World Health Organization

REGIONAL OFFICE FOR Europe

Schooling during COVID-19

Recommendations from the European Technical Advisory Group for schooling during COVID-19

ABSTRACT

These recommendations from the Technical Advisory Group (TAG) on Schooling during the COVID-19 pandemic of the WHO Regional Office for Europe represent the work of the TAG between October 2020 and March 2021. The recommendations were considered at a WHO ministerial meeting on 8 December 2020, after which they were reviewed and updated. The recommendations are endorsed by the TAG to represent the best available evidence and expert advice on safe schooling.

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Schooling during COVID-19. Recommendations from the WHO European Region Technical Advisory Group

At the request of Member States of the WHO European Region at the high-level meeting on safe schooling at the time of COVID-19 on 31 August 2020, the WHO Regional Director for Europe established a Technical Advisory Group (TAG) on Schooling during the COVID-19 Pandemic. The TAG is independently chaired, and members represent a wide range of stakeholders. Possible conflicts of interests are reviewed and managed by the Secretariat at the WHO Regional Office for Europe.

The TAG was set up to:

- provide strategic and technical advice to the Regional Office on matters relating to schooling in times of COVID-19, including the epidemiology of school transmission, infection prevention and control and public health measures and their effects on the development and well-being of school-aged children;
- identify findings from the emerging evidence to inform policy decisions in terms of education, social, development and health outcomes for children and adolescents; and
- advise the Regional Office on issues around reopening and potential reclosure of schools within the context of the coronavirus response, and other measures and their prioritization for infection control, taking into consideration the latest available evidence and early experience of infection prevention measures being taken.

The following recommendations represent the work of the TAG between October 2020 and March 2021. Recommendations on key issues 1–7 were agreed at the second TAG meeting on 12 November 2020 and considered at a WHO ministerial meeting on 8 December 2020. These recommendations were reviewed and updated during the third TAG meeting on 26 January 2021. The recommendations were reviewed again at the fourth meeting of TAG and expanded to include an eighth recommendation on vaccination. The recommendations are endorsed by the TAG to represent the best available evidence and expert advice on safe schooling.

The recommendations represent the views and points of agreement of the TAG experts and do not necessarily denote WHO's position or recommendations.

Children and adolescents in schools are not considered primary drivers of transmission of SARS-CoV-2*

COVID-19 is reported less frequently in children than in adults. Transmission in education settings can be limited if effective mitigation and prevention measures are in place.[1-3] In school settings across the WHO European Region, more outbreaks are reported in secondary and high schools than in primary schools (settings with children up to 10–12 years of age).[1, 2] Outbreaks in schools that involve only staff members are also observed. Data suggest that children and adolescents are followers, not drivers, of the pandemic, with a slower dynamic in younger children.[1, 2, 4] There is to date no evidence that in-school transmission is a significant driver of increasing infection levels. However, the emergence of new variants of COVID-19, which have been shown to have increased transmissibility, require an ongoing risk assessment-based approach with appropriate in-school mitigation measures a pre-requisite to keeping schools open.

While precautions must be taken to control the spread of COVID-19 in the community, including through school-based measures, a balance must be struck between imposing such measures and ensuring that children are able to continue learning and socializing to the greatest extent possible.

* This brief does not include considerations for university settings.

Key issue 1.
Keeping schools open is a key objective

WHO, the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the United Nations Children's Fund (UNICEF) have stressed that to support children's overall well-being, health and safety, the continuity of education should be at the forefront of all relevant considerations and decisions.[1,5-8] Given the adverse effects of school closures on the health and well-being of students, closures should be considered only as a measure of last resort.[8,9] To achieve this goal, adequate public health and social measures should be implemented in communities and schools so that on-site schooling can continue. Examples include smaller class sizes, ensuring wider spaces between desks and staggering breaks.[2,7,10-12] Longer school closures are likely to contribute to widening inequities in relation to education outcomes across the Region.[5,6,13]

The TAG supports the above and advises that:

- schools should be among the last places to be closed, as school closures have been shown to be detrimental to child health and well-being and educational outcomes;
- if large outbreaks occur or transmission in the community cannot be controlled by any other measures, reactive school closures may be considered as a last resort; and
- measures to control transmission of SARS-CoV-2 in school settings should be specific to the needs of different age groups.

Key issue 2. Testing strategy in the school setting

Routine checks for symptoms and temperature checks of all children and school staff appear not to be useful for controlling the spread of infection in schools and the community.[14,15] As countries are moving to widespread testing with rapid diagnostic tests, the value of rapid diagnostic antigen tests in school settings needs to be determined. When there are clusters of pupils with confirmed COVID-19, a school-wide testing approach may be considered, on the condition that clear objectives for the testing activity are determined and there is an agreed plan of action following the test result.[14-19] Contact-tracing should be initiated promptly following the identification of a confirmed case and should include contacts in the school (classmates, teachers and other staff), household and other relevant settings.[14-19] Some countries recommend that during the autumn/winter season, children with respiratory symptoms who are not prioritized for testing should stay at home to recover for five days.[17-19] If they continue to have symptoms on the fifth day, they must get tested.[14,17-19] Further evidence is needed to enable better understanding of what specific actions should be taken to minimize both transmission and the harms to children associated with being out of school.

The TAG supports the above and advises that:

- the value of widespread rapid diagnostic antigen tests in school settings in terms of opening schools and controlling transmission needs to be determined;
- testing should be prioritized for symptomatic children with acute respiratory infection of any severity if they belong to a vulnerable group, risk group or are in a special situation with a high risk of further spread, but asymptomatic high-risk exposure (close) contacts of cases should also be considered for testing;
- cluster investigation in children in school settings should be organized in a way that enables continuity of learning; and
- routine temperature or symptom checking in schools should be avoided, as no evidence is available to support their use.

Key issue 3. Effectiveness of applied risk-mitigation measures on infection control

Studies on the effects of risk-mitigation interventions in schools, such as limiting contact between children, wearing masks (outside or in classes continuously), closing areas and activities (play, sports, canteens) and enhancing ventilation, are sparse. There is therefore an urgent need for well conducted empirical – rather than modelling – studies to assess the range of effects of different measures implemented in the school setting. Interventions need to be evaluated for their intended and potential adverse effects, and in different age groups.[20] Wearing masks is a complex issue and should be considered as one of a package of measures to protect and prevent transmission. Interim guidance published by WHO recommends that children up to the age of 5 should not wear masks.[21,22] For children aged 6–11 years, a risk-based approach should be taken, considering community transmission levels, ability to maintain physical distancing and ventilation.[21-23] Over the age of 12 years, the same principles should apply as those implemented for adults in any indoor space where people are together for long periods of time in the context of ongoing community transmission.[21,22] WHO guidance on handwashing suggests how schools can best implement this simple but very effective measure.[1,24] Measures currently being adopted in some countries – for example, spraying the school environment with disinfectant, excessive disinfection (rather than cleaning) of surfaces and excessive handwashing – have low or no value for infection control, and may have adverse effects.[25]

The TAG supports the above and advises that:

- schools should have a risk-mitigation strategy in place; countries should ensure these strategies carefully balance the likely benefits for, and harms to, younger and older age groups of children when making decisions about implementing infection prevention and control measures;
- all the above needs to be balanced with the even worse alternative of schools being closed;
- any measure introduced by schools should follow standard protocols for implementation; and

- countries should review the package of measures regularly and update according to emerging evidence; measures deemed to have no effect or to be harmful should be discontinued, and all measures should be equity-proofed.

Key issue 4. Educational outcomes, mental and social well-being

All infection control measures have the potential to have adverse effects on educational outcomes, mental health, social well-being and health-related behaviours.[5,6,8,26-33] It therefore is necessary to consider carefully the positive and negative effects of implementing them. Evidence suggests that learning loss due to lockdown, school closures and even distance learning is several times higher in schools in the most deprived areas compared to those in less deprived areas.[5,6] Schools deliver essential functions beyond education that cannot be delivered online, including the opportunity for real-life interactions with peers, which is essential for healthy development.[5,8,28,31,34,35] Online teaching therefore remains a suboptimal alternative. In addition, there is evidence that more children are experiencing food insecurity due to lack of school meals, and levels of violence against children increase when staying home during lockdown and school closures.[5,6,8,29,30,32,36-43]

The TAG supports the above and advises that:

- when closing schools, countries need to guarantee substitute services for those normally delivered in the school setting, such as health services and school meals, where possible;
- countries should guarantee access to devices and facilities required for online learning, including functioning Internet connections for schoolchildren and teachers, regardless of whether schools are closed or open; and
- countries should establish hotlines for children and adolescents seeking psychological support.

Key issue 5.
Children in vulnerable situations

Children overall are not considered a vulnerable group for COVID-19. Those living in socially vulnerable situations, however, are affected disproportionately by changes to the structure of schooling and in-person learning.[5,7,8,11,44] Schools provide critical services for children in addition to education, such as the provision of adult supervision during school hours and school meals.[9,30,32,34,41,45-48] The absence of these services can put an additional financial burden on households, especially the most vulnerable. As children learn from home, parents and caregivers take on additional responsibilities that may impact on their ability to earn an income.[8,42,43,49-65] Children with pre-existing health conditions might be at increased risk for severe disease but should not routinely be excluded from on-site schooling.[44,66] Rather, they should be assessed individually for their specific risk. The objective must be to allow children to live as normal a life as possible.

The TAG supports the above and advises that:

- countries should provide additional support to schools in deprived areas and for children living in vulnerable situations;
- schools should implement additional measures to further protect children in socially vulnerable situations, including direct outreach to those at risk of dropping out of school;
- living in a vulnerable situation (and lack of access to computers and the Internet at home) should be among the criteria for allowing some children to continue to be physically present in schools when it is necessary to switch to hybrid schooling or full online learning;
- on-site schooling should include education and not consist solely of supervision; and
- children with pre-existing health conditions should not routinely be excluded from on- site schooling, but rather be assessed individually for their specific risk.

Key issue 6.
Changes in the school environment that are likely to be of overall benefit to infection control AND child health

The principles of health promoting schools are even more important in a pandemic. The quality of the school environment is an important factor in schools' ability to improve infection control and overall child health and well-being.[67] Improving the school environment has been the cornerstone of the concept of health promoting schools for many years. The school environment is under particular scrutiny during the pandemic and additional investments are being made to ensure improved infection control. Measures that will have a beneficial effect on child health and well-being are equally important. Areas for improvements may include: water supply, sanitation and indoor air; health literacy of schoolchildren and staff through scheduled lessons that help them to enhance their understanding of the basis of the risk-mitigation measures and promote adherence by children, adolescents and school staff; and smaller class sizes in the school environment, which can help to reduce transmission.[1,2,10,12,20,28,68-71] The presence of well trained school nurses can also enhance the school environment.[62,72] Under normal non-COVID circumstances, school nurses may be on hand to respond to illness or injury, provide mental health support and direct children to support services. In a pandemic, they can also support the implementation of COVID-specific measures. Promoting active transport to school through walking and cycling can reduce exposure on crowded public transport and contribute to physical well-being.[24]

The TAG supports the above and advises that:

- countries should use their health promoting school networks to ensure sustained improvement in the school environment throughout the pandemic, and develop a strategy for preparedness for future outbreaks;
- students, parents, teachers and other school staff should be involved actively in deciding at school level what risk-mitigation measures are feasible in their daily context;

- countries should ensure that a sufficient number of teachers are hired to reduce class sizes, which will serve to improve infection control as well as child health and educational outcomes;
- countries should ensure optimal collaboration between teaching staff and health and social workers;
- schools should improve their infrastructure and associated maintenance, including ensuring handwashing facilities with running water and reliable supplies of, for instance, soap, sufficient and adequate toilet facilities and fresh-air ventilation; and
- schools should ensure that students, parents, teachers and other school staff are empowered to implement the measures while being able to deliver their core functions.

Key issue 7. Children's and adolescents' involvement in decision-making

Children have different experiences arising from school closures, online learning and other measures. These range from a sense of heavy loss related to motivation, educational attainment, and maintenance of a healthy daily routine and social life, to positive feelings of increased autonomy and time-saving.[65,73,74] Negative experiences and feelings dominate, however, particularly with longer school closures. Schoolchildren from all backgrounds often report that effective online learning is not taking place.[8,9,31,35,65,73,75-77]

The TAG supports the above and advises that:

- countries are urged to recognize children's and adolescents' perspectives and give weight to their voices in relation to schooling and interventions during the pandemic;
- children and adolescents from different age groups and all backgrounds should be asked to provide their perspectives on the measures affecting them and whether they are helping them;
- children and adolescents should be involved actively in the decision-making process at school; and
- youth organizations should be involved in these processes.

Key issue 8. Vaccination strategies with the purpose of maintaining education as a societal good

As of March 2021, global vaccination programmes are underway to reduce severe disease and mortality. Currently, population groups are prioritized for vaccination on the basis of age, vulnerability and high-risk occupations (for example, frontline workers). Teachers are considered important in the prioritization process by some groups. The WHO Strategic Advisory Group of Experts on immunization (SAGE) and the European Technical Advisory Group of Experts for vaccination (ETAGE) recommend the prioritization of target groups for vaccination against COVID-19 in three stages.[78] During a period of community transmission, teachers are included in stages II (with 11–20% vaccines availability) and III (with 21–50% vaccines availability).[78] Other organizations (UNESCO, UNICEF and Education International) also call for teachers to be prioritized to receive the COVID-19 vaccine once older and other high-risk populations (including frontline health personnel) are vaccinated.[79] Benefits of vaccinating teachers and other professionals working in schools include: ensuring continuity of teaching in person, which helps to keep schools open; reducing teachers' likelihood of infection, which improves student safety; and increasing confidence in parents that schools are safe places in which to be.[79] While decisions about vaccine allocation ultimately rest with governments, the consequences of missed or impaired education are severe especially for the most marginalized. Whole-population approaches to vaccination provide the best chance of reducing mortality and severe disease and minimizing the negative impacts on educational, mental and social well-being for children and young people.[78] There currently are no vaccines licensed for children under 16 years.[78] Further evidence is required to ascertain the optimum set of mitigation strategies that would achieve the full range of health, social and educational aspirations for entire populations, particularly younger generations.

The TAG supports the above and advises that:

- vaccine trials are needed urgently with respect to children of all ages so that vaccination strategies can be refined;
- research should seek to determine the positive impact that vaccination programmes for children and young people can have on a full range of health, social and educational outcomes;

- national vaccination strategies should ensure teachers and other professionals working in schools are considered when prioritizing access to COVID-19 vaccinations; and
- vaccination strategies should consider how they can support schools to be open longer, maintaining positive education outcomes while minimizing and preventing negative mental and social outcomes.

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Annex 1

Results of the voting and comments from TAG members

Results from voting on TAG recommendations by 24.03.2021

Overview below shows that all 8 key issues in the TAG recommendations have been accepted by the TAG.

Key issue number	Number of accepts	Accepts in %
Key issue 1. Keeping schools open is a key objective	27	100
Key issue 2. Testing strategy in the school setting	23	85
Key issue 3. Effectiveness of applied risk-mitigation measures on infection control	27	100
Key issue 4. Educational outcomes, mental and social well-being	27	100
Key issue 5. Children in vulnerable situations	27	100
Key issue 6. Changes in the school environment that are likely to be of overall benefit to infection control AND child health	27	100
Key issue 7. Children's and adolescents' involvement in decision-making	27	100
Key issue 8. Vaccination strategies with the purpose of maintaining education as a societal good	25	93

27 out of 29 eligible votes were received (93%).

The bar for accepting a key issue was set to 75% of those who have voted.

Comments from TAG members who rejected a key issue.

Key issue 2. Testing strategy in the school setting

1. support for bullet 3) and 4). However preventive ("case finding") screening, specifically if pooled saliva screening, should not be disadvised. Important is, that the negative impact of a screening procedure on children should be well balanced against the potential benefit. I think that the harm of saliva tests is pretty low to neglect for children and thus gives a different balance than naso-pahryngeal specimens.

2. I don't support bullet number 4

3. Children with symptoms of an acute respiratory infection of any severity should not visit school and be cared for at home without contacts outside the family until they are at least 48 hours asymptomatic. SARS-COV-2 diagnostics should be initiated (using molecular tests), the same applies if asymptomatic but with a known contact to a confirmed COVID-19 case. (Bullet-point 2 had been included in case of shortage of diagnostic tests in the fall/winter situation.)

4. Testing is a key strategy for keeping schools open while impeding transmission. We don't have time for studies examining this empirically.

Key issue 8. Vaccination strategies with the purpose of maintaining education as a societal good.

1. I am not sure about bullet 3) – to consider schoolteachers and other professionals working in schools is not the same as prioritizing them. So perhaps instead: "national vaccination strategies should ensure schoolteachers and other professionals working in schools are prioritized "

2. The statement about vaccinating teachers is much vaguer than that previously circulated and I am not sure what it means. I do not support teachers being prioritized for vaccination based on their occupational group because there is no evidence that: teachers are at increased risk of infection, morbidity or mortality; vaccinating teachers would reduce risk of infection to children or their parents; vaccinating teachers would increase confidence in parents sending their children to school or community members seeking vaccine themselves. Prioritizing teachers for infection would, given prioritization of vaccines is a zero-sum game, reduce supply for those who are at increased risk of morbidity and mortality (older groups, clinical vulnerable, occupational groups genuinely at increased risk).

Annex 2
List of TAG members

Technical advisory group on Schooling during Covid-19 pandemic

Individual TAG members

Prof Antony MORGAN, TAG Chair, GCU School of Health and Life Sciences, Glasgow Caledonian University, London, United Kingdom

Mr Bruce ADAMSON, Children and Young People's Commissioner Scotland, Edinburgh, Scotland, United Kingdom

Dr Efrat AFLALO, Director of the Health Education and Promotion department, Ministry of Health, Jerusalem, Israel

Prof Freia DE BOCK, Head of Department Effectiveness and Efficiency of Health Education, Federal Centre for Health Education, Cologne, Germany

Prof Chris BONELL, Professor of Public Health Sociology / Associate Dean for Research

Faculty of Public Health & Policy, London School of Hygiene and Tropical Medicine, London, United Kingdom

Dr David EDWARDS, General Secretary, Education International, Brussels, Belgium

Dr Florian GÖTZINGER, Programme director for Paediatric Infectious Diseases, Vienna Healthcare Group, Vienna, Austria

Prof Walter HAAS, Head of the Unit for Respiratory Infections, Department for Infectious Disease Epidemiology, Robert Koch Institute, Germany

Dr Adamos HADJIPANAYIS, President, European Academy of Paediatrics, European University Cyprus, Nicosia, Cyprus

Prof Mark JIT, Department of Infectious Disease Epidemiology, London School of Hygiene and tropical medicine, London, United Kingdom

Prof Didier JOURDAN, UNESCO chair for health and education, Clermont-Auvergne University, Clermont-Ferrand, France

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Prof Olga KOMAROVA, Deputy Director, National Medical Research Center for Children's Health, Moscow, Russian Federation

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Prof Pierre-André MICHAUD, WHO CC for School and Adolescent Health, Lausanne University Hospital, Lausanne, Switzerland

Professor Leyla NAMAZOVA-BARANOVA, European Paediatric Association EPA/UNEPSA - past president; Russian national Research Medical University - head of pediatrics department; Paediatrics and child health research institute - head; president of the Union of paediatricians of Russia; IPA SC member, Moscow, Russia

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Dr Anders TEGNELL, Chief Epidemiologist, Public Health Agency of Sweden, Stockholm, Sweden

Prof Russell VINER, President, Royal College of Paediatrics and Child Health (RCPCH) London, United Kingdom

Dr Susanne STRONSKI, Co-Head Health Service City of Berne, Switzerland and President Scolarmed (Swiss Association of School Health Professionals)

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Dr Jonathan SUK, Principal Expert, Emergency Preparedness and Response, European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden

The WHO Regional Office for Europe

The World Health Organization (WHO) is a specialized agency of the United Nations created in 1948 with the primary responsibility for international health matters and public health. The WHO Regional Office for Europe is one of six regional offices throughout the world, each with its own programme geared to the particular health conditions of the countries it serves.

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