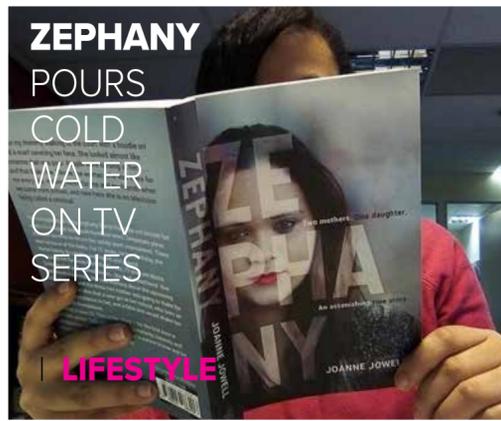


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Level 3 lockdown: Here's what's allowed from June 1 and what isn't.

— FOUNDED 1878, DURBAN, SOUTH AFRICA [IOL.CO.ZA] THURSDAY, MAY 28 2020 —

■ **VENTILATOR**

JESS NICHOLSON
Roving Reporters

AN INVENTOR working day and night in his home garage during lockdown has come up with a cheap ventilator that has won a national competition – and will now be assessed by Denel and other experts for production.

The Makers With Purpose ZA Ventilator Challenge at the weekend named a team led by Durban mechanical engineer Nick Matter as the winner.

Ventilators are essential for treating people seriously ill with Covid-19, but are expensive and difficult to procure.

The competition sought to encourage the design of machines that were easy to use and can be produced in big numbers at low cost.

Matter's team will receive a R5 000 cash prize and their device will be presented to Denel and the University of KwaZulu-Natal for assessment.

Trials have shown great promise and doctors were "delighted" with the device.

An outbreak of Covid-19 at Durban's Wentworth Hospital halted clinical testing on the prototype a few weeks ago, but work was now back on track, said Matter.

He brought together a small team to work on the project. They hope to produce 500 ventilators a week at about R40 000 each.

Dr Jean Pitot, one of the judges of the competition, was impressed with the robustness of the design, the practicality, and its use of widely available components.

Pitot commended the team for the lengths they had gone to in testing their prototype. "As things get worse in the country, and as the numbers really start to rise, we shouldn't underestimate the role that makers and engineers can play in coming up with equipment, not just ventilators and hoods, but personal protective equipment systems and components. That can really make a difference."

Durban anaesthetist Dr Mark Watt said having a basic device to help patients breathe while their bodies fight Covid-19 would be invaluable.

"While both private and government hospitals throughout the country are fairly well equipped with highly sophisticated state-of-the-art ventilators which cost up to R1 million, in a disaster situation, such as a quickly escalating Covid-19 pandemic, we will never have enough. So to give people a chance, we need basic machines, like the device Matter has made, to help people breathe while they try to fight the virus."

Fewer than 5% of people who contract coronavirus end up on ventilators, but in a population of 50 million, this is likely to be a huge number, he said.

At the start of lockdown, Matter, who runs Solmat Consulting Engineers and



NICK Matter with the ventilator he worked on day and night for a month-and-a-half. | LEON LESTRADE African News Agency(ANA).

Local inventor breathes hope into Covid-19 battle

designs industrial processes and building services, began work on a "mandatory mechanical ventilator".

"We all became aware of the worldwide shortage of ventilators, and the awful decisions doctors have had to face once the Covid-19 pandemic hit Europe and the US," Matter said.

Helping him were electrical engineers Graham Gillet and Miles Walker, and fibreglass specialist Mark Lewin, who made the casings.

Matter consulted ICU specialist Dr Hussein Cassimjee, and Watt, who helped him with the specifications. The machine should provide 20 breaths a minute, and be adjustable in air volume to cater for patients of different sizes.

It was decided to provide a simple but reliable emergency ventilator to be used as an emergency ventilator for limited hours. Matter disappeared into the garage, his lockdown workshop, and emerged with the device, the Savent,

after about a month-and-a-half.

Before approaching Professor Mergen Naidoo, chairperson of the Covid-19 Task Team at Wentworth and doctor and academic at the Nelson R Mandela School of Medicine, Matter tried his invention out on himself.

"It feels lovely. It does everything for you, so you really have to relax and just let it go," he said.

Naidoo, in consultation with the Department of Health technical services and Wentworth hospital staff, used a gas analyser to trial the Savent, and Matter reported the doctors were "delighted".

"We did a preliminary evaluation with the health technology unit. The results look promising. The key now would be to use it in an actual human subject and this needs to occur based on patient safety issues being addressed and complying with regulatory permissions. Results will need to be forwarded to the National Ventilator Project and final

decisions need to come from them."

Clarence Cowlen of the Department of Health Technology Services said "the clinicians definitely looked impressed with what was witnessed".

Dr Khanyisa Khoza, of Albert Luthuli hospital, said Matter's ventilator would be useful, particularly in under-resourced rural hospitals and field hospitals. She said it was very frustrating trying to save people's lives, knowing there was equipment that would keep people alive, but having no access to it.

Matter is now negotiating the process of getting the machine certified before rolling the project out.

"Getting accreditation or approval is difficult because the front line teams are so busy. We can't use the Savent until it has been certified," he said.

This is an abridged version of a story first published by Roving Reporters. Read the full story at www.rovingreporters.co.za

■ **DISPUTE**

Unions: schools not safe enough

Education Department admits to gaps in some areas, many schools ready to open

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KWAZULU-NATAL teachers will not return to schools today to prepare to receive matric and Grade 7 pupils from Monday.

A joint statement issued by the SA Democratic Teachers' Union, the National Teachers' Union, the National Professional Teachers' Organisation of SA the Professional Educators' Union and the SA Onderwysersunie, said education in KwaZulu-Natal would only resume when all schools were ready to receive pupils and teachers safely.

The education department said it was aware of "gaps" in some areas, and the unions said they had arrived at their decision after collecting information across the province on the state of affairs in schools.

They insisted that teachers would not return to schools today to prepare to receive pupils on June 1 after finding out that many schools had not received personal protection equipment (PPE) and water tanks.

Accusing the Education Department of not consulting with them, they called for officials to work closely with them so that the department could be advised on a comprehensive plan for the reopening of schools.

The unions have proposed that two to three weeks of uninterrupted work is the amount of time needed to get schools ready to receive pupils and to comply with the Covid-19 regulations.

The Provincial Command Council had moved the return date for teachers and school management teams to today, to ensure that all schools received all the non-negotiable sanitation and protection equipment agreed on by education stakeholders and Basic Education Minister Angie Motshekga.

In order to ensure that schools were conducive to receiving teachers today, the unions had collected information across the province as evidence of "the true, yet disturbing state of affairs in schools".

As a result, they arrived at a collective decision that it was not safe for teachers to return to work.

They said that the information gathered painted a "horribly bleak" picture against the claims made by the department, saying many schools had not received PPE.

"The lives of pupils and teachers remain more important than the need to save the academic year"

Water tanks were delivered to some rural schools but were not installed and not filled with water. In addition, some thermometers delivered were of poor quality, and could not be used as they did not have batteries.

The unions said some schools had not received sanitising and disinfecting materials, some schools had not been cleaned, and grass had not been cut at some schools.

They said this gave them reason to conclude that the department had misinformed them about the state of readiness of schools in the province to receive teachers and pupils.

"There was no audit done into what has been delivered. Some of the districts got more than they expected. There is no uniformity and no explanation about what is given to schools."

"The lives of pupils and teachers remain more important than the need to save the academic year," said the unions in their statement.

Today, Premier Sihle Zikalala and Education MEC Kwazi Mshengu are expected to assess the readiness of schools to receive pupils when schools reopen on Monday, by visiting Sisebenzile High, Lihlithemba Technical High and Buhlebemfundo Primary schools in Ndwedwe.

Following the decision by the unions that teachers would not go back to school as expected today, Education Department spokesperson Muzi Mahlabi said they noted the joint statement by the unions and admitted that the department was aware of "gaps" in some areas.

"We are generally happy with the progress that we have made. It gives us confidence that many of our schools will be ready to operate as from tomorrow (today). We are, however, aware of some of the gaps," he said.

■ **FAITH**

Religious organisations react to unbanning of gatherings

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THE South African Council of Churches (SACC) has warned that churches need to be innovative now more than ever in how they conduct their services.

Their statement comes amid fears that elderly congregants, because of underlying conditions, are the most vulnerable and are susceptible to contracting Covid-19 infections.

Responding to President Cyril Ramaphosa's announcement that the ban on religious gatherings would be lifted, SACC acting general-secretary Bishop Malusi Mpumlwana called on church leaders to tell their followers not to

subject themselves to a risk of infection during services.

Talking to SAfm's Sunrise show yesterday morning, Mpumlwana said the SACC had advised churches to rather "play music, (and) don't sing".

University of Massachusetts Dartmouth immunologist Professor Erin Bromage was quoted on www.11Alive.com saying that a person can infect others through talking, and worse when yelling or singing as "infected respiratory droplets can increase greatly".

Mpumlwana further added: "Elderly people, stay at home... I know that these (elderly people) are the ones who really love to go to church."

He said there were also suggestions

that special services be organised for the elderly.

Mpumlwana said it was important that churches conduct themselves in a disciplined manner, saying there have to be new training methods on how to conduct the services.

"The SACC has a special delegated website for Covid-19 which is called churchinaction.org.za, and through that we are trying to guide and advise," he said.

Meanwhile, the Muslim Judicial Council (SA) has in a statement welcomed Ramaphosa's move.

"The MJC continues to consult with medical professionals on the current developments. The MJC urges the com-

munity to co-operate with their respective masjid (place of worship) and to adhere to the guidelines provided by the government," read the MJC statement.

Controversial Bishop Bheki Ngcobo, who is the chairperson of the God's Church Must Rise movement, said that while he welcomed the opening of the church service, he was concerned by the restrictions that still existed.

"We would love to be made aware of the duration of this limit to 50 members requirement. We are eagerly waiting for when the church will be allowed to operate in full force," said Ngcobo, who was recently convicted and fined for undermining Ramaphosa's Covid-19 restrictions.

