



THIRTY billion rand has been allocated to a special National Disaster Benefit Fund, which will pay Unemployment Insurance Fund benefits for up to three months to qualifying workers whose income has been affected by the coronavirus pandemic. These workers in Durban this week were seeking information on their benefits. | LEON LESTRADE African News Agency (ANA)

# Those who are most at risk

*History shows us who needs the most protection, and where we should focus our efforts*

FOR ALL THREE deadly human coronaviruses, advanced age, being a male, and the presence of other pre-existing medical conditions – including obesity, diabetes and heart disease – are the major factors linked to severe disease and death.

There is concern about the possible impact Covid-19 could have should it spread among the most overcrowded and poorest areas of South Africa.

These areas typically have the highest incidence of immuno-compromised individuals – malnutrition, tuberculosis and HIV are commonly rife in these areas.

Some coronavirus history is required. We currently know of seven coronaviruses that affect humans. Four of these seven human coronaviruses, or hCoVs – known as hCoV-229E, hCoV-NL63, hCoV-OC43 and hCoV-HKU1 – are community-acquired and are among the numerous viruses responsible for the common cold.

These community-acquired coronaviruses have been shown to affect the immuno-compromised and the elderly, resulting in more severe symptoms. Then we know of three more pathogenic coronaviruses.

These are the Severe Acute Respiratory Syndrome coronavirus (Sars-CoV), which caused an outbreak of the disease “severe acute respiratory syndrome” (Sars) in mainland China and Hong Kong in 2003; the Middle East Respiratory Syndrome coronavirus (Mers-CoV) that led to an outbreak of “Middle East Respiratory Syndrome” (Mers) in, among other

## COMMENT



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countries, Saudi Arabia, the United Arab Emirates, and the Republic of Korea in 2012; and now, Severe Acute Respiratory Syndrome Coronavirus (Sars-CoV-2), which causes the outbreak of “Coronavirus disease 2019”, aka Covid-19.

For all three deadly human coronaviruses, advanced age, being a male, and the presence of other pre-existing medical conditions – including obesity, diabetes, heart disease, lung disease, kidney disease – are the major factors linked to severe disease and death.

Research suggests that, with conditions like Covid-19, in a small number of people, the immune system “over-reacts” or overcompensates. This can lead to organ failure and death.

The implications are still not well understood. Could this mean, for instance, that someone with a weaker immune system could be at lower risk of developing severe Covid-19? Sars-CoV and Mers-CoV have never been reported to cause a more severe disease in immunosuppressed patients.

So what does this mean for some-

one with immunodeficiency, such as HIV-Aids, but taking anti-HIV treatment? I know of only one reported case of an HIV-positive person infected with Sars during the 2003 outbreak. This person recovered fully from Sars.

During the same period, another study reported the connection between HIV and Sars. Interestingly, despite contact between the 95 patients confirmed positive for Sars and 19 HIV-positive individuals in a hospital ward, none of the HIV-positive patients became infected with the Sars-CoV.

Also interestingly, six of 28 medical personnel who worked in the ward were infected with the Sars virus. Researchers speculated that the anti-HIV treatment provided some protection against SarsCoV infection. It is too early to tell if we will see the same for Sars-CoV-2, but does this provide us with hope?

With Covid-19, we are beginning to identify those most at risk. One of the pressing questions on people’s lips is why do we see the high numbers of infected and deaths in a developed country such as Italy?

Studies would suggest that the highest fatality rates are among the elderly – some 23% of Italy’s population is aged 65 and older, compared with around 6% in South Africa – and those with pre-existing medical conditions, known as comorbidity. These comorbidities included heart disease, stroke, hypertension, diabetes, dementia and chronic lung disease. A study that came out over the last few days reports that up to 85% of Covid-19

fatalities in Italy were in older patients with multiple comorbidities.

There is another group at risk. Lessons learnt from Sars and Mers show us that this is the world’s healthcare workers. What can we learn from Italy?

Adequate training of medical staff to effectively handle this pandemic, without placing themselves at risk, is crucial. Protective measures, such as gloves and masks, should be mandatory for all medical staff seeing any patient, with or without obvious respiratory symptoms, during this period.

For the elderly, on the other hand, minimising exposure to any respiratory disease threat is essential. In nursing homes, this means that strict hygiene precautions should be implemented and that any residents showing any flu-like symptoms should be quarantined immediately.

Concern over immuno-compromised patients is understandable, but past experiences with Sars and Mers suggests that they are not an at-risk group.

What is clear, however, is that we should be putting in place the means to protect our elderly and those with pre-existing medical conditions. And, critically, our healthcare workers. Our health systems are notoriously frail. Without our healthcare workers, they will be even more so.

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