

National Advisory Group on Immunisations (NAGI) Enquiries: Prof Anne von Gottberg

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The Ministry of Health, Republic of South Africa
Office of the Minister

SUBJECT: RECOMMENDATIONS ON COVID-19 VACCINATION

Dear Honorable Dr A Motsoaledi

PROBLEM STATEMENT

- As part of the public health response to coronavirus disease (COVID-19) in South Africa, two index virus-based monovalent COVID-19 vaccines were deployed: BNT162b2 (Pfizer-BioNTech, Comirnaty®), a messenger RNA (mRNA) vaccine; and Ad26.COV2. S (Janssen/Johnson & Johnson), a non-replicating adenovirus vector vaccine.
- Since March 2024, there have been no COVID-19 vaccines available for use in South Africa - the last batches of COVID-19 vaccines expired on 29 February 2024.
- None of the vaccines with updated antigen composition have been registered in South Africa (and no vaccine manufacturer has submitted an updated vaccine for registration).
- Surveillance programmes demonstrate ongoing transmission of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in South Africa, but hospitalisations and deaths have fallen considerably.
- Based on these points, decisions are required around the need for an ongoing COVID-19 vaccination programme in South Africa.

BACKGROUND - POINTS CONSIDERED

SARS-CoV-2 epidemiology in South Africa

- National Institute for Communicable Diseases (NICD) sentinel surveillance programmes demonstrate ongoing transmission of SARS-CoV-2, with no established seasonal pattern^{1,2}.
- Routine respiratory virus testing statistics from private laboratories show relatively stable percentage testing positive for SARS-CoV-2, without the seasonal peaks observed with influenza and RSV³⁻⁵.
- Data from wastewater-based surveillance for SARS-CoV-2 are consistent with the syndromic surveillance, suggesting ongoing circulation with periodic increases in SARS-CoV-2 levels in wastewater⁶.

SARS-CoV-2 genomic epidemiology

- The Network for Genomic Surveillance South Africa (NGS-SA) continues to conduct genomic surveillance, using samples from national surveillance programmes and from routine SARS-CoV-2 diagnostic testing in public and private laboratories⁷.
- The distribution of variants in South Africa is currently consistent with the global patterns - JN.1 (descendent of BA.2.86) and JN.1 descendent lineages have been dominant since early 2024^{7,8}.

Burden of disease

- The national syndromic surveillance for pneumonia suggests a lower overall burden of hospitalisations for COVID-19 compared to influenza and RSV in 2023, and so far in 2024^{1,2}. More detailed burden of disease analyses are currently being conducted by the NICD.
- The dedicated national surveillance programme for COVID-19 admissions (DATCOV) ended in December 2022.
- National mortality surveillance shows significant change in the patterns of excess deaths since the peak in 2021, with all-cause weekly deaths in 2023 and 2024 reverting to within the prediction bounds⁹.
- The Triennial Report on Confidential Enquiries into Maternal Deaths in South Africa (2020-2022) reported a significant reduction in maternal deaths related to

COVID-19 – 124 deaths in 2020, 369 deaths in 2021, and 12 deaths in 2022. Overall institutional maternal mortality ratio (iMMR) increased by 30% in 2020 and 47% in 2021 (compared to 2019) but decreased to pre-pandemic level in 2022¹⁰.

COVID-19 vaccines and updates to antigen composition

- Only index virus-based monovalent COVID-19 vaccines were registered in South Africa.
- None of the monovalent or bivalent COVID-19 vaccines with updated antigens (e.g., BA.1, BA.4/5, XBB.1.5) have been registered in South Africa
- The WHO Technical Advisory Group on COVID-19 Vaccine Composition (TAG-CO-VAC) provided its latest recommendations on 26 April 2024 recommending the use of a monovalent JN.1 lineage as the antigen in future formulations of COVID-19 vaccines¹¹.
- Global data on COVID-19 vaccination highlight low levels of uptake in WHO member states that are still reporting in Q1 (Jan-Mar) 2024, 9.8 million individuals (0.12% of the general population) received a COVID-19 vaccine dose across 73 reporting member states containing 22% of the global population. In these member states in Q1 2024, 0.42% of older adults received a COVID-19 vaccine dose^{8,12}.

WHO SAGE recommendations

- The Strategic Advisory Group of Experts on Immunization (SAGE) roadmap for prioritising uses of COVID-19 vaccines provides recommendations to support countries in designing their respective vaccination programmes. The roadmap was last updated in November 2023 (further updates are pending)¹³.
- Three priority-use groups are defined (high priority-use, medium priority-use and low-priority use), based largely on risk of severe disease, hospitalisation and death.
- The current roadmap recommends a simplified vaccination schedule a single vaccine dose for most individuals, regardless of prior vaccination given that most of the population will have been infected at least once.

COVID-19 vaccination delivery

- COVID-19 vaccination in South Africa was delivered through a dedicated, vertical programme and this is no longer in place.
- Currently, there is no established adult vaccination programme in South Africa.
 The adult influenza vaccination programme has multiple challenges, and few
 people in the high priority groups (<5%) receive influenza vaccination each year,
 in part because vaccines are only procured for approximately 4% of eligible
 individuals^{14,15}.
- The National Department of Health has requested that the South African Health Products Regulatory Authority remove the requirement that COVID-19 vaccines should be procured through the national vaccination programme.
- Any vaccine that becomes available in SA, will be available for procurement by both the public and private sector.

RECOMMENDATIONS

- Pharmaceutical companies should be encouraged to have updated COVID-19 vaccines licensed in South Africa.
- Benefits of additional COVID-19 vaccine doses to individuals at high risk will primarily impact on severe COVID-19 and death, and not on population immunity or circulation of SARS-CoV-2.
- Considering the burden of disease attributable to COVID-19 in the context of multiple competing public health priorities, a national program should be limited to select groups of high-risk individuals based on cost-effectiveness evaluation.
- It is important to sustain robust SARS-CoV-2 epidemiological surveillance and variant tracking in South Africa.
- There should be concerted efforts directed towards the long-term development of an adult vaccination programme, into which COVID-19 vaccination could be integrated together with influenza. This is in line with the life-course approach set out in the Immunization Agenda 2030 and the draft National Immunisation Strategy.
- The development of an adult vaccination programme should be informed by lessons learnt from the influenza vaccination programme; and should be designed not only to deliver routine vaccinations but also to deliver new vaccines as part of broader pandemic preparedness and response efforts.

These recommendations will be reviewed if new data emerges about the burden
of COVID-19 in South Africa; if there is a global alert relating to changing
epidemiology; if updated vaccines are registered and become available in the
country; or if new COVID-19 vaccines with additional benefits become available
globally (e.g. vaccines with better sterilizing immunity or pan-coronavirus
vaccines).

Thank you for your consideration.

Yours sincerely,

PROFESSOR RUDZANI MULOIWA

DEPUTY CHAIRPERSON: NATIONAL ADVISORY GROUP ON IMMUNISATION (NAGI)

CC: Dr SSS Buthelezi (Director-General)

Mr Morewane (Acting Deputy Director-General: HIV, TB and MCWH)

References

- 1. National Institute for Communicable Diseases. *Weekly respiratory pathogens report: Week 48 of 2023*. 2023. https://www.nicd.ac.za/wp-content/uploads/2023/12/Weekly-RPSR-FluRSVSARSCoV2Pertussis-Week-48-Final.pdf
- 2. National Institute for Communicable Diseases. *Weekly respiratory pathogens report: Week 26 of 2024*. 2024. https://www.nicd.ac.za/wp-content/uploads/2023/12/Weekly-RPSR-FluRSVSARSCoV2Pertussis-Week-48-Final.pdf
- 3. Lancet Laboratories. *Respiratory virus statistics*, 2023. 2023. https://www.lancet.co.za/respiratory-virus-statistics-2023/
- 4. AMPATH. Respiratory virus statistics, April/May 2024. 2024. https://www.ampath.co.za/storage/491/Respiratory-statistics-AprMay24-FINAL.pdf
 5. Pathcare. Respirary pathogen statistics: 2023 summary. 2023. https://www.pathcare.co.za/wp-content/uploads/2024/01/RESPIRATORY-PATHOGE
- https://www.pathcare.co.za/wp-content/uploads/2024/01/RESPIRATORY-PATHOGEN-STATISTICS.pdf
- 6. National Institute for Communicable Diseases. *Wastewater-based epidemiology for SARS-CoV-2 in South Africa including wastewater genomics: week 23 of 2024*. 2024. https://www.nicd.ac.za/wp-content/uploads/2024/06/Watewater-based-genomic-epidemiology-of-SARS-CoV-2-in-South-Africa 2024-06-17.pdf
- 7. Network for Genomic Surveillance in South Africa (NGS-SA). SARS-CoV-2 genomic surveillance update (08 July 2024). 2024. https://www.nicd.ac.za/wp-content/uploads/2024/07/Update-of-SA-sequencing-data-from-GISAID-08-July-2024.pdf
 8. World Health Organization. COVID-19 epidemiological update: Edition 168 published 17 June 2024. 2024. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20240617 covid-19 epi update 168.pdf?sfvrsn=27a879e1 1&download=true 9. South African Medical Research Council Burden of Disease Research Unit. Report on Weekly Deaths in South Africa. 2024. https://www.samrc.ac.za/reports/report-weekly-deaths-
- south-africa
 10. National Department of Health RoSA. Saving Mothers 2020 -2022 Triennial Report on Confidential Enquiries into Maternal Deaths in South Africa. 2024.

https://knowledgehub.health.gov.za/system/files/2024-

02/Executive%20%20Report%20%202020-

2022%20Presentation%20Dr%20Sylvia%20Cebekulu .pdf

- 11. World Health Organization. Statement on the antigen composition of COVID-19 vaccines. https://www.who.int/news/item/26-04-2024-statement-on-the-antigen-composition-of-covid-19-vaccines
- 12. World Health Organization. *COVID-19 Vaccination Insights Report (07 June 2024)*. 2024. https://www.technet-21.org/en/resources/report/covid-19-vaccination-insights-report-07-june-2024
- 13. World Health Organization. *WHO SAGE Roadmap for Prioritizing Use of COVID-19 Vaccines*. 2023. https://iris.who.int/bitstream/handle/10665/373987/WHO-2019-nCoV-Vaccines-SAGE-Prioritization-2023.2-eng.pdf?sequence=1
- 14. Edoka I, Kohli-Lynch C, Fraser H, Hofman K, Tempia S, McMorrow M, Ramkrishna W, Lambach P, Hutubessy R, Cohen C. A cost-effectiveness analysis of South Africa's seasonal influenza vaccination programme. Vaccine. 2021 Jan 8;39(2):412-22. https://doi.org/10.1016/j.vaccine.2020.11.028
- 15. Fraser H, Tombe-Mdewa W, Kohli-Lynch C, Hofman K, Tempia S, McMorrow M, Lambach P, Ramkrishna W, Cohen C, Hutubessy R, Edoka I. Costs of seasonal influenza vaccination in South Africa. Influenza and other respiratory viruses. 2022 Sep;16(5):873-80. https://doi.org/10.1111/irv.12987