**Summary of findings 3.** Summary of findings: surveillance and response measures

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| **Intervention subcategory: surveillance and response measures ‐ mass testing and isolation** | | | |
| **Outcomes** | **Number of Studies (modelling studies)** | **Summary of Evidence** | **Certainty of Evidence (GRADE)** |
| **Outcome category: transmission‐related outcomes** | | | |
| Number or proportion of cases | 7 | The seven studies that looked at the impact of mass testing and isolation interventions on the number or proportion of cases all found positive results. One study found that measures that limit transmission and detect, trace, and quarantine cases within schools could lead to reductions in the cumulative COVID‐19 infection rate among students, teachers, and staff by over 14‐fold. However, these measures were implemented alongside classroom cohorting, face masks, physical distancing, and handwashing protocols in schools, so it is not possible to comment on the impact of these measures alone. Another study suggested that although testing and isolation strategies could lead to reductions in transmission, their effectiveness on their own was low, and when combined with strict social‐distancing measures, and a reduction in community transmission, they could be more effective. | Very low |
| Number of cases detected | 1  observational/  experimental | One observational study looked at the impact of mass testing strategies on the number of cases detected due to the intervention. The main goal of the study was to evaluate the practical application of a self‐performed, high‐frequency antigen test in a school setting and 10,768 of these tests (99.37%) were recorded to have been valid and 113 negative, 47 (0.43%) were recorded as invalid and 21 (0.19%) as positive (either true or false). The study found that 0.15% of all antigen tests (16 tests) gave false‐positive results. | Very low |
| Reproduction Number | 1 | One study looked at two different testing strategies and found that test–trace–isolate strategies would need to test a sufficiently large proportion of the population with COVID‐19 symptomatic infection and trace their contacts with sufficiently large coverage, for R to diminish below 1. | Very low |
| Number or proportion of deaths | 2 | Two studies assessed the impact of testing and isolation strategies on the number and proportion of deaths. They showed positive results overall. One study only showed results in a graphical way and suggested that more intense testing and isolation measures would lead to fewer deaths than less intense measures. The other study found that, under a testing strategy, the excess proportion of deaths in teachers would be 8.12 (95% CI 0.00 to 47.85), compared to 0 for students and 0.5 (95% CI ‐2.72 to 3.68) in the community. The effect sizes are moderated by the model parameters such as relative susceptibility and infectiousness of children, and extent of community transmission amid reopening. The effect sizes are moderated by the model parameters, such as relative susceptibility and infectiousness of children, and extent of community transmission amid reopening. | Very low |
| Shift in pandemic development | 4 | The four studies that assessed the impact of mass testing and isolation strategies on the timing and progression of the epidemic found that testing and isolation could slow or prevent a second wave of the epidemic. The studies suggest that the timing of the epidemic depends on the degree to which testing and isolation strategies are being implemented and the combination of testing and tracing. | Very low |
| **Outcome category: healthcare utilisation** | | | |
| Number or proportion of hospitalisations | 1 | One study found that reopening schools with a weekly or monthly testing strategy for teachers and students would lead to a higher number of hospitalisations compared to reopening under strategies to reduce contacts. The excess proportion of hospitalisations in teachers under a testing strategy would be 162.47 (95% CI 0.00 to 588.24), compared to students 0.58 (95% CI 0.00 to 15.27), and the community 3.68 (95% CI ‐7.27 to 15.54). The effect sizes are moderated by the model parameters, such as relative susceptibility and infectiousness of children, and extent of community transmission amid reopening. | Very low |
| **Outcome category: societal, economic and ecological outcomes** | | | |
| Number of days spent in school | 1 | One study found that policies that close the school when infections are detected substantially reduce the total number of days that students can attend in person. These effects are larger in schools operating full‐time than in schools using hybrid approaches. In secondary schools where students are attending daily and the community infection rate is at a moderate level, closing the school for 14 days for each detected infection would be highly disruptive. Even in the absence of a school closure policy, quarantines of the classmates and bus mates of infected students are likely to reduce in‐person attendance for the typical student. | Very low |
| Resources costs | 3 | Three studies looked at the cost of testing interventions and showed mixed results. One study used health economic modelling to look at the human resource costs of testing strategies. The study found that testing students and employees in primary and secondary schools over 1.5 months would cost CAD 816.0 million, compared to no intervention. Another study identified one high‐performing strategy of community‐based testing with a per person per day cost as low as USD 1.32. | Very low |

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| **Intervention subcategory: symptom-based screening and isolation** | | | |
| **Outcome** | **Number of Studies (modelling studies** | **Summary of Findings** | **Level of Certainty (GRADE)** |
| **Outcome category: transmission-related outcomes** | | | |
| Number or proportion of cases | 2 | Two studies found that policies that screen and isolate suspected cases can, overall, decrease the attack rate. The most effective testing and isolation strategies used a combination of early testing together with symptom screening and isolation of symptomatic cases. These strategies were often implemented alongside other transmission mitigation measures, such as physical distancing and cohorting, so it is not possible to assess the impact of symptom screening and quarantine measures alone. | Very low |
| Shift in pandemic development | 1 | One study found that implementing a policy of two days of home isolation following the last episode of fever, predicted a reduction in all outcome categories would reduce the peak number of infected people from 148 (interquartile range (IQR) 82 to 213) to 124 (IQR 58 to 184)). The interval between the first and last day with at least two cases would increase to 145 (IQR 127 to 157) from 139 (IQR 120 to 154). The effects varied according to the rate of detecting fever. | Very low |

CAD: Canadian Dollars; CI: confidence interval; IQR: interquartile range; USD: US Dollars.