mind which, as they spread, influence the behaviour of those infected (2009: 45).

A patient living with any chronic condition or disease has to take full personal responsibility for the management of that condition (Sum, 2001: 498; Burns, 2009). Chronic conditions or diseases may affect any part of the body and may have a range of causes. An example of a chronic condition which may have more than one cause is chronic back pain which may have mechanical causes or may be a symptom of a disease affecting the back or spine (Asher, 2007). The various methods of treatment available for any chronic condition may include several forms such as medication, exercise, diet, physiotherapy, occupational therapy, radiotherapy or chemotherapy. In order for the chosen treatment to be effective, the patient has to take the responsibility of ensuring that the treatment is utilized optimally. Medication has to be taken at the correct dosage and at the correct time intervals in order to maintain optimal blood levels of the particular drug. The patient has to ensure that a healthy diet is maintained and that adequate exercise is carried out so that the body is given the required building blocks to fight the disease or to maintain or improve health within the constraints of the condition. If other forms of treatment such as occupational therapy, physiotherapy, radiotherapy or chemotherapy are required for the disease or condition, the patient has the responsibility to attend the required sessions. If the patient is a child, the parent takes on these responsibilities but as the child grows and develops, the responsibility has to become a personal issue for the patient. In the case of DM type 2, the patient is usually an adult although this form of diabetes is being identified in younger patients at an alarming rate. Any strategies which address the concept of self-management for chronic health conditions have to recognize the importance of personal responsibility on the part of the patients in achieving their aims.

Some people may find it difficult to achieve full personal responsibility for their actions regarding implementation of self-management strategies for health care due to a variety of reasons. The professional nurse must be aware of the many factors in everyday life which may negatively affect the level of personal responsibility for health care achieved by the individual. These may include lack
of education, age-related physical frailty, poverty and living in underserviced areas (Bell and Orpin, 2006: 38). Age may affect memory levels, in turn affecting the level of personal responsibility achieved by the individual (Kessels, 2003: 220). Some of these factors are described in the Dahlgren and Whitehead Model (Whitehead, Dahlgren and Gilson, 2001) which shows how a variety of health determinants play a role in the ability of the individual to obtain optimal health care and implement self-help strategies. The determinants of health described in the Dahlgren and Whitehead Model are:

- General economic, cultural and environmental conditions
- Living and working conditions
  - Agriculture and food production
  - Education
  - Work environment
  - Unemployment
  - Water and sanitation
  - Health care services
- Social and community networks
- Individual lifestyle factors
  - Age
  - Sex
  - Personal constitution.

Investigators in the Diabetes Attitudes, Wishes and Needs study (DAWN) commented on the effect of determinants of health on development of self-management in DM when they found “that social and economic factors have a major impact on people’s emotions and might complicate efforts to self-manage their condition” (Weiss, 2007: 16). The determinants of health mentioned above will play an important role in the ability of the individual to obtain access to adequate health care resources as well as to implement self-management strategies for any chronic condition. As a result, they have to form an integral part of the development of strategies to facilitate the self-management of DM.

The individual is not always in a position to change or influence many of the above determinants of health such as the individual lifestyle factors of age, sex
and personal constitution. Other determinants such as socio-economic or political conditions also may potentially have either positive or negative influences on the level of personal responsibility achieved. For example, a patient may be willing to undertake regular glucose self-monitoring but, due to low income levels, may be unable to afford the cost of the test strips and lancets. As a result, strategies dealing with management and treatment of many chronic health conditions have to be implemented on a number of levels ranging from national legislative changes to individual lifestyle changes. When planning an individualized education programme for a person living with DM, the professional nurse has to take these health determinants into account as they have a potentially decisive effect on the memes held by the individual person.

Some people may normally be totally responsible in their attitude to their condition but have times when it becomes more difficult for them to deal with the situation. They may vacillate between not wanting to be told what to do by others and then wanting to have someone take over the responsibility for management to enable them to have a psychological break from the enormity of the experience (Lagergren, 2008; Burns, 2009). Lagergren (2008) describes this vacillation by saying at one point “I have a feeling that I’d distance myself from them because I don’t like being told what to do. Heck, I might even rebel and use their good-intentioned but overbearing ways to convince myself to go the opposite way”. He then describes the situation when his blood glucose levels may be “out of whack” and says “I think how nice it would be to turn over all of my diabetes responsibilities to someone else. Give me some keepers! ... sometimes, wouldn’t it be nice to have a team of people to take on the burden, to do the thinking for you?” However, it is possible to make use of cognitive and behavioural skills to assist patients in taking personal responsibility for their actions. For this to be successful there has to be a strong internal locus of control.

Locus of control is closely related to the concept of personal responsibility. Those individuals who have a strong sense of personal responsibility for their actions particularly when related to health may be expected to have an equally strong internal locus of control. People who have a strong internal locus of control accept the concept that their health is directly influenced by their own actions and
decisions (Sarafino, 2002: 109; Collins, Bradley, O'Sullivan and Perry, 2009: 6). Some people have a strong belief in the meme that their health is controlled by others and are less able to acknowledge the influence of their own actions on their health status. Other people believe that luck, fate or other external sources control their health status (Sarafino, 2002: 110; Collins et al, 2009: 7). The perceptions and beliefs which people have about their health are strongly influenced by the memes to which they have been exposed and which significantly affect their perceptions of locus of control.

In some countries, because of the ever-increasing costs of health services, there are moves by government and by health insurance providers to use coercive tactics to attempt to instil a degree of personal responsibility in people benefiting from health services. A deliberate attempt is made to influence and change the memes and behaviours of people. An example of this type of strategy is the introduction of anti-tobacco laws in South Africa which do not allow smoking in public places such as restaurants and work areas. This type of strategy may be regarded as an external factor but can also be regarded as an attempt to improve the level of internal locus of control in beneficiaries of the health system by changing the memes which influence their behaviour. The methods used to carry out this type of strategy may vary in different countries but have caused some dissension. Some people who are relatively healthy feel that it is unfair for them, as members of health insurance schemes or medical aids, to subsidise the treatment of others who do not take enough personal responsibility for their own health. This particularly applies to conditions which may be regarded by some people as self-inflicted such as obesity (Balko, 2004). This has implications for patients living with DM because of the link between DM and obesity. There are also those who feel that manipulating people into certain behaviours will not necessarily improve their health but will merely shift costs from the government, employers and health insurance providers to the patient as there is no guarantee that compliance with certain norms will be achieved (Steinbrook, 2006: 753).

External factors which may play a role in preventing a person from achieving optimal glycaemic control and well-managed DM may include a variety of socio-economic factors. Past experiences of illness and illness of family members also
play a role in reinforcing the idea of an external locus of control (Mackey, 2006). Advancing age plays a role in reducing the extent of an internal locus of control as people may perceive themselves as less able to cope with the requirements of their condition due to weakening personal competence (Mackey, 2006). The perceptions described are often due to memetic influences over the years.

Professional nurses dealing with patients living with DM should be able to respond to the needs of their patients and assist them in developing “responsibility” (Sklare, 2005). Professional nurses, due to the nature of their work, are also expected to achieve a high level of professional responsibility in their interactions with patients. According to the International Council of Nurses (ICN) Code of Ethics for Nurses (2006: 2), “The nurse carries personal responsibility and accountability for nursing practice and for maintaining competence by continual learning”. One area where this may be demonstrated is in the attitude of nurses towards patient teaching and their own continuing education. The importance of, and real need for, in-service training on all aspects of DM was emphasized by the Group Two participants, the diabetes nurse educators. In order to remain informed about the latest developments and research, the professional nurse has to take every opportunity for increasing knowledge such as being available when short courses or lectures are offered. Reading about new developments in journals, magazines and books is also essential.

Educating patients can be time-consuming during a busy day but it is an integral part of the role of the professional nurse. Once again, the ICN Code of Ethics for Nurses (2006: 2) emphasizes the importance of patient education when it states that “The nurse ensures that the individual received sufficient information on which to base consent for care and related treatment”. Professional nurses have to ensure that the patients in their care receive the required education to facilitate the development of a strong sense of personal responsibility, thus achieving optimal levels of self-management of DM and reducing the incidence of complications.

All nurses should also take measures to improve and maintain their own health as they are regarded as examples in the community and should be demonstrating
the healthy behaviours that they advocate to their patients (Pullen, 2009:21). As imitation is a method in which memes are spread, example can be influential in disseminating health messages (Blackmore, 2000: 43). Personal health in the nurse is regarded as an ethical issue by the ICN as it states in the Code of Ethics for Nurses (2006: 3) that “The nurse maintains a standard of personal health such that the ability to provide care is not compromised”. Participants in this study mentioned that they felt that some professional nurses who gave them patient education regarding lifestyle changes obviously did not adhere to those principles themselves particularly with regard to obesity and physical fitness. They felt that this created unnecessary tension between themselves and the professional nurse as they could not take the proffered advice seriously, feeling that if the advice regarding lifestyle changes worked, the nurses would implement it themselves.

The ICN has recognized the importance of assisting health care workers with their own health issues by establishing, together with Becton, Dickinson and Company, a global medical technology company, a number of Wellness Centres for Health Care Workers in some African countries such as Lesotho, Swaziland, Malawi, Zambia and Uganda (International Nurses Day highlights innovations that support the wellness of Africa’s nurses, 2009: 18). At these Wellness Centres, health care workers are able to obtain comprehensive and discreet health care services. In South Africa, employers are introducing wellness programmes in both the public and private sectors. The level of physical fitness of health care workers is being addressed in certain countries in different ways. As an example, some hospitals in Australia offer gym facilities for staff members at reduced rates and with extended hours to suit the shift workers. The Alfred Hospital in Melbourne, Victoria, offers gym facilities on a 24 hour basis (Staff benefits – Staff gymnasiums, 2009). The Flinders Medical Centre in Adelaide, South Australia, offers an on-site staff health and fitness centre run by an outside company, EFM Health Club, which also offers a diabetic programme (Employment – Benefits of working at FMC, 2009). It is, therefore, possible to assist health care workers to implement a physical fitness regime which could help them to act as an example to their patients while improving their own health levels. Such a programme would also make them more understanding about the difficulties faced by their patients on a daily basis (Van der Merwe, 2008: 1).
The concept of personal responsibility is an extremely important consideration in the compilation of strategies to assist the person living with DM to be able to implement self-management strategies and, in fact, has to be addressed in order for a successful self-management programme to be carried out. The proposed strategies will include action on various levels including lifestyle changes. In order for these strategies to be implemented successfully, persons living with DM have to accept personal responsibility for their own actions in self-management. Personal responsibility requires a high internal locus of control on the part of the person living with any chronic disease. Strategies to self-manage DM should include those which assist the person living with DM to develop or enhance a sense of personal responsibility. This can be achieved in the process which forms the therapeutic relationship. The professional nurse must be aware, however, that there are many factors or health determinants which may affect the ability of the individual to achieve a high sense of personal responsibility.

In the following discussion, the researcher links the concept of personal responsibility to the conceptual framework for development of strategies facilitating self-management of DM. In order for successful self-management of DM to take place, the person living with DM has to accept personal responsibility for implementation of self-management strategies.

4.5 CONCEPTUAL FRAMEWORK

A conceptual framework is used to provide a schematic representation of the relationship between concepts. Many models or frameworks have been devised over the years to aid and guide nursing practice by providing a clear picture of the important relationships between concepts in a particular situation (Nieswiadomy, 2008: 112).

The conceptual framework developed for this study is based on the work of Dickoff, James and Wiedenbach (1968) who described the relationship between nursing theory, nursing practice and nursing research. Dickoff et al (1968: 415) show that, in nursing, theory, practice and research are interrelated and
interdependent. They describe theory as an invention of concepts in interrelation (Dickoff et al, 1968: 419). Nursing theories have developed over time, with four levels of theory being described.

First level or naming theories isolate factors and identify them to create a terminology which may be used in the development of further knowledge (Dickoff et al, 1968: 421). Naming is used to verbalize primitive ideas or factors and allows communication about the ideas or factors to take place (Dickoff et al, 1968: 420), leading to further development of knowledge. One example of the process of naming is classification of subjects to create some form of order and relationship as categories and sub-categories are formed. Second level theories describe the relationship between factors while third level theories or predictive theories are used to show a cause and effect relationship between factors (Dickoff et al, 1968: 421). The relationship between factors in a second level theory may be described without a time reference or may be a description at a given moment in time. An example of descriptive theory could be anatomy in which the structures of the human body are described (Dickoff et al, 1968: 421). Predictive theories may be used to describe a simple relationship between factors such as the premise that when a person living with DM does not follow a correct diet, erratic glycaemic levels will result. Fourth level theories are also known as situation producing theories as they describe a more elaborate relationship between factors. Related to this study, it is suggested that if the recommended strategies are implemented, the professional nurse will be able to facilitate the development of a strong personal responsibility which will empower the people living with DM to attain optimal self-management of their condition.

Dickoff et al (1968: 421) state that a situation producing theory has three essential ingredients as follows:

1. Goal-content specified as aim for activity
2. Prescriptions for activity to realize the goal content
3. A survey list to serve as a supplement to present prescription and as preparation for future prescription for activity toward the goal content.

The aim of this study is not to produce a nursing theory but to create strategies to assist the professional nurse in facilitating the strengthening of personal
responsibility so that people living with DM are able to implement self-management principles. These strategies are based on and congruent with the Empowerment Model which encourages patients to take personal responsibility for their own self-management under the guidance of the diabetes nurse educator as discussed in Chapter One of this study as well as earlier in this chapter. The patient is the most important member of the multidisciplinary team but requires assistance and support in the journey towards optimal self-management.

In order to create the strategies to assist the patient, the essential ingredients of the situation producing theory, namely the goal or terminus, the prescriptions for activity and a survey list, are required. The goal which is the aim of the activity in this research study is to identify strategies which the professional nurse may utilize to assist people living with DM to be able to accept personal responsibility for implementing the principles of self-management. The prescriptions for activity to realize the goal content in this study are the strategies which may be used by the professional nurse to achieve the stated goal. In particular, a survey list will be used in the development of the conceptual framework. The concepts which form part of the conceptual framework are used as building blocks to develop strategies to assist patients in the self-management of DM. The concepts derived from the survey list described by Dickoff et al (1968: 421) are shown in Figure 4.1 which is the cogitation map used by the researcher for the development of the conceptual framework.

A conceptual framework is used to provide the professional nurse with a systematic approach to the patient and the nursing interventions required to promote and to maintain health in the individual and thereby in the community. In order for the professional nurse to assist the patient living with DM, a therapeutic relationship has to exist between the parties. A detailed discussion of the therapeutic relationship, the dynamic interaction in which the professional nurse and the patient work together to obtain self-management of DM, will be discussed in Section 4.5.1.5(a). The conceptual framework describes the factors affecting the therapeutic relationship between the professional nurse and the diabetic patient together with their interrelationships which will be discussed in this chapter.
4.5.1 Aspects of activity

Dickoff et al (1968: 423) describe six aspects of activity which may be used to create a survey list when attempting to organize and explain the relationships between the concepts which form part of a conceptual framework. When creating a survey list, Dickoff et al (1968: 422) state that the following questions need to be answered in order to identify the aspects of activity which will form the basis of the conceptual framework:

1. Who or what performs the activity? - *Agency*
2. Who or what is the recipient of the activity? – *Patiency or recipiency*
3. In what context is the activity performed? – *Framework or context*
4. What is the end point of the activity? – *Terminus or end point of activity*
5. What is the guiding procedure, technique or protocol of the activity? – *Procedure, technique or protocol*
6. What is the energy source for the activity? – *Dynamics or energy source for activity.*

![Cogitation map for development of conceptual framework](image_url)
The cogitation map, shown in Figure 4.1 above, describes the relationship between the aspects of activity in the compilation of the conceptual framework which follows. The aspects of activity shown in the cogitation map create a logical flow from the agent to recipient; describe the context together with the procedure to be used and the dynamics which drive the process until the desired terminus or goal is reached.

### 4.5.1.1 Agent

The agent as described by Dickoff et al (1968: 422) is the person who performs or facilitates the activity which is designed to attain the desired goal. The agent described in this conceptual framework is the professional nurse who, while implementing the process described in the discussion on the therapeutic relationship, assists in the empowerment of the person living with DM. A person living with DM who has been educated and empowered will be in a favorable position to accept the responsibility for successful implementation of self-management strategies. The role of the professional nurse is considered of vital importance in the provision of the accessible, high quality health care at all levels from primary health care to tertiary levels of care promised by the Constitution of South Africa (National Department of Health - RSA, 2008: 9).

The professional nurse is expected to be able to independently provide comprehensive nursing care and therefore plays a variety of roles as a health practitioner (National Department of Health, 2008: 5). These roles are not limited to the direct hands-on patient care experienced in a hospital setting but also include the roles of health educator and promoter, patient advocate, researcher as well as provider of support to patients and their families. The professional nurse is expected to fulfil these roles within the limits of policies implemented by the government of the day, professional bodies such as SANC and employers. The above-mentioned roles of the professional nurse are relevant to the provisions of the Diabetes Declaration and Strategy for Africa (International Diabetes Federation et al, 2006: 2).

The professional nurse may be employed in the public or private health care sectors. The level of involvement with diabetic patients experienced by the
professional nurse may vary, depending on the specialty of nursing carried out by the individual nurse. The professional nurse may be employed as a specialist diabetic nurse or may be in general nursing practice. If in general nursing practice or working in another specialization, the professional nurse will still have contact with diabetic patients in the course of normal practice. Some professional nurses may have received special training as diabetic nurses while others working with diabetic patients may have received on-the-job training or may depend on the information obtained while doing the basic general nursing course, either as a degree or diploma.

Mention has been made of the variety of roles which the professional nurse has to fulfil in the course of everyday duties. The researcher has identified several roles, depicted in Figure 4.2 below, which are relevant to the context of this study and which will be discussed as follows.

![Figure 4.2 Role of the professional nurse in relation to self-management of Diabetes Mellitus type 2](image)
• Health educator and promoter

The role of health educator and health promoter is vital to assist the people living with DM to be able to implement self-management strategies as well as assisting and educating their families and the greater community. Health education and health promotion are two different concepts although they are often used interchangeably (Greig and Ricks, 2009: 24). Health promotion aims to enhance positive health while preventing or diminishing ill-health (Greig and Ricks, 2009: 23). Strategies and actions aimed at health promotion may be carried out on a variety of levels which may range from the activities of large international health organizations to local health clinics and may include a number of different approaches. The approaches which may be used include the medical approach, the behavioural change approach, the educational approach, the health care user-centred approach and the societal approach (Greig and Ricks, 2009: 22). Whichever approach is used in health promotion, health education forms a fundamental part of the approach. As nurses form the largest category of health professionals and are indispensable in the implementation of health care delivery in South Africa, they are a fundamental part of any health promotion and education strategy which may be implemented (National Department of Health, 2008: 9).

All patients living with DM require the opportunity to participate in a learning process which equips them with the necessary knowledge about the condition to enable them to make informed decisions about the steps required in reaching optimal self-management. They need to know about all aspects of the condition and its management as well as the resources which are available to assist them.

Although patient education is a very important aspect, the professional nurse is not limited to only educating patients about the effects and management of DM. In the role of health educator and promoter, it is possible for the professional nurse to have a very important influence on the perceptions of the community regarding chronic diseases and DM in particular. By playing an active role in the community and taking opportunities to act as health educator and promoter in places such as schools and churches, the professional nurse will be able to positively influence members of the community to play a more supportive role
towards those living with DM. Health promotion in the greater community will also raise the profile of DM and assist in the prevention or delay of onset in others who may be at risk.

- **Provider of support for patients, family and significant others**
  The therapeutic relationship between the professional nurse and the person living with DM is affected by social influences such as families, friends and significant others. Influences from work colleagues, employers and the community at large may also affect the therapeutic relationship. The strategies described in Chapter Five will have to take these influences into account in order to be successfully implemented.

  The professional nurse is expected to provide support for the patient living with DM. However, this is not limited to the patient as the family and significant others may also need support in coming to terms with the limitations imposed by the condition on their loved ones. Support may be emotional particularly when the patient is newly diagnosed and experiencing the range of reactions described in Chapter Three (Funnell and Siminerio, 2004: 23). However, there may be more practical support required in which other resources available to the patient may be mobilized. An example of practical support which may be given is the referral of the patient to other appropriate members of the medical team when required. The professional nurse may also play a supportive role in assisting the patient to obtain the correct level of care from a medical aid fund or by referring the patient to the appropriate clinic or facility in the public health care sector.

- **Patient advocate**
  Once again, in order for effective implementation of the strategies described in Chapter Five to take place, the role of the professional nurse as patient advocate must be understood. The role of patient advocate is crucial for a number of the strategies as the professional nurse may need to act as an advocate of patients’ rights for example with other members of the medical team or with employers. The professional nurse may also act as patient advocate when dealing with medical aid funds where a formal motivation letter or other form of communication
may be required to ensure that the correct management principles are carried out within the limits of the rules imposed by that medical aid fund. Another example of acting as patient advocate is in lobbying for policies designed to assist in improving the level of health delivery to patients. The Constitution of South Africa bestows many rights on the individual. Along with these rights comes the responsibility of ensuring that the individual remains informed and committed to ensuring that these rights are not curtailed in any way. The professional nurse has a duty to remain informed about resources available to assist the patients and to make the patients aware of them. If the expected resources are not made available, the professional nurse also has a duty to bring this to the attention of higher levels of management.

- **Researcher**

Research is a function of the professional nurse which should form part of everyday life as it affects every aspect of professional practice while increasing nursing knowledge and leading to informed professional judgement (Chapman, 1997: 38). Research creates a link between theory and practice as problems identified in the practical field may be solved or new methods of practice may be implemented leading to a higher level of health care delivery for the patient and the community at large. Chapman (1997: 37) states that the professional nurse who identifies with the role of researcher will have the following characteristics:

- An enquiring attitude of mind
- A logical approach to problems
- An awareness of the existence of research reports
- A willingness and ability to read, evaluate, select and make use of research findings.

Research into all aspects of DM is an ongoing process which increases the level of knowledge about the condition. It is essential for the professional nurse to remain abreast of the latest developments in diabetic care in order to critically evaluate what findings are applicable and desirable to implement in everyday practice. The professional nurse may also identify aspects of care which could be improved and instigate research into them.
Physical and emotional care for the professional nurse

In order to fulfill the role expected of the professional nurse, the individual has to take note of the importance of self-care in order to remain effective both physically and mentally and to prevent the danger of burn-out which can so easily happen in the stressful situations experienced in practice each day. Reflective practice, in which the individual is able to reflect on the experiences of practice, preferably with the assistance of a mentor, is a useful method of linking theory with practice. The use of critical thinking and reflective practice can be a guide for the professional nurse to identify both problems and positive events in everyday experiences. This practice will assist in the identification of any issues which may need to be addressed and will assist in the identification of research needs as well as the implementation of research findings when desirable and helpful.

The professional nurse should be aware of the importance of the image projected by the nursing profession in the community and act accordingly. The importance of this has been recognized by the ICN in the Code of Ethics for Nurses (2006: 3) which states that “The nurse at all times maintains standards of personal conduct which reflect well on the profession and enhance public opinion”. Advocating healthy habits in the patients will be more effective if the professional nurse is seen to be making use of those habits as well. This will have the added advantage of a healthier lifestyle for the professional nurse. These effects were demonstrated in the Agents for Change programme which was implemented for health care workers in rural areas of South Africa (Pullen, 2009: 20). A healthy diet and an exercise programme together with weight reduction strategies could be used to create an example for the patients to follow as shown in the Agents for Change programme. The results of the programme also showed improved self-reliance and self-worth and promoted networking for the participants (Pullen, 2009: 21). In a previous study undertaken by the researcher, some participants (DNEs) felt that it is important for them to set an example in the community and promote healthy living standards. One participant verbalized it as follows: “I’ve got a small garden at home and I do eat from my garden at home… You must practise what you preach, so I am practising it. I am gardening” (O’Brien, 2005: 64). In a newsletter of the Diabetes Education Society of South Africa (DESSA), Van der Merwe (2008: 5) advocated implementing some of the recommendations
that educators make to patients to help improve their own health and to give them an understanding of the effect of the many lifestyle changes that their patients face in the words “WALK THE TALK”.

- **Coordinator of health care services**

  The professional nurse, as the person often working most intimately with a patient, is in an admirable position to be able to assess the need of that patient for specialized or alternative care from other members of the medical team. It is, therefore, logical for the professional nurse to act as co-ordinator of health services for the patient. This has applied to acute care in a hospital setting but as the role of the professional nurse has expanded, it also holds true for the management of chronic diseases or conditions.

  Pruitt and Epping-Jordan (2005: 637) have demonstrated that the global health care workforce is inadequately equipped and prepared to deal with the changing face of the provision of health services. As more emphasis is placed on the management of chronic conditions, the quality of the care delivered becomes a bigger issue. The lack of health care workers in all categories places more pressure on the provision of health services. Professional nurses remain the largest group of health care workers, in spite of the widely publicized nursing shortage. Attempts to address the nursing shortage have led to policies which recognize nurses as professional partners (Kimball, 2004). These policies can give the professional nurse greater autonomy and authority in acting as a co-ordinator of health services.

  In the context of this conceptual framework, the professional nurse is in an admirable position to be able to co-ordinate the care of the person living with DM. The relationship between the person living with DM and the professional nurse is central to the conceptual framework. In practice, many persons living with DM are seen more regularly by the professional nurse than the physician. The professional nurse is therefore in the best position to act as co-ordinator of services, referring the person living with DM to the podiatrist, ophthalmologist, dietitian and other members of the medical team as required.
4.5.1.1 (a) Sub-agent – the Expert Patient

Many health care providers have recognized that there are patients living with chronic diseases such as DM who understand their condition better than members of the medical team. They are regarded as “key decision-makers in the treatment process” (Department of Health (UK), 2000: 5). These patients are potentially valuable resources in the education of other patients and also of the members of the medical team who require further information or insight into all aspects of living with the chronic condition. Dickoff et al (1968: 426) recognize that the role of the agent may be more efficiently filled in certain circumstances by a person other than the professional nurse. The professional nurse may be constrained by other responsibilities whereas a sub-agent such as an Expert Patient may have the freedom to provide the person living with DM with a more personal view of living with the condition.

In several countries, such as the UK, USA, and Australia, the concept of Expert Patient has been developed to allow these patients to take an active part in their own management, leading to a greater level of self-management. The Expert Patient has been shown to “make a profound contribution to people’s health” (Street and Powell, 2008: 55). Expert Patients are also used as peer educators and trainers for a number of chronic conditions. Self-management programmes instituted at centres such as Stanford University, USA, make use of trained lay people as tutors (Department of Health (UK), 2000: 6). Programmes which make use of the Expert Patient have also been designed for several other chronic conditions including arthritis, manic depression and multiple sclerosis (Department of Health (UK), 2000: 7). Reach for Recovery where former mastectomy patients provide support and information to recently diagnosed breast cancer patients and those who have undergone mastectomy is another example of an Expert Patient programme (Browning and Thomas, 2005: 257). As the Expert Patients have successfully implemented self-management strategies in their lives, they act as models for those who are newly diagnosed or have been less successful in their attempts at self-management (Browning and Thomas, 2005: 259; Wykurz and Kelly, 2002: 819). Modeling of roles has been proven to be an effective method of improving health outcomes in people living with chronic conditions.
Highly motivated persons living with DM could eventually be defined as a sub-agent as opposed to a recipient as described in this conceptual framework. There are persons living with DM in Nelson Mandela Bay who have become expert patients because of the high level of interest and motivation that they have shown in dealing with their condition. They are able to take an active role in their own treatment and regularly make responsible decisions regarding their own care. Some members, who are active in the local branch of Diabetes South Africa where they play a valuable role in encouraging and counselling fellow diabetics, may be described as expert patients. People like these, who act as examples to others by displaying a high level of personal responsibility, could play a valuable role in the education and encouragement of others living with DM in the implementation of self-management strategies.

4.5.1.2 Recipient

The recipient of the activity as described by Dickoff et al (1968) is the person living with DM in Nelson Mandela Bay. The person living with DM may come from any of the demographic groups found in the municipal area and may fall under either the private or public health care sector. Those patients who fall under the private health care sector do not necessarily have the means to ensure that they obtain optimal health care for their condition as they may fall in a lower socio-economic group and be a member of a low-income medical aid as a benefit of employment. Other patients who are also of a lower socio-economic group and do not have access to medical aid as part of employment benefits, will be able to seek health care in the public health care sector.

However, all patients living with DM, no matter what their economic situation, will require assistance and support in accepting personal responsibility so that they can optimally manage their condition. Those patients with a high internal locus of control will be expected to have a high level of personal responsibility in the implementation of self-management strategies. Other patients with lower levels of personal responsibility who have a weaker sense of control will require further motivational strategies to encourage them to implement the required lifestyle changes.
The individual level of health literacy needs to be addressed when implementing self-management strategies. People may be highly educated in their own field and may have sufficient funds to ensure that they receive top class medical attention but they do not necessarily have the insight and training to understand and implement the principles of self-management of DM. Assisting the patient to achieve a higher level of health literacy will be an important part of the education programme utilized by a professional nurse when dealing with these patients. The professional nurse, therefore, must be in a position to provide the necessary support and education to the patients living with DM, no matter what their socio-economic group or level of health literacy.

4.5.1.3 Context

The conceptual framework is to be developed in the specific context of health services in Nelson Mandela Bay, a highly industrialized area with a wide range of socio-economic conditions experienced by inhabitants. The level of socio-economic condition affects all aspects of the lifestyle of the individual, including the level of health care enjoyed.

Health services in Nelson Mandela Bay are provided in both the public and private sectors. After 1994, the government implemented a new health plan emphasizing the importance of primary health care as opposed to the previous hospital based health care system (Muller, 1998: 107). A decentralized model of health care provision was implemented to deliver an equitable and accessible health service to all as required by the Constitution of South Africa (Muller, 1998: 113). The public health services in South Africa, provided by the State, are ultimately governed by the national Department of Health. The national Department of Health acts as a leader while supporting, regulating and acting as a liaison between other health service providers such as the provincial Health Departments (Van Rensburg, 2004: 127). Each province has a provincial Health Department which is responsible for the co-ordination and monitoring of health services for the citizens of that province. Primary health care is delivered to the community at the local level by the District Health System (Van Rensburg, 2004: 127).
All tiers of public health service provision are found in Nelson Mandela Bay. The Port Elizabeth Hospital Complex consists of Port Elizabeth Provincial Hospital, Livingstone Hospital and Dora Nginza Hospital. Outlying clinics controlled by the District Health System are found in a number of township areas to facilitate access to health care for those living there. Community Health Centres may be found in Algoa Park, Korsten and Motherwell and there is a Day Hospital in Kwazakhele. There is also a Provincial Hospital in Uitenhage. Nelson Mandela Bay Municipality’s Health Directorate has municipal primary health care clinics spread throughout the municipal area.

The private sector is dominated by two major hospital groups, namely Netcare (Greenacres Hospital in Port Elizabeth and Cuyler Hospital in Uitenhage) and Life Health care (St George’s Hospital, Mercantile Hospital and Hunterscraig Hospital in Port Elizabeth). Most of the specialist physicians in private practice in Port Elizabeth have connections with one of the private hospitals. There are also many general practitioners in private practice in the Nelson Mandela Bay municipal area. Many of the general practitioners have their rooms in medical centres such as Medicross.

Specialist diabetic clinics may be found at all the public hospitals in the Port Elizabeth Hospital Complex. Diabetic patients in the public health care sector may also obtain treatment at outlying state or municipal clinics. At the private hospitals, there are specialist physicians with a special interest in diabetes who employ professional nurses as diabetes educators to assist their patients with the management of their condition. Some general practitioners have a special interest in diabetes and provide a specialized service in Centres of Excellence for diabetic patients with professional nurses as diabetes educators. In the city, there are also dietitians and pharmacists who are trained as diabetes educators.

The required resources for the implementation and maintenance of a chronic disease self-management programme utilizing strategies to enhance the level of personal responsibility and self-management in the individual will be obtained from either the public or private health care sector, depending on the sector in which the professional nurse is employed. The envisaged National Health
Insurance (NHI) will require increased co-operation between the two health care sectors. This will, in turn, increase the scope of the role of co-ordinator of health services for the professional nurse. The ongoing negotiations on the NHI are intended to contribute to an improvement in the provision of health care services and to address the imbalances in both human and material resources which currently exist between the public and private health care sectors in South Africa.

Diabetes South Africa is active in Nelson Mandela Bay and surrounding areas. Meetings are held monthly in Port Elizabeth and Uitenhage with smaller groups in surrounding areas to assist those who find it difficult to attend the main meeting. There are support groups at Dora Nginza Hospital and West End Clinic and in Gelvandale and Malabar. Support groups are also found in Port Alfred, George and Somerset East which are small towns in or near the Eastern Cape. In Port Elizabeth, there are also support groups specifically for children and teenagers. For details of the local support groups of Diabetes South Africa, see Annexure L. Diabetes South Africa offers support from fellow diabetic patients to newly diagnosed diabetics and to those who have lived with the condition for many years. Guest speakers are invited to talk at the meetings about various topics of interest to diabetic patients. Members also have the use of a library of books and magazines dealing with all aspects of diabetes.

Another aspect in the context of activity is the environment in which the patient finds himself. The environment in which the patient lives has physical, cultural, social, geographic, economic and political health determinants which can affect the self-management of DM. These health determinants have been described in the Dahlgren and Whitehead conceptual model as previously discussed (Whitehead et al, 2001: 314). The health determinants experienced by the individual may also affect the type of memes which influence the self-management behaviour of the person living with DM. A person who is able to readily access required health care will have different experiences, perceptions and memes than someone who for any reason has difficulty in obtaining access to health care. Access to health care may not necessarily be limited by a simple socio-economic factor as a busy executive may perceive that he has less time to
visit a health care centre regularly while someone who performs a lowly, badly paid job may be able to visit a nearby public sector clinic on a more regular basis. The patients living with DM may be managed in either the public or private health care sectors. The degree to which the two health sectors will combine in the future as a result of the new NHI is speculative at this stage as negotiations are still taking place. Some patient participants in this study have experienced management in both sectors due to their particular socio-economic circumstances. One of the aims of the primary health care system at present in use in South Africa is to provide adequate health services within a reasonable distance of a person’s home (O’Brien et al, 2006: 33). As a result, patients making use of the public health sector may be managed in hospitals, either as in-patients or out-patients, or in outlying clinics depending on where they live and the level of care they may require for their particular condition. Those patients who have access to medical aid schemes may be treated in the practices of general practitioners or specialist physicians or in Centres of Excellence for the management of DM. Some employers may provide Occupational Health Clinics where the professional nurse is in a position to influence the approach taken by the employer towards workers who develop DM. An increasing number of pharmacies in Nelson Mandela Bay are also providing primary health care facilities including diabetic clinics for their clients. Professional nurses may be found in all these areas.

4.5.1.4 Procedure

The procedure of an activity as described by Dickoff et al (1968: 430) is used to describe the patterns or paths which the activity follows in order to reach the terminus. They may be detailed but are always general rules which guide and safeguard those who carry out the activity. The procedure may be governed by policies or protocols which act as guides to the quality of the proposed activity (Dickoff et al, 1968: 431).

The procedure described in the cogitation map (Figure 4.1) requires the development of strategies to assist the professional nurse to facilitate self-management in persons living with DM through the growth of personal responsibility. Proposed strategies may require implementation on a large scale.
or possibly at a more personal level and, as a result, may be classified as either
grand or functional strategies (Ehlers and Lazenby, 2010: 199). In a business
milieu, grand strategies are those which are used to plan major actions and the
achievement of long-term goals (Ehlers and Lazenby, 2010: 200). In the context
of this study, grand strategies are those which are designed for implementation
on a national or regional level. Although grand strategies are not necessarily part
of the direct function of the professional nurse, they are required to be in place in
order for that function to be fulfilled. Functional strategies in the business milieu
are used to create action plans to implement the requirements of the grand
strategies (Ehlers and Lazenby, 2010: 214). In this context, functional strategies
are those which the professional nurse may implement on an individual basis in
everyday practice when dealing with persons living with DM. In order to
implement both grand and functional strategies, social marketing tools can be
utilized to achieve the desired results on both the individual level as well as in the
wider community (Tones, 2004: 209).

Social marketing is recognized as the use of marketing tools and techniques to
achieve socially desirable change in both the individual and the community
(Tones, 2004: 208). Social marketing can be of great value in health promotion
and education initiatives as the tools which are used can be designed to address
the needs of the individual within the greater community by, for example,
removing barriers to healthier lifestyles (McKenzie-Mohr, 2009).

In order for the proposed strategies to be effective, the importance of health
promotion and capacity building has to be recognized. The strategies which will
be developed are required to be wide-ranging as they will influence the
management of persons living with DM in both the public and private sector in
Nelson Mandela Bay. There are widely diverse socio-economic conditions in the
area which influence the ability of the individual to access appropriate health care
facilities. Grand strategies may be used to address these issues. Once again, it is
reiterated that the grand strategies do not form part of the scope of this study but
it is necessary for them to be in place to allow professional nurses to fulfil their
function.
Action is required to implement self-management strategies on a number of levels. The proposed actions include legislative action and high levels of advocacy for the person living with DM which is on the level of grand strategies. Each individual concerned will be required to acknowledge the importance of personal responsibility and to take action with the implementation of lifestyle changes and physical action at a functional level. The importance of physical action in the management of DM is recognized by proposing the term, Action, as the leading strategy.

Co-ordination of services offered to persons living with DM will assist those in lower socio-economic groupings to obtain higher, more effective levels of care. Co-ordination of these services forms a grand strategy. As a result of co-ordination of services, functional strategies may be utilized to facilitate the implementation of preventative measures in order to delay or prevent the onset of complications which have such dire economic and personal consequences.

Education is vitally important for both the person living with DM and the professional nurse. The provision of opportunities and resources for education for the professional nurse, the person living with DM and the general community forms the basis of a grand strategy to address this need. The professional nurse has to receive ongoing education and training in order to fulfil the expected roles as shown in Figure 4.2. Education for the person living with DM and for the general community is imperative particularly to facilitate the spread of positive memes regarding diabetes with particular emphasis on self-management. Patient education is an important role of the professional nurse and is essential for the development of personal responsibility and the practical implementation of self-management strategies. Education for the general community is equally important both for the provision of support for the individual person living with DM as well as for the detection of new cases before serious complications take place. Functional strategies which address the practical implementation of such educational programmes making use of social marketing tools are aimed at the development of positive memes regarding the self-management of DM in persons living with DM, professional nurses and the general community.
Strategies which have been identified to facilitate the growth of personal responsibility and implementation of self-management in persons living with DM are as follows:

- **Action** by the professional nurse is required to improve levels of self-management in diabetic patients by acting as patient advocate, lobbying for legislative changes and encouraging physical action and lifestyle changes by the individual taking responsibility for their own condition.

- **Co-ordination** of available health care resources for diabetics and capacity building in both the private and the public sectors as well as other resources such as Diabetes South Africa.

- **Education** of all relevant parties such as patients, community and other health care staff together with the provision of information to enable the people living with DM to take personal responsibility for their own condition.

These strategies designed by the researcher and which are closely related and interlinked, form the ACE approach to the facilitation of the growth of personal responsibility and self-management in persons living with DM. As Action is required to implement all three strategies, it is the leading strategy. However, Co-ordination and Education are needed to guide all Actions taking place in the fight against DM. All the above strategies are aimed at health promotion for persons living with DM in Nelson Mandela Bay by assisting them to gain the level of personal responsibility required to implement self-management strategies. Health promotion and the provision of effective primary health care services in both the private and public health care sectors are an important focus of the proposed NHI (Shisana, 2009: 6). The strategies will be described in detail in Chapter Five.

### 4.5.1.5 Dynamics

Dickoff et al (1968: 431) state that, when considering the dynamics of an activity, the power sources of that activity should be emphasized. The power sources to be explored may be chemical, physical, biological or psychological. When nursing goals are being considered as in this study, psychological and physical power
sources are of particular importance. The agent (professional nurse) has to have drive, motivation and to be goal-orientated in order to successfully assist the person living with DM to accept personal responsibility in the implementation of self-management strategies. A therapeutic relationship between the agent and recipient will provide the dynamics required to reach the terminus or goal. The Expert Patient contributes to the dynamics of the process of facilitating the growth of personal responsibility by supporting and mentoring the person living with DM and also acting as a peer educator.

The dynamics of this conceptual framework are closely related to the context, namely the health care services in Nelson Mandela Bay. Although the concept of empowerment of patients is not a new one, it is not being practised consistently in Nelson Mandela Bay according to participants in this study. Group One participants felt that there was widespread ignorance of the complexity of the condition and of methods of self-management amongst nurses who did not have specific training on DM. Group Two participants are all DNEs who emphasized the importance of empowering patients who had to accept personal responsibility for their condition and to implement self-management strategies. However, some admitted that, according to what they had seen and experienced in everyday practice, many other nursing staff as well as other members of the medical team are ignorant about the ramifications of DM management. Professional nurses who did not have specialized training, according to the DNEs, had limited knowledge of the condition and did not know how to teach self-management to people living with DM. This was confirmed in a study which was undertaken to establish the knowledge of RNs working in Intensive Care Units regarding the management of DM (Teichler, 2005).

Education and training on the principles of patient empowerment and the process of the therapeutic relationship amongst professional nurses working in health care facilities in both the public and private sector will play a valuable role in raising the standard of diabetic care in the metropolitan area. The RNs must also be provided with the means, both in time and in equipment and supplies, for the implementation of the principles. These are examples of social marketing skills
which can be developed to improve the facilities offered to persons living with DM in Nelson Mandela Bay.

4.5.1.5 (a) Therapeutic relationship

Anderson and Funnell (2005:36) describe a number of stages in an educational process which together allow the development of a therapeutic relationship between the agent (the professional nurse) and the recipient (person living with DM). Development of a therapeutic relationship takes place during a series of interviews or education sessions which provide the process for acceptance of personal responsibility in the implementation of strategies for self-management. At each step of the therapeutic relationship, emphasis should be placed on the fact that the ultimate responsibility for the success of the process rests with the person living with DM, i.e. the recipient. However, the professional nurse is able to assist the person living with DM with motivational education and support by means of an ongoing therapeutic relationship. The stages of the therapeutic relationship between the professional nurse and the person living with DM are shown in the following figure.

![Figure 4.3 Process of the therapeutic relationship between the professional nurse and person living with Diabetes Mellitus type 2](image-url)
In order to successfully implement behaviour changes, diabetes education in any form has to take account of the “needs, goals, culture and life-experiences of the participants” (Funnell, 2009: 20), as well as to provide much needed support. Active participation by all concerned is essential for success (Salman, 2005: 2). The interviews provide an opportunity for the person living with DM to become aware of natural processes involving behaviour and finding ways to counteract those processes, instigating behaviour change. In order to counteract processes which negatively affect the individual’s perception of locus of control and health beliefs, attention must be given to positively reinforcing and, where necessary, changing the memes which influence the individual.

When initiating the therapeutic relationship, the professional nurse and person living with DM make a commitment to work together to identify feelings, wants and needs regarding self-management of the condition (Anderson and Funnell, 2005: 152). The main problem must be identified by the person living with DM and not by the professional nurse (Lawn, Battersby, Harvey, Pols and Ackland, 2009: 30). Identification of the problem must be precise in order to be effective. This creates a level of awareness which is the first stage of behaviour change.

The next step is to set goals which can be designed to attain specific targets. The goals should be incremental and start off in small stages so that the prospect does not seem too daunting to the patient.

The following step in the process of establishing the therapeutic relationship is to devise ways and means to implement strategies to achieve the goals which have been agreed on. When deciding on methods of implementing strategies, the professional nurse has to bear the particular circumstances of the individual in mind, particularly when dealing with people from lower socio-economic conditions.

The person living with DM must make a formal commitment to any new behaviours or strategies which have been agreed on (Tucker, 2005). The implementation phase is then entered.
After a period of time agreed on by both parties, the implementation phase must be evaluated in order to see if the goals are being met. Experimentation in implementation of self-management strategies by the person living with DM is an indication of growth in confidence in coping abilities and acceptance of personal responsibility (Weiss, 2007: 17). If the goal has not been reached, further evaluation has to take place and new strategies and methods of implementation must be negotiated. Once again, a firm commitment by the patient must be made. If the goal has been reached, a new goal may be implemented.

As this study does not deal with the implementation of the proposed strategies, the evaluation and re-evaluation process will not form part of the discussion.

The function of the therapeutic relationship is to provide a platform for interaction between the professional nurse and the person living with DM. This interaction allows the professional nurse to act as health educator and promoter, to assess the need for support and for patient advocacy. The professional nurse will also be able to assess the need of the individual patient for referral to other members of the medical team and to act as co-ordinator of health services.

Anderson and Funnell (2005: 120) have found that “A person can change within the safety of a therapeutic relationship”. The therapeutic relationship provides a venue for the person living with DM to develop self-awareness together with the required practical skills for self-management with the support of the professional nurse. As the people living with DM grow in confidence in their skills, they will be able to accept a higher level of personal responsibility for the self-management of their condition. The professional nurse provides the opportunity for the development of self-awareness by allowing the person living with DM to share his experience. As Anderson and Funnell (2005: 124) state: “Listening to patients without judgment is an act of compassion. It conveys respect and reaffirms the validity of their experience”.
4.5.1.5 (b) Factors affecting the therapeutic relationship

There are several factors which may affect the depth of the therapeutic relationship between the professional nurse and the patient living with DM. These include the influence of other members of the medical team as well as social input from family, friends and other members of the community in which the patient lives and works. Due to the strong influence of these external factors, they have to be constantly borne in mind when developing any social marketing plan to assist the person living with DM.

- **Other members of the medical team**

In order for effective self-management to take place, the patient must be aware of the role of other members of the medical team and when their services should be utilized. The professional nurse must also be aware of the necessity for referring the patient to specialists in their field when required. Some team members need to be consulted regularly such as the physician who provides ongoing medical management. The ophthalmologist requires consultation at least once a year to assess the level of retinopathy which may occur. If required, an individual patient may require the services of a cardiologist or nephrologist.

A podiatrist should also be consulted regularly to assess for foot damage. In a diabetic patient, this is an essential preventative measure as this group of patients has a high incidence of amputations, many of which could have been prevented if adequate care had been taken when the damage was not severe. Foot care is an extremely important aspect of diabetes self-management which was also noted by several of the participants in this study. In 2005, the importance of foot care in diabetes was recognized by the designation of ‘diabetes and foot care’ as the theme for World Diabetes Day that year (Bakker, 2005: 41).

A dietitian is also required to create a personalized eating plan which takes into account the personal likes and dislikes and culture, as well as the financial status of the patient. If this is done, there is more chance of the eating plan being effective than if a generic “diet plan” is presented to the patient. An eating plan has to be individualized in order to be effective as it must fit in with the lifestyle of
the patient and not create an added obstacle to success in achieving optimal glycaemic blood levels. The eating plan should also be reviewed on a regular basis as adequate weight loss is achieved and correct weight maintenance is required.

Exercise is a major component of the self-management of DM. Some patients may have difficulty in exercising due to other health conditions. It may be necessary for them to have physiotherapy or to consult a biokineticist, especially when unused to exercise. A personal exercise programme should be implemented which would take into account their individual level of fitness and the effect of other health conditions. A person who has co-morbid conditions such as heart disease or arthritis may require alternative methods of exercise in order to maintain adequate fitness levels.

In the South African context, the traditional healer may be considered to be part of the medical team for some persons living with DM. Some people will consult traditional healers before considering consulting allopathic health practitioners. As the majority of the population in the Nelson Mandela Bay area is isiXhosa speaking, traditional medicine is widely used. As a result, the importance and relevance of the use of traditional medicine by some cultural groups has to be acknowledged by the professional nurse when entering into a therapeutic relationship with persons living with DM. Participants amongst the diabetes nurse educator group in this study made mention of the fact that many of their patients prefer to consult a traditional healer and may only approach an allopathic health practitioner when complications have occurred. When traditional healers are consulted, they may not wish to refer their patients to allopathic health practitioners for further management (International Diabetes Federation et al, 2006: 21). This situation is not unique to South Africa as it is found in other African countries and also in other countries around the world where health care systems making use of traditional medicine exist.

Research into the effects of *sutherlandia frutescens*, a plant widely used by traditional medical practitioners, by researchers at Nelson Mandela Metropolitan University has shown positive results in blood sugar control in persons living with
Another study at the same university showed *cannabis sativa* *l.* extract, also a traditional African medicine for several illnesses including DM, has the potential to reduce hypercoagulation experienced by diabetics (Levendal and Frost, 2006: 1). These results demonstrate that not all traditional medicines should be regarded as mere folk-lore. In fact, throughout Africa, there is a growing tendency to integrate allopathic and traditional health care systems (Tembani, 2009: 8). In South Africa, the Traditional Health Practitioners Act which was originally passed in 2004 and amended in 2007, was intended to create some form of regulation amongst traditional healers and to facilitate co-operation between allopathic and traditional health systems (Tembani, 2009: 11).

- **Social influences on the therapeutic relationship**

As no one lives in isolation, the community may be expected to have an influence on the therapeutic relationship. Social influences which play a role include the influence of family and friends. As discussed previously in Chapter Three, a family may be supportive and enhance the level of self-management achieved or may have a negative influence due to lack of support. Friends, work colleagues and employers may also have either a positive or a negative effect on the therapeutic relationship and the ability of the patient to achieve self-management depending on their level of support and understanding of the condition. Holistic treatment of a patient also implies that spiritual aspects have to be considered. The spiritual mentor of the patient can play a valuable role particularly when dealing with the variety of issues which may arise during the initial phase after diagnosis or when the set goals may appear to be difficult to achieve.

Goal-setting is an important part of the therapeutic relationship. According to Dickoff et al (1968: 431) the action of setting goals gives impetus and direction to an activity. The professional nurse has to bear in mind that goal-setting must not be too ambitious as it may become counter-productive and the recipient of the activity may become discouraged if unable to realize the goals. That is why it is important, particularly initially, for small achievable goals to be identified and set during the implementation of the therapeutic relationship.
By the same token, the professional nurse will require physical and emotional care in order to maintain the drive and motivation required to set and achieve goals in everyday practice. Dickoff et al (1968: 432) point out the importance of continuing service motivation for professional nurses as a power source or dynamic in achieving the terminus of the activity by stating that “Knowing what you are doing and how to do it is a very useful complement for service orientation”. Giving professional nurses the required tools and resources will be an important dynamic in achieving the terminus of assisting persons living with DM to develop personal responsibility so that they are able to implement self-management strategies.

4.5.1.6 Terminus

The terminus or end point of the activity described in this conceptual framework is to ensure that people living with DM are able to accept a high level of personal responsibility, facilitating the successful implementation of self-management strategies. Use of the ACE approach is a means of achieving this goal. Implementation of the ACE approach to self-management of DM goes beyond merely supplying a service to a patient but seeks to ensure that the patient has an adequate understanding of the condition and is able to accept the personal responsibility of making educated decisions in his own care. The therapeutic relationship between the professional nurse and the person living with DM is a powerful tool in creating a collaborative plan to fit the goals, priorities and lifestyle of the individual. People are thus assisted to develop the capacity to be responsible for their own health care decisions. The recommended strategies are not limited to patient education but cover all the requirements of persons living with DM in achieving their self-management goals.

The conceptual framework for the development of proposed strategies to facilitate growth in personal responsibility in persons living with DM is summarized in Figure 4.4 below.
Figure 4.4 Cogitation map on conceptual framework to facilitate self-management in persons living with DM
4.6 CHAPTER SUMMARY

In Chapter Four, a conceptual framework to be used in the development of nursing strategies to assist the professional nurse to facilitate the self-management of DM was discussed. The importance of the role of memes in behaviour and the concept of personal responsibility for the person living with DM were emphasized. The conceptual framework was based on the work of Dickoff et al (1968) where a survey list was proposed to provide a guide for the construction of the strategies. The survey list includes the agent, recipient, context, procedure, dynamics and terminus of the proposed strategies. The proposed strategies, Action, Co-ordination and Education are combined to form the ACE approach to self-management of DM, making use of social marketing tools. The importance of the therapeutic relationship between the professional nurse and the person living with DM as described in the Empowerment Model used by Anderson and Funnell was emphasized. A graphic figure was used to illustrate the conceptual framework.

In Chapter Five, the researcher will discuss strategies which will be developed with the assistance of the conceptual framework. The aim of this study is to develop strategies to assist the professional nurse to facilitate the growth of personal responsibility in persons living with DM, assisting them in the implementation of self-management principles. It does not deal with the implementation of those strategies.
CHAPTER FIVE

STRATEGIES FOR THE FACILITATION OF SELF-MANAGEMENT IN PERSONS LIVING WITH DM TYPE 2

5.1 INTRODUCTION

Chapter Four described the development of a conceptual framework forming the basis of strategies that the professional nurse may utilize to facilitate the development of personal responsibility leading to the attainment of self-management in persons living with DM. The professional nurse plays a variety of roles in everyday practice, creating an opportunity to positively influence the patient living with DM to take personal responsibility for successful implementation of self-management strategies. The professional nurse is also in a position to assist the person living with DM by positively influencing the memes held by and increasing the knowledge of families, colleagues and the general public about all aspects of DM. The sub-agent, the Expert Patient who has become experienced in the implementation of self-management strategies, may provide assistance and support to people living with DM, as peer educator and trainer.

Chapter Five elaborates on strategies and implementation activities which may be used by the professional nurse to facilitate self-management in persons living with DM. The survey list proposed by Dickoff et al (1968: 421), and described in Chapter Four was used as the basis of the strategies. Dickoff et al (1968: 421) describe the survey list as a “supplement to present prescription and as preparation for future prescription for activity toward the goal-content”. The development of the strategies included identification of the agent and recipient,
the desired goal or terminus as well as the means (ie the procedure and dynamics) to be utilized by the agent in achieving that goal. The strategies will be driven by the professional nurse, as primary agent. In certain instances, the sub-agent or Expert Patient may assist with the help and guidance of the professional nurse. The reader is reminded that the strategies have not been implemented and refined but have been evaluated by a panel of experts. Implementation of the strategies does not form part of this study.

5.2 IDENTIFICATION OF STRATEGIES TO BE USED FOR FACILITATION OF SELF-MANAGEMENT OF DM

Thompson and Strickland (1998, cited in Tembani, 2009: 184), state that strategy development “is a process that seeks to challenge assumptions and beliefs, brings about paradigm shifts and creates visions for the future”. Creating these nursing strategies is a means to achieve the above criteria, particularly with regard to creating a vision for the future where persons living with DM are ultimately enabled to achieve a high level of self-management.

When creating strategies aimed at modifying health behaviours, the WHO suggests that negative behaviours should be addressed by three types of interventions, namely, universal, selective and targeted interventions (Browning and Thomas, 2005: 45). Universal interventions are directed at the population at large and include legislative action such as anti-smoking laws. Selective interventions are aimed at people who are non-symptomatic, and are designed for the prevention of a disease or condition such as DM. These include public awareness campaigns and screening projects. Targeted interventions are specifically aimed at people diagnosed with the condition and are intended to prevent or delay further symptoms and complications. The strategies address these varied levels of intervention.

The strategies which were developed during data analysis address needs and gaps identified by both groups of participants and are closely related and interlinked. Together, they are aimed at overall health promotion which is in line with the health policies favouring a public health emphasis on health care delivery
which have been promoted in South Africa since the introduction of the National Health Plan in 1994 (Muller, 1998: 110). The titles of the three strategies describe the particular activity required for the implementation of those strategies, namely Action, Co-ordination and Education. A mnemonic, the “ACE approach” to self-management of DM, was derived from the titles of the strategies. Each of these strategies incorporates both grand and functional sub-strategies (Ehlers and Lazenby, 2010: 200). Grand strategies are those which require implementation on a macro (national) or meso (provincial or district) level for effective functioning at grassroots or micro level (International Diabetes Federation, 2009a). As the focus of this study is on the professional nurse, these strategies will not be discussed in detail. Functional strategies are those on a micro level which a professional nurse is able to implement in everyday practice and will be discussed in greater detail than grand strategies.

5.3 BACKGROUND TO PROPOSED STRATEGIES

At the 20th World Diabetes Congress held in Montreal, the incoming president of IDF, Professor Jean Claude Mbanya from Cameroon, stated: “The challenge ahead is to put diabetes care within the reach of all people living with diabetes. It is my hope that my time as President of the Federation will see an increase in spending on global health, with a major shift in funding for diabetes and non-communicable diseases. We have to act together to ensure that accidents of geography and history do not determine who should live or die” (IDF elects new leadership to address global diabetes epidemic, 2009: 9). This attitude should be adopted by all those involved in the provision of care for persons living with DM, including policy-makers in local, provincial and national government as well as those in the private sector. The United Nations Resolution on Diabetes, ratified in 2006, was aimed at focusing world attention on the need for urgent action against DM (International Diabetes Federation, 2010(b)). As the incidence of DM continues to escalate, it is essential to address the issue of chronic and non-communicable diseases, many of which are complications or contributory factors to the rise in DM, and to provide cost-effective, high quality health care services to those who require them as outlined in the United Nations Resolution on Non-Communicable Diseases (Alleyne et al, 2010). The urgent need for action
will be a particular focus at the United Nations High Level Summit on Non-Communicable Diseases to be held in September 2011 (International Diabetes Federation, 2010(a)).

As strategies may be used to provide a perspective on a particular situation, they may also be used to influence a change in perspective (Mintzberg, Ahlstrand and Lampel, 2005: 27). The strategies are aimed at assisting persons living with DM by positively influencing the memes which they hold regarding the condition. This may be done by enabling a growth in personal responsibility, by removing the perceived barriers to self-management which they experience and by supplying the professional nurse with the required tools and facilities to facilitate the implementation of the strategies. To assist the implementation of the strategies, tools derived from social marketing may be useful.

Social marketing is a growing concept which has been used to good effect for health promotion campaigns in over 40 countries including the USA, UK, Australia, New Zealand and Poland (Kotler, Roberto and Lee, 2002: xi). Kotler et al (2002: 5) define social marketing as “the use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify or abandon a behavior for the benefit of individuals, groups or society as a whole”. It is therefore ideal for influencing the changing of memes regarding health issues. Veeder, (1999: 66) describes the goals of a social marketing campaign as below:

- Educating publics as to the need for a service – see Education strategy
- Creating an awareness that a service exists – see Action and Co-ordination strategies
- Positioning the human service as unique amongst its competitors – see Action and Co-ordination strategies
- Creating referrals to the organization – see Co-ordination strategy
- Stimulating select publics to try the service – see Action strategy
- Improving the financial ability of the organization and meeting the health needs of the community – see Action, Co-ordination and Education strategies.

Some carefully selected social marketing tools may be useful during implementation of the strategies. Modern technology should also be used where possible, recognizing the changing needs of the community (Veeder, 1999: 71).
The goal or terminus of the strategies is for those living with DM to be able to accept a high level of personal responsibility enabling them to implement self-management strategies. In order for this goal to be attained, Action on a number of different levels is required. Co-ordination of activities is necessary to make the provision of services as cost-effective as possible. Education of all role-players including patients, all members of the multi-disciplinary medical team, the community as well as political and economic decision-makers is essential in order for positive memes to be adopted leading to the successful management of DM.

Strategies should be developed in a process aimed at the achievement of a specific outcome or goal (Minnaar, 2010: 64). The reason or rationale for the creation of a specific strategy must be identified and guide the development process. Methods to be used for implementation of the strategy should be indicated. As the implementation and the evaluation of these strategies are not part of this study, other components of strategic plans such as dates for commencement and completion, guidelines for the implementation process and methods of evaluation and measurement are not included. When developing strategies, value for money has to be constantly borne in mind so they should be as effective, efficient and economical as possible (Minnaar, 2010: 82). This does not necessarily mean the cheapest option as cost vs benefit should be evaluated (Minnaar, 2010: 86).

The Diabetes Strategy for Africa (International Diabetes Federation et al, 2006: 29) advocates combining a high risk approach, which targets those who are identified as being at high risk of becoming diabetic, together with a population approach to benefit all population groups and “reduce risks for other diseases”. These approaches are similar to the selective, targeted and universal approaches advocated by WHO as previously mentioned and should form part of a National Diabetes Strategy (Browning and Thomas, 2005: 45).

The professional nurse working at grassroots level is not necessarily in a position to implement all the following strategies due to limitations imposed by the workplace. However, professional nurses do not live and work in a vacuum and
their ability to fulfil their function is often influenced by factors such as government policies and lack of co-ordination of health care services. Each of the following strategies has several sub-strategies. Some sub-strategies are on the level of grand strategies to be implemented on a macro or meso level while the functional strategies may be implemented on a micro level by the professional nurse acting as agent.

It is possible for grand strategies to be influenced to some extent by the professional nurse. The professional nurse may not always be in a strong position to directly influence political or legislative action and the development of policies personally, but has the potential to influence those who will do so. If employed by the national or provincial Departments of Health, for example, professional nurses may find themselves in an administrative position where decisions regarding policies may be made (Alexander, Igumbor and Sanders, 2009). As a voter, the professional nurse may become politically active and achieve higher office. An example of this is in neighbouring Botswana where the Health Minister is a female professional nurse (Tota, 2009: 32). It is, therefore, possible for professional nurses to find themselves in a position to lobby for changes which will positively affect their ability to assist persons living with DM to implement self-management strategies.

### 5.4 DESCRIPTION OF STRATEGIES TO FACILITATE SELF-MANAGEMENT IN PERSONS LIVING WITH DM

The following table summarizes the strategies which comprise the ACE approach to self-management of DM. The title of each strategy forms an umbrella term for sub-strategies which may be described as either grand or functional strategies.

Each grand and functional strategy will be described as follows:

- Background information
- Rationale
- Proposed outcome
- Implementation activities.
Persons responsible for the implementation of the strategies will be indicated in the discussion. As previously stated, the professional nurse will not be able to implement some of the strategies personally. However, the grand strategies should be in place to enable the professional nurse to fulfill the functional strategies and to facilitate self-management in the person living with DM.

**Table 5.1 Summary of strategies comprising ACE approach to self-management of DM**

<table>
<thead>
<tr>
<th>ACE Strategies</th>
<th>Sub-strategies</th>
<th>Proposed outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Action strategy for effective diabetes care to be implemented on macro, meso and micro levels to positively influence self-management outcomes</td>
<td>1.1 Grand strategies: 1.1(a) Development of a National Diabetes Strategy and related policies and legislation influencing diabetic care</td>
<td>To develop a National Diabetes Strategy aimed at detecting and managing DM in both the public and the private sector. Policies and legislation which have been previously developed must be constantly reviewed and adapted on a macro and meso level by policy-makers in government and the private sector to ensure that implementation on a micro level can take place.</td>
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<td></td>
<td>1.2 Functional strategies 1.2(a) The professional nurse will assist with the implementation of health promotion policies and legislation influencing diabetes care</td>
<td>Professional nurses implement policies and legislation aimed at improving health care service levels to persons living with DM. A feedback system incorporated in the implementation process encourages further development of policies and legislation related to diabetes care.</td>
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<td></td>
<td>1.2(b) The professional nurse should facilitate lifestyle modification by the person living with DM</td>
<td>Persons living with DM will be able to successfully implement lifestyle changes such as increased levels of physical activity, weight reduction, diet adjustment and daily monitoring tasks to assist in the achievement of optimal levels of self-management.</td>
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<tr>
<td></td>
<td>1.2(c) The professional nurse should promote patient advocacy to increase levels of support for persons living with DM</td>
<td>Persons living with DM managed in both the public and private health care sectors will receive required support for implementation of self-management, both physical and psychological, in an efficient and cost-effective manner. Effective use of a multidisciplinary multi-level medical team leads to a more efficient service for persons living with DM.</td>
</tr>
<tr>
<td>ACE Strategies</td>
<td>Sub-strategies</td>
<td>Proposed outcomes</td>
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<tr>
<td>1.2(d) Development of self-awareness and responsibility for self for the person living with DM and for the professional nurse</td>
<td>Professional nurses are able to impart self-care skills to the persons living with DM, enabling them to deal effectively with their condition and to accept responsibility for their own management. Professional nurses also take responsibility for their own health.</td>
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<tr>
<td>2. Co-ordination strategy to mobilize available resources to provide effective services for persons living with DM</td>
<td>2.1 Grand strategies:</td>
<td>Available health care resources in both the public and private health sectors will be co-ordinated and mobilized in such a way that all persons living with DM are able to obtain the health care services they need in order to achieve a high level of self-management.</td>
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<tr>
<td></td>
<td>2.1(a) Co-ordination of resources for effective health care services for persons living with DM</td>
<td>The outcome of this strategy will be the provision of high quality, efficient and cost-effective care available to all persons living with DM. Each person employed in the health services understands his role in providing a service to persons living with DM. Quality management tools are utilized in evaluation and assessment of health care services.</td>
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<tr>
<td></td>
<td>2.1(b) Capacity building</td>
<td>Co-ordination and capacity building initiatives to provide an efficient health care service for persons living with DM at macro and meso level are implemented at micro level.</td>
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<tr>
<td>2.2 Functional strategies</td>
<td></td>
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<tr>
<td></td>
<td>2.2(a) The professional nurse to implement functional aspects related to co-ordination strategy</td>
<td></td>
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<tr>
<td>3. Education strategy to improve compliance with self-management principles in persons living with DM</td>
<td>3.1. Grand strategies</td>
<td>All persons living with DM, their families and the community as well as health care workers will have access to culturally relevant education resources and to information resources that suit their needs.</td>
</tr>
<tr>
<td></td>
<td>3.1(a) Provision of human and material resources to enable educational initiatives on a number of levels to influence the growth of positive memes regarding DM</td>
<td>An effective patient education programme will empower persons living with DM to attain a high level of personal responsibility enabling the implementation of self-management behaviour leading to an improved blood glucose level.</td>
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<td></td>
<td>3.2 Functional strategies</td>
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<td></td>
<td>3.2(a) Patient education</td>
<td>Family members of persons living with DM and members of the community are given the opportunity to increase their knowledge about diabetes in order to provide a social support network for those who require it.</td>
</tr>
<tr>
<td>ACE Strategies</td>
<td>Sub-strategies</td>
<td>Proposed outcomes</td>
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<tr>
<td>3.2(c) Education for health care professionals</td>
<td>All health care staff have access to training initiatives and relevant information on all aspects of diabetic care to improve the level of care offered to persons living with DM.</td>
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5.4.1 **Strategy One: Action strategy for effective diabetes care to be implemented on macro, meso and micro levels to positively influence self-management outcomes**

In order for persons living with DM to receive the appropriate care and to facilitate the implementation of strategies to assist development of personal responsibility and self-management skills, a variety of actions on a number of levels are required. On a grand strategy level, action by policy-makers is required to develop policies and legislation on a macro (national/supporting policies and frameworks) and meso (community and health care organizations eg provincial health departments) level in order to facilitate the provision of appropriate and necessary health care to persons living with DM (International Diabetes Federation, 2009a). Functional strategies include the implementation of those policies at grassroots or micro level. The professional nurse acts as a patient advocate and also as educator to assist the person living with DM to achieve the personal responsibility required to implement lifestyle changes. Action is also required for the development of a sense of self-awareness and responsibility for self amongst both the persons living with DM and health care workers including the professional nurse.
4.5.1.1 Grand strategies

Policies and legislation are required to control the provision and management of health care services at all levels, both in the public and private sector, in South Africa.

5.4.1.1(a) Development of a National Diabetes Strategy and related policies and legislation influencing diabetic care

One of the ultimate aims of government is to promote the general welfare of the population governed (Minnaar, 2010: 16). Health initiatives in the community aimed at encouraging healthy lifestyles may also be directed by official policies and legislation, giving added value to health care services. For health policies to be successful, it is necessary to “look for greater pace of change in the political, legal, commercial, educational and administrative systems on which successful health policy relies” (Potter and Harries, 2006: 841). Co-operation between a variety of role-players responsible for the development of health policies as envisaged in the Diabetes Strategy for Africa has to take place for efficient and effective health services to reach all those who require them (International Diabetes Federation et al, 2006: 50). A National Diabetes Strategy can assist in this process.

- Background information

At the 20th World Diabetes Congress held in Montreal in 2009, the need for political action to try to stem the tide of DM was once again highlighted (Diabetes goes global at IDF’s mega-congress in Montreal, 2009: 8). Initiatives such as the United Nations Resolution on Diabetes and the Diabetes Strategy for Africa are aimed at alerting governments and other policymakers to the immense humanitarian, social and economic costs involved (International Diabetes Federation, 2010(b)). The diabetic pandemic has the potential to cripple health services particularly in developing countries. The cost of dealing with the development of complications due to uncontrolled diabetes is far more expensive than the measures which can be taken to prevent the onset of complications.
The introduction and enforcement of preventative measures can potentially save governments millions of rand by either reducing the number and severity of complications or delaying or preventing the onset of DM in parties who are at risk. With the rising incidence of DM as discussed in previous chapters, the state faces both direct and indirect costs which may be crippling to the economy. Direct costs are related to the provision of health care services while indirect costs are entailed by reduced productivity and the prospect of having to support families whose breadwinners are disabled, either temporarily or permanently due to the potentially crippling and life-threatening complications of DM.

Several countries have implemented National Diabetes Strategies in an attempt to address the above issues. In 2010, Kenya became the first African country to compile and implement a National Diabetes Strategy (World Diabetes Foundation, 2010a). A South African National Diabetes Strategy would assist in coordinating efforts to address the pandemic and, together with related policies and legislation, would provide guidance to health care workers at all levels as well as inform the public of their rights and responsibilities in health care matters related to diabetes. The approaching implementation of the NHI will hasten the need for clear guidance for both health care workers and for the public regarding health policies.

**Proposed outcome**

A National Diabetes Strategy must be developed aimed at detecting and managing DM in both the public and private sector. Policies and legislation which have been previously developed must be constantly reviewed and adapted on a macro and meso level by policy-makers in government and the private sector to ensure that implementation on a micro level can take place.

**Rationale**

The national Department of Health has the overriding responsibility to ensure that all citizens in South Africa receive health care appropriate to their needs, a responsibility which filters down to the provincial Departments of Health and local
authorities. The national Department of Health also acts as a liaison with hospital groups and other members of the private health care sector. The legislation created by government also influences and controls to some extent developments in the private health care sector. Participants in both groups felt that the policies of medical aid schemes affect the level of care received by persons living with DM as shown in Group One Theme 4.2 and Group Two Theme 2.2. Group Two participants also felt very strongly that DM did not receive sufficient care and attention from government and policy-makers as shown in Group Two Theme 3.1.

Taking action to improve health care services is not limited to the government, however. Private sector companies may, as part of their social responsibility programmes, invest in social enrichment programmes which include initiatives to improve the quality of life and health levels in the communities around them (Hellriegel et al, 2010: 121). Social enrichment programmes may provide the funding for some of the following strategies, allowing them to be implemented effectively.

A concerted effort to address the diabetes epidemic requires a National Diabetes Strategy by providing a coordinated approach to reduce the morbidity and mortality of the condition. A National Diabetes Strategy may also be influential in the growth of positive memes, for example, by removing external barriers to self-management experienced by persons living with DM.

- **Implementation activities**

  The implementation activities presented here are very wide and require resources not accessible to the professional nurse working at clinic level. However, they potentially influence the ability of the professional nurse to fulfil the roles described in the conceptual framework in Chapter Four. The following activities should be implemented on a macro level:

  - A National Diabetes Strategy should be compiled and implemented as soon as possible. In order to compile such a strategy, the following groups should be formed:
A National Action Group on Diabetes including members from government, relevant professional associations, industry and NGOs (International Diabetes Federation, 2008)

A parliamentary action group to promote policies regarding DM within government (International Diabetes Federation, 2008)

- Resources for the following activities should be provided on a national level:
  - Development of a social marketing programme to be utilized at a micro level to positively influence the memes held by the person living with DM
  - Marketing campaign to encourage healthy eating patterns driven on a national level by the government can be influential in changing memes regarding food habits in the population
  - Marketing campaigns to promote healthier lifestyles as done for other chronic diseases must be aimed at specific target groups for greater effectiveness
  - Marketing of unhealthy food options to school children should be limited as far as possible as a measure to prevent obesity in children (MacMullan, 2009: 38)

- Food policies regarding pricing and labelling to be revised – more descriptive labelling and larger fonts to be used

- Policies designed to encourage improving levels of physical activity in the individual to be developed.

Examples of policies to encourage improving levels of physical activity in the individual:
- positive marketing of exercise initiatives particularly amongst lower socio-economic groups
- wider media exposure of existing initiatives to improve activity levels
- medical aid schemes to provide incentives to encourage healthy lifestyles
- remove safety barriers to exercise opportunities by providing safe areas where people are able to exercise without threats of being mugged which was a factor mentioned by a number of participants in this study
- promote opportunity for physical activity through urban design by creating walking and cycle paths (International Diabetes Federation, 2009a; Unwin, Roglic and Whiting, 2010: 46)

- Introduction of policies to reduce cost of medication to the end-user by:
- cutting or removing value-added tax and import duties on basic medication supplies
- supplying free or more affordable insulin to those who require it especially after introduction of NHI

Policy-makers in national government services
Management of medical aid schemes
Partnerships with pharmaceutical companies supplying insulin and other medication

- Legislation requiring medical aid schemes to make use of evidence-based guidelines when updating their formularies to be promulgated

Policy-makers in national government services
Policy-makers in private health care services
Management of medical aid schemes
Consumer organizations

- Require both public and private health care providers to provide blood-glucose monitoring equipment when appropriate to those who need it

Policy-makers in national and provincial health care services
Policy-makers in private health care services
Management of medical aid schemes

- Development of policies to encourage weight reduction and healthier diet such as the following:
  - All members of medical aid schemes, including LIMS, who develop DM to have access to the services of a dietician as part of their PMB benefits
  - All patients making use of public health care facilities must have access to the services of a dietician to provide them with an individual diet which is culturally and nutritionally acceptable to the patient.

Policy-makers in national and provincial health care services
Policy-makers in private health care services
Management of medical aid schemes.

### 5.4.1.2 Functional strategies

As mentioned previously, functional strategies are those which the individual professional nurse is able to implement in interaction with the person living with DM or other relevant persons. The reader must be aware that in order to
implement the following activities effectively, a therapeutic relationship between the agent and recipient is essential.

5.4.1.2(a) The professional nurse will assist with implementation of health promotion policies and legislation influencing diabetes care

Policies and legislation created on a macro or meso level must be implemented on a micro level.

- **Background**
  The person implementing the health promotion policies and legislation on a micro level is usually the professional nurse who is the member of the multi-disciplinary team likely to have the most contact with the person living with DM. Implementation of several of the above activities is reliant on social marketing tools. Making use of social marketing tools can improve the effectiveness of measures implemented. Social marketing may not be a familiar concept to the professional nurse but is becoming used more frequently and can be particularly useful in positively influencing a change of memes regarding health care.

  Social marketing includes identifying the target population and conducting an analysis of their needs to ensure that available resources are not squandered (Kotler et al, 2002: 37). Implementing strategies to address those needs and continuous analysis of the efficacy of the strategies will ensure that any initiatives undertaken remain cost-effective (Kotler et al, 2002: 41).

- **Proposed outcome**
  Professional nurses implement policies and legislation aimed at improving health care service levels to persons living with DM. A feedback system incorporated in the implementation process encourages further development of policies and legislation related to diabetes care.

- **Rationale**
Policies and legislation aimed at improving the quality and accessibility to health care for all in South Africa have been introduced since the change in government in 1994. However, these are not always implemented in practice at grassroots level. A study by De Mendonca (2009: 306) showed that although some policies and guidelines are available, effective implementation at micro level is not taking place.

- Implementation activities

Implementation activities for policies and legislation related to diabetes care should include the following:

- implementation of social marketing methods to increase the knowledge and awareness about DM and the need for intervention of policy-makers in government as well as the public and private health care sectors.

<table>
<thead>
<tr>
<th>Social marketing activities which may be used:</th>
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<tbody>
<tr>
<td>• carry out needs assessment to identify needs of community members</td>
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<tr>
<td>• analyze the needs of community members</td>
</tr>
<tr>
<td>• identify target markets to improve efficacy of initiatives undertaken</td>
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<tr>
<td>• provide requested services to specific targeted communities</td>
</tr>
<tr>
<td>• plan education programmes addressing the specific needs of target markets</td>
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<tr>
<td>• implement education programmes as in Strategy Three</td>
</tr>
<tr>
<td>• do follow-up studies to evaluate the efficacy of education programmes and other services.</td>
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</table>

5.4.1.2(b) The professional nurse should facilitate lifestyle changes by the person living with DM

Lifestyle changes required of persons living with DM include exercise interventions, diet, medication regimes, weight reduction and self-monitoring tasks such as checking feet daily and blood glucose self-monitoring.

- Background information

Lifestyle changes are an essential part of a self-management programme for persons living with DM but are often dependent on the demands of everyday life “which are constantly changing, take priority in individuals’ lives and prevent them from making lifestyle changes” (Bazata, Robinson, Fox and Grandy, 2008: 1034). Persons living with DM will be encouraged to implement important lifestyle changes, which they will identify themselves as goals to be achieved, as they engage with the professional nurse in a therapeutic relationship. Social marketing
initiatives, implemented as a grand strategy, will reinforce the therapeutic relationship by making the individual aware of the changes required. The messages which are sent out must be truthful in order to be effective (Veeder, 1999: 53). For example, no one should be led to believe that they can be cured of diabetes but must understand that the lifestyle changes can, if implemented effectively, prevent further deterioration and the onset of complications.

Diet is an essential part of the management of DM. As there is a close link between DM and obesity, weight reduction is an integral part of a self-management programme. The meme of a healthy diet may vary according to the socio-economic grouping of the individual. Cultural and religious influences also play a role in the meme of what constitutes a healthy diet. Some people refuse to eat certain types of food, for example, on account of religious or cultural beliefs. Patients who have limited success with weight reduction initiatives may require gastrointestinal surgery such as gastric banding or gastric bypass (Roux-en-Y) which has been shown to reduce the mortality rate in obesity and lead to better metabolic control (Pieber, 2002: 24).

Persons living with DM have to be motivated to undertake daily tasks related to their condition such as monitoring their feet and SMBG. The importance of these daily self-monitoring tasks is an integral part of an education programme. Methods and importance of checking feet for signs of sores or blisters on a daily basis must be emphasized in an education programme. This will prevent the development of foot ulcers and reduce the risk of lower limb amputations. Up to 20% of people living with DM develop foot complications in South Africa (Hollands, 2005: 6).

Physical action is one of the most important lifestyle changes which should be implemented by the person living with DM in order to attain improved blood glucose control but is the one that is least likely to be utilized by persons living with DM. Dr Elliot P. Joslin, the first doctor in the United States of America to specialize in DM and also the person who initiated the concept of nurses specializing in diabetes care, pioneered the concept of the “troika” of diabetes management, namely insulin, diet and exercise (Joslin Diabetes Center, 2008b). As countries become more developed and westernized, people adopt an
increasingly sedentary lifestyle and are not exposed to the physical labour which is part of everyday life in rural areas. People in lower socio-economic groups may perceive exercise as irrelevant and as unnecessary hard work, particularly if they are from rural areas where they had to do hard physical labour to earn a living. This is one of the factors which have contributed the most to the rise in chronic lifestyle diseases especially DM, particularly in developing countries.

Participants in the study mentioned a number of barriers to the implementation of an exercise programme. These included lack of opportunity due to time constraints or lack of a place in which to exercise. Some participants in Group One felt that they could not exercise as they could not afford gym fees. Diabetes Nurse Educators in Group Two were of the opinion that many persons living with DM used this as an excuse but that it was possible to engage in an exercise programme at home without the use of gym equipment. Diabetes Nurse Educators also felt that a formal exercise programme was not always necessary as physical movement could take place in other ways such as housework and working in the garden. These issues are amongst those which can be addressed by making use of lifestyle counselling techniques during engagement in the therapeutic relationship.

Opportunities to positively influence the meme and to increase levels of physical activity are available on a number of levels. Formal exercise programmes may include aerobic exercises, resistance training or flexibility exercises. A successful exercise programme should include all three elements. However, many people are extremely resistant to the meme of a formal exercise programme. For these people, resistance to this meme can be overcome by suggestions regarding other ways of increasing levels of physical activity without embarking on a formal exercise programme.

Some more expensive medical aid schemes have programmes which subsidise gym membership for their members. Programmes to encourage greater levels of physical activity have been introduced in the Eastern Cape and other areas of South Africa such as the Mass Participation Programme (MPP) (Province of the Eastern Cape, 2009: 1). Some initiatives have been started at grassroots level.
with great success by people who wished to assist their communities (Dimbaza, 2008: 3; Juni, 2010: 7). However, there is no general awareness of the availability of these programmes and initiatives.

Both groups of participants agreed on the need for lifestyle modification and that these changes are easier to implement when the person living with DM has a deeper understanding of them. Lifestyle counselling will address these issues during engagement in a therapeutic relationship.

- **Proposed outcome**
  Persons living with DM will be able to successfully implement lifestyle changes such as increased levels of physical activity, weight reduction, diet adjustment and daily monitoring tasks to assist in the achievement of optimal levels of self-management.

- **Rationale**
  Although opportunities for the implementation of lifestyle changes are available, persons living with DM do not always have a high enough level of personal responsibility to make use of them or simply are not aware of the availability of certain resources.

- **Implementation activities**
  Set goals making use of the process of the therapeutic relationship with regard to physical action, weight reduction, dietary changes, foot care and blood glucose monitoring. Smoking cessation should also, if applicable, be addressed. Goal-setting during the therapeutic relationship will be discussed in detail in Strategy Three. However, there are a number of implementation activities which encourage lifestyle changes including the following:
    - The professional nurse could encourage greater levels of physical action by:
      - Setting realistic individual targets
      - Regularly re-assessing progress made and providing positive feedback on efforts made
      - encouraging the person living with DM to make informed choices on activities making use of blood glucose monitoring results
• encouraging self-help exercise groups in the community
• providing suggestions for activities that are fun and not necessarily seen as exercise e.g. dancing, swimming and walking
• providing information on ways of using household items to assist in a “home gym” exercise programme
• encouraging spouses to take part in an exercise programme to support and encourage the person living with DM
• encouraging the use of devices such as a pedometer to track levels of activity
• finding ways of increasing activity levels without a formal exercise programme e.g. 15 minute walk during lunchtime, when interacting with fellow workers, walk to their office instead of phoning, do not use the closest parking at shopping centres
• encouraging persons living with DM to make use of other forms of physical activity if they do not wish to take part in a formal exercise programme.

Suggested physical activities include (Alexandra Hospital, 2004: 18):
• Use the stairs instead of taking the lift or escalator
• Alight one bus (or in South Africa, taxi) stop away from your destination and walk the rest of the way
• Increase your pace of walking so that you are doing a brisk walk
• Use a toilet on a different floor (when working in multi-level buildings)
• Take a walk during tea or lunch break
• When watching television, use commercial breaks to walk around or do some simple exercises
• Park your car in a spot further away from your usual place and walk the extra distance
• Walk your dog or let it walk you!

The professional nurse should assist the person living with DM to implement weight reduction/dietary activities such as:
• encouraging dietary changes – further discussion in Education Strategy
• providing motivational information and information on various aspects of a correct diet such as the dietary pyramid in waiting areas at medical facilities in both public and private health care facilities
• arranging support groups for persons living with DM which should assist in reinforcement of positive dietary requirements
- preparing obese persons living with DM for gastrointestinal surgery if indicated
  - The professional nurse should assist the person living with DM to implement foot care activities by:
    - encouraging regular checking of feet
    - providing posters and brochures on foot checking to be displayed in waiting rooms at private and public health care facilities and at pharmacies.
  - The professional nurse should assist the person living with DM to implement blood glucose monitoring activities by:
    - encouraging regular blood glucose testing where applicable
    - providing training on use of glucometers
    - demonstrating how to make use of a monitoring diary to keep track of blood glucose levels and to identify triggers which cause change such as hyper- or hypoglycaemia

*Professional nurse*

*Diabetes nurse educator*

*Expert patient (sub-agent) when assisting others in a peer counselling situation*

*Person living with DM.*

5.4.1.2(c) The professional nurse should promote patient advocacy to increase levels of support for persons living with DM

Acting as a patient advocate is a basic role of the professional nurse wherever employed. In dealing with persons living with DM, there are a number of areas requiring utilization of the role of patient advocate. For example, action as patient advocate is often required when dealing with medical aid schemes or when addressing problems caused by lack of ability to access services due to financial constraints. The professional nurse should also be aware of evidence based practice which may be used to improve standards in health care services, both in the public and private sector. Advocacy is also one of the implementation strategies of the Diabetes Strategy for Africa particularly with regard to the role of patient advocacy groups in raising awareness of the impact of DM (International Diabetes Federation et al, 2006: 55). Advocacy should also be included, therefore, in a National Diabetes Strategy for South Africa. Participants from both
groups in this study emphasized the importance of patient advocacy with particular regard to obtaining services and medication from medical aid schemes. Dealing with other members of the multidisciplinary medical team may also require a measure of patient advocacy.

- Background information

Patient advocacy has a wide range of meanings and interpretations, from a personal level to national and international patient advocate groups. On a personal level, the professional nurse can act as a patient advocate while assisting the person living with DM in making use of the services of the multidisciplinary team which can provide holistic support and care for the individual. The action of each member of the team can influence the development of positive memes which can improve the growth of personal responsibility. The participants in Group Two were of the opinion that their role as a patient advocate was one of the most important that they played.

The rise in the incidence of DM globally has led to initiatives by international bodies to address the problem. The Diabetes Strategy for Africa recognizes that an advocacy platform which covers a number of related conditions will be more effective than one which deals with a single condition (International Diabetes Federation et al, 2006: 55). Networks between health professionals in all health sectors and NGOs specializing in related conditions, such as those in Canada, USA and Australia, will lead to a wider support base and increased effectiveness particularly when advocating lifestyle changes. Networks need not be limited to health related associations and societies. International service clubs such as Rotary International may be utilized to provide assistance with outreach programmes (Deeb, Silink, Benedetti and Edwards, 2009: 42). The importance of these networks will be discussed in Strategy Two – Co-ordination of services.

Some medical aid schemes, in the experience of the participants of this study, do not readily provide their members with benefits required by their condition. DM is a recognized PMB condition which requires that all expenses related to that condition must be paid by the medical aid. However, as previously stated, medical aid schemes are not required to provide the latest drugs or technology for
these conditions. As a result, the person living with DM may struggle with glucose control if the medication provided is not effective. The professional nurse is in a position to act as a patient advocate in dealing with the medical aid schemes.

Patients managed in the public health sector also require advocacy in order to receive the treatment they require. Financial constraints in the public sector lead to inadequate supplies of medication and other resources at clinic level which leads to frustration for the person living with DM and for the DNE who has to supply the service. Both groups of participants felt that this is a fundamental problem in service delivery in both the public and private health sectors.

- **Proposed outcome**
  Persons living with DM managed in both the public and private health care sectors will receive required support for implementation of self-management, both physical and psychological, in an efficient and cost-effective manner. Effective use of a multidisciplinary multi-level medical team leads to a more efficient service for persons living with DM.

- **Rationale**
  In acting as a patient advocate, the professional nurse will have to ensure that the person living with DM receives the appropriate care required at that time. Private health care sector patients may need an advocate to approach the medical aid schemes to motivate for added benefits or to clarify why certain medication has been prescribed. The professional nurse is in a position to be able to negotiate with the medical aid schemes to assist the patient.

  For those persons living with DM who are managed in the public health care sector, the professional nurse should be able to ensure that they receive the correct medication and supplies required. Delays and problems in the supply chain where stock does not reach the clinics timeously may require the skills of a patient advocate as management and administrative staffs are made aware of the situation.
As part of the therapeutic relationship, the professional nurse is expected to support the patient in choices made regarding self-management. However, if this means that negative memes are being reinforced, the professional nurse has a duty to act as a patient advocate by educating persons living with DM to improve their own understanding of the situation so that they are able to make informed choices. A deeper understanding of the situation will allow them to make positive choices in order to improve their level of personal responsibility which was confirmed by Group One participants in Theme 2.1.

As part of the advocacy strategy, the professional nurse should also act in cooperation with patient advocate groups, NGOs and service clubs offering outreach programmes and other groups which can form networks of support for related conditions. These groups may also assist in the co-ordination strategy.

- **Implementation activities**
  The role of patient advocate can be implemented on a number of different levels and can be utilized in both the public and private health care sectors.
  The professional nurse should:
  - be trained in correct and effective methods of motivating for the use of benefits from the medical aid schemes for their patients (Maryniuk, 2006: 61)
    *Management – private and public health care sectors*
    *Professional nurse*
    *Diabetes nurse educator*
  - make use of evidence based practice when motivating for appropriate treatment from medical aid schemes or in the public sector health services
  - implement or support a health literacy programme to assist persons living with DM in understanding what is required for their own self-management. This has a close link with the Education strategy
    *Professional nurse*
    *Diabetes nurse educator*
  - offer emotional and psychological support to persons living with DM as part of the therapeutic relationship
    *Professional nurse*
    *Diabetes nurse educator*
o take part in professional networks and partnerships between health care workers and societies/associations dealing with related conditions.

Management – private and public health care sectors
Professional nurse
Diabetes nurse educator.

5.4.1.2(d) Development of self-awareness and responsibility for self for the person living with DM and for the professional nurse

During the journey of learning how to cope with a chronic condition such as DM, both the person living with DM and the professional nurse have to become aware of the importance of developing a strong sense of self-awareness and accepting the responsibility for self required in order to deal with the stresses encountered along the way. The professional nurse, as part of the therapeutic relationship, has to assist the person living with DM to accept the limitations imposed by the condition and to recognize the physical and emotional effects experienced. Persons living with DM have to be aware of the necessity of accepting personal responsibility for their own management. Professional nurses also have to accept personal responsibility for their own health so that they are able to render an efficient service and act as examples to the patients they deal with every day.

• Background information

Development of self-awareness is a skill which can be facilitated and is essential for anyone dealing with chronic health conditions (Johns, 2000: 6). If a person is aware of his own needs, it is possible to address those needs in a positive way. Being aware of one’s own needs is a valuable motivational tool in the development of personal responsibility. Motivation may be extrinsic or intrinsic. Extrinsic motivation relies on pressure from outside the person, may lead to short term success regarding specific targets but is less effective in maintaining long term benefits. Intrinsic motivation is reliant on the personality of patients and their beliefs and perceptions regarding health locus of control.

People who have a strong internal locus of control will be able to cope better with the stresses experienced as a diabetic and to assume responsibility for their own management. As those who do not have such a strong internal locus of control
receive education relevant to their needs, it is possible for the development of personal responsibility to take place. It is a personal choice that the person has to make. The professional nurse has to respect the person’s choice in the matter of how much responsibility he or she is prepared to accept (Anderson and Funnell, 2005: 13). It is essential for the professional nurse to accept that the patient has to deal with the “choices, control and consequences” of the decisions made, both positive and negative (Anderson and Funnell, 2005: 13).

Professional nurses also have to accept responsibility for their own actions, both professional and in their private capacity, and also have to deal with the consequences of those choices (Johns, 2000: 172). However, some professional nurses have given a bad impression in the past to some of the participants in this study as they felt that if the health care advice given is effective, the people giving it would be seen to apply it and, for example, not be overweight themselves.

Reflecting on the work that one does is a valuable tool in both personal and professional development (Johns, 2000: 8). Reflective practice should be encouraged amongst professional nurses (Holmström and Rosenqvist, 2004: 210). A mentoring process for those new to dealing with people with DM would be invaluable in enabling professional nurses to learn from the experience of others.

- **Proposed outcome**
  Professional nurses are able to impart self-care skills to the persons living with DM, enabling them to deal effectively with their condition and to accept responsibility for their own management. Professional nurses also take responsibility for their own health.

- **Rationale**
  Taking personal responsibility for one’s own actions is essential for both persons living with DM and for the professional nurse working with them. By making use of motivational skills as part of the therapeutic relationship, it is possible for the professional nurse to change negative memes which may prevent the person living with DM from achieving a high level of self-management. Professional nurses also have to be aware of the need for personal responsibility in their own
actions while providing a health service to the community. They must also pay attention to their own health needs while ensuring that they are role models for their patients. A similar situation in the South African Police Force has led to implementation of a fitness programme for staff (Fitness programme for a meaner, leaner police force, 2010: 1).

- **Implementation activities**

  Implementation activities for this strategy apply to the person living with DM as well as to the professional nurse. Management of health care services in the public and private health care sectors is in a position to provide facilities which assist in the prevention of burnout and improve the working experience of professional nurses.

  Persons living with DM should, with the assistance of the professional nurse:

  o develop self-awareness by taking part in the process of the therapeutic relationship
  o evaluate environmental, physical and emotional aspects of their lives to enable goal-setting to occur
  o compare costs and benefits attached to a particular goal to establish a personal value related to that goal (Rollnick et al, 2003: 86)
  o make health-related choices based on the personal value attached to their goal.

    *Person living with DM*

    *Expert patient (sub-agent)*.

  Professional nurses should assist the person living with DM to develop personal responsibility by:

  o making use of reflective listening techniques and active listening skills during implementation of therapeutic relationship (De Clerck, 2005: 14)
  o making use of lifestyle counselling skills to encourage persons living with DM to implement required changes
  o making use of tools such as Conversation Maps™ to facilitate the education process.

    *Professional nurse*

    *Diabetes nurse educator.*
Professional nurses should assist other nursing staff in the development of personal responsibility for their own practice by:

- introducing a mentoring programme to assist new staff – see education strategy
- providing a venue for learning by holding regular meetings between experienced staff and professional nurses in practice – see co-ordination strategy
- teaching time management skills to facilitate an efficient service
- encouraging the use of reflective journals to aid reflective practice (Holmström and Rosenqvist, 2004: 210; Johns, 2000: 42).

*Professional nurse*

*Diabetes nurse educator.*

Management in both private and public health care sectors should support nursing staff by:

- providing wellness programmes for health care workers allowing them to initiate a weight loss and exercise initiative
- introducing stress relief programmes to assist staff in the development of coping skills
- addressing working conditions to allow staff to have regular meal breaks in spite of their workload and to ensure that the breaks actually take place

*Management – private and public health care sectors.*

Strategy One, the Action strategy, is summarized in the following table:
Table 5.2 Summary of Strategy One – Action strategy for effective diabetes care to be implemented on macro, meso and micro levels to positively influence self-management outcomes

<table>
<thead>
<tr>
<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
</tr>
</thead>
</table>
| 1. Action strategy for effective diabetes care to be implemented on macro, meso and micro levels to positively influence self-management outcomes | 1.1 Grand strategies: | • A National Diabetes Strategy should be compiled and implemented as soon as possible. Following groups should be formed:  
  o National Action Group on Diabetes  
  o Parliamentary Action Group on Diabetes  
  • Provide resources for following activities on a national level:  
    o Development of social marketing programme  
    o Revision of food policies  
    o Develop policies encouraging the level of physical activity in the individual  
    o Introduce policies to reduce cost of medication to the end-user  
  • Promulgation of legislation requiring medical aid schemes to make use of evidence-based guidelines when updating their formularies | Policy-makers in national government services  
Management of medical aid schemes  
Partnerships with pharmaceutical companies supplying insulin and other medication |
|                     | 1.1(a) Development of a National Diabetes Strategy and related policies and legislation influencing diabetic care | • Implement social marketing methods to increase the knowledge and awareness about DM and the need for intervention of policy-makers in public and private sectors | Professional nurse  
Diabetes nurse educator |
| 1.2 Functional strategies | 2(a) The professional nurse will assist with implementation of health promotion policies and legislation influencing diabetes care | • The professional nurse should encourage greater levels of physical action in the person living with DM  
• The professional nurse should assist the person living with DM to implement | Professional nurse  
Diabetes nurse educator  
Expert patient (sub-agent) when assisting others in a peer |
|                     | 2(b) The professional nurse should facilitate lifestyle | • The professional nurse should encourage greater levels of physical action in the person living with DM  
• The professional nurse should assist the person living with DM to implement | Professional nurse  
Diabetes nurse educator  
Expert patient (sub-agent) when assisting others in a peer |
<table>
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<th>Implementation activities</th>
<th>Persons responsible</th>
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</thead>
<tbody>
<tr>
<td>changes by the person living with DM</td>
<td>weight reduction/dietary changes • The professional nurse should assist the person living with DM to implement foot care activities • The professional nurse should assist the person living with DM to implement blood glucose monitoring activities</td>
<td>counselling situation Person living with DM</td>
<td></td>
</tr>
<tr>
<td>2(c) The professional nurse should promote patient advocacy to increase levels of support for persons living with DM</td>
<td>• The professional nurse should: • be trained in correct and effective methods of motivating for the use of benefits from the medical aid schemes for their patients</td>
<td>Management – private and public health care sectors Professional nurse Diabetes nurse educator</td>
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<td></td>
<td>• make use of evidence based practice when motivating for appropriate treatment from medical aid schemes or in the public sector health services • implement or support a health literacy programme to assist persons living with DM</td>
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<td></td>
<td>• offer emotional and psychological support to persons living with DM as part of the therapeutic relationship</td>
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<td></td>
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<tr>
<td></td>
<td>• take part in professional networks and partnerships</td>
<td>Management – private and public health care sectors Professional nurse Diabetes nurse educator</td>
<td></td>
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<tr>
<td>2(d) Development of self-awareness and responsibility for self for the person living with DM and for the professional nurse</td>
<td>Persons living with DM should, with the assistance of the professional nurse: • Develop self-awareness by taking part in the process of the therapeutic relationship • Evaluate environmental, physical and emotional aspects of their lives to enable goal-setting to occur • Compare costs and benefits attached to a particular goal to establish a personal value related to that goal • Make health-related choices based on the personal value attached to their goal</td>
<td>Person living with DM Expert patient (sub-agent) Professional nurse Diabetes nurse educator</td>
<td></td>
</tr>
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<td></td>
<td>Professional nurses should assist the person living with DM to develop personal responsibility by: • Making use of reflective listening techniques and active listening skills during implementation of therapeutic relationship • Making use of lifestyle counselling skills to encourage persons living with DM to implement required changes • Making use of tools such as Conversation Maps™ to facilitate the education process</td>
<td>Professional nurse Diabetes nurse educator</td>
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<td></td>
<td>Professional nurses should assist other nursing staff in the development of personal responsibility for their own practice by: • Introducing a mentoring programme to assist new staff • Providing a venue for learning by</td>
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<td>holding regular meetings between experienced staff and other professional nurses in practice</td>
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<td></td>
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</tbody>
</table>

5.4.2 Strategy Two: Co-ordination strategy to mobilize available resources to provide effective services for persons living with DM

The co-ordination of resources and capacity building on a national, regional and local level are essential parts of the Diabetes Strategy for Africa and should form an important part of a National Diabetes Strategy (International Diabetes Federation et al, 2006: 49). These sub-strategies include the co-ordination of resources in both the private and public health sectors as well as the importance of obtaining the assistance of corporate and business organizations. Capacity building is defined as being “about making what you have work better” (International Diabetes Federation et al, 2006: 59).

5.4.2.1 Grand strategies

Co-ordination of resources and capacity building are strategies which require implementation on the macro, meso and micro levels in order to provide adequate health care resources. These strategies are examples of those which need to be in place to enable the professional nurse to deliver the required care to the individual person living with DM.
5.4.2.1(a)  Co-ordination of resources for effective health care services for persons living with DM

In South Africa, co-ordination of health resources should be a priority at present due to the impending implementation of the NHI. However, when creating strategies which require co-operation and networking between different departments or organizations for the common good, institutional designs based on the strategy should be used as it is important that “structure must follow strategy and not strategy structure” (Minnaar, 2010: 123). Co-operation between health care providers can lead to more effective implementation of care for persons living with DM which would be an important focus of a National Diabetes Strategy.

- **Background information**

  Historically, the health care services in South Africa have been fragmented due to the policies of the previous government (Muller, 1998: 110). Several tiers of government ranging from the macro (national), meso (provincial) and micro (local) levels had various responsibilities in health care allocated to them as the situation remains today. However, there were also homelands and independent states such as Transkei and Ciskei, all with their own health departments. Since reunification, combining all the health resources has been a challenge to all concerned. The shift in focus introduced by the ANC government after 1994 from a hospital centred policy to a public health centred policy has also created challenges in the co-ordination of services which are being addressed, for example, by the publication of a Policy on Quality in Health Services in South Africa (National Department of Health, 2007: 4). However, as mentioned previously, the policies require effective implementation in order to fulfil their purpose.

  Co-ordination of services by both the public and private sector is recognized by the World Health Organization as an important method of improving health care service delivery in low and medium income countries (World Health Organization, 2008a: 2). However, the report states that “collaboration must be seen as beneficial to both parties” which may include private health sector institutions, NGOs and large companies as well as service clubs such as Rotary International.
and Lions International (World Health Organization, 2008a: 3; Deeb et al, 2009: 42). The World Diabetes Foundation, funded by Novo Nordisk, a large multinational company, is acting as a co-ordinator for projects in many developing countries, including South Africa (World Diabetes Foundation, 2010b).

Private companies and corporations, as part of their social responsibility programmes, can be encouraged to assist with funding for specific projects (Kotler et al, 2002: 352). Cause-related marketing is becoming increasingly popular as companies often gain a larger market share by taking part (Kotler et al, 2002: 354). Co-ordination of these initiatives, which would be an important part of a National Diabetes Strategy, is required to ensure that the funds are used for their intended purposes and that efforts on the part of providers and sponsors are not wasted.

- **Proposed outcome**
  Available health care resources in both the public and private health sectors will be co-ordinated and mobilized in such a way that all persons living with DM are able to obtain the health care services they need in order to achieve a high level of self-management.

- **Rationale**
  For efficient service delivery to take place, the available facilities require co-ordination so that all those who require care are able to access that care easily and effectively. Participants from both groups felt that the health care services in both the public and private sectors had wide-ranging levels of service and were both often inefficient in the provision of adequate care and resources (Palmer, Mills, Wadee, Gilson and Schneider, 2003: 296). Financial issues were often mentioned with medical aid schemes dictating the level of care and, for those with low incomes, a reliance on state facilities. As negotiations about the impending implementation of the NHI continue, both the public and private health care sectors should play a pro-active role in assessing the levels of co-ordination required to provide adequate and efficient health care services. The rise in chronic diseases, especially DM, as discussed in previous chapters makes this imperative.
- **Implementation activities**

Co-ordination of services should take place at all levels of health care from national to local level to provide a more efficient and cost-effective service particularly with the impending implementation of NHI. Some activities which would improve co-ordination of available services include:

- negotiating to provide more Centres of Excellence such as CDE in medical practices in Nelson Mandela Bay
- development of more public-private enterprises in public hospitals in Nelson Mandela Bay which include diabetic clinics
- provision of more accessible clinics for persons living with DM by:
  - extending opening hours of the facilities to enable working people to have easier access and relieve the congestion of people accessing them in the limited hours currently available
  - making use of mobile clinics in areas where it is not practical to provide a full-time service
  - setting up clinics in areas such as shopping malls to make them more accessible to those who require the services
- provision of 24 hour help lines for information and telephone counselling on all aspects of DM
- co-ordination of the content of training programmes on diabetes care for all levels of health professionals
- implementation of Angels of Change programme to provide training in diabetes care as well as “caring for the carer”
- provision of opportunities for corporations and other business organizations to sponsor diabetes awareness campaigns where appropriate
- provision of tangible promotional items to promote a health information message may be sponsored by private companies as part of their social responsibility programmes.

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**Examples of promotional items which may be used:**

- recipe cards for diabetic meals
- signage in stores identifying approved items for diabetic patients similar to the Heart Mark
- small sharps containers for used needles and syringes
- marketing items such as water-bottles, keyrings, t-shirts, notebooks, pens and pencils, bookmarks or fridge magnets with motivational messages or contact details for organizations such as Diabetes South Africa
- printed handouts on aspects of self-management such as need for treatment, when to take medication and what to do in an emergency
- all material to be made culturally sensitive for the target groups (Berryman, Gill, Pietsch and Halloran, 2009: 177)
• media advertising on lifestyle changes and other aspects of DM – print, radio, TV – may be sponsored by private companies
• inclusion of diabetes messages in popular TV and radio programmes such as soap operas

Policy-makers in national and provincial government
Managers of local health care facilities
Policy-makers for business partners
NGOs
Relevant societies such as Diabetes South Africa, Heart Foundation
Service clubs such as Rotary International and Lions International

• establishing protocols to clarify position and responsibilities of each person in the multi-disciplinary team with regard to the management of the person living with DM
• establishing protocols to ensure that appropriate use is made of members of the multi-disciplinary team and that referrals are made when required. For example, doctors and nurses are not qualified as dieticians
• encouraging retired professional nurses to implement awareness and coaching programmes for persons living with DM as has been done for persons living with HIV/AIDS (Retired nurses recalled for VCT, 2009: 3) 

Managers of local health care facilities

• co-ordination with other industries such as the food industry in order to address issues regarding obesity which is closely related to DM (Verduin, Agarwal and Waltman, 2005: 2608)

Management in the food industry.
5.4.2.1(b) Capacity building

Capacity building is one of the key implementation strategies of the Diabetes Strategy for Africa (International Diabetes Federation et al, 2006: 59) and would be as important in a National Diabetes Strategy. In order to build capacity in health care, it is essential to evaluate present services and to identify ways in which different use of human and material resources can improve the cost-effectiveness and efficiency of services provided (Ried, Farmer and Weston, 2006: 2). With the approaching implementation of the NHI, capacity building in both the private and public health sectors will assist in the co-ordination of care for persons living with DM and other chronic illnesses.

- Background information

Improving the standard of human and material resources, the most important commodities in health care, is an integral part of capacity building. This applies to all levels of staffing as each person has the potential of improving the level of care for recipients of health care. An example is where state facilities may find themselves out of stock of medications for various reasons which include under-qualified officials being responsible for large public health care budgets but unable to deliver the required services due to inexperience and ineptitude (Hollands, 2006: 1; East Cape hospital managers suspended, 2009: 1). Similar situations may be found in the private sector where staff of medical aid schemes may query or refuse treatment prescribed by a medical practitioner if the formulary used is not updated with new developments in treatment. Group Two participants felt that the discrepancies in levels of service offered to persons living with DM by private health care facilities, low income medical aids and public health care facilities was a particular frustration in their work. Both groups of participants felt that it was possible for a more efficient and cost-effective service to be rendered to persons living with DM.

Dealing with any health issue is expensive and DM is notoriously expensive to manage effectively. However, it is one of the few conditions where it is possible for effective self-management of the condition to cut the cost to service providers. In order for the person living with DM to obtain a high standard of health care, certain forms of basic equipment should be available at the facility approached, whether in the private or public sector. Basic equipment required is detailed in
available guidelines such as the National Programme for Control and Management of Diabetes type 2 at Primary Level published by the National Department of Health (2004), SEMDSA Guidelines for diagnosis and management of type 2 Diabetes Mellitus for primary health care (Society for Endocrinology, Metabolism and Diabetes of South Africa, 2009) the Diabetes Foundation report on implementing national diabetes programmes in sub-Saharan Africa (Beran, 2006) and the Global Guidelines published by the IDF (International Diabetes Federation, 2005).

- **Proposed outcome**
  The outcome of this strategy will be the provision of high-quality, efficient and cost-effective care available to all persons living with DM. Each person employed in the health services will understand his or her role in providing a service to persons living with DM. Quality management tools will be utilized in evaluation and assessment of health care services.

- **Rationale**
  Both groups of participants agreed that an efficient cost-effective health care service making use of a multi-disciplinary team is required to facilitate the development of self-management in persons living with DM in Nelson Mandela Bay. In order for an efficient health service to be provided, each person working towards that goal has to understand the role that he or she plays. Analysis of any capacity shortcomings is imperative in both public and private health care sectors (Potter and Harries, 2006: 841). Quality assurance and governance tools should be used to establish best practice and to evaluate ongoing health care services. Regular performance appraisals of staff and auditing of services will provide an indication of any progress and to ascertain where any re-allocations are required. Training needs which are identified may be addressed with educational initiatives. Educational initiatives are linked to the education strategy.

- **Implementation activities**
  Activities which may facilitate capacity building on a macro or meso level to improve health care for persons living with DM are as follows:
  
  o Creation of a National Diabetes Strategy should specifically address capacity building for diabetes care – *link with Action Strategy*
Partnerships between relevant parties in diabetes care to be negotiated to provide more efficient and cost-effective health care services – eg private public enterprises (Crisp, Swerissen and Duckett, 2000: 102) – link with Action Strategy

Decentralized locations for service provision required to provide facilities closer to home for persons living with DM

Policy-makers at macro and meso level
Policy-makers in medical aid schemes and business partners
Managers of local health care facilities
NGOs.

Financial management training for those in administrative capacity to ensure an efficient supply of material and human resources to provide an efficient health care service for persons living with DM

Address other categories of staff eg maintenance and procurement to ensure that health care facilities remain intact and an efficient supply chain for diabetes related medication and other requirements is in place

Policy-makers in government
Managers of local health care facilities
NGOs.

Provision of basic resources for diabetic care in all hospitals and clinics in the public sector

All equipment used in diabetic clinics to be in working order

Proper channels of communication for reporting and repairing or replacing faulty equipment

Management of local health care facilities

Pharmaceutical companies which win tenders to supply drugs to public sector hospitals and clinics should be required to provide training on the optimal use of their products to all staff who utilize them in performance of their duties

Training to include:

- Action and side-effects of insulin and other medication utilized
- How to advise persons living with DM about calculating dosages required according to blood glucose levels
- Calibration of glucometers
- Checking of expiry dates

Management of pharmaceutical supply companies.
5.4.2.2 Functional strategies

Co-ordination and capacity building sub-strategies are required to provide the necessary human and material resources, in both the public and private health care sectors, to facilitate an efficient and effective service to persons living with DM. However, functional strategies are necessary to ensure effective use of the available resources.

5.4.2.2(a) The professional nurse to facilitate implementation of functional aspects related to co-ordination strategy

In order for a strategy to be successful, it has to be correctly and effectively implemented in the manner intended. Successful implementation requires making use of all available resources as well as co-ordination of those resources. In the Diabetes Strategy for Africa, this is termed “mobilization of resources” (International Diabetes Federation et al, 2006: 58). Because of the close relationship between implementation activities of the above sub-strategies at a functional level, they will be combined in the following discussion to prevent repetition.

- Background information

The various roles of the professional nurse described in Chapter Four lend themselves to the implementation of co-ordination and capacity building strategies to improve the service level for persons living with DM. The role of researcher, in particular, is required for compiling databases of information and for feedback on service initiatives to service providers, in both the public and the private sector (Ried et al, 2006: 11). Quality assurance surveys such as audits and competencies will also be implemented by the professional nurse. Freely accessible information resources are an essential adjunct to any education initiative. Suggestions made by participants included the need for centralized information facilities which persons living with DM could utilize when required. The information facilities could be facilitated by the professional nurse. An alternative form of information facility is the use of smart phones utilizing the Mobile Health Information System which was introduced in public sector hospitals in Nelson Mandela Bay in 2010 (Van Zyl, 2010: 1). The smart phones give
professional nurses access to a library of information resources which include guidelines on various conditions including DM.

- **Proposed outcome**
  Co-ordination and capacity building initiatives to provide an efficient health care service for persons living with DM at macro and meso level are implemented at micro level.

- **Rationale**
  Factors such as the impending implementation of the NHI will require greater co-operation between health care service providers, both in the public and private sector. Health promotion policies related to diabetes care should be utilized to provide comprehensive health care to persons living with DM. These policies may also promote the growth of personal responsibility by removing some barriers to self-management experienced by participants.

- **Implementation activities**
  The professional nurse should assist in the implementation of co-ordination and capacity building initiatives for health care services for persons living with DM by:
  
  o creating a register of resources to be utilized for awareness or education initiatives on diabetes
  o networking with societies and professionals dealing with related chronic conditions to create a broad base of support for the introduction of measures to positively influence lifestyle changes required for effective self-management of DM
  o making use of market research methods to ascertain the needs of identified target groups to ensure that services provided to persons living with DM are relevant and cost-effective
  o conducting surveys in areas particularly in lower socio-economic areas to identify persons living with DM to establish need for services in those areas
  o liaising with community leaders in those areas
  o facilitating the creation of community walking clubs to promote physical activity in persons living with DM
o utilizing existing church groups such as Care Ministry to reach those who require assistance in their parishes

o co-ordinating visits to other members of the medical team such as the ophthalmologist and podiatrist by use of electronic records and reminder system

o initiating health literacy programmes regarding the diabetes pandemic in school and adult education facilities – see Education Strategy

o facilitating communication between role-players in health services to widen availability and level of services offered by:
  ▪ regular meetings involving role-players in diabetes care
  ▪ notices of meetings, agendas and minutes of all meetings being circulated to all parties involved in diabetes care
  ▪ making use of newsletters to facilitate communication regarding initiatives involving diabetes

o implementing quality assurance and governance tools on all aspects of diabetes care in all health care facilities including clinics and hospitals in both the private and public health sectors (Moss, Palmberg, Plsek and Schellekens, 2000: 63; Crisp et al, 2000: 104). Some examples of quality assurance tools which may be utilized include:

o Audits on diabetes services to be created and implemented to assess the need for re-allocation of resources if necessary
  ▪ Audit staff to assess work methods and knowledge to identify needs for further training
  ▪ Create competencies to assist in the provision of staff trained for specific requirements such as management of DM
  ▪ Audit equipment to ensure that adequate facilities are provided enabling staff to provide a proper service to persons living with DM
  ▪ Auditing of standard procedures on diabetes care to ensure that they comply with best practice
  ▪ Auditing of supply levels to ensure that the patients receive the correct medication in a cost-effective manner – enough test strips and lancets, variety of insulin and oral medications

o Benchmarking items to be identified and assessed to chart progress or need for re-assessments or re-allocation of resources

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- Data to be collected on a macro, meso and micro level.
- Local data to be compared with national levels to ascertain the quality of the local health services for persons living with DM
  - Compilation of databases to provide the necessary data for further research on diabetes care
  - Instigation of or assistance with research projects to improve quality assurance, add further knowledge and decide on best practice methods for diabetes care
  - Co-ordination of research projects on all aspects of DM to prevent unnecessary duplication and waste of resources
  - Diabetes patient register to be used as a tool for data collection and quality assurance purposes
  - A comprehensive patient record card should be implemented for all patients receiving treatment for chronic conditions and in particular for DM
  - Assisting in community development to help change to positive memes regarding health in general and DM in particular
  - Making use of smart phones to access information resources which may be utilized to provide a higher level of care for persons living with DM (Van Zyl, 2010: 1)
  - Setting up and facilitating information centres for persons living with DM and other interested parties in:
    - Doctor’s waiting rooms
    - Hospitals
    - Municipal libraries
    - Community centres
    - Pharmacies
    - Schools
    - Shopping centres
  - Utilization of diabetes awareness days such as World Diabetes Day and World Health Day as opportunities for providing information to the general public
  - Ensuring that the information which is provided is culturally sensitive to persons living with DM
Diabetes nurse educator
Professional nurse.

Strategy Two, the Co-ordination strategy, is summarized in the following table:

**Table 5.3** Summary of Strategy Two – Co-ordination strategy to mobilize available resources to provide effective services for persons living with DM

<table>
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<tr>
<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
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</table>
| 2. Co-ordination strategy to mobilize available resources to provide effective services for persons living with DM | 2.1 Grand strategies | Activities which would improve co-ordination of available services include:  
- Negotiating to provide more Centres of Excellence such as CDE in Nelson Mandela Bay  
- Development of more public-private enterprises in public hospitals  
- Provision of more accessible clinics for persons living with DM  
- Provision of 24 hour help lines  
- Co-ordination of the content of training programmes for health professionals  
- Implementation of Angels of Change programme  
- Provision of opportunities for corporations and other business organizations to sponsor diabetes awareness campaigns  
- Provision of tangible promotional items to promote a health information message  
- Media advertising on lifestyle changes sponsored by private companies  
- Inclusion of diabetes messages in popular TV and radio programmes  
- Establishing protocols to clarify position and responsibilities of each person in the multidisciplinary team with regard to the management of the person living with DM  
- Establishing protocols to | . Policy-makers in national and provincial government  
. Managers of local health care facilities  
. Policy-makers for business partners  
. NGOs  
. Relevant societies such as Diabetes South Africa, Heart Foundation  
. Service clubs such as Rotary International and Lions International  
. Managers of local health care facilities |
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<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
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<td>ensure that appropriate use is made of members of the multi-disciplinary team</td>
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<td></td>
<td>• Encouraging retired professional nurses to implement awareness and coaching programmes for persons living with DM</td>
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<td>2.1(b) Capacity building Activities which may facilitate capacity building on a macro or meso level as follows:</td>
<td>Policy-makers at macro and meso level</td>
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<td></td>
<td>• National Diabetes Strategy to specifically address capacity building for diabetes care</td>
<td>Policy-makers in medical aid schemes and business partners</td>
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<td></td>
<td>• Partnerships between relevant parties in diabetes care to be negotiated to provide more efficient and cost-effective health care services</td>
<td>Managers of local health care facilities</td>
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<td>• Decentralized locations for service provision to provide facilities closer to home for persons living with DM</td>
<td>NGOs</td>
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<td>• Financial management training for those in administrative capacity to ensure an efficient supply of material and human resources to provide an efficient health care service for persons living with DM</td>
<td>Policy-makers in government, Managers of local health care facilities, NGOs</td>
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<td>• Address other categories of staff eg maintenance and procurement to ensure that health care facilities remain intact and an efficient supply chain for diabetes related medication and other requirements is in place</td>
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<td>• Provision of basic resources for provision of diabetic care in all hospitals and clinics in the public sector</td>
<td>Management of local health care facilities</td>
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<td></td>
<td></td>
<td>• All equipment used in diabetic clinics to be in working order</td>
<td>Management of local health care facilities</td>
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<td>• Proper channels of communication for reporting and repairing or replacing of faulty equipment</td>
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<td>• Pharmaceutical companies which win tenders to supply drugs to public sector hospitals</td>
<td>Management of pharmaceuticals</td>
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<td>ACE strategies</td>
<td>Sub-strategies</td>
<td>Implementation activities</td>
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<td>and clinics should be required to provide training on the optimal use of their products to all staff who utilize them in the performance of their duties</td>
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<td>Training to include:</td>
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<td>o Action and side-effects of insulin and other medication utilized</td>
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<td>o How to advise persons living with DM about calculating dosages required according to blood glucose levels</td>
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<td>o Calibration of glucometers</td>
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<td>o Checking of expiry dates</td>
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<td>2.2 Functional strategies</td>
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<td>2.2(a) The professional nurse to facilitate implementation of functional aspects related to co-ordination strategy</td>
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<td>The professional nurse should assist in the implementation of co-ordination and capacity building initiatives for health care services for persons living with DM by:</td>
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<td>Creating a register of resources to be utilized for awareness or education initiatives on diabetes</td>
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<td>Networking with societies and professionals dealing with related chronic conditions to create a broad base of support</td>
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<td>Making use of market research methods to ascertain the needs of identified target groups</td>
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<td>Conducting surveys to establish the need for services in lower socio-economic areas</td>
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<td>Liaising with community leaders in those areas</td>
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<td>Facilitating the creation of community walking clubs to promote physical activity</td>
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<td>Utilizing existing church groups such as Care Ministry to reach those who require assistance in their parishes</td>
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<td>Co-ordinating visits to other members of the multi-disciplinary medical team</td>
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<td>Initiating health literacy programmes in schools and adult education facilities</td>
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<td>Facilitating communication</td>
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<td>al supply companies</td>
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<td>Diabetes nurse educator</td>
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<td>Professional nurse</td>
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<td>ACE strategies</td>
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<td>between role-players in health services</td>
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<td>• Implementing quality assurance and governance tools on all aspects of diabetes care such as:</td>
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<td>o Audits on diabetes services to be created and implemented to assess the need for re-allocation of resources if necessary</td>
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<td>o Benchmarking items to be identified and assessed to chart progress or need for re-allocation of resources</td>
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<td>• Compilation of databases to provide data for further research</td>
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<td>• Instigation or assistance with research projects to improve quality assurance</td>
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<td>• Co-ordination of research projects to prevent unnecessary duplication and waste of resources</td>
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<td>• Diabetes patient register to be used as a tool for data collection and quality assurance purposes</td>
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<td>• Utilization of a comprehensive patient record card</td>
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<td>• Assisting in community development to help change to positive memes regarding health in general and DM in particular</td>
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<td>• Making use of smart phones to access relevant information resources</td>
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<td>• Setting up and facilitating information centres for persons living with DM and other interested parties</td>
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<td>• Utilization of diabetes awareness days as opportunities for providing information to the general public</td>
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<td>• Ensuring that the information which is provided is culturally sensitive to persons living with DM</td>
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5.4.3. Strategy Three: Education strategy to improve compliance with self-management principles in persons living with DM

Education is required by all those concerned with DM, whether as a patient, a member of the community or as health care professionals. “The quality of diabetes health education will be enhanced when more health-care professionals are made aware of the progressive nature of the education process. Learning must be perceived as life-long; self-care is always open to improvement” (De Clerck, 2005: 14). In recognition of the importance of education, the International Diabetes Federation has adopted the theme of Diabetes Education and Prevention for World Diabetes Day for the period 2009-2013 (International Diabetes Federation, 2007b). With research being conducted globally, new initiatives and procedures are continuously being implemented with regard to the self-management of DM. Sharing of information between people is essential for the continuing development of optimal health care. Unfortunately there is often a lack of awareness of the importance and value of diabetes education amongst health care workers and also those who supply funding for any management initiatives (De Clerck, 2005: 12).

Education for the management of DM is required on a number of levels depending on the needs of the individual. Patients require education in order to cope with all the challenges of living with a condition such as DM. Their families require education to enable them to support and understand the challenges faced by the person living with DM. The greater community requires education to provide support to those living with the condition and also to aid in the diagnosis of undetected DM as well as the prevention or delay of onset in at risk individuals. The health care workers require education to ensure that they are in a position to offer optimal levels of care to the person living with DM and to their families. All these aspects would be addressed in the development of a National Diabetes Strategy.

Patient education is usually regarded as the most important method of improving compliance in persons living with DM. However, a patient education programme cannot stand alone – education of health care workers, significant others and the general community are required for an effective education strategy. In order for
the education strategy to take place, the co-ordination and capacity building required to provide an effective service has to be in place while action strategies may remove barriers to self-management identified by persons living with DM and positively influence development of positive memes regarding their ability to deal with the condition.

When initiating an education initiative, social marketing should be used to design the way messages are disseminated. Creativity is required to provide an effective programme as it has been noted that “people do not read printed media like they used to" (Veeder, 1999: 53). Modern technology, as mentioned in Strategy One, should be used more frequently for health care initiatives as the needs of the population change.

5.4.3.1 Grand strategies

As the Education Strategy requires human and material resources such as venues for instruction and educational resources, grand strategies are required. The professional nurse is able to educate persons living with DM but requires input on macro and meso level in order to obtain the resources required to fulfil this function.

5.4.3.1(a) Provision of human and material resources to enable educational initiatives on a number of levels to influence the growth of positive memes regarding DM

As there is a wide range of economic and cultural groups in Nelson Mandela Bay, cultural aspects have to be addressed in any educational initiatives. Information resources should also be culturally relevant for the particular recipient group. A multi-level diabetes education team including community health workers as proposed by the American Association of Diabetes Educators could be of great value in providing culturally relevant support and education to persons living with DM (American Association of Diabetes Educators, 2010: 3).
• **Background information**

Educational initiatives must be accessible to persons living with DM. A study at the University of Michigan suggested that programmes presented at community-based venues such as churches, community centres and senior centres may be more acceptable to recipients (Tang, Gillard, Funnell, Nwankwo, Parker, Spurlock and Anderson, 2005: 91). Tang et al (2005: 92) also point out that long-term interventions are necessary to obtain a sustainable positive outcome. Long-term initiatives are also more effective in changing and reinforcing positive memes in the individual and the community at large. Grand strategies must be in place to provide the resources for educational initiatives such as venues, materials and human resources required for long-term interventions.

• **Proposed outcome**

All persons living with DM, their families and the community as well as health care workers will have access to culturally relevant education resources and to information resources that suit their needs.

• **Rationale**

Participants in both groups emphasized the need for education for both the person living with DM and for the professional nurse. The Group Two participants also felt that the professional nurse could play a bigger role in educating the community at large about the implications of DM.

• **Implementation activities**

Policy-makers in the public and private health care sectors should provide facilities and resources to enable the professional nurse to implement educational programmes for persons living with DM and also for families and the community by:

- providing educational materials to be utilized in educational programmes for persons living with DM, their families or the community
- involving pharmaceutical companies, especially those winning state tenders, in sponsoring educational initiatives in the community as part of their social responsibility programmes
o enabling the provision of a combination of one-to-one and group education for persons living with DM which, together with a high level of social support, has been shown to be the most effective method of achieving improved glycaemic control

o providing suitable venues for professional nurses to implement educational programmes on DM for all cultural groups

o providing suitably qualified health care staff to assist in the provision of educational programmes and awareness initiatives about DM

o providing facilities to research the needs of the community to enable educational programmes on DM to be designed for specific target groups such as age-related or various cultural groups

o providing media advertising to inform persons living with DM, their families and the community that educational initiatives are available to them and how to access them.

Policy-makers in national government services
Policy-makers in private health care services
Management in local health care facilities
Management of pharmaceutical companies and other suppliers of health care resources.

Relevant policy-makers in the public and private health care sectors and in health education should provide facilities and resources to enable the implementation of educational programmes for health care workers at the micro level by:

o implementing effective co-ordination of training programmes for all staff dealing with persons living with DM. Continuing education must be required at all levels of health care personnel to ensure quality of care and that “all speak with the same voice” as stated by a Group One participant

o increasing the level of education on DM during basic nursing courses

o conducting regular evaluation of strategies and training programmes

o co-operation with universities and training colleges to provide regular short courses on management of DM

o facilitating training of nurse practitioners specializing in DM

o making use of distance education with minimal contact sessions to implement education for health care workers.

Policy-makers in national government services
Policy-makers in private health care services
5.4.3.2 Functional strategies

One of the roles of the professional nurse, as discussed in the conceptual framework in Chapter Four, is that of educator. This role may be played out on a number of levels while educating the people living with DM, their family and friends and the general community.

5.4.3.2(a) Patient education

As DM is a lifelong condition, regular reassessment and follow-up is required to prevent the onset of complications (Lawn et al, 2009: 31). Studies have shown that effects of self-management educational interventions have often declined after about 6 months which indicates the importance of ongoing support to maintain any gains made (Funnell, 2009: 23). Education programmes should also include practical skills development allowing the people living with DM to gain confidence in their own ability to cope with the condition. A structured individualized programme which takes the social environment into account is essential for improving metabolic control in the individual (Pieber, 2002: 25). The Expert Patient is an invaluable educational resource and can play a role in assisting the professional nurse with such programmes (Wykurz and Kelly, 2002: 820).

- Background information

A therapeutic relationship between the professional nurse and the person living with DM is essential for the implementation of lifestyle counselling and the development of positive change in the person living with DM. At each step of the therapeutic relationship, emphasis should be placed on the fact that the ultimate responsibility for the success of the process rests with the person living with DM, i.e. the recipient. This is a meme which should be reinforced throughout the education process. The therapeutic relationship can be used to provide support
and an opportunity for personalized goal setting, as well as learning about “problem solving techniques and coping strategies” (Henshaw, 2006). In this way, the negative memes regarding an inability to deal with the condition which the person living with DM experiences as being true are changed. Replicating and developing memes to improve the quality of life in the person living with DM will assist the process of behaviour change. Education sessions provide an opportunity for the person living with DM to become aware of natural processes involving behaviour and finding ways to counteract those processes, instigating positive behaviour change.

During education sessions, a basic tenet from social marketing must be remembered – ie price (Thackeray and Neiger, 2002: 539). The person living with DM has to become aware that the benefit of the action taken outweighs the price paid. Implementing one change at a time is a method of reducing the perceived personal cost of the abandoned behaviour. When the individual becomes aware of the benefits of the implemented change such as being able to move more freely after physical activity and experiencing greater levels of well-being, other required changes become easier to implement (Kotler et al, 2002: 32; Thackeray and Neiger, 2002: 539). Participants in an education programme are also more likely to successfully address priorities and behaviours they have identified themselves rather than those determined by health professionals (Funnell et al, 2005: 55). Specifying an implementation intention linked to a specific activity enhances the likelihood of that activity being enacted (Rutter and Quine, 2002: 127).

From a social marketing point of view, the education strategy is on the level of personal selling, an example of which occurs when goal-setting takes place during the process of the therapeutic relationship (Veeder, 1999: 74). The process of positively influencing and changing memes in the individual takes place during the therapeutic relationship which underpins the functional strategies proposed in the ACE approach to self-management of DM as was discussed in detail in Chapter Four.
As part of the therapeutic relationship, it is essential to identify goals and to assess the readiness of the person living with DM to implement positive changes. It must be remembered that any action or strategy has to be meaningful to the individual who has to carry it out in order to be successful (Vallis, 2009: 7). Some Group One participants in this study are willing and able to take personal responsibility for self-management while others find it difficult. Some newly diagnosed diabetics are bewildered by the new lifestyle forced on them by the diagnosis of DM. These reactions are strongly influenced by the memes held by the individual. The goal-setting process during the therapeutic relationship should be used to positively influence these memes.

Anderson and Funnell (2005: 174) state that “It has been our experience that for goal setting to succeed, the goals need to flow from the patient’s story and be an expression of the patient’s desire to solve the problem. The goals need to both arise from and be owned by the patient”. Setting a limited number of small goals or lifestyle changes increases the chance of sustained success. Successful implementation of small goals leads to skills mastery which is one of the efficacy-enhancing mechanisms identified by Bandura (Browning and Thomas, 2005: 254). As one successful goal succeeds another, people living with DM will gain confidence in their ability to cope with the demands of the condition (Tucker, 2005). A confident patient will assume a higher level of personal responsibility in implementing self-management strategies (Welch, Rose and Ernst, 2006: 6). Studies have shown that patients who are given a wide variety of choices regarding their health care with relevant information and little pressure were more confident in their coping abilities, more motivated to accept responsibility for their self-management and reported improved blood glucose control (Salman, 2005: 3).

The therapeutic relationship can also be used to provide support as well as learning about “problem solving techniques and coping strategies” (Henshaw, 2006; Funnell and Simineiro, 2004:23). It thus forms the basis of several of the functional strategies at each stage of the ACE approach. However, the reality of time constraints experienced by professional nurses working in both the private and public sectors is a negative factor in facilitating an effective therapeutic
relationship. As high patient loads are experienced, the time spent with each patient is limited. Use of an assessment form such as the Diabetes Concerns Assessment Form developed by Anderson and Funnel (2005) may assist in solving this issue. Completion of such an assessment form by the person living with DM while waiting for a consultation will assist the patient flow and help facilitate a deeper level of communication during a session. An example of the Diabetes Concerns Assessment Form used at the Michigan Diabetes Research and Training Center, University of Michigan (Anderson and Funnel, 2005) may be found in Annexure N. Group sessions with several persons living with DM will also facilitate patient education as people taking part will learn from the experiences of others in the group. Studies have shown that a combination of personal and group sessions is most effective in achieving a higher level of self-management (Tang, Funnell and Anderson, 2006: 99; Fan and Sidani, 2009: 24; Boegner, Fontbonne, Gras Vidal, Mouls and Monnier, 2008: 248).

- **Proposed outcome**
An effective patient education programme will empower persons living with DM to attain a high level of personal responsibility and thus enabling the implementation of self-management behaviour leading to an improved blood glucose level and thereby improving quality of life for the individual.

- **Rationale**
Educational initiatives by the professional nurse making use of lifestyle counselling as part of the therapeutic relationship can positively influence memes held by the person living with DM. A patient education programme, whether on a one-to-one basis, as a group initiative or as a combination of both methods, has been shown to be essential in facilitating the growth of personal responsibility and the implementation of self-management activities in persons living with DM. This leads to improved patient outcomes, reducing the mortality and morbidity associated with the condition.

- **Implementation activities**
A professional nurse will make use of the therapeutic relationship when initiating lifestyle counselling for the person living with DM. When implementing the
therapeutic relationship to positively influence memes regarding DM held by the patient, professional nurses should:

- not appear rushed and should not omit pleasantries which help the development of a good relationship between the professional nurse and the person living with DM (Belzer, 1999: 24)

- address time constraints by encouraging the person living with DM to identify concerns or topics to be discussed making use of an assessment form such as the Diabetes Concerns Assessment Form as used by Michigan Diabetes Research Center while waiting for a session (Anderson and Funnel, 2005). See Annexure N for example

- allow the person living with DM to choose topics for discussion (Welch et al, 2006: 8)

- assist the person living with DM to identify and set goals which are “specific, measurable, achievable, relevant and timely (SMART goals)” (Vallis, 2009: 7)

- assess the level of acceptance of the need for change in the person living with DM using tools such as the Importance-Confidence ruler (Welch et al, 2006: 8)

- assist the person living with DM to set goals in small steps or increments with plans to decide how to achieve those goals (Vallis, 2009: 7; Funnell and Weiss, 2009: 37)

- make use of positive feedback to assist in the development of a stronger locus of control particularly in people who have previously either believed in chance or powerful others as a controlling factor in their health status (Morowatisharifabad, Mahmoodabad, Baghianimoghadam and Tonekaboni, 2009: 38)

- ensure that decisions regarding implementation of self-management strategies are taken in consultation with the person living with DM who has to take full personal responsibility for them

- ascertain if the person living with DM wishes to involve significant others in the education process, e.g. spouses, parents or children of elderly patients

- remain an active listener through the process

- address any concerns the person living with DM has about achieving the goals which have been identified (Rollnick et al, 2003: 87)
assist the person living with DM to gain insight about the meaning of an identified problem which often leads to behaviour change
be aware that negative emotions will be revealed at times but that “emotions are not problems to be solved” and may assist in identifying goals (Anderson and Funnell, 2005: 168)
ensure that methods of implementation are feasible and attainable for the circumstances experienced by the individual
assist the person living with DM to identify means of avoiding or altering situations which foster unhealthy choices so that their influence is limited (Vallis, 2009: 7)
show how to link behaviours to family activities and routines such as riding on an exercise bicycle while watching the news on TV or walking with other family members for thirty minutes three times a week (Tucker, 2005; Rutter and Quine, 2002: 127)
encourage a system for positive reinforcement with rewards for achieving goals to encourage the person living with DM (Vallis, 2009: 8)
encourage assertiveness training for persons living with DM to allow them to deal with people who undermine any gains which have been made
encourage association with other people who are living with DM to assist with modelling new roles by attending a support group or meetings of Diabetes South Africa (Browning and Thomas, 2005: 254)
make use of self-monitoring to record any gains made or obstacles encountered
use monitoring diaries such as those of the Flinders University Health Behaviour and Research Unit (2001, as referred to by Browning and Thomas, 2005: 256) to:
- identify any triggers for symptoms or change in condition
- form the basis of action plans to address any symptoms or problems or
- act as a motivational tool
be aware that it is essential for the person living with DM not to feel judged in any way
make a conscious effort to keep their personal thoughts and feelings in abeyance while supporting the patient in his choice of action
o ensure that the person living with DM has a good understanding of the expected outcomes of his choices
o assure the person living with DM regarding continuous support, providing a 24 hour contact number in case of questions or an emergency
o make use of written take-home information to improve treatment adherence (Kessels, 2003: 221)
o refer to the appropriate person in the multi-disciplinary team as a priority if the person living with DM exhibits complex problems including psychological problems such as depression (Tucker, 2005).

The following points should form part of an effective patient education programme which should be available to persons living with DM whether managed in the public or the private health care sector:

o Education initiative to commence as soon as possible after diagnosis
o Education initiative to be staged to meet the needs of the individual at the time
o Education initiative to include several one-on-one sessions
o Group sessions to allow members to increase their own knowledge by sharing with each other
o Education sessions to make use of process of the therapeutic relationship
o Goals to be set by the person living with DM using SMART principles
o Professional nurse to make use of available guidelines such as the National Guidelines or SEMDSA guidelines
o Education sessions to include:
  ▪ The need to obtain a medic-alert bracelet or other identifier
  ▪ To always carry a snack or concentrated glucose sweets
  ▪ Basic information on causes of DM
  ▪ Basic information on risk factors
  ▪ Prevention of complications eg hyperglycaemia/hypoglycaemia
    – Symptoms of hyperglycaemia/hypoglycaemia
    – Treatment of hyperglycaemia/hypoglycaemia
  ▪ Action and side-effects of medication – oral and insulin
  ▪ How to use medication effectively
  ▪ Correct storage of insulin – prevention of freezing
  ▪ The need to check expiry dates of medication to prevent wastage
• Advice and monitoring of injection technique such as site rotation
• Storing medication and other supplies such as lancets, pens and needles in a safe but easily accessible place
• Correct use and storage of test strips – keeping the lid closed to prevent exposure to moisture
• Correct disposal of used equipment, particularly sharps
• If possible, keep a separate glucose monitor at work to allow for regular monitoring, if required
• Advice on exercise as discussed in Action strategy
  ▬ Choose an activity which is enjoyable
  ▬ If joining a gym, choose one close to work or home
  ▬ Plan exercise sessions in advance
  ▬ If utilizing a gym, pack gym bag the night before
  ▬ How to adjust snacks according to exercise levels
• Advice on diet. Simple steps can be beneficial.

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<th>Suggested dietary advice</th>
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<td>• Lose weight if overweight</td>
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<td>• Not to use fad diets from magazines or other unregulated sources</td>
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<td>• Use recipes designed for low-fat cooking or specifically for diabetics</td>
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<td>• Make use of the glycaemic index when choosing food</td>
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<td>• Do not spend money on special foods</td>
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<td>• Pay strict attention to portion control</td>
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<tr>
<td>• Make use of fresh fruits and vegetables – but remember to take into account the higher sugar content of fruits</td>
</tr>
<tr>
<td>• Reduce salt intake</td>
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<tr>
<td>• Use herbs and spices to flavour food instead of salt</td>
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<tr>
<td>• Limit alcohol intake</td>
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<tr>
<td>• Use low fat milk instead of full cream milk</td>
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<tr>
<td>• Discard fat on meat and skin on chicken</td>
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<tr>
<td>• Prepare lunches, snacks and water bottles each night for the following day</td>
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<tr>
<td>• When ordering takeaways, ask for a grilled option</td>
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<tr>
<td>• Use Low GI wholegrain bread instead of white bread</td>
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<tr>
<td>• Make use of a dietician for an individual meal plan</td>
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<tr>
<td>• Be able to adapt the meal plan for special occasions and dining out</td>
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<tr>
<td>• Be able to correctly read and interpret food labelling</td>
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<tr>
<td>• Limit use of alcohol</td>
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</table>

• The need for assessment for sleep apnoea in obese patients who find it difficult to lose weight (Reichmuth, Austin, Skatrud and Young, 2005: 1593)
• Foot care as discussed in Strategy One
• The need for proper footwear to prevent sores and blisters
• The importance of smoking cessation – behavioural counseling with pharmacological therapy is often required (Pieber, 2002: 26)
• Practical use of blood glucose testing equipment
• Implementation of a blood glucose monitoring schedule
• Interpretation of blood glucose values and adjusting treatment plan accordingly
• Caring for blood glucose testing equipment, e.g. avoiding extreme temperatures or dropping it, how to clean it
• Blood pressure control
• Cholesterol control
• Sick day management
  – Adjusting food and liquid intake
  – Adjusting monitoring and medication schedule
  – When to consult a health care provider (Australian Diabetes Educators Association, 2006)
• Planning for hospitalization, if necessary (Funnell, 2004: 203):
  – Persons living with DM may be unable to carry out self-care if in a critical care situation
  – Persons living with DM require information regarding meal plans, co-ordination of food and insulin dosages, blood glucose and urine testing while in hospital
  – To resume self-care tasks as soon as possible while in hospital
• Dealing with psychological issues such as depression
• Developing coping skills
• Making use of relaxation techniques such as yoga, meditation, deep-breathing exercises, reflexology and aromatherapy
• The need for regular check-ups to monitor progress and to prevent the onset of complications.

Physical check-ups to include:
• General physical health
• Dilated eye examinations
• Kidney function
• Blood tests such as HbA1c, cholesterol, LDL, HDL and triglycerides
• Vit B12 levels in diabetic patients using metformin (Bell, 2010: 265; Pieber, 2002: 28)
• Urinary microalbuminuria
• Foot examination
• Testosterone levels in males (DM has been shown to adversely affect testosterone production in males (Dandona, Dhindsa, Chandel and Topiwala, 2009: 27; Role of testosterone replacement therapy in diabetic and prostate cancer patients, 2010: 52))
o The need for regular dental care
o Special attention to be given to the needs of female patients regarding family planning and pregnancy issues
o If intending to travel, to consult a physician in good time
  – To prepare for the effects of changing time zones
  – To ensure that the cold chain for insulin is maintained by correct storage methods
o The need to remain abreast of new developments in diabetes care

- Educational material to be designed to target specific cultural and educational groups
  o Informal, patient-driven educational tools such as Conversation Maps are effective in addressing specific individual needs
  o A health literacy programme can be useful for communicating with persons with low literacy levels
  o For those with low literacy, material should facilitate oral communication, the traditional form of communication in Africa (De Clerck, 2005: 14)
  o Cartoons can be used to facilitate discussion on a particular topic

- Use available technology as a communication tool:
  o Use of bulk sms for general motivational messages and information
  o Individual messages for reminders about appointments to improve attendance (Hansen, Olivarius, Siersma, Beck-Nielsen, and Pederson, 2003: 93; Bega, 2010: 15)
  o Internet resources such as Facebook and Twitter to send motivational messages or to spread information about health initiatives to those who have internet access or cellphones (Maryniuk, 2006: 61)

- Expert Patient to play a role in education initiatives (Wykurz and Kelly, 2002: 819)
- Use of community health workers in education initiatives to assist in reinforcing messages
- Make use of all members of multidisciplinary and multi-level medical team to assist in reinforcing education initiatives
- Family members to be encouraged to take part in education initiatives with the people living with DM to provide support and to enable them to better understand the need for lifestyle changes
- Organizers of patient education programmes to be aware of factors such as accessibility and transport to ensure that those who require the information and education are able to access it.

Diabetes nurse educator
Professional nurse
Expert patient.

5.4.3.2(b) Family and community education

The Policy on Quality in Health Care in South Africa recognizes the importance of community involvement in health care (National Department of Health, 2007: 4). Educational initiatives addressing the needs of families and the general community will be listed together as their needs are similar.

- Background information
Another factor important in developing positive memes in the individual is the education of the family and significant others of the patient and the community at large on the impact of DM type 2. Family members should be actively engaged in the education process (Pieber, 2002: 25). Educational interventions will help create a better understanding of the experience of the person living with DM which is often lacking as found by some participants in Group One. The participants in both groups felt that education of the greater community would be beneficial. This form of health education and promotion may also assist in the prevention of the development of DM in other members of the family of the patient or of the community at large.

- Proposed outcome
Family members of persons living with DM and members of the community are given the opportunity to increase their knowledge about diabetes in order to provide a social support network for those who require it.

- **Rationale**
  Studies have shown that social support is one of the most effective methods of lifting external barriers to self-management amongst persons living with DM (Chlebowy et al, 2010: 7). As the condition has so many negative economic and health connotations, it is essential for the person living with DM, the family involved and the community to develop an understanding of the implications of the diabetes pandemic. Perceived barriers to diabetes education noted in the Diabetes Atlas include factors such as cultural beliefs and employers not allowing people with diabetes to take time off work (International Diabetes Federation, 2009a). Community education will assist in lifting these barriers.

- **Implementation activities**
  Professional nurses may assist in educating families of persons living with DM and the community by:
  - Explaining the management of the condition to improve support levels while stressing the fact that the person living with DM remains ultimately responsible
  - Initiating and taking part in regular awareness days and screening programmes in the city
  - Encouraging diabetes prevention strategies in the community such as:
    - Encouraging breast feeding in women
    - Targeting people with impaired glucose tolerance or insulin resistance to implement non-medical measures
    - Encouraging diet and weight loss in those at risk – these are the most effective measures in prevention of DM
  - Ensuring education initiatives for family and community which include:
    - Education on risk factors – obesity, smoking, lack of exercise, cardiac disease, hypertension
    - Prevention of onset of disease
    - Prevention of complications
- Dealing with complications such as hyper/hypoglycaemia
- Methods of providing support to the person living with DM
  - Presenting education initiatives to groups of people:
    - At work-related areas such as factories
    - In schools
    - At churches
    - At relevant lifestyle fairs and exhibitions
  - Involving local schools in programmes which link nutrition and gardening to other subjects to promote healthy lifestyles in children which may prevent or delay the onset of DM in some people
  - Ensuring that education initiatives include traditional healers as in the Traditional Health Practitioners Act of 2007 and the draft National Policy on African Traditional Medicine in South Africa (Muller, 2009: 87).

Diabetes nurse educator
Professional nurse
Expert patient.

5.4.3.2(c) Education for health care professionals

All members of the multidisciplinary medical team should receive ongoing education and training on the needs of the person living with DM.

- Background information

Education of health care workers in all aspects of DM is essential (Sum, 2001: 499). Participants from both groups felt that professional nurses do not generally have the insight and knowledge required to deal with persons living with DM. Some professional nurses admit that they lack sufficient lifestyle counselling skills (Jansink, Baspenning, Van der Weijden, Elwyn and Grol, 2010: 43). Other health care workers also require further education in the special needs of persons living with DM. As one Group One participant stated “All those dealing with diabetic patients should talk with the same voice”. Educational initiatives at appropriate levels can be provided for all categories of health care workers (World Health Organization, 2008b: 3). The International Diabetes Federation has published an International Curriculum for Diabetes Health Professional Education addressing all aspects of diabetes care (International Diabetes Federation, 2002). A Diabetes Education Training Manual specifically tailored for Sub-Saharan Africa has also
been published (International Diabetes Federation, 2009b). These tools will be of great value in educational initiatives introduced in Nelson Mandela Bay.

Further education for diabetes nurse educators is essential as research findings lead to new developments and methods of management of DM. In Nelson Mandela Bay, regular meetings are held where training and networking take place for local diabetes nurse educators. However, although diabetes nurse educators working in the public sector are invited to attend the evening meetings, they do not do so, mainly due to transport problems (Williams, 2010). Possible alternatives at times and venues accessible for public health care workers could be considered.

Education initiatives for health care workers should include the importance of continuous research. Potentially valuable research studies are often hampered by the lack of response. A study undertaken by Health Systems Trust had a 24% response rate from a total of 70 institutions which were approached (Magwaza, Mathambo, Magongo, Kortenbout, Mvo and Makhanya, 2003: 2).

- **Proposed outcome**
  All health care staff have access to training initiatives and relevant information on all aspects of diabetic care to improve the level of service offered to persons living with DM.

- **Rationale**
  As DM is such a complex condition, with a high morbidity and mortality rate, effective and cost-effective management is required. However, many health professionals do not have enough knowledge to assist persons living with DM with self-management principles. Professional nurses also find it difficult to implement behavioural modification strategies when dealing with persons living with DM. Research is taking place continuously leading to new developments in care. As health care delivery should be based on evidence-based care, continuing education on new methods of management of DM should be implemented on an ongoing basis.
• **Implementation activities**

The professional nurse may assist in the education of other health care workers in all aspects of diabetes care by:

- Implementing formal educational programmes for all health care professionals working with persons living with DM
- Motivating for university level courses on the management of DM to raise standard of care delivery
- Making use of distance learning to provide greater coverage for all health care professionals and to develop self-directed learning skills
- Encouraging attendance at regular training and networking meetings for diabetes nurse educators by scheduling meetings at convenient times and accessible venues
- Encouraging diabetes nurse educators to join professional organizations such as DESSA for networking and to ensure that the standard of diabetes education is elevated and maintained
- Ensuring that all courses on the management of DM include basic pre-requisites of knowledge to implement a self-management programme for persons living with DM:

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<thead>
<tr>
<th>Basic pre-requisites of knowledge for self-management of DM:</th>
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<tr>
<td>• Definition of DM – classification of types</td>
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<td>• Aetiology</td>
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<td>• Pathophysiology</td>
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<td>• Identification of risk factors for DM</td>
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<tr>
<td>• Symptoms of DM</td>
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<tr>
<td>• Management of DM – medication, diet, exercise and psychological aspects</td>
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<tr>
<td>• Development of counselling skills</td>
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<tr>
<td>• Management of complications such as hyper/hypoglycaemia</td>
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<tr>
<td>• Implementation of monitoring tasks such as foot care and SMBG – special attention to be given to training on foot care to prevent lower limb amputations</td>
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<tr>
<td>• Role of multidisciplinary team – when to refer</td>
</tr>
</tbody>
</table>

- Lobbying for courses on aspects of management of DM to be presented regularly as Continuous Professional Development for medical staff
- Encouraging the use of medical libraries at public sector hospitals as information and research centres for professional nurses
- Using smart phones to provide access to medical information resources  
  (Van Zyl, 2010: 1)
- Diabetes nurse educators to provide education to health care workers in both public and private sectors as a social responsibility initiative

*Diabetes nurse educator*

*Professional nurse*

Strategy Three, the Education strategy, is summarized in the following table:

**Table 5.4 Summary of Strategy Three – Education strategy to improve compliance with self-management principles in persons living with DM**

<table>
<thead>
<tr>
<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
</tr>
</thead>
</table>
| 3. Education strategy to improve compliance with self-management principles in persons living with DM | 3.1 Grand strategies | Policy-makers in public health care sectors to provide facilities and resources to enable the professional nurse to implement educational programmes by:  
- Providing educational materials to be utilized in educational programmes  
- Involving pharmaceutical companies, especially those winning state tenders, in sponsoring educational initiatives in the community as part of their social responsibility programmes  
- Enabling the provision of a combination of one-to-one and group education for persons living with DM  
- Providing suitable venues for professional nurses to implement educational programmes on DM for all cultural groups  
- Providing suitably qualified health care staff to assist in the provision of educational programmes and awareness initiatives about DM  
- Providing facilities to research the needs of the community to enable educational programmes on DM to be designed for specific target groups | Policy-makers in national government services  
- Policy-makers in private health care services  
- Management in local health care facilities  
- Management of pharmaceutical companies and other suppliers of health care resources |
<table>
<thead>
<tr>
<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
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<tbody>
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<td></td>
<td>such as age-related or various cultural groups • Providing media advertising to inform persons living with DM, their families and the community that educational initiatives are available to them and how to access them.</td>
<td>Relevant policy-makers in public and private health care sectors and in health education should provide facilities and resources to enable the implementation of educational programmes for health care workers at micro level by: • Implementing effective co-ordination of training programmes for all staff dealing with persons living with DM • Increasing the level of education on DM during basic nursing courses • Conducting regular evaluation of strategies and training programmes • Co-operation with universities and training colleges to provide regular short courses on management of DM • Facilitating training of nurse practitioners specializing in DM • Making use of distance education with minimal contact sessions to implement education for health care workers.</td>
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<tr>
<td></td>
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<td></td>
<td>. Policy-makers in national government services . Policy-makers in private health care services . Management in local health care facilities . Management in local health care training institutions accredited by SANC</td>
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</tbody>
</table>

### 3.2 Functional strategies

#### 3.2(a) Patient education

When implementing the therapeutic relationship, the professional nurse will:
- Address time constraints by making use of an assessment form
- Assist the person living with DM to set SMART goals
- Assist the person living with DM to set goals in small steps or increments
<table>
<thead>
<tr>
<th>ACE strategies</th>
<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
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<tbody>
<tr>
<td></td>
<td>Make use of positive feedback to assist in the development of a stronger internal locus of control</td>
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<td>Ascertain if the person living with DM wishes to involve significant others in the education process, e.g. spouses, parents or children of elderly patients</td>
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<td>Ensure that decisions regarding implementation of self-management strategies are taken in consultation with the person living with DM</td>
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<td>Remain an active listener through the process</td>
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<td>Address any concerns the person living with DM has about achieving identified goals</td>
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<td></td>
<td>Assist the person living with DM to gain insight about the meaning of an identified problem which often leads to behaviour change</td>
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<td></td>
<td>Be aware that negative emotions will be revealed at times but that “emotions are not problems to be solved” and may assist in identifying goals</td>
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<td>Ensure that methods of implementation are feasible and attainable for the circumstances experienced by the individual</td>
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<td>Assist the person living with DM to identify means of avoiding or altering situations which foster unhealthy choices so that their influence is limited</td>
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<td>Show how to link behaviours to family activities and routines</td>
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<td>Encourage a system for positive reinforcement with rewards for achieving goals to encourage the person living with DM</td>
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<tr>
<td><strong>ACE strategies</strong></td>
<td><strong>Sub-strategies</strong></td>
<td><strong>Implementation activities</strong></td>
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<td>assertiveness training for persons living with DM to allow them to deal with people who undermine any gains which have been made</td>
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<td>• Encourage association with other people who are living with DM to assist with modelling new roles by attending a support group or meetings of Diabetes South Africa</td>
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<td>• Make use of self-monitoring to record any gains made or obstacles encountered</td>
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<td>• Use monitoring diaries to:</td>
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<td>• identify any triggers for symptoms or change in condition</td>
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<td>• form the basis of action plans to address any symptoms or problems or</td>
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<td></td>
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<td>• act as a motivational tool</td>
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<td>• Be aware that it is essential for the person living with DM not to feel judged in any way</td>
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<td>• Make a conscious effort to keep his/her personal thoughts and feelings in abeyance while supporting the patient in his choice of action</td>
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<td>• Ensure that the person living with DM has a good understanding of the expected outcomes of his choices</td>
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<td>• Assure the person living with DM regarding continuous support, providing a 24 hour contact number in case of questions or an emergency</td>
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<td>• Refer to the appropriate person in the multi-disciplinary team as a priority if the person living with DM exhibits complex problems including psychological problems such as depression</td>
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An effective patient education programme should include: Diabetes nurse educator
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<tr>
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<th>Sub-strategies</th>
<th>Implementation activities</th>
<th>Persons responsible</th>
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<tr>
<td></td>
<td></td>
<td>• Education initiative to commence as soon as possible after diagnosis</td>
<td>Professional nurse</td>
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<td>• Education initiative to be staged to meet the needs of the individual at the time</td>
<td>Expert patient</td>
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<td>• Education initiative to include several one-on-one sessions</td>
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<td>• Group sessions to allow members to increase their own knowledge by sharing with each other</td>
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<td>• Education sessions to make use of process of the therapeutic relationship</td>
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<td>• Goals to be set by the person living with DM using SMART principles</td>
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<td>• Professional nurse to make use of available guidelines such as the National Guidelines or SEMDSA guidelines</td>
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<td>• Education sessions to include:</td>
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<td>• Basic information on causes and risk factors of DM</td>
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<td>• Prevention of complications</td>
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<td>• Action, side-effects and correct utilization of medication – oral and insulin</td>
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<td>• Safety issues regarding medication and equipment</td>
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<td>• Advice on exercise as discussed in Action strategy</td>
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<td>• Advice on diet.</td>
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<td>• The need for assessment for sleep apnoea in obese patients who find it difficult to lose weight</td>
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<td>• The need for proper footwear to prevent sores and blisters</td>
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<td>• The importance of smoking cessation</td>
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<td>• Aspects related to blood glucose monitoring</td>
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<td>Blood pressure control</td>
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<td>Cholesterol control</td>
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<td>Educational material to be designed to target specific cultural and educational groups</td>
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<td>Use available technology as a communication tool:</td>
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<td>Expert Patient to play a role in education initiatives</td>
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<td>Use of community health workers in education initiatives to assist in reinforcing messages</td>
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<td>education are able to access it</td>
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<td>3.2(b) Family and community education</td>
<td>Professional nurses may assist in educating families of persons living with DM and the community by:</td>
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<td>Diabetes nurse educator, Professional nurse, Expert patient</td>
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<tr>
<td>ACE strategies</td>
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</table>
| 3.2(c) Education for health care professionals | | The professional nurse may assist in the education of other health care workers in all aspects of diabetes care by:  
- Implementing formal educational programmes for all health care professionals working with persons living with DM  
- Motivating for university level courses on the management of DM to raise standard of care delivery  
- Making use of distance learning to provide greater coverage for all health care professionals and to develop self-directed learning skills  
- Encouraging attendance at regular training and networking meetings for diabetes nurse educators by scheduling meetings at convenient times and accessible venues  
- Encouraging diabetes nurse educators to join professional organizations such as DESSA for networking and to ensure that the standard of diabetes education is elevated and maintained  
- Ensuring that all courses on the management of DM include basic prerequisites of knowledge to implement a self-management programme for persons living with DM:  
- Lobbying for courses on aspects of management of DM to be presented regularly as Continuous Professional Development for medical staff  
- Encouraging the use of medical libraries at public sector hospitals as information and research |  
- Diabetes nurse educator  
- Professional nurse |
5.5 EVALUATION OF STRATEGIES

Evaluation of the proposed strategies forms part of the research process in order to establish the trustworthiness of the study as described in Chapter Two. An Expert Panel (consisting of a specialist physician with a special interest in diabetes, two diabetes nurse educators and a nursing academic with a PhD focusing on management of DM) was approached to evaluate the draft strategies. The comments of the members of the panel were incorporated into the final version of the strategies.

Criteria used for evaluation of a nursing model were adapted to evaluate the proposed strategies in this study. The literature on the evaluation of nursing models and theories proposes a number of criteria which deal with both the internal and external validity of the proposed theories or models. The criteria which were selected for evaluation are derived from those suggested by Fawcett (1995: 47-52), McKenna (1997: 227-235) and Pearson, Vaughan and Fitzgerald (1997: 218-221). The following criteria were selected as those common to the above authors which evaluate both the internal and external validity of the strategies and are presented together with the comments of the Expert Panel.

5.5.1 Clarity of the strategies

The strategies are presented clearly, using understandable language. A member of the Expert Panel felt that the repetition used when describing the strategies could be reduced. It was generally felt that the background information provides a
good basis for the rationale and development of the strategies. The format used to explain the ACE strategies is clear.

5.5.2 Simplicity of the strategies

The three main strategies are simple to understand and demonstrate a logical development which links theory and practice. Although a member of the Expert Panel felt that the attention given to grand strategies could be reduced, other members felt that the ACE strategies are logically developed, are practical and correlate theory and practice.

5.5.3 Generality of the strategies

The strategies have been compiled in the context of Nelson Mandela Bay in the Eastern Cape, South Africa. It will be possible, however, to transfer the strategies to other geographic areas where required. A member of the Expert Panel stated that “DM is a global and particularly a national challenge” and is not limited to a single population. The strategies have been prepared with this fact in mind. The strategies will be able to be implemented in both the public and private health care sectors. Implementation of the strategies, it was felt, would be easier in the private sector but creation of a National Diabetes Strategy would make implementation easier in the public sector.

5.5.4 Usefulness/utility of the strategies

The strategies will be of use in practice and give clear methods of implementation. It will be possible for the professional nurse to implement the functional strategies in order to assist the person living with DM to achieve a greater level of self-management. However, the Expert Panel members emphasized that the grand strategies must be in place for the functional strategies to be effective.
The above strategies focus on the person already living with DM as that was the aim of this study. However, the strategies may be reworked for implementation in primary health care for prevention of the development of DM.

5.5.5 Significance of the strategies

The strategies will be able to positively influence nursing practice, education and research. Implementation of the strategies will have a positive effect on quality of care delivered to persons living with DM. If implemented correctly, quality care could be rendered to persons living with DM and prevention of new cases may occur. A member of the Expert Panel stated that all nurses should develop a deeper understanding of the experiences of persons living with DM in order to equip them to play a significant role in the life of their patients.

5.6 CHAPTER SUMMARY

In Chapter Five, the ACE strategies aimed at facilitating self-management in persons living with DM were presented. A number of supplementary strategies were described under the groupings of Action, Co-ordination and Education. The desired outcome of each strategy was given together with a rationale for the inclusion of the strategy. Methods of implementation of the strategies were described. An evaluation of the strategies was presented.

The following chapter will present the conclusions of this study together with limitations and recommendations for nursing practice, nursing education and nursing research.
CHAPTER SIX

CONCLUSION, LIMITATIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

Strategies to assist the professional nurse to facilitate the acceptance of personal responsibility and implementation of self-management strategies in persons living with DM were presented in Chapter Five. Chapter Six will focus on conclusions, limitations and recommendations for nursing practice, education and further research.

6.2 CONCLUSIONS AND SUMMARY

In this study, the researcher’s objective was to explore and describe the experiences of persons living with DM in Nelson Mandela Bay and of diabetes nurse educators who assist them with self-management. The purpose of the study was to utilize the data collected to create a conceptual framework which would form the basis of strategies which can be used by professional nurses to assist persons living with DM in the development of personal responsibility, enabling them to implement self-management strategies.

An exploratory, descriptive, contextual qualitative research design was used to create an understanding of the experiences both of persons living with DM and of the diabetes nurse educators who assist them. The study was conducted in two
phases. Phase One consisted of data collection from persons living with DM in Nelson Mandela Bay and from professional nurses working as diabetes nurse educators. Data were collected by means of individual interviews and focus group sessions which were tape recorded and transcribed verbatim. The resulting data were analysed and coded by an independent coder and by the researcher. Data analysis led to the identification of themes which were used to create the conceptual framework in Phase Two.

Phase Two consisted of two steps. Step One of Phase Two was the compilation of a conceptual framework. This was done with reference to the survey list of aspects of activity identified by Dickoff et al (1968: 422). Step Two of Phase Two consisted of the compilation of strategies, making use of the conceptual framework, to assist professional nurses working with persons living with DM. The strategies, which are closely related and interlinked, form the ACE approach to self-management which uses the Empowerment Model of Anderson and Funnell, (2005) as a point of reference.

The following research objectives were identified for this study:

- To explore and describe the experiences of persons living with and managing DM
- To explore and describe the experiences of professional nurses assisting persons living with DM in the management of their condition
- To create a conceptual framework for the facilitation of self-management by persons living with DM
- To identify strategies which the professional nurse may use in the facilitation of self-management by persons living with DM.

Each objective will be individually reviewed to assess whether it has been achieved during this research study.

- **To explore and describe the experiences of persons living with and managing DM**

Analysis of the data obtained in the semi-structured interviews with the group of diabetic patients showed that there is a definite initial reaction to the diagnosis of
DM. The initial reaction is usually negative with a range of emotions such as shock, anger, denial, resentment and anxiety about the future. Some participants, however, experienced relief on diagnosis as they had feared a worse condition.

Lifestyle changes to assist in achieving optimal blood glucose levels were implemented as knowledge and understanding of the implications of the condition grew. The participants in this group were aware of the concept of self-management and that it required lifestyle changes regarding diet, exercise and medication. They acknowledged the need for self-discipline to implement the lifestyle changes.

Participants acknowledged a number of positive and negative factors which influenced their ability to achieve self-management. The same factors could be either positive or negative for some of the participants. These factors ranged from support from family and friends, physical competency to deal with lifestyle changes, financial and cultural issues and the availability and accessibility of information.

Participants also acknowledged the role which professional nurses could play in facilitating self-management in persons living with DM. A number of suggestions were made, which included the fact that nurses should be educated themselves on all aspects of the management of DM. Another factor which was noted was that participants felt that professional nurses should set an example for the patient in implementing a healthy lifestyle themselves.

The objective of exploring and describing the experiences of patients about living with and managing DM in Nelson Mandela Bay was achieved with a description of the themes and data in Chapter Three.

- To explore and describe the experiences of professional nurses assisting persons living with DM in the management of their condition

During analysis of the data obtained from a focus group interview and semi-structured interviews with professional nurses working as diabetes nurse
educators in Nelson Mandela Bay, a number of themes were identified. Many of
the themes supported the data given by the Group One participants.
All diabetes nurse educators were in agreement with the themes which were
identified during the data analysis process. The DNEs all acknowledged the
importance of patient education as well as the motivation and empowerment of
patients.

Many of the factors which assist or hinder the persons living with DM were in
agreement with the factors identified among the Group One participants. Group
Two participants, however, added that there are some doctors who do not wish to
refer their patients to specialist care when referral is indicated and should be
encouraged to do so. The DNEs agreed that financial aspects play a major role in
allowing persons living with DM to receive optimal care, that cultural factors are
important to patients, that some persons living with remain in denial and do not
wish to take responsibility for their own health care and that sometimes other
physical problems may make self-management difficult. DNEs also felt that South
Africa was lacking in the application of certain forms of modern technology.

The DNEs agreed with the Group One participants about ways in which
professional nurses could assist in the facilitation of self-management of DM. This
included taking part in continuing education on the subject, being aware of the
financial implications of the condition and lobbying for DM to receive the same
attention and resources as other chronic diseases.

The objective of exploring and describing the experiences of the professional
nurse in assisting patients to achieve self-management of their condition was
achieved with a presentation of the themes and data in Chapter Three.

- **To create a conceptual framework for the facilitation of self-management
  by persons living with DM**

A conceptual framework for the facilitation of self-management of persons living
with DM was created, making use of a survey list as described by Dickoff et al
(1968: 421). The aspects of activity which were used in the creation of the
conceptual framework were context, agent, recipient, procedure, dynamics and
terminus or goal. During development of the conceptual framework, the concept of the Expert Patient as sub-agent was also included. A major concept which was identified during the data analysis and coding process was that of personal responsibility which is essential for the successful implementation of self-management strategies.

The process of the development of the conceptual framework has been described in Chapter Four.

- **To identify strategies which the professional nurse may use in the facilitation of self-management by persons living with DM**

Strategies to facilitate the acceptance of personal responsibility and the implementation of self-management strategies in persons living with DM were identified. The strategies are designed to positively influence the memes held by persons living with DM regarding their health and diabetes. Each strategy was described on both grand (macro and meso) and functional (micro) levels. Three strategies which are closely related and interlinked form the ACE approach to the self-management of DM. The strategies which were identified are Action, Co-ordination and Education. Each strategy has a number of related sub-strategies.

The Action strategy includes development of health promotion policies and legislation, physical action, implementation of lifestyle changes, patient advocacy and development of self-awareness and responsibility to self. On a macro level, a National Diabetes Strategy is required to focus attention on the need for action against the spread of the diabetes pandemic in South Africa. A National Diabetes Strategy will also assist in the provision of resources for carrying out functional strategies on a micro level.

The Co-ordination strategy addresses the co-ordination of available resources to provide effective services for persons living with DM. Co-ordination of resources and capacity building are integral parts of this strategy. Grand strategies include co-ordination of resources on a macro and meso level to provide effective health services for persons living with DM. Co-ordination may be carried out between the public and private health care sectors which will be an essential requirement.
when the NHI is implemented. On a micro level, the professional nurse should assist in the implementation of co-ordination and capacity building initiatives for health care services for persons living with DM. Examples of functional strategies include networking with societies and health care professionals, making use of social marketing initiatives and quality assurance tools such as audits and benchmarking, compilation of databases and creation of a diabetes patient register.

The Education strategy includes patient education, family and community education and education of health professionals. Education is essential for the development of positive memes in persons living with DM and in the community. Grand strategies address the provision of human and material resources for effective education initiatives for persons living with DM, family and the community and for all health care professionals working with persons living with DM. Patient education making use of the therapeutic relationship is an essential part of the duties of the professional nurse working with persons living with DM. Education is not limited to the person living with DM. Education initiatives must include the family and the general community in order to provide support for the person living with DM and also to aid in the prevention of DM. It is essential for all members of the multidisciplinary team to receive ongoing education and training on the needs of the person living with DM.

A description of the strategies which form the ACE approach to self-management of DM and action steps for implementation are given in Chapter Five. Chapter Five also includes an evaluation of the strategies by an Expert Panel.

In the light of the above discussion, it can be concluded that the objectives have been reached.

6.3 LIMITATIONS OF THIS STUDY

The following limitations of this study were noted during the research process:
• The study was limited to persons living in the Nelson Mandela Bay urban and suburban area. There is no input from persons living with DM who reside in outlying semi-rural areas and who may experience more difficulty in obtaining medical care due to a lack of access to adequate health facilities;

• Participants in Group One were predominantly white and managed in the private health care sector although some were from lower economic groups and made use of lower income medical aid schemes, limiting the range of treatment available to them in a similar way to those being managed in the public sector;

• Participants in Group Two were experienced Diabetes Nurse Educators. There was no input from professional nurses working in other specialties who do not have specialized training in assisting persons living with DM;

• There is not enough input from Diabetes Nurse Educators working in the public sector. Although DNEs working in the public sector hospitals were invited to take part in the study and agreed to do so, they were forced to cancel attendance at the focus group session at the last minute due to excessive work loads. One public sector DNE took part in this study;

• A follow-up session with the DNE participants to review the suggested strategies would enhance the relevance, applicability and usability of the strategies:

• As the NHI has not yet been introduced and the ways in which it will be implemented have not been finalized, it is difficult to predict what effect it will have on the provision of health services in both the public and private sectors.

6.4 RECOMMENDATIONS
The following recommendations are made to implement the strategies which were described in Chapter Five.

6.4.1 Recommendations for strategies to be implemented on a macro or meso level

As discussed in Chapter Five, the professional nurse is unable to carry out the implementation of functional strategies if action is not taken on a macro or meso level. It is recommended that the following grand strategies be implemented:

- International collaboration in programmes led by organizations such as the IDF, WHO and ICN which address the realities of the diabetes pandemic should receive support from leaders in both the public and private healthcare sectors in South Africa;

- National Diabetes Strategy to be compiled and implemented to assist in the co-ordination of care for persons living with DM;

- Resources for activities discussed under Strategy One in Chapter Five to be provided refer to Chapter Five for a detailed discussion of activities;

- Health care resources, in both the public and the private health care sectors, to be co-ordinated in such a way that a more efficient service is provided to persons living with DM see Strategy Two – Co-ordination.

6.4.2 Recommendations for nursing practice

It is recommended that:

- More attention be given to co-ordination of public-private health care initiatives in Nelson Mandela Bay to provide a cost-effective holistic service to all persons living with DM;

- Policy-makers in the public health sector as well as those employed in the private sector, particularly by medical aid schemes, should be made aware of the findings of this study as it presents the views of the diabetic patient regarding what they require to assist them in achieving a high level of self-
management, leading to more cost-effective management of the condition. Articles in relevant health care industry journals and presentation at a research conference attended by policy-makers will aid in the dissemination of these findings;

- Guideline documents, which are available, such as the National Guidelines for the management of DM type 2, must be made available to all staff dealing with persons living with DM;

- The proposals in the above-mentioned guidelines must be implemented to ensure that persons living with DM receive correct, cost-effective management;

- All staff working in contact with persons living with DM should receive regular in-service education and training on all aspects of self-management of the condition;

- Opportunities for staff to share information or request assistance regarding particular problems should be created. Formal or informal meetings can facilitate interaction between staff members and allow feedback to take place;

- Facilities to obtain further information to assist in advising patients must be made available to all staff working in both the public and private health sectors. Medical libraries are available at the public sector hospitals in Nelson Mandela Bay. Similar facilities should be made available at the private sector hospitals;

- Particular attention should be given to discharge planning for persons living with DM who find themselves in hospital, particularly for those who are admitted due to difficulties with managing blood glucose levels;

- Nurses working in areas where there may be limited emphasis on in-service training, such as factories or medical practices, should be given the
opportunity to attend training sessions which will give them the knowledge required to assist persons living with DM to implement self-management strategies;

- Qualified Diabetes Nurse Educators should be employed at each hospital, both in the public and private sector, to facilitate training for persons living with DM and for other staff members;

- Quality assurance and benchmarking tools such as patient registers, audits and competencies must be provided and implemented on a national, provincial and local level;

- Basic monitoring and assessment equipment such as glucometers and sphygmomanometers must be made available and be kept in working order at local clinics.

6.4.3 Recommendations for nursing education

It is recommended that:

- All aspects of DM including the importance of self-management must be addressed fully during the basic training courses for all categories of nursing staff;

- Post-basic courses should include aspects of DM self-management where relevant;

- Specialized courses covering all areas of management of DM must be made more readily available. Staff members of all ranks should be encouraged to attend these courses;

- Formal short learning programmes should be offered by higher learning institutions approved by SANC;
During training courses, special attention should be given to cultural factors which may affect the implementation of lifestyle changes, particularly with regard to diet, in the person living with DM;

Training courses should include methods of facilitating the development of personal responsibility and empowerment of the person living with DM, positively reinforcing positive memes regarding health behavior.

6.4.4 Recommendations for further nursing research

It is recommended that:

- Further investigation be conducted in a rural area to identify particular challenges faced by persons living with DM;

- A similar study may be done where participants are patients making exclusive use of available public health facilities;

- Services available at private medical centres or medical practices for persons living with DM should be evaluated and audited as part of the quality assurance programme;

- A similar study may be conducted in other provinces to assess similarities and differences in the experiences of persons living with DM in other parts of South Africa;

- Further research on the links between DM and other conditions such as cardiovascular disease and depression will be invaluable;

- A follow-up study on the implementation and evaluation of the proposed strategies would be valuable in order to assess their efficacy.
6.5 CONCLUDING SUMMARY

In this chapter, the researcher has presented a summary of the research process. The research objectives have been reviewed together with the conclusions of the study. Limitations of the study were highlighted. Recommendations for nursing practice, nursing education and for further research have also been identified and presented in this chapter.

Diabetes Mellitus is a chronic lifestyle disease with major implications for the health of patients living with the condition. As self-management forms the basis of the treatment of DM, it is imperative that patients are able to understand the condition and all the implications regarding their health and lifestyle and to take personal responsibility to implement the lifestyle changes which are required. The professional nurse should be in a position to facilitate self-management skills and to foster the growth of personal responsibility in persons living with DM. There are many factors which affect the implementation of lifestyle changes which are required to achieve an optimal level of self-management in an individual patient. By creating an understanding of the experiences of the patient diagnosed with DM, it is possible for professional nurses to make use of the suggested strategies to facilitate the development of self-management skills by persons living with DM.


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Henrichs, HR. Against the worldwide epidemic. *Diabetes Voice*, Vol. 54, no. 3: 3


International Nurses Day highlights innovations that support the wellness of Africa’s nurses. 2009. Nursing Update, Vol. 33, no. 5: 18


Province of the Eastern Cape: Sport, recreation, arts and culture. 2009. Let’s go back to the fields and play! Come and play with MPP. Sportsbuzz: 2.


Sklare, JH. 2005. Define responsibility to accept personal responsibility. Available on


Society for Endocrinology, Metabolism and Diabetes of South Africa. 2009. SEMDSA Guidelines for diagnosis and management of type 2 Diabetes Mellitus for primary health care – 2009.


Williams, H. (Diabetes nurse educator working with a specialist physician). 2006. Personal communication. (10 November 2006 at Greenacres Hospital, Port Elizabeth).

Williams, H. (Diabetes nurse educator working with a specialist physician). 2010. Personal communication. (30 November 2010 at Greenacres Hospital, Port Elizabeth).


Your personal guide to living with diabetes. (S.a.) Johannesburg: Novo Nordisk

ANNEXURE A

CORRESPONDENCE PERTAINING TO THE GRANTING OF PERMISSION TO CARRY OUT THE STUDY
Coleen O’Brien

From: "Van Rooyen, Dalena (Prof) (Summerstrand Campus South)"
     <Dalena.VanRooyen@nmmu.ac.za>
To: "Coleen O’Brien" <coleenobrien@worldonline.co.za>
Sent: Monday, December 10, 2007 9:59 AM
Subject: FW: EXTRACT: REC-H minutes (provisional) dd 28 Nov 07 (Matters referred from FRTI Committee Health Sciences)

Kind regards
Dalena van Rooyen

Prof RM van Rooyen
Head: Department of Nursing Science
Nelson Mandela Metropolitan University
South Campus
PO Box 77000
Port Elizabeth 6031
(041) 5042122 or 083 269 444 8

From: Spies, Ursula (Mev) (Summerstrand Campus South)
Sent: 07 December 2007 10:16
To: Van Rooyen, Dalena (Prof) (Summerstrand Campus South)
Subject: FW: EXTRACT: REC-H minutes (provisional) dd 28 Nov 07 (Matters referred from FRTI Committee Health Sciences)

HUM07.80.2 REC-H NOTED the applications that have been received by the REC-H from the FRTI Committee (Health Sciences). Furthermore it was NOTED that the resolution taken by the FRTI Committee (Health Sciences) on all the applications was “approved subject to amendments being made to the satisfaction of the supervisor”.

b) [H07HeaNUR-001] Nursing strategies to facilitate self-management in patients with Diabetes Mellitus Type II (PRP Prof RM van Rooyen / PI Ms C O’Brien)

RESOLUTION OF REC-H:

2) That the applications be ACCEPTED provided that the recommendations highlighted by the FRTI Committee (Health Sciences) are implemented and the comments of the REC-H are noted by the FRTI Committee (Health Sciences).

Ursula Spies
Nelson Mandela Metropolitan University
Committee Officer
Main Building - 16th Floor - Room 1613 - Summerstrand South Campus
Tel: +27 (0)41 504-3140
Fax: +27 (0)41 504-1940
Email: Ursula.Spies@nmmu.ac.za

1/9/2011
NOTICE: Please note that this eMail, and the contents thereof, is subject to the standard NMMU eMail disclaimer which may be found at: <http://www.nmmu.ac.za/disclaimer/email.htm>
Coleen O'Brien

From: "Van Rooyen, Dalena (Prof) (Summerstrand Campus North)"
   <Dalena.VanRooyen@mnmu.ac.za>
To: "Coleen O'Brien" <coleenobrien@worldonline.co.za>
Sent: Tuesday, June 09, 2009 8:17 AM
Attach: themedata.thmx; colorschememapping.xml
Subject: FW: REC-H Affirmation of Protocol
Hi Coleen

Hope you are well, have you also received information from them, see you soon!

Thanks

Dalena

Kind regards
Dalena van Rooyen

Prof RM van Rooyen
Head: Department of Nursing Science
Nelson Mandela Metropolitan University
J Block, 2nd Floor, North Campus
PO Box 77000
Port Elizabeth
6031
Tel +27 (0)41 5042122 or 083 269 444 8
Fax +27 (0)41 5042816

From: Longe, Kirsten (Ms) (Summerstrand South Campus)
Sent: 04 June 2009 14:55
To: Van Rooyen, Dalena (Prof) (Summerstrand Campus North)
Subject: REC-H Affirmation of Protocol

Dear Prof van Rooyen

In the next few minutes, you will be receiving a “mail merge” email with an attached document named REC-H Affirmation of Protocol for the following project/s:

- H07-Hea-Nur-001: NURSING STRATEGIES TO FACILITATE SELF-MANAGEMENT IN PATIENTS WITH DIABETES MELLITUS TYPE 2

It would be appreciated if you could print out and complete the document attached to the email and send a signed hardcopy to: Ms K Longe, Research Capacity Development, South Campus, MB-13-08 by Tuesday, 30 June 2009.

Ethics clearance is for a period of three years, and the Research Ethics Committee (Human) follows this annual affirmation process to monitor projects which have been given ethics clearance.

Many thanks in advance for your cooperation.

Ms Kirsten Longe
ANNEXURE B

PARTICIPANT REQUEST LETTER – GROUP ONE
Dear Participant,

CONSENT TO PARTICIPATE IN RESEARCH

I am currently registered at Nelson Mandela Metropolitan University for the degree Doctor Curationis in Nursing Science. As a requirement for the degree, I am undertaking a research project entitled “Nursing strategies to facilitate self-management in patients with Diabetes Mellitus type 2”. This study is being conducted under the supervision and guidance of Professor RM van Rooyen of the Nursing Science Department of the university.

The objective of this study is to explore and describe the perceptions and experiences of patients living with Diabetes Mellitus type 2 (DM) as well as the perceptions and experiences of registered nurses assisting patients in the management of their condition. The information will be used to create a conceptual framework for the facilitation of self-management of the patient with DM and to identify strategies which the registered nurse may use in assisting these patients to achieve self-management.

It will be necessary to collect data by means of interviews with patients with DM. These interviews will be tape-recorded and then transcribed verbatim. This data will then be analysed and coded by the researcher and an independent coder. Willing participants will also be asked to keep a reflective journal for a week in which any further thoughts on the subject may be recorded for later analysis. This data will also be coded together with the transcripts of the interviews. The resulting data will be used to create the conceptual framework and to identify strategies which the registered nurse may use in assisting patients with DM.

All information will be strictly confidential and anonymous as no names or places will be identified in the study. The tape-recordings will be kept in a locked safe only accessible to the researcher and will be destroyed after 3 years in case of any queries by participants. The information obtained will only be accessible to the researcher and the independent coder. There will be no identifying features on any of the interviews and journals to ensure anonymity.

Each participant will be asked to sign an informed consent form and has the right to withdraw at any time.

A summary of the research findings will be made available to any person interested in the results.

Your assistance in this research project will be greatly appreciated.

Yours sincerely,

Coleen O'Brien
Doctoral Student
Department Nursing Science
083 652 9891
Dear Participant,

CONSENT TO PARTICIPATE IN RESEARCH

I am currently registered at Nelson Mandela Metropolitan University for the degree Doctor Curationis in Nursing Science. As a requirement for the degree, I am undertaking a research project entitled “Nursing strategies to facilitate self-management in patients with Diabetes Mellitus type 2”. This study is being conducted under the supervision and guidance of Professor RM van Rooyen of the Nursing Science Department of the university.

The objective of this study is to explore and describe the perceptions and experiences of patients living with Diabetes Mellitus type 2 (DM) as well as the perceptions and experiences of registered nurses assisting patients in the management of their condition. The information will be used to create a conceptual framework for the facilitation of self-management of the patient with DM and to identify strategies which the registered nurse may use in assisting these patients to achieve self-management.

As part of the research study, diabetes nurse educators are invited to attend a focus group session in which they will be asked to comment on various aspects of self-management of patients with DM. Participants will be asked to identify factors which assist or may hinder patients in attaining optimal self-management. The focus group session will be tape-recorded and then transcribed verbatim. This data will then be analysed and coded by the researcher and an independent coder. The information obtained will be added to the data obtained from patient interviews. The resulting data will be used to create the conceptual framework and to identify strategies which the registered nurse may use in assisting patients with DM.

All information will be strictly confidential and anonymous as no names or places will be identified in the study. The tape-recordings will be kept in a locked safe only accessible to the researcher and will be destroyed after 3 years in case of any queries by participants. The information obtained will only be accessible to the researcher and the independent coder. There will be no identifying features on any of the interviews and journals to ensure anonymity.

Each participant will be asked to sign an informed consent form and has the right to withdraw at any time.

A summary of the research findings will be made available to any person interested in the results.

Your assistance in this research project will be greatly appreciated. The date, time and venue will be communicated to you as soon as possible.

Yours sincerely,

Coleen O’Brien
Doctoral Student
Department Nursing Science
083 652 9891
ANNEXURE D

INFORMED CONSENT FORM
## CONSENT FORM

**PRINCIPAL INVESTIGATOR:** Coleen O’Brien, Department of Nursing Science, Nelson Mandela Metropolitan University Port Elizabeth, 6000

**ADDRESS** 84 Hudson St, Newton Park, Port Elizabeth, 6045

**TELEPHONE NUMBER:** 041 365 3797       Cell 083 652 9891

### DECLARATION BY OR ON BEHALF OF THE PARTICIPANT

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**I HEREBY CONFIRM:**

- I was invited to participate in the abovementioned research project, which, is being undertaken by Coleen O’Brien at the Department of Nursing Science in the faculty of Health Science at the Nelson Mandela Metropolitan University, Port Elizabeth

- The following aspects have been explained to me as the participant:-
  - The aim of the study is
    - to explore and describe the perceptions and experiences of patients about living with and managing DM type 2
    - to explore and describe the perceptions and experiences of registered nurses assisting patients with DM type 2 in the management of their condition
    - to create a conceptual framework for the facilitation of the self-management of patients with DM type 2
    - to identify strategies which the registered nurse may use in the facilitation of self-management of patients with DM type 2

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<th>Possible benefits:</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>As a result of my participation in this study, registered nurses may be</td>
<td></td>
</tr>
<tr>
<td>enabled to render more optimal holistic care to DM patients.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Confidentiality</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>My identity will not be revealed in any discussion, description or</td>
<td></td>
</tr>
<tr>
<td>scientific publications by the investigator.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Access to findings</th>
<th>Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any new information / benefits that develop during the course of the</td>
<td></td>
</tr>
<tr>
<td>study will be shared with me</td>
<td></td>
</tr>
</tbody>
</table>

The information above was explained to me the participant by Coleen O’Brien in  
English / Afrikaans. I am in command of this language / it was satisfactorily translated to me by  
…………………………………………….. (Name of translator) 

I was given the opportunity to ask questions and all these questions were answered satisfactorily  

No pressure was exerted on me to consent to participation and I understand that I may withdraw at any stage without permission  

Participation in this study will not result in any additional cost to myself  

<table>
<thead>
<tr>
<th>I HEREBY CONSENT VOLUNTARILY TO PARTICIPATE IN THE ABOVE MENTIONED PROJECT.</th>
<th></th>
</tr>
</thead>
</table>
| Signed / confirmed at …………………..on………………………..2008  
(Place) (Date)                                                                   |          |
| ………………………………………………..  
Signature or right thumb print of participant                                  | Signature of witness |
ANNEXURE E

INTERVIEW RECORD AND QUESTION GUIDES FOR SEMI-STRUCTURED INTERVIEWS AND FOCUS GROUP SESSION
### INTERVIEW AND TRANSCRIPTION PARTICULARS

<table>
<thead>
<tr>
<th>Date</th>
<th>Interview ID</th>
<th>Date interviewed</th>
<th>Date transcribed</th>
</tr>
</thead>
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### INTERVIEW LOCATION PARTICULARS

<table>
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<tr>
<th>Location of interview</th>
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<tr>
<td>Home</td>
</tr>
<tr>
<td>Preferred venue</td>
</tr>
<tr>
<td>(specify)</td>
</tr>
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</table>

### PARTICIPANT PARTICULARS

<table>
<thead>
<tr>
<th>Diabetic patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered nurse</td>
</tr>
</tbody>
</table>

### PERSONAL PARTICULARS OF PARTICIPANT / PERMISSION

#### Diabetic patient

<table>
<thead>
<tr>
<th>Age</th>
<th>Sex</th>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>Length of time since diagnosis</th>
<th>Yes / No</th>
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<tr>
<td>Private or public health care facility</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Willingness to participate in interview</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Introduction letter read</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Consent form signed</td>
<td>Yes / No</td>
</tr>
<tr>
<td>Permission to record interview</td>
<td>Yes / No</td>
</tr>
</tbody>
</table>
Identified recorded interview | Yes / No
---|---
ID of recorded tape | 

**Registered nurse**

| Registration with SANC | 
| Years of experience working as diabetes nurse educator | 
| Private or public health care facility | 
| Willingness to participate in interview | Yes / No
| Introduction letter read | Yes / No
| Consent form signed | Yes / No
| Permission to record interview | Yes / No
| Identified recorded interview | Yes / No
| ID of recorded tape | 

**SEMI-STRUCTURED INTERVIEW GUIDE FOR DIABETIC PATIENTS**

- Tell me about your experiences of living with DM
- Tell me about what you perceive as achieving self-management of DM
- Tell me about factors that contribute towards you being able to manage your disease
- Are there any factors which hinder you in the management of your disease?
- How can registered nurses assist diabetic patients in enhancing self-management of DM?

**SEMI-STRUCTURED INTERVIEW GUIDE FOR REGISTERED NURSES / FOCUS GROUP**

- What do you perceive as effective self-management in patients with DM type 2?
- What factors do you think assist patients in managing their disease?
- What factors do you think hinder patients in the management of their disease?
- How can registered nurses assist diabetic patients in enhancing self-management of DM type 2?
ANNEXURE F

PERSONAL PARTICULARS OF PARTICIPANT
NURSING STRATEGIES TO FACILITATE SELF-MANAGEMENT IN PATIENTS WITH DIABETES MELLITUS TYPE 2

Personal particulars of participant

Note: These particulars are required to enable the researcher to contact the participant in case of any queries regarding data and for checking of transcriptions. This information will remain confidential at all times and will be destroyed at the end of the research process.

<table>
<thead>
<tr>
<th>Name</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
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</tr>
<tr>
<td>Telephone</td>
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<tr>
<td>Cellphone</td>
<td></td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
<tr>
<td>Referred by</td>
<td></td>
</tr>
</tbody>
</table>

REFERENCE CODE: 

Coleen O’Brien  
January 2008
Dear Dr Alpaslan,

Thank you for agreeing to be my independent coder. Kindly receive copies of my interviews in both hard copy and electronic format. Data will be analysed according to Tesch’s method as described by Cresswell (2003:192). The steps identified by Tesch as the most useful method of providing an analysis of the data are:

- Get a sense of the whole by reading all transcriptions carefully
- Pick one document to analyse the underlying meaning
- After completing this task for several documents, make a list of topics clustering those that are similar
- Assign codes to the topics. Return to the data and assign codes to the appropriate segments
- Assign categories to the topics, grouping them and indicating interrelationships
- Decide on the abbreviation for each category
- Perform a preliminary analysis by assembling the data for each category together
- If necessary, recode existing data

Thank you for your help.

Yours faithfully,

Coleen O’Brien
ANNEXURE H

LETTER FROM TRANSLATOR
TONI'S PLACE
69 MANGOLD STREET
NEWTON PARK
6045
16 JANUARY 2010

TO WHOM IT MAY CONCERN

I, Antoinette Estelle Kleb, BA Hons, B Ed Tertiary hereby acknowledge that I translated the isiXhosa section of the interview of the participant in the study. I have taught and lectured isiXhosa for 34 years and have published 3 works related to learning the Xhosa language.

My translation was a true reflection of what was said by the participant during the interview.

Yours sincerely

[Signature]

AE Kleb
041 3641964 / 084 9101 473
ANNEXURE I

EVALUATION DOCUMENT FOR EXPERT PANEL
EVALUATION OF NURSING STRATEGIES
TO FACILITATE SELF-MANAGEMENT
IN PERSONS LIVING WITH
DIABETES MELLITUS TYPE 2

Name:______________________________

Capacity:__________________________

Date:______________________________
EVALUATION OF STRATEGIES

Please write your comments in the box provided indicating:

1 Clarity of the strategies
The extent to which the strategies are presented clearly, using understandable language.

2 Simplicity of the strategies
The extent to which the three main strategies are simple to understand and demonstrate a logical development which links theory and practice.

3 Generality of the strategies
The strategies have been compiled in the context of Nelson Mandela Bay in the Eastern Cape, South Africa. Please give your opinion on the extent to which the strategies will be able to be transferred to other geographic areas where required as well as the extent to which the strategies will be able to be implemented in both the public and private health care sectors.
4 Usefulness/utility of the strategies

In your opinion, to what extent will the strategies be of use in practice and give clear methods of implementation? To what extent will the professional nurse be able to implement the functional strategies in order to assist the person living with DM to achieve a greater level of self-management?

5 Significance of the strategies

In your opinion, to what extent will the strategies be able to positively influence nursing practice, education and research? To what extent will the implementation of the strategies have a positive effect on quality of care delivered to persons living with DM?
ANNEXURE J

TRANSCRIPT OF AUDIO-TAPED GROUP ONE PARTICIPANT INTERVIEW
INTERVIEW 8  [CODE H]

18/02/2008 AT 15H40

H1 R: Thank you very much for agreeing to be interviewed. Now I’d just like you to tell H2 me a bit about your experiences of being diagnosed with diabetes and actually living H3 with the condition.

H4 P: I was diagnosed in August 2006, I thought of a joke, because you’ve heard H5 of the sugar sickness and “ouma had sugar sickness” – but when I came out of H6 ICU after having the stents and the whole lot which was all related directly to H7 diabetes, I suddenly realised that this is not a joke any more.

H8 My first understanding of diabetes is that I would have been living on lettuce H9 leaves and carrots for the rest of my life, which is an extremely frightening H10 scenario because I grew up in a very staunch Afrikaans family where “reis, H11 vleis en aartappels” was the in-thing. You know, you like big, cooked meals, H12 your fatty, greasy gravy on a Sunday with the pot roast, and that type of stuff.

H13 But to suddenly have to change your whole eating habit, you’re not allowed H14 sugar and I’m not a big sweets person but you know you enjoy your sugar on H15 your porridge, you enjoy your sugar in your tea and to suddenly doing away H16 with that got to me – it got to me emotionally, it got to me mentally and it got to H17 me physically.

H18 From a mental point of view it was denial. Denial I think is the biggest problem H19 that I’ve experienced it with our clients that have come into our business and H20 we deal with them, is that “I’m not sick” – you actually don’t feel sick because H21 the disease creeps up slowly on you, you actually don’t know and realise that H22 you’re ill until it’s too late. It’s once you sit back and you start looking at what H23 the disease has and the side effects and the ailments and the signs that are out H24 there, that you suddenly realise that it’s not just old age creeping in, you know H25 the “Brille, pille” stage, it’s not with that, it’s actually the disease that has crept H26 into your system and is destroying your system. So once I started sitting back H27 and realising, looking at myself from the inside and from the outside, I realised H28 that the disease had already done a lot of damage to me already.

H29 From a psychological viewpoint, is the turbulence of medication combined with H30 emotions, combined with denial and it psychologically affected me the worst.

H31 That was my biggest problem. I became extremely suicidal, I think I’ve H32 attempted suicide about three or four times already in the last 18 months,

H33 eventually referred to a psychologist, put onto mild sedatives and
H34 antidepressants and massive improvement. The hatred is out of my system
H35 now, and the fact that I work with other diabetics on a daily basis – I can now
H36 empathise with them and they can empathise with me and there's a nice
H37 understanding between us because we're speaking the same language. A
H38 typical problem that comes up is erectile dysfunction, you know. At my age,
H39 your phase of life, you believe it's part of your body and your body changing;
H40 it's not – it's due to the disease, it's due to the medication and the
H41 complications and the side effects that off it. And when your partner turns
H42 around and says, you know, “Aren't you good enough?” or “Are you messing
H43 around, you don't want it from me any more” and you try to say to your partner,
H44 “It's not that, I'm not having an affair” or “I'm not messing around”, and “You're
H45 not turning me off”, it's just my mind is like when my body doesn't want to
H46 function, it takes a lot of adjustment, I think it's more prolific in a man than what
H47 it actually is in a woman, because a man has been built to be the fighter, he's
H48 the provider, he's the whole being of civilization – he creates and grows the
H49 community, and suddenly for that to be taken away from him – it's his power,
H50 his manlihood is taken away from him, he becomes a weakling and any man
H51 doesn’t want to be called a weakling so it's a combination of a lot of hatred, the
H52 disease, the side effects from medication because there are definitely side
H53 effects from medication. It's your whole system has been recalibrated because
H54 basically when you're on a high with sugar, you know it's almost like a
H55 permanent adrenalin rush and until the adrenalin has worked out of your
H56 system and you've calmed down, you actually don’t realise how mentally and
H57 physically you are powerful until your body normalises again, and with the
H58 sugar being normalised, it's a weird sensation, suddenly ranting and the raving
H59 and the irritation of traffic and the wife moaning and the children screaming
H60 and you want to kill them and abuse everybody, dissipates and you sit back
H61 and say, “Hell, but that was a stupid thing I did”, you know. And when my wife
H62 was moaning and would say, why did I do this or why did I do that, I mean
H63 you're not the type of person, and I would say to her at that stage, that I didn’t
H64 care about it, you know, I'm the man, I can do what I want. Now that I'm
H65 becoming better, my disease is being treated to a greater extent and my system
H66 is stabilising, I can actually now sit back and say, “Hell, that was a stupid move
H67 on my part” but at that stage my mentality didn't allow me to think like that.
H68 R: It's quite a long process to go through and some people even recognise the
H69 things in themselves.
H70 P: You don't, for the simple reason that as they say in all books and on the
Internet, wherever you go, diabetes is known as the silent killer, okay, and it’s exactly what it means. It’s a silent killer. You drive down the road, you can’t see the road signs any more, “Ag, I’m getting old!” you know, and the kids laugh and say “Dad, you’re getting old, you need to get glasses now!” and you say to yourself, “I’m a kid still, I’m a youngster still, at 48 I’m still a baby” but you lie in bed at night, you say, “You know, I actually could not see that street sign” you know, and you get to the optometrist and he says to you, “Your eyesight is okay” and you say, “Yes, I accept my eyesight, because I’m not a kid any more, but I’m not an old person” until you get diagnosed and the first thing they say to you in diabetes is your eyesight is one of your first areas of affliction, it is your eyesight starts going because of the nature of the disease and suddenly I’ve got glasses and I can see again, and I feel like the “brille en pille” stage. But it’s that frustration getting home and not being able to see the street signs, that’s such a stupid thing. My wife says, “You’ve missed the turnoff” and the children say, “Dad, can’t you see, are you bloody blind?” you know, and what they don’t realise is that you actually could not see it. But you’re denying the fact there is something wrong with you. So you’re in permanent conflict with yourself and with your family, and it’s stupid, until you start getting the treatment and then you sit back and say - look, your eyesight will never improve, but it will stabilise, and there can be days where you don’t have to wear your spectacles, okay, you can see better. Your sores heal quicker, okay. Previously you used get a little sore that used to take weeks and weeks on end, your blood sugar’s stabilised, so your sores heal quicker you know, you don’t walk around ashamed of all these sores on your legs and your arms that are taking weeks and weeks and they’re festering, you know, some people look like they’ve got scurvy and they’ve got every dreaded disease under the sun, they’re too frightened to go outside and they become reclusive. So, ja – it’s not a thing that happens overnight, it’s not a thing that disappears overnight – definitely not. It’s a long-term. It’s not a common cold where within seven days, fantastic, you’re better and you can carry on with life – it’s not. It’s a total life-changing scenario and it takes a lot of working on from a personal point of view and from a support point of view from family, colleagues, friends, associates who stand by and actually understand that you’re not going to be better tomorrow morning and you never will be 100% right again. And you have to accept that, take that and adapt your life and your lifestyle to the change that you have to go through. When you’re a kid, I think it’s easy, but when you’re established and not a youngster any more, it’s difficult to change and really
what they say, it’s difficult to teach an old dog new tricks, okay, and you have to be taught. You have to accept that you have to be taught, and it’s all that kicking against, so it’s a very, very tiresome and long process and it’s exhausting mentally, physically, emotionally it’s extremely exhausting on you and everybody around you. Ja, it’s very difficult.

R: What do you think is achieving self-management? How do you perceive optimal self-management?

P: Well, the first thing is to understand the disease. The is the most thing. If I did not do the amount of research from various aspects in my personal life, I would still be where I was 18 months ago, if not in a worse condition. One of the things that hindered me the most, was the actual ignorance out in the market place. There’s a massive, massive ignorance in the market place pertaining to diabetes and yet it’s the oldest disease known to mankind.

Sorry, what was the question – I’ve forgotten! I started rambling off! Self-management. Yes, education. Education is critical, okay. Now, not everybody has the resources to access information. A lot of people don’t enjoy researching, a lot of people don’t enjoy listening or being bombarded with information. Attending lectures and training, it is boring, it’s tiresome, okay not everybody can present them but if you have somebody that has empathy and understanding that is a diabetic themselves and has got the dispensation and the personality about them, that you can go and cry your best buddy shoulder cry, okay, and just have a communal area where you can get around a braai or a campfire or a cup of tea or whatever the case is, and listen to other diabetics and their families and friends, and pick up information from them, and then take that information and apply it to yourself. You can only benefit from it but the problem is to source the information. We don’t always have the time, because we’re too busy in this rat race that we live in. Number two is we’re also in a situation where a lot of us don’t have the amenities to access this information, and amenities is not just your GP. With your GP, he’s all strict regime, and I’m not being facetious but he’s on an extremely strict regime – how many patients can he put through in a day, okay he does not have the time to sit and listen to your jargon and your whining and grining. Your psychologist which I’ve experienced, I actually have not found a psychologist that has actually specialised in diabetes treatment. I know a lot of psychologists and psychiatrists. I go to a very good guy here in Port Elizabeth, and I said to him, explain to me why my mind is working like this, and he cannot. He says to me,
“I don’t know anything about diabetes”. So if we have people out there that can become specialists in this field, okay, and we can get these people on a periodic basis to congregate with the community on an informal basis, at a place of leisure and pleasure, and they can pass over their knowledge to us as diabetics and we can take this information and process it inside our own arena that we live in, I think 90% of the battle is won. It’s definitely. It’s just going to make life a lot easier for us, and everybody around us.

R: I think you’ve dealt with this already but factors that contribute towards you being able to manage your disease – things that help you in the management of diabetes.

P: It's understanding. It's a realisation of what I've done in my past towards myself physically, emotionally, towards my family physically, emotionally, towards people around me physically, emotionally. It’s understanding that I didn’t do what I’ve done because I wanted to. I did it because I was a sick person, okay. And actually having to go back and re-evaluate my own lifestyle, and take all the regrets I suddenly have, because I've got a lot of regrets for actions that I've taken, things I've done, and going back to these people and saying, “Look guys, I'm sorry” – facing the people I've hurt, harmed, injured, whatever I've done to them, and saying “I'm sorry. I now know why, because I was a sick person” and nobody understood what was wrong with me, and I didn’t understand what was wrong with me.

R: Sorry, I keep on tracking off – what was the question again?

P: About managing diabetes, but it’s fine, all this stuff is actually very important. Managing diabetes, ja, as I say, it’s a soul-searching thing. You then have to take your life and you’ve got to decide what you want to do with your life. I've taken like diabetics in the alignment that I've now placed myself in, and I've taken diabetics and I divide them into two categories – the extrovert and introvert. The extrovert diabetic is a very simple person, okay. You can work with him easily, you can identify him easily – he’s the guy who walks out there, is blasé, is arrogant, is cocky and goes … “I'm going to die young” okay, so – “Before I die, I’m going to do everything now that I could never do” and a person like that you can get hold of him quickly, I was one of those type of people. Get hold of him, and say to him, “Hey, my friend, you and I can sit down and braai, yes, still enjoying our braaivleis, yes, still having a drink, yes, we can still have a full cooked meal, cooking it slightly differently. We can live another 30, 40, 20 whatever the case might be years” but that person doesn’t bother me and worry me, okay and I’ve also been through this phase of the introvert side, and this is the worst type of diabetic to actually deal with
because they've effectively been given the death sentence, because that is what diabetes is, it's a death sentence. You've been told that you will not live as long as a healthy person. To that person the shock and trauma to their system is frightening, and they become a total introvert. They actually withdraw totally from life. They physically lock themselves in rooms. We've got one of our clients here that, Mrs George, a coloured woman, that weighed 28 or 30 kg when she walked in here 8 months ago, into the shop and I thought she was a drunkard and I was going to kick her out of the shop because she was coming into the shop and I thought she was a drunk woman, a drunk coloured, and I was going to kick her out of the shop, until I got her at the door and I took one look at her eyes and I knew immediately she was not drunk. Today, that woman must weigh a good 60 - 65 kg, she looks absolutely magnificent, she's a beautiful woman, she's full of life and you know she comes in once or twice a month, just to thank us. As she says, she did not know how to treat herself, because nobody was there to tell her how to treat herself, what she had to do, because there aren't people out there that know how to do this. And once again, the people that are there, are hands full. There is no ways that they can get to everybody. But she had a central point where she could come to, and she could listen to another diabetic, and be guided by another diabetic's .... and say, “You can eat well, and you are going to eat well, and you're going to have great fun with your food, and you're going to live to a ripe old age” and she walks in, and we cry every time she walks in, she says, “You saved my life” and she's now at the stage, as I am, in that we've realised that we can have great fun. We can go out, we can party, we can do everything that everybody else does, it's just slightly different. So when we're out there, having a party or having a braai, or having a few drinks with the guys, just remember instead of having my beer, I now have to drink whisky or I would drink red wine. Instead of having a nice thick rump steak with a lot of fat on it, I can have a nice thick kudu steak, okay. I can still have all the salads. So you have to be true to yourself. But because there's no information out there, there is no true actual source of information that's consolidated in one point, it makes it extremely difficult. The other thing of self-management is that – .... my first experience, having now dealt in the last 18 months with diabetics and being very involved in the diabetic arena, is that the general medical fraternity are actually not sure of what diabetes is about. So you get a tremendous amount of conflicting advice, information and guidance. My brother's a doctor himself. He's third in the family, the brother that's just after me was declared a diabetic about eight
months prior to when I was declared diabetic, and Vaughn, well they found him in the river, floating down the river – he’d blacked out and Mark who’s the doctor, turned around and the first thing that they put him onto Willard’s Simba Chips because it doesn’t have sugar in it and he can have as much of this but he must cut out his Coke and he must go for Coke Lite or Tab but when he gets peckish, he must always have a packet of Simba Chips or crisps with him. And when my brother came down on holiday a year ago, I saw him with all the crisps, I said, “What are you doing with the crisps?” and he said, “No, Mark said I must have crisps, if I’m hungry, I must nibble crisps”. I said no, you cannot, the fat content is so high in crisps, that is what’s actually killing you. Sugar does not kill a diabetic, fat kills a diabetic. And my brother’s one of the top GPs in Bloemfontein, you know he’s very, very sought after and highly respected in Bloemfontein, and he’s not a fool. Yet he knows nothing about diabetes and it’s a pity, not him as Mark but him as the general practitioner out there, he doesn’t know anything about diabetes, he doesn’t know how to treat diabetes, doesn’t know how to – well they know how to treat diabetes but to advise the patient on what to do to manage their daily lifestyle. And I think this is where the biggest problem is, is that confusion that reigns supreme out there. All research I’ve done on Internet, I still find worldwide conflicting stories. And I think it’s time that we take all the information that is given to us as diabetics, funnel it, consolidate it and get a common denominator through everything – be it medication, be it your foods, be it your personal consumption in whatever – cigarettes, drinking, eating, whatever, and get a common denominator and from that adapt to each person, say to them, ... diabetic, you’re not going to be living on lettuce leaves and carrots. You are going to have your chocolate cake. You are going to have scones, cream and jam. You can have peanut butter and toast. But the product that has been given to you has been designed for you as a diabetic, and instead of eating twice a day, eat six times a day. It’s this type of information that I had to learn the hard way. I had to learn the very hard way, my wife the very hard way. And it’s made my life easier because I’ve made it my sole goal to understand the disease and how I am going to manage it because if I don’t manage it, nobody else can manage it for me. But I’ve got to have somebody standing by me. It’s like I broke my leg. You know I can get by in a way with crutches but there’s going to be a stair or two in my way and I’m going to need somebody to take the crutch or help me up the stairs. So that, when you get to the staircase that you need somebody by you, and that is where your family member comes in or your partner, or your
H256 lover, whatever the case is. But they must understand how to work with you,
H257 they make your life easier for you also. For you to work with yourself, and the
H258 information they must be given must be unilateral information, there must be a
H259 common denominator. It mustn’t be a .... at the moment.
H260 R: So much confusion.
H261 P: It’s total, it’s frightening. And you cannot blame any specific person.
H262 You’re a doctor, you should know this. It doesn’t work like that. However, if
H263 you’re a doctor, there are certain ailments that are directly associated with
H264 diabetes and most of it is cardiovascular and blood. So if your doctor is very
H265 clued up, he will know a fair amount of cardiovascular and blood diseases
H266 problems. And blood gets drawn on an hourly basis, on a daily basis. Your
H267 doctor must be taught that diabetes has got a direct effect on blood and blood
H268 has got a direct effect on diabetes. I would say that I would almost make it
H269 compulsory that in medical schools and universities, that diabetes becomes
H270 one of the main – let’s call it subsidiaries, subjects if anything else, that forms
H271 part of your cardiovascular training. Because if your practitioner knows and
H272 understands the basics, he can hand it over to the patient and I as the patient
H273 can take that information and as I said, I can do two things with it, I can either
H274 throw it out of the front door, or I can apply it to myself. And throwing it out of
H275 the front door, those people, you need to get hold of them. You’ve got to give
H276 them a .... where they can congregate on an informal basis and listen to the
H277 other diabetics talk, and listen to other diabetics’ experiences, and that’s what
H278 our focus is here. I want all the diabetics to sit around me, and I want to sit
H279 around them, and listen, is my erectile dysfunction natural as a diabetic? If it's
H280 natural, what am I going to do about it for myself and what am I going to do
H281 about it for my diabetic friends and acquaintances out there. And how can we
H282 sit down and go back to the medical fraternity and say, Guys, we've got a
H283 problem, okay, this is our problem, we’re halfway through our management,
H284 we’ve improved drastically in our eating habits, our blood sugars are nice and
H285 stable, yes we can be naughty once or twice a month without any drastic side
H286 effects or extra damage to our system, but we have got a problem with our
H287 erectile dysfunction is our major problem, what can you as manufacturers, as
H288 professional entities and bodies and persons, do to assist? And have this
H289 ongoing direct liaison with the professional body, and give them feedback,
H290 because the more information I can hand over to a manufacturer and say those
H291 are my problems and a thousand million other people's problems, the quicker
H292 those manufacturers can come up with a product or a system or a method or a
H293 tuition or an educational campaign or whatever the case might be, to assist us.
H294 Because the more information I have pertaining to my disease, the easier my
H295 burden is on myself, and the easier it's going to be for me to manage with what
H296 I have. I have to accept that I might not reach the ripe old age of 80, I might
H297 only reach 65 and I've got to make up my mind what I'm going to do from now
H298 until 65. Am I going to throw it out the front door, or do I want a good life time,
H299 to still see my grandchildren grow up, see my children get married, and that's
H300 the decision I need to make for myself but and the easier it's going to be for me
H301 to manage with what I have. I have to accept that I might not reach the ripe old
H302 age of 80, I might only reach 65 and I've got to make up my mind what I'm going
H303 to do from now until 65. Am I going to throw it out the front door, or do I want a
H304 good life time, to see my grandchildren grow up, see my children get married,
H305 and that's the decision I need to make for myself but I need that pillar of
H306 strength next to me to help me, guide me. I need the people to have the
H307 information that they can hand over to me, and say, Len, if you do this and you
H308 do that, those are the end results, but in a way that it's not demanding and
H309 commanding.
H310 R: These are all the kind of things that we're wanting to have as part of the survey.
H311 I think you've covered quite a lot on this next section, but is there anything else that
H312 you can think of that hinders you in managing the disease? You've spoken about
H313 information and about having ....?
H314 P: Pricing of products. Everybody's on the bandwagon at the moment.
H315 Worldwide, the whole world is going through this health phase at the moment,
H316 and “health phase” is an extremely broad word or phrase. Obesity is the
H317 biggest problem worldwide, and how do you treat obesity, okay. So all these
H318 starvation diets come in, all these fangled diets come in, all these gizmos,
H319 gadgets, machines come in, and it's a quick money-making racket. There are
H320 companies that are making trillions and trillions of dollars per annum on
H321 gizmos and gadgets and all these fancy things. ... diabetic I've lost now 50kg. I
H322 do not exercise. I eat six times a day. I eat what particularly what everybody
H323 else eats, just make sure that it's the right proportions, right quantities, and
H324 prepared right, and I've lost 50 kg. I feel good. And it hasn't cost me a fortune.
H325 Your vegetable stores are around the corner. Vegetables are one of the best
H326 fibre products in the word known to mankind – vegetables and fruit. But
H327 because your, let's call it the Greedy Sector, has found something that they can
H328 make money on, they now go onto the bandwagon and have all these millions
H329 of dollars that they can splash on advertising campaigns [end of Side A of
As I say, you know, unfortunately there's nothing you can do about, it's mankind, it's human instinct, human nature, it's breed. But if your manufacturer actually had to turn around and say, Let me cut my profit margin by a percentage factor and I double my volume from a resale point of view, actually at the end of the day I'm going to be much wealthier in finances and in market share than – why sell six cars a month and make R10,000 a car when you can sell 30 cars a month and make R4,000 a car, because with 30 cars in a row, I've got 30 cars in the workshop which brings me additional income, I've got 30 jobs that I've created and I actually make more money with 30 cars than what I do with six cars. And the same would be applicable to the products for diabetics – it's your artificial sweeteners, your sweets. Now the fad is going around the world – health-conscious, everything's health-conscious – obesity. If they're pumping obesity and health-consciousness and the whole drive is changing worldwide, why do they have to produce a product to substantiate their information campaigns? If they're promoting, every day normal products are going to be falling by the wayside because everybody's going to rush now for the new products and if they're clever and they drop their prices slightly, they're going to put out even more of their products, which is going to make them even more lucrative.

But this is the biggest problem – your daily products for a diabetic – the meat and the vegetables and the fruit. That is a market price – everybody has the same price. But, well, to give you an example, a normal Nestlé slab sells for R5.99 in a Spar, okay. The glucose-free slab sells for R15.95 in the Spar. You're talking 300% difference in pricing. Now you cannot tell me by taking out normal cane sugar and putting an artificial sweetener into it, that your price has escalated by 300%, because there is no way on God's earth that it is possible. We approached Nestlé last year just before Easter, we asked them wouldn't they make us Easter eggs for the shop and they said no, they can't do it, and I said, why not? They said they'd well they've got to stop their whole production line, they've got to clean up everything, then they've got to run a small batch of Easter eggs and they've got to find the ingredients for it, and they had a million stories of why they could not do it. And I listened to them and I said, “Okay fine, when you make your sucrose-free chocolate slabs, what do you do?” They said they've got a separate production line. I said “Okay”, I said, “Those products that you use in your sucrose-free Nestlé slabs, is it imported specifically for that production line?” And she says, “No, we make it.” I said,
“Oh. So now, when you make the slabs, are these slabs pre-manufactured that you just put a wrapper around them, or you take raw ingredients, melt it, boil it, cook it, what if you take liquid form, put it in moulds, solidify and wrap it?” And she said, no this whole process is as you explained. So I said, “Oh. Now imagine if you took that liquid form and you put it into the mould of the Easter egg.” And she could not answer me. I took it to one of the senior people at Nestlé and he could not answer me. As far as they’re concerned, it cannot be done, yet they have a production line that runs as sucrose-free chocolate slab, and they make all the ingredients, or they take all the raw ingredients and they make the slabs. Yet those exact same ingredients that they use to make the Easter eggs with is applicable to the sucrose-free, but that’s an Easter egg, that they cannot do.

R: It’s unbelievable.

P: Ja. Look at pricing of artificial sweeteners, it ranges from R30 for a packet of tablets, to R80 a packet of tablets. The question I ask – yes you’ve got a Mini on the road, and you’ve got a Mercedes on the road, okay but in a Mini you’ve got four wheels, two doors, a steering wheel and a small engine and with the Mercedes you’ve got all the above plus a million other things. An artificial sweetener has got four or five basic ingredients, exactly the same right throughout. Why is there a price difference from R33 to R80? Is it because of labelling, it is because of greed? So they take this and suddenly realise that instead of being greedy, drop your margin, double your turnover, you are going to make more money No. 1. No. 2 is that your diabetic is not a wealthy person necessarily. Diabetes affects from the poorest of the poor to the richest of the rich, from the darkest of dark to the lightest of light. Now what manufacturers actually do, is say, I’m sorry, Jonas Kleinbooi, you cannot have my product, you must die in silence, don’t whine and moan and groan in my ears because you’re a diabetic, that’s your fault, not my fault, okay, and yet tomorrow night and tonight in the newspapers and on the TVs puts up an ad there, “Buy my product, Jonas, buy my product”, okay. So they must stop the ... make it affordable for the diabetic, because he is as much part of the community and the economy as well as a normal health person, I think on the contrary your good diabetic that looks after themselves, take care of themselves, are actually healthier, fitter people, physically and emotionally than what the average person is out there, because we eat healthy, we’re living healthy ... we’re eating healthy, we’re living healthy, we’re caring for our bodies. So why we should actually receive preferential treatment, because we take care, we notice our
blood sugar levels, we notice our blood pressure every day, we notice our cholesterol, we keep tabs on this. How many everyday people actually know what their blood pressure is today. If you had asked me as a diabetic, 18 months ago, as far as I was concerned blood pressure was a bag that they put around my arm that has a lot of funny numbers on it, okay. Today if you say to me, Len what is your blood pressure? I can tell you it's 125/80 and I know exactly what that means, it means I'm a healthy person. Eighteen months ago it was 175/135 and I didn't know what they were talking about. I thought I was doing good, I was touching on the 200 mark, and at 200 I'm not healthy.

R: Now you're better!

P: Ja! So, your diabetic, through self-management of his disease, has become a lot more aware of him as a person, as a structure, as a being, as a well, he's a lot more aware of his health conditions and has actually become a lot more productive in the economy – this is non-diabetic but yet we are slanted, yet we are defamed, we are ragged, we are abused. Even the banks don't want to finance us because they say they cannot be a viable enterprise if they finance them, and yet those same people that say this have got family members that are diabetics but they do not have the concept, they do not have the idea, they don't understand what is involved in our lives. It's like cancer – I said to a person with cancer – first thing, you're dead. We said it in the conversation and, oh, did you hear Anne has got cancer? Everybody – get out the book, we're going to be burying Anne in a week's time. Yet Anne had cancer for the last 20, 30 years but because she's looked after her body and she's cared for herself, she's been able to keep and maintain her life. ... and I said to everybody in a congregation or a crowded group and I said, I'm a diabetic, and they turn around and say oh, you're not allowed sugar, hey? So no sugar tonight, hey? And yet sugar doesn't kill a diabetic. ... kills a diabetic.

R: Ja, all the interrelated things there. So are there any other factors that you can think of, that would be .... because, you know small things that might make a diabetic's life difficult?

P: Yes. Government's attitude and approach towards us. A very classic example I'm busy relaying to the Minister at the moment, is that the New Credit Act says they're not allowed to finance us as a diabetic business, because we're the first of this kind in South Africa and because they cannot gauge us up an existing enterprise, therefore they cannot finance us – that is what the National Credit Act says.

However, in the same breath they also turn around and say that how quickly are
we going to be opening our franchises throughout South Africa because they've got friends and families, they've got colleagues, they've got relatives, they've got employees that are working for them but are always off ill, are unproductive and they need to get them sorted out. So, this problem has to have a clear understanding at Government level and I believe that at least 30%, maybe even higher, of all government employees are diabetic or pre-diabetic. They don't know it and if they do know it, they've kept quiet about it because they're frightened they're going to lose their jobs and they cannot lose their jobs, you cannot fire a person because they are sick. It's against the law, it's against the Constitution. So there must be an extremely clear, precise understanding from Government that diabetes is actually more prolific or profound in the economy of South Africa than what they know and believe and that this information must come to the fore, and take this information and work with it. If you can take a person and feed him six times a day, small portions of food, normal everyday food, nothing fancy, nothing flashy, nothing weird and wonderful, and you can get his health to an acceptable standard where he feels healthy, where he feels good, he's got the oomph inside of him to actually get out of bed and not have that dead exhaustion hanging around his body and his shoulders – get up, go to work, have that excitement and eagerness of getting to work and hell, I can be productive again. I reckon we can push the productivity rate in South Africa, I think push it by maybe 15 to 20 basic percentage points and if we took the South African economy and even if we upped the productivity rate by 10 basic points, we would treble our revenue in this country. And all we've done is given them a little place where they can congregate on a regular basis, get all the information, guides, shoulder to cry on, and take that information and apply it in their life. And actually look forward to going to work every day, and not go in fear to work, because a lot of diabetics go in fear to work, because they're frightened they are going to be fired and those that don't care are off every second or third day, because they are physically ill, they're emotionally ill, they cannot physically get up and go to work. If we can get to those people and get them better, and get them back into the work environment, would even drop our unemployment rate. We can drop it. I believe maybe even up to 20%, we could drop unemployment. If you go into your poorer communities, and you go and look at the person lying there that's a diabetic, that has had a heart attack, that's got blood pressure shooting through the roof, with cholesterol so high it cannot even be measured any more, okay, has bedsores because they become bedridden, because they
physically cannot get up any more, they are so exhausted and debilitated from
the disease, have feet that are gangrenous, have had legs amputated, toes
amputated, okay. If we could get these people and treat them and teach them
about diabetes, and let them understand what it’s about and what they can do
to make themselves active again, we can but only stimulate the economy. I’m a
classic example. I had two options in my life 18 months ago. I had just two
options. Take it, make it work for me as an individual and my family around me,
or give up. No, fine, I give up, take my own life, it’s one less mouth to feed in
South Africa. But what does one being in the economy equate to? It’s a fair
amount of money.
When you look at the road statistics and the deaths, what does it cost the
economy in road deaths, loss of life? And that’s through negligence, and look
at the numbers that it’s equated to, and take those numbers and convert it into
the diabetic fraternity and related illnesses that they pick up and die of, and put
a rand value to that. And then the road death toll numbers is miniscule, it’s
nothing. It’s 10 seconds on the stock exchange versus the amount of people
die on a daily basis directly and indirectly due to diabetes and the related
ills that go with it.
We’ve been speaking to – I’ve got a pathologist that I’ve been in contact with on
a periodic basis, doing his thesis and I asked him, one of the things I asked
him, is do you actually find out the people that die from HIV/AIDS? He said, do
an autopsy and do a blood sugar analysis on that person and find out if they
could maybe not have died of diabetes or related diabetes side effects.
Because we believe that HIV – well, everybody says HIV/AIDS, you don’t die of
HIV/AIDS, you die of the ailments that come with it, okay. But those ailments
that come with it, are blood-related, are heart-related. And diabetes is blood-
related and heart-related and we believe strongly, very strongly, that once he’s
done his thesis and he comes up with his findings, that diabetes is the actual
killer of AIDS patients, not AIDS. The heart attacks, everybody dropping down
from heart attacks. Stress – it’s not stress, a small percentage might be, the
bulk of the heart attacks you’ll find somewhere that glucose levels in the
diabetic’s pre- or qualified diabetics, they actually died because they were
diabetic or they were pre-diabetic.
And if we take this and we change the whole perspective from the
Government’s point of view, and start analysing, doing autopsies on all these
people that pass away on a daily basis, on a hourly basis, from heart-related
diseases and from AIDS, and actually go and do a study into their history, you
don’t have to go too far to analyse and diagnose whether they are diabetic or
pre-diabetic. You’ll find, I reckon 50 to 60% are diabetic or pre-diabetic that was
never diagnosed correctly and if they were, were never taught what to do with
themselves. And that of course, and how much money is South Africa
currently not losing through the stupidity of not understanding what diabetes is
about?
R: It’s such a world-wide phenomenon, epidemic that goes on.
P: Well, the American market is now into – the American Diabetic
Association’s website, they have classified it as a “pandemic”, it’s past
epidemic, it’s pandemic now, and they believe that at least 30 to 40% of their
population is diabetic.
R: Ja, scary. The other thing that we’ve been trying to find is, if you have any ideas
about how registered nurses can help diabetic patients, what things that can be done,
just on a general basis, that can help diabetic patients to facilitate them with general
health management?
P: I think from a nursing point of view, is that your nurse is your front line in
any medical scenario. Your doctor basically does the analysis, your nurse
actually does the caring. The nurse is in the face of that patient on a daily basis
and I believe that firstly, it should become part of their curriculum okay, once
again referring to what we said earlier, is there is a lot of misdiagnosing of
diabetics and diabetes, okay. If your nurse at college or at university level is
taught the basic signs of diabetes and then let them become specialised in that
you create a specialised division so that your nurse that has that ambition to
specialise in the field, let her study that field, let her become a specialist.
Acknowledge her in her remuneration package. Acknowledge her in the
qualifications. Give her a status that she can be proud of. You get your theatre
sister, the theatre sister is always looked upon more highly than a little nurse in
a ward, okay. Why? It’s a status, it’s an honour, it’s a prestige to be a theatre
sister.
And because diabetes is prolific, make it part of the curriculum. I would say
make it almost compulsory, okay but give your nurse the opportunity to decide
whether they want to specialise in that field and once they’ve specialised in that
field, keep them ... give them research projects to do, let them be in the face of
the diabetic, let them be in the forefront of the caring of the diabetic, don’t take
them out of that arena. Keep them there, let them become specialists, let them
become knowledgeable, let them take what they’ve learned and pass it on to
their juniors and their subordinates. Then the juniors and subordinates can
H552 look up to them and say, “Wow! I wish I was a diabetic nurse, it’s an honour
H553 and prestige to be a diabetic nurse”. What do you get out of that? Firstly,
H554 you’re boosting your nurse’s ego. Secondly you’re boosting your nurse’s
H555 remuneration package. Thirdly, you’re improving your all-round education
H556 standard of your nursing fraternity, so you’re going to get a higher qualified,
H557 more respected nurse in the medical arena, and you are creating almost a
H558 hierarchy status where – to give you a basic comparison, the general
H559 practitioner, that’s the quack that sits around the corner, but the specialist is a
H560 guy that, once a specialist has spoken, thou shalt listen. Give that to the nurse.
H561 When I was lying in ICU, who looked after me? Not the doctor, the doctor
H562 popped in, in the evening – “Are you okay?” He popped in in the morning, “Are
H563 you okay, nurse, what is the diagnosis, nurse what happened during the
H564 night?” That poor nurse had to stand by my bedside for 20 minutes, holding
H565 the machine for 20 minutes she had to put pressure on, what
H566 acknowledgement, what recognition did she get for that? Nothing. She was
H567 there when asked what happened, in that almost arrogant doctor’s way and I
H568 think that’s unfair towards the nurse.
H569 Also, let’s, you’ll find in the nursing community that there are diabetics, there’s
H570 many nurses that are diabetic. Take them, let them become spokespeople out
H571 there. Let them speak to their colleagues, use them in the morning meetings,
H572 the staff meetings, the congregations that you have in your hospitals, in your
H573 private centres, let these people stand up and talk about it. Give them the
H574 opportunity to air their personal views or take cognisance of it. But if you put
H575 all that together, the nurse will have a higher respect for herself or for himself,
H576 they’ll have a higher regard for themselves, they’ll be proud of what they’re
H577 doing and they won’t run out of the country, they’ll actually stay behind and
H578 look after the country, and in doing that, it will hike the productivity rate and
H579 economy, they will uplift the absenteeism in the work environment and in the
H580 school environment and I reckon they can bring down the death rate
H581 drastically, because as I said, I believe, we believe and there’s a few people I’ve
H582 spoken to, that a lot of deaths that occur in South or all over the world, diabetes
H583 has a direct influence, impact on their deaths. So, if it’s so bad, take these
H584 people and make them proud. Give them something to look forward to –
H585 respect them, remunerate them. Make them the leader of the pack, so that the
H586 other nurses that come on board, the nursing fraternity, as they come on board
H587 it is an honour for them to be qualified as a diabetic nurse, and use these
H588 diabetic nurses in the community. They all get married, they all have children,
H589 their children all go to school, why doesn’t the school approach these nursing
H590 sisters with that – you’re a qualified diabetic nursing sister, why don’t you
H591 come and address our school? The nursing sisters go to the schools when
H592 they do the inoculation and vaccinations and the medical checkups at school,
H593 why don’t they then rather send a qualified nursing sister that has diabetic
H594 experience and qualifications and at an early age, pre-ed potential diabetic
H595 patients.
H596 R: Those are excellent ideas. Have you got any ideas related to everyday living,
H597 that the nurses would be able to assist the patients with?
H598 P: Yes. Every general practitioner – well not every but I would say the
H599 moment that you have a little organisational group where there’s two or three
H600 practitioners in and there’s a little, almost like a care centre, should have high
H601 qualified nursing, or nursing system. Once again, look out for your qualified
H602 nurse in the diabetic arena. Use your diabetic nurse, classify them as diabetic
H603 nurse, in everyday life, in other words, in all your magazines, in all your
H604 journals, in your CDE books, in your diabetes posters, magazines, put these
H605 people’s names there and give them contact numbers. Put their contact
H606 numbers on them so that any stage of the day or night, these key people can be
H607 accessed. There’s many a day that I don’t have the money or the time to go
H608 and see my doctor but if I’ve got a nurse or a nursing sister who is qualified
H609 and is potentially mobile when she’s come off duty, or she’s part of a mobile
H610 scenario, and can pop around to work, and even if she charge me the same
H611 tariff as what the doctor charges, I’ve got to pay this doctor’s tariff, I might as
H612 well pay her the tariff, and she can pop around to my workplace and look at me,
H613 and look at my staff and say, right guys, fine, everything’s okay or you haven’t
H614 done this or do that, okay, it’ll speed up the pre-empting, the diagnostics and
H615 the productivity and the all-round general health of the economy. So make
H616 them mobile – make them known out there. Use them, they are qualified, they
H617 will be qualified.
H618 In Port Elizabeth, everybody talks about Sister Sheridon, a very highly
H619 respected nursing sister. If you cannot tell me that Sister Sheridon can see a
H620 million people.
H621 R: Impossible.
H622 P: Ja, yet she’s made a concerted effort and the people around her have
H623 made a concerted effort to make Sister Sheridon well known in PE. How many
H624 other nursing sisters aren’t there that are just as highly qualified, if not more
H625 highly qualified than Sister Sheridan? Why have they not been made ... know
about them? Give them the respect and give them the package for the
responsibility they take on. But bring them into the community. Don't hide
them in a hospital, and don't hide them in a clinic. Get-togethers at the library,
get-togethers are frail care centres, old age homes – how many nursing sisters
actually go around the old age homes?

R: Not very many, I don't think.

P: How many healthy citizens are diabetic?

R: It's a lot, increasing all the time.

P: So why aren't we taking these nursing sisters and using them in these
communities? Bring your young people in – your qualified nursing sister, and
bring them into the community, ... places. Use centres or ... or venues. Similar
to what we've created here, and let them come and give us talks, come give us
advice. Take your young nurse that's just come out of college or out of
university and let them do their housemanship at the hospitals, okay and build
them up – your senior nursing sisters and then earmark “potential good
candidates” – screen them, take them out and get them into the community.

Let them go with them on day trips, let them go on weekend trips, evening trips,
let them go to lectures, let them assist in giving lectures. The best way to teach
a person is to put them in the battlefront. The quickest and the best way to
teach a person is to put them in the battlefront, and give them a good leader.

You can take these people and build them. We can only as a diabetic
community, we can only benefit out of it. If you take my venue that I have here,
if I've got a nursing sister, a different one every day in this building, from 8:30
in the morning when the shop opens until 6:00 tonight when the shop closes
and they all work on shifts and they get paid directly that day, I mean paid
directly is that they're remunerated by a controlling body for the effort they've
put in for the day. I can in a very informal environment have people coming in
and talking to a professional person. I am a non-qualified person, so if we take
these nurses on a daily basis, with people we've formed a diabetic centre here,
a non-medicinal diabetic centre. The people in the community are starting to
know about us and are actually coming to us for advice, assistance and
guidance. If we had a professional person here that could pass over the
information, can diagnose, can chat and has the time to interact with diabetics,
there’s a group session, there’s a one-on-one basis.

The community’s going to physically respect the nursing community much
more, because there’s now concerted effort from the nursing community to
actually do what they were made to do, to be caregivers.
You are also going to find that your diabetic community is going to latch on to somebody, and once they latch onto somebody, they're going to build up a repertoire and you've going to get a reciprocating scenario where your diabetic will pick up information because a good diabetic is always on the lookout and searching for new products, for new information, new treatment methods and when you've got so many people out there searching, and they get the information and they've got a caregiver that is with them, is there compadre, is their Mom, their soul being, they will hand over the information to this caregiver, this caregiver can only grow in knowledge, and as this person grows in knowledge and experience, they will naturally, as the human body, the human mind, naturally brag and when you brag about something, you pass on information, and so it becomes a vicious circle, and what's so nice about the vicious circle is that it's an ever-increasing circle, so information gets out quicker into the community. And people can sit back and say, "Anne, what a doll, she saved my husband or she saved my wife", or whatever the case might be, or "Annie, please John's gone into a hyper, what do I do?" So you're going to get the community standing together, congregating and as our country slogan says, "Eendrag maak mag" – Community stand together, divided I shall fall, united I shall stand. If we stand together, how powerful can we not be as a nation? And such a stupid, simple thing, as just putting people into a comfortable environment with somebody that they can relate to, that has got trained, not as a highly qualified but has got enough training and basic information that can see them through and they will grow together, and take these nurses, and make them martyrs. If you want to do anything with them, make them martyrs, because this is what they will become. Because if they can treat a diabetic, and teach a diabetic how to care for themselves, how to monitor their blood sugars, what they can or what they can't do, okay, and it's not an "in your face" bombardment of information and lecturing the whole day, and arguing and fighting because you haven't done this and you haven't done that, it's a motherly, nursing environment.

Your diabetic will also become aggressive, he will not kick against the disease, he'll become more susceptible to understanding what he has to do to sustain himself and his family and his friends at his work environment. It's a total vicious circle, and it's such a lovely vicious circle, because as ... becomes positive, your health improves, your productivity improves, your unemployment rate drops, the economy grows. You can imagine if everybody was at work every day, how powerful can a country not be? But at the moment
50% of South Africa today, Monday, is off ill, for whatever reason. So effectively, half the population is off ill today, not working. Then over and above that, you’ve still your diabetic who is at work but is so sick that he cannot, or she cannot function properly. So where does our productivity rate come into it? Get your nursing sisters to go to companies. Let them call on the companies, let them call on the HR Managers, go to the ... Managers and say, sir/ma’am by law you have to supply me with a list of all the employees and what ailments they have, and earmark your diabetics, and have a session at work. Explain to the employer, explain to the employee, explain to the colleague, explain to the partner, what diabetes is about and what a diabetic goes through, how much animosity aren’t you going to eradicate out of the work environment, how much anger and frustration aren’t you going to take out of the work environment, how much road rage aren’t you going to cut out, because remember if that person knows he’s a diabetic, or she knows she’s a diabetic and she hasn’t been controlling her sugars properly and her moods are fluctuating, she has had hell at work today, she’s stressed out and she still gets into peak hour traffic, by the time that person gets home, it’s a ticking time bomb. It’s a total ticking time bomb and now the children come, and mom and dad and all hell breaks loose.

R: It can be even without diabetes!

P: Without diabetes? Imagine what it’s like? Now imagine if diabetes isn’t involved in it? With explode condition, and if you had a nursing sister that’s based I will almost say every city block, there’s a nursing sister that is accessible on every city block or city blocks, okay a small radius area. And your diabetic can approach and say, please, I’ve had a terrible day, just check my sugar or can I just come and cry on your shoulder?

By having this person “on call”, by the time a person gets home, their anxiety, their stress, their worries, their – whatever they are in at that moment in time, has basically been taken out of them, so by the time they get home, they’re always docile, peaceful, relaxed. How is that not going to affect the home environment, it’s got to make it positive. It’s got to make it friendly, it’s got to take that hatred, that animalistic instinct if you want to call it anything, that anger, that venting and abuse and – let’s call it assault, out of the equation. Are we not going to cut out abuse, child abuse and domestic abuse?

R: Yes, that’s a very important observation as well.

P: And all you’ve done, is you’ve put people in strategically. When I was in Canada, one of the interesting things that I’ve learnt there, or saw there, as
related now to the motor industry, and this is where the city block concept, okay their city blocks are much larger than what ours are, but each city block, the white line in the middle of the road divides a city block, so on the left hand side of the city block you would have an insurer, your short term insurance, and you'll have a government department. Every city block. And if you're on the left hand side of the city block, you're only allowed to go to those offices, and if you're on the right hand side, you can only go to the right hand side office block. But at any given moment in time, if you need short term insurance, life insurance, you need a mortgage for your home, you need finance for your vehicle, you walk downstairs, you walk half a kilometre, a hundred yards, whatever the case might be, into your local office and there are people sitting waiting for you, to assist you. There's no queue because remember that person only serves 100 people or 200 people max a day. They still get paid, the government still pays for them. They don't have big flashy offices, they've got a little hokkie, but the person is accessible and in a very short period of time is accessible and a clear cut, precise answer is given to the enquirer. And they walk back after lunch, go back upstairs, they're got their answer, they can go home, they know what to do. If we had that here, from a medical point of view, how much problems can we not eradicate, how many diseases can we not pre-empt, how many deaths can we not prevent? How much hatred can't we eradicate? How much abuse can't we eliminate? Take these people, your nursing fraternity, because they will become the core of this whole caring because although they might be specialised as a diabetic nurse, they have been qualified and trained in all aspects of medicine. They might pick up something else, and they can do referrals through to the local practitioner or through to the local hospital and if so, cure other things also, they are not focusing 100% on diabetes. We have people coming in here that believe they are diabetic and I test their sugar for them, they're not diabetic. They've got all the symptoms of being a diabetic, but they're not a diabetic. They might have blood pressure problems, they might have cholesterol problems, I don't know but I can say to them sir, you've got a problem but it's not diabetic-related, or you are not a diabetic at this moment in time, your blood sugar count is good. But the symptoms you are showing, I suggest that you get to your doctor asap. What have I done with that person? In a split second I've built up a repertoire with that person. That person, irrespective of what the outcome is, when he goes to his medical fraternity, is going to have extremely high regard for me, because why? I show a caring for him. I showed a potential understanding of a
problem that he has. It didn't cost him one cent to come into my business, not one cent. But he will in time, directly or indirectly, reciprocate to me, and to my business. And in doing that, two things happen – firstly, my business can potentially benefit financially, which I can use then to plough back into the venture and into the community and build and expand on what I've got. And No. 2, I've formed a unity with another citizen and by forming a unity, I'm strengthening the community.

Now what do we want as a nation – what does any nation want, what does any town want, what does any business want? You want a community or an integration of people that are so strong it doesn't matter what happens, they will always come out tops. And if we can create that, it is such a simple, stupid situation, strategically placed nursing sisters that have been recognised, remunerated, almost being made a martyr of, by being in the face of the diabetic, saying you've got somebody whose shoulder you can cry on. It has to work, I cannot see it not working. I cannot see the country, or a country, or a colony not benefiting out of it. And if we take those bicycles for the “illiterate” people, they're not medically qualified, let's put it that way. But we take them and we send them for medical training, and they do their Level 1 and their Level 2 first aid courses and some of them will grow further. We're eradicating illiteracy. We're creating jobs. We are taking the community to look after the community. It's not, I'm going to make a million bucks out of this story, what am I actually doing for my fellow being? And we can only become powerful out of it, because if everybody’s literate and everybody’s highly qualified in their parameters that they live in and their mental state, if we got them running at peak performance within themselves, how proud can they be? They will only be proud. And the ripple effect out of that into your environment, your economy, your people, is horrifying, it's horrifying.
R: Well, thank you very much for all this input. It's been a tremendous amount of input.
P: You're very welcome.
R: I'm sure you've made a lot of input in here, if there's anything else that you want to put in – any other ideas?
P: There's plenty of ideas, as they come along! I think just basically, is eradicate the ignorance that's out there.
R: Ja, that's a big thing.
P: If we can eradicate the ignorance and actually tutor people, I think 90% of our battle's probably ... – and actually tell about it not being the end of the world. It's the beginning of a great time, I'm having a great time now, I feel better, I look better, I don't have the stress and hassles, I'm not aggressive any more and I don't take my frustrations out on everything and everybody – it's because I'm being treated. And suddenly I've got an enjoyable environment, there's an aura of an enjoyable environment.
R: But eliminate the ignorance, and there's only one way of doing it, is to create venues where people can congregate on an informal basis and listen to fellow people, ja, and let them learn what it's all about, and get in the professional people on a periodic basis, in quite an informal manner, to talk, to interact, and the word spreads – word of mouth is the most powerful form of advertising any information.
R: Ja, it is. Well thanks very much, I really appreciate your time.
ANNEXURE K

TRANSCRIPT OF AUDIO-TAPED FOCUS GROUP INTERVIEW – GROUP TWO
FG1 R: Right – now ladies, I'd just like you to tell me a bit about what you perceive as self-
management in patients with diabetes – what does self-management mean to you and your
patients?
FG2 N1: I think self-management is a patient that is well-educated, he is well motivated, he's
got his goals set and he’s trying to reach them and that's about it.
FG6 N2: If he understands what it’s all about, so it’s really as you say, if the patient has been
informed and is knowledgeable, and to remember that right from the word “go” when a
patient is diagnosed with diabetes, we often find that, dealing with those patients,
especially for all of us from the specialist group, for working with specialists, once they
get to us there, they've been a diabetic for a couple of months and they really don't
know what the heck is going on and they're taking those tablets and they've got a little
bit of sugar and they've got this and that. So self-management means that patients,
there's certain things that the patients need to know and need, people they need to see,
to put them onto this road of self-management and having a goal and being motivated.
FG16 There’s nothing as de-motivational I think, um, as not knowing why you need stuff. So
knowledge is really power and knowledge makes management I think so much better. I
don't know what you think but ...
FG18 N3: No, it’s true because really patients that you say they are on the programme of self-
management, it means really they are fully informed and they take it, you know, the bull
by the horns as soon as they are diagnosed and they are enthusiastic about it, and they
are looking forward and they are interested also you know, and say, okay, what are you
wanting to do now? – what next, where do I need to go, like maybe dietician or eye
specialist, you know all those other things that they need to, and they make out a
proper ... you know. Then those are the type of patients that are going to make it, and
also winning to manage themselves, you know. Unlike the others, because now there's
another group of them whereby you need to coerce them into trying to get them, into
buying in this idea, you see. So it’s almost the same as what the other type is.
FG28 R: How do you manage that second group that you spoke about? How do you approach
them, to try and get them to buy into the idea?
FG30 N3: Ag, it is a very big struggle for these other type of patients that I’m getting, because
you need to convince – let's say that there may be a patient, besides he's a diabetic,
he's also having hypertension, you know, so those are the complications that – maybe
he's also starting not to see and then you find that they still go to the cultural people,
FG34 you know the Transkei people, and yet it’s for the same thing and do you know what is
FG35 happening in the structure of the eyes, why are they like this you know, and it takes a
FG36 big struggle to convince them and suddenly I’ve got “My feet is sore and I can’t walk
FG37 properly” and now there is no picture that you really, you’ve got to make them, okay
FG38 realise this is what is happening but as soon as they start to feeling better like maybe
FG39 their glucose level is controlled and all that stuff, then you find that, “Okay, now I
FG40 realise why I am diabetic and also now I can link now the two – the eyes, because
FG41 actually I couldn’t see but now I can see” you know. There is oh, lots of things but
FG42 really you’ve got to try and coerce them and also to convince them, because it’s not
FG43 just a child’s play, you really need to work on these people, you know.
FG44 R: You need time to –
FG45 N3: You need time, you need time, because every moment you, it may be hours you
give them, maybe to say two weeks you know, just to come again and treat that and
FG46 sometimes they don’t have to be seen by doctors you know. Maybe we can also see
FG47 them and then we encourage and we motivate – no, this is how you must watch your
FG48 blood pressure, this is how you must go to eat, it’s so important to go to the dietician
FG49 and blah blah blah, you know the dietician is going to teach you the ways of eating and
FG50 all that stuff you know, and all, you know the cholesterol and everything that comes in,
FG51 you know, starts to make a picture at the end but really, it doesn’t come, you know, it
doesn’t come just like that on a plate, you know, no it is something where you need to
FG52 work hard.
FG53 N2: But it’s true what you say, and sometimes we find it’s the patient that has come
FG54 along with the disease for some time already and sometimes the one that’s not so
FG55 motivated, but my point for that, even with that, sometimes it’s even then that from the
FG56 start it will not – what I want to say is, if from the start, if all our new patients and
FG57 luckily, that’s why I’m saying it’s wonderful that all the specialists have got educators
FG58 with them, because we are filling in a huge gap here in between hearing the diagnosis
FG59 and the GP, being referred to the specialist, luckily they’ve got us to extend their
FG60 whatever and the information, and sit down with the patient, ten minutes, give them a
FG61 bigger picture, that with diabetes, why you’ve got more high consistency of your
FG62 blood – you will have high blood pressure, we must look at that. You will have an
FG63 abnormality with your cholesterol because unfortunately it’s all under this big envelope
FG64 of diabetes. Don’t ignore this because all of this, you know – so what I’m saying is um,
FG65 that initial, the patients as [Tilly] said, those patients are very difficult because they
FG66 came along with not being properly informed right from the start, so it does not make
FG67 sense and now I’ve got this problem, I want you to sort out that problem now for this
FG70  [fee] without the sense that, listen, and you can't make them blame themselves now for
FG71  neglecting themselves, this is how [derogatory] we are, unfortunately you can't do
FG72  everything. Um, but that's where ... I'll tell you know, okay. As soon as you get this so
FG73  let's say you do for two weeks, go and check your sugar, just see, don't [charge]
FG74  anything, just check and see, let's come back and see, okay, here you are, thank you
FG75  very much for doing that, you see? Please check after breakfast so maybe we'll need
FG76  to do this and maybe we'll need to do that. Small goals but knowledge and as you say,
FG77  just to get them into the picture again. Um, but there is a huge educational, what do
FG78  you call, not shortage but an educational gap out there and especially to those people
FG79  that don't have the access to the three of us or all of the educators, that don't have
FG80  access, those people sitting in clinics, diabetic clinics, they just go there, and they just
FG81  get shocked, thinking that they have to go home and then do this and do that, why are
FG82  you doing it – the nurse told me to do that you know, and so unfortunately ja, maybe I'm
FG83  jumping the gun but that is exactly, in our own training I mean you get trained about
FG84  diabetes but it's a disease, a managed disease or whatever, um, but so much changed
FG85  in the field of diabetes since we did our training. It's so much more easier, I mean you
FG86  can – if you had a diabetic in your ward, it was the most horrific thing that you could
FG87  have had. Nowadays, I mean, all you have to do is – and – Don't eat because you have
FG88  to wait 30 minutes – or the ... tablets you know. So there is such a jump in the
FG89  treatment of diabetes um and with those – sometimes those people that are not so
FG90  bright about it but you also find is that you're still dealing with the old generation where
FG91  the word “diabetes” goes with blindness, amputation. Insulin – when my father was
FG92  put onto Insulin, he died. Why? – No, no, it was bad ... so you've got that, because that
FG93  was the way the treatment was then and not now. So unfortunately it's a disease
FG94  growing so fast, faster than we can actually teach the world out there that there is so
FG95  much more that we can do. Um, but even today as she said in practice where there is
FG96  access to physicians, we find patients and it's not because they're not so educated but
FG97  you can do whatever you want, they still don't do what they have to do. We've got
FG98  those Insulin [pipes] the most novel method of treatment and you find that they don't
FG99  come for their follow-ups, they slip through, you need, and I am, I am guilty, yes, they
FG100  slip through.
FG101  You actually, ja, you need to phone them and say, Listen, but even then you can take
FG102  the horse to the water. So there is a percentage of patients where you have to realise
FG103  that you will do your absolute utmost to inform, try and motivate but there is that small
FG104  percentage of patients that we can do, well, you can't force them.
FG105  N1: Re-educate.
It must really feel like you guys are knocking your heads against the wall sometimes!

Luckily most are coming around, they are motivated enough. So I really feel with this type of thing, I mean I’ve been working in a medical ward for 14½ years and as [Hannie] was saying, really you don’t know really what you’re dealing with. And coming to being a diabetic educator, now I’ve learned what I have to emphasise to patients. You must know your HA13, you must know the complications, you must know how to monitor your AGTs, you must take your treatment regularly, and these are goals that is set there for you and you have to adhere to it. And I think now patients in future will, the more we make people aware of how to treat diabetes, the more patients will be able to empower themselves.

It will take a generation, and it will take a generation, ja. Where there was a generation where people lost legs and go blind, and even today, we’ve got those still with us, that -

They can, despite all the new technology.

Ja, that’s a big problem that, because you’ve got to try and avoid the –

Availability of the glucometer, nê? Availability of being able to test and see how food affects my sugar levels.

Ja, because if they don’t have, then they are like walking in blindness because without them knowing that my sugar is high, it’s only by, you know, using the machine you know, that’s the first step that you can take but because without that, really, you’re like walking in darkness.

So, self-monitoring.

Ja, self-monitoring.

I think we all have got different um, maybe fields, but I think the medical aid in some way with this disease management programmes, is also trying to contribute, I don’t know how they get to everybody but I find that patients will say, my medical aid actually phoned me and asked me this or asked me that about my diabetes – uh, so in a small, very small way, but it’s there – it’s there. I don’t know by how much they succeed and I also feel that, the [CDEs] I mean with [CDEs] – we feel different about [CDEs] I mean we’re not buying into [CDEs] for whatever reason I don’t know but um, it’s there, it’s a centre where you can go, people centre for diabetes, even if you see this big boards, you can actually go and knock there. Yes, okay, that’s it. Um, so those are, ja and the press – World Awareness Day in November for diabetes. You know we, but you were
with me [Pam] when we attended here with the medicine companies, um also contributing and public awareness of this and we, there was a couple of patients that came in with 20s, knowing that they were diabetic, they came along so public awareness of this without scaring them away, um trying to find a fine line, don't scare them to the corner of the room or whatever, make them aware that if you're diagnosed, you've got to get better, it's the one chronic disease that you are actually can be in charge because you can self-manage it. Why? You've got pills, or Insulin, you've got a meter, you know exactly how to develop education, you've got the education along with it, and you can monitor yourself – how am I doing? They say this but it's actually not, so, listen, what's happening here. It's not that you depend on a lab only, well the laboratory is obviously always there but I feel that the home blood glucose minding although it's a small picture in a huge frame, but it does contribute, nê?

R: I'd say that's very important.

Because though you are doing it at home, nê, but you find that when you go to the, maybe when you go and visit the doctor because now, I don't know with the State hospitals but when you go, then you just connect the machine to your arm and to the computer and then it gives the whole picture you know, a graph-like thing and then you present that thing to the patient and say, Okay this is how your glucose level is doing, then the patient is able to see exactly where am I going wrong you know, and when even if she has got to go to the doctor then the doctor will also emphasise the same thing, because at least you and the nurse you've got an idea as to how to handle that.

I think another thing is GPs should be encouraged to know more about diabetes. There should be facilities, even in your public hospitals, you should have facilities where you've got diabetic educators, where they can teach the patients what to do.

The public sector is a huge gap, because most of our patients unfortunately today is falling into the public sector, we can't afford medical aid for ourselves even you know.

For that reason I would think that public should really do a little bit more, to have educators like us. Even in the factory, there in the factories they've got a clinic. Shouldn't they have the nurses diabetic trained, especially diabetic trained, she teaches the patient how to handle it. Especially when the patient needs to ... and supply him with sticks. Motivate that patient to do better. So you can do it in the factories, public sector can do it. Doctors at their surgeries need to do more. The first time, the first connection, ja. I think maybe the first diagnosis.

And then also have more people working with the doctors?

With the doctors, ja. What actually also is a big help for a patient managing, is
because of the legislation about prescribed medical benefits for certain 25 diseases

and obviously diabetes being one of them at least you've got some foot to stand on, at

least you can say to the medical aid, if there's a problem, you won’t believe, there’s a

A4 page of medical aids that do not have to give benefits for P & B you won’t believe it,

A4 page of medical aids. But in the overall, the most medical aids um is part of the P &

B and that helps, because you’ve got some foot to stand on, at least you can try and

motivate them, most of my time, a lot of my time is going in dealing with medical aids,

they struggle, phoning me, we’ve got the info, I'll phone and I'll fight for you, let me get

that 150 strips a month, it will enable you to check four times a day if you have to, you

know, if you really whatever.

And another thing that I think is important, is that thing of everyone going for an in-

service, okay, like for a diabetic specialist you know, because it’s not everybody that

knows all –

N2: Uh-uh, uh-uh, uh-uh.

So that if you’ve got it starting from the secretary, you know, everybody that is

involved with the patient, then they must also go through a training, so that it doesn’t

matter who comes in contact with the patient, then that person can be able to help the

patient, just to create that info you know to everybody else at the end of the day, I think

it can ...

When the patient comes in then the patient’s going to feel very important. The

secretary knows them, the sister knows, the doctor, they’re all speaking the same

language.

That’s the big thing – for everybody to speak the same language when it comes to a

condition like this. Because if different people have different ideas it’s bad but everybody must

speak the same language, and the latest things.

Ja, um, what kind of strategies do you use, I just suddenly thought of this now – when patients

come along and they don’t feel like taking part in anything and they’re not really taking any

interest in whatever, how do you actually approach that patient? Is there any particular thing

that you do? When a patient comes to you and they’re really not controlling themselves

properly and so on, how do you actually – like you say about setting small goals and things. Is

there anything else that you’ve got?

Ja, first of all as she said, it’s very useful, um, I think you said something about like

that, that you can’t – not fight them but you can’t [control] ... why are you not – I mean

that’s the last thing that you can do, you need to find some or other connection, how

can I help, what went wrong. Listen at least you’re taking your medication so you’re

doing something, it’s good, ja. So what do you hate about pricking yourself? What,
FG214 you've got a fear for needles? There you are! So let's see what we can do about this
FG215 now, because all of a sudden then, dawn arrives, so I try and get to what is the thing
FG216 behind whatever.
FG217 R: And if somebody has a fear of needles, because I mean sometimes ... um, what can you
FG218 do?
FG219 N2: Sorry, but you wanted to say something and I interrupted and now you lost your
FG220 thought.
FG221 N1: ... it will come back again. From what you were saying, I think the pens are still the
FG222 best, if we can really have access to, all of us to have access to the pens because
FG223 pricking with the pen is much better than pricking with a needle, we can get the ...
FG224 N2: Terrible - I hate the nurse for doing that!
FG225 N3: So now, I should think if we can go you know with the pens like and you know, just
FG226 try and orientate the person listen, because this is how you can use it, this is how you
FG227 can prick yourself you know, and also, I think that's what I wanted to say now.
FG228 N1: I think with the pens, the nurses didn't know how to use the pens. Because I was
FG229 working in a medical ward where we had lots of pens, every month you had to buy new
FG230 pens, when new nurses come on duty, they break the pens. But now the [lances] that I
FG231 was using before, the red and white, you know it, those are terrible needles. But the
FG232 new ones ..., it's quite nice, it doesn't prick, the prick is not so bad.
FG233 N2: Are you talking about the Multi Sticks now?
FG234 N1: No, not the Multi Sticks, the new disposables.
FG235 N2: You mos use disposables. That thing works nicely. The needles are fine, it's sharp
FG236 and ...
FG237 N2: But ... as well, there's a new Multi Click Stick ... you take a little drop and you don't
FG238 even see the needle, there's no sign of the needle. But boy, if you load it and you prick
FG239 it in, it will prick you but I find, I've got patients with terrible phobia now in the clinic,
FG240 she said, “Thank you dear Lord for that thing, I don't see the needle, I get my drop of
FG241 blood”. So they do make things, for the kids there is these ... they don't have to see the
FG242 needle.
FG243 N1: You don't even see the needle of your –
FG244 N2: of your injection – injection, ja. So there is ... they're very aware of the phobia.
FG245 N1: And the needle itself's fine, you have to tell them also, really, the needle itself's fine
FG246 and so sharp that you hardly feel something, you don't feel it. Sometimes you have to
FG247 even inject yourself, not inject, but put a needle in yourself ... it's not that bad. So you
FG248 have to re-emphasise every time!
FG249 N2: Dis reg.
FG250 R: ... where I had to prick myself, we were having training and I had to prick myself every
FG251 three minutes I had to prick something and then do it just to see how it was going, and I was
FG252 actually amazed, it wasn’t as bad as I thought, and that was the ordinary ... thing, not even
FG253 these new ones that you talk about –

FG254 N2: So difficulty with the patient not wanting to be motivated, is the thing to be aware
FG255 of, although you’re working as a diabetic sort of specialist, that you’re still treating the
FG256 whole person, ... more holistic approach, so maybe it’s not so much the pricking of a
FG257 finger or the injection but it’s the social whatever thing about it. Sometimes I visit the
FG258 other schools, you know, the children, and, ...needle and whatever, so, that’s why,
FG259 okay, you know what you can do, it’s still fine, you can wear it in your pocket and you
FG260 can quickly slip into the toilet and do it there and came out, nobody will notice. So,
FG261 remember that this is still – I don’t have the money ... I don’t want to come here, I can’t
FG262 afford the doctor, I can't this, I can’t that and there's then the other way, just phone me,
FG263 tell me when you’ve got difficulties. Look, this is the target, remember this is your
FG264 target, if you find your pattern is outside this target, so really remember that we’re still
FG265 working with a person in more than one direction ... holistic approach whatever.

FG266 R: Ja, and that’s so important. If a patient has a problem with funds and that, how do they go
FG267 about it, do companies help in any way?

FG268 N1: They can refer to the hospital, like I'm working with the doctors that work at
FG269 Livingstone at the diabetic clinic, so a patient gets referred from there to, his then
FG270 patient to the hospital.

FG271 R: That’s wonderful.

FG272 N1: It’s a wonderlike thing – a wonderful, wonderful thing. So they still see him, but
FG273 they see him at Livingstone, yes.

FG274 R: Oh, that’s fantastic.

FG275 N2: Ja, Mr ... is working there as well, so it is some kind of support.

FG276 R: I think we’ve been talking about some of these things as well, including self-management,
FG277 the problems that patients have, can you think of any other things that – besides the needle
FG278 phobia and so on, that –

FG279 N1: Educational level, emotional level, they’re not taking it, they’re in denial, they don’t
FG280 take it right, so they can refuse it with certain things.

FG281 N2: Ja I've seen it, and age, ... it’s a lost generation, it’s ... even today, dis not so. That
FG282 kind of thing, there’s all, ja, there’s even old age for that matter.

FG283 N3: And also social-related issues you know, who can also come in you know, with the
FG284 Xhosa is a big problem because then the patient says, I haven't taken sugar because I
FG285 had to do, you know, I had to do this and that, and I am so stressed out, you know
FG286 maybe I've got a son or whatever but then find that in the middle of all this news, you
FG287 must look after yourself, in the middle, it's you must be responsible for yourself.
FG288 N2: Not taking responsibility.
FG289 N3: No, they're not taking their responsibility but then you find really there are a lot of
FG290 family issues and all those – at the end of the day ...
FG291 N1: Lack of support. Lack of family support.
FG292 R: What kind of cultural issues do you cover, especially amongst those who haven't got very
FG293 much education – do you find that they go to the sangomas and so on?
FG294 N3: They do go to sangomas my dear, you are the last step now that they can knock at,
FG295 but first step is to sangomas and you know, the head and all that stuff and when they
FG296 are done with them, then at last they come and knock by your door, and they still
FG297 gonna, because now they still have this belief that my sangoma whatever, you know
FG298 can sort of help me but it's gonna take you a long, big guts you know, to win that
FG299 person to come over you know, so it's not an easy thing because the cultural thing is
FG300 just here.
FG301 N2: ...., there's one thing I want to ask you, so, as, as sort of, a while, there was a stage
FG302 while Xhosa males especially, don't want Insulin because they say it's a weak man that
FG303 must inject to live. Don't want that Insulin – it's a weak man – it's a sign of weakness of
FG304 you have to inject. Is it a ... thing that's still alive?
FG305 N3: You still find in most of the patients in that, though there is a little percentage that
FG306 is like moving to – but other than that, they believe in taking the tablets, but when it
FG307 comes to Insulin, you know, it's not so easily acceptable, you know – I don't want –
FG308 N2: I'm going to die
FG309 N3: Yes.
FG310 N2: People that use Insulin, die.
FG311 N3: Ja, yes.
FG312 N2: That's what they believe in but a person can tell them your sugar must be
FG313 controlled, those people die because their sugar wasn't controlled. I don't know, do we
FG314 get to anything on the ... side? (END OF SIDE 1)
FG315 R: Okay, let's start again.
FG316 N2: Okay, I want to – I was asking ... again because you see maybe more Xhosa patients
FG317 than I do – we do have ja, but I found the one thing that drives men back to the
FG318 specialist, is sexual dysfunction. They get erectile dysfunction because of
FG319 uncontrolled diabetes and then they come and knock, because even maybe the herbs
FG320 or whatever didn't help now for this thing and now they're really not a man any more
FG321 and they've got this huge issue, and I find that if I can convince them at least for um,
first of all, explaining why Insulin ... sexual disability ... why the hormone is important
and I tell them, I'm trying to get there, because with the barrier of being a female
speaking to a Xhosa male, I can't go directly there but in visiting him in hospital for two
or three sessions, while he's here and educating him how to inject, I can get to um, are
you still okay, is there anything else? And then they come with – No, but I'm not, I'm
not with the wife or whatever, I try to get to that so I can tell him, listen, I promise you if
you use that injection, your sugar will be better and you will be a man to your wife.
Some, I must say believe that Insulin acts as an aphrodisiac not - ... they found that
when they've got Insulin, boy my sex life is good but it's because of the uncontrolled of
the orals that they have erectile dysfunction, going over to the Insulin is more
controlled and erectile dysfunction is better, even if ... or Viagra helps better. It's no
use with an uncontrolled sugar level, trying to take ... or Viagra, they will jump from the
one to the other, to the other, it doesn't work and they feel immensely depressed, um,
so I would say in my own culture, it's easier, the last question, as I'm finishing off you
know the session with the patient – Lastly, I need to ask you this and it's very difficult
for me, do you have erectile dysfunction? Yes – please – okay, let me tell you, if you
stick to your medication, check and see how you're doing, I promise you, and they
don't come back to say that it's not - ....
N3: And really if you don't touch on that area, avoiding it, otherwise you are just
wasting your time. And also you must motivate and encourage the person, it's not
going to be an overnight thing you know, it's just going to take a little bit of some time
but it'll come right. Stay close to your wife you know, or close to your girl friend,
whatever, you know, and also you know, play around with them, or play around you
know, let her play around with you and all that stuff, and you're gonna sit, because your
attention mustn't be on this thing, that doesn't take shape, but it must be, you know,
just take your work out and you go home, you know, somewhere, you have a jolly good
time and all that, but don't concentrate on this and what you must concentrate on is the
medication that you must take and in the midst of all this, you find that, heyyy, I can ...
you know, to some extent you can say, ay-ah, it's starting to take a shape now, you
know, and really they won't come back, and like I say they don't come back, but what
I'm saying is that you try and put yourself in the shoes of the patient you know,
because also like the ladies, they also mos sometimes they've got this soreness and
itching, it's like – Oooohh! I don't want to have you know, you know I don't want to go
to bed with my husband and I wish he can understand and all that but then you need
also to explain as long as your sugar's not quite right, this is what is happening, you
know, this is what is happening, all the hormones, but as soon as you're controlled,
then you’re going to see, things are gonna be much better you know. So what I’m saying, to either side you need to have something to encourage the patient with.

R: And then do you approach the partner of the patient as well – do you have any time with them as well?

N1: Yes, if the partner is there, we speak to both of them. Especially when it comes to sexual, like the other day I just re-educate the patient, I’ve educated the patient in the ward but when the patient came into the rooms, he didn’t know how to get his Insulin and he showed me how in hospital, he showed me how to draw up his Insulin, he knew how much to take, he showed me that, yet he comes to doctor, he don’t know anything.

So when we went through all complications and how your stabilised sugar will help you through all the complications, it came to sexual things and the wife said, That’s the thing that I was talking, Sister, I didn’t know, he don’t touch me any more. So now he was a little bit open and they talked about it but what I think is this husband think that the wife wasn’t reporting to him enough. She don’t even look how I get my Insulin. So I think he needed some support from the wife.

N3: You say as long as you are interested, don’t just concentrate on that but you look at like what you are saying to somebody, think of ... look at everything about your husband or look at everything about your wife, let that bad thing be the last thing that you consider, but be interested to the person himself, then everything is you know, is gonna come right.

R: Do you find that sometimes people think that their partners are having affairs because they’re not interested –

N3: Sometimes you do find that maybe it’s the wife that’s you know having the diabetes and all that stuff and they also, it’s like, Oh, you’ve got another man then, blah blah, blah, and then the end of the day it’s not like that oh it’s the husband that is not like you know showing up at the right time but then at the end of the day, as long as, that’s why it’s important that thing, you need to, if the patient himself comes to you, you must educate, don’t consider the fact that, ai, your wife is not here, talk about everything, because now you don’t know whether he’s married or what ..., you need to handle everything about himself and also about herself, because now you don’t know, maybe there’s a wife there or there isn’t a wife, but what is important, you need to ..., sum it up and give the picture so that she doesn’t sit and wonder, Ooh – what about a girl friend or what about my ... and all that stuff you know, because at the end of the day you are dealing with a person in totality.

N2: I’ve learned something from you today, and that is something that I will definitely take in my next whatever with the males. To tell them about, still being close to your
FG394 wife, and that is now so important to me, it’s something that I really appreciate so much
FG395 but it’s something I don’t talk. I may be, I will certainly have to get adventurous to tell
FG396 them about erectile dysfunction so I can have the guts to say it will be better if you do
FG397 this and this and that, then I forget to tell him about it, being first of all, sort of open, he
FG398 says yes his wife knows about it ... whatever, but the other thing is to cuddle and be
FG399 close, treat her ... but as I say, ... and then I will then forget it, I will do it ...
FG400 N1: I don’t know whether Sophie told you about our seminar we had – not?
FG401 N2: No.
FG402 N1: So we had to take ... there, and there was also, how you must treat your wife, what a
FG403 wife must do for the husband but they said mostly of course it’s the wife that feels left
FG404 out and all this, and sometimes the wife moves away from the husband, she don’t want
FG405 to have sex and things like that, but this is the little thing that a man said - once a
FG406 woman’s heart gets closed, the koekie get closed! ... Hy het nou mooi in Afrikaans
FG407 gesels! Wanneer die hart toegaan, dan kry die koekie ook so! So he must keep his
FG408 wife’s heart open, otherwise he will have those problems!
FG409 N3: These things about stressful situations, you know, we were talking about that, and
FG410 the one really close to you, why don’t your husband – you know, you don’t mind about
FG411 all the other things, you just take it or it takes you and you are – and at the end of the
FG412 day you know, things they just sort themselves out but what I’m trying to say, it’s not
FG413 just about a person being diabetic, it’s more about everything – everything that you
FG414 know a person, you know, probably might be facing at the end of the day, you see. So
FG415 what I’m trying to say, it’s just about everything that you need to be looking at.
FG416 N1: It is difficult, nê – thinking about getting to speak about sex with a patient, in the
FG417 process or in the practice setup, it’s not always possible within that five or ten minutes
FG418 that you say hello and get the patient ready to go to doctor and whatever, really to get
FG419 to that stage, to really speak to them in depth. But as you, unfortunately here it’s
FG420 sometimes – as you get to know one another better, now that they know that you are
FG421 there and you are available and you’re open and whatever, you will get to it, or
FG422 hopefully they will actually speak to the doctor. Without even touching that subject
FG423 sometimes, they will come to you. They’re used to you, they see you there, you talk to
FG424 them, you educate them, re-educate them and then they tend to open up. Sometimes
FG425 they don’t even talk to the doctor, but they will ask you about it all.
FG426 N2: But I think it’s our approach then, of not um, what is the word, not to – ag man, nie
FG427 “apprehend” nie, maar om hulle nie aan te vat nie om hulle –
FG428 N1: Don’t want to offend them?
FG429 N2: Nee, what I’m saying is, in our way of not saying, listen but because you’re not
FG430 doing this and this and that, that's why you've got a – because we are so susceptible
FG431 for them as a person, and not showing a finger when they get in there, look at your
FG432 sugars and look at that, ... ja, I'm struggling to get the right word I'm looking for, but
FG433 we're not –
FG434 R: very independent?
FG435 N2: Ja, sê maar dis die woord. Um, but that helps, but we've got a passion for what
FG436 we're doing and if you're -
FG437 R: Compassionate.
FG438 N2: And if you're passionate, ja – compassionate, I think they spot you a mile and they
FG439 know, I can speak to her.
FG440 R: Ja, it's important to know, for a patient to know that they can speak to you, to the nurse
FG441 there.
FG442 I think we've covered a little bit of this but are there any particular points how registered
FG443 nurses can assist diabetic patients, take registered nurses working in the wards and so on –
FG444 any specific thing, we've spoken about education and so on, but any specific ways of
FG445 assisting?
FG446 N1: I think the way we teach our patients, that is the way that nurses should be taught
FG447 in the wards too. As she says, we must be preaching out of the same mind. So the
FG448 nurses must also, I think they must be made, that nurses in the medical, not just
FG449 medical, there you get those patients that's pregnant too so you can't just say medical,
FG450 you find the surgical patients ... surgery, and she's diabetic - I think all nurses in the
FG451 wards, all registered nurses, should be trained as we train our patients and we really go
FG452 far for these patients.
FG453 N2: The other thing of theatre is, um, to, if you're lucky, ... lucky, if your patient is able
FG454 to do self-management, is to make them co-responsible even when they're in hospital.
FG455 There is nothing more frustrating to me if I get to one of our patients and he had a low
FG456 and I said, did you call the nurse? – No, but I'm better now, I mean – ja, the poor nurse,
FG457 sometimes she's not always there, and she already has got a lack of knowledge about
FG458 diabetes, so, patients to be also even in hospital, be a bit responsible for being about it,
FG459 listen I know it's time to have my sugar done because doctor requested it two hours
FG460 after my meal, or I can see it's three o'clock and I need to have it done, um, but I find
FG461 that when they get to hospital, they just relax, they think, ja, not it's the nurses that
FG462 must look after me. So I find that I will – ja, be the first to tell nurses is to when I get a
FG463 patient in that's diabetic I will say, Listen, my name is Hannie and I'm responsible for
FG464 you but please, being a diabetic I can't always be around so please, here is the bell,
FG465 make that agreement with your patient, that I will come and help you and assist you if
FG466 you ring the bell but you are please, you are diabetic, have you got your machine with
FG467 you? No, that’s fine but then you can ring the bell. You’ve got your machine, okay. If
FG468 there’s an emergency, please test your sugar for me. Ring your bell, somebody will
FG469 come and we can report it to the doctor. I think we need to come to that agreement
FG470 between nurse and patient, and not to sit back and watch and say, You know, this
FG471 hospital is terrible because they didn’t even come to my aid when I ... and that very
FG472 often they can sort of speak out ... but there’s an agreement between patient and nurse.
FG473 But yes – education.
FG474 N1: Before we had diabetic educators, before the company sent out ..., when my
FG475 patients went that time, they used a lot of [actrophane] so when the patient went on to
FG476 [actrophane], I always said to the nurses, start teaching the patient now already, so the
FG477 moment the patient went onto [acrophane], you teach them, to teach them how to use a
FG478 ... we just observe them and they do it, and that helped also a lot.
FG479 R: Ja, that’s –
FG480 N1: That’s the leader in the ward, you lead the nurses, jy weet, you lead but the nurses
FG481 that I was working with, hoor, die Baajies, vra my!
FG482 N2: What about them?
FG483 N1: My nurses are so well educated where diabetes is concerned, even the assistant
FG484 nurse, the assistant would be lying in the hospital and then she say, oh, Fortuin you
FG485 allow Baatjie to give an enema? Ek sê, some patients we teach to give Insulin are not
FG486 educated, Baatjie is educated, she knows how to do it, she’s got the pins and I feel
FG487 happy with her giving the Insulin, ja.
FG488 R: Ja, that’s a good approach to have, because you know, it’s so incredible that everybody
FG489 needs to know how to deal with it and just now that person becomes diabetic and you’re
FG490 already halfway there!
FG491 Okay. Well, I think we’ve covered it. Is there anything else that you people would like to add?
FG492 Especially with regard to the nurses and so on, if there’s anything –
FG493 N1: I really think nurses should be educated more re diabetes. It’s like a world thing,
FG494 it’s like a world epidemic
FG495 N2: There’s more people worldwide with diabetes than HIV.
FG496 R: And then you get the two combined.
FG497 N2: And when you get the two combined, then you’ve got a problem.
FG498 N1: So, there’s a lot of – ja. An awareness in the community, you must try and promote
FG499 at that five hospitals, in the churches, in the schools, wherever you can. I think that’s
FG500 something that we really have to look at.
FG501 R: Ja, because a lot of people are very frightened when they’re confronted with this. They
FG502 don't understand what's happening to them and yet there is so much education going on, so
FG503 how are we going to reach the wider population?
FG504 N2: But luckily there's people like Diabetes South Africa, Martin Prinsloo in Port
FG505 Elizabeth, that's running Diabetes South Africa, a monthly group getting together, um
FG506 and that gets published in the PE Express and whatever, about the meeting coming up.
FG507 So yes, maybe the rule is, it's not a rule, but maybe if some of the communities does
FG508 not have somebody like that, maybe a Xhosa or a Zulu or whatever speaking courses,
FG509 and think of involving these people that can speak that language, so maybe it's
FG510 something we can approach Martin for, is that Martin, you are having this at St
FG511 George's but what are you doing for Motherwell and Kwazakhele and whoever, where
FG512 there's a broader public sitting out there, the factory workers and whatever, or the more
FG513 [affluent] people, but what are we doing for them? What are our Diabetes South
FG514 Africans doing for the poorer public?
FG515 N1: I think they've got a black guy that's on the committee there.
FG516 N2: Yes?
FG517 N1: Mmm.
FG518 N2: But then we must make him more responsible, not responsible but more – get these
FG519 people in and ask Martin, you know, by giving it here that's good but what about getting
FG520 a group together at Mercantile? What about getting a group together at wherever and
FG521 me them, yes, it's good to have once, there's Diabetes South Africa and Martin and
FG522 them are doing it for years so thank you dear Lord that he's doing, they are doing
FG523 something, then for the kids and I know they know, there's Sweet Talk. Shelley Appel
FG524 and Deidre Gerber. I say even now and I'm going to do that, there's a guy at UPE
FG525 starting at Group 4, the teenagers are a difficult case, so early student groups. So all of
FG526 this is out there and I find it ... we don't see younger than 12-year-olds or 10-year-olds.
FG527 Whenever I phone, my first thing is, and that is why ... I can't help you but let me give
FG528 you these numbers, please phone Shelley, please phone Deidrei, they're excellent in
FG529 supporting the mother with a child who's newly diagnosed or having problems or –
FG530 listen, phone her but you've got teenagers, so we've got this group going for teenagers,
FG531 phone them but again, that group needs to be more representative of our community.
FG532 Again, we need to involve more of our people in those groups. It should not be a wife
FG533 only or a UPE group only, you know, it should be schools too, so we need, we need,
FG534 maybe have a school morning ... ignorance, why, they're afraid, why they don't have the
FG535 knowledge to use, this very easy stuff. So it's not something that we may have perfect
FG536 .... but certainly with a lot of us having the patience for this, it will create some or other
FG537 fire out there amongst the public. Um, perhaps offer a – I have also strong feelings for
the broader community. I also feel that, even I, I'm trying to do my best for this group that's got medical aids, this patients with medical aids, but what am I doing for the patients sitting in the clinics and the State hospitals? I'm not doing anything and I feel terrible for not doing anything. I feel that at least if I can have whoever is prepared to learn, she can shadow me around and that, I can't speak the language but I would love to be able to do something for the broader community. There is a gap.

R: Ja, I would love to as well because – but the problem is I think I can't speak the language either.

N2: Ja.

N1: Well I don't find, okay maybe you've got different type of patient in the rooms, but I don't have a problem, and I can't even speak the language.

N2: I can't even speak the language, I find English is fine but can you think, if somebody –

R: It would just be better for the patient.

If I have a patient I know that [jaga] is to prick, and I know [vuka], so I can say listen you need to [jonga] four times a day – even that one word in your own language, I think it's [jonga] – “Listen, it's my language”.

N3: It's true, like now I'm sitting here and I'm thinking what impact am I prepared to do you know, in my, like in my church because now a lot of cases that are there, they're diabetics but they don't know themselves or what, so I was thinking it's true that the work here on that day, we are thinking of doing that thing, that diabetic application, but then we come again it's not gonna, we mustn't start with diabetic education, we must start with health promotion and then we [calculate] it down you know and put it also to, work from a different perspective you know, and at the end of the day we'll be able to reach you know, out to them. So it's true, we can't be sitting and doing nothing, you can make a difference where you are.

R: Like those patients out there that don't know where to go and you know, the ones that I feel so sorry for, and actually have nowhere to go because the medical aid won't allow them to do this, or they don't qualify to go to the hospital, I think, because they're on a medical aid and so it can be a heck of a problem.

Okay, anything else you want to add?

N2: No, we'll keep you here the whole day!

R: Well, we've got plenty of cake here! Well thanks so much, ladies, I really do appreciate what you've done. It has been very, very valuable.
ANNEXURE L

DIABETES SOUTH AFRICA SUPPORT GROUPS IN NELSON MANDELA BAY
<table>
<thead>
<tr>
<th>Support Groups</th>
<th>Contact</th>
<th>Phone</th>
<th>Meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>Yolande Knoetze</td>
<td>041 379 1082</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shelley Appel</td>
<td>041 367 5101</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Deidre Gerber</td>
<td>041 368 5616</td>
<td></td>
</tr>
<tr>
<td>Teenagers</td>
<td>Garret Barnwell</td>
<td>078 655 6281</td>
<td></td>
</tr>
<tr>
<td>Dora Nginza</td>
<td>Sr. Vacu</td>
<td>041 501 4135</td>
<td>08:30, Thursdays in H Block</td>
</tr>
<tr>
<td>Gelvandale</td>
<td>Hester Isaacs</td>
<td>041 456 1486 082 224 6020</td>
<td>Second Tuesday evening of the month at Uniting Reformed Church</td>
</tr>
<tr>
<td>George</td>
<td>Maureen Barnard Mervyn Watten</td>
<td>044 874 6769/0824943447 044 877 0069</td>
<td>Lecture Room, Mediclinic Hospital</td>
</tr>
<tr>
<td>Graaff Reinett</td>
<td>Anthony Hollander</td>
<td>049 891 0102</td>
<td></td>
</tr>
<tr>
<td>Malabar</td>
<td>George Yenketsamy</td>
<td>041 457 4344/0832885947</td>
<td>7pm at Catholic Church Malabar. Contact George for dates</td>
</tr>
<tr>
<td>Port Alfred</td>
<td>Anthony Tarr</td>
<td>046 624 4372</td>
<td>Third Thursday of the month at 09:30 at Settlers Park</td>
</tr>
<tr>
<td>Somerset East</td>
<td>Rosalee Bradfield</td>
<td>042 243 3466/0720987701</td>
<td>Last Tuesday of the month</td>
</tr>
<tr>
<td>Uitenhage</td>
<td>Diane Bezuidenhout</td>
<td>041 995 9000 ext 9068 076 631 1603</td>
<td>Last Thursday of the month @ 18:00</td>
</tr>
<tr>
<td>West End Clinic</td>
<td>Cecile Ackerdien</td>
<td>041 481 2131</td>
<td>Last Wednesday --- 07:00</td>
</tr>
</tbody>
</table>
ANNEXURE M

PERMISSION LETTERS FOR USE OF COPYRIGHT ITEMS
You are welcome to use it as long as it is credited.

Martha M. Funnell, MS, RN, CDE  
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F-(734) 936-8907

>>> "Coleen O'Brien" <coleenobrien@worldonline.co.za> 11/20/2010 4:06 PM  
>>>>>>  
Dear Ms Funnell,

I would like to request permission to reproduce a copy of the Diabetes Concerns Assessment Form as an example in my thesis.

I am presently completing my doctoral thesis on Nursing strategies to facilitate self-management in persons living with Diabetes Mellitus type 2 at Nelson Mandela Metropolitan University in Port Elizabeth, South Africa. In the strategies, I have mentioned making use of an assessment form such as yours. I would like to make use of it as an annexure in my thesis, if you are agreeable.

If you have any queries, please contact me or my promoter, Prof Van Rooyen at Dalena.VanRooyen@nmru.ac.za.

Thank you in anticipation.

Yours faithfully,

Coleen O'Brien
ANNEXURE N

DIABETES CONCERNS ASSESSMENT FORM – UNIVERSITY OF MICHIGAN
Diabetes Concerns Assessment Form

Please answer the following questions before your visit. Your answers will help ensure that your concerns are addressed.

1. What is hardest or causing you the most concern about caring for your diabetes at this time? (e.g. following a diet, medication, stress) __________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

2. Please write down a few words about what you find difficult or frustrating about the concern you mentioned above. _________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

3. How would you describe your thoughts or feelings about this issue? (e.g. confused, angry, curious, worried, frustrated, depressed, hopeful) ________________________________________________
   __________________________________________________________________________

4. What would you like us to do during your visit to help address your concern? (Please circle the letters in front of all that apply)
   A. Work with me to come up with a plan to address this issue.
   B. I don’t expect a solution. I just want you to understand what it is like for me.
   C. Refer me to another health professional or other community services

5. I would like answers to the following questions at this visit: ______________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

6. I would like answers to these questions at some future visit: ______________________________
   __________________________________________________________________________
   __________________________________________________________________________
   __________________________________________________________________________

7. Other (Please Explain) __________________________________________________________________________
   __________________________________________________________________________

Thank you

Developed by RM Anderson and MM Funnell
Michigan Diabetes Research and Training Center
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ANNEXURE O

LANGUAGE QUALITY ASSURANCE CERTIFICATE

Best regards,

Gregory

Grégory Ghyoot | Diabetes Data Administrator
tel +322 543 1642 | Gregory.Ghyoot@idf.org

International Diabetes Federation
166 Chaussée de la Hulue, B-1170 Brussels, Belgium
tel +32-2-5385511 | fax +32-2-5385148
info@idf.org | www.idf.org | VAT BE 0433 674 528

IDF | Promoting diabetes care, prevention and a cure worldwide

From: Coleen O'Brien [mailto:coleen.obrien@worldline.co.za]
Sent: Monday, November 22, 2010 8:10 AM
To: Grégory Ghyoot
Subject: permission to use figure from diabetes atlas

Dear Mr Ghyoot,

I am a PhD student in the Nursing Department at Nelson Mandela Metropolitan University. My thesis is on the self-management of diabetes mellitus type 2.

I would like to request permission to use the figure showing the major diabetic complications (figure 1.1) in Chapter One of my thesis. If you have any queries please contact me at this email address or my co-supervisor, Prof van Rooyen, at Dalene.VanRooyen@nmru.ac.za

Attached please find a permission request form.

Thank you.

Yours truly,

Coleen O'Brien