

COVID-19 MANAGEMENT IN THE EDUCATIONAL SYSTEM: ADVICE FOR SEPTEMBER 2021

RAG meeting 29/06/2021

DISCLAIMER: *This advice presents the view of the RAG during its meeting end of June and not the final decision. The advice was presented at the RMG on 01/07/2021 who did not validate it but formulated further questions and remarks. Final decisions on this subject will need to be taken at the level of the competent political level.*

CONTEXT AND QUESTION:

Since the start of the COVID-19 epidemic, many non-pharmaceutical interventions have been applied in society and schools have been no exception. Although continuity of education has been considered a priority, the impact on daily (school) life for children has been severe. As the vaccination campaign progresses and general measures in society are relaxed, the question is raised which measures should be maintained for children. In particular, contact tracing and quarantine measures for children are being questioned by some, as the direct impact of COVID-19 in children themselves is limited and the clinically most vulnerable population has been vaccinated. On the other hand, children will not (or very limitedly) be vaccinated by September 1st. Therefore, schools and children could theoretically become pools of intense virus circulation, from which the virus could feed back into vulnerable groups. Therefore, measures like repetitive screening might be of some use.

This advice is part of a broader advice in collaboration with the GEMS. Additionally, it is linked with some ethical questions and societal priorities, for which the decisions will need to be taken at the political level.

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1. Recommendations

GENERAL

- Long-term predictions are difficult to make since the effect of relaxation of restrictions, contact behavior, international mobility, variant replacement, vaccine effectiveness and the speed of the remainder of the vaccination program (including projected vaccine deliveries) etc. all need to be taken into account. **A close monitoring of the situation and careful evaluation before proceeding with further relaxations will be paramount.**
- The RAG reiterates the recommendation that **compulsory education should have the highest priority and (partial) closing of schools should be the last resort.** Throughout summer, the aim should be to have schools reopen fully in September. This should be born in mind when deciding on further possible relaxations during summer (e.g. large-scale events) that could have a negative impact on the epidemiological situation and jeopardize a full return to school.
- If the epidemiological situation would require more stringent measures, a gradual step-up approach like in the previous color coding system should be used. The RAG reiterates that measures for afterschool-activities (hobbies, academy, sports...) can never be less strict than at school. Afterschool activities should be restricted before considering (partial) school closures and measures should be taken in the broader society (e.g. travel restrictions, telework, large gatherings...)
- Contact tracing has put an enormous strain on school health services. This has resulted in insufficient resources for other important preventive tasks, like routine vaccination, amblyopia screening and follow-up of physical and mental health of children and adolescents. **Regardless of the COVID-19 situation, it is of paramount importance that enough resources are made available for all preventive medicine in children and adolescents.**
- As previously advised, color coding should follow overall intensity of the epidemic in the society (especially with regards to hospitalizations and ICU capacity) and not be based only on detection of cases in schools or among children and adolescents. The colorcodes in this document are linked to the thresholds as defined by the RAG epidemiologie.

Outbreak management:

- Previous guidelines remain largely unchanged (see flow charts page 4-5).
- Interventions should first be done at the level of the class/group, before being expanded to the entire school.

CODE GREEN IN SEPTEMBER (alarmniveau 1)

Prevention:

- Particular attention should be accorded to adequate ventilation, as good air quality is important for COVID-19 as well as in general.
- Mask wearing is not compulsory. Regular hand hygiene and coughing etiquette are good practices that should always be maintained. Persons who are sick should stay at home.
- Regular hygiene and cleaning remain particularly important, but frequent disinfection of surfaces or shared objects is NOT recommended. If necessary, material can be shared between students.

Testing:

- All children ≥ 6 years with possible COVID-19 symptoms should be tested and remain isolated whilst attending the result.
- Routine screening is not considered useful in this context. Sentinel surveillance (routine testing of asymptomatic students and staff in a representative sample of schools) could be considered to monitor ongoing transmission. Extra testing of asymptomatic individuals should not lead to isolation and/or quarantine of persons who would not have been identified outside of the surveillance program.

Contact tracing:

- All children that have a household member with confirmed COVID-19 need to comply with quarantine.
- All children in the same class in kindergarten and primary school (or group for afterschool activities) are considered low-risk contacts and do NOT require quarantine. They do need testing if they present any possible COVID-19 symptoms. If 2 confirmed COVID-19 cases with a possible link within the class group are detected within 14 days, the entire class goes into quarantine for a period of min. 7 days.
- For children and adolescents in secondary school, high-risk contacts need to undergo quarantine and testing. High-risk contacts are (only) those that had an identified cumulative face-to-face exposure of $>15'$ at $<1,5m$, either within the classroom or outside, or had physical contact like hugs or kisses. Exceptions for fully vaccinated persons apply like in the broader society.
 - to limit the number of high-risk contacts and facilitate tracing, fixed seating in classes is helpful
 - if there are doubts about risk classification of classmates, testing low-risk contacts (as previously advised by the RAG) could be considered.

CODE YELLOW (alarmniveau 2): (*additional to measures of code green*)

Prevention:

- All students and staff in secondary school wear masks, except when distance and adequate ventilation¹ are assured or when working in silence (e.g. during exams or tests) and adequate ventilation¹ is assured.
- All staff in primary schools wear masks, except in their own classroom with their class.

Testing:

- Repeated screening of secondary students and staff can be useful (1x/week if PCR on saliva used, 2x/week if rapid Ag tests used, cf. previous advices). Screening should be offered to all, but will be most useful in non-vaccinated individuals.

Contact tracing:

- Mask wearing is taken into account when evaluating close contacts

¹ « adequate ventilation » should be assessed using the same standards and norms as those that are applicable in other sectors : see [advice TaskForce Ventilation](#)

CODE ORANGE (alarmniveau 3): (additional to measures of code yellow)

Prevention:

- No more afterschool activities, except if adequate physical distancing and ventilation¹ are guaranteed. “Voor- en naschoolse opvang” can be continued but with particular attention to avoiding indoor mixing of groups as much as possible or have adequate physical distancing between groups and ventilation in place.
- Indoor mixing of groups to be avoided
- Primary school students from 5th grade to wear masks when indoor

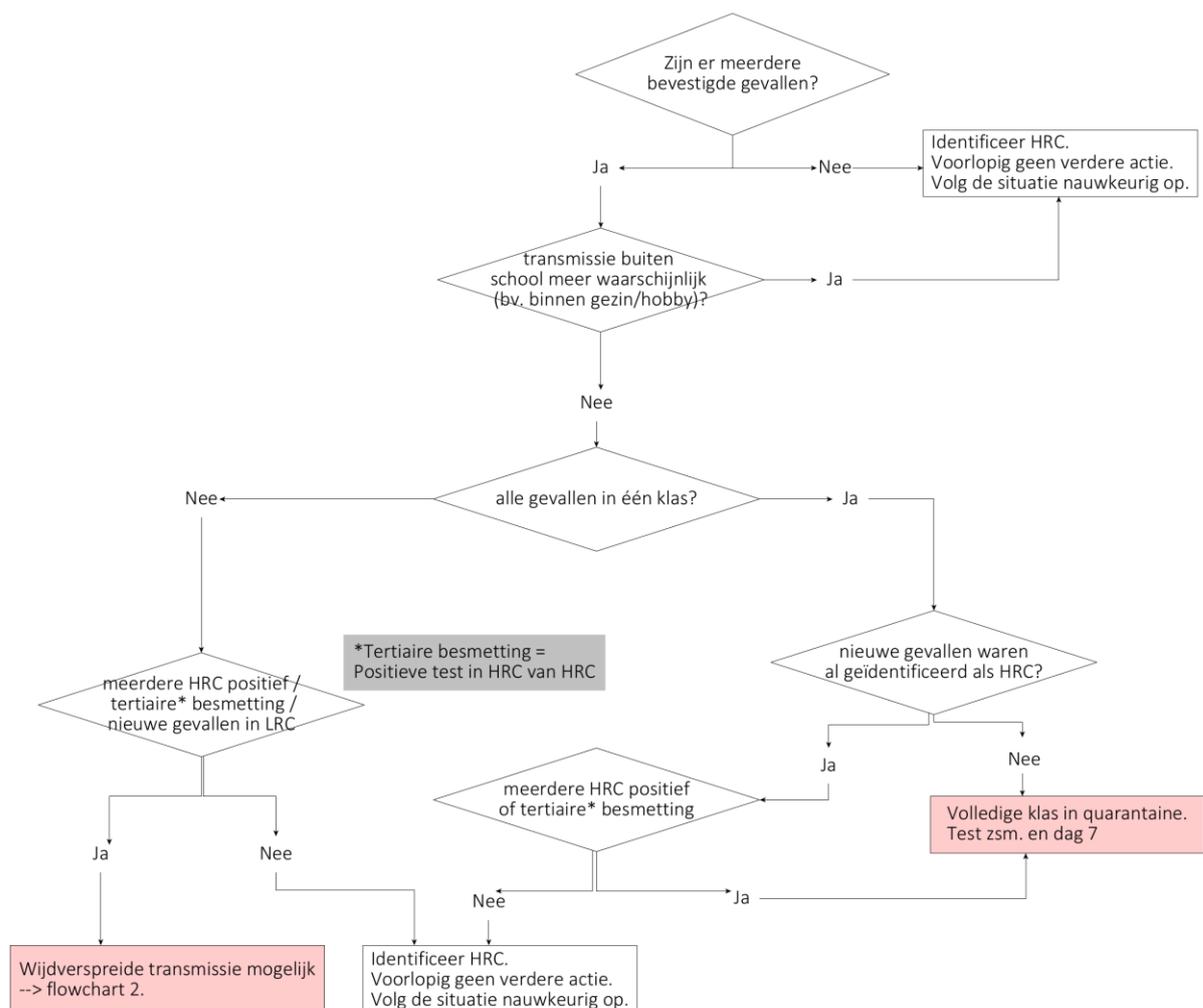
Contact tracing:

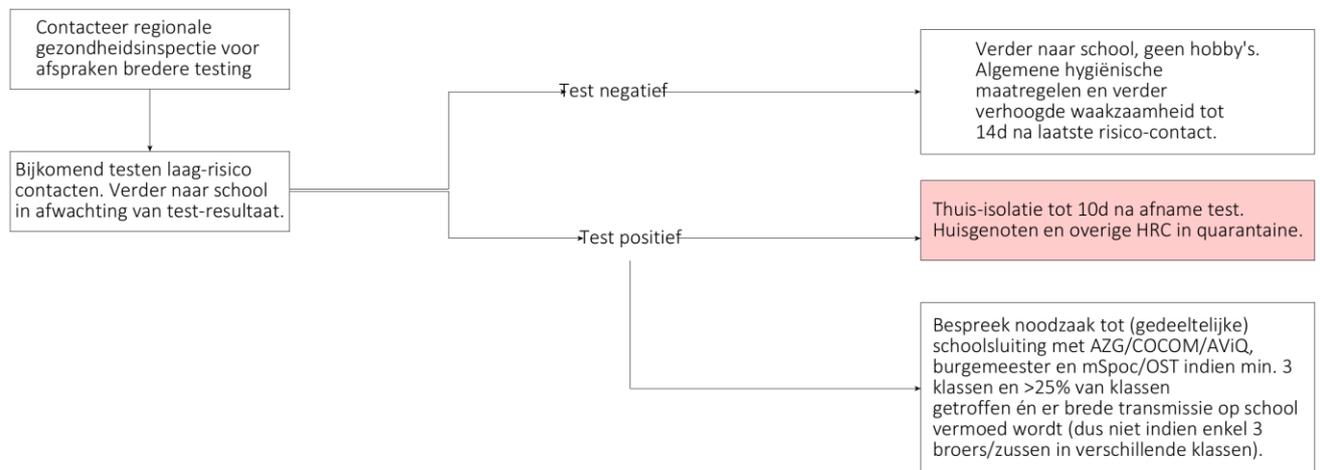
- Children in primary school: all children of the same class are considered high-risk contacts if an index case is detected.

CODE RED (alarmniveau 4):

Prevention:

- Secondary school students 50% distance learning





2. Elements of discussion

- According to a recent [ECDC threat assessment brief](#), a new surge of **hospitalizations** is to be expected by end of summer if measures are further relaxed. This is due to the impact of the delta variant and despite the ongoing vaccination campaign (see figure Annex 1). Many modelling exercises point in the same direction: a return to pre-pandemic behavior in September will lead to a severe fourth wave.
- The burden of disease (severe direct effects) of COVID-19 is much lower in children and adolescents than among older age groups. Uncertainty remains regarding the size of the impact of infections in children on the overall circulation of the virus, especially in view of an uneven vaccination coverage.
- Vaccination coverage in some groups and regions remains suboptimal, increasing the risk of outbreaks. Protection against severe disease is high in those vaccinated, but not 100%. However, societal choices might need to be made regarding how much of the responsibility should be put on children and adolescents once everyone has had the chance to be vaccinated.
- Contact tracing is generally considered to be especially useful at low levels of virus circulation, when viral spread can be more easily controlled. At higher levels of circulation, it can be useful to keep children in school and have a more targeted approach.
- Acceptance and compliance with quarantine and isolation measures for asymptomatic persons has already importantly decreased and will be (very) low during favorable epidemiological periods. We should however remain vigilant (cf. predicted 4th wave) and are not (yet?) in a situation where contact tracing in schools can be abandoned altogether. If the situation would evolve more favorable than anticipated (e.g. increase in cases, NOT followed by increases in hospitalization), this advice can be re-evaluated.
- Therefore, it is important to **limit the number of people that are identified as high-risk contacts**. For those high-risk contacts, measures should remain clear and intelligible: stay at home, do not have contacts, get tested. However, it seems the more lenient approach that was in place in primary schools before January (all classmates LRC if 1 case) was a valid alternative.
- Although extracurricular activities are also important for children, low-risk contacts have had an identified exposure to SARS-CoV-2 and should limit their contacts. They can continue school attendance (important also to allow parents to continue working and avoiding children quarantining with their grandparents) but should not participate in hobbies, academy, sports etc.

- There is a trade-off between preventive measures and the impact of one index case in school: continuous mask wearing is uncomfortable but will limit the number of students that require quarantine if one case is detected in a class. Therefore, with increasing incidence and hence a higher risk of having an index case in the class, it is important to have more preventive measures in place.
- Preventive measures should be implemented early enough, to avoid escalation to a worse phase where those measures will not suffice anymore and have little impact.
- CDC advises that screening is especially useful during times of high prevalence when false-positive results will be less of a problem. However, unpublished results from France show that repetitive testing should be implemented early enough to be useful. Several RAG members have highlighted the high costs and logistic burden of a generalized screening approach.
- There seem to be legal constraints that hinder differentiating preventive measures like mask-wearing and preventive testing according to vaccination status (vaccination status = medical information). Moreover, if VOCs with immune escape circulate, the protection offered by vaccination against transmission might be significantly decreased.
- Risk perception and communication will be very important. All parents should feel comfortable allowing their children to attend school.
- Several countries have implemented repetitive screening of staff and students (see 6.1), but clear evidence is lacking on the impact of these measures.

3. Belgian data on infections in children

A thematic report covering the entire school year 2020-2021 is in preparation. Some key graphs and figures are already presented below, based on the different surveillance systems in place.

Figure 1. Overview of key epidemiological indicators for COVID-19 for total of children 0-17 years, Belgium, 01/09/2020-07/06/2021. School holidays are shaded in grey.

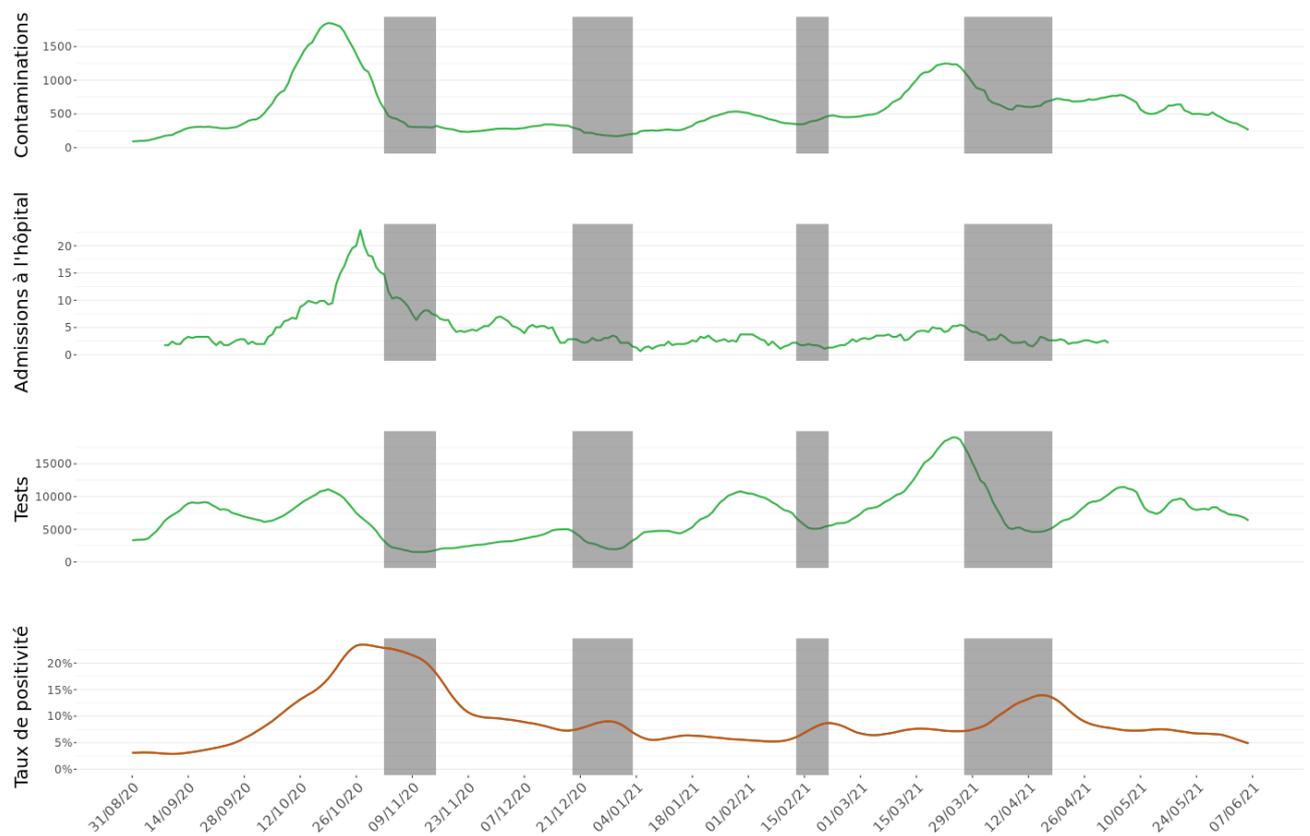


Figure 2. 14-day cumulative incidence of COVID-19 cases /100 000 (upper), test-positivity rate (middle) and number of tests /100 000 (lower) by age group, 01/09/2020-07/06/2021, Belgium. School holidays are shaded in grey.

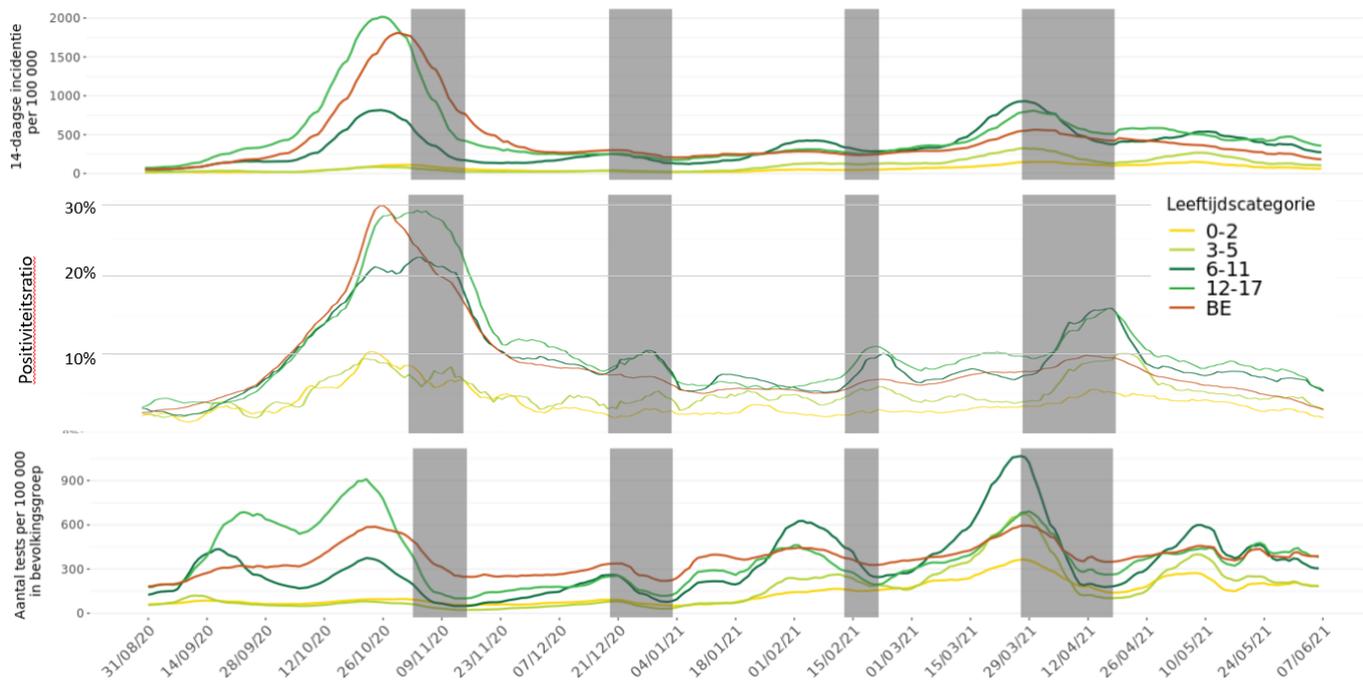
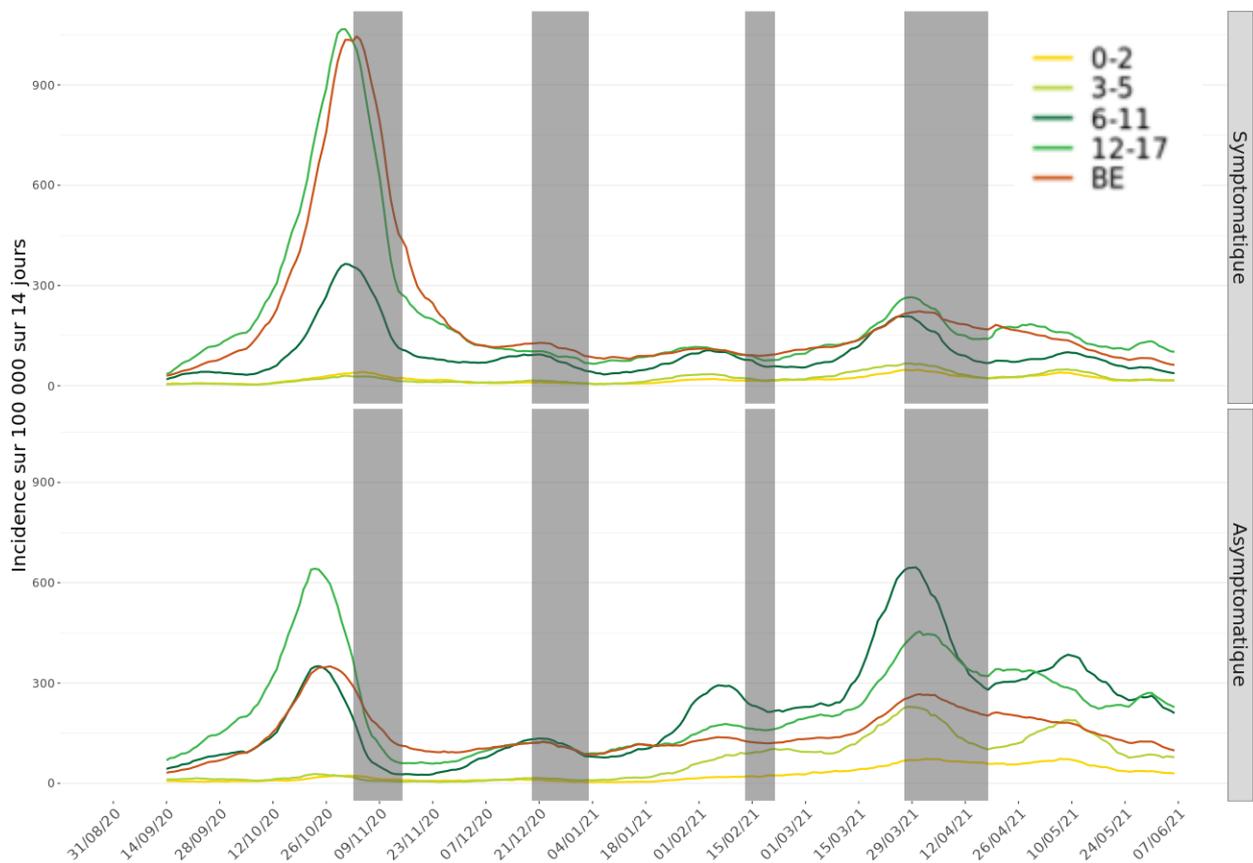


Figure 3. 14-day cumulative incidence of COVID-19 cases by age group and symptom status at time of testing, Belgium, 01/09/2020-07/06/2021. School holidays are shaded in grey.

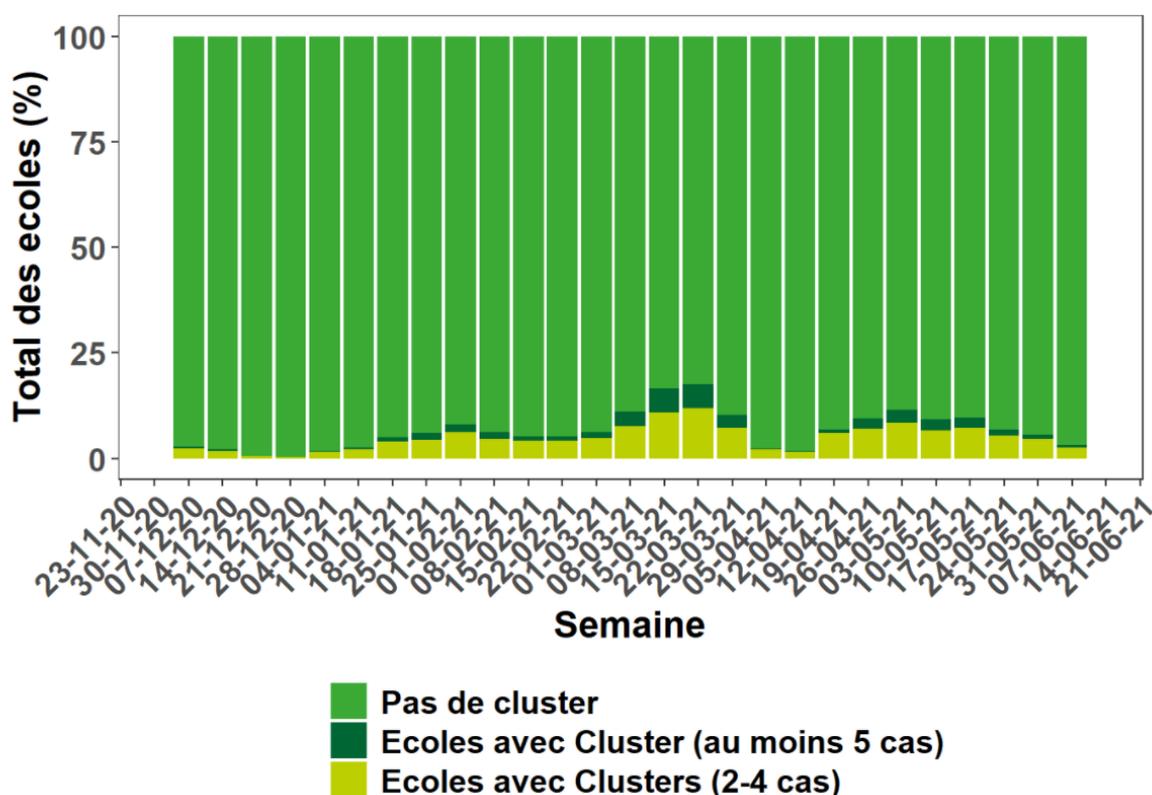


From the previous 3 figures, we can conclude:

- Test-positivity rate and incidence per age group (between 0-17 years) generally show the same trends: both are high when intense virus circulation exists and decrease with an improving epidemiological situation. However, especially since changes in test strategy in 2021, number of tests decreases rapidly during school holidays, which is mirrored by an increase in test-positivity rate. Especially since beginning 2021, test-positivity rate has been higher in 6-17y old than the average for the entire population.
- After a change in definition of high-risk contacts in children in primary schools (and hence increased testing in children of primary school age), there is a clear increase in tests and in detection of asymptomatic cases (symptom status at time of testing). **In contrast to the end of 2020, apparent increases in incidence in children in 2021 were not followed by increased number of hospitalizations for COVID-19 in children.**
- Therefore, it seems that **school presence (and the work of school health services and intensive case finding and contact tracing) has a clear impact on the detection rate of cases in children**: a bigger proportion of all cases (including asymptomatic) are detected during school periods than during school holidays. This makes it difficult to interpret trends and compare between periods where schools are open and when they are closed. A similar phenomenon has been reported by researchers in Spain (1).

At any given point in time during the past school year, a large majority of schools did NOT have any COVID-19 clusters. When clusters are reported, they are mostly small (2-4 cases), but mid-March some large clusters (>60 infections) have been reported.

Figure 4. Proportion of schools reporting (no) active clusters, 13/11/2020-07/06/2021, Belgium



UHasselt and INSERM jointly developed a model for modelling infections in a primary school environment. The model explores different scenarios, one with testing based on symptoms and one with repetitive testing. For symptomatic cases, an Ag RDT is used, for asymptomatic, an RT-PCR.

Preliminary results pointed towards a combination of testing of all symptomatic people and high-risk contacts with repetitive testing of teachers, as the probably best strategy. This model did however not take into account increased transmissibility of new VOCs nor vaccination of teachers.

CHU Liège conducted a study of weekly testing of students, staff and parents on saliva samples in one selected primary school. Despite the implementation of several mitigation measures, the incidence of COVID-19 in children attending primary school was high and comparable to the incidence observed in teachers and parents. Transmission tree reconstruction indicated that most transmission events originated from within the school.

Pilot projects with repeated saliva testing in Flemish school staff showed that logistics to roll this out on a large scale were very complicated. Preliminary results from a study lead by ULB showed low detection rates per 1000 tests performed.

4. Evidence update

In general, evidence is only available for the period where vaccination coverage in the general population and known spread of variants of concern were low.

4.1. ROLE OF SCHOOLS AND CHILDREN IN TRANSMISSION OF SARS-COV-2

Previous RAG advices contain evidence briefs on this topic (in particular the [advice of 10/11/2020](#)). Since then, several additional studies have been published on the role of SARS-CoV-2 transmission among children and in schools during the second COVID-19 wave in Europe (2–6). Most of these studies conclude that **schools did not play a crucial role in driving the SARS-CoV-2 pandemic, and confirm earlier conclusions that the number of cases amongst students and teachers mirror trends in the community.** Research from the US suggest that school openings are not associated with increases in community transmission at low or moderate pre-existing levels of community transmission, but can be associated with increases in transmission at high levels of community transmission (7,8). On the other hand, Mensah et al. report that during a month-long lockdown in the UK in November incidence rates rapidly declined in young adults, followed by declining incidences in children in all age groups one week later. These reduction of case numbers in children was seen despite schools remaining open (9).

Meta-analyses of household contact studies concluded that younger children are less susceptible to SARS-CoV-2 than adults (10–12). Spanish data from the summer and autumn of 2020 showed that 77% of pediatric cases were secondary to infections in an adult (13). There **is concern that the increased transmissibility of variants of concern would render adults and children equally susceptible.** An analysis of outbreaks in daycare centres in Germany show indeed similar secondary attack rates in adults and children (14), whilst contact tracing data from the UK show an increase of susceptibility in all age groups, but with still a lower susceptibility in the 0-9 years old (15). A Belgian seroprevalence study in schools showed comparable infection rates in children, teachers and the general population (16). However, whilst seropositivity indicates exposure to the virus, it doesn't mean the subject was highly infectious at the time. An intriguing case report describes children of infected parents repeatedly testing negative by PCR on nasopharyngeal samples, but testing positive on immunoglobulins (17). Moreover, there is evidence that truly asymptomatic infections are less contagious than symptomatic disease (18–21).

However, if children get infected, they are able to transmit the infection. Therefore, concerns exist regarding the risk of spillover of infections from children to parents and other household contacts. A study from the UK concluded that **during wave 2 of the epidemic, adults <65 years living with children in the UK were at increased risk of SARS-CoV-2 infection, compared to those living without children** (22). The risk was higher for those living with children age 12-18 years (hazard ratio 1.26 - 95% CI [1.12-1.40]) than for those living with children aged 0-11 years (HR 1.06 [1.05-1.08]). In absolute numbers, this translates to a small increase in the number of hospital admissions of 1-5 per

10,000 people (for children 0-11 years) or 2-6 per 10,000 people: from 160 to between 161 and 166 per 10,000. There were no increases in mortality. This increased risk was not noted during wave 1, when schools (but also many other sectors) were closed. Of note is that the studied period was a period with high community transmission and children-related risk may be different in periods with low or moderate community transmission. Lessler et al. report in *Science* similar results from the US, based on analysis of survey data from over 500,000 respondents. **After adjusting for county-level incidence and other individual- and county-level factors, living in a household with a child engaged in full-time in-person schooling was associated with increased odds of a positive SARS-CoV-2 test result (aOR 1.30 [1.24-1.35])** (23). The strength of the association increased with grade (~age) of the child and decreased with school-mitigation measures in place. The authors note that families with a child attending in-person schooling were also more likely to have recently eaten out or gone to a bar and, despite efforts to correct for this, residual confounding might have been possible.

4.2. PREVENTIVE MEASURES IN SCHOOLS

A recent Living Rapid Review summarizes evidence available until the 31st of May 2021 (including grey literature and pre-prints) on the role of daycares and schools in COVID-19 transmission. The review, done by the National Collaborating Centre for Methods and Tools, concluded that **the risk of transmission from children to children and children to adults in primary school and daycare settings is low when preventive measures are in place and adhered to** (24). The risk of transmission within secondary schools is more variable, suggesting that adherence to preventive measures in place in the school setting and reducing activities outside of the school settings is critical in this age group. Indeed, many of the results reported in section 4.1 are in context of mitigation measures being in place in schools. In the previously mentioned study by Lessler et al., the increased risk in household contacts of children attending in-person schooling disappeared when 7 or more mitigation measures were in place in the school (23). Mitigation measures, like student mask mandates, have varied widely per geographic region and sometimes age group.

Several studies have indicated higher secondary attack rates in staff than students or staff being more likely to be the index case than students (25–28). **Vaccination of staff might therefore be a very effective measure to prevent outbreaks in schools**, although currently no data is available. Likewise, several studies have reported **masking of teachers** to have a larger effect on reduction of cases than other measures (23,29).

Lessler et al. further report **suspension of extracurricular activities** (aOR 0.73 [0.68-0.79]), daily symptom screen (aOR 0.78 [0.73-0.84]), restricted entry (aOR 0.88 [0.81-0.95]) and outdoor instruction (aOR 0.88-0.98) to be associated with significant risk reductions. Similar to the reduced risk with outdoor instruction, a study from Georgia, USA, found **improved ventilation** to be associated with significant risk reductions (RR 0.61 [0.43-0.87]). In this study, risk of COVID infections was compared between different schools who implemented different mitigation measures (29).

The same study from Georgia found masking of teachers and staff to be associated with a risk reduction (RR 0.63 [0.47-0.85]), whilst for **masking of students their might be a risk reduction**, but it was not statistically significant at the 0.05-level (RR 0.79 [0.50-1.08]) (29). On the other hand, mask wearing hinders the ability to understand emotions. This is true for both adults and children, but the effect is particularly large and problematic for children under 5 years of age (30).

4.3. VACCINATIONS COVERAGE AND THE EFFECT ON CHILDREN

Evidence from Israel shows that the **number of infections in (unvaccinated) children decreases with increasing vaccination coverage in adults** (31). Several thresholds for reaching herd immunity have been proposed. In general, the required vaccination coverage for herd immunity will depend on the effectiveness of the vaccines, characteristics of the virus and clustering of susceptible individuals. With the emergence of VOCs with increased transmissibility, some have argued that reaching herd

immunity will be difficult, if not impossible (32). If the threshold is not reached but immunity is sufficiently long-lasting, the virus will continue to circulate, but at a low level, causing occasional peaks (33).

4.4. REPETITIVE SCREENING IN SCHOOLS

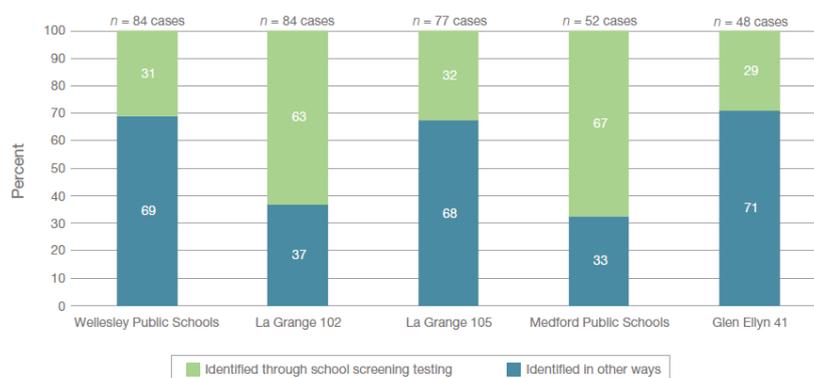
Literature on the effect of school-based test strategies is still scarce, and is mostly from the US and from time periods where vaccination coverage in the adult population was low.

Volpp et al. assessed a comprehensive mitigation strategy that included universal masking, improved ventilation, physical distancing and mandatory twice-weekly screening of students and staff members in a boarding school (grade 9-12; 520 full-time resident students, 255 commuter students and 405 staff members) in New Jersey, USA (34). During a 14-week period, eight students (1%) and 19 staff members (5%) tested positive. Only two identified cases were plausibly caused by secondary transmission on campus. The authors concluded that comprehensive mitigation approaches including frequent testing and universal masking can help prevent outbreaks in in-person high school settings even when community transmission is ongoing.

Crowe et al. piloted weekly saliva PCR testing of staff and students in two middle schools and one high-school in Nebraska, USA (35). During a five-week period, 2,885 saliva samples were tested from 455 staff members and 315 students enrolled for in-person learning, and 22 students (7%), and 24 staff (5%) tested positive. Cumulative case rates detected by saliva testing among pilot program participants substantially exceeded case rates detected by conventional reporting mechanisms among students and staff registered for in-person school activities over the same time period at the pilot schools (representing a 5.8- and 2.5-fold increase among students and staff, respectively). The authors concluded that weekly screening of asymptomatic staff and students by saliva PCR testing dramatically increased SARS-CoV-2 case detection in an urban public-school setting. However, it is unclear how case detection relates to outbreak prevention since there is evidence that truly asymptomatic infections are less contagious than symptomatic disease (18–21).

Faherty et al. conducted a national scan in the US to identify schools, districts, and states that had implemented COVID-19 testing in K–12 schools (grade 1-12) in the fall semester of 2020 (“early adopters”) (36). Interviews with early adopters and quantitative data they shared shed light on three main benefits of COVID-19 testing for schools: (1) providing a sense of safety among staff and families, (2) identifying and isolating asymptomatic cases, and (3) maximizing in-person instructional time. Across the five school districts that were profiled and that had implemented regular (at least weekly) screening testing of most staff and students and that shared their data, **screening identified about 44 percent (153 out of 345) of all COVID-19 cases reported to the school districts** (see Figure below). In the absence of screening, these cases would likely have been identified later or not at all. **However, while screening reduced the number of infected individuals attending schools in-person, there was lack of data to evaluate whether proactively identifying and isolating these cases also decreased in-school COVID-19 transmission rates.** The authors also found that cost was one of the most significant barriers for early adopters, and that even for the most well-resourced districts and schools, testing is a major undertaking.

FIGURE 3
Proportion of reported COVID-19 cases that were identified through school screening testing versus other testing in five selected districts

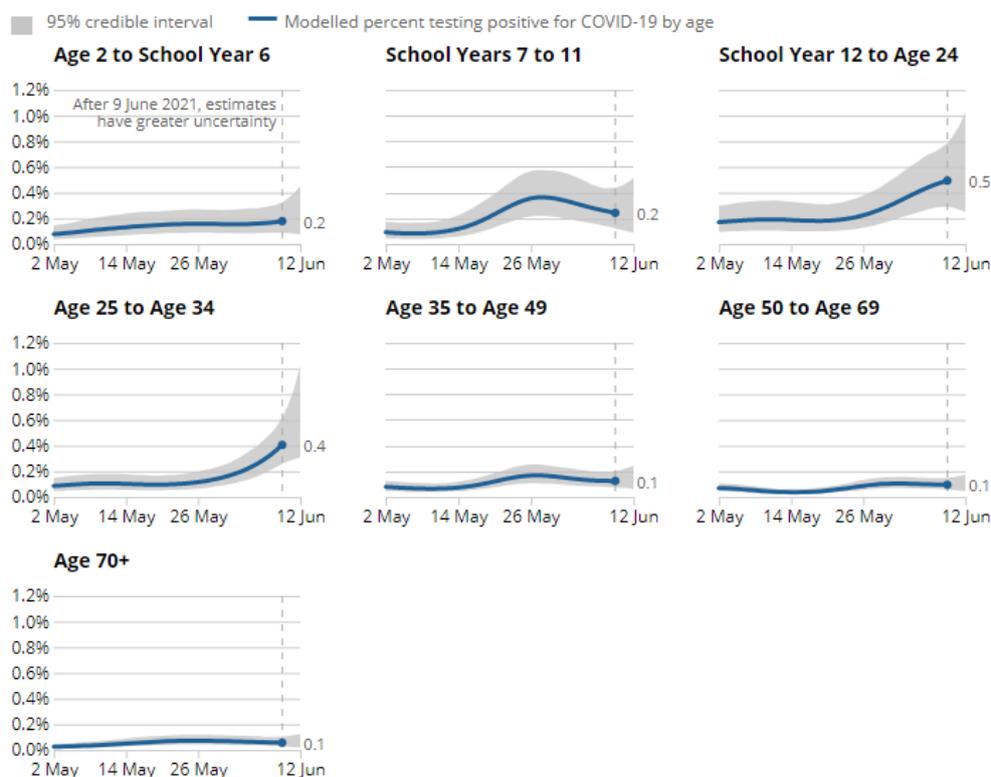


A modeling exercise by INSERM and CNRS is reported in the advice on the use of self-tests by the French Scientific Council COVID-19 (37). The model showed that regular testing has increasing effectiveness in reducing the size of the epidemic as adherence and testing frequency increase. For low adherence (25%, as reported in schools for nasopharyngeal testing), testing should be performed at least twice a week to significantly improve quarantine protocols (approximately 35% reduction in cases). For high adherence (75%, as reported in schools for saliva samples), testing once-weekly testing would be sufficient to significantly reduce (around 50%) the number of cases. Full adherence (100%) would provide slightly more control. The conclusion was that **1 to 2 tests per week with a participation of at least 75% of the pupils makes it possible to have a very significant impact on the risk of the virus spreading in schools**. Thresholds will differ according to the prevalence of the virus in the community.

5. Data from countries with a more advanced vaccination campaign

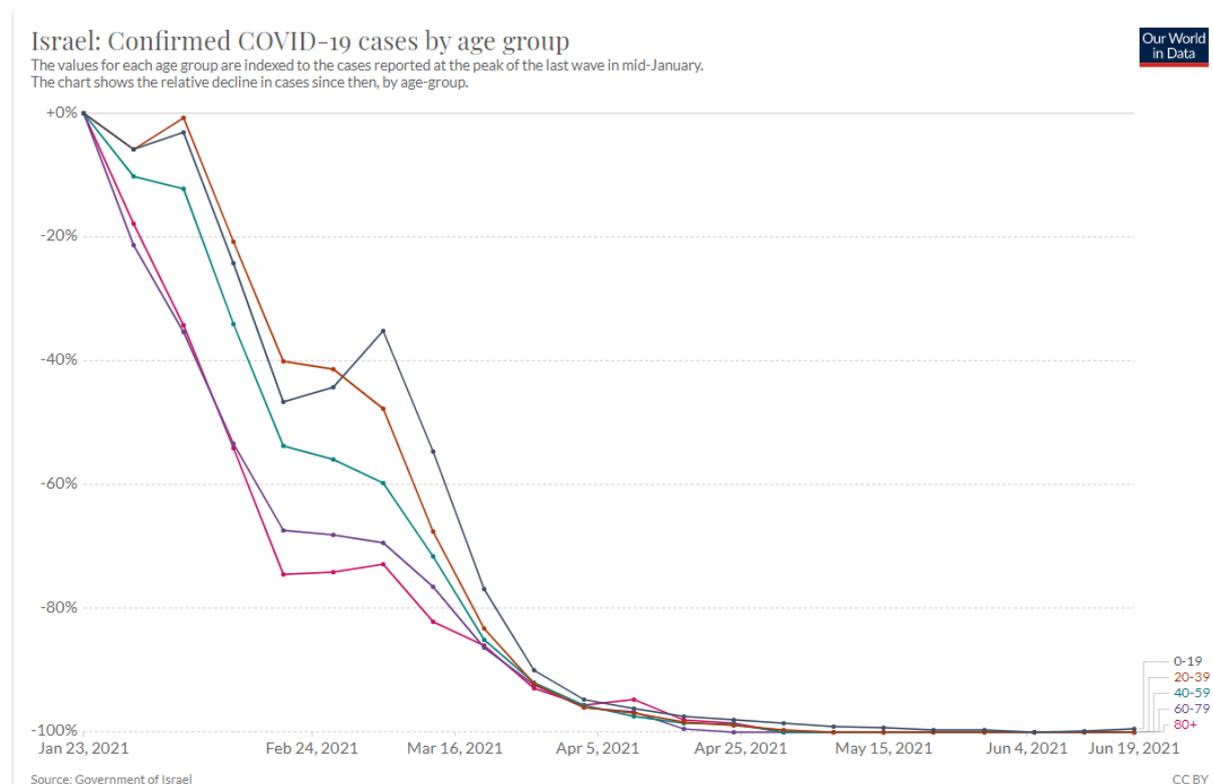
Despite high vaccination coverage, the UK was confronted with a recent increase in both case numbers and hospitalizations, which started first in regions with the lowest vaccination coverage. Increase in hospitalizations was less steep than what was seen during previous waves. **England** has recurrent testing in place of a randomly selected representative sample of the population. Data from this surveillance show that the recent increase in infections started particularly amongst the younger population, where vaccination coverage is lower. This is also described in a pre-print by Riley et al (38). *Age 2-school year 6 = primary school, school years 7-11 = secondary, school year 12+ = higher education*

Estimated percentage of the population testing positive for the coronavirus (COVID-19) on nose and throat swabs, daily, by age group since 2 May 2021, England



Source: COVID-19 Infection Survey England, Office for National Statistics, 18th June 2021. Available [online](#)

Data from **Israel** showed a clear reduction of cases in all age groups after a successful vaccination campaign. This led Israel to abandon mask wearing in schools and other measures like restricted group sizes. In case of a positive case, all class mates were screened and could return to class upon receipt of a negative test result. Recently, cases have started to increase again, especially in the youngest age group, with some outbreaks in schools, and some restrictions in schools have been reinstated at the local level. It will need to be seen what the further evolution and impact on number of hospitalizations will be.



6. Recommendations in other countries

6.1. TESTING STRATEGIES

Several countries have introduced repetitive testing of school children during the past months. The table below summarizes some of them. All of these strategies were initiated before significant vaccination coverage in the general population was obtained and reports of their effectiveness are scarce.

Country	School/Age group	Frequency	Place of test	Type of test
UK	Secondary schools (12-17)	Twice a week	At home	Ag self-test
NL	Secondary schools	Twice a week	At home	Ag self-test
Germany	Primary and secondary schools	Twice a week	At home/ at school*	Ag self-test
Austria	Primary schools	Twice a week	At school	Ag self-test
	Secondary schools (10-18)	Once a week		

*Depends on the Länder

In screening programmes, especially at low incidence, the risks (including false-positive and false-negative results) and benefits should be carefully weighed.

6.1.1. UK

In its guidance of 24 March 2021 (39), The British Ministry of Education advises that there are currently limited public health benefits attached to testing primary school pupils with rapid Ag tests. **In primary schools, only testing of adult school staff is recommended.**

In an update of 30 March 2021 on guidance for testing in **secondary schools** (40) : **from 8th of March all eligible staff, pupils and students were expected to test twice weekly (voluntarily).**

The testing of pupils and students took place in two phases:

1. Pupils and students conducted their first 3 tests on-site.
2. The fourth test and all subsequent tests are to be conducted using home test kits collected from the secondary school or college.

Adolescents aged 12-17 should self-test and report with adult supervision. The adult may conduct the test if necessary. Children aged 11 attending a secondary school should be tested by an adult.

All positive results, whether conducted at home or at a school or college need to be confirmed with a PCR test within two days of the positive rapid Ag test. If the PCR test is negative, provided it was taken within two days of the positive rapid Ag test, it overrides the rapid Ag test and pupils or students can return to school or college, and close contacts and other household members can stop self-isolating.

6.1.2. The Netherlands

The Dutch Ministry of Education has made self-tests available to primary schools for testing of staff and to secondary schools for testing of staff and students (41). **Secondary school pupils can test themselves at home twice a week.** An online motivational campaign started from June 1st (42) in which students motivate their fellow students.

6.1.3. Germany

In Germany, self-tests are used in schools for age groups that have face-to-face classes. **Twice a week, pupils take a self-test.** The exact procedures might differ between the Länder. For example, **in some Länder school-based self-tests are compulsory and in other voluntary.** Moreover, depending on the Länder, they can be carried out at school or at home.

6.1.4. Austria

Austria was one of the first countries to make self-tests available in schools (43). **Since February 2021, testing is obligatory for pupils and voluntary for staff.** Rapid Ag tests are used on a self-collected nasal anterior swab. At elementary and special schools up to the 4th grade and in boarding schools self-tests should be carried out twice a week at the start of classes. At all other schools, all pupils are tested immediately after the semester breaks in two groups: one on the first day of school (Monday), and a second group on the Wednesday of that week. The tests must be supervised, and in elementary, special and lower secondary schools, students or their teachers are assisted by school physicians. People testing negative still have to respect all protective measures. **Positive tests are to be confirmed with PCR.**

6.1.5. France

In France a positive advice was given by the COVID-19 Scientific Council to initiate repetitive screening in school children (primary and secondary schools) (37), but screening has not yet started.

6.1.6. Unites States

CDC states in its advice on operational strategies for K-12 schools that some schools may elect to use screening testing as a strategy to identify cases and prevent secondary transmission (44). Screening of **students, teachers and other staff is said to be particularly valuable in areas with moderate, substantial, and high levels of community transmission.** At low levels of community transmission, screening could be offered to teachers and staff. Achieving substantial reduction in transmission with testing requires more frequent testing and shorter lags between test administration and reporting of

results. Screening testing of students should be at least once per week. In areas with substantial and high community transmission, twice a week screening testing might be preferable.

Schools **may consider using pooled testing or a random sample of at least 10% of students**.

Schools and public health officials might consider prioritizing teachers and staff over students given the increased risk of severe illness among certain adults.

In selecting among students, schools and public health officials might **prioritize high school students, then middle school students, and then elementary school students**, reflecting higher infection rates among adolescents compared to younger children.

According to the EducationWeek magazine, testing their own students and staff for COVID-19 won broad support among school districts, but relatively few districts so far have applied it because of logistical concerns (45).

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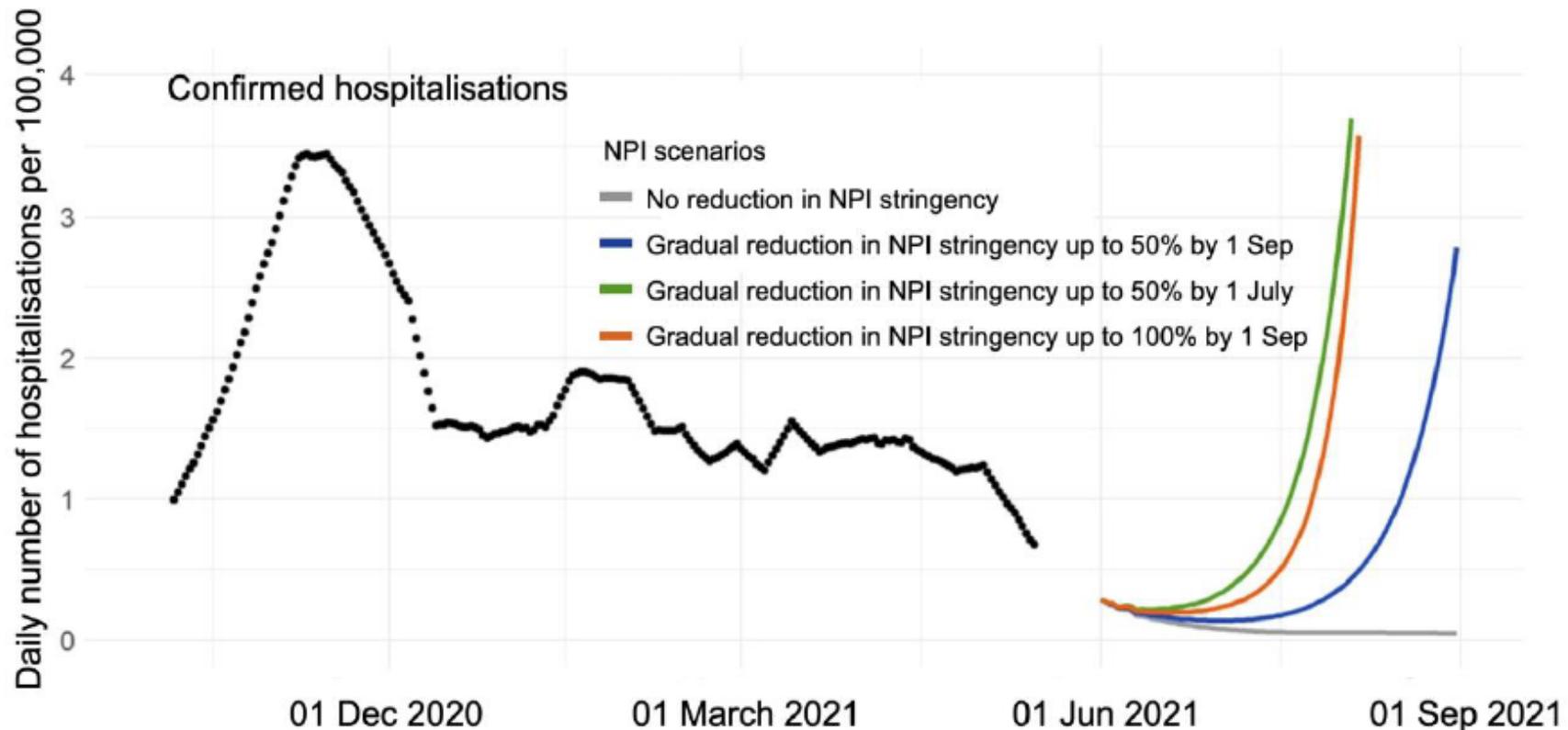
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Annex 1 – estimation of daily covid-19 hospitalizations in the EU/EEA according to NPI relaxations

Figure 5. Estimation of possible changes in daily COVID-19 hospitalisation in the EU/EEA according to four NPI relaxation scenarios



Source: ECDC Threat Assessment Brief: Implications for the EU/EEA on the spread of the SARS-CoV-2 Delta (B.1.617.2) variant of concern 23 June 2021
Available on: <https://www.ecdc.europa.eu/en/publications-data/threat-assessment-emergence-and-impact-sars-cov-2-delta-variant>