

# HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE

SETTING THE SCENE | WHAT DRIVES US | LEADERSHIP | DELIVERING ON OUR STRATEGY AND OUTLOOK | ANCILLARY INFORMATION



## HOW WE DID IN 2019

### SUCCESSES

**21%**  
reduction in silicosis cases reported

**16%**  
increase in employees on medical schemes

**31%**  
decrease in the rate of noise-induced hearing loss

### CHALLENGES

Planning and dealing with COVID-19, considering more than 80,000 employees

## HEALTH AND WELL-BEING

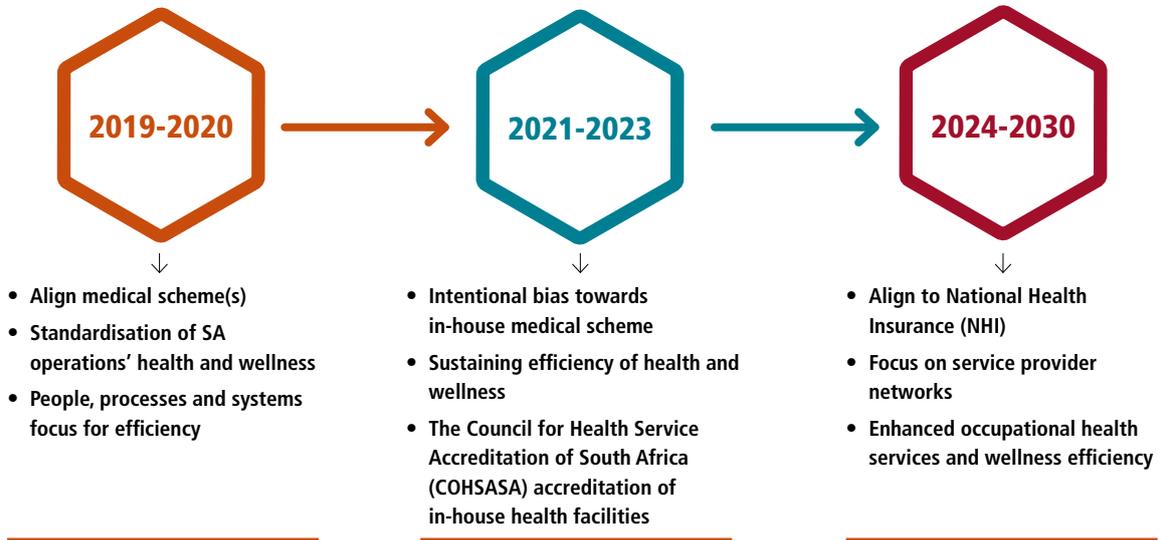
Sibanye-Stillwater continues to make progress in aligning our health strategy with that of the United Nations Sustainable Development Goals (SDGs) 2015 to 2030 with a particular focus on goal three which refers to health and well-being.

The strategy is intent on providing equitable health care based on health needs and financial risk protection for employees and their families, and is aligned to the principles of Universal Health Coverage and National Health Insurance (NHI). It will provide employees with an affordable and cost-effective funding mechanism for health care needs while also maintaining efficiencies. In addition, the strategy focuses on preventative health care with enhanced occupational health services which will support a healthy workforce.

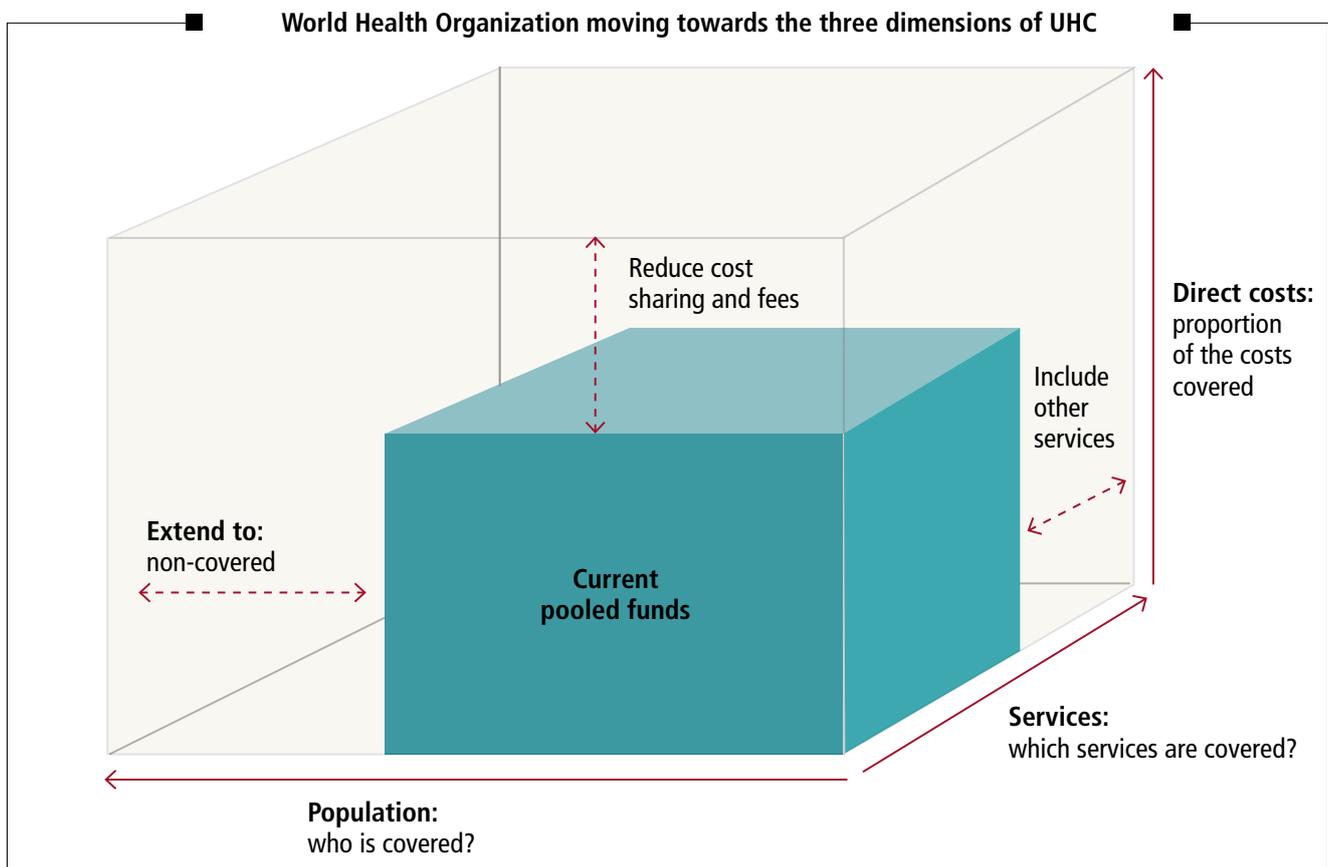


Health care is available to our employees at the medical centres

## SA OPERATIONS' HEALTH STRATEGY



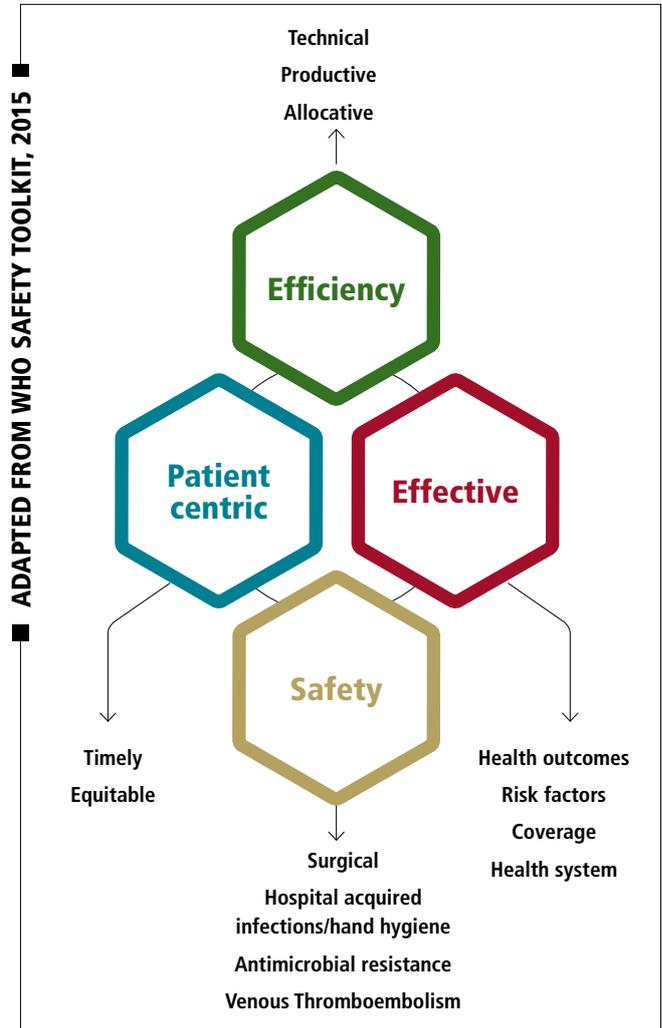
SDG three contains a set of comprehensive health targets that are aimed at addressing health challenges including non-communicable diseases, injuries and environmental issues. The goals call on inter-sectorial action to achieve policy reforms whereby universal health coverage (UHC) for all people can be achieved through a sustainable approach based on efficiency, health services integration and people centred care. UHC is defined as "ensuring that all people can use promotive, preventative, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective while ensuring that the use of the service does not expose the user to financial hardship." (World Health Organization, Health in 2015 from MDGs to SDGs.) The United Nations and several heads of state have reaffirmed the commitment to UHC "moving together to build a healthier World", including South Africa, in the form of NHI. The figure below illustrates the three dimensions of UHC that need to be addressed to achieve UHC by 2030.



# HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

Health system strengthening is fundamental in driving the policies and actions to achieve UHC. Sibanye-Stillwater has adopted the WHO approach to health systems strengthening which includes the six elements listed below. As an outcome of our health system strengthening programmes, Sibanye-Stillwater hopes to deliver improved health, system responsiveness, financial risk protection and efficiencies. The six elements focused on by Sibanye-Stillwater include:

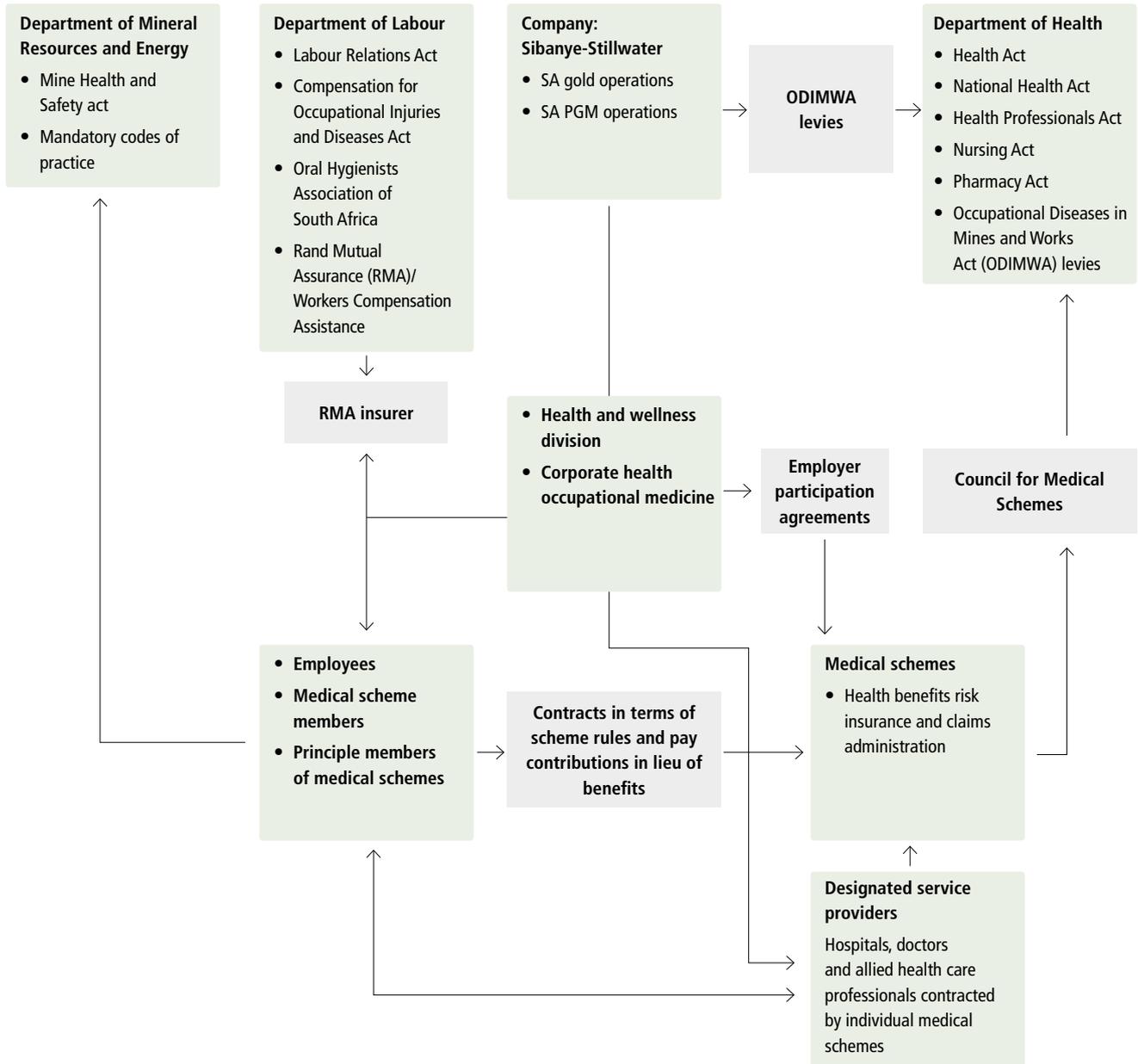
- A healthy, well-performing workforce: Sibanye-Stillwater ensures that its employees have access to the highest skilled professionals in the region by selectively contracting with centres of excellence and professionals
- A well-functioning information system that ensures the use of reliable and timely information on health determinants, health systems performance and the health status of employees through annual surveillance checks. Sibanye-Stillwater is also exploring opportunities to enhance existing digital radiology capabilities by including computer aided diagnostics
- A comprehensive pharmaceutical supply system which ensures access to essential medical products, vaccines and technologies. Our service offers employees access to the most advanced technologies and current treatment protocols and guidelines
- A good health financing system which protects employees from financial catastrophe. A total of 66% of Sibanye-Stillwater employees are insured through medical aid schemes that protect our employees from the financial risk of high medical costs
- Leadership and governance provided by Sibanye-Stillwater ensures role clarity and accountability among all stakeholders and the promotion of partnerships within the system
- Safe quality care is ensured in the system by focusing on the four elements of efficiency, effectiveness, safety and patient centric care. This is achieved by measuring and monitoring the inputs and outputs of the various role players and continuous improvement



■ An employee visits the medical centre close to the operations

In addition to this commitment to UHC and health systems strengthening, the Sibanye-Stillwater health model is evolving and has undergone significant transition over the past five years from being both a health care funder and provider of services to one in which health services are provided for by a multitude of stakeholders and partnerships which Sibanye-Stillwater manages as per the business context diagram below. By actively managing the health system, Sibanye-Stillwater can ensure delivery of quality health care to employees while not ignoring the needs of regulators and partners.

### THE SIBANYE-STILLWATER'S SA OPERATIONS' BUSINESS CONTEXT



In most cases, employee health is closely related to employee safety. Our safety value encompasses occupational health and well-being, which in turn, can affect safety performance. Sibanye-Stillwater conducts annual medical examinations of all employees engaged in risky work to ensure that they are fit and healthy enough to meet the inherent requirements of the work assigned to them as required by the Mine Health and Safety Act (MHSA). In South Africa, as part of our safety values campaign and in line with employees' rights and responsibilities regarding workplace safety, employees must, before they start any work, confirm at their safety team briefings that they are ready for work daily by declaring "I am fit, healthy and competent to perform my tasks".

## HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

In pursuit of our ultimate goal of zero harm, Sibanye-Stillwater has built a health system that aims to safeguard the health and well-being of our employees and contractors, so that they are appropriately positioned to undertake their daily responsibilities safely and efficiently. Guided by our CARES values, our health and wellness model in South Africa is designed to address the risks presented by the internal and external environments facing employees. The care we provide is based on six broad pillars (as part of the health and wellness model) with the aim of delivering effective, safe, quality personal and non-personal health interventions to those who need them, when and where needed, with minimum waste of resources.

- **Access to occupational health resources** that assess health risks, determine fitness to work, and manage disease and rehabilitation
- **Shaft clinics** within a walking distance to the workplace with qualified primary health care staff providing health risk assessments and disease treatment for communicable diseases – tuberculosis (TB) and HIV – and chronic ailments (diabetes and heart disease, among others)
- **Satellite primary health care clinics** with qualified nurses operating during office hours
- **Primary health care centres** with qualified doctors and nurses managing cases 24/7
- **Emergency medical services** equipped with advanced paramedical teams and 24/7 rescue capability
- **Wider hospital networks** offering specialised care for trauma as well as occupational injuries and diseases



■ Emergency vehicles like these are manned by paramedic teams

### HEALTH CARE PROVISION AT THE US PGM OPERATIONS

The US operations' health and welfare benefit plans provide access to primary care and specialty care for our employees.

A contracted national network partner, Cigna, enables our employees and their families to seek medical and mental health treatment services throughout the US. However, the structure of our health plan provides incentives for members to seek care locally or within the state of Montana. Incentives include lower costs in the form of discounted services and lower contributions from their wages. South-central Montana has two reputable and competing hospital systems, each having a presence in many of the outlying rural communities.

At the US PGM operations, high-dollar claimants are the primary drivers of our cost trend. Statistics demonstrate that most of our health care costs are incurred by a small fraction of our members. In 2019, we embarked on a three-year commitment with two robust and competing hospital systems in south-central Montana and created exclusive provider organisations through which we contract directly with the hospitals and their doctors. The hospitals have agreed to compete for our business, recognising that our financial contribution to the local health care community is a significant portion of their revenue stream.

We have introduced a unique benefit plan design that encourages patient and provider accountability. Managing the quality of care is an important new focus. The hospital systems have agreed to share financial risk for unsuccessful treatments. This is an exciting opportunity for an integrated approach to health care using primary care physicians to co-ordinate care, integrating delivery systems that optimise primary and specialty care, providing concierge-style nurse navigators to help members receive the most from their benefit plans, to answer health care questions and to manage chronic conditions. Feedback on the new health plan is positive so far, and costs are remaining flat.



■ An employee working at our US PGM operations

## SA OPERATIONS' MEDICAL SCHEME STRATEGY

The health care strategy adopted by the SA operations, aligned as it is to goal three of the UN's SDGs, advocates a preventative approach, which funds and manages a continuum of health care in preference to providing health care services. This is exemplified by the growth in medical scheme membership from 8% in 2013 to 66% in 2019 and the support for UHC.

During 2018, it was agreed to transition employees at the SA gold operations from provided health care to a medical scheme model as part of the formal wage agreement. The medical scheme model is advantageous to both Sibanye-Stillwater, providing cost efficiencies, and employees, providing improved access to medical care and the opportunity for partners and family to join a medical scheme. Implementation is likely to take place in the second quarter of 2020.

For the SA PGM operations, the in-house medical scheme continues to deliver effective health care services and has entrenched its position as the scheme of choice among employees.

In an effort to represent the interests of employees and the organisation in a transparent manner, we have formalised employer-participation agreements with all participating schemes in order to enhance the relationship between the funders, providers, the Department of Health and Sibanye-Stillwater.

The amalgamation of the Marikana operations and the Sibanye-Stillwater in-house Sisonke Medical Schemes has been approved in principle by the Boards of both schemes. The amalgamation of the two in-house medical schemes will see the achievement of the long-term strategic objective for the Group which is to invest in a single multi-commodity medical scheme which can provide a customised solution for all employees and their dependants by 2021, while also leveraging economies of scale.



■ Nutritious supplements are provided to underground employees

## PERFORMANCE

Our quarterly health forum, including representatives of organised labour, focused on a 12-year outlook for health and repositioning of health care funding as well as the provision of health care to all operations. Specifically, much progress has been made within the medical schemes' environment with an improved understanding and alignment of the overall strategic objectives among all stakeholders. This has resulted in close collaboration with the appointed medical schemes with improved monitoring of performance and outcomes of health programmes. In addition, Sibanye-Stillwater is in the process of identifying and appointing reputable primary health care service providers to operate the onsite clinics. Sibanye-Stillwater will provide quality assurance by ensuring accreditation of the clinics and compliance with the Department of Health's Ideal Clinic Standards.

In 2018, through the Chief Medical Officers' Network, we committed to address workplace health concerns, such as antimicrobial resistance, obesity, mobility and mental health. Experiences were shared, including a review of our mental health offering and insights into workplace disaster management. In 2019, we continued to focus on mental health resilience, as we seek to understand the social and ethnographic determinants of mental disease. We also encouraged physical fitness for better health and better outcomes from injuries. As a result of the review of our workplace disaster management, we split our emergency and disaster services, in the interests of efficiency and responsiveness.

The centralisation of the occupational health service in the SA gold operations (West Wits and Beatrix), as well as at the Marikana operations, is well underway with construction set to be completed by the second quarter of 2020. The project will see the integration of functional and physical work capacity testing as well as the high performance centre and final phase rehabilitation programmes into the ambit of occupational health. The centralisation will increase efficiency and improve turnaround times.

Throughout the Group, we are focusing on employing and refining technology to improve occupational health services. Health care technology that is designed to track and monitor patients and improve the speed of service in our health centres has been standardised and rolled out across the Group with the aim of providing the operations with a one-day turnaround time. This means we can provide our patients with better health care all round by improved surveillance and data analytics to understand trends and proactively address issues. The new technology will also allow for peer review and consultation.

Furthermore, we have commissioned a project to review our current on-boarding processes and will be investing in technology which will speed up the processes and cycle times at our induction centres in terms of initials, exits, annual medicals and medicals after absences and will notify us where an employee is not compliant. The project is set to be completed by the third quarter of 2020.

The integration of the Marikana operations includes a review of the health system and funding of health care which includes the hospital, occupational health and primary health care centres to which communities have access. Significant work is being done to bring about efficiencies, and this will include transitioning Marikana to the Sibanye-Stillwater health care model by the end of 2020, and

## HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

the repositioning of the Andrew Saffy Memorial Hospital to a 24/7 community health centre which will be operated by a contracted third party. The proposed outsourcing of the primary health care clinics to a local service provider will form part of the enterprise development assistance offered by the company.

To further increase efficiencies, we are working on the alignment of codes of practice which will allow rationalisation of resources. Associated with this process, is the alignment of terminology across the operations, for example regarding people's positions and departmental functions, as well as the extension of the ISO 45001 accreditation to other operations in the SA PGM operations.

In a further rationalisation of resources, at the SA gold and PGM operations on site primary health care clinics, primary health care qualified nurses attend to the majority of cases, with fewer referrals to

doctors at the hospitals. For instance, nurses deal routinely with HIV, TB and hypertension cases, which represent some 98% of our chronic diseases. This approach will also be instituted at Marikana in time.

At the Rustenburg operations, against a background of community unrest, which affects day-to-day operations around the shafts, we are making increased efforts to build community relationships. We will be hosting community leaders at our occupational health centre and will acquaint them with our engagement processes. The exercise will increase insight into the stringent requirements per job category including the physical and functional attributes necessary to be successfully appointed at the company. This will help create an understanding of the inherent requirement of specific job categories and the possible reasons why a person might be excluded from employment on the mine.

### SA operations: sources of health care funding (R million)

	2019			2018			2017		
	Total	PGM*	Gold	Total	PGM	Gold	Total	PGM	Gold
Medical schemes	948	638	310	725	421	304	714	404	310
Company-funded	402	103	300	282	12	270	324	21	303
Compensation for occupational injuries and diseases <sup>1</sup> (Rand Mutual Assurance)	337	163	173	213	77	136	208	69	138
Occupational diseases in Mines and Works Act dust levies <sup>1</sup>	32	3.7	29						
<b>Total<sup>1</sup></b>	<b>1,718</b>	<b>908</b>	<b>811</b>	<b>1,220</b>	<b>510</b>	<b>710</b>	<b>1,246</b>	<b>495</b>	<b>751</b>

<sup>1</sup> Health care funding costs exclude Occupational Diseases in Mines and Works Act dust levies for gold (R392 million from 2013 to 2018) and PGM operations (R4.8 million from acquisition to 2018)

\* Includes seven months of Marikana operations since acquisition in June 2019

### SA operations: funding employee health care (number of employees)

	2019			2018			2017		
	Total	PGM*	Gold	Total	PGM	Gold	Total	PGM	Gold
Principal medical scheme members	44,501	37,286	7,215	26,212	18,696	7,516	27,298	18,909	8,389
Company-funded employees	21,970	0	21,970	24,736	0	24,736	24,328	0	24,328
Total employees	67,594	37,286	27,933	50,948	18,696	32,252	51,626	18,909	32,717
Employees on medical schemes (%)	66	94	26	51	100	30	53	100	26

\* Includes seven months of Marikana operations since acquisition in June 2019

### SA operations: medical conditions under management<sup>1</sup>

	2019			2018			2017		
	Total	PGM*	Gold	Total	PGM	Gold	Total	PGM	Gold
Chronic medical conditions (schemes)	28,018	21,621	6,397	10,862	6,871	3,992	13,532	8,546	4,986
Chronic medical conditions (company)	8,830	0	8,830	8,364	0	8,365	8,978	0	8,978
<b>Total</b>	<b>36,848</b>	<b>21,621</b>	<b>15,227</b>	<b>19,227</b>	<b>6,871</b>	<b>12,357</b>	<b>22,510</b>	<b>8,546</b>	<b>13,964</b>

\* Includes seven months of Marikana operations since acquisition in June 2019

<sup>1</sup> Statistics represent the number of conditions, with some employees having multiple conditions

## SA operations: employees registered on chronic disease management programmes

Chronic medical conditions	SA operations	Southern Africa region	
		PGMs*	Gold
Principal medical scheme members	44,501	37,286	7,215
Company-funded employees	21,970	0	21,970
Chronic medical scheme members	17,033	13,540	3,493
Chronic company-funded employees	7,599	0	7,599
<b>Total employees with chronic medical conditions</b>	<b>24,632</b>	<b>13,540</b>	<b>11,092</b>

\* Includes seven months of Marikana operations since acquisition in June 2019

## SA operations: occupational diseases (number of cases reported)

	2019			2018			2017		
	Total	PGMs*	Gold	Total	PGM	Gold	Total	PGM	Gold
Silicosis <sup>1</sup>	131	60	71	165	106	59	261	68	193
Chronic obstructive airways disease <sup>1</sup>	68	39	29	70	41	29	50	13	37
Noise-induced hearing loss <sup>1</sup>	355	189	166	243	167	76	193	100	93

<sup>1</sup> Number of cases reported includes new and resubmission cases

\* Includes seven months of Marikana operations since acquisition in June 2019

## SA operations: occupational health management

	2019			2018			2017		
	Total	PGMs*	Gold	Total	PGM	Gold	Total	PGM	Gold
Medical surveillance and certificate of fitness examinations – total <sup>1</sup>	194,137	96,650	97,487	123,846	50,146	73,700	145,689	52,852	92,837
Employees	153,187	68,704	84,483	101,152	35,140	66,012	103,841	21,673	82,168
Contractors	40,939	27,946	12,993	22,694	15,006	7,688	41,848	31,179	10,669
Days lost due to health-related absenteeism	736,124	323,232	412,892	776,365	293,822	482,543	826,475	321,104	505,371

<sup>1</sup> Includes heat tolerance screening test (HTS)

\* Includes seven months of Marikana operations since acquisition in June 2019

## SA gold operations: TB rates per 1,000 employees (new and retreatment cases)

	2019	2018	2017
Total TB	7.39	9.75	10.65
Pulmonary TB	5.39	7.38	8.72
Extra pulmonary TB	2.01	1.86	1.93
Cardiorespiratory TB	6.07	8.30	9.46
Multi-drug-resistant TB	0.22	0.10	0.38

## HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

### SA operations: number of new and retreatment cases of TB

	2019			2018			2017		
	Total	PGMs*	Gold	Total	PGM	Gold	Total	PGM	Gold
TB	553	284	269	539	157	382	623	148	475
Cardiorespiratory TB	491	270	221	480	155	325	570	148	422
New cases of drug-resistant TB	26	Unknown	26	13	Unknown	13	28	0	28
New cases of multi-drug-resistant TB	8	Unknown	8	4	Unknown	4	17	0	17

\* Includes seven months of Marikana operations since acquisition in June 2019

### SA operations: HIV, VCT<sup>1</sup> and HAART<sup>2</sup>

	2019			2018			2017		
	Total	PGMs*	Gold	Total	PGM	Gold	Total	PGM	Gold
VCT offered	82,670	46,940	35,730	59,900	28,153	31,747	51,122	25,008	26,114
VCT conducted	32,162	28,885	3,277	20,544	11,681	8,863	20,326	9,932	10,394
VCT test-positive	1,608	1,327	281	887	170	717	1,168	113	1,055
Proportion of workforce tested <sup>3</sup>	39.5	66	8.7	33.4%	50%	24%	29%	40%	23%
New recipients of HAART <sup>4</sup>	502	Unknown	502	563	0	563	843	Unknown	843
Category 3-8 employees on HAART	5,696	Unknown	5,696	5,638	0	5,638	5,688	0	5,688
HAART patients who are employees <sup>5</sup>	10,744	3,731	7,013	9,745	3,090	6,655	9,761	3,133	6,628
Employees who have left HAART programme <sup>6</sup>	52	0	52	8	0	8	46	0	46

<sup>1</sup> Voluntary counselling and testing

<sup>2</sup> Highly active antiretroviral therapy

<sup>3</sup> VCT conducted as a percentage of total workforce (employees and contractors)

<sup>4</sup> Entry-level mining employees (Category 3-8) of the SA gold operations

<sup>5</sup> HAART patients alive and on treatment, total employees including category 3-8 employees – excludes Marikana data

<sup>6</sup> Employees who left HAART programme within 12 months of starting antiretroviral therapy (including retrenched employees with ill health and any other labour-related terminations)

\*Excludes the seven months of Marikana operations since acquisition in June 2019, due to records still being verified for integration into the Group

## COMMUNICABLE DISEASE MANAGEMENT

We are collaborating successfully with the Department of Health in South Africa and local communities to control the spread of TB across all operations and have been acknowledged by the Global TB Caucus partnership for our ongoing efforts in helping to end TB and leading the private sector in reducing the rates of TB and HIV in South Africa.

Our success in reducing the TB burden at our SA gold operations, from 832 cases in 2014 to 269 cases in 2019, can be attributed to improved access to primary health care at shaft clinics, staffed by qualified health care professionals who are able to screen and diagnose outside the hospital environment, and treat the disease at an early stage.

Another contributing factor to the successful interception of TB transmission is the high retention rate of employees on HIV treatment at 12 months, which stands at 90%. In addition, viral load suppression as a surrogate for effective treatment stands at 76% across the Group which includes employees registered on medical schemes disease management programmes. As TB is activated when a person's immunity is weak, people enrolled and controlled on HIV treatment programmes indirectly control the spread of TB.

Over and above these medical initiatives, engagement with the Department of Health and local communities is ongoing. As a result, mainly due to actively seeking TB sufferers and co-ordination of care, we have seen a 170% decline in the spread of TB since 2013.

### CORONAVIRUS (COVID-19)

The National Department of Health in collaboration with the National Institute for Communicable Diseases have developed a comprehensive set of guidelines in preparation for the COVID-19 pandemic. Sibanye-Stillwater has included these guidelines into the Group Emergency Preparedness plan which will screen employees with symptoms, those returning from leave and employees who have had close contact with a confirmed or probable case. A management toolkit has been distributed to all operations and health facilities which includes education of health care workers and PPE.

The plan will also focus on several preventative measures within the company and community in collaboration with local government and provincial structures. Measures that are being rolled out include hand washing, distribution of hand sanitisers to employees, decontamination of employee conveyances and education of the workforce.

Sibanye-Stillwater health services provided strong leadership in the three provinces in which we operate:

- In the Bojanala district of North West province, all mining houses and medical aid schemes participate in the national Masoyise iTB initiative, which oversees TB contact tracing. Sibanye-Stillwater also participates in the Rustenburg Health Forum which coordinates health care resourcing and projects in the region. Sibanye-Stillwater has committed resources to building a forensic mortuary in Brits, a community health centre in Marikana and an old age home in Majaekeng
- In the Lejweleputswa district of the Free State, we worked in partnership with the MHSC and the Department of Health on the 2019 World Aids Day
- In the West Rand district of Gauteng, we work on community TB contact tracing through the Masoyise iTB initiative, which ensures that health care workers are trained, and close contacts are screened for TB

In aligning with the UNAIDS 90-90-90 targets, Sibanye-Stillwater continues to encourage employees to test annually. In addition to introducing the newer testing technologies of HIV self-testing to our employees, we will further prevent new infections by continuing to encourage employees to seek medical attention for pre exposure prophylaxis (PREP) and post exposure prophylaxis (PEP). Following the success and advocacy for HIV self-testing in Sibanye, The Mine Health and Safety Council (MHSC) has issued guidelines in early 2020 for the implementation of HIV self-testing in the mining industry as well as the strengthening of HCT (HIV counselling and testing).



Contraceptives are available at our SA medical centres

# HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

## SOCIO-ECONOMIC FACTORS AFFECTING HEALTH

The social determinants of health and well-being such as smoking, alcohol consumption and lack of exercise, contribute significantly to the disease burden. Other behaviours include the sharing of medication and non-adherence to prescribed medication, stress and anxiety due to unhealthy relationships and financial hardships, which in turn, lead to excessive drinking, smoking and multiple partners. Our policy on the living out allowance, particularly in terms of its impact on informal settlements, is being reviewed. Social workers deployed at each operation assist employees with complex issues and refer employees into formalised networks for assistance.

The drug and alcohol awareness programme at our SA operations conducted 658,953 alcohol breathalyser tests in 2019 and aims to promote responsible alcohol consumption. In addition, 11,649 multi drug tests were conducted at the occupational health centres. Employees found to be non-negative for prohibited substances are referred into a formalised rehabilitation programme.

In recognition of the need to get employees active and lead healthier lifestyles, Sibanye-Stillwater has launched a mobile application – myWellness – for employees. The application will enable employees to register for fitness and weight loss programmes and to track progress. In addition, Sibanye-Stillwater will be able to run Group-wide challenges as well as monitor patients in the high-performance centres.

Sibanye-Stillwater has a range of programmes for employees around indebtedness and creating financial independence. At the SA operations, our employee indebtedness programme, CARE for iMali, designed to address some of these issues, has been well received. Indebtedness and creating financial independence are particularly pertinent at the SA gold operations, given the length of the strike that took place in Q4 2018 and the beginning of Q1 2019. Marikana will be integrated into our financial programme, effective 2020.

See the fact sheet: *CARE for iMali* at [www.sibanyestillwater.com](http://www.sibanyestillwater.com)

In the US PGM operations, our wellness programme, managed by a specialist service provider, pays attention to employee wellness at home and in the workplace, including the Financial Finesse programme in which certified financial planners provide solutions to employees in one-on-one or classroom-based settings.

## FUTURE FOCUS – HEALTH CARE

### US PGM OPERATIONS

As part of the operations' new employee health benefit plan, a team of employees, consultants and health care professionals will monitor and evaluate the performance of the two hospital systems in south-central Montana, and will recommend actions to leaders accordingly, based on the performance of the hospitals and the new plan, and thus empower decisions that will have a positive impact on the health of our employees and their families.

### SA OPERATIONS

Our SA operations are working to ensure that, by 2021, all employees have health insurance, that the scope of services is equitable, that health care is accessible, and that employees are protected financially. Long-term relationships with funders and communities will form the basis of business dealings aimed at measurable health care outcomes.

Over the next five years, we will endeavour to extend universal health care coverage to the families and dependants of employees. We believe that we can achieve this by leveraging cost efficiencies and effective health care within the existing system.

## OCCUPATIONAL HYGIENE

### HEAT-RELATED ILLNESS

Standards and procedures regarding thermal stress, including safe declaration and withdrawal temperature limits (in terms of sections 22 and 23 of the MHSA) are emphasised to all SA gold and PGM employees. Additional action undertaken included promoting awareness of heat-related disorders and retraining of all safety representatives, team leaders, artisans, miners, foremen and shift bosses about monitoring workplace temperatures. The on-mine visitors' procedure, overtime standard and thermal stress threshold were enhanced.

The ensuing revitalised awareness, along with engineering controls, meant that the number of exposures to temperatures above the action level of 31 degrees Celsius wet bulb drastically reduced. Temperature is now included in the Rules of Life, which instruct employees to withdraw if the temperature is at or exceeds 31 degrees.



Health related posters are visible within the operations

## UNDERGROUND VENTILATION AND REFRIGERATION

Our underground ventilation and refrigeration systems are reviewed annually against planned production targets to enable safe and productive work. Environmental controls are designed to ensure that underground temperatures remain within design benchmarks. The annual review includes:

- macro-ventilation distribution per shaft and ventilation districts to ensure availability of the required volume of air in each workplace at an acceptable intake temperature
- refrigeration availability and distribution per shaft in order to optimise the effectiveness and positional efficiency of available cooling

## RADIATION EXPOSURE

At our SA operations we comply with the radiation exposure conditions in our certificate of registration with the National Nuclear Regulator by maintaining employee exposure to ionising radiation at less than 20 millisieverts (mSv) per annum. The SA operations comply with the mandatory radiation exposure levels.

Radiation levels are monitored so that employees are not exposed to this health risk.

In the US, under management of a radiation safety officer, the processing facilities use nuclear gauges to measure density and monitor vessel levels. The source is then regulated by the Nuclear Regulatory Commission and a radiation safety programme.

## NOISE-INDUCED HEARING LOSS

Enhanced systems have led to reporting of more cases of noise-induced hearing loss (NIHL) cases as we redouble our efforts to reduce hearing loss  (see table on page 181 for the number of cases reported to date). The diagnosis of NIHL is made on assessment of the percentage hearing loss from baseline audiograms, with NIHL defined as a shift in excess of 10% that has developed over a prolonged period after repeated exposure to noise levels exceeding 85dB(A).

At our SA operations, employees' exposure to noise is monitored in terms of the Mandatory Code of Practice on Noise, issued by the Department of Mineral Resources and Energy. The Minerals Council South Africa supports this process by sourcing leading practices through the Mining Industry Occupational Safety and Health (MOSH) initiatives.

Investigations are ongoing to mitigate personal noise exposure for employees, including engineered solutions (such as silencers on rock drills and visible warning signs in relevant areas) in tandem with personalised hearing protection devices for all employees. Moulded hearing protection has been introduced at the SA gold operations for the three most exposed groups of employees – rock drill operators, winch drives and loader and loco drivers – who are exposed to noise above 85dB(A). Discussions will be initiated with the unions, as part of the Minerals Council MOSH leading practice adoption process, ahead of the devices being implemented from early 2020. Rockdrill noise has been reduced to below 107 dB(A).

The decrease in the NIHL rate per 1,000 employees at our SA PGM operations in 2019 to 4.95 (2018: 7.14) demonstrates the relative effectiveness of the hearing conservation programme put in place at the Kroondal operation, which will be extended to the Rustenburg operation during the first quarter in 2020. In this programme,



Water sprays in SA underground reduce dust exposure

employees who experience temporary hearing loss through noise exposure are brought for surveillance. The overall absolute increase in the number of NIHL cases is due to enhanced systems and the incorporation of the Marikana operations as from June 2019.

Personal noise exposures are routinely monitored within the US operations in terms of a dedicated hearing conservation programme, which provides training on the effects of noise as well as personal protective equipment and annual audiograms to detect NIHL. Zero elevated exposures were recorded in 2019.

The Mine Health and Safety Council (MHSC) milestone for noise reduction, ensuring all process noise (including machinery) is below 107dB(A) by 2024, can be achieved at Sibanye-Stillwater by ensuring 100% availability and effectiveness of installed noise control equipment (such as inline fan silencers) and practices (such as demarcating noise zones for hearing protection). We are also involved in the developing the MOSH Buy Quiet policy, which commits us to procuring only equipment and machinery that complies with specific noise-emission requirements. This policy will be implemented when published by the Minerals Council.

## DUST MANAGEMENT

In South Africa, where exposure to silica dust has historically been a significant factor causing occupational health issues, specifically at the SA gold operations, plans are in place to achieve the MHSC milestone for silica dust exposure to be below 0.05mg/m<sup>3</sup> for 95% of all silica dust measurements by 2024. A step-down approach has been implemented since 2014 to achieve an annual improvement of 20% every year. This is achieved by ensuring 100% availability and effectiveness of respirable installed dust control equipment (such as tip filters) and practices (such as watering down).

At our SA operations, employees' exposure to airborne pollutants (including silica dust) is monitored in line with the Mandatory Code of Practice for an Occupational Health Programme (Occupational Hygiene and Medical Surveillance) on Personal Exposure to Airborne Pollutants of the Department of Mineral Resources and Energy.

The Minerals Council supports this process by continuously monitoring leading practices through MOSH initiatives.

# HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

Silica dust exposure at the SA gold operations regressed during 2019, mainly a result of underground areas not being maintained and becoming excessively dry as a result of the prolonged five months industrial action ending in April 2019, after which build-up took until August 2019 for some working places. Action has been taken to improve awareness through poster campaigns on silicosis and to develop and track leading indicators that will mitigate dust load in the ambient air.

One of the new leading practices industry experts have identified is the continuous real-time monitoring of airborne pollutants. Real-time dust monitors were introduced in 2018 to locate sources of dust and as an additional control measure and these have further reduced overall dust load and silica exposure levels. Critical controls for dust, noise and diesel particulate matter have been implemented.

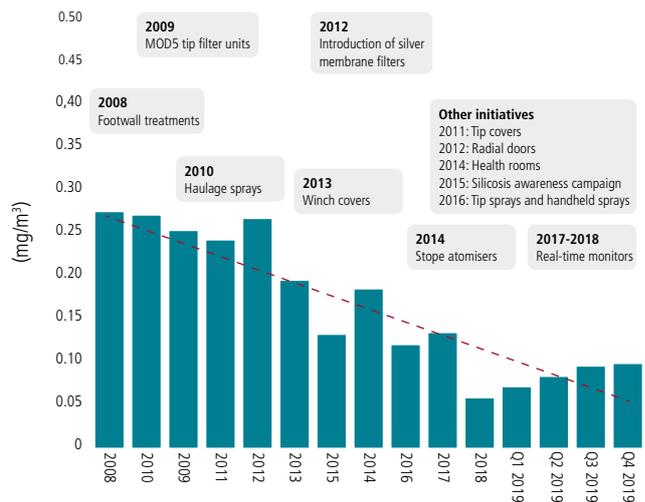
To date, 43 of a planned 50 real time dust monitors have been installed and commissioned. Some real time dust monitors have been installed around shaft areas and have assisted in identifying activities that generate dust, and control measures have been implemented. The data from these real time dust monitors is collated automatically and daily reports are generated and distributed from Qlikview.

At our SA PGM operations, dust exposure is relatively low (and PGM ore silica content is negligibly low and virtually undetectable in contrast to that of our SA gold operations) but reducing nuisance dust on surface, particularly blown off tailings facilities and from haul roads, is an ongoing focus area. Actions have been implemented to mitigate dust-related issues, which include the development of a five-year dust risk reduction plan, stockpile and haul road dust mitigation and wind shear modelling on the tailings storage facilities.

At our US PGM operations, potential airborne hazards are monitored, and pulmonary function of employees and contractors is tested annually at all three properties. Monitoring results indicate the effectiveness of workplace engineering and administrative controls. Where controls are not effective in reducing exposure, specific action plans are implemented. In addition to routine monitoring by employees and the State of Montana, independent industrial hygiene consultants evaluate exposures at the Metallurgical Complex. All results were under exposure limits in 2019.

The analytical laboratory in our US PGM operations does not fall within the Occupational Safety and Health Administration's regulation for lead exposure but has voluntarily implemented controls and monitoring to ensure employees are not exposed to lead.

SA gold operations: average dust load on filter (mg/m<sup>3</sup>)



Similar trends are found in all mining companies with monthly or annual increases or decreases. The overall annual trend should indicate improvements in line with MHSC milestones until absolute consistency is achieved in maintenance and use of interventions and dust control practices.

“One of the new leading practices industry experts have identified is the continuous real-time monitoring of air borne pollutants.”

## OCCUPATIONAL LUNG DISEASE

In November 2014, Sibanye-Stillwater, Anglo American Limited, AngloGold Ashanti Limited, Gold Fields Limited, Harmony Gold Limited and African Rainbow Minerals Limited formed an occupational lung disease (OLD) industry working group to address issues relating to compensation for OLD in the gold mining industry of South Africa.

As part of the working group, Sibanye-Stillwater has been involved in tracking and tracing employees to settle claims relating to silicosis. We have also collaborated with financial institutions and the Mineworkers Provident Fund in distributing unclaimed pension funds. For more information on the working group and its efforts, see [www.oldcollab.co.za](http://www.oldcollab.co.za)

In May 2016, a class-action suit, filed to obtain compensation for South African gold miners affected by silicosis or TB, was approved by the High Court in Johannesburg. Six of the largest mining companies decided to work together with lawyers for the miners and come to a settlement agreement out of court. Parties finally reached an agreement in May 2018. In an historic judgment, the court approved this agreement on July 26 2019.

The Tshiamiso Trust has been tasked with locating, verifying, medically screening and paying out thousands of miners across southern Africa. The working group has developed an industry database to facilitate the administration of queries and claims submitted to the Tshiamiso Trust. The database has passed a rigorous audit and final updates have been completed.

The silicosis and TB class action settlement 90 day opt out period ended on 24 November 2019. The opt out submission underwent an independent audit and three class members chose to opt out. Since the agreement is now unconditional, the Tshiamiso Trust was registered on 28 November 2019 and the appointment of trustees is underway.

For more information, visit [www.silicosissettlement.co.za](http://www.silicosissettlement.co.za)

### SA operations: new and resubmitted cases of occupational lung diseases

	2019	2018	2017
<b>Silicosis</b>	<b>131</b>	165	261
Gold	71	59	193
PGM*	60	106	68
<b>Chronic obstructive airways disease</b>	<b>68</b>	70	50
Gold	29	29	37
PGM*	39	41	13
<b>Cardiorespiratory TB</b>	<b>491</b>	480	570
Gold	221	325	422
PGM*	270	155	148
<b>Noise-Induced Hearing Loss</b>	<b>355</b>	243	193
Gold	166	76	93
PGM*	189	167	100

\*Includes seven months of Marikana operations since acquisition in June 2019

### Cases and claims: Medical Bureau for Occupational Diseases and Compensation Commissioner for Occupational Diseases

	2019	2018	2017
Cases assessed by Medical Bureau for Occupational Diseases	12,670	9,854	14,732
Claims processed by Compensation Commissioner for Occupational Diseases	7,388	10,575	8,727
Total paid to beneficiaries (R million)	198	212	250

## HEALTH AND WELL-BEING AND OCCUPATIONAL HYGIENE CONTINUED

### DIESEL PARTICULATE MATTER CONTROL

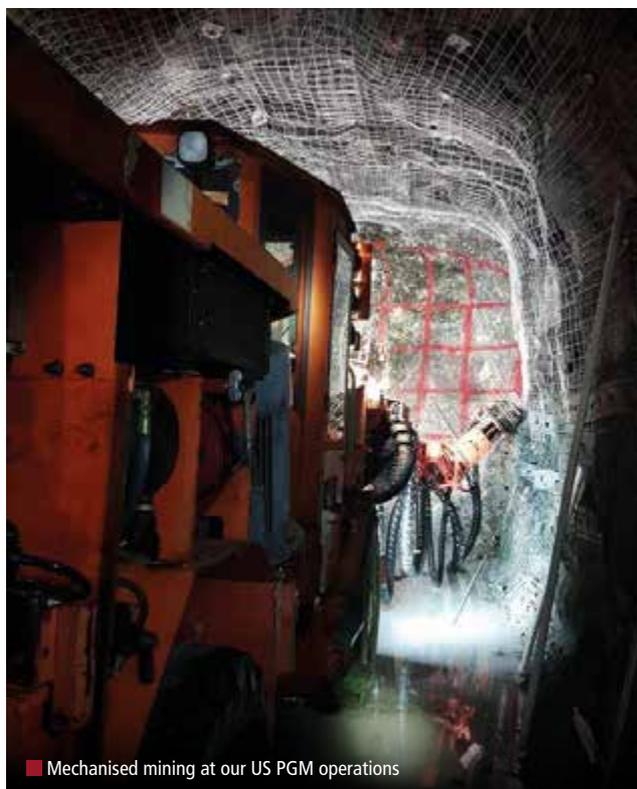
Among the airborne pollutants that may compromise the health of employees is diesel particulate matter (DPM), which can lead to chronic obstructive airways disease (characterised by chronically poor airflow, resulting in shortness of breath, coughing and sputum production) due to long-term exposure. Diesel exhaust emissions (including DPM) have been declared human carcinogens (cancer-causing agents).

Across the Group, mitigation measures include increasing dilution ventilation and equipment maintenance to reduce employees' exposure. PPE is also provided to further reduce personal exposure.

Routine internal sampling is conducted at the US PGM operations, with a requirement for diesel particulate matter to be below 176 micrograms per cubic metre. When that is exceeded, we conduct internal communication about the reading, communicate with employees and put in place a series of corrective actions, which includes respirator requirements. Once they are complete, we resample and once we have a level below the required level, we can return to normal operation.

In addition to internal monitoring, mine operations periodically work with the Federal Department of Labor Mine Safety and Health Administration (MSHA) Technical Support to evaluate ventilation controls. In September 2019, we incurred three violations (104 (d) (2) Orders from MSHA) relating to levels of diesel particulate matter at Blitz. The process to have these orders terminated was carried out in steps, with various ventilation improvements being made and then testing being conducted for DPM levels after each improvement, with limited work activities taking place in the area. Production activities were reintroduced first and after two passed tests, we requested development activities be included which also passed twice. Early in March 2020, diamond drill activities were added to this area for testing which started on 11 March, resulting in full production recommencing by the end of March 2020 depending on MSHA testing and approvals.

At the SA operations, there is currently no legislated occupational exposure limit (OEL) but our internal control limit for exposure to DPM is to maintain employee exposure at 0.16mg/m<sup>3</sup> (measured as total carbon). In 2019, a total of 1,081 DPM personal exposure samples were taken at the SA gold operations – 131 samples (12.12%) were above the Sibanye-Stillwater target. Of the 294 DPM personal exposure samples taken at the SA PGM operations in 2019, 169 samples (57.5%) exceeded the Sibanye-Stillwater internal target. Investigations into exposures above limit are conducted regularly to establish the root cause and to prevent recurrence. From 2020, all re-builds and new machines at our SA PGM operations will be fitted with DPM filters that will reduce DPM by approximately 30%.



■ Mechanised mining at our US PGM operations

### FUTURE FOCUS – OCCUPATIONAL HYGIENE

#### US PGM OPERATIONS

The US PGM operations will continue to monitor industrial hygiene at all operations. Each mine has dedicated industrial hygienist professionals and the Metallurgical Complex will continue to utilise contractors on a quarterly basis. Ventilation upgrades continue at both sites with the Stillwater operation adding a second ventilation engineer. A continued emphasis will be placed on reduced emissions provided by tier 4 and 5 engines. Battery operated equipment also continues to be evaluated for feasibility.

#### SA OPERATIONS

The SA operations will continue to focus on reducing exposure to noise. At the SA gold operations moulded hearing protection will be introduced utilising the Minerals Council MOSH leading practice adoption process.

After the regression in the silica dust exposure levels in the gold operations post the prolonged strike last year, further work is required to reduce dust exposure levels.

An additional focus for 2020 will be the reduction of exposure to DPM, especially at the SA PGM operations.