**Summary of findings 1.** Summary of findings: measures reducing the opportunity for contacts

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| **Reducing opportunity for contacts: reducing the number of students and contacts\*** | | | |
| **Outcomes** | **Number of Studies (modelling studies)** | **Summary of Evidence** | **Certainty of Evidence (GRADE)** |
| **Outcome category: transmission‐related outcomes** | | | |
| Number or proportion of cases | 13 | All studies but one study predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the number or proportion of cases. One study predicted mixed effects. The variation in the magnitude of effect might be explained by the level of community transmission, susceptibility of individuals to a SARS‐CoV‐2 infection as well as implementation of community‐based interventions. | Very low |
| Risk of infection | 2 | Both studies predicted reducing the number of students and reducing the number of contacts between students led to a reduction in the risk of infection. In one study, a reduction in students led to a proportional reduction in the risk of infection. In another study, reducing the number of students to 50% by introducing alternating attendance schedules led to a predicted risk of infection in students between 0.2% to 3.1% and 0.4% to 4.3% in teachers and staff. One study predicted that the lowest risk of infection can be achieved by limiting attendance to primary school students and reducing their cohort size by 50% (risk of infection in teachers: 0.2% to 0.7%; risk of infection in students: 0.1% to 1.0%) The variation in the magnitude of effect might be explained by varying levels of susceptibility of individuals to a SARS‐CoV‐2 infection, age of the students targeted by the intervention as well as the level of community transmission. | Very low |
| Reproduction Number | 6 | All but one study predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the reproduction number. One study predicted no consistent trend across different scenarios of alternating schedules and reduction of students. The variation in the magnitude of effect might be explained by the level of community transmission as well as the age of students targeted by the intervention. | Very low |
| Number or proportion of deaths | 5 | All studies predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the number or proportion of deaths when compared to schools operating without measures in place. In all populations (general population; teachers and staff; students), the number of deaths was reduced by reducing the number of students. The variation in the magnitude of effect might be explained by the level of community transmission, age of students, susceptibility of children to a SARS‐CoV‐2 infection as well as implementation of community‐based interventions. | Very low |
| Risk of death | 1 | One study predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the risk of death in various populations (students, teachers, general population) when compared to operating schools without any measures. If only 50% of all students attend school, the risk of death can be reduced to 3.0% (95% CI 3.0% to 3.0%) in teachers, in family members to 0.4% (95% CI 0.4% to 0.5%) and in the general population to 4.0% (95% CI 4.0% to 5.0%) if countermeasures such as face masks are in place. | Very low |
| Shift in pandemic development | 5 | All studies predicted that reducing the number of students and reducing the number of contacts between students led to a positive shift in the pandemic development when compared to schools operating without measures in place. In all studies, the reduction in the number of students was predicted to slow the pandemic development, reduce the length of an outbreak or time until the maximum intensive care bed capacity would be achieved. The variation in the magnitude of effect might be explained by the implementation of community‐based interventions. | Very low |
| Number or proportion of infected schools | 1 | One study predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the number of schools with at least one infected individual when compared to operating schools without any measures. With all students attending, the proportion and number of schools with at least one infected individual on the premises ranged between 4% and 20% (661 to 3310 primary schools); if only a third of all primary school students attending, the risk could be reduced to 1% and 5.5% of primary schools (178 to 924 schools). The variation in the magnitude of effect might be explained by the level of community transmission. | Very low |
| Risk of transmission to other schools | 1 | One study predicted that reducing the number of students and reducing the number of contacts between students led to a reduction in the risk of transmission to another school when compared to operating schools without measures in place. While the risk ranged between 0.42% and 3.6% for 100% attendance, it was the lowest if only certain grades of primary school attended school, with the risk ranging between 0.01% and 0.09%. The variation in the magnitude of effect might be explained by the level of community transmission. | Very low |
| **Outcome category: healthcare utilisation** | | | |
| Number or proportion of hospitalisations | 2 | Both studies predicted that reducing the number of students and thus reducing the number of contacts between students led to a reduction in the number or proportion of hospitalisations when compared to operating school without any measures. The variation in the effect might be explained by the level of community transmission, susceptibility of individuals to a SARS‐CoV‐2 infection as well as implementation of community‐based interventions. | Very low |
| Number or proportion of cases requiring intensive care | 3 | All studies predicted that reducing the number of students and thus reducing the number of contacts between students led to a reduction in the number or proportion of cases requiring intensive care when compared to operating school without any measures. The variation in effect might be explained by the level of community transmission, age of students, susceptibility of individuals to a SARS‐CoV‐2 infection as well as implementation of community‐based interventions. | Very low |
| **Outcome category: societal, economic and ecological outcomes** | | | |
| Number of days spent in school | 3 | Three studies assessed the number of days spent in school. Of these, two studies predicted that reducing the number of students and reducing the number of contacts between students led by design to a reduction in the number of planned days spent in school (60% to 83% of all school days to be spent at home as shown by one study) when compared to operating schools without measures in place. In one study, the number of days lost to classroom closures varies between 76.0 ± 59.5 SD for a ratio of students to teacher of 8:1 and 1157.7 ± 684.3 SD for a ratio of 30:1. The variation in the magnitude of effect might be explained by the level of community transmission. | Very low |
| **Reducing opportunity for contacts: reducing contacts\*** | | | |
| **Outcomes** | **Number of Studies** | **Summary of Evidence** | **Certainty of Evidence** |
| **Outcome category: transmission‐related outcomes** | | | |
| Number or proportion of cases | 3 | All studies predicted that reducing the number of contacts between students led to a reduction in the number or proportion of cases. One study reported a reduction in the cumulative infection rate from between 6.4% and 17.2% for students and between 9.5% and 24.6% for teachers and school staff, depending on the level of community transmission. The variation in the magnitude of effect might be explained by the level of community transmission and susceptibility of individuals to a SARS‐CoV‐2 infection. | Very low |
| Reproduction number | 3 | Two studies predicted that compared to operating schools without reducing the number of contacts, a reduction in the number of contacts between students led to a reduction in the reproduction number. One study graphically predicted that reducing the number of contacts while maintaining the number of students at 100% did not have a large impact on the reduction in the reproduction number. The variation in the magnitude of effect might be explained by the susceptibility of individuals to a SARS‐CoV‐2 infection. | Very low |
| Shift in pandemic development | 2 | One study predicted that reducing the number of contacts between students led to a positive shift in the pandemic development. Implementing an alternating attendance schedule by creating rotating cohorts with a weekly rotating schedule extends the period of instruction from 10 to 12 weeks to 18 to 22 weeks until reaching the stopping rule on cumulative prevalence of 5%. With regards to the length of an outbreak, one study predicts that an alternating attendance schedule, while maintaining the number of students, performs slightly better with regards to mean and median outbreak lengths than a non‐alternating attendance schedule, but probably not in a significant way. | Very low |
| **Outcome category: healthcare utilisation** | | | |
| Number or proportion of hospitalisations | 2 | Two studies predicted that reducing the number of contacts between students led to a reduction in the number and proportion of individuals requiring hospitalisation. The variation in the magnitude of effect might be explained by the susceptibility of individuals to a SARS‐CoV‐2 infection, co‐interventions, the level of community transmission, as well as the age of students. | Very low |
| **Outcome category: societal, economic and ecological outcomes** | | | |
| Number of days spent in school | 3 | Two studies predicted that reducing the number of contacts by implementing an alternating attendance schedule or enforcing students remain within their classroom led to more days spent in school than when the number of contacts are not reduced . One study predicted no effect: reducing the number of contacts between cohorts alongside other countermeasures (non‐pharmaceutical interventions; screening) predictably leads to an equal percentage of school days spent at home as if no measures would be in place (~5% to 10%). | Very low |

CI: confidence interval; SARS‐CoV‐2: severe acute respiratory syndrome coronavirus 2; SD: standard deviation.

\*We differentiate between measures *reducing the number of students and contacts* (i.e. reducing the number of students on school premises automatically reduces the number of contacts with or without additional contact‐reducing measures being implemented) and measures *reducing contacts* (i.e. contacts between students as well as between students and school staff can also be reduced through forming cohorts with all students present on school premises).