



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Date:	16 July 2021		
To:	Acting Minister Mmamoloko Kubayi, Honorable Acting Minister of Health	From:	Ministerial Advisory Committee (MAC) on COVID-19

CLOSURE OF SCHOOLS

Problem Statement

There is an increasing number of daily COVID-19 cases in the country, with the highest numbers of cases in Gauteng province. The new (third) wave is also associated with increased identification of the SARS-CoV-2 delta variant, which is recognized to be more transmissible. This has led to increased anxiety about the disease, including about transmission of the virus at schools. The questions that need to be addressed are:

1. Should all schools close immediately, two-weeks prior to the official public school holiday closure date?
2. Should there be a differentiated approach to school closure based on, for example, the age of students, phase of schooling (foundation, intermediate, senior and FET Phase) or geographical location?

Evidence Review

- Transmission of the SARS-CoV-2 virus has been associated with both asymptomatic and symptomatic carriers. Transmission is more likely via symptomatic (sick) individuals who have a higher viral load.¹
- Although with the surge in the COVID-19 pandemic in the community there is a higher possible risk of asymptomatic (but SARS-CoV-2 infected) learners attending schools, generally children of school-going age and adolescents are less likely to become infected with SARS-CoV-2 compared to adults. Adolescents have a higher rate of infection compared to younger children.²
- Children younger than 12 years appear to be less likely to transmit the SARS-CoV-2 virus than adults. Older adolescents (15-18 years) have a slightly lower or similar risk of transmitting the virus compared to adults.³
- Recent (June 2021) epidemiological analysis of South African households shows that

¹ Byambasuren O, Cardona M, Bell K, Clark J, McLaws M-L, Glasziou P. Estimating the extent of asymptomatic COVID-19 and its potential for community transmission: systematic review and meta-analysis. JAMMI. 2020;5(4):223-234. doi:10.3138/jammi-2020-0030

² Epidemiology and clinical characteristics of laboratory- confirmed covid-19 among individuals aged ≤19 years, South Africa, 1 March 2020 – 1 May 2021. Quarterly COVID-19 in children surveillance report. National Institute for Communicable Diseases.

³ Rostad CA, Kamidani S, Anderson EJ. Implications of SARS-CoV-2 Viral Load in Children: Getting Back to School and Normal. JAMA Pediatr. Published online June 11, 2021. doi:10.1001/jamapediatrics.2021.2022.

children are less likely to both acquire and transmit SARS-CoV-2 as compared to adults.⁴

- When children and adolescents are infected, they are more likely to have a milder clinical course of illness compared to adults.³
- Children comprise 35% of the South African population. They account for a relatively small proportion (9%) of SARS-CoV-2 cases and even smaller proportion of admissions to hospitals (4%).³ Most admitted children are infants (<1 year of age) or have associated co-morbidities (other underlying illnesses).
- From March 2020 to May 2021, 401 child deaths have been recorded in South Africa where the child was SARS-CoV-2 positive.³ Most had other severe associated conditions (such as cancer, immunosuppression, or being preterm). Of the 401 deaths, few were directly attributable to COVID.
- There is a paucity of evidence on the specific effects of the delta virus variant on children.
- In schools, transmission typically follows trends in community transmission, rather than preceding or augmenting them.⁵
- Schools have not been associated with frequent outbreaks,⁶ or substantial increases in community transmission as measured by COVID-19–associated hospitalizations.⁷
- Review of the timing of opening and closing schools in relation to changes in COVID-19 incidence does not show any consistent relationship between opening schools and increasing numbers or closing schools and decreasing numbers. For example, at the peak of the second wave case numbers were already reducing before schools were closed, and we would expect any intervention like closing schools to take one to two weeks to show an effect. Similarly, the peak of the second wave occurred while schools were closed. This suggests that schools are not a major driver of transmission in the general community.

⁴ Unpublished data from PHIRST-C study of SARS-CoV-2 transmission (A Prospective Household study of Influenza, and Respiratory Syncytial virus community burden, Transmission dynamics and viral interaction in South Africa – COVID-19 version).

⁵ Leidman E, Duca LM, Omura JD, Proia K, Stephens JW, Sauber-Schatz EK. COVID-19 trends among persons aged 0-24 years—United States, March 1-December 12, 2020. *MMWR Morb Mortal Wkly Rep.* 2021;70(3):88-94. doi:10.15585/mmwr.mm7003e1

⁶ Ismail SA, Saliba V, Lopez Bernal J, Ramsay ME, Ladhani SN. SARS-CoV-2 infection and transmission in educational settings: a prospective, cross-sectional analysis of infection clusters and outbreaks in England. *Lancet Infect Dis.* 2021;21(3):344-353. doi:10.1016/S1473-3099(20)30882-3

⁷ Harris D, Ziedan E, Hassig S; National Center for Research on Education Access and Choice (REACH). The effects of school reopenings on COVID-19 hospitalizations. Published January 4, 2021. <https://www.reachcentered.org/publications/the-effects-of-school-reopenings-on-covid-19-hospitalizations>.

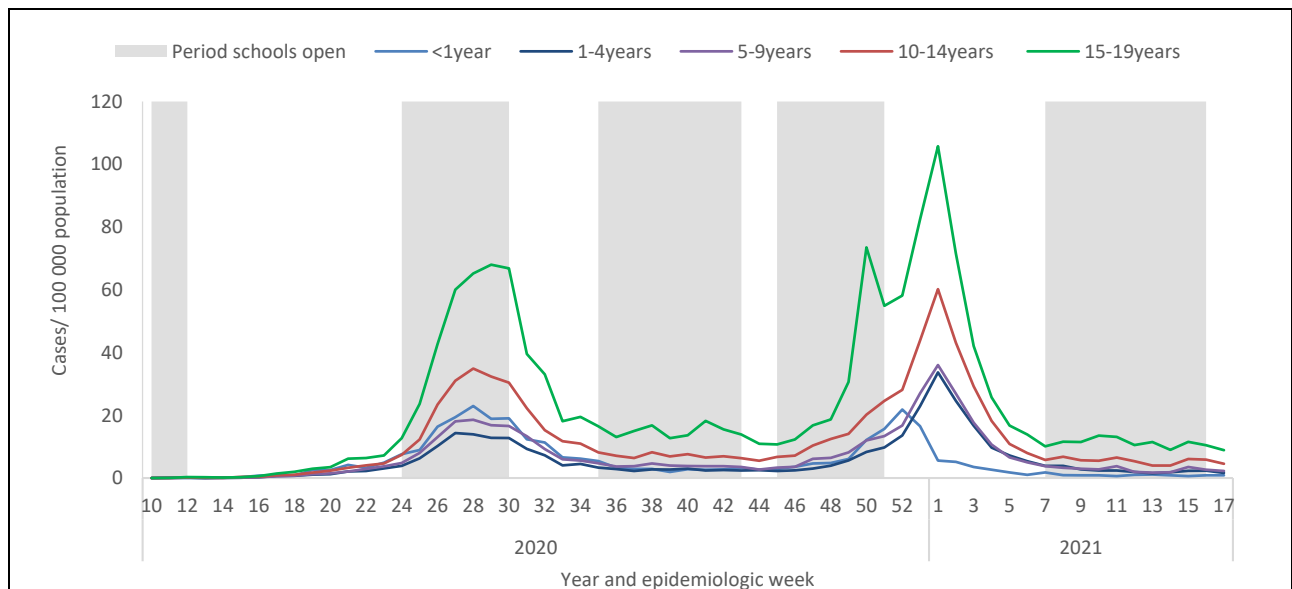


Figure: Weekly incidence per 100 000 population of laboratory-confirmed COVID-19 in individuals aged ≤19 years by age group, South Africa, 1 March 2020 – 1 May 2021 (N=148 768) (personal communication, C Cohen, 26 June 2021)

- Analysis of teacher payroll data showed no relationship between excess teacher mortality and the opening and closing dates of schools between March 2020 and February 2021.⁸
- Emerging evidence from systematic reviews of global school transmission studies suggest very low infection attack rates and SARS-CoV-2 positivity rate in students and staff.^{9,10}
- Layered protective measures (ventilation, masking, etc.) have been shown to be effective in mitigating (reducing) any risk of transmission from school attendance.¹¹ Teacher masking, daily symptom screens, and appropriate isolation and quarantine further reduces this risk.
- There are multiple negative consequences of school closure including:
 - Learning losses (at the primary school level in 2020 have amounted to 50-75% of a year of learning lost relative to the 2019 cohort);^{9,12,13,14}
 - Nutrition and food security; and
 - Psychological safety.

⁸ Shepherd, D., Mohohlwane, N., Taylor, S., & Kotze, J. (2021). Changes in education: A reflection on COVID-19 effects over a year. NIDS-CRAM. (Online). Available: https://cramsurvey.org/wp-content/uploads/2021/05/10.-Shepherd-D.-Mohohlwane-N.-Taylor-S.-_Kotze-J.-2021.-Changes-in-education-A-reflection-on-COVID-19-effects-over-a-year.pdf

⁹ Xu W, Li X, Dozier M, He Y, Kirolos A, Lang Z, Mathews C, Siegfried N, Theodoratou E. What is the evidence for transmission of COVID-19 by children in schools? A living systematic review. *Journal of Global Health*. 2020, 10 (2).

¹⁰ Xu W, Li X, Dozier M, He Y, Kirolos A, Lang Z, Mathews C, Siegfried N, Theodoratou E. What is the evidence for transmission of COVID-19 by children in schools? A living systematic review. <https://uncover-livingreview.shinyapps.io/schoolreview/> (accessed 24th June 2021)

¹¹ Lessler J, Grabowski MK, Grantz KH, et al. Household COVID-19 risk and in-person schooling. *Science*. 2021; eabh2939. Published online April 29, 2021. doi:10.1126/science. abh2939

¹² Spaul, N., & Daniels, R (2021). NIDS-CRAM Wave 4 Synthesis Report. National Income Dynamics Study Coronavirus Rapid Mobile Survey (NIDS-CRAM). (Online). Available: https://cramsurvey.org/wp-content/uploads/2021/05/11.-Van-der-Berg-S.-Patel-L.-_Bridgman-G.-2021-Hunger-in-South-Africa-Results-from-Wave-4-of-NIDS-CRAM.pdf

¹³ Ardington, C. (2021). COVID-19 Learning Losses: Early grade Reading in South Africa. (Online). SALDRU. Available: [https://fundawande.org/img/cms/news/Ardington%202021%20-%20Funda%20Wande%20EC%20learning%20losses%20report%20\(24%20May%202021\)_1.pdf](https://fundawande.org/img/cms/news/Ardington%202021%20-%20Funda%20Wande%20EC%20learning%20losses%20report%20(24%20May%202021)_1.pdf)

¹⁴ Reddy, V. (2021). Counting the cost of lost schooling in South Africa. *The Conversation*. (Online). Available: <https://theconversation.com/counting-the-cost-of-lost-schooling-in-south-africa-160031>

- Continued high adherence to prevention interventions at schools can make a significant difference to risk of acquiring SARS-CoV-2. These include:
 - Ensuring good ventilation and sufficient space;
 - Frequent hand washing;
 - Mask wearing (cover nose and mouth);
 - Regular cleaning of high-touch surfaces; and
 - Symptom screening of learners and staff prior to school entry.

Recommendations

- There is no medical or public health related evidence to support closure of all primary and high schools.
- The need for closure of any school should continue to be determined on an individual school basis and not at a district, provincial or national level.
- Existing guidelines developed by the MAC on COVID-19 Technical Working Group (TWG) on School Closure on how schools manage COVID-19 cases in learners and school staff should be reviewed and updated.

Rationale

- In accordance with the World Health Organization's (WHO) recommendation of weighing up the local risks and benefits of all COVID-19 related actions and using an evidence-based approach, the MAC on COVID-19 determined that the consequences of children not attending school – specifically the severe cognitive, nutritional, and psycho-social costs – continue to outweigh the risks of learners being infected at school and any possible benefits of school closure reducing community infection rates.
- Schools able to fully implement prevention measures may provide a relatively safe and contained environment for many children than their home settings, that is protective against community SARS-CoV-2 acquisition related to unprotected play and exposures.
- Layered protective measures (ventilation, masking, daily symptom screening, etc.) have been shown to be effective in mitigating (reducing) any risk of transmission from school attendance.
- Vaccination of educators and school staff will offer protection against severe COVID-19 disease.
- It is anticipated that COVID-19 infection rates will substantially increase in children, in line with higher community (adult) infection rates. Most child infections are likely to be acquired in the community (at home, at social gatherings, or during activities of daily living [in the street, taxi, malls, etc.]) through adult contact and not at school.
- It is anticipated that class and school closures will increase as more children are infected in the community. It is also possible that educational activities may be curtailed through educator absenteeism as a result of community acquisition.
- School clusters should be closely monitored and additional surveillance focused on schools.
- The view of the MAC on COVID-19 TWG on School Closure is that the benefits of continued school attendance – both in infection risk mitigation and the additional non-medical benefits outlined earlier – continue to outweigh the risks and harms of general closure.

Thank you for consideration of this advisory.

Kind regards,



PROF KOLEKA MLISANA

PROF MARIAN JACOBS

Co-Chairpersons: Ministerial Advisory Committee on COVID-19

DATE: 16 July 2021

CC:

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