CONTINUING PROFESSIONAL DEVELOPMENT | COCHRANE CORNER
https://doi.org/10.1071/HC19569

CSIRO PUBLISHING
The Royal New Zealand College of General Practitioners
Te Whare Tohu Rata o Aotearoa
Journal of Primary Health Care

Coronavirus (COVID-19): measures implemented in the school setting to contain the COVID-19 pandemic

Vanessa Jordan[A,*] PhD

For full list of author affiliations and declarations see end of paper

*Correspondence to:
Vanessa Jordan
University of Auckland, Auckland, New Zealand
Email: v.jordan@auckland.ac.nz

Published: 13 April 2022

Cite this:
Jordan V
Journal of Primary Health Care 2022; **14**(1): 87–88.
doi:10.1071/HC19569

Cochrane Review: Krishnaratne S, Littlecott H, Sell K, Burns J, Rabe JE, Stratil JM, Litwin T, Kreutz C, Coenen M, Geffert K, Boger AH, Movsisyan A, Kratzer S, Klinger C, Wabnitz K, Strahwald B, Verboom B, Rehfuess E, Biallas RL, Jung-Sievers C, Voss S, Pfadenhauer LM. Measures implemented in the school setting to contain the COVID-19 pandemic. *Cochrane Database of Systematic Reviews* 2022, Issue 1. Art. No. CD015029. doi:10.1002/14651858.CD015029.[1]

Background

On the 11th of March 2020 the World Health Organisation (WHO) declared the novel coronavirus (COVID-19) outbreak a global pandemic.[2] We have just passed the 100th week of education disruption across the globe. Worldwide over 151 countries have had national school closures.[3] In New Zealand we have over a million affected learners.[3] There are concerns that COVID-19 and the associated control measures such as school closures will negatively impact on children's health and well-being.[4] It is therefore important to measure the impact and effectiveness of the measures implemented during the COVID-19 pandemic.

Clinical bottom line

Reducing opportunities for contact within the school setting was shown to reduce transmission, hospitalisations, and death in multiple modelling studies. Although this reduced contact, which was achieved by reducing the number of students on campus, led to a reduction in the number of days spent in school this was offset by the number of days students would have lost due to quarantine as a result of higher case numbers. Wearing masks, improved ventilation and cleaning regimes also reduces transmission and reduced healthcare utilisation. These measures resulted in more days of school attendance overall. Testing and surveillance without reduction in contact in a school led to a high number of hospitalisations and larger disruptions to education (Table 1).[1]

Table 1. Summary of measures implemented within schools to reduce the transmission of COVID-19.

Implementation measures	Findings	Evidence
Measures reducing the opportunity for contacts	Transmission related outcomes: the majority of modelling studies showed a reduction in the proportion of cases, risk of infection, the risk of death and transmission to other schools	22 modelling studies providing very low quality of evidence
Examples: reducing the numbers of students present by attending alternate days or weeks	Healthcare utilisation: all modelling studies predicted that these measures would reduce hospitalisation and admission to intensive care units	5 modelling studies providing very low quality of evidence
	Societal, economic and ecological outcomes: two studies predicted that this would lead to a reduction in days spent in school but this was offset by the prevention of days lost due to quarantine or isolation	3 modelling studies providing very low quality of evidence
Measures making contacts safer	Transmission related outcomes: full school reopening with high-face-mask adherence as a mandatory mask policy, significantly reduced the increase in community infections due to school reopening (3 times the number of infections). The reproduction number and excess deaths were also predicted to be reduced using these measures. Enhanced cleaning policies and air purifiers with HEPA filters also proved effective in reducing transmission. Hourly handwashing was not predicted to result in any decrease in transmission	10 modelling studies providing very low quality of evidence
Examples: face masks, improving, cleaning, handwashing	Healthcare utilisation: modelling showed mask wearing resulted in a reduction in hospitalisation for students, staff and family members. A combination of mask wearing ventilation and other measures also resulted in decreased healthcare utilisation	2 modelling studies providing very low quality of evidence
	Societal, economic and ecological outcomes: multiple interventions including mask wearing, air purifiers and cleaning would result in more days spent at school	2 modelling studies providing very low quality of evidence
Surveillance and response measures	Transmission related outcomes: both mass testing resulting in isolation and symptom-based screening resulting in isolation reduced the number of cases. With mass testing predicted to reduce death rate and reproduction rate if the ability to trace contacts was sufficient	9 modelling and 1 observational study providing very low quality of evidence
Examples: screening for symptoms with resulting isolation or quarantine	Healthcare utilisation: testing strategies in schools was predicted to lead to higher hospitalisations than strategies that would reduce student contact	1 modelling study providing very low quality of evidence
	Societal, economic and ecological outcomes: closing schools as a result of positive tests results in large disruptions to education. Even if there is no whole school closure, isolation of contacts will result in reduced in person attendance	1 modelling study providing very low quality of evidence
Multicomponent measures A combination of the three above measures	Transmission related outcomes: keeping schools open with a variety of measures in place to reduce transmission still resulted in high case numbers when compared to full school closures	2 modelling and 1 observational study providing low to very low quality of evidence

References

1 Krishnaratne S, Littlecott H, Sell K. Measures implemented in the school setting to contain the COVID-19 pandemic. *Cochrane Database Syst Rev.* 2022; 1: CD015029. doi:10.1002/14651858.CD015029

2 World Health Organization. WHO Director-General's opening remarks at the media briefing on COVID-19. 11 March 2020.

3 UNESCO. Education: from disruption to recovery. 2022. Available at https://en.unesco.org/covid19/educationresponse [Accessed 1 March 2022]

4 Golberstein E, Wen H, Miller BF. Coronavirus Disease 2019 (COVID-19) and mental health for children and adolescents. *JAMA Pediatr.* 2020; 174(9): 819–820. doi:10.1001/jamapediatrics.2020.1456

Author affiliation
[A]Assoc. Professor, University of Auckland, Auckland, New Zealand