In November 2019, the first cases of a new disease, later named COVID-19 by the World Health Organisation, were reported by health care workers from Wuhan, China. In December 2019, researchers from Wuhan reported a cluster of pneumonia cases caused by a novel coronavirus, which has since been named SARS-CoV-2. In just 3 months, as of March 20, SARS-CoV-2 transmission has resulted in 245,484 cases of COVID-19 that have been reported in 166 countries worldwide.
While the SARS-CoV-2 virus has demonstrated a propensity to spread rapidly at a community level, the rate at which its spread occurs can be mitigated as seen in Figure 1 where Singapore, South Korea and Vietnam have been able to curtail the spread preventing the rapid exponential growth seen in China and Europe⁴.
Valuable lessons are being learnt from the experiences of each country dealing with the COVID-19 epidemic and some trends are emerging including nine essential lessons on fighting coronavirus from around the world\(^5\).

One of the most significant lessons to be learnt from the experiences of China and Italy is that the Coronavirus epidemic can grow very rapidly and quickly overwhelm health care services leading to large number of avoidable deaths.

Singapore and South Korea were able to avoid this situation by interventions that “flattened the curve” ie. mitigated the exponential growth phase of the epidemic so that the health care service was able to cope with the demand for medical care, especially ventilators.
The mitigation involved the basic elements of infectious disease control – screening, diagnosing, isolating and contact tracing.

China’s “lock-down” approach has proven to be very successful in reducing new cases, by reducing interactions between people that maintained the chains of transmission. China has now reported no new cases for two consecutive days. Several countries are now trying to emulate these interventions.
The first case of COVID-19 infection in South Africa was reported on March 5, 2020. As of March 21, 7,425 tests have been conducted and there are 240 confirmed cases (Figure 1).
While many of the cases are in individuals who recently travelled to Europe or the US, there is clear evidence of community transmission.

Since the 240 currently diagnosed cases reflect infections that occurred at least 14 days ago (comprising the incubation period, time to seek care and time for the test result to become available), this number reflects a minimum number of SARS-CoV-2 infections present a fortnight ago.

Given the exponential growth in the epidemic, the actual number of cases is probably much higher and is likely to already be in the thousands.

If left unchecked, more than a million cases could occur within weeks, according to mathematical models.
❖ Under Article 12 of the Third Edition of the 2005 International Health Regulations, the WHO has declared Covid-19 a “public health emergency of international concern” thereby requiring states to respond “promptly and effectively”.

❖ The Declaration of “a national state of disaster” by the State President on 15 March followed by regulations provides the legal framework for the country’s national response.
The continued spread of the coronavirus SARS-Cov-2 is a major concern as the country only has a short window of opportunity to “flatten the curve” prior to the inflection point, by reducing interactions between infected and uninfected people.

In this respect, entire communities will need to buy-in to the need to prioritise contributions and actions “in the common interests of the country”.

The goal is to control the spread of COVID-19 through steps to “test the susceptible population, quarantine the suspected cases and offer treatment to the infected and confirmed, as well as block the transmission route in the shortest time and limited space.”
In summary, the next steps to control the spread of SARS-CoV-2 Coronavirus are:

1. To implement a 21 day “stay-at-home” whole-country lockdown, where only absolutely essential personnel (such as doctors, nurses, police, etc) and those requiring medical care will be allowed to leave home for restricted periods. Individuals will not be allowed to leave their homes except under strictly controlled circumstances.

   • For the homeless, either their existing locations or, where available, alternative temporary accommodation sites, will be used for their 21-day “stay-at-home” period.

   • During this period, clinics, pharmacies, food-stores and hospitals will remain open.
In summary, the next steps to control the spread of SARS-CoV-2 Coronavirus are:

2. To reduce transport and movement opportunities by the controlled closure of some modes of public transport and capillary road networks with only main roads remaining open and unobstructed.

- Due to disruptions in supply and distribution of goods, medical and other supplies will be secured and stored in bulk, including supplies such as personal protective equipment for healthcare workers.

3. To implement spatially-based teams, including local volunteers, to implement house-to-house screening and testing which is managed at the level of enumerator areas (± 300 households).

- To identify as many cases as possible, SARS-CoV-2 testing will be made widely available and the criteria for a test will be relaxed, with commensurate increasing laboratory capacity.
In summary, the next steps to control the spread of SARS-CoV-2 Coronavirus are:

4. Health care will be provided through triage to obtain “centralised treatment” for severe cases and “decentralised primary care” for mild cases.

   • A key objective is not to overwhelm hospitals with unnecessary care seekers.

5. To record and manage data on the number of tests performed and the identification of every new case in each enumerator area, in order to identify hotspots for ongoing transmission.

   • To implement further control measures in sites where viral transmission is continuing during the “stay-at-home” period. Importantly, accurate and reliable information on the nation’s progress towards controlling the epidemic will be provided.
Prepared documents that will aid in executions

- The COVID-19 Manual based on China's experience, but adapted for South Africa
- Operational Plan,
- Contact Tracing per province
- Resources
- Capacity for proactive testing
- contact persons to lead in the implementation in government and outside government.