

Addressing key
determinants of
noncommunicable
diseases using an
intersectoral approach:
**The Swaziland
experience**



World Health
Organization

REGIONAL OFFICE FOR **Africa**



Addressing key
determinants of
noncommunicable
diseases using an
intersectoral approach:

**The Swaziland
experience**



Swaziland

WHO/AFRO Library Cataloguing – in – Publication

Addressing keys determinants of noncommunicable diseases using an intersectoral approach: the Swaziland experience

1. Social determinants of health
2. Socioeconomic factors
3. Public policy
4. Chronic diseases
5. Cooperative Behavior
6. Health Behavior
7. Organizational Case Studies

I. World Health Organization. Regional Office for Africa

ISBN: 978-929023265-0 (NLM Classification: **WA 525**)

© WHO Regional Office for Africa, 2013

Publications of the World Health Organization enjoy copyright protection in accordance with the provisions of Protocol 2 of the Universal Copyright Convention. All rights reserved. Copies of this publication may be obtained from the Library, WHO Regional Office for Africa, P.O. Box 6, Brazzaville, Republic of Congo (Tel: +47 241 39100; Fax: +47 241 39507; E-mail: afrobooks@afro.who.int). Requests for permission to reproduce or translate this publication, whether for sale or for non-commercial distribution, should be sent to the same address.

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. Errors and omissions excepted, the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by the World Health Organization to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either express or implied. The responsibility for the interpretation and use of the material lies with the reader. In no event shall the World Health Organization or its Regional Office for Africa be liable for damages arising from its use.

Disclaimer:

This report contains the collective views of the drafting team and does not necessarily represent the decisions or the stated policy of the World Health Organization.

Contents

Acknowledgments..... iv

Abstract v

1. Introduction 1

2. Hypothesis 2

3. Methodology 2

4. Results 3

5. Discussion..... 8

6. Conclusion 11

7. Recommendations..... 11

8. References 13

Annexure 1 14

Acknowledgments

This case study was prepared jointly by the Ministry of Health and the Social Determinants of Health Unit, World Health Organization, Regional Office for Africa. Financial support was made available through the *Spanish Core Contribution Grant for Social Determinants of Health (SDH)* received by the Department of Ethics and Social Determinants of Health of the World Health Organization. The overall aim of Spanish Core Contribution Grant for SDH is to strengthen leadership and stewardship role of Ministry of Health to addressing social and economic determinants of health. It supports documentation of country level experiences in using intersectoral actions aimed at addressing the key social determinants of priority public health conditions.

An earlier draft of this case study was included in a special collection of global experiences on intersectoral actions which was widely disseminated during the World Conference on Social Determinants of Health held in Rio de Janeiro, Brazil in 2011. At the country level, the review process leading to the finalization of the case study generated multi-stakeholder policy and strategy discussions on implementing intersectoral actions to address social determinants of health.

The final product is a result of collective efforts of many individuals and organizations. However, the drafting team included Dr Sabelo Dlamini, Lecturer, UNISWA, Swaziland; Mrs Rejoice Nkambule, Ministry of Health; Mrs Rosemary K. Mthethwa, WHO Swaziland.

The overall guidance and technical inputs to the project from WHO Regional Office for Africa are gratefully acknowledged, namely: Dr Tigest Ketsela, Director Health Promotion Cluster; Dr Davison Munodawafa, Programme Area Coordinator, Determinants and Risk Factors; Dr Chandralall Sookram and Mr Peter Phori; and Dr Eugenio Villar, SDH Coordinator in WHO HQ, Geneva. We are indebted to the many people who made valuable inputs throughout the process who cannot be mentioned by name. Last but not least, we express great appreciation for the support received from the Government through the Ministry of Health to conduct this activity.

Abstract

Noncommunicable diseases (NCDs) have traditionally been associated with affluent of lifestyles in developed nations. However, at the dawn of the new millennium, NCDs now pose a huge health challenge in Africa, and Swaziland is no exception. It calls for urgent action from both the Government of Swaziland and non-state actors to address the risk factors for NCDs and their determinants. While Swaziland finds itself facing an increase in NCDs, maternal and child morbidity and mortality, HIV and AIDS, TB and malaria also remain a huge public health concern.

A social determinant of health approach reveals that the health outcomes of individuals, families and communities are influenced by the social and economic conditions in which people are born, grow, live, work and age, and the systems put in place to deal with illness, disability and premature death. This case study was conducted to identify how actions of various sectors could be harnessed to address key determinants of noncommunicable diseases including their risk factors.

A secondary analysis of government policy papers, strategic plans and WHO guidelines was conducted in addition to key informant interviews. The study examined the presence of intersectoral actions across programmes and sectors namely, health in all policies, good governance for health, leadership and stewardship roles, adequate financing, health literacy and community empowerment. The key findings are that there is an unnoticed, unrecorded and unabated increase of noncommunicable conditions mainly diabetes mellitus, cardiovascular disease, hypertension, respiratory problems and HIV-related cancers like Kaposi's sarcoma. The associated major risk factors are alcohol and tobacco consumption, physical inactivity and unhealthy diet. It is concluded that a rise in noncommunicable conditions in Swaziland requires an intersectoral approach to ensure effective and sustainable prevention and control.

1. Introduction

Global statistics suggest that there is an unprecedented increase in the burden of NCDs in both developed and developing countries. This review undertook to assess the status of NCDs in Swaziland and to identify collaborative actions of different sectors towards addressing social determinants of health (SDH) with a view to underline and strengthen the prospect for intersectoral action towards reducing the impact of NCDs in the country. Much attention has been given by sub-Saharan governments, including Swaziland, to communicable diseases such as HIV/AIDS, diarrhoeal diseases, malaria and TB and NCDs have remained neglected for many decades. As a result, information systems in these and other developing countries currently do not reveal adequately the true burden of NCDs.

It is estimated that NCDs cause 35 million (60%) deaths globally each year and they are responsible for 46% of the global disease burden (Nigel, 2001; WHO, 2001; Murray & Lopez, 1996). The World Health Organization (WHO) estimates that mortality due to NCDs will increase by 17% over the next 10 years. The United Nations Secretary-General, Ban Ki Moon, in 2009 stated, "Cancer, diabetes and heart diseases are no longer diseases of the wealthy. Today, they hamper the people and the economies of the poorest populations even more than infectious diseases. This presents a public health emergence in slow motion." (cited in Smart 2011).

Swaziland is burdened by a high prevalence of HIV infection and AIDS, tuberculosis as well as other communicable diseases, further exacerbated by high levels of poverty. These problems have overshadowed the burden of NCDs, leading to limited attention, data and reports on the incidence, morbidity and mortality rates of NCDs in the country. Recent records from health facilities have revealed that NCDs comprise the top five reasons for hospital admissions (MOH, 2007). This finding suggested that risk factors for NCDs could be abundant in Swaziland. Nonetheless, data on the occurrence and distribution of risk factors for NCDs remain limited in many developing countries, including Swaziland. It is due to this information gap that this study was commissioned to determine the occurrence and distribution of the risk factors that cause a high burden of NCDs in the Swazi people and to determine why risk factors for a particular NCD are high. Compilation of adequate data could help the Swaziland government understand fully the health inequities that exist within the population, why they exist and to identify appropriate targets to reduce them. Social determinants of health (SDH) include social, economic, political, cultural and environmental causes of inequities in health and recognize that health is not just the outcome of genetic or biological processes. However, SDH, by their nature, cut across various sectors beyond the Ministry of Health (MOH) and as such, intersectoral collaboration is crucial to eliminating these social determinants of disease. The emphasis on attending to SDH has the strength of actually improving people's lives and preventing disease occurrence rather than provision of reactive care, which many governments in sub-Saharan Africa have turned to as a strategy against NCDs.

Countries in the African Region identified three priority strategies for implementation of actions on social determinants of health: (i) promotion of participation; (ii) governance to tackle the root causes of health inequities and monitoring progress; and (iii) measurement and analysis of noncommunicable conditions to inform policies and build

accountability on social determinants. Identifying baseline levels of participation is key in coordinating and strengthening such participation from all stakeholders and to strengthen collaborative roles of sectors. The main aim of this review was, therefore, to identify the key actors in reducing inequities and their actions and to establish ways to strengthen such actions. Once such baseline information is established, it will become easier for the Swaziland government to set up a surveillance system and routinely monitor the progress of interventions or the impact of policies and actions. This activity is, therefore, in direct response to the Brazzaville Declaration on NCD Control and Prevention in the WHO African Region (2011). The process of this exercise is also likely to raise the awareness of the NCD problem among different stakeholders and different demographic and socioeconomic groups and across geographical areas, which may induce individual and collective participation, further resulting in the reduction of currently existing health inequities.

2. Hypothesis

- (1) There is a very high prevalence of risk factors leading to a high incidence of NCDs in Swaziland;
- (2) An intersectoral approach to addressing key social determinants of noncommunicable conditions is a holistic and effective strategy for the prevention of noncommunicable diseases and for mitigating their occurrence and impact.

3. Methodology

Study design

The research study design employed a descriptive cross-sectional analysis via a desk review of policy documents and other materials on NCDs, including survey reports, conference papers as well as WHO guidelines and resolutions.

- Documents reviewed included:
 1. MOH National Health Policy (2007)
 2. National NCD Strategic Plan 2013–2018
 3. WHO Report (2008)
 4. MOH/WHO STEPS Report 2009

A review of these and other documents assisted in establishing the gap between policy and practice and also gave the rationale for evidence-based practice if found to exist among different stakeholders.

- Face-to-face interviews were conducted with key informant members of collaborative stakeholder institutions such as officials from the MOH and key government institutions (Ministry of Agriculture, Ministry of Works and Construction, Ministry of Youth, Culture and Sports and Ministry of Environmental Affairs and others), private hospitals, major industries, UN agencies and nongovernmental organizations as well as the academia.

- Key informants included directors of state departments, chief executive officers of organizations and managers of programmes who were best positioned to provide in-depth information about various activities that existed in their institutions. Structured face-to-face interviews allowed for probing and clarification of issues where deemed necessary.
- Consultative meetings with various stakeholder groups were held. Key representatives of institutions made presentations to audiences of members of other institutions which allowed for cross-examination and probing from the participants.

Sampling design

Stakeholder groups were identified through various sources such as invitation lists of the MOH and WHO from previous workshops and meetings related to NCDs. The snowballing technique was also used to identify more stakeholders and a comprehensive list was finally derived.

The stakeholder institutions that participated in the review were purposively and randomly selected from the final list.

4. Results

A situational analysis of risk factors and status of NCDs: A desk review

The MOH has, in 2011, developed the National NCD Policy and the National NCD Strategic Plan (2013 – 2018), which is a road map outlining the strategic direction to be taken by the health sector in collaboration with other governmental and nongovernmental sectors in contributing to the national collective effort towards reducing NCDs and managing their impact in Swaziland. The goal of the NCD Policy and Strategic Plan is to contribute to the reduction in and combat the incidence of NCDs through the provision of health services for prevention and management in the context of universal access at all levels of care. All in all, the health sector has made progress in its efforts to collaborate with all partners involved. In addition, the MOH (2010) formulated the national NCD management guidelines to assist the clinical teams in the management of clients suffering from NCDs at all levels. These guidelines are dynamic; hence, they are reviewed as and when deemed necessary to reflect the changing world of the treatment of NCDs, and to ensure the highest possible standard of care of all people of Swaziland.

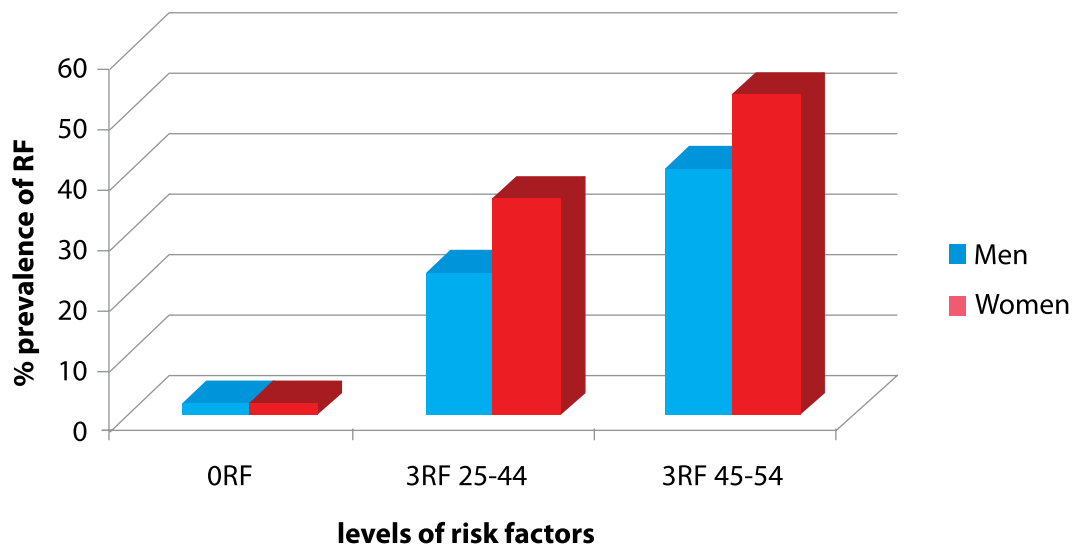
Prevalence of risk factors for NCDs

Social and economic policies of any country have a determining impact on the risk of premature death of an individual. In turn, the level of risk factors estimates the distribution of health across the social spectrum of any country. The more the number of risk factors of NCDs on an individual, the higher is the risk of death. A study of risk factors of NCDs was conducted in Swaziland in 2007 where information provided by 1500 householders randomly selected from 228 041 households was presented (MOH/WHO, 2009). The level of risk factors for NCDs among the Swazi people suggests that only a very small

percentage of the society has no risk factor. The majority of householders have three or more risk factors on the same individual and the level was found to increase with increasing age (MOH/WHO, 2009).

A case in point is the MOH/WHO 2009 survey which revealed a general increase in the prevalence of diabetes mellitus, hypertension, cardiovascular disease and respiratory diseases and that these were variably distributed according to age, gender and other social factors. Prevalence of risk factors of NCDs (poverty, tobacco consumption, physical inactivity, unhealthy diet, alcohol and drug abuse, raised blood glucose, reckless driving and many more) in the Swazi population were also investigated (MOH & WHO, 2009). The survey revealed that the risk of NCDs increased with increasing age and that the population with no risk is very small. This suggests that almost everyone has at least one risk factor for a particular NCD and a majority have three or more risk factors.

Figure 1. Level of risk factors for NCDs in Swaziland

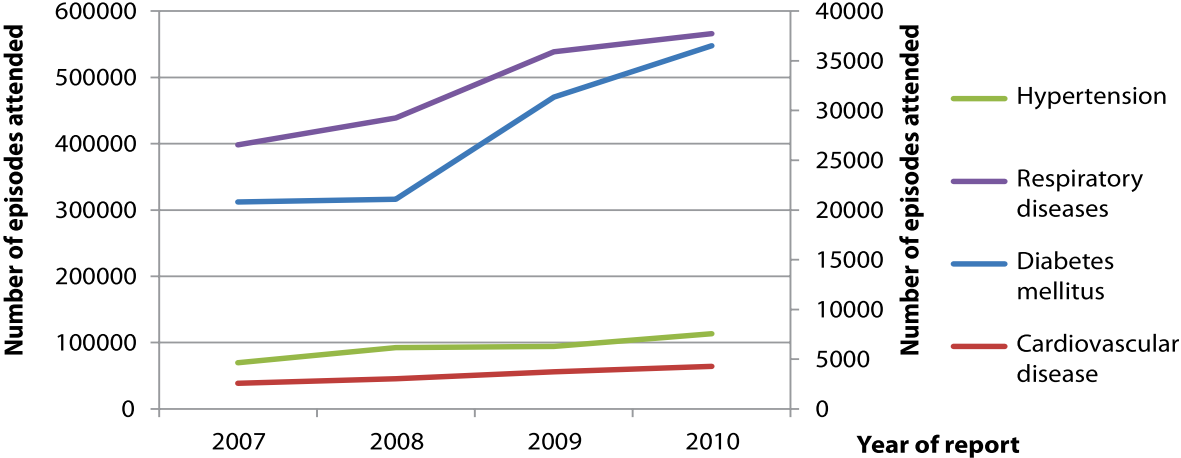


Source: MOH/WHO, 2009

Prevalence of diabetes mellitus, hypertension, respiratory diseases and cardiovascular disease

The national data on the prevalence of diabetes mellitus, hypertension, respiratory diseases and cardiovascular disease was found to be greatly limited in Swaziland. Data from the records of the Health Management Information System (HMIS) were sourced and these revealed that between 2007 and 2010, the number of episodes of these noncommunicable conditions attended in the country had actually increased. While this increase could be the result of population growth or an improvement in the information control systems, nonetheless, the prevalence of these conditions appeared to be high in the kingdom. Such available information may not be conclusive about the situation but will be crucial in the future for monitoring trends and changes.

Figure 2. Number of episodes of hypertension, respiratory diseases, diabetes mellitus and cardiovascular disease attended in health facilities in Swaziland, 2007 – 2010

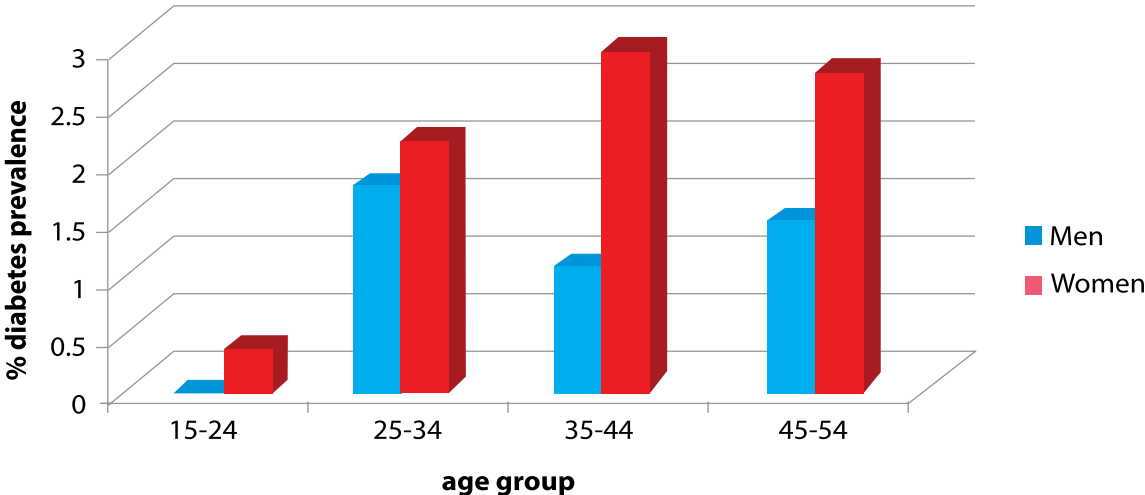


Source: Adapted from HMIS data

Nonetheless, this increase in the national burden of the quoted conditions suggests an increased burden contributed by NCDs to the health system of the country which has not changed any significantly in the same period.

The HMIS data on the prevalence of diabetes mellitus were later confirmed by the findings of the MOH/WHO STEPS survey that was conducted in 2008. Diabetes mellitus is highly prevalent among the people of Swaziland, particularly among the age group 25 to 54 years, which was investigated. Also, it was found that diabetes mellitus was more prevalent among women than men (Fig. 3).

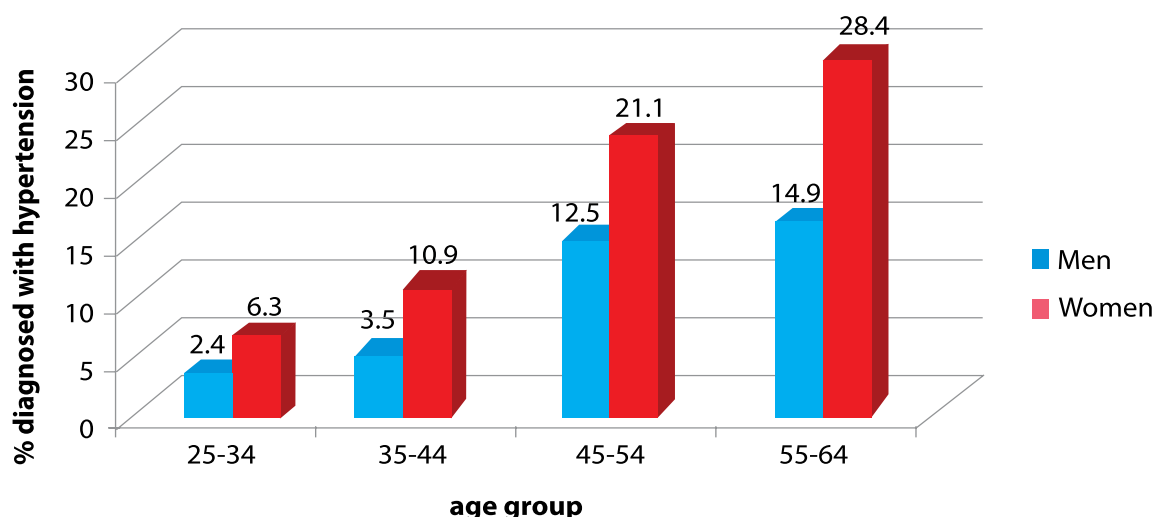
Figure 3. Prevalence of diabetes mellitus in Swaziland



Source: MOH/WHO, 2009

The findings derived from the MOH/WHO STEPS survey in 2008 suggest that the prevalence of hypertension was also very high in Swaziland. The prevalence gradually increases with age from 6.3% in women 25 to 34 years old to 28.4% in the 55 to 64-year-old women. Also, hypertension appears to be higher in women than in men (Fig. 4).

Figure 4. Prevalence of hypertension in Swaziland

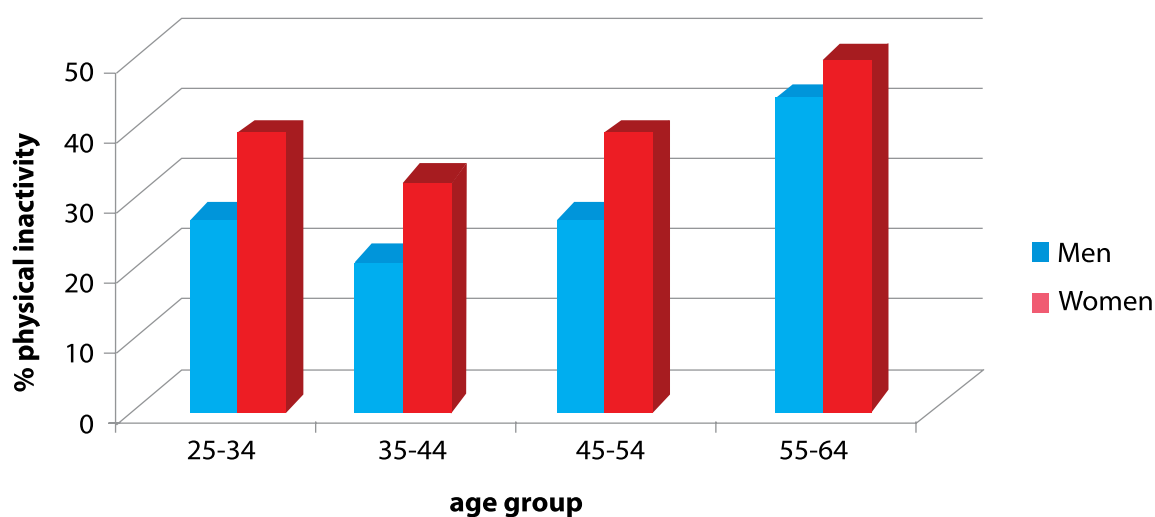


Source: MOH/WHO, 2009

Physical inactivity and diet

Physical inactivity generally increases with age and is higher among women than men. However, this result in Swaziland is worrying because it shows higher physical inactivity in the age group 25–34 years among both men and women. The damage in this group has still not been observed and most members are not obese; hence, they neglect physical activity. Then, above 34 years of age, they start physical activity but the major damage is already done (Fig.5). This is the group that has just joined the employed group and has money to buy ‘junk’ as food. Therefore, in changing the trends, important emphasis should be placed in this group in order to make changes effective even at older age groups. Physical inactivity is also higher in women than in men; hence, women easily become obese and become prone to many noncommunicable diseases compared to men. This is the group more responsible with preparing meals for most households and they are a prime target group for promotion of food preparation methods that do not utilize high amounts of fat, sugar and salt. It is not immediately clear how much this group knows that alterations in diet and physical activity have major effects on health throughout the life of an individual or family.

Figure 5. Level of physical inactivity in Swaziland



Source: MOH/WHO, 2009

Cancer prevalence

In 2008, 7.6 million people died from all forms of cancer globally (WHO Cancer Statistics, 2011). Though there is a lack of data on the prevalence of cancers in the cancer registry of Swaziland, evidence on the ground suggests a marked increase in the incidence of HIV-related cancers affecting the genitourinary organs in both males and females. For example, compared to all other cancers, the annual crude incidence of cervix cancer among women in Swaziland was 33.1 per 100 000 population. The annual crude incidence of Kaposi sarcoma was 9.2 per 100 000 population and that of breast and ovarian cancer was 6.4 and 2.3 per 100 000 population respectively (IARC Globocan, 2008).

Drug and substance abuse

In Swaziland, studies that estimate the impact of drug and substance abuse are scanty. The then Ministry of Health and Social Welfare (MOHSW) conducted a study on drug and substance abuse in 2002. The study reported that 34% of Swazis abused at least one substance at any given time. The breakdown of this abuse is as follows:

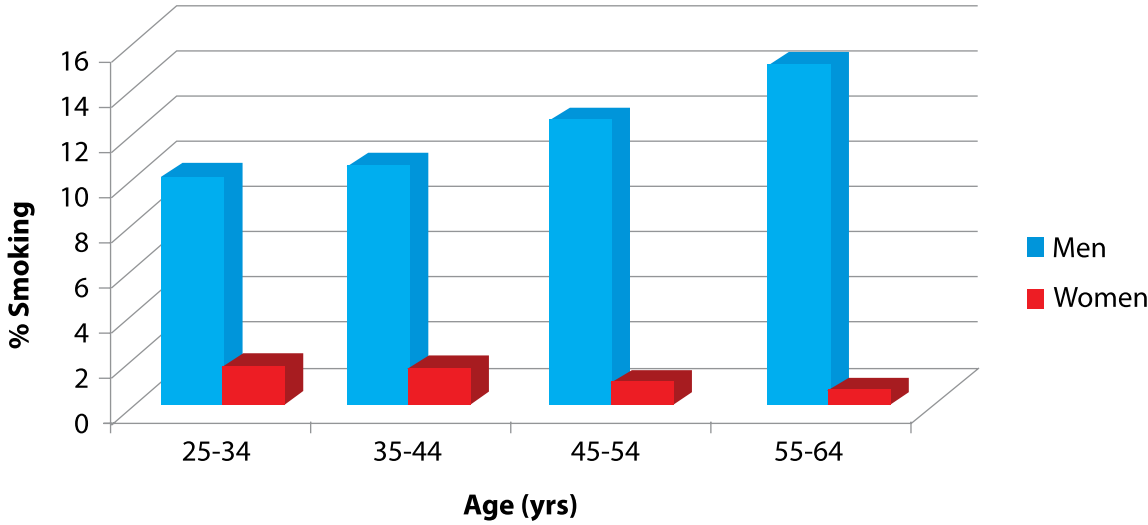
Table 1: Level of drug and alcohol abuse in Swaziland, 2002

Substance	Level of abuse
Alcohol	60%
Tobacco	31.8%
Others	8%

Source: MOHSW (2002)

The study identified abuse of cannabis, mandrax, cocaine, heroine and inhalants such as benzene, glue, etc., which are prevalent in Swaziland. The majority of abusers start either at school or in college, i.e. involving the age group 10–19 years (MOHSW, 2002). Typically of global trends, the prevalence of all substance abuse in Swaziland is higher among men than women and there is a strong association between substance abuse and unemployment (40% of drug abusers and 43.9% of alcohol abusers were unemployed) (MOHSW, 2002). The findings of the MOHSW (2002) were further confirmed by the MOH/WHO STEPS (2009) survey which showed a much larger number of male smokers than females. However, the study revealed that the number of female smokers increased with decreasing age (Fig.6).

Figure 6. Level of smoking in Swaziland, 2009



Source: MOH/WHO, 2009

Stakeholders and their actions towards NCDs

The study revealed a large number of stakeholders engaged in a wide variety of activities that contribute to the addressal of social determinants of health in the light of NCDs. The organizations may be classified as governmental, nongovernmental, private, UN agencies, pressure groups, etc. Some institutions provide screening, treatment, counselling and rehabilitation while others have regulatory functions and development of policies for environmental protection (air and water). A majority of them promote physical fitness which is achieved through participation in organized sporting activities and walks. Other institutions encourage healthy eating habits while others, such as the Wellness Centre, provide healthy foods to the needy affiliates. However, in the performance of these activities, institutions focus on their comparative advantage and there is little evidence of collaboration or understanding of their contribution to the NCD problem. Most did, however, express their willingness to collaborate with relevant partners and expert organizations to improve service to their members. For a detailed presentation on the different stakeholders, evidence and their activities, please refer to Annexure.

5. Discussion

Status of NCDs and risk factors in Swaziland

Social determinants of health include underlying causes of health problems such as environmental factors, working and living conditions and sociocultural factors that affect the health of the population of any country. Social determinants of health, therefore, place individuals at risk of development of noncommunicable diseases. However, noncommunicable diseases have a variety of preventable, modifiable and non-modifiable risk factors. A majority of the modifiable risk factors are also contributed by the lifestyle assumed by a household/family. For example, when a family consumes food high in saturated fat or cholesterol, it translates into a number of members of the family suffering from obesity. Increase in cholesterol increases the risk of heart problems.

However, in Swaziland, a mixture of obese and stunted children exists. Stunting results from early nutritional deprivation as a result of poverty, particularly among rural families. Obesity, usually expressed as increased body mass index (BMI), is associated with an increased risk factor for diabetes mellitus, hypertensive diseases, ischaemic stroke and cancer. Both overweight and underweight put an individual at an increased risk of chronic noncommunicable diseases later in life, hence the increase of such diseases with increasing age among the Swazi people.

The findings from this review suggest that the morbidity and mortality due to NCDs such as cancers associated with HIV and those of the genitourinary tract, diabetes mellitus, cardiovascular disease and hypertension have been on the increase in Swaziland in the recent years. However, what the country lacks is reliable baseline data with which to compare current statistics in order to understand clearly the true picture of the prevalence trends of NCDs. The MOH/WHO (2009) survey data suggest that the level of risk factors for NCDs is higher among women than among men. In accordance with findings in other countries, physical inactivity, diabetes mellitus and hypertension appear to be higher among women than among men. However, alcohol and substance abuse as well as the risk of injury and accidents were found to be higher in men than in women. This could possibly explain why more men seem to die than women in the country. While many women develop noncommunicable conditions quicker than men, they actually manage them better than men.

Intersectoral collaboration in health promotion and education

While it is commendable that there is a high rate of implementation of activities that contribute to the lowering of NCD prevalence in Swaziland, the lack of coordination and expert guidance is a limitation. The Ministry of Health's Health Promotion Unit is the only sector that possesses the expertise to offer effective promotion and education prior to implementation of all activities. Providing more resources to improve the capacity of the unit to make it accessible to all sectors would be very beneficial in the fight to control the risk factors of NCDs. Nonetheless, many sectors implemented activities for various other reasons. Some of the participants of such activities have no knowledge of the health benefits of their participation. Empowering participants with such knowledge is likely to improve participation. Implementation and participation was found to be poor in some sectors because the beneficiaries lacked proper preparation for the implementation of the activities.

Diabetes mellitus

Type 2 diabetes, also known as 'non-insulin-dependent diabetes mellitus' occurs when people either produce insufficient amounts of insulin or their bodies do not use the insulin they produce. It commonly occurs in adults but an increasing number of children and adolescents who are overweight are also found to suffer from this type of diabetes. This type of diabetes was found to occur in adults above 25 years of age in Swaziland and more in women than in men. This trend correlates with the trend of physical inactivity. Therefore, interventions towards motivating more women and the adult population to increase physical activity is likely to have an impact in reducing diabetes mellitus incidence. Nonetheless, other contributing practices include high consumption of high

energy foods made of animal fat or those prepared with added fat, sugar and salt. These foods are not indigenous to Swaziland, but there is a trend towards these new food preparation methods and the traditional methods that involved simple boiling have been abandoned, particularly in urban areas. Most of these foods are also bought at fast food shops that have gained popularity among the youth, who become obese and later face problems of noncommunicable diseases including diabetes mellitus.

Physical activity and diet

There is a high prevalence of risk factors for NCDs among the Swazi population and efforts to reduce them are needed as a matter of urgency. Women carry higher risk because of their lack of physical activity and their general nature of being submissive. However, women generally tend to pay more attention to their diet than men.

Physical inactivity has been identified as the fourth leading risk factor for global mortality causing an estimated 3.2 million deaths (6%) globally (WHO, 2005a). Physically inactive persons have a 20% to 30% increased risk of all-cause mortality compared to those who participate in a 30-minute or more activity per day. Physical inactivity accounts for 21.5% of ischaemic heart disease, 11% of ischaemic stroke, 14% of diabetes, 16% of colon cancer and 10% of breast cancer (Pratt et al., 2004). Physical inactivity also leads to obesity and overweight, which both kill at least 2.6 million people globally each year (WHO, 2005b).

A diet rich in fruits and vegetables has the potential of saving 2.7 million lives globally (WHO, 2005). The overall fruit and vegetable intake was found to be significantly low in all age groups in Swaziland and appears to be even lower among men than women. Adequate consumption of fruits and vegetables is likely to result in reduced risk of cardiovascular diseases and gastrointestinal cancers, ischaemic heart disease and stroke (WHO, 2003). The low intake of fruits and vegetables could partly explain the high proportion of obese population as the majority subsequently take foods high in energy and fat content. Fruits and vegetables provide low energy intake as opposed to processed foods that are high on fats and sugars. High fat and sugar intake leads to obesity which increases the risk of coronary heart disease.

Physical activity is also vital for reduced level of hypertension. While physical activity is a major individual decision, infrastructure contributes to the decision to engage in exercise such as walk or run. Where the public transport infrastructure, as is the case in Swaziland, is conducive, most members of the public choose to drive to work rather than walk to the bus stop, which would add to their physical activity. Also, areas where people can do athletic exercise such as next to roads is important and encourages many to do such exercises in the mornings or evenings. In Swaziland, the road infrastructure, particularly in the two major cities, does not provide for people to run. Running along the narrow areas next to the roads increases the risk of runners being hit by vehicles and, as a result, hit-and-run incidences are plenty in the country.

Smoking and substance abuse

About 1.3 billion people smoke globally and the number of smokers continues to rise; of these, about 84% live in developing and transitional economy countries (Guindon &

Boisclair, 2003). It is estimated that globally, alcohol accounted for 1.4% and 1.7% of the disability-adjusted life years (DALYs) lost among women and men respectively in 2002 (Wilsnack et al., 2000). Alcohol-attributed deaths accounted for 1.1% of all deaths among women and 6.1% among men. This difference is mainly attributed to the large gender difference universally observed in alcohol consumption. Drinking rates are higher in men than in women. Smoking prevalence is highest in the age group 55–64 years in Swaziland, confirming earlier findings by Negin et al. (2011: p.640), whose study revealed high rates of alcohol and tobacco consumption among men and women aged 50 years and above in rural Africa. Males were found to be six times more likely to consume tobacco products as compared to females. However, the ratio of male smokers to female smokers decreases with age, suggesting that more young women are engaging in smoking. Smoking markedly increases the risk of multiple cancers, particularly lung cancer.

With the unabated increase of the HIV burden and the resultant communicable diseases, the Government of Swaziland and its development partners should engage themselves in policy development that will address this double burden as well as ensure sufficient funding to also address the newly emerged NCD problem.

6. Conclusion

Noncommunicable diseases have multiple preventable risk factors which operate at different levels, from the most proximal (i.e. biological) to the most distal (i.e. structural). Modifiable determinants include factors that can be altered such as individual and community influences, living and working conditions and sociocultural factors. Non-modifiable determinants include those factors that are beyond the control of the individual, such as age, sex and hereditary factors.

Swaziland needs to urgently implement the WHO strategy on diet, physical activity and health. Emphasis should be on the establishment of surveillance, prevention and management of NCDs.

7. Recommendations

In view of the findings of this review, the following recommendations are made:

- There is a need to establish links (and strengthen existing ones) between all stakeholders and support/expert groups to improve quality of programmes addressing social determinants of health for NCDs among different sectors.
- There is need for a formalized, clearly defined and government-coordinated intersectoral approach to address key social determinants of noncommunicable conditions in Swaziland. This collaboration should be enshrined in the health policy, strategic plans as well as statutory instruments.
- Collaboration and terms of reference should be clearly outlined and not to be assumed.
- The MOH, through its Health Promotion Unit, and in close collaboration with all available media outlets, has to spearhead sector-wide education and social marketing activities on the risk factors and social determinants of NCDs. Even though so many activities have been documented from different sectors, there is little knowledge about their importance in relation to NCDs.

- The Health Promotion Unit may be strengthened by establishment of an office directly responsible for NCDs at the national and regional levels.
- Further research be conducted on the nature and form of risk factors and social determinants of noncommunicable conditions versus the Swaziland's sociocultural and economic-political fabric.
- Political will to herald a national response to NCDs similar to that given to communicable diseases is needed.
- There is a need to treat cancer and HIV and AIDS as twin problems in the light of HIV-related cancers like Kaposi sarcoma which are on the rise and hence require a concerted effort from the government and non-state actors alike.
- There is an urgent need for government-commissioned baseline surveys on the status of NCDs to provide current and up-to-date data, which is currently scant. This can propel the government into action.
- Enhance the capacity of data-gathering institutions like the cancer registry to provide reliable and up-to-date data and create similar institutions for other noncommunicable conditions.
- There is a need to build-up the capacity of the NCD programme of the Ministry of Health in order for it to cope with the magnitude of the emergent problem of NCDs and the coordinatory role expected from it in terms of additional human resource and reliable and sustainable financial base.
- Many sectors either have poor policies or policies that support activities for addressing social determinants of NCDs do not exist. There is a need to develop intersectoral policies aimed at improving the lives of the people and reducing social determinants of health.
- A national coordinating body also responsible to secure funding for activities addressing social determinants on NCDs, similar to NERCHA, should be formed. Many activities could be launched at a higher level and would benefit more people if sufficient funding was available.

8. References

- Guidon GE, Boisclair D. (2003). Past, Current and Future Trends in Tobacco Use. Economics of Tobacco Control Paper No.6, Health, Nutrition and Population Discussion Paper, 2003.
- MOH (2011). National Non-Communicable Diseases [NCDs] Policy – Draft 0. Government of the Kingdom of Swaziland.
- MOH (2011). Swaziland National NCD Strategic Plan 2013 - 2018. Government of the Kingdom of Swaziland.
- MOHSW (2007). National Health Policy. Mbabane. Government of the Kingdom of Swaziland.
- MOHSW (2002). An Assessment Report on Substance Abuse in Swaziland.
- MOH & WHO (2009). Swaziland non-communicable diseases risk factors surveillance report. Government of the Kingdom of Swaziland.
- Negin J, Cumming R, de Ramirez S.S, Abimbola S and Sachs S.E. Risk Factors of Non-Communicable Diseases Among Older Adults in Rural Africa; *Tropical Medicine and International Health*, Vol 16. No. 5: 640-646: 2011.
- Pratt M, Jacoby ER, Neiman A (2004). Promoting physical activity in the Americas (2004). *Food and Nutrition Bulletin* 25(2):183-93.
- Smart T. HIV and Non-Communicable Diseases. *HIV and AIDS Treatment in Practice*. Issue 182 : pp 3, 2011 MOH. (2010). NCD Case Management Desk Guide – draft. Government of the Kingdom of Swaziland.
- Wilsnack et al. (2000). Gender differences in alcohol consumption and adverse drinking consequences: cross-cultural patterns. *Addiction* 95(2): 251 – 256. In: *Equity, social determinants and public health programmes*, WHO, 2010.
- World Health Organization (WHO) 2003/International Society of Hypertension (ISH). Statement on management of hypertension. *Journal of Hypertension* 2003; 21: 1983-1992.
- WHO, 2005. *Global Strategy on Diet, Physical Activity and Health*. (<http://www.who.int/dietphysicalactivity/pa/en/index.html> accessed: 19 June, 2012).
- World Health Organization, 2005b. *Preventing Chronic Diseases. A Vital Investment*. WHO, Geneva.

Annexure 1

INTER-SECTORAL ACTIONS TO ADDRESS SOCIAL DETERMINANTS OF NCDs IN SWAZILAND

DEPARTMENT/ INSTITUTION	IMPLEMENTING DEPARTMENTS	ACTIVITIES
Ministry of Tourism and Environmental Affairs	<p>Activities executed in 4 departments:</p> <ul style="list-style-type: none"> Administration, Tourism, Forestry and Meteorology 3 parastatals: Swaziland Environmental Authority (SEA), Swaziland National Trust Commission (SNTC), Swaziland Standards Authority (SWASA). 	<ul style="list-style-type: none"> Preserve the culture, norms and heritage through museums, game reserves and heritage sites Promote the Swazi culture globally and nationally during national events Warn and alert the public on threats of extreme weather and climate Promote tree planting and support community-initiated programmes Develop policies to protect the country's main resource, the environment Monitor and investigate sources of air and water pollution Coordinate trans-boundary movement of waste that cannot be disposed of in Swaziland Scrutinize and licence waste management applications Provide PPE to employees for use during execution of their duties Provide efficient services on surveying, mapping and valuation of the resources for the social and economic development of the Kingdom Support football and walks for employees in the form of transport Collaborate with department of Water Affairs in monitoring pollution in the country's rivers and with SAICM Would like to establish collaborative links with hospitals, industries
Ministry of Agriculture & Co-operatives	<ul style="list-style-type: none"> Department of Co-operatives and Development Department of Veterinary Services and Livestock Production Lowveld Farmer Training Centre Malkerns Research Station (Soil Testing Unit) Department of Agriculture & Extension Agriculture Information Section 	<ul style="list-style-type: none"> Formulate policies and administer all legislation related to agriculture Organization and management of cooperative societies for the financial empowerment of members and their families Ensure food security and increased sustainable agricultural productivity through diversification and enhancement of commercial agricultural activities Formation of appropriate technologies Testing of soil and advising farmers on input requirements to improve yield
Ministry of Youth, Culture and Sport	<p>Executes activities in 3 parastatals:</p> <ul style="list-style-type: none"> Swaziland National Sports Council, Swaziland National Youth Council, Swaziland National Arts and Culture Council 	<ul style="list-style-type: none"> Provide technical and financial support to sports bodies preparing competitors for local and international games Facilitate behavioural change to discourage physical inactivity through promotion of programmes such as "Shukuma" which means "Be active" among community members for age groups 35 years and above and "Asidiale", a community initiative to establish Active Community Clubs (ACC) in netball, volleyball and football among children aged 7 to 15 years Initiate "Leaders in Training" (LIT) community programme in collaboration with the Canadians where messages of leadership, respect and positive living are packaged into sporting activities for the youth in schools

Ministry of Education	<ul style="list-style-type: none"> • Important departments: National Curriculum Centre, Senior Inspectorate: Sports and Culture 	<ul style="list-style-type: none"> • Develop curricula for schools including making sure sport and culture are included • Provide opportunities for relevant and affordable education and training • Assist with payment of school fees for orphaned and vulnerable children (OVCs) and the implementation of the universal primary education
Swaziland National Association of Teachers	<ul style="list-style-type: none"> • Swaziland Schools Sports Association • SNAT Cooperatives 	<ul style="list-style-type: none"> • Organize sporting competitions among schools and with other countries in the region • Operate a cooperative that promote financial savings and offer loans to members
Ministry of Labour and Social Security	<ul style="list-style-type: none"> • Factories Inspectorate Department • Directorate of Industrial & Vocational Training • Human Resource Development Planning • Scholarships Unit 	<ul style="list-style-type: none"> • Develop policies for old age and disability benefit • Develop policies for compensation of work injury • Administration of the social assistance programme • Provide general supervision of the provident fund programme • Provide training programmes for factories and industries • Receive and scrutinize business building plans • Register, regulate and inspect workplaces, steam boilers, air receivers and elevators • Investigation of serious fatal accidents and dangerous occurrences • Develop, review and improve safety and health legislation in collaboration with other social partners • Dissemination of safety and health information to employees and employers • Inspection of employing agencies, factories and industries for safety and status of general working conditions
Deputy Prime Minister's Office	<ul style="list-style-type: none"> • Gender Department • Social Welfare Department • National Disaster Management Agency • National Children's Coordinating Unit 	<ul style="list-style-type: none"> • Develop national policies, plans and legislation relating to the welfare of women and children • Provide support to the construction of neighbourhood care points that feed orphaned and vulnerable children • Design and coordinate the production of a comprehensive database on children with disability • Coordinate the improvement of the socioeconomic status of children
Ministry of Justice	<ul style="list-style-type: none"> • Sexual Offences Unit • Courts: Swazi National, Magistrates, Industrial and the High court • Human Rights and Public Administration Commission 	<ul style="list-style-type: none"> • Ensure that members of the public abide by policies and laws of the country that protect disadvantaged and vulnerable groups such as women and children • Listen to and provide judgment of cases of complaints by abused parties
Royal Swaziland Police	<ul style="list-style-type: none"> • Domestic Violence, Child Protection and Sexual Offences Department • Drugs Squad • Transport and Traffic Department 	<ul style="list-style-type: none"> • Accident prevention through road blocks and inspections • Counselling abused members of the public • Enforcing laws meant to protect abused individual members or groups of society • Education of police officers by police nurses on different forms of abuse, diet and physical inactivity • Health module on diet, physical activity, tobacco and alcohol abuse also included during training of police officers

Swaziland Correctional Services		<ul style="list-style-type: none"> • Offer corrective/rehabilitative services to offenders including training them on skills for vegetable production, upholstery, carpentry and many others • Production of vegetables for low-cost sales to the public • Run active soccer and netball staff teams • Run staff walks about four times each year • Encourage production of vegetables for personal use of families of officers • Psychologist and nursing staff assist victims of physical abuse • Encourage complete physical examination every six months • Would like to collaborate with experts on breast cancer, hypertension and diabetes
Ministry of Public Works and Transport	<ul style="list-style-type: none"> • Roads Department • Buildings Department 	<ul style="list-style-type: none"> • Training, testing and licensing of drivers • Developing policies and laws for use of roads • Allocation of government houses to civil servants • Designing, inspection and rehabilitation of government houses
Ministry of Tinkhundla Administration & Development	<ul style="list-style-type: none"> • Community Development • Women in Development 	<ul style="list-style-type: none"> • Provide funding for community projects at the Inkhundla level or to organized groups of people in an Inkhundla • Has special fund for projects aimed at developing economic status of women in communities
Ministry of Economic Planning & Development	<ul style="list-style-type: none"> • Poverty Reduction Section • Millennium Projects • Aid Coordination and Management • Micro Projects 	<ul style="list-style-type: none"> • Carry out macroeconomic analyses and reports on the situation • Coordinates, manages and monitors externally funded projects and implementation of aid policy • Promotes community participation in the establishment of sustainable community development projects that will make a positive contribution to poverty alleviation
Media	<ul style="list-style-type: none"> • Times of Swaziland • Swaziland Observer • Swaziland Broadcasting and Information Services (SBIS) • Swaziland Television and Broadcasting Corporation 	<ul style="list-style-type: none"> • Cover and publish news of implementation of activities of programmes including NCD • Publish a health page of global news in order to inform society of the best decisions when disease strikes • Publish other news such as football which attract members of the public to the source where they found themselves also exposed to other issues such as those relating to NCDs, which otherwise may not be attractive on their own
Ministry of Commerce, Industry and Trade	<ul style="list-style-type: none"> • Small & Medium Enterprise Unit • Co-operatives Development • Development and Promotion of Trade • Company Registration 	<ul style="list-style-type: none"> • Promote small businessmen and women, e.g. SEDCO • Ensure a sound environment and policies for investors • Provide basic infrastructure for industries to operate in • Attract foreign investors to come to the country ensuring provision of employment
Ministry of Housing and Urban Development	<ul style="list-style-type: none"> • Physical Planning Department • Environmental Health Department • Urban Government 	<ul style="list-style-type: none"> • Enforce planned settlements • Provision of services for protection of life and property from the risk of fire and other emergencies
Family Life Association of Swaziland	<ul style="list-style-type: none"> • Gone Rural Project 	<ul style="list-style-type: none"> • Empower women craft business for wellness; provides home-based work for approximately 700 rural women at 13 sites throughout the country • Screening for cervix, uterine and breast cancer

Swaziland Action Group Against Abuse (SWAGAA)	<ul style="list-style-type: none"> • Counseling and Support Services • Referral System 	<ul style="list-style-type: none"> • Counselling and support services to abused individuals; family and couples counselling • Provide clients with transport to hospital/police if none is available for case management • Cooperate closely with other service providers by referring clients, e.g. Social Welfare, Council of Swaziland Churches, Save the Children, hospitals, food support services and the Domestic Violence and Child Protection Unit
Council on Smoking, Alcohol and Drugs (COSAD)		<ul style="list-style-type: none"> • Advocacy for policies against tobacco and alcohol • Offer rehabilitative and social support, education (counselling) and drug treatment for addicts
Non-Communicable Diseases Programme (MOH)		<ul style="list-style-type: none"> • School and community screening; walk-in screening for hypertension, diabetes mellitus and breast cancer diet • Patient counselling
Wellness centre		<ul style="list-style-type: none"> • Education on exercise, problems of alcohol, drug and tobacco abuse, good diet and provision of vegetables by nurses and councillors • Offer professional counsel to patients of physical, mental, emotional and sexual abuse • Offer monthly BP and diabetes check-ups and medication refills • Education and screening for cervical and breast cancer
Swaziland Young Women's Network (SYWON)		<ul style="list-style-type: none"> • Organize 'Feminist circles', where issues impacting on livelihood of young women are discussed • Organize sporting activities in communities for young women as a way of 'edutainment' on issues of women's rights, HIV awareness and many other issues • Organize campaigns during the 16 days of activism against gender-based violence (GBV) • Organize community debates and training to create awareness of the effects of GBV • Counselling and referral of abused victims of GBV • Empower women with negotiation skills for safer sex • Beneficiaries of programmes are young women aged 18–30 years. • Collaborate with Open Initiative for Southern Africa (OSISA), the American embassy, the gender consortium within the Coordinating Assembly of Non-Governmental Organisations (CANGO), SWGAA and the Family Life Association of Swaziland (FLAS) • Would like to collaborate with UNICEF, UNDP and NERCHA
Mbabane Government Hospital		<ul style="list-style-type: none"> • Offer appropriate treatment and rehabilitation to those physically, mentally, emotionally or sexually abused • Offer treatment for injuries, sometimes in collaboration with RSP, e.g. in road accidents, physical abuse or where there are legal implications

Swaziland Nutrition Council		<ul style="list-style-type: none"> • Education and demonstration of appropriate food preparation procedures to women groups • Promotion of physical activity on the local radio • Education of patients of hypertension and diabetes at various clinics on nutritional methods of control • Receive technical support from Ministry of Agriculture, UNICEF, Ministry of Health, School Health Programme and Action Against Hunger. • Developed guidelines for the monitoring of acute malnutrition and training manuals for growth monitoring and food prescription for HIV patients
School Health Programme		<ul style="list-style-type: none"> • Education of schoolchildren on the importance of proper and adequate diet and physical activity • Collaborate with NGOs in educating schoolchildren on methods to handle and cope with physical, mental, emotional and physical abuse • Developed collaborative ties with UNICEF, MOH and MOE



**World Health
Organization**

REGIONAL OFFICE FOR **Africa**

ISBN 978-929023265-0

