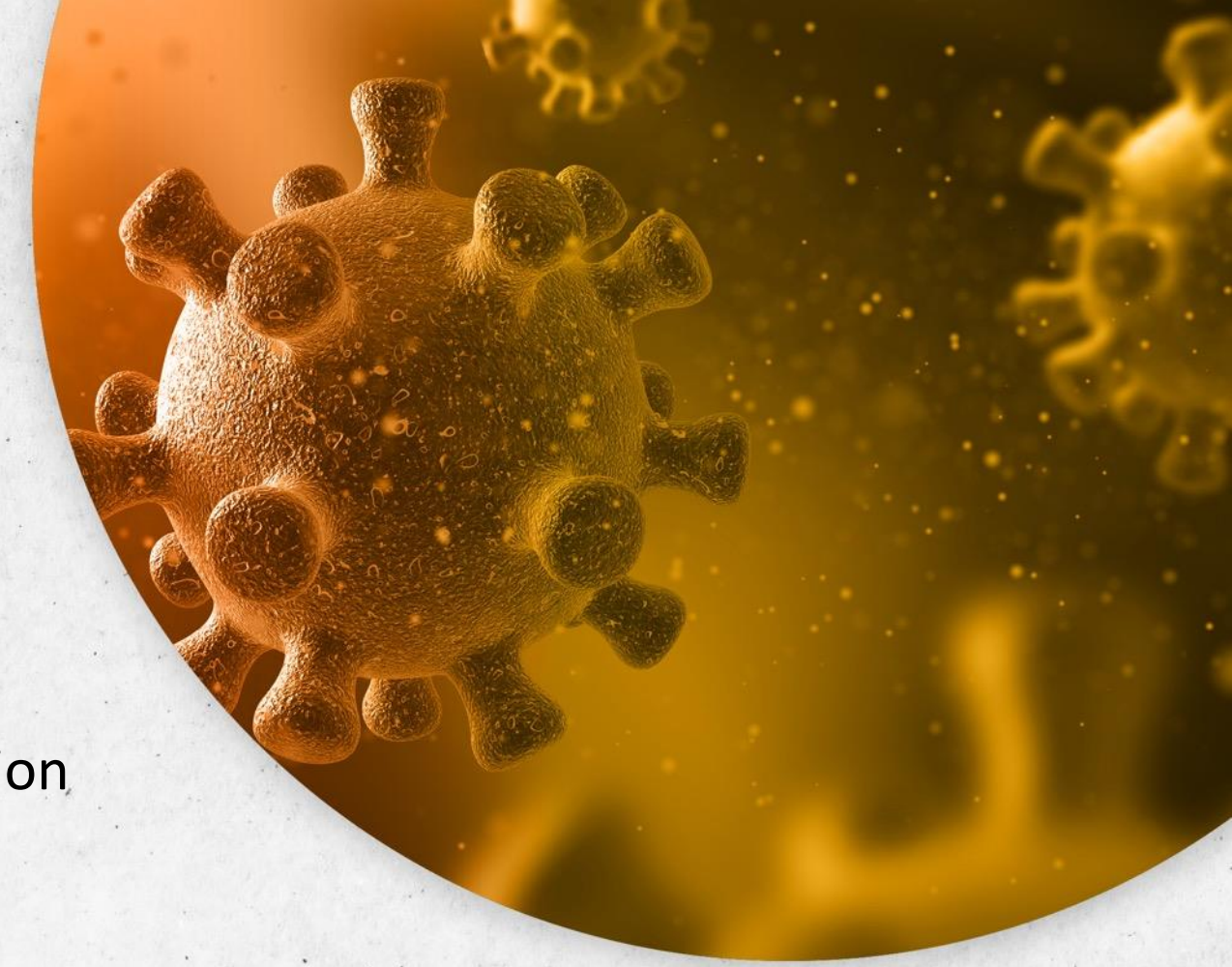
Health Sector Response to Covid-19 in South Africa



Preparation, prevention, containment, mitigation

03 June 2020

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2030 NDP

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CHAPTER OUTLINE AND INTERVENTION PACKAGE

Section 1: Introduction (incl. Background, Governance Structure, Organising Framework, Theoretical Lens, Interventions)

Section 2: Epidemiology ('Patient Zero', Case load, Data trends, Disease progression, New Variants)

Section 3: Biomedical and Clinical Aspects (Agent, Presentation, Management Guidelines, Adjunctive Therapies, High flow oxygen therapy, Implementation guidelines)

Section 4: Healthcare System Response (Diagnosis, Admission, Mortality, Healthcare Workers)

Section 5: Public Health Interventions (Surveillance, Outbreaks, Contacts, Isolation, Quarantine, IPC)

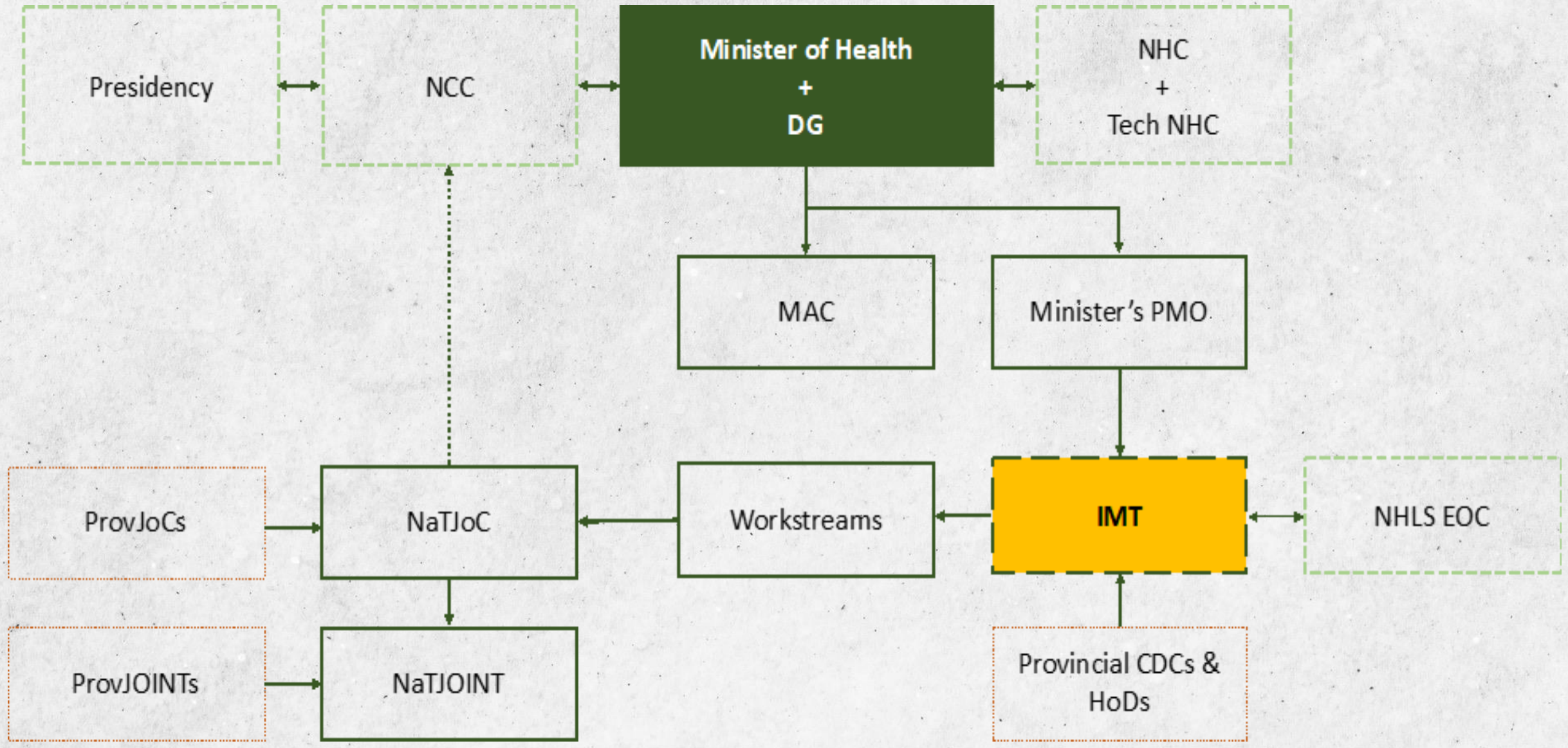
Section 6: Socio-Behavioural Interventions (Masks, Hygiene, Distancing, Lockdown, Vulnerability)

Section 7: Covid-19 Vaccination Campaign

Section 8: Conclusions and Recommendations

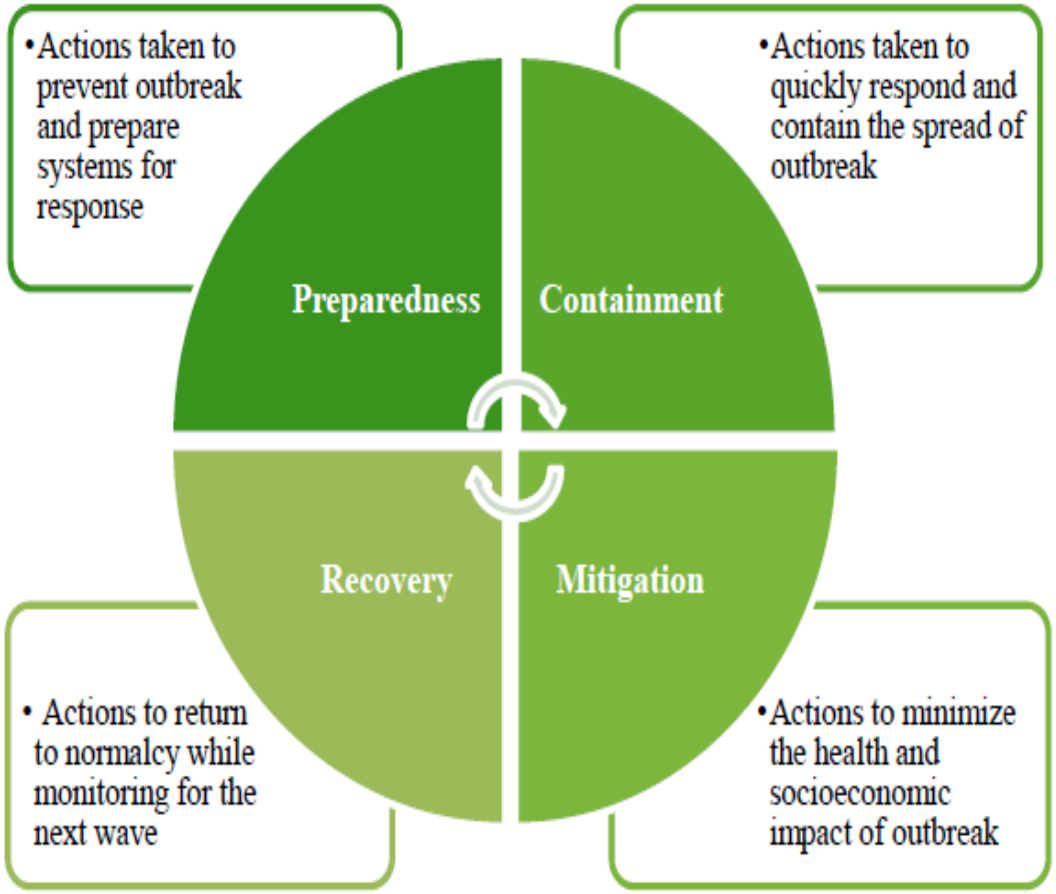
Intervention area	Sub-components
Governance and leadership	– Governance, leadership & coordination
Medical supplies	– Medical supplies
Port and Environmental Health	– Port Health – Environmental Health
Epidemiology and response	– Epidemiology – Laboratory – Contact tracing and community screening
Facility readiness & case management	– Facility readiness – Quarantine & isolation – Case management – Emergency Medical Services
Information systems	– Information systems
Risk communication and community engagement	– Risk communication and community engagement
Occupational health and safety	– Occupational health and safety – Infection prevention and control
Infection Prevention and Control	– Infection prevention and control
Human resources for health	– Human resources for health

GOVERNANCE STRUCTURE



ORGANISING FRAMEWORK

Stage 1: Preparation, community education, capacity building and surveillance.
Stage 2: Primary Prevention, social distancing, reduced gathering & border closure

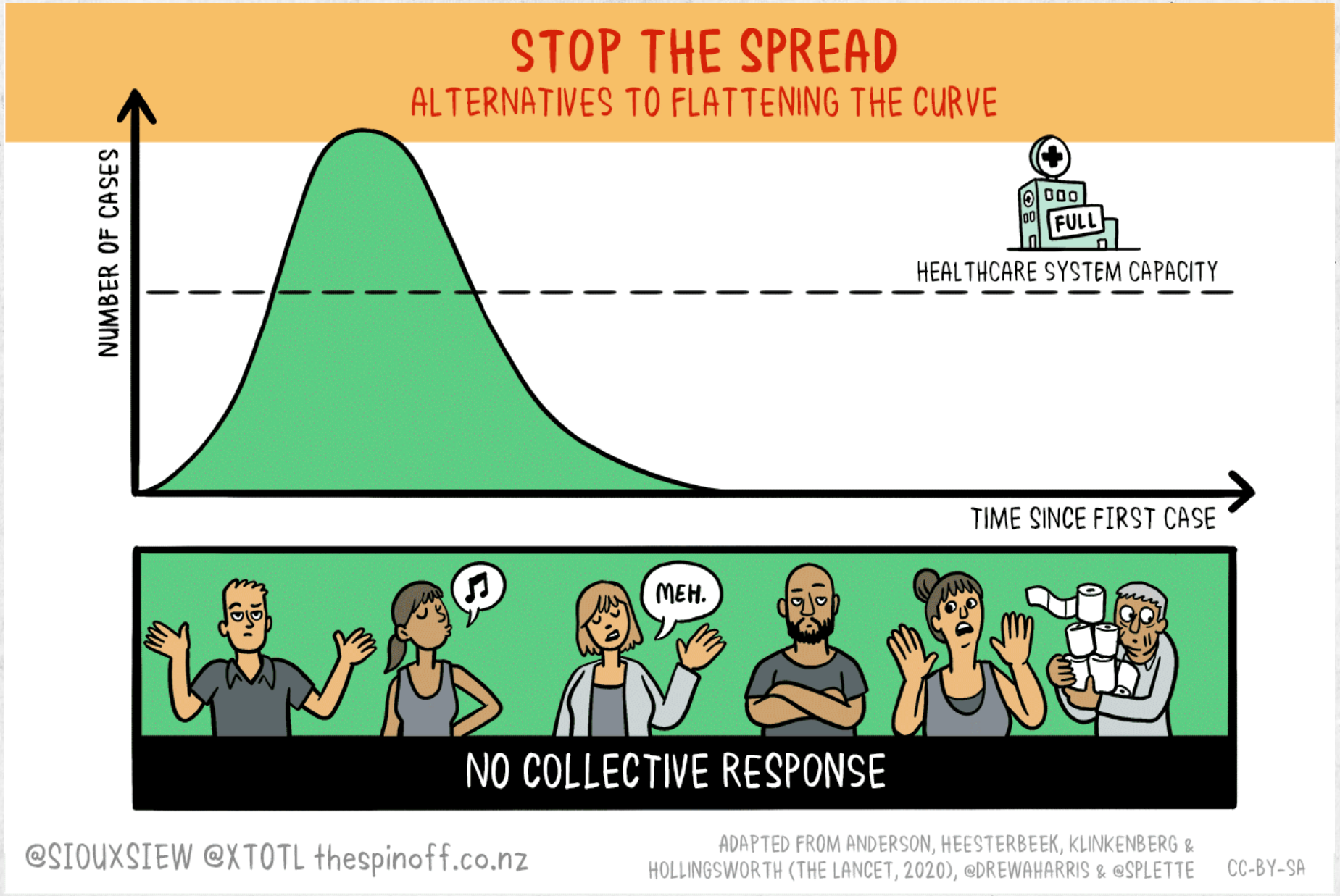


Stage 3: Lockdown with curtailment of human interaction.
Stage 4: Surveillance and active case-finding
Stage 5: Hotspot identification with timeous interventions monitoring new cases

Action Stage 8; Ongoing vigilance monitoring antibody levels, vaccine actions and a vigilant ongoing surveillance for new cases/ next wave

Action Stage 6: Focusing on the provision of quality medical care, and upscaling the surge capacity in preparation for the peak of transmission during the mitigation phase
Action Stage 7: Bereavement and managing the psychological and social impact.

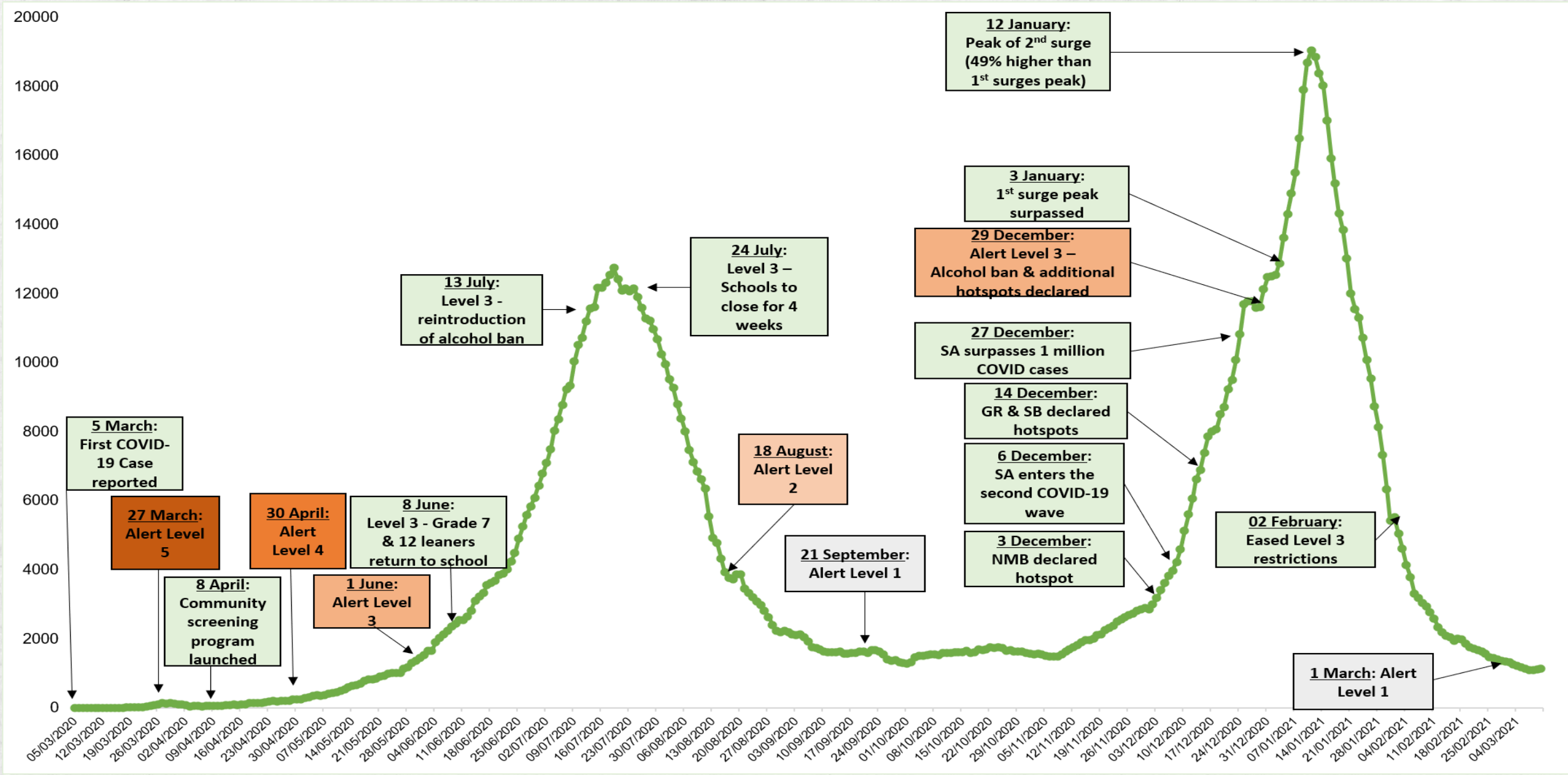
THEORETICAL FRAMEWORK



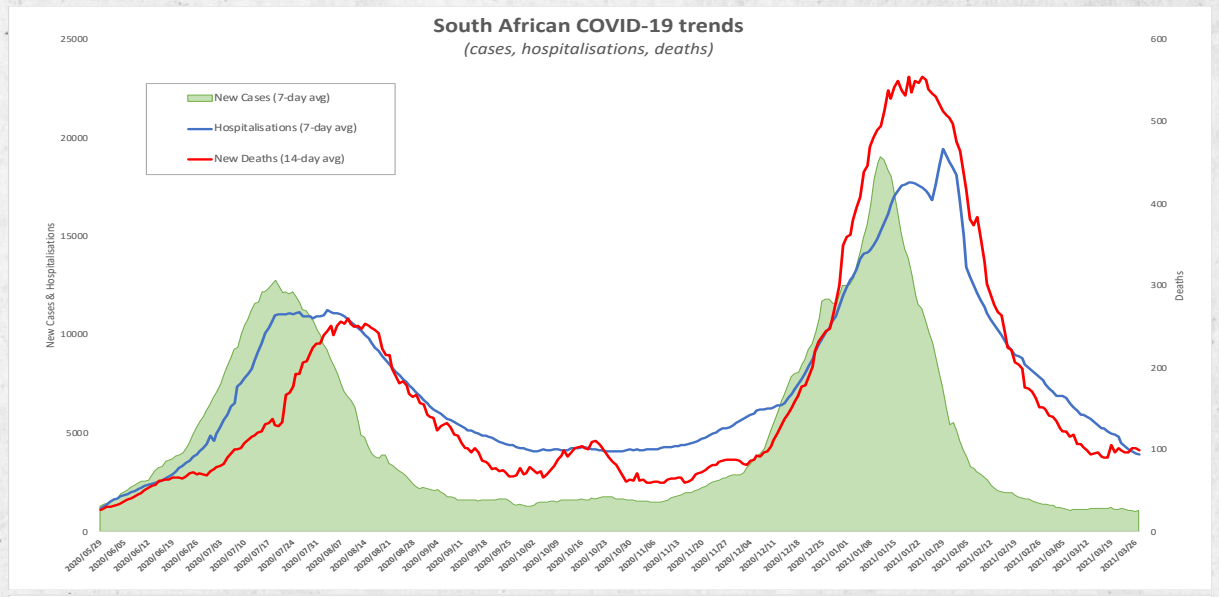
Health Sector Covid-19 Surveillance

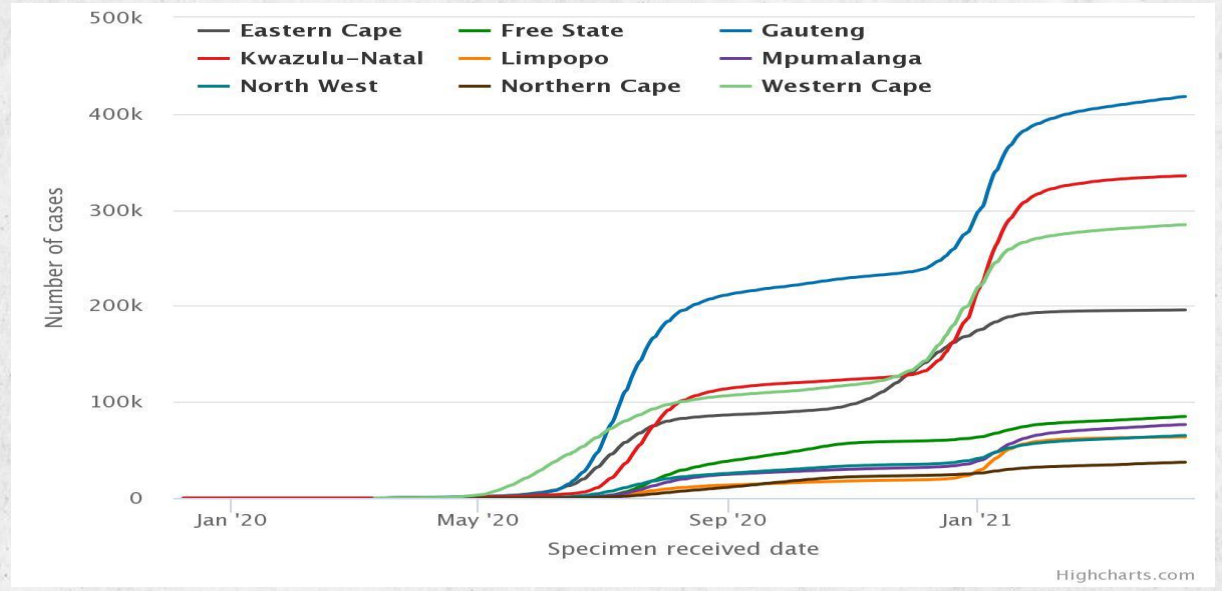
	Indicator*	Description
1	New COVID-19 cases per day	• New COVID-19 cases reported within a geographic region • Consider the additional descriptive indicators of the new cases: Gender, Age, geographic area • The rate of change of daily new cases from one week to the next should be calculated and measured against the thresholds
2	Testing rate / unit population	• The testing rater per 100 000 population should be greater than 41 tests per 100 000 population per day • Note: testing rate data is currently only available for the public sector
3	Percentage positivity rate (note within which population groups)	• The positivity rate should be less than 20% (there should at least 5 tests for every positive) • Percentage of positive tests of all tests conducted within a defined geographic area • Note within which population groups the high positivity rates are in
4	Active cases (incidence risk)	• Active COVID-19 cases per 100 000 population • Confirmed cases - COVID deaths – COVID recoveries
5	Current COVID-19 hospital admissions	• Consider percentage of hospital beds occupied by COVID-19 patients. In given geographic area • Consider percentage of ICU beds occupied by COVID-19 patients.
6	COVID-19 mortality	• COVID-19 deaths per 100 000 population • Investigate factors associated with mortality and severity
7	All-cause mortality	• All-cause mortality per 100 000 population (compared to projections)

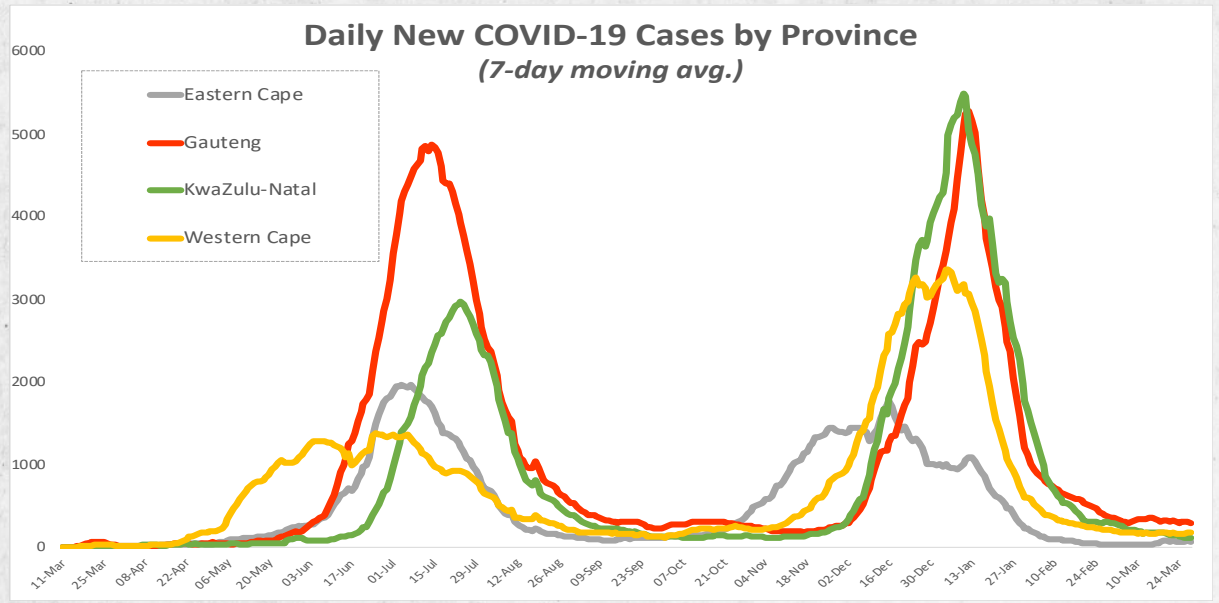
EPIDEMIOLOGICAL TREND

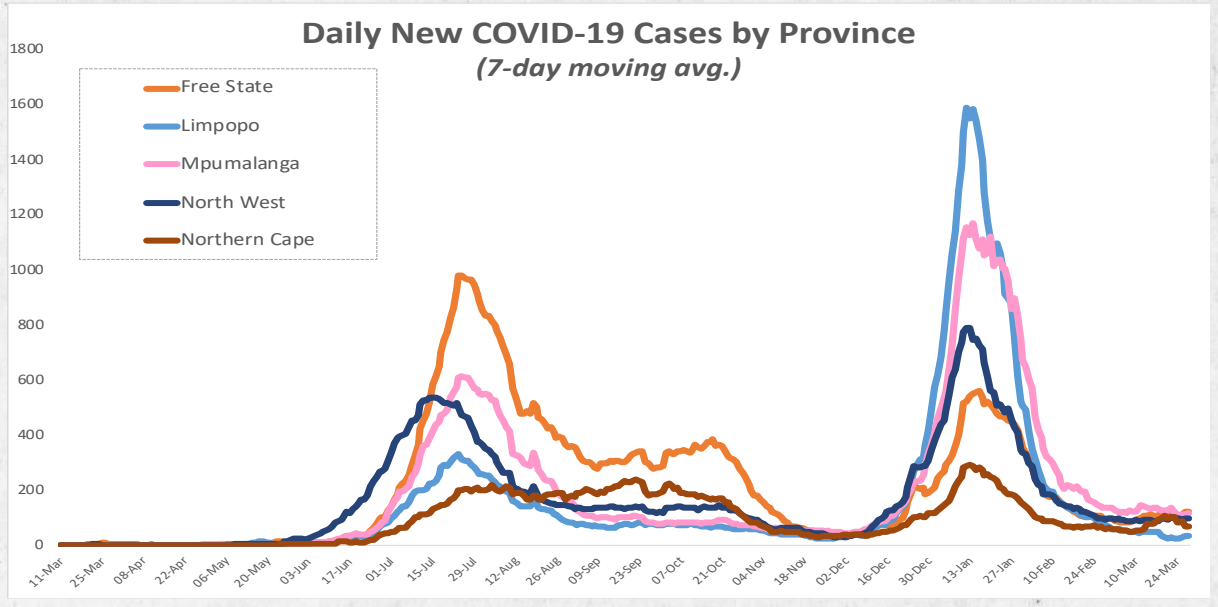


Covid-19 Cases and Provincial Trends

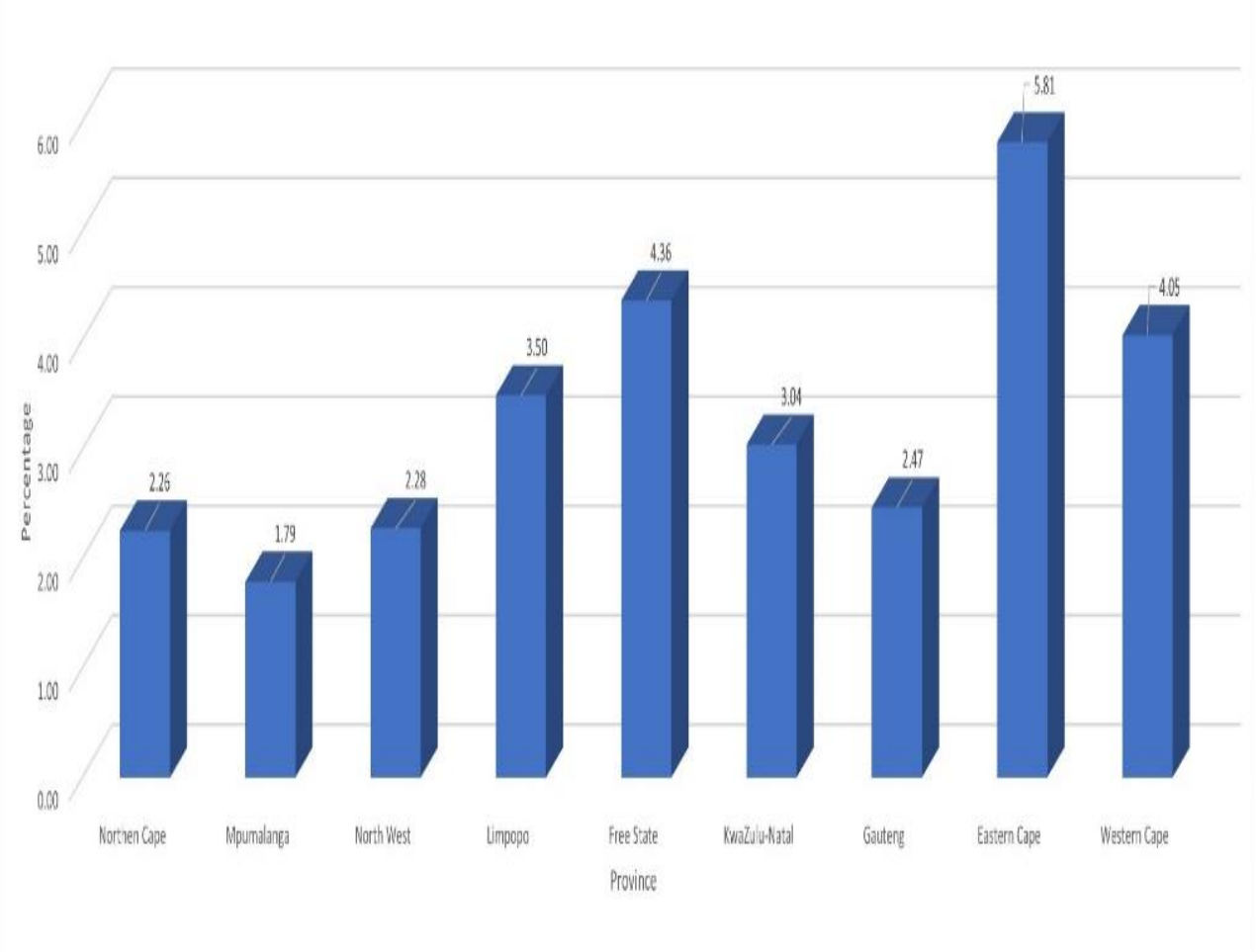


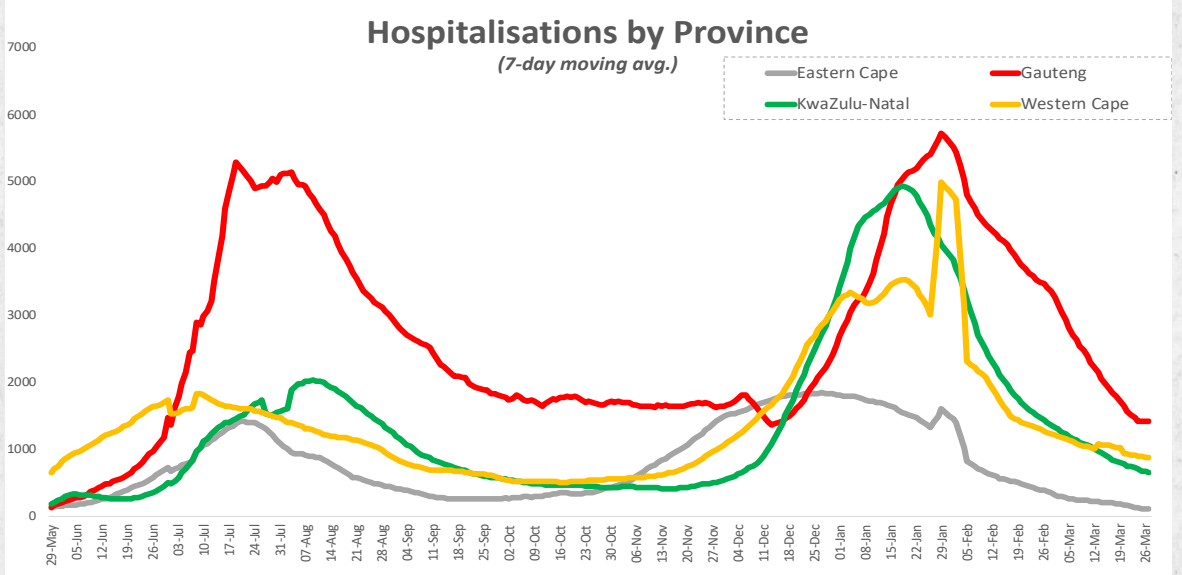


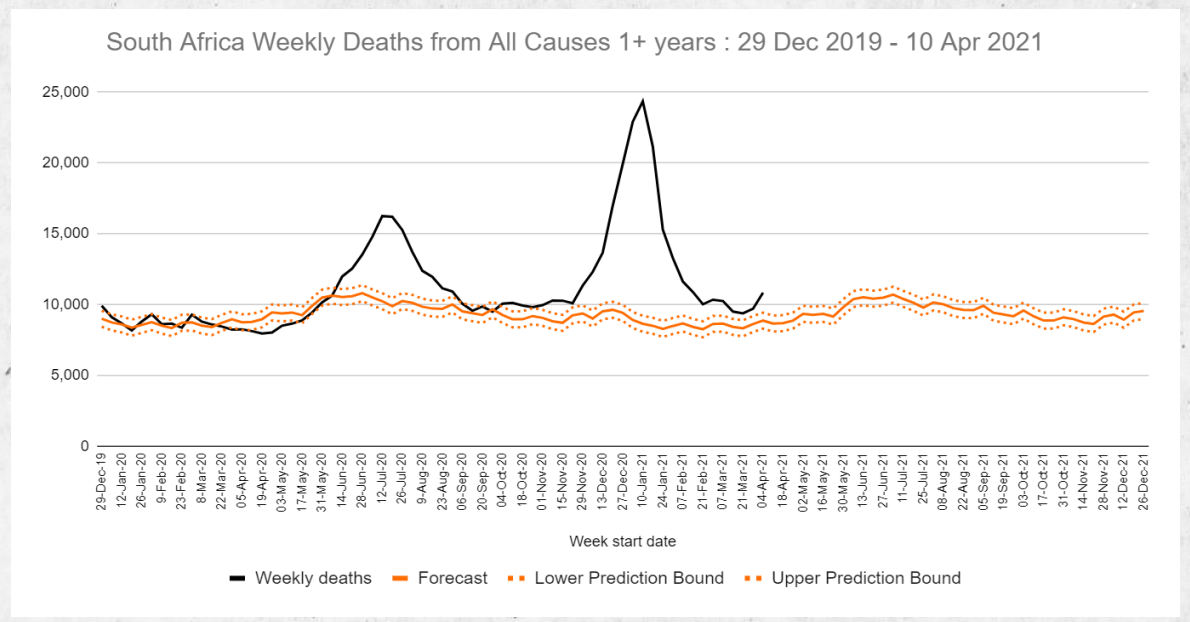




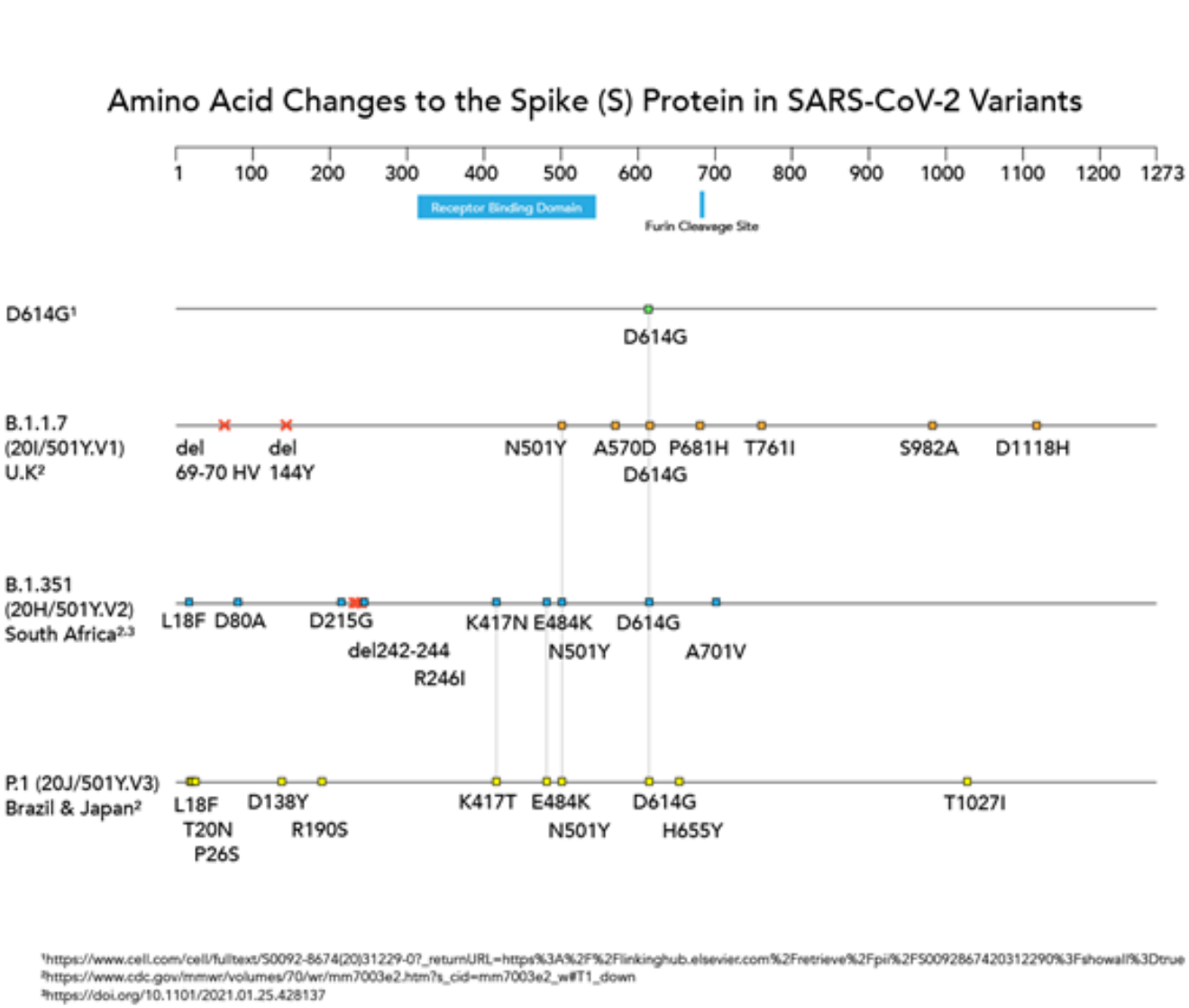
High burden of disease and mortality in the second surge







Variants of Concern and Vaccine Campaign



Company	Type	Doses	Storage
Oxford Uni-AstraZeneca	Viral vector (genetically modified virus)	x2	2 to 8°C (6 months)
Moderna	RNA (part of virus genetic code)	x2	-25 to -15°C (7 months)
Pfizer-BioNTech	RNA	x2	-80 to -60°C (6 months)
Gamaleya (Sputnik V)	Viral vector	x2	-18.5°C (liquid form) 2 to 8°C (dry form)
Sinovac (CoronaVac)	Inactivated virus (weakened virus)	x2	2 to 8°C
Sinopharm	Inactivated virus (weakened virus)	x2	2 to 8°C
Novavax	Protein-based	x2	2 to 8°C
Janssen Johnson & Johnson	Viral vector	x1	2 to 8°C (3 months)

Source: UK government, Reuters

BBC

Evidence of a Strained but Resilient Healthcare System

- The healthcare system was strengthened by leveraging both the public and private healthcare sectors, hospitals and GP networks
- Restriction of movement which limited demand on the healthcare system, restriction of alcohol linked to reduced demand for emergency care following trauma and accidents,
- Prolonged prescriptions for chronic medication intended to reduce the demand for chronic care services, particularly on the primary healthcare services
- Freezing of elective procedures designed to reduce the demand for routine surgical care
- The one province that was widely reported to struggle with admissions was the Eastern Cape, and this necessitated direct intervention from the Minister of Health

Complexity of interventions and Long-term Implications

- The effective control of outbreaks depended not only on isolated measures being implemented effectively, but also on maintaining the chain of all measures intended to prevent infection at all vulnerable points in the cycle of disease transmission
- However, restricted movements, temporarily suspended healthcare services, fear of acquiring Covid-19 in healthcare facilities and lack of funds to access healthcare due to income losses in communities
- Noted unintended consequences resulting from the redirection of services and resources, such that care was compromised, and may have contributed to excess mortality
- The full scale of long-term implications of these complex interventions is yet to be determined, but some indication of double-edged ramifications of gains and losses

Recommendations

1. Strengthen data systems and science for decision-making
2. Strengthen outbreak prevention and containment measures
3. Integrate behavioural interventions into the health sector
4. Protect vulnerable individuals, groups, and communities
5. Limit unintended consequences and excess deaths
6. Ensure supportive legislation to protect public health and wellbeing
7. Monitor measurable outcomes of vaccination campaign
8. Maintain case-based and genomic surveillance
9. Conduct implementation studies for vaccination roll-out to monitor safety and effectiveness