



Covid vaccines to land in South Africa on Monday – we break down what will happen once they arrive

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One million Covid-19 vaccines will land at OR Tambo on Monday 1 February. The jabs will be reserved for health workers. But how will they get to the workers and what will happen to the shots once they get here? We break it down for you.

The one million Covishield vaccine doses South Africa is getting are produced under licence from AstraZeneca by the Serum Institute of India. Another 500,000 will arrive later this month.

The jabs are [70% efficacious in preventing Covid-19, research has shown](#), and two shots are required. The second shot needs to be given between four and 12 weeks after the first one – SA’s ministerial advisory committee recommends 12 weeks.

The AstraZeneca jab’s efficacy is lower than that of the Pfizer/BioNTech ([95%](#)) and Moderna ([94.1%](#)) vaccines, but higher than that of the Novavax ([49.4% in South Africa](#)) and [Johnson & Johnson \(57% in South Africa\)](#) vaccines.

But it’s not really possible to compare the efficacy of these vaccines, because some, such as the Pfizer/BioNTech and Moderna jabs, were tested before new, more infectious variants of SARS-CoV-2, the virus that causes Covid-19, started to circulate. Those jabs have since been tested on some of the new variants and the efficacy dropped in some cases, [specifically with the 501Y.V2 variant that was first identified in South Africa](#).

The AstraZeneca jab’s efficacy (70%) is based on the results of trials in the UK and Brazil – [the study also has a South African arm, but those results are still being analysed](#).

This first batch of Covishield vaccine will go to health workers – but even with the additional 500,000 that we’re getting later this month, the jabs wouldn’t cover all of the 1.25 million health workers the government says SA has (they will all need two shots, so, the 1.5 million doses will, at best, cover 750,000 workers).

Receiving the vaccine is entirely voluntary, so the success of the government’s strategy relies on South Africans’ willingness to be vaccinated – for both personal and public benefit.



We asked Morena Makhoana, CEO of Biovac, the company that is managing the logistics for the first phase of our vaccine roll-out, and Ron Whelan, chief commercial officer of Discovery Health and member of the Business for South Africa steering committee that is helping the health department with the programme, to answer 17 questions about what will happen to the vaccine doses once they get here.

1. When will people start receiving vaccinations?

The health minister [announced on January 27](#) that inoculations are likely to begin in mid-February, once all regulatory and quality assurance processes have been completed. The precise timing for “Day 1” is not yet known. Given that the initial batch of 1.5 million vaccines (those arriving on Monday and the second batch that will arrive later in February) is enough to cover 700,000 to 750,000 people with two doses each, the government’s prioritisation is patient-facing healthcare workers as a starting point. Once all those from the “frontline” group who wish to be vaccinated have been reached, support and other healthcare staff, such as cleaners and receptionists working in health facilities, will be eligible.

2. What needs to happen before vaccines get into people’s arms?

The short version is: A multi-step process consisting of customs clearance, transportation to cold-storage warehouses, vaccine “quarantine” in parallel with independent laboratory verification and quality testing, and finally, vaccine shipments to points of use. This will take between one and two weeks.

The long version: First, the vaccines’ customs clearance at OR Tambo is expected to be immediate, on Monday (health department paperwork confirms the vaccines’ approval by the South African Health Products Regulatory Authority, or Sahpra). Next, samples get transported to the National Control Laboratory (NCL) for testing (we explain what type of tests in the answer to question three) in Bloemfontein, by cold-storage truck. This will take one day (by Tuesday). The NCL’s tests may take up to a week. While “everything is going to be fast-tracked”, Makhoana says, the testing process and duration can differ from vaccine to vaccine so the timing of this step is not totally predictable. The testing is likely to be completed in [between 10 and 14 days, the health minister said in January](#).

In the meantime, while testing is under way at the NCL, the entire batch of vaccine will be “quarantined” at Biovac facilities in Johannesburg to ensure that it is not released before regulatory procedures have been completed. This form of quarantine involves holding the stocks in secure, temperature-controlled facilities and labelling the boxes with designated orange stickers so that people responsible for holding and moving stock within Biovac know that the jabs are not ready for distribution and are not to be touched.

“Once we get clearance from the NCL that means we can fulfil orders,” Makhoana says, and distribution according to specifications from the health department can then begin.



“By the time the NCL gives us the go-ahead, we’ll have a comprehensive list [from the health department] of when to deliver and where to deliver – that list is being updated as we speak.”

3. Why do the vaccines need to be tested in South Africa if they’ve already been approved for use?

All medicines, including vaccines, that arrive in South Africa must be tested for verification (that they are what the label says they are) and for quality assurance, according to rules set by Sahpra. Samples from the Covishield vaccine shipment will be sent to the NCL in Bloemfontein, which is contracted by Sahpra to do independent testing of all medicines and vaccines. This includes checking that the vaccines’ ingredients and their concentrations are exactly as specified in AstraZeneca/University of Oxford’s original formulation (AstraZeneca’s licensing the Serum Institute of India to produce the vaccine is on the basis of approved “technology transfer”, ie, AstraZeneca gave the Serum Institute their “recipe”).

4. How do people register if they want to be vaccinated – does the registration process differ depending on your “priority” ranking or if you do or don’t have health insurance?

All people who wish to receive a vaccine will register via the electronic vaccine data system – or EVDS – which will be the backbone of the vaccination programme. The EVDS will have its own web-based portal and an app – you won’t need to have a smartphone in order to access the system.

The EVDS works “across the entire system”, explains Whelan, describing it as “effectively a national database of all South Africans categorised according to the government’s vaccine-priority categories for phases one to three”. All healthcare workers – whether public, private, clinical or non-clinical – should register through the EVDS during phase one.

Regardless of whether someone has health insurance or not, people who’d like to get vaccinated must use the EVDS to receive an appointment to be inoculated. (If they are insured, their medical scheme will enable them to register via the medical aid’s website.) The registration information will include the location of their workplace, and the EVDS will assign them to a vaccine centre close to that location and communicate that back to them once that is determined.

5. Once registered, how will people know where and when to go to receive their jabs?

The “vaccinee” who has registered will receive an SMS notification of the date, time and place of their vaccination, as well as a unique vaccination code that they will need to

present, along with their identification document (and medical aid details if they are on a medical aid), at the vaccination appointment. Once the healthcare worker has received their first dose (of two, in the case of Covishield) they will receive a message confirming that they've had the first vaccination and scheduling an appointment for their second dose. After the second dose, they will receive an electronic certificate that confirms that they have been vaccinated.

6. To which facilities will vaccines be delivered?

Once the delivery points have been confirmed – either central points within provinces for onward distribution or specific points of use such as hospitals or pharmacies, depending on the province – Biovac will verify that at each delivery point a specified pharmacist can receive and sign for vaccines. This is a standard practice used for the delivery of children's immunisations. "By signing they are taking accountability for the vaccine from that point," says Makhoana.

7. Which hospitals, pharmacies or private medical practices will serve as "vaccine centres" and which medical practitioners will be authorised to give jabs?

The health department has not yet released details about the number or specific locations of "vaccine centres" and which medical practitioners will be authorised to administer vaccinations. This information is being updated daily by the national and provincial departments of health, Whelan says. What we know so far is that for Phase One (healthcare workers only) the vaccination programme is mainly "work-based", so that healthcare workers in hospital settings will get their jabs there. Others in primary, community healthcare and smaller private facilities will get their vaccinations via an "outreach" programme in the form of mobile vaccination teams and independent healthcare workers at vaccine centres such as community pharmacies.

Whelan says that "extensive work is in progress to assess and decide on accredited sites and provider partners". It is possible that some vaccination sites may be large "vaccine centres", where inoculating a huge number of people is possible in a relatively short space of time (the UK is, for instance, using cathedrals).

In phases two and three, people who don't have jobs will be able to [receive](#) their vaccinations at the health facilities they normally visit for their care. In the case of industries such as mines, employers will be able to arrange for vaccinations on site.

8. How will the jabs get to different parts of the country?

The vaccines will travel in unmarked trucks – either refrigerated or non-refrigerated – accompanied by security. Depending on the route and the duration of transportation, Biovac will allocate trucks according to the relative risk of "cold-chain breakage". Most



vaccines, Makhoana says, get transported in validated “shippers” (boxes) “that can maintain temperature over a very long duration”. These boxes also have temperature-logging devices inside, to monitor and record the vials’ temperature during transportation.

9. How will the government let us know when and where to access jobs and when the EVDS will be live?

[At last week’s briefing](#), the health department said “there will be extensive communication” via social media, employers, labour unions and professional organisations. An official announcement about when the EVDS will go live has not yet been made.

10. Does it make a difference if you do or do not have health insurance?

No. All South Africans, whether insured or not, will receive a vaccination against Covid-19 if they wish to. Covid jobs are prescribed minimum benefits, which compel medical schemes to pay for both the vaccine (the product) and the administration cost (between R50 and R60, inclusive of VAT) of the jab. The service provider will have to claim the cost directly from medical aids. If you don’t have a medical scheme, you will have two options: The first is to be vaccinated at a public health facility where you would normally receive your medical care. The jab will be free, funded by the state. The second option, which will be available in some locations (to be determined) is to be inoculated at accredited private sector sites, for example a private pharmacy – the government will fund both the shot and the administration cost. “Where those sites are and who will administer vaccinations has not yet been established,” Whelan says.

11. Who is planning, coordinating and managing the vaccine roll-out?

Under health and finance department leadership, the vaccine roll-out process is a collaboration between government and the private sector, with a Business for South Africa steering committee providing support to the government.

12. Who is handling the logistics?

Biovac, a South African government and private-sector vaccine manufacturing partnership, is contracted by the health department to handle the logistics process from the moment the vaccines arrive at OR Tambo airport, up to the point at which they are delivered to pharmacists at each vaccination site. After that point, the health department is responsible for vaccine delivery to public healthcare sites and the private sector has to distribute vaccines to private sites.

13. Where do the vaccines go after the airport?

From the airport, the pallets of vaccines, still in their specially-designed cold-storage boxes, will go to a Biovac cold-storage warehouse in Johannesburg. (Because of security concerns, Biovac is not divulging details of the boxes' sizes, number of vials per box or other physical characteristics.) There they will be placed in a cold-room "receiving area" so that when the vaccine boxes are first opened for the condition of the vials to be checked, they are already at the correct storage temperature of 2-8 degrees Celsius. At this point, the temperature-logging devices that travelled with each box "will tell you how the journey went from a temperature perspective", Makhoana explains.

The boxes will then be divided up for storage in three separate cold rooms, which is standard risk-management practice. Makhoana says: "Of course we have monitoring, backups, generators – all the bells and whistles. Even during load shedding we don't worry too much about the risk from our side."

14. How is the required 2-8-degree Celsius storage temperature maintained?

The vaccine vials are packed in a particular configuration within each box to keep them at the optimal temperature. Each box of vials has a temperature monitoring device that keeps a record of the vaccines' temperature at all times during the trip. A vial contains 10 doses of vaccine (with each dose to be extracted by syringe at the time of vaccination) which makes handling, storage and transportation of the jabs easier and more cost-effective.

15. How does the health department know how many vaccine doses are needed in specific locations?

The EVDS, through which anyone who'd like to be vaccinated must register, will automatically give the health department a picture of how many vaccine doses are needed in different parts of the country, as a function of how many people (frontline healthcare workers in Phase One) have registered for it.

16. Can the public health system cope with vaccinating 40 million people (the health department's target by the end of 2021)?

Where there is a need to augment the public sector capacity, "government will contract private providers based on their location, capacity and other relevant considerations", says a [health department document that was presented during a media briefing](#). These will include private pharmacies, GPs and possibly others, who will receive a R50-R60 fee for each patient vaccinated.

17. How will Biovac ensure vaccines aren't stolen?

Biovac has put security arrangements at its storage facilities, and stringent security will accompany every shipment from Johannesburg to the specific delivery end-points, says Makhoana.

Though Biovac's accountability ends there, Makhoana says, its involvement does not, as anything that happens in the process of vaccinating people, for example possible side effects, or damaged vials, needs to be responded to and fed back to the manufacturer, in this case the Serum Institute of India. **DM/MC**

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