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MINE HEALTH AND SAFETY ACT, 1996 (ACT NO. 29 OF 1996)

GUIDANCE NOTE FOR THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES AND MENTAL HEALTH DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY

I **DAVID MSIZA**, the Chief Inspector of Mines, in terms of section 49 (6) read together with Sections 9 (2) and 9 (3) of the Mine Health and Safety Act, 1996 (Act No. 29 of 1996) as amended, hereby issue the Guidance Note for the Prevention and Management of Non-communicable Diseases and Mental Health Disorders in the South African Mining Industry, as set out in the schedule below.



DAVID MSIZA
CHIEF INSPECTOR OF MINES
DEPARTMENT OF MINERAL AND PETROLEUM RESOURCES

SCHEDULE

GUIDANCE NOTE FOR THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES AND MENTAL HEALTH DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY

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DEPARTMENT OF MINERAL AND PETROLEUM RESOURCES

MINE HEALTH AND SAFETY INSPECTORATE

GUIDANCE NOTE FOR

THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES AND MENTAL HEALTH DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY



CHIEF INSPECTOR OF MINES



**mineral &
petroleum resources**

Department:
Mineral and Petroleum Resources
REPUBLIC OF SOUTH AFRICA

GUIDANCE NOTE FOR THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES AND MENTAL HEALTH DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY

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GUIDANCE NOTE FOR THE PREVENTION AND MANAGEMENT OF NON-COMMUNICABLE DISEASES AND MENTAL HEALTH DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY

PART A: THE GUIDANCE NOTE**1. Foreword**

- 1.1 **NCDs**, also known as chronic diseases, are diseases that are neither spread through infection nor other people. It tends to be of long duration and are the result of a combination of genetic, physiological, environmental behavioural and lifestyle factors. **NCDs** may be modified through lifestyle interventions or behaviours.
- 1.2 Globally, **NCDs** are responsible for the majority of deaths (most of which are premature deaths of people under the age of 70) and **disability**, according to the **WHO**. Low and middle-income countries are disproportionately affected the most, accounting to 77% of all **NCD** deaths.
- 1.3 There are four groups of **NCDs** that are the leading cause of morbidity and mortality globally and these are: cardiovascular diseases (17.9 million deaths annually), followed by cancers (9.3 million), chronic respiratory diseases (4.1 million) and diabetes (2.0 million including kidney disease deaths caused by diabetes).
- 1.4 Globally, 15% of working-age adults were estimated to have a mental disorder in 2019. Furthermore 12 billion working days are estimated to be lost every year to depression and anxiety at a cost of US\$ 1 trillion per year in lost productivity.
- 1.5 In South Africa, **NCDs** and **mental health disorders** are not only the leading causes of mortalities, but also morbidity and **disability**. The following **NCD** groups are prevalent in South Africa: cardiovascular diseases, endocrine and metabolic disorders, cancers and chronic respiratory diseases.
- 1.6 The South African mining industry started collecting data on **NCDs** in 2019 through the **DMPR**'s Annual Medical Reporting form. Findings from the data show that the main **NCD** groups in the South African mining industry are categorised as follows: autoimmune disease, cancer, cardiovascular disease, cerebrovascular disease, chronic respiratory disease, endocrine and metabolic system disorders, genitourinary disorders, infectious diseases, mental and behavioural disorders, metabolic syndrome, musculoskeletal conditions, nervous system and sense organs disease. The national picture of **NCDs** shows the metabolic syndrome as the most prevalent **NCDs** in the industry. These are followed by endocrine and metabolic system disorders. The industry also noted a rise in mental and behavioural disorders in 2020 (during COVID-19).
- 1.7 **NCDs** may affect employees' overall state of health and safety, and fitness to perform work.

2. Scope of the guidance note

- 2.1 The practice standards set out in this guidance note should apply to:
 - 2.1.1 The South African mining industry and mining communities.
 - 2.1.2 All mine workers, irrespective of employment categories, as well as contract workers.

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- 2.2 This guidance note has been developed to provide information for the employer to use in developing and implementing a programme to assist employees in the **prevention** and **management** of **NCDs** and **mental health disorders**. The employer is therefore expected to review the mine's health and safety policy to include the **prevention** and **management** of **NCD** and **mental health disorder** programme.
- 2.3 Developing and implementing a programme for **NCDs** and **mental health disorders** requires a multi-stakeholder collaborative approach including employer, employee, employee representative and associated parties in the public sector (such as the **NDoH**). For this reason, this guidance note only sets out minimum requirements and good practices for the development and implementation of the programme for the **prevention** and **management** of **NCDs** and **mental health disorders**.
- 2.4 This guidance note does not replace any official public health guiding principles, practice and services offered for **NCDs** and **mental health disorders** such as those from the **WHO**, the **NDoH**, the **ILO**, the **UN** etc. and therefore shall be read in conjunction with other related official documents. These include but are not limited to:
- 2.4.1 The **UN's** Sustainable Development Goals.
 - 2.4.2 The **WHO's** Global Action Plan to 2030 on advancing the global agenda on **prevention** and control of **non-communicable diseases**.
 - 2.4.3 The **NDoH's** National Strategic Plan for the **prevention** and **management** of **NCDs** (2022-2027).
 - 2.4.4 The **National Mental Health** Policy Framework and Strategic Plan 2023-2030.
 - 2.4.5 The Guideline for the Compilation of a Mandatory Code of Practice on Minimum Standards of Fitness to Perform Work at a Mine (DMR 16/3/2/3-A3).
 - 2.4.6 The Guideline for the Compilation of a Mandatory Code of Practice for the **Management** of **Medical Incapacity** due to Ill-health and Injury (DMR 16/3/2/4 – B8).
 - 2.4.7 ISO 45003: Occupational health and safety **management** - Psychological health and safety at work - guidelines for managing psychosocial risks.
 - 2.4.8 ISO 45001: Occupational health and safety **management** systems - requirements with guidance for use.
 - 2.4.9 SANS 16001: Wellness, health and disease **management** systems.
- 2.5 The employer is expected to keep abreast of relevant developments on the **prevention** and **management** of **NCDs** and **mental health disorders** and update the programme accordingly.

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3. Status of the guidance note

- 3.1 The guidance note has been compiled specifically with the view to provide guidance to all stakeholders regarding their roles and responsibilities with regard to the programme aimed at preventing and managing **NCDs** and **mental health disorders** in the South African mining industry.
- 3.2 This guidance note sets out good practice for the **prevention** and **management** of **NCDs** and **mental health disorders** in the South African mining industry.
- 3.3 The preparation and implementation of this type of programme is encouraged as it promotes a pro-active approach to improve the health of employees. **NCDs** can affect all individuals and therefore it is expected that thorough risk assessments be conducted to identify hazards and the associated risks as well to identify risk populations.
- 3.4 Based on the outcomes of the risk assessment, a programme should be developed to outline measures that will be put in place to prevent and manage **NCDs** and **mental health disorders** among employees in the South African mining industry.
- 3.5 It is crucial that continuous monitoring of the programme is undertaken by the employer.

4. Objective of the guidance note

- 4.1 The objective of this guidance note is to provide information for the employer to use in developing and implementing a programme to assist employees in the **prevention** and **management** of **NCDs** and **mental health disorders**.

5. Definitions and acronyms

- 5.1 For the purpose of this guidance note, unless the context otherwise indicates, the definitions and acronyms are as follows:
 - 5.1.1 **CIOM** means Chief Inspector of Mines.
 - 5.1.2 **Disability** means a recurring physical or mental impairment which substantially limits the capacity of the individual to meet either occupational demands or statutory or regulatory requirements.
 - 5.1.3 **DMPR** means the Department of Mineral and Petroleum Resources.
 - 5.1.4 **Health promotion** means the process of enabling people to increase **management** over, and to improve their health to reach a state of physical, mental and social well-being.
 - 5.1.5 **ILO** means International Labour Organization.
 - 5.1.6 **Management** means the systematic process of addressing **NCDs** and **mental health disorders** among employees through the implementation of strategies and practices including:

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- 5.1.6.1 Improving workplace policies.
- 5.1.6.2 Identifying and assessing **NCDs** and **mental health disorders** through screening, risk assessments and diagnosis.
- 5.1.6.3 **Treatment**, care and referral including psychological care, rehabilitation and palliative care.
- 5.1.7 **Medical incapacity** means the inability to retain a normal occupation due to temporary or permanent impairment on the grounds of ill-health or injury that prevents the performance of the customary duties of an employee.
- 5.1.8 **Medical surveillance** means a planned programme of periodical examinations which may include clinical examinations, biological monitoring or the medical testing of employees by an occupational health practitioner or an occupational medical practitioner contemplated in Section 13 of the **MHSA**.
- 5.1.9 **Mental health** means a state of mental well-being that enables people to cope with the stresses of life, to realize their abilities, to learn and work well, and to contribute to their communities.
- 5.1.10 **Mental health disorders** means a positive diagnosis of a **mental health** related illness in terms of diagnostic criteria made by a **mental health** care practitioner authorised to make such diagnosis. It is characterised by a clinically significant deviation in an individual's cognition, emotional regulation or behaviour. It is usually associated with distress or impairment in important areas of functioning.
- 5.1.11 **MHSA** means the Mine Health and Safety Act, 1996 (Act No 29 of 1996) as amended.
- 5.1.12 **Modifiable risk factors** means risk factors that can be reduced or managed by intervention thereby reducing the probability of disease.
- 5.1.13 **Natural deaths** means deaths that are due entirely as a result of natural causes and are not precipitated by any other event.
- 5.1.14 **NCD(s)** means non-communicable diseases.
- 5.1.15 **NCDs+** means non-communicable diseases plus.
- 5.1.16 **NDoH** means the National Department of Health.
- 5.1.17 **NSP** means the national strategic plan.
- 5.1.18 **PHC** means primary healthcare.
- 5.1.19 **Prevention** means the action taken to prevent disease and secondly, should disease occur, efforts to eliminate or minimise its impact (such as **disability** or death). Levels of disease **prevention** (i.e. primordial, primary, secondary and tertiary) are defined below:

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- 5.1.19.1 **Primordial prevention** means population-level measures to prevent the development of **modifiable risk factors** and includes policy, programmes, education and environmental changes to support healthy ways of living.
- 5.1.19.2 **Primary prevention** means actions taken to protect the health of individuals by modifying risk factors for diseases through personal and communal efforts.
- 5.1.19.3 **Secondary prevention** means health intervention for early detection (screening and diagnosis) and prompt intervention to manage diseases, reduce mortality and minimise **disability** and the burden of the disease (morbidity).
- 5.1.19.4 **Tertiary prevention** means softening the impact of chronic disease and **disability** by minimising suffering and maximising years of useful life. It includes **rehabilitation** and palliative care.
- 5.1.20 **Rehabilitation** means a structured programme developed to ensure the optimal recovery and deployment of employees who suffer impairment from a **disability**.
- 5.1.21 **Risk factor** means the characteristic that increases a person's chance of getting a disease.
- 5.1.22 **Treatment** means the **management** and care of a person to manage or cure a disease, an injury or a disorder and includes both medical and surgical intervention.
- 5.1.23 **UN** means the United Nations
- 5.1.24 **WHO** means the World Health Organization

6. Members of the task team

- 6.1 This document was prepared and drafted by members of the task team which comprised of:

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7. Background

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- 7.1 The South African mining industry has been reporting on **NCDs** and **mental health disorders** since 2019. The **DMPR** has been analysing data and continually monitor and formulate trends. There has been a significant increase in the number of **NCDs** in the South African mining industry since then and it has become imperative that a guidance note be developed to guide the employer on the **prevention** and **management** of **NCDs** and **mental health disorders**.
- 7.2 The primary aim is to prevent the development of **NCDs** and **mental health disorders** as far as possible, to protect and promote the health of employees. However, since these disorders are as a result of multiple factors, some of which are not modifiable, other levels of **prevention** should be prioritised to reduce its negative impact on the health of employees. Support should also be provided to those employees living with **NCDs** and **mental health disorders**.
- 7.3 This guidance note supports the **UN's** SDG Target 3.4 of 2018 on **NCDs** and **mental health**, which states that: By 2030, reduce by one third premature mortality from **NCDs** through **prevention** and **treatment** and promote **mental health** and well-being.
- 7.4 The guidance note further supports the implementation of the 2024 Milestones on **NCDs** and **mental health** as follows:

	OBJECTIVE	2024 MILESTONE
Mental health awareness in South African mining industry	Promotion and support of mental health of employees in the South African mining industry.	95% of employees should be screened annually for mental health. 100% of screened employees with mental health challenges to be linked to care (this includes in-house or referral) annually.
NCDs awareness in the South African mining industry	Prevention and management of NCDs in the South African mining industry.	100% of employees presenting during medical surveillance programme should be screened for NCD metabolic risk factors.

8. Risk management

- 8.1 In view of multiple factors that may result in the development of **NCDs** and **mental health disorders**, it is advisable that the employer conducts a workplace risk assessment to identify **risk factors** and identify high risk employees or those vulnerable to the **risk factors**.
- 8.2 The employer is also expected to empower employees with **NCDs** and **mental health** literacy, to be able to identify and manage personal **risk factors** that may predispose it to developing **NCDs** and **mental health disorders**.
- 8.3 The employer to put systems in place to enhance and promote a workplace culture of safe declaration if an employee has identified a possible **risk factor(s)**, if they have been diagnosed with metabolic **risk factors** of **NCDs**, an **NCD** or **mental health disorder**. This is to assist in providing mechanisms for dealing with **NCDs** and **mental health disorders** or its associated **risk factors**.

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- 8.4 The employer to identify employees diagnosed with **NCDs** or **mental health disorders**, whose health and safety is at risk by virtue of their nature of work.
- 8.5 To assist the employer with the risk assessment, all reasonable available information such as employees' statistics on **NCDs** and **mental health disorders**, research reports, occupational hygiene exposure trends, records of absenteeism, sick leave, **medical incapacity** reports, information from the system of **medical surveillance** and statistics on **natural deaths** should be obtained and considered.
- 8.6 The risk assessment is to be reviewed annually and updated as and when the need arises. In the review, the following should be considered:
- 8.6.1 Changes in the prevalence and disease burden of **NCDs** and **mental health disorder** cases at the mine.
 - 8.6.2 Changes in work such as the introduction of hybrid working arrangements which may affect the level of physical activity, diet, stress due to isolation, etc.
 - 8.6.3 Mine disasters that could impact the **mental health** of employees.
 - 8.6.4 Major changes in the industry that may affect employees such as retrenchments, mergers, acquisitions, health outbreaks, etc.
 - 8.6.5 National and global targets or any other reason that may warrant a review.

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PART B: ASPECT TO BE ADDRESSED IN THE GUIDANCE NOTE**1. Risk assessment and review**

- 1.1 The **NSP** for the **prevention** and **management** of **NCDs** aligns itself to the global approach of targeting the five major groups of **NCDs+** (cardiovascular diseases, cancer, chronic respiratory diseases, diabetes and **mental health**, including neurological conditions) which have the highest morbidity and mortality rates of the **NCDs+**. It also aligns with the five shared behavioural **risk factors** (tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol and air pollution). However, because it is recognised that all **NCD+** conditions are of utmost public health importance, an integrated people-centred system approach is used to ensure it receive policy attention and consideration.
- 1.2 This guidance note supports the same global approach in identifying, preventing and managing **NCDs** and **mental health disorders**. In addition to focusing on the five main groups of **NCDs+** and the five shared behavioural **risk factors**, the heightened attention will be given to **NCDs+** and the associated **risk factors** which are prevalent in the South African mining industry. Environmental factors in the South African mining industry should also be given attention during risk management. See **Annexure A** for some examples of **NCD** and **mental health disorders risk factors**.

NOTE 1:

A risk assessment questionnaire to assist the employer in identifying **NCDs** and **mental health disorders risk factors** and vulnerable employees is attached as **Annexure 2**.

NOTE 2:

A self- assessment questionnaire to assist the employee in identifying **NCDs** and **mental health disorders risk factors** is attached as **Annexure 3**.

- 1.3 In terms of Section of 11 of the **MHSA**, the employer must assess and respond to risk. This is to be conducted through a thorough risk assessment which should as a minimum include the following:
- 1.3.1 Quantifying the burden of **NCDs** and **mental health disorders** at a mine.
- 1.3.1.1 This can be done through accessing employees' medical records at the mine in accordance with the ethics of medical practice.
- 1.3.2 Identifying vulnerable or high risk employees.
- 1.3.2.1 While **NCDs** are often associated with older age groups, evidence shows that 17 million **NCD** deaths occur before the age of 70 years.
- 1.3.2.2 Persons across all age groups are vulnerable to the **risk factors** contributing to **NCDs**, whether from unhealthy diets, physical inactivity, exposure to tobacco smoke, the harmful use of alcohol or air pollution. Poor working environments associated with a negative workplace culture, discrimination and inequality, excessive workloads, workplace violence, low job control and job insecurity have been found to pose a risk to **mental health**.

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- 1.3.2.3 In essence, all employees in the South African mining industry are vulnerable to the **risk factors** contributing to **NCDs** and **mental health disorders**, however others may be at a higher risk and for the purpose of this guidance note, such employees are referred to as high-risk employees. These include employees who:
- 1.3.2.3.1 Have a genetic predisposition to **NCDs** and **mental health disorders** because of family history.
 - 1.3.2.3.2 Employees who are immunocompromised.
 - 1.3.2.3.3 Employees with chronic occupational respiratory diseases.
 - 1.3.2.3.4 Employees with multiple chronic diseases.
 - 1.3.2.3.5 Employees who have been affected by mine accidents (The Mine Health and Safety Council research project SIM 050803 identified that the main determinant of post-traumatic stress disorder in the mines was a work-related factor which was the advent of a traumatic mines accident – most of these employees were underground workers).

NOTE 3:

The Mine Health and Safety Council website provides more information on the research project SIM 050803.

- 1.3.2.3.6 Employees who are dependent on alcohol and other harmful substances as coping mechanisms (the Mine Health and Safety Council research project SIM 020103 discovered that some employees rely on alcohol and cannabis for reasons such as: coping with mental stress linked to production target pressure, isolation from families and partners while staying in single sex hostels for prolonged periods and nightshift employees keeping entertained during the day when they struggle to sleep).

NOTE 4:

The Mine Health and Safety Council website provides more information on the research project SIM 020103.

- 1.3.2.4 High risk employees can be identified through:
 - 1.3.2.4.1 A medical screening questionnaire which are self-administered or administered by a health practitioner during wellness days.
 - 1.3.2.4.2 A **mental health** screening tool which is self-administered or administered by a health practitioner during wellness days (see Annexure C for the **NCDs** and **mental health** screening tool).
 - 1.3.2.4.3 **Medical surveillance.**
 - 1.3.2.4.4 Self-reporting or voluntary disclosure.
- 1.3.2.5 The risk assessment must have clearly defined roles and responsibilities with competent people undertaking the process.

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1.3.3 Identifying **risk factors** associated with **NCDs** and **mental health disorders**.1.3.3.1 In identifying **risk factors** associated with **NCDs** and **mental health disorders**, the following approach can be used:

1.3.3.1.1 Health screening questionnaires.

1.3.3.1.2 **Medical surveillance.**1.3.3.1.3 **Mental health** screening tools.

1.3.3.1.4 Mine environmental control practices.

1.3.3.2 Where screening and testing is conducted, it must be done by competent persons.

1.3.3.3 Once all the relevant data has been collected and analysed, based on the outcome, the mine may develop and implement a programme for the **prevention** and **management** of **NCDs** and **mental health disorders**.1.3.3.4 Below are the core **NCD risk factors** that should be considered as a minimum when undertaking risk assessment. In addition, environmental factors such as exposure to airborne pollutants should be considered:1.3.3.4.1 **Modifiable risk factors**

- a) Substance and drug abuse.
- b) Physical inactivity.
- c) Unhealthy diet e.g. low fruit and vegetable consumption, diet high in salt, etc. This includes assessing the nature of food sold to employees at the mines' canteens, drinks sold at vending machines, food served at mine compounds or residence and food prepared for mine events.
- d) Negative appraisals of life events.
- e) Psychosocial factors or issues (e.g. occupational stress, social interaction, cultural diversity, sleep quality, etc.)

1.3.3.4.2 **Metabolic risk factors**

- a) **Metabolic risk factors** contribute to four key metabolic changes that increase the risk of **NCDs**:
 - i. Raised blood pressure.
 - ii. Overweight and obesity.
 - iii. Hyperglycaemia (high blood glucose levels).
 - iv. Hyperlipidaemia (high levels of fat in the blood).

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1.3.3.4.3 Environmental **risk factors**

- a) These include excessive exposure to airborne pollutants and ionizing radiation in the workplace. Environmental factors which may lead to mine accidents should also be considered. In assessing environmental **risk factors**, the following should be considered:
- i. Nature of the work and the key workplace operations and activities that pose potential risks of **NCDs** and **mental health disorders**.
 - ii. Occupations and number of employees exposed to environmental **risk factors**.
 - iii. Essential occupations or critical skills of the mine that might be impacted by **NCDs** and **mental health disorders**.
 - iv. Control measures in place i.e. engineering, administrative, personal protective equipment, etc.

1.3.4 Early identification and **management** of **risk factors** associated with **NCDs** and **mental health disorders** as part of **primordial prevention**.

1.3.4.1 Wellness campaigns.

1.3.4.2 Health questionnaires.

1.3.4.3 Self-reporting or voluntary disclosure.

1.3.4.4 **Medical surveillance**.

1.3.4.5 Fitness assessment.

1.3.5 Detection of **NCDs** and **mental health disorders** to promote other levels of **prevention** and **management**.1.3.5.1 Referral and/or linkage of employees to relevant health care service providers for further **management**. This may include but is not limited to:

1.3.5.1.1 Psychiatric institutions.

1.3.5.1.2 Specialists.

1.3.5.1.3 Alternative medicine.

1.3.5.1.4 Provision of employee assistance programmes through an in-house or outsourced service model.

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2. NCDS and mental health disorders programme

2.1 Establishment of a committee to run the programme

2.1.1 Based on the outcomes of the risk assessment, the employer shall establish a committee for the development, implementation and monitoring of the programme for the **prevention** and **management** of **NCD** and **mental health disorder** programme, after consultation with the employees in terms of the **MHSA**. The roles and responsibilities of the committee members shall be clearly outlined and documented (including those of outsourced professionals).

2.1.2 The committee shall as a minimum be comprised of the following persons:

2.1.2.1 Persons responsible for providing health services in mines.

2.1.2.2 The **Occupational Medical Practitioner** appointed in terms of Section 13 (3) (a) (i) of the **MHSA**.

2.1.2.3 Occupational health nurses.

2.1.2.4 Health and wellness coaches.

2.1.2.5 Nutritionists.

2.1.2.6 The Health and Safety Committee or a representative.

2.2 Prevention strategies

2.2.1 The most common causes of **NCDs** are metabolic and behavioural **risk factors** and can be preventable by several available means. Many **mental health disorders** are also preventable.

2.2.1.1 Primordial prevention

2.2.1.1.1 Education and awareness: The employer to empower the employees with education relating to healthy living and positive social behaviour using relevant platforms for engagement with relevant stakeholder groups. This can take place during induction, various health and safety meetings, health campaigns and using peer educators. The following should be considered:

- a) Education and awareness should include issues of discrimination in relation to race, gender, tribalism, organisational culture or inclusivity or multilingualism, culture and xenophobia.
- b) It is vital to raise awareness of **mental health** and identify employees who may be at risk for **mental health**-related problems.
- c) Improve awareness of available wellness services and reducing stigma should be addressed through health awareness campaigns. This will assist to normalise seeking help and motivate individuals to act when they need support.

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- d) Developing and implementing a specific education programme for the **mental health** of employees is very vital.

2.2.1.1.2 Programme and policy: Through the implementation of this programme for the **prevention and management of NCDs and mental health disorders** as well as alignment or synergies with other related mine policies including alcohol and substance abuse, employee wellness, workplace violence, sexual harassment, etc.

2.2.1.1.3 Environmental control: Control measures to prevent and manage environmental or occupational hygiene hazards e.g. airborne pollutants, radiation and hazards related to ergonomics.

2.2.1.1.4 Preventing and managing modifiable risk factors: Early identification and **management of risk factors** associated with **NCDs and mental health disorders** as part of **primordial prevention**.

2.2.1.2 **Primary prevention**

2.2.1.2.1 Nutrition: As mine employees spend a large proportion of their time at work, access to healthy food options and education about nutrition in the workplace can have a large impact on their diets and overall health. Implementing healthy nutrition policies in the workplaces (support the provision of healthy food options at canteens and mine hostels or residences, kitchens and hospitals) is crucial. This includes, but is not limited to lower sodium, lower sugar, lower carbonated, lower caffeine and lower saturated fatty foods and drinks options. Hydration and the consumption of fruits and vegetables is encouraged.

2.2.1.2.2 In developing and implementing the nutrition policy, nutritionist should be consulted. Employees should also be motivated about home or backyard or community gardening for access to organic food production.

2.2.1.2.3 Physical activity and social interactions: Depending on the tasks at a specific workplace, workers may be either sedentary for extended periods of time or physically active, while others work in solitude which may have an impact on the **mental health** of employees. Mines should implement a multi-component workplace activity programme aimed at promoting the holistic wellbeing of employees e.g. physical, mental and emotional wellbeing. These may include:

- a) Gymnasiums at the mines or multi-purpose sport facilities. This would enable the possibility of mine employees practising different sporting disciplines within the same space.
- b) Initiating and supporting employee participation in different sporting codes that will keep employees active.
- c) Mind or board games (e.g. morabaraba, chess, crossword, etc.).
- d) Encouraging the use of staircases and walking (where applicable).

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e) Activities for physically challenged employees.

f) Various social interactions or events.

2.2.1.2.4 Environment: Promotion of environmental risk reduction and enhance public awareness of environmental, biological and occupational hazards (the use of a policy to control smoking areas and the monitoring of air quality).

2.2.1.2.5 Psychosocial support: Various factors can affect the **mental health** of employees at the mine. These include when workers experience an imbalance between perceived responsibilities and their abilities and resources, underutilisation of talent, bullying, harassment, repetitive tasks, economic stress, precarious work and other factors and situations. In addition, **mental health** conditions can affect workers' productivity and their ability to complete tasks safely. **Mental health** screening, the provision of wellness services and linkage to care are important. Mines should provide education and support for workers in **mental health**. Other interventions may include the promotion of a positive work culture, the modification of workstations, managing environmental factors, training, career progression and support groups (refer to **Annexure E: WHO and ILO's mental health policy brief** provides in-depth strategies to address **mental health** at work).

2.2.1.2.6 Addressing violence and harassment: Violence and harassment in the workplace can be horizontal (between co-workers), vertical (between supervisor and worker) or external (between worker and the public, customers or vendors). Violence and harassment can affect the mental and physical health of workers as well as their productivity and safety on the job. Workplaces should have training, clear policies and procedures in place to protect workers.

NOTE 5:

The Mine Health and Safety Council website provides more information on measures to address violence and harassment in mines.

2.2.1.2.7 Alcohol and drug abuse: Alcohol and drug use, occurring both during working hours or outside of the workplace, can affect workers' ability to safely complete tasks and can increase risks of diseases and injuries. Workplaces can provide cessation support and education about these substances as part of their **health promotion** strategies. Regulations concerning the consumption of alcohol and drugs in the workplace can also protect workers' health and safety.

2.2.1.2.8 Harmful substance management: Harmful substances such as tobacco in the workplace can affect workers through primary exposure as well as second-hand smoke from other workers. Smoking breaks can also result in reduced productivity from workers. Smoking in the workplace also has the potential to cause fires or explosions, further posing a risk to safety and health. Providing workers with education, cessation support and regulations concerning smoking on workplace premises can protect workers from the harmful effects of smoking.

2.2.1.2.9 Promotion of healthy sleep: Working schedules, long hours, stress and other factors can impact healthy sleep, increasing the risk of workplace

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injury and **NCDs**. Promoting healthy sleep patterns will not only assist in reducing risk to **NCDs** and **mental health disorders** but also fatigue **management**.

2.2.1.2.10 Wellness programme: Many of the **prevention** strategies above may be undertaken under a wellness programme which will be part of the **NCDs** and **mental health disorders** programme. A wellness committee comprising of all relevant stakeholders including the trade unions is to be established. The committee will be responsible for the following as a minimum:

- a) Wellness policy whether as a standalone or an integrated policy.
- b) Wellness budget.
- c) Annual health and wellness calendar aligned to the company statistics and trends and further aligned to the **NDoH** health calendar.
- d) Health and wellness promotion materials from other stakeholders such as the **DMPR**, the Mine Health and Safety Council, the Mineral Council of South Africa, etc.
- e) Employee assistance programmes in place to address employees' psychosocial issues.
- f) The programme should cover initiatives such as a smoking cessation programme, fitness and weight loss, diet, discouraging the use of alcohol and drugs, **mental health promotion**, etc.
- g) Adopt leading health and wellness practices and systems such as the SANS 1600, ISO 45003 etc. in order to have a structured approach to health and wellness in the workplace.
- h) Collaborative efforts with the communities in which they operate to implement community health initiatives to empower the communities. This works well if the employers collaborate with the **NDoH**.

2.2.1.3 Secondary prevention

2.2.1.3.1 Screening: Integrate **NCDs** screening within the **medical surveillance** programme to screen high risk employees to increase the rate of early detection and diagnosis.

2.2.1.3.2 Diagnosis: Employees whose screening results indicate the need for further investigations are to be referred to **PHC**. Those employees with a positive diagnosis for **NCDs** or **mental health disorders** metabolic **risk factors** are to be linked to care to ensure that the **risk factors** are controlled and do not lead to the development of an **NCD** or **mental health disorder**. Employee assistance programme support is also crucial during these stages.

2.2.1.3.3 Treatment: If the mine offers **PHC** services on site, employees should be put on **treatment** and be placed on a chronic disease register for

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monitoring. If there are no **PHC** services on site, the mine should link the employees with their preferred **treatment** providers (general practitioners or the **NDoH** facilities) for the provision of **treatment**.

- 2.2.1.3.4 Linkage to care is crucial for employees diagnosed with **NCDs** and **mental health disorders**. Regular check-ups (blood test, reports from own general practitioner and the **NDoH** clinics) and continuous support is also important. Through the **medical surveillance** programme, the Occupational Medical Practitioner may deem it fit to conduct a fitness to work assessment and if the employee is no longer fit to perform work optimally, the **medical incapacity** process should be initiated.

2.2.1.4 Tertiary prevention

- 2.2.1.5 In the tertiary level of care, measures should be put in place to ensure that employees living with **NCDs** and **mental health disorders** receive care to prevent and manage related complications. This also includes **rehabilitation** and palliative care.

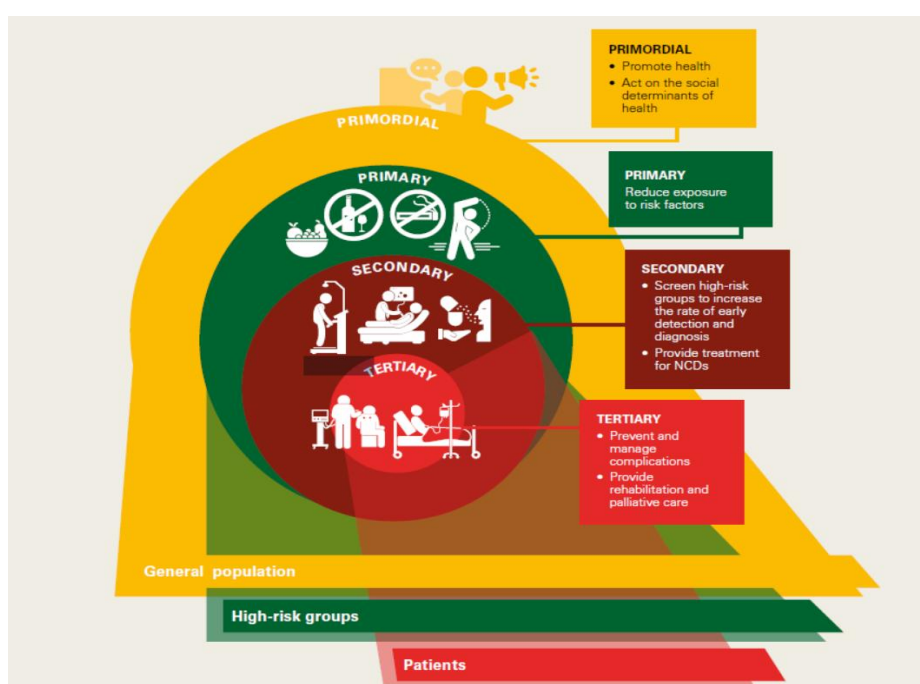


Figure 18: Example of **NCD** interventions across the life course and levels of **prevention** (NCDs **NSP**: 2022-2030)

3. Monitoring and evaluation of the **NCDs** and **mental health disorders** programme

- 3.1 The employers should ensure that the internal monitoring and evaluation of the employer's **NCDs** and **mental health disorders** programme is conducted and recorded.
- 3.2 It is also recommended that an employer's **NCDs** and **mental health disorders** programme be subjected to annual monitoring. **Annexure D** outlines the employer **NCDs** and **mental health disorders** programme monitoring and evaluation tool.

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PART C: IMPLEMENTATION

1. Implementation plan

- 1.1. The employer must prepare an implementation plan for a guidance note that makes provision for issues such as organisational structures, responsibilities of functionaries and programmes and schedules for the guidance note, which will enable proper implementation of the guidance note (a summary of and a reference to, a comprehensive implementation plan may be included).
- 1.2. Information may be graphically represented to facilitate easy interpretation of the data and to highlight trends for the purposes of risk assessment.

2. Compliance with the guidance note

- 2.1. The employer must institute measures for auditing, monitoring and ensuring compliance with the guidance note.

3. Access to the guidance note and related documents

- 3.1. The employer must ensure that a complete guidance note and related documents are kept readily available at the mine for examination by any affected person.
- 3.2. A registered trade union with members at the mine, or where there is no such union, a health and safety representative on the mine, or if there is no health and safety representative, an employee representing the employees on the mine, must be provided with a copy. A register must be kept of such persons or institutions with copies to facilitate the updating of such copies.
- 3.3. The employer must ensure that all employees are fully conversant with those sections of the guidance note relevant to their respective areas of responsibilities.

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ANNEXURE A: Examples of NCDS and mental health disorders risk factors

Genetic factors	Environmental factors	Sociodemographic factors	Behavioural factors	Metabolic factors
• Family diseases history • Genetic inheritance • Epigenetic changes • Environmental exposure-based (e.g. radiation) • Toxic material-based mutations	• Air pollution • Weather changes • Sunlight (ultraviolet radiation) • Substances with radiological properties, e.g. uranium	• Age • Gender • Race • Ethnicity • Education • Income	• Harmful substance abuse (e.g. tobacco) • Alcohol abuse • Physical inactivity • Unhealthy diet	• High blood pressure • High glucose levels • Very low blood pressure • Obesity • Stress

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ANNEXURE B: Guide for the employer – Risk assessment questionnaire**Aim:**

To help employers in the mining industry to identify **risk factors** and vulnerable employees for **NCDs, mental health disorders** and substance abuse.

SECTION A: Employee health data

	0	1	2
What was the absenteeism rate due to health issues last year?	Less than 5%	5-10%	Over 10%
TOTAL SCORE			

SECTION B: Occupational health and safety

	0	1	2
Is there a regular health screening programme for employees?	Fully implemented	Partially implemented	Not implemented
Are there comprehensive records of employees exposed to hazardous substances?	Well-documented	Incompletely documented	Poorly documented
TOTAL SCORE			

SECTION C: Mental health and substance use

	0	1	2
Is a mental health support system available and accessible to employees?	Fully available	Limited availability	Not available
Is there a policy in place for managing substance abuse?	Fully enforced	Partially enforced	Not enforced
TOTAL SCORE			

SECTION D: Workplace environment

	0	1	2
How would you rate the air quality and ventilation in the workplace?	Meets or exceeds standards	Adequate	Below standards
How would you rate the nutritional quality of food provided to employees?	High quality	Moderate quality	Poor quality
TOTAL SCORE			

SECTION E: Risk management and training

	0	1	2
How frequently are training programmes on NCDs and mental health conducted?	Regularly	Occasionally	Rarely/Never
TOTAL SCORE			

SECTION F: Policy and compliance

SECTION G: Referral and support actions

Calculate overall score

Instructions for scoring:

- ## Interpreting scores

*** This questionnaire has been developed using evidence-based tools to provide guidance and has been structured for quick assessment across large groups of employees in the mining industry. It has not been empirically tested and is not a standardised measurement scale. It is intended to help employers identify risk levels and areas requiring urgent attention within their operations. This tool should not be used as a substitute for professional advice or **treatment**. The creators of this questionnaire assume no liability for its use or for the outcomes resulting from its application.

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ANNEXURE C: Guide for employee self-assessment– Risk assessment tool

Aim: To enable employees to self-identify risk factors for NCDs, mental health disorders and substance abuse.

SECTION A: Demographic and employment information

Age: _____	Gender: _____
Job role: _____	Years in mining: _____

SECTION B: Health and lifestyle assessment

	0	1	2
How many glasses of water do you drink daily?	8 glasses or more	4 to 7 glasses	Less than 4 glasses
How often do you eat 3 meals a day?	Frequently	Occasionally	Never
How often do you eat a balanced meal?	Frequently	Occasionally	Never
How often do you eat fast foods?	Never	Occasionally	Frequently
How often do you use vitamins or supplements?	Daily	Occasionally	Never
How often do you engage in physical activity?	Often	Sometimes	Rarely
How often do you engage in hobbies and leisure activities?	Often	Sometimes	Rarely
Have you been diagnosed with conditions such as high blood pressure, diabetes, etc.?	No	Yes, receiving treatment and managing well	Yes, treatment needed or not managing well
How often are you plagued by stress and anxiety?	Rarely	Sometimes	Often
Have you ever been diagnosed with or sought help for a mental health disorder ?	No	Yes, receiving treatment and managing well	Yes, treatment needed or not managing well
How often do you get enough sleep?	Often	Sometimes	Rarely
How often do you consume caffeine?	Never	Occasionally	Frequently
TOTAL SCORE			

SECTION C: Work environment and exposure

	0	1	2
How often are you exposed to harmful substances (i.e. airborne pollutants or hazardous substances) at work?	Never	Occasionally	Frequently
How safe do you feel in your workplace?	Very safe	Somewhat safe	Unsafe
How often are you exposed to ergonomic risks (repetitive motions, poor posture, inadequate equipment, heavy lifting, etc.) at work?	Never	Occasionally	Frequently
TOTAL SCORE			

SECTION D: Substance use and mental health

	0	1	2
How often do you use tobacco products?	Never	Occasionally	Frequently
How often do you use alcohol?	Never	Occasionally	Frequently
How often do you have blackouts as a result of alcohol abuse?	Never	Occasionally	Frequently
How often do you use mood altering substances or non-prescribed medication?	Never	Occasionally	Frequently

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How often do you seek help for stress and anxiety?	Never	Occasionally	Frequently
How often do you feel unheard or unseen?	Never	Occasionally	Frequently
How supported do you feel at home?	Well supported	Somewhat supported	Unsupported
How supported do you feel at work?	Well supported	Somewhat supported	Unsupported
How would you rate your work-life balance?	Excellent	Fair	Poor
TOTAL SCORE			

	+		+		=	
Section B	+	Section C	+	Section D	=	TOTAL SCORE

Instructions for scoring:

- **Refer to the table:** As you complete each section of the questionnaire, refer to the point values listed next to each response option in the table. These are pre-allocated as 0, 1 or 2 points based on the risk associated with each answer.
- **Calculate section scores:** For each section you have completed, tally the points for each response to get the total score for that section.
- **Sum the totals:** Add the scores from all completed sections to get the final total score.
- **Interpret your score:** Use the total score to refer to the interpreting scores section, which provides guidelines and suggests appropriate actions based on your risk level.

Interpreting scores

TOTAL SCORE	RISK LEVELS	ACTION
0 – 15	Low risk	Maintain current health practices and consider basic health education or wellness tips.
16 – 32	Moderate risk	Engage in targeted wellness programmes and internal support measures and monitor closely for any health improvements or deteriorations.
33+	High risk	Immediate professional health evaluations are recommended and consider comprehensive external support services and significant workplace adjustments.

*** This questionnaire has been developed using evidence-based tools to provide guidance. It has not been empirically tested and is not a standardised measurement scale. It is intended as a self-assessment guide for employees to identify their own risk levels. This tool should not be used as a substitute for professional advice or **treatment**. The creators of this questionnaire assume no liability for its use or for the outcomes resulting from its application.

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ANNEXURE D: Employer NCDs and mental health disorders programme monitoring and evaluation tool**Aim:**

This tool is designed to help employers conduct an annual review of their **NCDs and mental health disorders** programmes to ensure they are effectively addressing employee health needs within the mining industry.

Evaluation frequency:

Annually	Bi-annually	Quarterly	Monthly	Weekly	Daily
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Annual review date: _____

Completed by: _____

PART 1: Programme implementation and coverage

Programme coverage	
How many employees form part of the NCDs and mental health disorders programme?	
Are all departments or sections within the mining operation covered?	
For any departments or sections not covered, please provide reasons and any plans for future inclusion.	
Programme components implemented	
List the key components of the NCDs and mental health disorders programme that have been implemented this year.	
Have there been any components that were planned but not implemented? If so, why?	

PART 2: Programme effectiveness

Health outcomes	
What improvements in employee health outcomes have been observed this year (e.g. reduction in reported cases of NCDs , enhanced mental health support uptake)?	
Are there specific health metrics or indicators (like blood pressure, glucose levels, etc.) that have shown significant improvements?	
How has the programme impacted the rate of absenteeism and productivity among employees?	
Employee satisfaction	
Based on internal surveys or feedback, how satisfied are employees with the NCDs and mental health disorders support provided?	
What aspects of the NCDs and mental health disorders programme do employees feel are most beneficial?	
Are there any suggestions from employees for enhancing the support provided?	

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PART 3: Challenges and barriers

Challenges encountered	
What are the major challenges faced in implementing or running the NCDs and mental health disorders programme this year?	
Which components of the programme were the most difficult to implement, and why?	
How have internal or external factors affected the delivery and effectiveness of the programme?	
Barrier analysis	
Identify any barriers that have prevented effective implementation or access to the programme components.	
Are there specific logistical, financial or personnel-related barriers that have impacted the programme?	
How have employee attitudes or cultural factors influenced the programme's uptake and success?	

Part 4: Financial and resource allocation

Budget utilisation	
What percentage of the allocated budget for NCDs and mental health disorders was utilised?	
Were there any financial overruns or shortfalls? What were the causes?	

PART 5: Recommendations and improvements

Recommendations for improvement	
Based on the evaluation, what are the key areas for improvement in the programme?	
Are there any additional resources or changes required to enhance programme effectiveness?	
Action plan for next year	
Outline the steps planned to address the identified challenges and improvements for the coming year.	

PART 6: Documentation and reporting

Record keeping	
Confirm that all programme activities and outcomes have been documented according to internal standards.	
Is there a need to improve documentation practices?	

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DISORDERS IN THE SOUTH AFRICAN MINING INDUSTRY

ANNEXURE E: WHO and ILO's mental health policy brief

https://www.ilo.org/sites/default/files/wcmstp5/groups/public/%40ed_protect/%40protrav/%40safework/documents/publication/wcms_856976.pdf

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