

# The COVID-19 vaccine roll-out in the mining sector

**Thuthula Balfour:** Head of health, Minerals Council South Africa  
 e-mail: Tbalfour@mineralscouncil.org.za

## BACKGROUND

South Africa is the country that is most affected by the COVID-19 pandemic on the continent, having recorded 1 470 516 cases and 45 092 deaths by 6 February 2021. This accounts for 40% of cases and 48.6% of deaths on the African continent.<sup>1</sup> The country, however, took time to secure any bilateral agreements with vaccine companies. By September 2020, wealthy nations had secured 2 billion doses of COVID-19 vaccines through advanced purchase agreements (APAs), which are legally-binding bilateral agreements between countries and companies.<sup>2</sup> Although the country delayed getting into bilateral agreements with the vaccine producers, it has managed to secure a supply of vaccines.

The availability of the vaccines does not translate to vaccination, and this article explores the preparedness of the South African mining industry to participate in the roll-out of the COVID-19 vaccine.

## RATIONALE FOR A VACCINE FOR COVID-19

SARS-CoV-2, the virus that causes COVID-19, was isolated early in January 2020, but it has reverberated around the world, leading to a need to find a vaccine if its path of destruction is to be stopped. The disease has led to much morbidity and mortality, major disruptions to economies, and second waves that have been more severe than the first waves experienced in the northern hemisphere winter in January to March 2020. South Africa was no exception; average weekly cases during the peak of the second wave in January 2021 were higher than those reached during the peak of the first wave in July 2020.<sup>3</sup>

By early February 2021, the pandemic had led to 106 million cases and 2.3 million deaths around the world. This is the largest outbreak of a rapidly transmissible respiratory viral infection since the biggest influenza pandemic in 1918–1919, which killed an estimated 50 million people worldwide. To provide context, influenza now kills 389 000 people a year<sup>4</sup> and tuberculosis killed 1.4 million people in 2019.<sup>5</sup>

It is estimated that 40–60 million people will be pushed into extreme poverty because of the economic shocks from COVID-19,

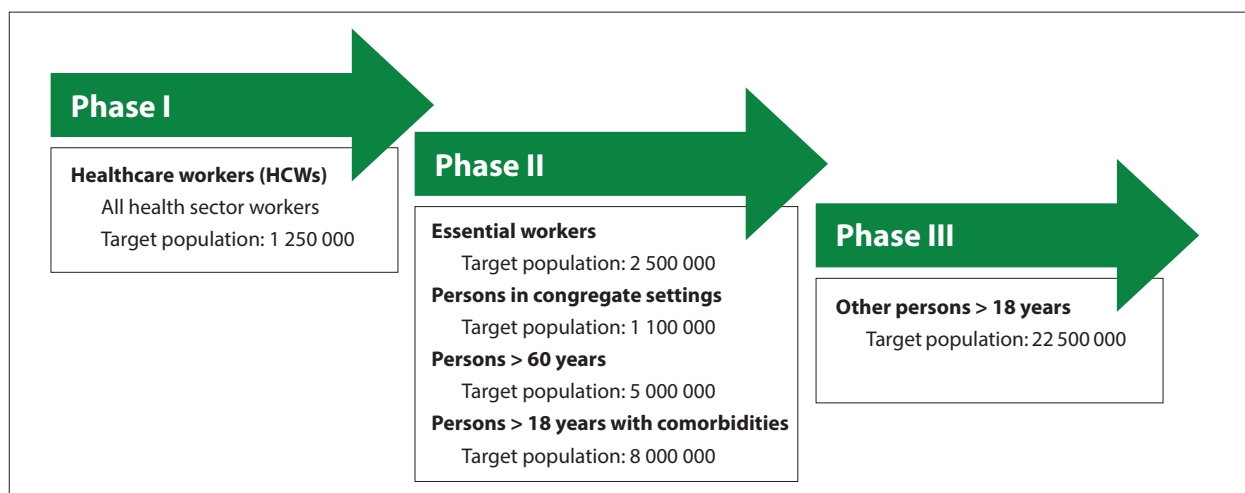
and that about 1.6 billion informal workers lost 60% of their income, with little to no savings and no access to social protection.<sup>6</sup> Several countries, including South Africa, have had to institute lockdowns and severely restrict economic activity in many sectors, as well as control movement of people.

Vaccination and achieving herd immunity are seen as a viable method of getting back to normal life and economic activity.

## SOUTH AFRICAN VACCINE ROLL-OUT PLAN

Due to global shortages of the COVID-19 vaccine, all vaccine manufacturers are dealing with governments only through bilateral agreements. This has meant that the private sector cannot procure its own stocks of vaccine. The South African Government has formed a collaboration with Business Unity South Africa (BUSA) on how business can play a significant role in ensuring that around 67% of the South African population is vaccinated by the end of 2021. Government will be the sole procurer for the vaccine, and the private sector will assist in ensuring vaccination. The vaccination process has been phased, as indicated in Figure 1.

Compared to other high- and middle-income countries, South Africa was late in securing vaccine stocks. The first lot of vaccines comprised 1.5 million doses of the AstraZeneca vaccine secured through the Serum Institute in India. The first 1 million doses arrived in South Africa on 1 February 2021. Through the COVAX initiative, driven by the World Health Organization (WHO) to ensure access to the vaccine for lower-income countries, the country expects another batch of vaccines by the second quarter of 2021, to cover 10% of the population.<sup>7</sup> The South African Government plans to purchase further vaccine doses from other pharmaceutical companies to cover 67% of the population by the end of 2021. The exact vaccines used in the roll-out will be highly influenced by their efficacy against the South African variant 501Y.V2. Many of the vaccines are undergoing tests specific to the variant.



**Figure 1. Phased approach to vaccination in South Africa** (source: National Department of Health, 7 January 2021)

Both public and private providers will play a part in vaccinating the population. Medical aid companies will pay for the vaccination of their approximately 7 million members and dependents, and have committed to pay for 7 million other non-insured members of the public.<sup>8</sup> The Council for Medical Schemes has changed regulations to include the COVID-19 vaccine under prescribed minimum benefits. The remainder of the private sector will contribute through permutations that include purchasing vaccines for their employees who are not insured, vaccinating their employees, vaccinating dependents and community members, and contributing to the Solidarity Fund or in kind.

The vaccination programme will rely on support from the Electronic Vaccine Data System, which will manage the accreditation of facilities, supply of vaccines, pre-booking, and recording of the vaccines administered.

### COVID-19 IN THE MINING INDUSTRY

The impact of COVID-19 on the mining sector mirrored that of South Africa. By 5 February 2021, the sector had recorded 28 198 cases with 307 deaths among a population of 382 928 employees that was screened on a daily basis.<sup>9</sup> The trajectory of the epidemic clearly illustrates the second wave in January 2021, as seen in Figure 2.

Mining companies endeavour to implement the measures for combatting and controlling SARS-CoV-2 as set out in the Department of Mineral Resources and Energy's Guidelines for a mandatory Code of Practice on the Mitigation and Management of COVID-19 Outbreak. This starts with health promotion through education of employees. The preventive measures are:

- wearing of face masks, hygiene (hand washing, sanitisers), and social distancing, i.e. non-pharmaceutical interventions (NPIs);
- adequate ventilation;
- screening and testing; and
- quarantine.

Treatment for the disease includes isolation and medication. Despite these measures, as seen in Figure 2, the peak in daily cases seen in January 2021 was higher than that seen in July 2020, underscoring the need for the implementation of other measures to control the disease, such as vaccination.

### MINING INDUSTRY VACCINE ROLL-OUT PLAN

The South African mining industry is an integral part of the response by business in partnering with government on the vaccine roll-out. Similar to South Africa, the industry has approved an approach on prioritisation of individuals for vaccination. Other preparatory measures include the registration of health workers, which will be followed by all other employees; the registration of vaccination sites; and general readiness for the logistics of implementing a vaccination programme.

#### Prioritisation for vaccination

Companies have identified risk-ranked employees for vaccination (Table 1).

#### Preparedness

The COVID-19 vaccination campaign is a major undertaking for the country and the mining industry. A number of steps need to be in place for it to be successful, including:

1. provision of information and education to employees on the COVID-19 vaccine. This should be at company, Minerals Council, and Mine Health and Safety Council (MHSC) levels. Focus group discussions at all these levels might be required to inform employees about the facts regarding the vaccine and to dispel some of the prevalent myths about the vaccine;
2. education about informed consent for vaccination and ultimately securing consent from employees;
3. ensuring that adequate staff will be available for administration of the vaccine;

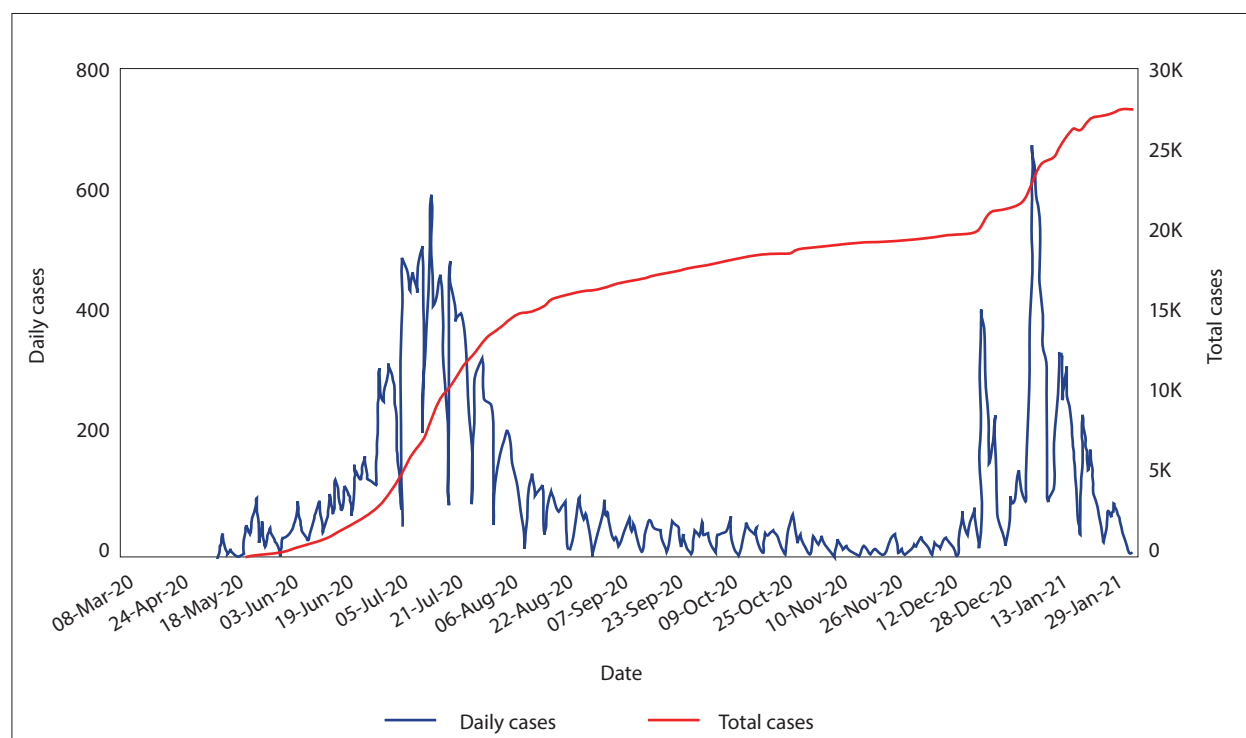


Figure 2. Daily and total cases of COVID-19 diagnosed, 2020–2021 (source: Minerals Council South Africa, 2021)

**Table 1. Summary of the mining companies' prioritisation framework**

Priority	Reason
Healthcare workers (HCWs)	HCWs are prioritised above all sections of the population as they are exposed to COVID-19 in the course of their work.
Working in gold sector	Research by the Minerals Council showed that workers in the gold sector had a mortality that was 2–2.7 times higher than that of the industry.
Age > 45 years; previous history of tuberculosis; impaired lung function	Research also showed that age > 45 years and previous history of tuberculosis or impaired lung function increased the risk of mortality.
Comorbidities as defined by the National Department of Health (NDOH)	The NDOH has a defined list of conditions that increase the risk of mortality from COVID-19.
Occupations	The top 30 occupations with highest numbers of personnel that contract COVID-19 have been identified by the Minerals Council. The limitation of this analysis is the lack of denominators, and thus the rate calculation.

4. procurement of supplies for administering the vaccine to employees (and possibly dependents and communities);
5. categorising employees into those on medical aid and those who are not insured;
6. categorisation of health workers into four groups:
  - Phase 1a: all patient-facing workers in hospitals and emergency medical services workers
  - Phase 1b: all patient-facing workers in other healthcare facilities/establishments
  - Phase 1c: all patient-facing workers working at community level
  - Phase 1d: non-patient-facing workers in the health sector;
7. risk ranking and categorisation of all employees according to priority for vaccination;
8. readiness to report on vaccines administered, ensuring second doses are administered and reported on, and monitoring adverse side effects. This requires linking to the EVDS; and
9. consultations with district health officials on what coordination and support will be required to ensure access to vaccines and to vaccinate peri-mining communities.

It is not yet resolved how pregnant women and children younger than 16 years will be handled. Thus far, these groups are being excluded in most vaccination programmes.

## CONCLUSION

The world is facing an unprecedented pandemic with devastating social and economic consequences. Vaccination offers a tool to break the cycle of transmission of SARS-CoV-2 and should be supported and utilised to gain maximum benefit. Vaccines are, however, not a panacea for breaking the back of the pandemic. Uncertainties about the effectiveness of the vaccines against the South African variant 501Y.V2 abound. The approach by the industry is that the variants could not have been foreseen and, if the vaccines are effective against severe disease, as most are, the vaccine programme is still well worth it.

The availability of vaccines will not mean that we drop the NPIs against the disease. For some time to come, it will be safer for individuals to continue to wear masks, wash hands, and practise social distancing. This will likely be the new norm for some years to come.

## REFERENCES

1. Worldometer. Reported cases and deaths by country or territory, 6 Feb 2021. Available from: <https://www.worldometers.info/coronavirus/#countries> (accessed 7 Feb 2021).
2. Phelan AL, Eccleston-Turner M, Rourke M, Maleche A, Wang C. Legal agreements: barriers and enablers to global equitable COVID-19 vaccine access. *Lancet*. 2020; 396(10254):P800-P802. Available from: <https://www.thelancet.com/action/showPdf?pii=S0140-6736%2820%2931873-0> (accessed 7 Feb 2021).
3. National Institute for Communicable Diseases. COVID-19 Weekly Epidemiological Brief, Week 3, 2021. Available from: <https://www.nicd.ac.za/wp-content/uploads/2021/01/COVID-19-Weekly-Epidemiology-Brief-week-3-2021.pdf> (accessed 7 Feb 2021).
4. Paget J, Spreeuwenberg P, Charu V, Taylor RJ, Iuliano AD, Bresee J, et al. Global mortality associated with seasonal influenza epidemics: new burden estimates and predictors from the GLaMOR Project. *J Glob Health*. 2019; 9(2): 020421. doi: 10.7189/jogh.09.020421.
5. World Health Organization. Tuberculosis. Geneva: WHO; 2020. Available from: <https://www.who.int/news-room/fact-sheets/detail/tuberculosis> (accessed 7 Feb 2021).
6. United Nations. Brief #2: Putting the UN Framework for Socio-economic Response to COVID-19 into Action: Insights. UN; 2020. Available from: <https://reliefweb.int/report/world/brief-2-putting-un-framework-socio-economic-response-covid-19-action-insights-june-2020> (accessed 7 Feb 2021).
7. South African Government. COVID-19/Novel Coronavirus. Vaccine; 2021. Available from <https://www.gov.za/covid-19/vaccine/> (accessed 7 Feb 2021).
8. Daniel L. Medical aids could fund half SA's vaccines for Covid-19 – but one key number is still missing. *Business Insider*; 2021 Jan 29. Available from: <https://www.businessinsider.co.za/medical-aids-could-fund-half-of-sas-covid-vaccine-rollout-if-govt-gives-a-good-deal-on-doses-2021-1> (accessed 7 Feb 2021).
9. Minerals Council South Africa. COVID-19. Daily Dashboard: 05 February 2021. Available from: <https://www.mineralscouncil.org.za/minerals-council-position-on-covid-19> (accessed 7 Feb 2021).



ASSOCIATION OF MINE FINANCIAL & ADMINISTRATIVE MANAGERS

## "THE SECOND COVID-19 WAVE AND INDUSTRY'S RESPONSE"

# WEBINAR

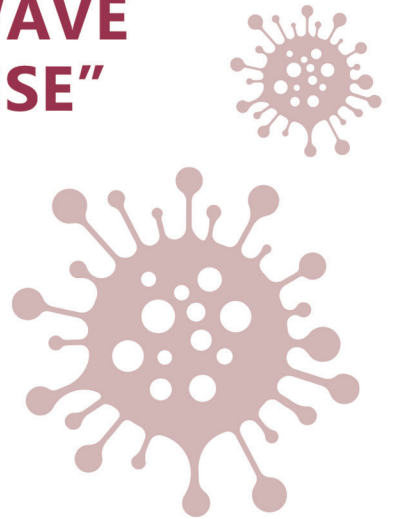
25 FEBRUARY 2021

**TIME**

09:00 - 11:00

**MICROSOFT TEAMS**

Upon RSVP of attendance, a link to the event will be sent to each member via a meeting request



Dr. T Balfour is a qualified medical doctor and public health medicine specialist with an MBA. She has a wealth of management experience that spans 20 years, 17 of which have been at a strategic level. She has gained experience in varied settings across the public and private sectors. Her key strengths lie in strategic leadership and analysis, advocacy and lobbying and stakeholder management.

Dr. T Balfour is the Head of the Health Department, at the Minerals Council South Africa. In addition she has served on several boards including the Medical University of Southern Africa, Department of Labour's Compensation Board and Department of Mineral Resource's Mine Health and Safety Committee. She currently serves on the board of an NGO, Vuyani Dance Theatre.

Dr. T Balfour is also a patron for Women in Mining South Africa (WIMSA).

## RSVP before 23 February 2021

**Mbalenhle Buthelezi**

 (+27) 11 568 2054  [mbalenhleb@mpas.org.za](mailto:mbalenhleb@mpas.org.za)  @AMFAMofficial