health
Department:
Health
REPUBLIC OF SOUTH AFRICA

INTERNAL MEMO

Date:	31 March 2021		
To:	**Minister ZL Mkhize,** **Honorable Minister of Health**	From:	**Ministerial Advisory Committee (MAC) on COVID-19**

PREPARING FOR A POTENTIAL THIRD WAVE

Problem Statement

As South Africa reaches the end of its second wave, planning needs to begin for a third wave, to ensure lessons learned in the first and second waves are concretely applied to reduce the impact of future resurgences.

- **Lessons Learnt:** What lessons have been learned from first and second wave, which can be used to help prevent, plan and manage a potential third wave? What lessons can be learned from third waves and resurgences occurring elsewhere?
- **Preparedness:** What actions should the government and private sector consider implementing now in order to reduce the impact of a third wave? What needs to be done in anticipation for a third wave to prepare the health system as well as the public?
- **Communication:** Information on the potential for a third wave needs to be communicated effectively to the public early as part of mitigation measures and continued risk prevention. How can the public be effectively engaged on a third wave, including what to expect regarding the impact of COVID-19 vaccination and the need for continued mitigation measures?

Evidence review/Background

- To date, South Africa has experienced two epidemic waves, with the second wave having a higher peak and larger numbers of cases, hospital admissions, and deaths than the first wave nationally. Based on analyses conducted by the South African COVID-19 Modelling Consortium using the MAC on COVID-19 wave criteria, the second wave ended on 9 February 2021[1].
- South Africa's implementation strategy of strict public health measures and infection prevention and control (IPC) protocols helped to end the second wave even in the absence of vaccination.
- The second epidemic wave in South Africa was driven by the emergence of a new SARS-CoV-2 variant (N501Y.V2 aka B.1.351)[2].

- The N501Y.V2 variant appears to have been associated with higher mortality than variants circulating in the first wave. However, the main driver of increased mortality in the second wave was overloading of the health system[3].
- Analyses indicate that the relative magnitude of the second wave was generally smaller in areas that had higher first-wave attack rates, suggestive of protection resulting from prior infection (Appendix, Part 1).
- Several studies have been undertaken to estimate the seroprevalence of anti-SARS-CoV-2 antibodies in specific populations. Although each study is limited in scope and has potential biases, collectively they indicate that there is substantial variation in seroprevalence in different communities and settings. None of the communities surveyed have estimated seroprevalence above the putative herd immunity threshold of approximately 65-70%, suggesting that most areas are susceptible to at least minor resurgences (Appendix, Part 1).
- Internationally, three variants of concern (including N501Y.V2) and numerous variants of potential interest (VOI) have been identified. Ongoing genomic surveillance is being conducted by the Network for Genomic Surveillance South Africa (NGS-SA)**.** To date, NGS-SA has detected variant of concern B.1.1.7 in 1 specimen from the Western Cape and variant of interest A.23.1 in 1 specimen from the Eastern Cape.
- Worldwide, most countries are (by MAC on COVID-19 definitions) still experiencing or have recently concluded their second waves. Israel and Serbia are both currently experiencing third waves. In both cases, the waves started 1-2 months after the end of their second waves, and the peak of each wave has been higher than the previous wave. Many European countries are also experiencing substantial resurgences within their second wave, with incidence exceeding previous peak levels.
- Factors likely to contribute to a third wave include:
    - behavior change (increased contact) due to reduced adherence to non-pharmaceutical interventions (NPIs) and public health measures, easing of restrictions, holiday travel, and super-spreading events
    - increased transmissibility or immune escape driven by viral mutation
    - seasonal changes in contact rates, ventilation practices, and/or viral properties
    - waning of immunity produced by previous infections
- An overview of potential third wave scenarios is given in the Appendix (Part 1). Formal third wave scenario modelling is being undertaken by the South African COVID-19 Modelling Consortium (SACMC) but results are not yet available.
- Surveillance methods for the detection of epidemic resurgence were reviewed extensively in the MAC on COVID-19 Technical Working Group on the Second Wave Report[4]. These methods remain relevant for detection of local resurgences and a potential third wave.
- There are minimal data available to objectively evaluate the prior COVID-19 waves with respect to IPC and clinical management. There is a need for more detailed clinical data to better evaluate clinical outcomes at unit level. Health care workers raise issues of being overworked and are thus not able to capture detailed patient clinical information for analysis.
- Vaccination of health care workers has begun with the Johnson & Johnson vaccine under the Sisonke protocol, a Phase 3B clinical trial[5]. It is, however, too soon to observe or expect any indirect impact of vaccination on health care workers.

Recommendations

Overall

- National operational guidelines are needed outlining **containment** measures that must be undertaken when transmission is low (cases are clustered in space and time and common exposures can be identified) and **mitigation** measures that must be undertaken when there is sustained community transmission (as indicated by the occurrence of cases not linked to transmission chains and/or multiple unrelated clusters in several areas).
    - These guidelines should be developed by the Incident Management Team of the National Department of Health.
    - Containment measures should emphasize contact-tracing, isolation, and quarantine to prevent or delay establishment of community transmission.
    - Mitigation measures should emphasize preventing the health system from being overwhelmed through increased services to prevent morbidity and mortality and introduction of public health and social measures to reduce transmission and competing demands on the health system.
    - Targeted containment of certain outbreaks (such as in long-term care facilities or prisons) may be warranted during the mitigation phase, but it is not necessary to identify all cases outside of these settings.
- The decision to switch from the containment paradigm to the mitigation paradigm should be driven by local assessment of the epidemiological situation.
- Districts and provinces must be prepared and empowered to rapidly switch from containment to mitigation once sustained community transmission is identified.
- Guidelines should also emphasize preparation to switch approaches in districts closely connected to those with sustained community transmission.
- Preparation for the mitigation phase of the response must also aim to (a) protect delivery of routine services, including treatment for HIV, TB, maternal health, and noncommunicable diseases such as diabetes, and (b) strengthen infection prevention and control protocols and practices.
- A national structure is needed for instituting restrictions at a district or provincial level based on local epidemiological assessment (bottom-up).
- Strengthened IPC and ongoing NPIs – social distancing, face masks, hand hygiene – are necessary in both containment and mitigation phases.
- Large gatherings, particularly indoor events and those that draw people from long distances, should continue to be prospectively limited (without increases) until vaccination targets and have been achieved and community transmission is contained.
- Achieving high levels of vaccination among health care workers, including hospital workers, primary care workers, and traditional medicine practitioners, is an urgent priority to prepare the health care system for a third wave.

Health Systems Capacity and Preparedness

Health System Level

- The resurgence plans must be reviewed and revised at national, provincial, district and facility levels in preparation for a third wave.
- Surge capacity must be prepared for a third wave, including human resources, training/clinical governance, personal protective equipment (PPE), medical equipment, beds and oxygen.
- Integration of planning and management platforms is needed across all levels of care to enable seamless management of the available capacity across the health system.
- Strengthened collaboration between the public and private sector is required to facilitate access to critical care beds across public and private sectors.

Testing

- Testing criteria should be adjusted according to the intensity of transmission. During the containment phase, identification of infections is a priority to reduce spread and testing should be used as a surveillance tool. During the mitigation phase, testing should be more limited, focusing on those with symptomatic illness and containment within vulnerable populations (e.g. prisons and long-term care facilities).
- Testing criteria (and any changes) must be transparently communicated with the broader public and civil society to support monitoring.
- Close liaison between National Department of Health and public and private labs is needed to monitor the number of specimens and turnaround times as the number of cases change. Corrective action must be taken if needed to ensure turnaround times within a clinically useful timeframe.

District and Provincial Level

- Adequate allocation of resources for the track and trace approach is required during the containment phase of response. Provinces should consider requesting assistance from implementing partners (e.g. PEPFAR).
- Strengthening of local coordination and governance is required, with specific emphasis on strengthening district hospitals and referral networks.
- To ensure that provinces are prepared for a substantial third wave, dismantling of field hospitals is not recommended at this stage.

Facility Level

- A whole-of-hospital response is recommended during epidemic surges.
- Training on and adherence to national clinical guidelines is critical and should be audited.
- Audits and quality improvement processes should be put in place to strengthen clinical governance.
- Data dashboards should be developed and used for planning. Dashboards should tracking general and critical care beds, staffing, oxygen use and availability, test turnaround time, etc. Daily management huddles informed by data can be useful to monitor and manage hospital capacity.
- The MAC on COVID-19 Surgery Recommendations and Risk Calculator[6] should be used to inform individual-level and facility-level decisions regarding performance of elective surgery.
- Mentoring, support, and training by medical and critical care specialists is needed to prepare district hospitals to treat COVID-19 patients.
- Strengthen IPC in health care facilities is needed to protect healthcare workers and patients.
- Staff health and wellness guidelines must be developed and implemented to maintain the morale of health care workers and minimize burnout.

Additional information on Health Systems Capacity and Preparedness recommendations can be found in the Appendix (Part 2).

Clinical and Infection Prevention and Control

- Training of health care workers (including community health workers and traditional practitioners) on infection control and prevention by trained IPC professionals must be increased.
- There should be increased distribution and uptake of guidelines.
- Clinical guidelines must continue to be promptly updated as new clinical evidence emerges.

- COVID-19 IPC guidelines V2 (May 2020)[7] should be promptly updated based on new evidence relating to transmission and prevention of SARS-CoV-2.
- Better and clearer co-ordination of clinical care at all levels, with enhanced communication among health care workers at the respective levels.
- Systems should be put in place to enable the collection of detailed clinical data at unit level, and these data should be regularly reviewed to identify approaches to improve clinical outcomes.
- The following specific areas need urgent attention in preparation for a potential third wave (see Appendix Part 3 for details):
    - Ventilation of spaces/environment
    - Vaccination IPC recommendations (a separate advisory has been issued)
    - Training of heath care workers in infection prevention and control by trained IPC specialist or focal persons. In particular, there is a need for a single message using South African guidelines for all levels of healthcare training.
    - Decontamination of mechanical ventilation equipment. Current IPC COVID-19 guidelines to be reviewed and updated.
    - Nebulisation of COVID-19 patients. Current IPC COVID-19 guidelines to be reviewed and updated.
    - Methods for increased guideline distribution and uptake
    - Specific clinical issues as outlined in the section on Health Systems Capacity and Preparedness

Communication

- An entertainment-education approach should be undertaken for most messaging to sustain the interest and responses to the messages and to manage the current COVID-19 information fatigue (e.g. messages regarding ongoing importance of NPIs and public health measures).
- Both the importance of self-risk/self-protection and community-risk/community-protection should be emphasized as motivators, where appropriate.
- Tailored messaging is needed to account for community norms in hotspots (e.g. Eastern Cape and Limpopo).
- Health literacy on key terms should be increased (e.g., isolation and quarantine).
- Stronger emphasis should be placed on correction of misinformation.
- Engagement with traditional leaders, faith-based organizations, and NGOs is essential to promote ground-up messaging.
- The following topics require (renewed) targeted communications strategies. Further details, including detailed recommendations for each topic, are provided in the Appendix (Part 4).
    - Adherence to NPIs and public health measures (even during vaccine rollout)
    - Travel and the Easter holidays (a separate Easter Holiday MAC on COVID-19 advisory has been issued)
    - Vaccine rollout plan (with MAC on Vaccines)
    - Potential resurgence scenarios (with SACMC)
    - New variant likelihood
    - Clinical readiness (public and private sectors), including IPC and safety of health care workers and patients
    - When to seek care
    - Best practices for isolation and quarantine
    - Vaccine hesitancy (a separate MAC on COVID-19 advisory has been issued)

Surveillance, Monitoring, and Response

- Surveillance for increasing trends must be multidimensional and take place at all scales (from facility level through national).
- Regular 'data huddles' (e.g., at the district and province levels) are recommended to improve rapid detection of emerging patterns based on local intelligence, in addition to regular monitoring of cases, admissions, positivity, outbreaks / superspreading events, genomic data, wastewater monitoring, the time-varying reproduction ratio, and resurgence metrics.
- Systems must be put in place to rapidly assess drivers of resurgence once community transmission is identified in an area. In particular, we must enable:
    - rapid assessment of the populations affected (e.g., are cases coming from previously affected communities or new areas)
    - genomic surveillance to identify potential variants of concern
    - rapid identification of reinfections and vaccine breakthrough infections

Thank you for consideration of this request.

Kind regards,

PROF MARIAN JACOBS
CO-CHAIRPERSON: MINISTERIAL ADVISORY COMMITTEE ON COVID-19
DATE: 31 March 2021

CC:

» **Dr S Buthelezi (Director-General)**
» **Dr T Pillay (Deputy Director-General)**
» **Incident Management Team**

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