

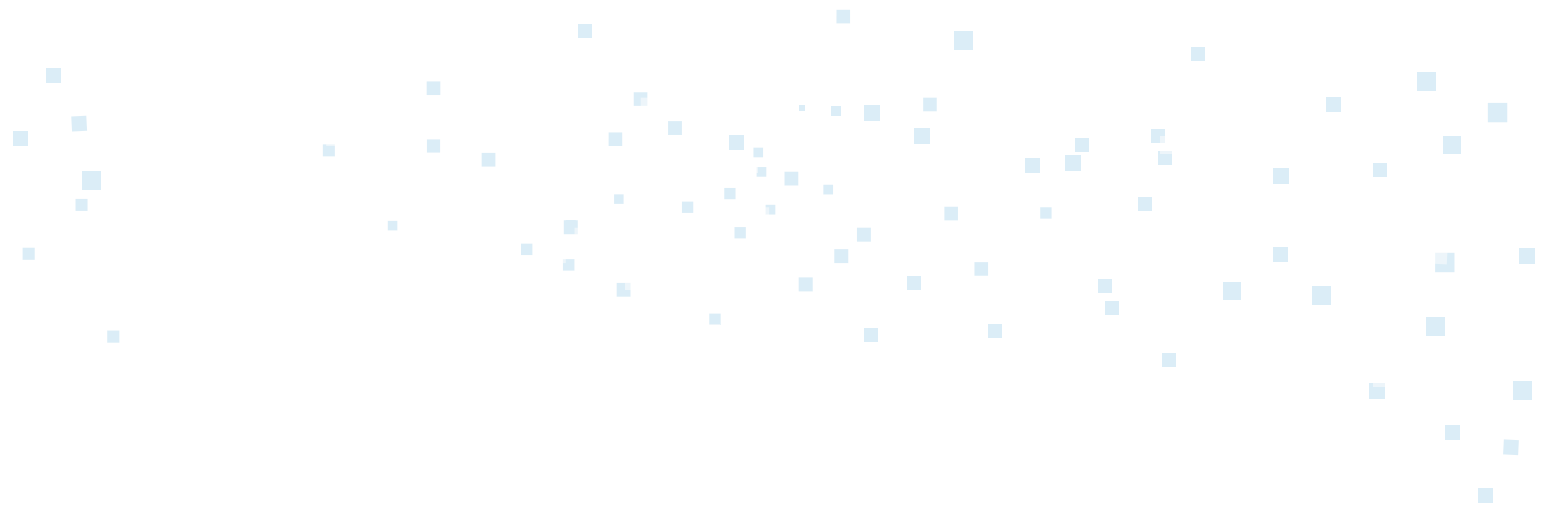


NONCOMMUNICABLE
DISEASES

Tackling the World's Number One Killer

CONTENTS

1. Executive summary	3
2. The impact of noncommunicable diseases	4
3. Experience within South Africa's medical schemes	6
4. Stakeholder strategies to prevent and manage noncommunicable diseases	7
5. Case study: Discovery Health	8
6. Conclusion.....	13







PRESENT

NONCOMMUNICABLE DISEASES

4 main RISK FACTORS >>



Physical
inactivity



Unhealthy
diet



Smoking



Excessive alcohol
intake

lead to

4 main NONCOMMUNICABLE DISEASES >>



Cardiovascular
disease



Cancer



Respiratory
disease



Diabetes

>> RESPONSIBLE FOR

60%

of all deaths
worldwide

FUTURE

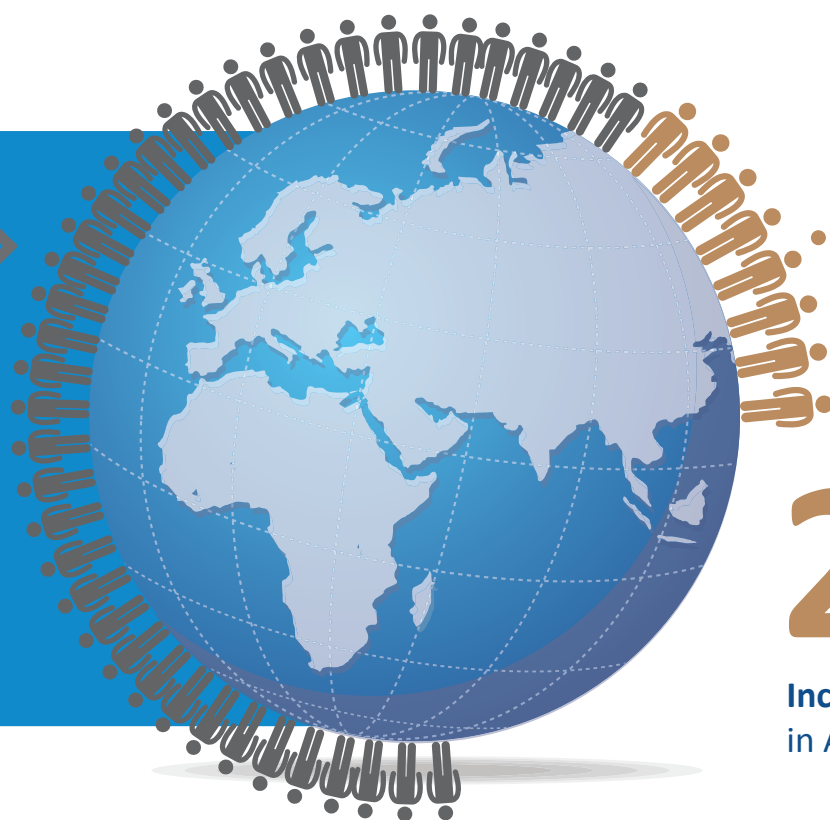
their **growing** prevalence

BETWEEN NOW & 2030

Without action to address the causes...

17%

Increase in deaths caused by chronic conditions



20%

Increase in deaths in Africa alone

The cost of disease burden is likely to **double** by 2030 in developing countries



1. EXECUTIVE SUMMARY

In recent years, various studies have highlighted the global rise of noncommunicable diseases and its impact on the global burden of disease.

The most recent studies show that more than 60% of deaths each year worldwide are now due to noncommunicable diseases.

The rising tide of NCDs is increasingly affecting the quality of life of younger individuals who are of working-age. Consequently, the economic impact of NCDs is significant due to the combined burden of high healthcare costs of treating these diseases and lost economic productivity due to illness and premature deaths.

In South Africa, whilst infectious diseases still predominate in terms of both morbidity and mortality, lifestyle related NCDs are becoming more prevalent, resulting in approximately one third of all deaths per annum. Data from medical schemes in South Africa confirm the increasing problem posed by NCDs. Since 2008, there has been a significant increase in the number of medical scheme members living with one or more chronic conditions. The cost of treatment of chronic diseases has also risen significantly over the past five years.

It is estimated that the global NCD epidemic will continue to escalate in the next decade, specifically in low-to-middle income countries where the rapidly growing burden of NCDs is exacerbated by an ageing population, as well as the negative effects of unplanned urbanisation, lack of education and increasingly sedentary lifestyles. Unless addressed, the rising prevalence of chronic diseases could have a crippling effect on society, in particular the cost of providing support and treatment for those living with these conditions.

Given the fact that most NCDs are a result of modifiable lifestyle related risk behaviours, any efforts to reduce the long-term impact of NCDs must focus on changing the lifestyles of individuals, in order to reduce mortality, lower healthcare costs and increase productivity. This is a critical challenge to governments, healthcare funders and employers.

Whilst our government has implemented strategic plans to address the increase of NCDs at a national level, other stakeholders such as medical schemes and employers need to do more, using innovative tools and wellness programmes, to manage the impact of chronic diseases and assist in building a healthier nation. Collaborative effort amongst stakeholders is vital in developing intervention strategies and reducing disease burden. Stakeholders efforts should be centered around three areas namely; early detection and screening, lifestyle modification, and disease and risk management.

2. THE IMPACT OF noncommunicable diseases

More than 35 million people worldwide die each year from noncommunicable diseases — mainly heart disease, diabetes, lung diseases, and cancer — twice the number of deaths from infectious diseases and other causes of death combined.

2.1 A ticking time bomb

More than 60% of all deaths worldwide occur due to NCDs, and it is expected that by 2030 this figure will increase to 75%. The rapidly growing burden of NCDs is not only accelerated by an ageing population and urbanisation, but also by the increasing adoption of westernised eating patterns and poor lifestyle related behaviors. Much of the rise in NCDs is attributable to four modifiable risk factors namely:

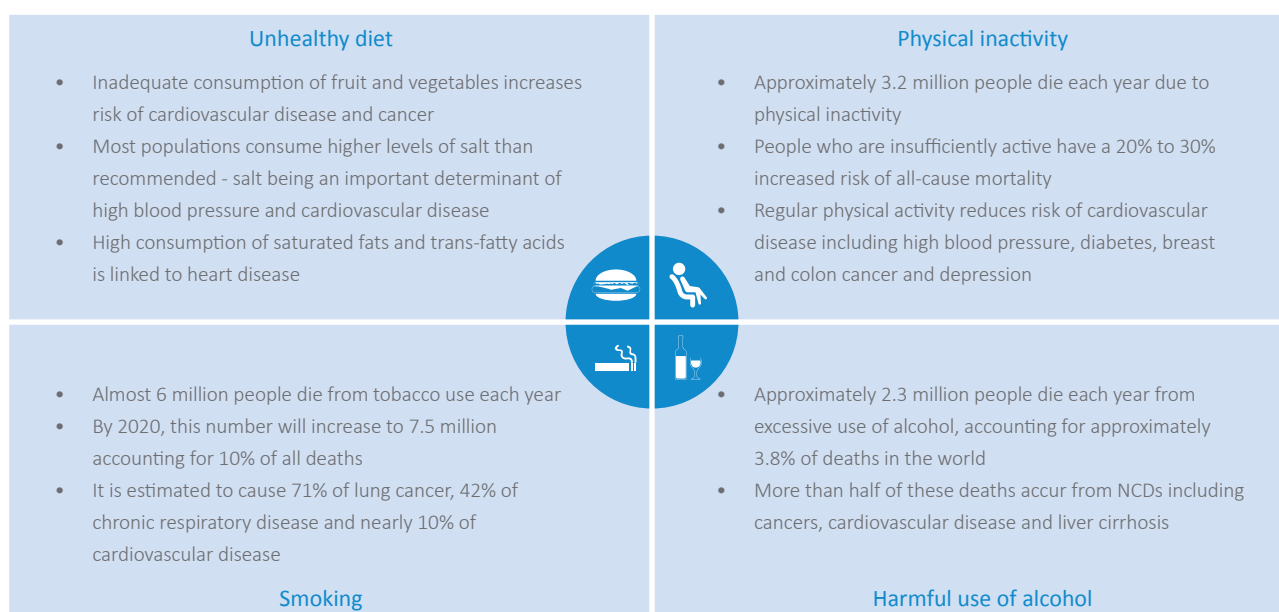
- Smoking
- Unhealthy diet
- Physical inactivity
- Excessive alcohol intake

These four risk factors may lead to intermediate risk factors – raised blood pressure (hypertension), obesity, and raised cholesterol – which together lead to the four main NCDs, namely:

- Cardiovascular disease
- Cancer
- Chronic respiratory disease
- Diabetes

Cardiovascular diseases account for the largest proportion of deaths related to NCDs (47%), followed by cancer (21%), chronic respiratory disease (12%) and diabetes (2%). Of these four NCDs, diabetes is the fastest growing. The International Diabetes Federation estimates that one in ten adults will have diabetes by 2030. This equates to approximately three new cases every ten seconds.

Four main modifiable risk factors lead to NCDs



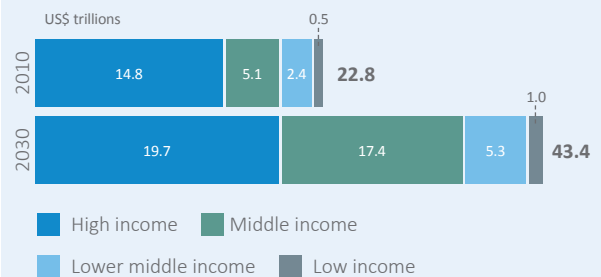
2.2 Developing countries are the worst affected by the increasing burden of NCDs

“Poor countries are developing diseases of the rich – with lethal consequences”. World Health Organisation, 2012

Whilst NCDs were once seen as a “diseases of affluence”, according to the World Health Organisation (WHO), premature deaths from these diseases are now particularly high in poorer countries – with 80% of all NCD related deaths occurring in poorer countries in 2012. Health status in developing regions is influenced by many factors including high rates of tobacco use and availability, as well as high levels of consumption of foods high in sugar, salt, and fat, since these are actively marketed and are often cheaper than healthier alternatives as well.

The potential cost of NCDs to economies, health systems, households and individuals in developing countries is high, as NCDs are affecting populations at younger ages, resulting in longer periods of ill-health, premature deaths and greater loss of working age productivity that is so vital for development. Costs from NCDs are projected to rise by over 50 percent in low and middle income countries by 2030.

Doubling the economic burden by 2030



In low resource settings, treatments for chronic conditions can quickly drain household resources, driving families into poverty.

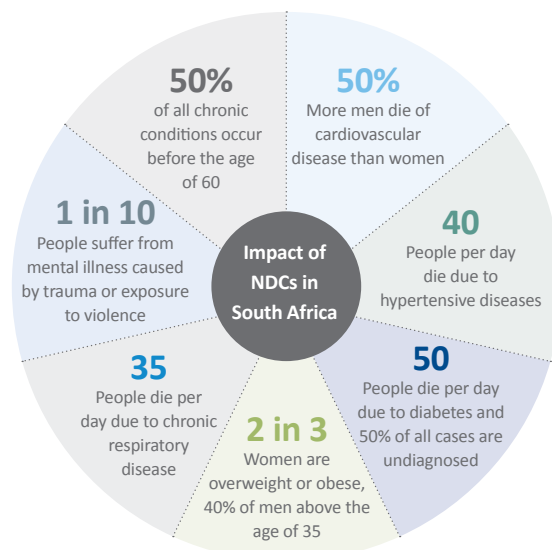
2.3 NCD burden is becoming an increasing problem in South Africa

With the rapid rise in NCDs, South Africa will have to contend with a “double burden” of disease as it continues to battle the ongoing challenge of infectious diseases and the rising prevalence of chronic conditions, thus further placing pressures on the already stretched healthcare system.

Whilst HIV and AIDS, and related diseases such as TB still predominate as the leading cause of death in South Africa, deaths relating to infectious diseases have been reducing over the recent years, whilst South Africans are increasingly being affected by NCDs.

NCDs are estimated to account for 40% of all deaths in South Africa at present, with cardiovascular diseases being the number one cause, followed by cancer, diabetes and lung diseases. Mental disorder such as schizophrenia, bipolar disorder and epilepsy are also becoming more prevalent .

Impact of NCDs, in South Africa



3. EXPERIENCE WITHIN

South Africa's Medical Schemes

South Africa's medical schemes have experienced a significant increase in the number of members with one or more chronic diseases.

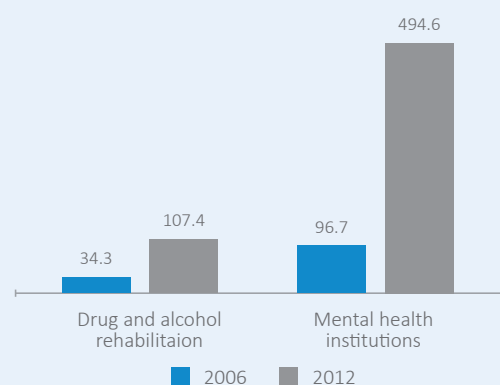
The increasing prevalence of NCDs in South Africa and its impact on cost and healthcare is supported by the experience of medical schemes in covering chronic conditions. The most common chronic conditions covered by medical schemes today are cardiovascular disease, cancer, chronic respiratory disease and diabetes. Between 2008 and 2012, the number of medical scheme members registered for chronic conditions has increased significantly.

Increase in chronic registration between 2008 and 2012

REGISTRATION PER 1 000 AVERAGE BENEFICIARIES			
Condition	2008	2012	% increase
Hypertension	105.6	118.8	13%
Hyperlipidaemia	45.6	54.3	19%
Diabetes (Type 2)	26.9	34.9	30%
Asthma	26.6	28.4	7%

Apart from registered chronic conditions, the cost associated with other lifestyle related diseases have also increased significantly. Treatment for drug and alcohol rehabilitation funded by medical schemes have increased by 213% between 2006 and 2012. In the case of mental disorders, the cost of admissions has increased by more than 400% over the same period even though membership only increased by 23%.

Annual risk spend of medical schemes (Rm's)



Members with chronic diseases use healthcare resources, including doctors, hospitals and medicines approximately 4 times more intensively than healthy members, posing a very significant cost burden on the members of medical schemes.

4. STAKEHOLDER STRATEGIES

to prevent and manage noncommunicable diseases

Effective disease management and wellness programmes are key mechanisms through which the private sector can address the burden of NCDs and provide significant relief to the overburdened South African healthcare system.

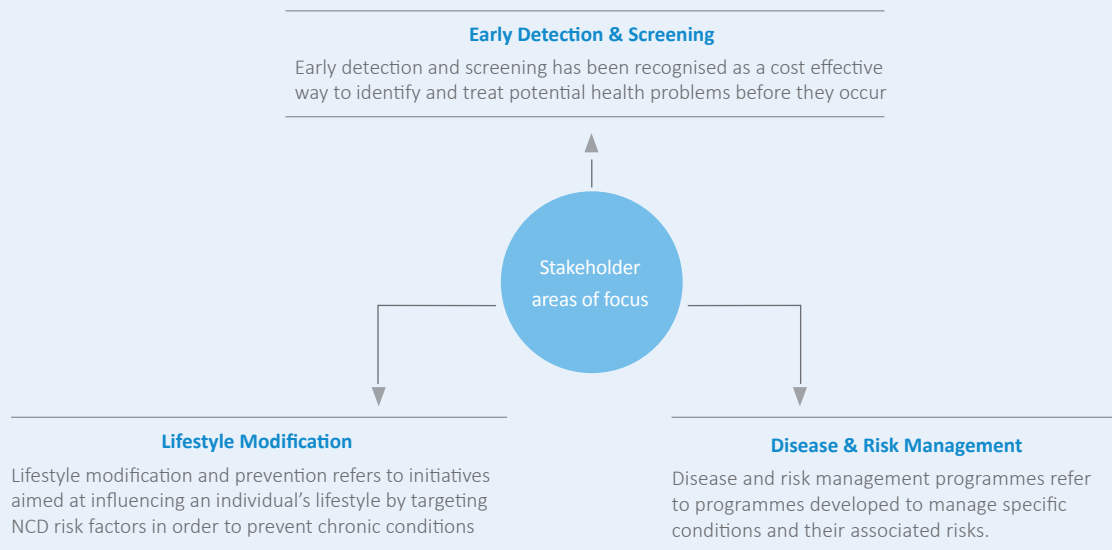
Reducing the prevalence of NCDs presents a significant challenge, given that it requires changes in lifestyle with choices and habits that are subject to a number of physical, emotional, social and financial factors. Collaborative effort amongst key stakeholders is therefore crucial in developing intervention strategies.

These stakeholders include all of those that have a significant impact on the factors affecting lifestyle choices and daily habits. Government and employers clearly have a significant role to play, as do medical schemes and their administrators and managed

care organisations. Whilst the South African government has developed Strategic Plans for the Prevention and Control of Non-Communicable Diseases (2013-2017) at a national level, medical schemes and employers need to develop and implement wellness programmes to manage the impact of chronic diseases, and in this way assist in building a healthier nation.

These tools and programmes can be grouped into three broad initiatives; namely Early Detection and Screening, Disease and Risk Management and Lifestyle Modification.

Three key areas of focus for reduction of NCDs



5. CASE STUDY:

Discovery Health

At the end of 2013, Discovery Health administered nearly 3 million medical scheme members, equivalent to 33% of the total medical scheme market in South Africa. Discovery Health's data and experience in managing NCDs members serves as a powerful case study to illustrate the impact of NCDs in South Africa, and how effective interventions can make a significant difference.

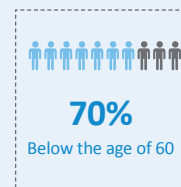
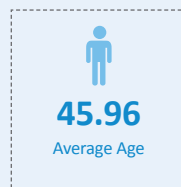
5.1 Increasing burden of Chronic Disease

5.1.1 Burden of chronic disease is becoming increasingly prevalent amongst members

Discovery Health data confirm that the burden of chronic disease is becoming increasingly prevalent amongst medical scheme members. Of the 2.9 million lives currently under management by Discovery Health, approximately (18%) live with one or more chronic

conditions. During the past five years, this number has grown by more than 40%. Today, one in three Discovery Health families has a member suffering from one or more chronic conditions, and 70% of members with chronic diseases are below age 60.

Discovery Health Members with Chronic Conditions (2012)



In line with global trends, cardiovascular disease is the most common chronic condition amongst Discovery Health members, with approximately (9.3%) of members registered for the disease. This is followed by mental disorders (6.6%) and respiratory diseases (2.6%). Although less than 2% of members are registered for

diabetes, it is currently the fastest growing amongst the chronic conditions, increasing by a staggering 60% in the last five years. Respiratory diseases (47%) and mental disorders (41%) also experienced a sharp increase over the same period.

Growth in top chronic conditions amongst Discovery Health Members (2008 – 2012)



60%

Increase in diabetes



47%

Increase in respiratory disease



41%

Increase in cardiovascular disease



41%

Increase in mental disorder



38%

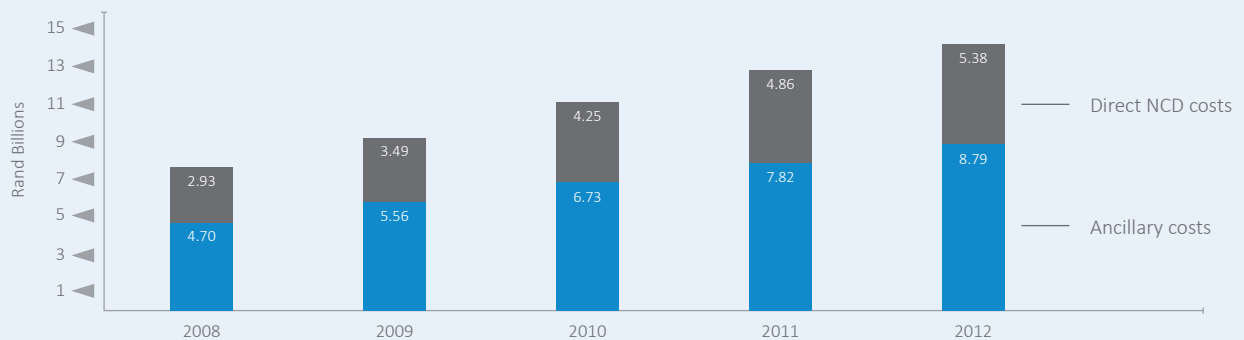
Increase in cancer

5.1.2 The cost of treating members with chronic conditions is high, and rising

Discovery Health's data shows that in the past five years, there has been a staggering 83% increase in NCD related healthcare costs. Cardiovascular disease represented nearly half of all expenditure on chronic conditions in 2012. Mental illness is becoming increasingly prevalent amongst members, and represented close

to R1billion of expenditure in 2012. In total, approximately R5.4 billion was spent on treating NCDs in 2012. If the ancillary costs of medicine, doctor consultations and hospital admissions are included, then this amount escalates to R14.2 billion, representing approximately 40% of the total expenditure.

Discovery Health costs of treating chronic conditions, 2012

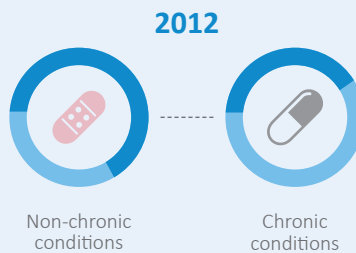


To illustrate the impact that the increasing cost has on an open-enrolment, community rated environment, one can consider that the cost of chronic medicine funded for chronic members was 60%

of the total cost of medicine for all Discovery Health members in 2012, whilst chronic members only constituted 18% of the total membership base.

Spend on medicine for chronic vs. non-chronic conditions amongst Discovery Health members

Members with non-chronic conditions constitute 82.2% of total membership base, yet 40% of medicines spend in 2012 was spent towards non-chronic medication



Members with chronic conditions constitute 17.8% of total membership base, yet 60% of medicines spend in 2012 on chronic medication

5.2 Discovery Health response strategies to rising prevalence of NCDs

Discovery has developed a number of sophisticated benefits and programmes to manage and reduce the impact of NCDs.

5.2.1 Early Detection and Screening

Members of Discovery Health Medical Scheme have access to a Screening and Prevention Benefit, which funds critical tests to identify risk factors that may lead to chronic conditions. In addition, members of Vitality are incentivised to use this benefit through a significant rewards structure. The success of this approach is evidenced by:

- More than 800 000 Early Detection and Screening tests were funded by Discovery Health Medical Scheme in 2012.
- For members who are diagnosed with an NCD following these tests, the costs associated with managing the condition is lower than average, in part due to early detection of the condition.

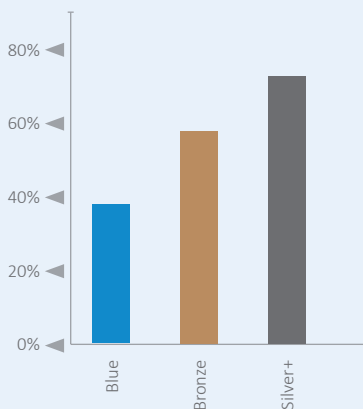
- Vitality members are more likely to undergo screening tests and to detect a chronic condition, due to the incentives in the Vitality programme.

The analysis below demonstrates the impact that Vitality has had on early screening for cancer. Highly engaged Vitality members are more likely to undergo cancer screening tests, and although the cancer incidence rates rise with screening due to higher rates of detection, the average cost per case for cancer is lower as these are typically identified at an earlier stage.

Vitality impact on cancer screening incidence and cost

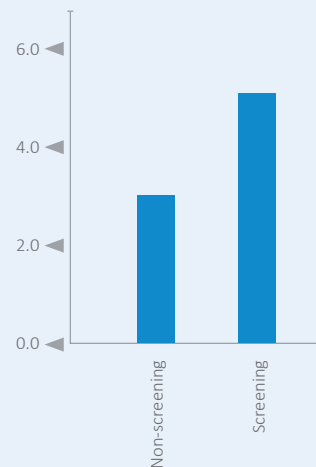
Highly engaged Vitality members are more likely to undergo screening

(Proportion of members who undergo screening)



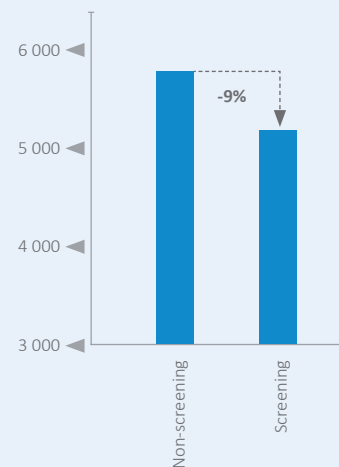
Cancer incidence rates are higher amongst those who have regular screening

(Incidence per 1000 lives)



Cost of treating cancer is lower for those who have regular screening

(Cost per member per annum)



5.2.2 Lifestyle Modification

Discovery recognises the significant impact that lifestyle modification has on the cost of healthcare, and through Vitality provides powerful incentives for individuals to make these changes.

Encouraging physical activity

Studies indicate that increasingly sedentary lifestyles impact significantly on the current epidemic of chronic diseases. Physical activity can reduce illness and deaths linked to chronic diseases. Thirty minutes of moderate-to-vigorous intensity physical activity on most days of the week is associated with at least 50% lower risk of most chronic diseases.

Interventions that encourage physical activity have become an important feature of Vitality, with the gym benefit being the cornerstone of its offering. Vitality studies have been able to identify a clear relationship between engagement in fitness related activities and health related outcomes in members with chronic conditions – for each additional gym visit, the probability of hospital admission is reduced by approximately 7%.

Incentivising healthy eating

The major shift in the patterns of disease observed in the 21st century is related, in part, to significant changes in eating habits. Factors such as urbanisation, economic development and market globalisation have led to significant changes in diets and lifestyle. The prevalence of unhealthy diet is difficult to estimate, but the ramifications are profound. Apart from obesity, poor dietary practices underlie the key metabolic derangements that fuel the NCD epidemic: high blood pressure, high cholesterol and high blood glucose. Poor food choices that are implicated in increasing prevalence of NCDs include:



Increased intake of calorie dense foods



Increased intake of foods high in fat, particularly saturated fat and trans fat



Increased intake of foods high in sugar



Increased intake of foods high in refined starch



Excessive salt intake



Insufficient intake of fruits and vegetables, rich in antioxidants

Vitality launched the HealthyFood benefit in South Africa in 2009. HealthyFood is a simple, yet ground breaking rewards-programme aimed at encouraging the consumption of healthy foods through the use of strong financial incentives when these foods are purchased. In addition to a strong financial incentive, which has the effect of lowering the price of healthy foods for Vitality members, HealthyFood also assists members by clearly identifying healthier foods on supermarket shelves and checkout receipts.

Discounts on healthy food items are available through leading national food retailers Pick n Pay and Woolworths, and are paid back into the members bank account. Items eligible for discount are reviewed by an experienced panel of nutritionists and academics, and the list generally conforms to international guidelines on healthy eating. The list is comprised of six thousand items which include fruits, vegetables, and fat-free dairy. Member adoption has been significant to date – there are currently more than 320 000 families in South Africa registered for this benefit. Evidence suggests that a greater proportion of healthy foods (30%) in shopping baskets translates into a 40% lower tendency to be diagnosed with lifestyle-related chronic diseases.

Pick n Pay WOOLWORTHS



A HealthyFood transaction takes place every 3 seconds

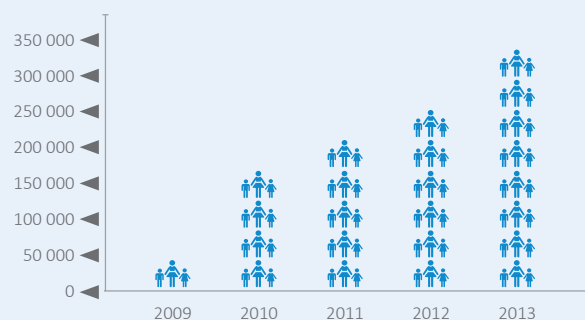


Over R1m is spent on HealthyFood every day



Over one billion HealthyFood items are purchased every year

Families registered for healthyfood benefit

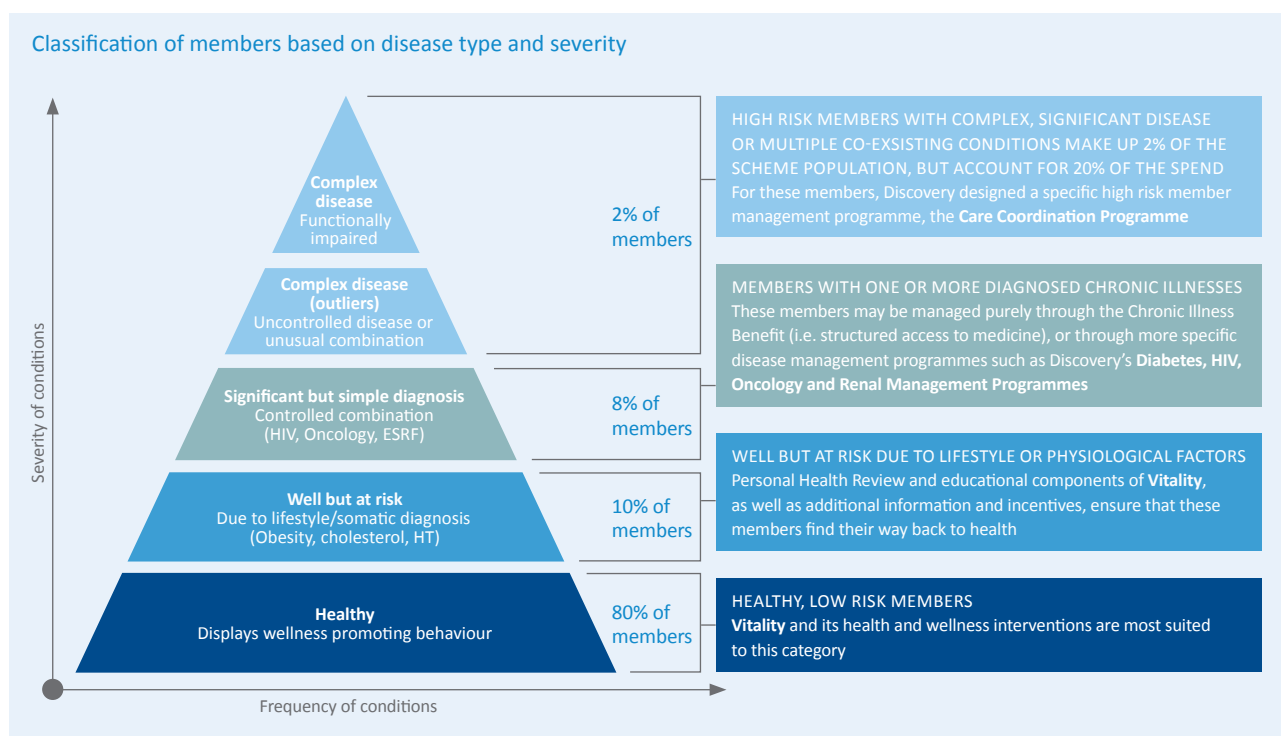


5.2.3 Disease Management

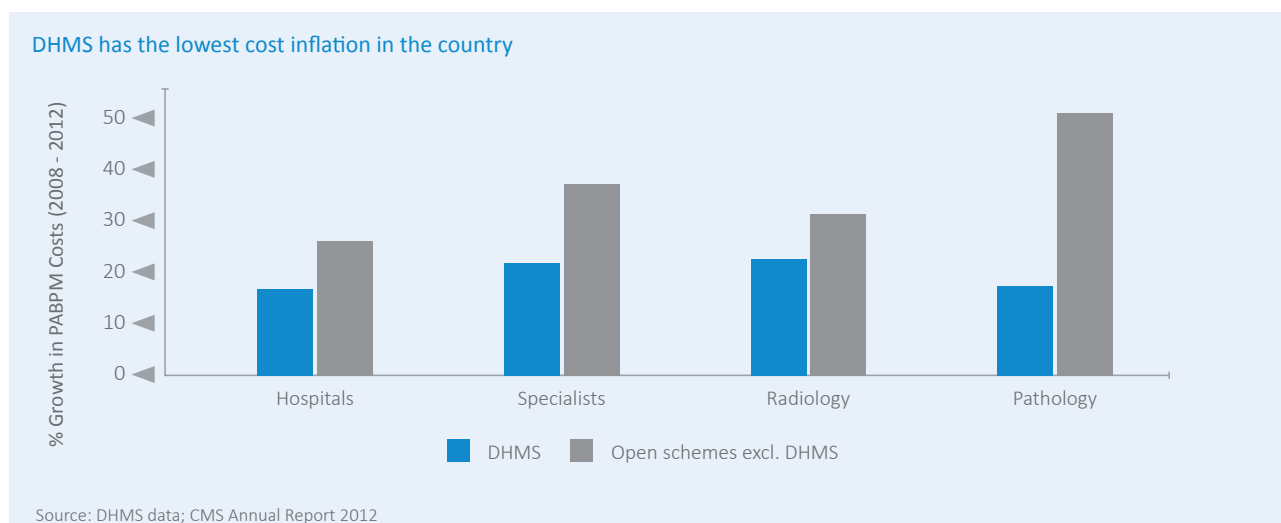
Appropriate benefit design and management programmes for chronic diseases leads to optimised clinical outcomes.

Using sophisticated data analysis, Discovery Health segments its members into four segments linked to the risk of having one or more chronic conditions. Interventions and management programmes are then developed to target each of these specific

‘risk segments’. This has proven to be a highly efficient method of delivering improved clinical outcomes and quality of life to members. In addition to stratification of the Scheme as a whole, members are also classified according to defined chronic conditions. Members get appropriate access to medicine and doctors through a specific chronic illness benefit and additional benefits addressing the lifestyle costs associated with chronic conditions.



The impact of appropriate benefit design and management programmes is evidenced by superior health outcomes and lower treatment costs per unit of benefit provided to members.



6. CONCLUSION

This White Paper examines the global challenges of NCDs and suggests strategies for dealing with this growing epidemic.

NCDs are recognised as a significant global burden on health systems, economies, and a source of catastrophic expenditure for many families, particularly in developing nations. In South Africa, as the population ages and undergoes urbanisation and globalisation of unhealthy lifestyles, the burden of chronic disease is becoming increasingly heavy. South African medical schemes are experiencing rapid increases in the number of individuals being admitted to hospitals for complications of chronic diseases, and the costs of medicines used to treat some chronic conditions are also rising rapidly, thus driving up the cost of private healthcare. The current status of NCDs and their future trajectory is closely tied to the ability of schemes, employers and society at large to modify four principle risk factors namely unhealthy diets, physical inactivity, tobacco use and harmful use of alcohol.

Lifestyle related behaviours can be targeted together with metabolic and psychological risk factors, including high blood pressure, raised cholesterol and impaired glucose metabolism. Given the fact that these diseases of the lifestyle can be controlled and prevented, government, employers, health professionals, medical schemes and other stakeholders have a critical responsibility to work together to influence the key behaviors that impact on NCDs.

This is not always an easy task, given that ongoing changes in lifestyle that affect individuals on a daily basis, with choices and habits that are subject to a number of physical, emotional, social and financial factors are required. Collaborative effort between government and private sector is therefore crucial in developing intervention strategies and ensuring success in reducing the nations disease burden. The private sector has a key role to play, in particular through development of innovative programmes and tools as mechanisms for management of costs related to chronic diseases. With one in three people on medical aid in South Africa currently managed by Discovery Health, this White Paper uses Discovery Health data to illustrate the growing prevalence of NCDs amongst scheme members, and also outlines key strategies developed by Discovery to prevent and manage the key NCDs.

At the heart of Discovery's drive to manage lifestyle diseases is the Vitality wellness programme. Vitality aims to address modifiable risk factors and enhance health by incentivising healthier food and lifestyle choices thereby making healthcare funding more sustainable. Through Vitality, as well as other innovative tools and programmes, Discovery strives to manage the impact of chronic diseases amongst its members, and to assist in building a healthier nation.





Discovery Health

155 WEST STREET, SANDTON
0860 99 88 77 www.discovery.co.za

Discovery Health (Pty) Ltd registration 1997/013480/07, administers Discovery Health Medical Scheme,
Registration number 1125. Discovery Health (Pty) Ltd is an authorised financial services provider.