COVID-19 Rapid Response Series

Reopening Schools during COVID-19 Pandemic: A Comprehensive Roadmap for Action
A K2P Rapid Response responds to high priority areas and urgent requests from policymakers and stakeholders by synthesizing research evidence drawn from systematic reviews and from single research studies. K2P Rapid Response services provide access to optimally packaged, relevant and high-quality research evidence for decision-making over short periods of time ranging between 3, 10 and 30-days.
K2P COVID-19 Rapid Response Series

Reopening Schools during COVID-19 Pandemic: A Comprehensive Roadmap for Action
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Merit Review
The K2P Rapid Response undergoes a merit review process. Reviewers assess the summary based on merit review guidelines.

Citation
This K2P Rapid Response should be cited as:

* This is the 3rd document in the K2P COVID-19 Supplement on School Reopening (3 of 3)
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Key Messages
Preamble

→ The COVID-19 pandemic has challenged the capacity of educational systems to provide continued access to learning and imposed long closures of schools and educational institutions. Careful planning for reopening of schools is now essential by all those involved in the decision-making and implementation process.

→ Planning for school re-openings must be deliberate, indicating precisely how, when, under what conditions, and based on available data and evidence. School reopening should also be sensitive to community needs.

→ This rapid response document provides a comprehensive roadmap for action to guide and inform local authorities, decision-makers and school managements involved in the re-opening process. It also sheds light on the role of parents/guardians and NGOs in supporting school reopening.

→ The roadmap is divided into the following sections:
  › Conditions that must be met before considering school reopening
  › Preparing for school reopening
  › Initiation of school reopening
  › Post-reopening phase
  › Roles of parents/guardians, municipalities and NGOs

Conditions that must be met before considering school reopening

- Low community transmission
- Rigorous surveillance system focused on testing, contact tracing and isolation of cases
- School readiness and capacity to implement and maintain prevention and control measures
Preparing for school reopening

Decision-makers at the national and regional levels (in collaboration with representatives of different constituencies including school staff, families, local public health officials, municipalities and other key stakeholders as needed), should consider the below actions in preparing for school reopening during the pandemic:

- **Form decision-making taskforce**
- **Provide clear national guidance on parameters for decision making on school reopening**
- **Reopen schools in a staged fashion**
- **Promote equity in reopening**
- **Ensure that schools have access to ongoing support from public health officials**
- **Prioritize set of strategies and measures for mitigating the spread of COVID-19**
- **Develop tailored protocols and policies**
- **Address financial burdens for schools and districts**
- **Adopt principles of risk communication**
- **Monitor and evaluate the situation and epidemiology of COVID-19**

Initiation of school reopening

→ When decision to reopen has been made, school administrators should proceed by implementing key measures and strategies within school settings to enable safe reopening. Dialogue with teachers, staff and their representative organizations is essential in developing and implementing these measures and strategies

→ Measures are to be implemented according to the following pillars:
Communication

Health and Safety
- Protect vulnerable populations and safeguard well-being (including mental health)
- Integrate hygiene and respiratory etiquette into daily routine
- Enforce routine cleaning and disinfection
- Support mask use and protective facial coverings

Administrative Measures
- Revise attendance policies
- Enhance staffing and training
- Regulate meetings and visits
- Limit physical education and extracurricular activities
- Prohibit large assemblies and celebrations

Operational & Environmental Modifications
- Enforce reduced capacity (smaller groups, rotations & staggering times)
- Increase spacing and physical distancing
- Ensure adequate ventilation and air flow
- Reorganize school transportation

Education and Learning Approach

Screening, contact tracing and isolation strategy
- Screening
- Testing and isolation
- Contact tracing and quarantine
- School closure

Post-reopening phase

Once schools have re-opened, the following should be closely monitored and adjustments made accordingly:

→ Compliance with school policies and required preventive measures.
→ Effectiveness of screening and symptom-reporting, testing and tracing of suspected cases
→ Trend in school dropouts as well as absenteeism among staff and students
→ Number of cases in children, teachers and staff within school setting, and frequency of school-based outbreaks in the local area and the country
→ Effects of implemented measures on educational objectives and learning outcomes
→ Effects of implemented measures on health and well-being of school community (student, teachers, staff, parents and other family members)
→ Impact of remote teaching and blended/hybrid models on learning outcomes

Additionally, school administrators should continue to:

→ Share information on COVID-19 with students, staffs and parents to manage fears and anxiety and promote self-care strategies and prevention measures
→ Keep students and parents informed about the measures being implemented to ensure their collaboration and support
→ Reinforce preventive behaviors and model physical distancing
→ Ensure cleaning and disinfection measures are effective and regular
→ Prioritize psychosocial support and socio-emotional learning activities
→ Monitor teachers’ situations related to deployment and working conditions (including working and teaching hours).
→ Review and assess the learning needs of students

Roles of parents/guardians, municipalities and NGOs

Parents/guardians, NGOs and municipalities have important roles to play in supplementing the efforts of governments and school administrators in school reopening. The specific roles of the different entities are detailed in the full document.
الرسائل الأساسية

تمهيد

تشكلت جائحة كوفيد-19 تحديًا لقدرات الأنظمة التعليمية على ضمان استمرارية التعليم، بسبب فرض الإغلاق لفترة طويلة على المدارس والمؤسسات التربوية. لذا، يعد التخطيط الدقيق لإعادة فتح المدارس أمرًا ضروريًا اليوم، من قبل كل أصحاب المصلحة في عملية صنع القرار وتنفيذها.

يجب أن يكون التخطيط لإعادة فتح المدارس مدروسًا، ضمن إطار يحدد وبدقة، كيف، متى وتحت أي ظروف تم اتخاذ قرار إعادة فتح المدارس، وعلى أي أسس علمية. يجب أن يراعي مسألة إعادة فتح المدارس احتياجات المجتمع.

يرفع مستند الاستجابة السريعة خارطة طريق شاملة لتنويع وتوجيه وترشيد قرارات الجهات المحلية المعنية وصانعي القرار وإدارات المدارس حول مسألة إعادة فتح المدارس. ويلقي الضوء على دور الأهالي / أولياء الأمور والمنظمات غير الحكومية في إعادة فتح المدارس ضمان الشمولية والمساواة في تدابير إعادة فتح المدارس.

تختتم خارطة الطريق على الشكل التالي:

الشروط التي يجب توافرها قبل النظر في إعادة فتح المدرسة

- التحضير لإعادة فتح المدارس
- بدء إعادة فتح المدارس
- مرحلة ما بعد إعادة الفتح
- دور الأهل / الأموات والمنظمات غير الحكومية
- ضمان الشمولية والمساواة في تدابير إعادة فتح المدارس

الشروط التي يجب توافرها قبل النظر في إعادة فتح المدرسة

- نسبة انتقال المرض في المجتمع قليلة
- نظام مراقبة صارم، يتركز على الفحوصات وتتبع المخالطين وعزل الحالات
- مدى استعداد المدرسة وقدرتها على تنفيذ تدابير الوقاية وفرض تطبيقها والمحافظة عليها

التحضير لإعادة فتح المدارس

يجب على صانعي القرار على المستوى الوطني والمنطقي (بالتعاون مع ممثلي مختلف الفئات المستهدفة بما في ذلك طاقم المدرسة الإداري والعائلات ومسؤولي الصحة العامة والبلديين والأطفال وأسواح المصلحة الآخرين عندما تتطلب الحاجة) النظر في الإجراءات التالية للتحضير لإعادة فتح المدارس خلال الوباء:

- تشكيل فريق عمل لاتخاذ القرارات
- تقديم إرشادات وطنية واضحة حول معايير اتخاذ القرار بشأن إعادة فتح المدارس
- إعادة فتح المدارس على عدة مراحل
- تعزيز مبدأ المساواة في تدابير وقرارات إعادة فتح المدارس
- ضمان حصول المدارس على الدعم المستمر من مسؤولي الصحة العامة
- إعطاء الأولوية لمجموعة من الاستراتيجيات والتدابير الهدف إلى الحد من انتشار كوفيد-19 في البيئات المدرسية
- تطوير بروتوكولات وسياسات تحاكي السياق المحلي
- معالجة أعباء المدارس المالية
- اعتماد مبادئ محددة للإبلاغ عن المخاطر
- رصد وتقديم الوضع بما في ذلك الوضع الوبائي للكوفيد-19 على المستوى الوطني وفي المدارس

الشروح في إعادة فتح المدارس

عند اتخاذ قرار بإعادة فتح المدارس، يجب على إدارات المدارس الشروع بتنفيذ التدابير والاستراتيجيات الرئيسية داخل إعدادات المدرسة لتمكين عملية آمنة لإعادة فتح. الحوار مع المعلمين والموظفين والمنظمات التي تمتلكهم أمر ضروري لتطوير وتنفيذ هذه التدابير والاستراتيجيات.
يتم تنفيذ الإجراءات وفق الركائز التالية:

- حماية الأفراد الأكثر عرضة للخطر وحماية رفاههم
- دعم أدبيات النظافة والسعال والعطس في الروتين اليومي
- فرض التنظيف والتعقيم الروتيني
- استخدام الكمامة أو أقنعة الوجه الواقية
- مراجعة سياسات الخاصة بالحضور والإجابة المرضية
- تعزيز التوظيف والتدريب
- تطوير وتنظيم الاجتماعات والزيارات
- الحد من أنشطة التربية البدنية والأنشطة الليكياحية
- حظر التجمعات الكبيرة والاحتفالات
- التخفيف من القدرة التشريعية
- مجموعات أصغر، اعتماد مبدأ المناوبة
- تعزيز التباعد الاجتماعي والجسدي
- التأكد من وجود نظام التهوية المناسب
- إعادة تنظيم وسائل النقل المدرسية
- الكشف
- الفحص والعزل
- تتبع الاتصال وفرض الحجر الصحي
- إغلاق المدرسة
مرحلة ما بعد فتح المدرسة

بمجرد إعادة فتح المدارس، يجب مراقبة ما يلي عن كثب وإجراء التعديلات وفقًا لذلك:

- الالتزام بالسياسات المدرسية والتدابير الوقائية المفروضة
- فعالية الكشف والبلوغ عن الأعراض والفحوصات وتعرف الحالات المشتبه فيها
- اتخاذ حالات التسرّب المدرسية بالإضافة إلى التغيب بين الموظفين والطلاب
- عدد الحالات بين الأطفال والأساتذة والموظفين داخل المدرسة، ونوبة التفشي المدرسي في المحيط المجتمعي على المستوى الوطني
- تأثير التدابير المنفذة على الأهداف التربوية والنتائج التعليمية
- تأثير التدابير المنفذة على صحة ورفاه المجتمع المدرسي (الطلاب والمعلمين والموظفين وأولياء الأمور وأفراد الأسرة الآخرين)
- تأثير التدريس عن بعد والتفاوت المخلتف في النجاح التعليمي

بالإضافة إلى ذلك، يجب على مسؤولي المدارس الاستثمار في:

- مشاركة المعلومات حول كوفيد-19 مع الطلاب والموظفين والآباء والمجتمع، وتعزيز التوعية، إلقاء الضوء على المخاوف والقلق
- إطلاع الطلاب والآباء على التدابير التي يتم تنفيذها لضمان تعاونهم ودعمهم
- تعزيز السلوكات الوقائية ومنظمة التعاون الحضري
- التأكد من أن إجراءات التنظيف والتغذية المفيدة ومنظمة
- إعطاء الأولوية لخدمات الدعم والأنشطة النفسية والاجتماعية
- مراجعة وتقديم احتياجات الطلاب التعليمية

دور الأهل / أولياء الأمور والبلديات والمنظمات غير الحكومية

للأهل / أولياء الأمور والمنظمات غير الحكومية، دور مهم في استكمال جهود الجهات الرسمية وإدارات المدارس لجذب فتح المدارس. يتم تفخيم الدور المحدد لكل من هذه الجهات في الوثيقة الكاملة.
Content
Roadmap for reopening schools

The COVID-19 pandemic has challenged the capacity of educational systems to provide continued access to learning and imposed long closures of schools and educational institutions. Careful planning for reopening of schools is now essential by all those involved in the decision-making and implementation process. Planning for school re-openings must be deliberate, indicating precisely how, when, under what conditions, and based on available data and evidence. School reopening should also be sensitive to community needs (1).

Below, we provide a roadmap for reopening schools, building on existing research evidence, country experiences and published guidance documents on school reopening. Along with other crises management plans and documents in place, this roadmap will provide guidance and information to local authorities, decision-makers and school managements involved in the reopening process. It also sheds light on the role of parents/guardians, municipalities and NGOs in supporting school reopening.

The roadmap is divided into the following sections:

→ Conditions that must be met before considering school reopening
→ Preparing for school reopening
→ Initiation of school reopening
→ Post-reopening phase
→ Roles of parents/guardians, municipalities and NGOs

Background to K2P Rapid Response

A K2P Rapid Response responds to high priority areas and urgent requests from policymakers and stakeholders by synthesizing research evidence drawn from systematic reviews and single research studies. A systematic review is an overview of primary research on a particular question that relies on systematic and explicit methods to identify, select, appraise and synthesize research evidence relevant to that question.

K2P Rapid Response services provide access to optimally packaged, relevant and high-quality research evidence over short periods of time ranging between 3, 10, and 30-day timeframe. This rapid response was prepared in a 30-day timeframe and involved the following steps:

1) Formulating a clear review question on a high priority topic requested by policymakers and stakeholders from K2P Center.
2) Establishing what is to be done in what timelines.
3) Identifying, selecting, appraising and synthesizing relevant research evidence about the question
4) Drafting the K2P Rapid Response in such a way that the research evidence is present concisely and in accessible language.
5) Submitting K2P Rapid Response for Peer/Merit Review.
6) Finalizing the K2P Rapid Response based on the input of the peer/merit reviewers.
7) Final Submission, translation into Arabic, validation, and dissemination of K2P Rapid Response

The quality of evidence is assessed using the AMSTAR rating which stands for A Measurement Tool to Assess Systematic Reviews. This is a reliable and valid measurement tool to assess the methodological quality of systematic reviews using 11 items. AMSTAR characterizes quality of evidence at three levels:

8 to 11 = high quality
4 to 7 = medium quality
0 to 3 = low quality
Principles for school reopening

→ Set an ultimate goal of returning safely to in-person instruction based on cross-sectoral and context-specific evidence, including education, public health and socio-economic factors.
→ Make physical reopening decisions based on local health conditions and school-specific information
→ Maximize the educational and health benefit for students, teachers, staff, and the wider community, and help prevent a new outbreak of COVID-19 in the community
→ Promote inclusiveness and equity in school re-opening
→ Adopt a multi-faceted, layered approach to protect students, teachers, and staff.
→ Ensure school re-entry policies are practical, feasible, and appropriate for children’s different developmental stage and address teacher and staff safety
→ Ensure school strategies are flexible and adaptable to the level of viral transmission and test positivity rate throughout the community and in schools
→ Even with the goal of returning safely to in-person instruction, schools must develop a comprehensive plan for remote learning that includes plans for full-time remote learning and hybrid approaches

Adapted from: (2, 3)
Conditions that must be met before considering school reopening

The safe return of most (or even large proportions of) students to school is conditional on the presence of (1) low community transmission, (2) rigorous surveillance system focused on testing, contact tracing, isolation, and quarantine, and (3) school readiness and capacity to implement and maintain prevention and control measures.

1. Low community transmission

School reopening requires both low levels of community transmission and safeguards to control the epidemic (4-6). This means that communities should first drive down the spread of COVID-19 for schools to be able to open safely (2, 6-8). Community-related risk factors including epidemiological factors, public health and healthcare capacities, population density and adherence to social distancing and good hygiene practices need to also be taken into consideration (9, 10).

The strong correlation between community COVID-19 incidence and risk of outbreaks in educational settings (even during a period of low COVID-19 incidence) highlights the importance of controlling the transmission of the disease in the community to protect the staff and students in educational settings (4, 5).

Studies in Europe and Australia show that schools can reopen safely when community transmission is low (4, 11). In Denmark and Norway, reopening of schools for all students in regions with low community transmission has not resulted in a significant increase in the growth rate of COVID-19 cases (7, 12). In England, most of the regions reopened schools when community SARS-CoV-2 incidence was low across most regions while educational settings in regions with high incidence areas remained closed (5). Low risks of COVID-19 infections or outbreaks in educational settings have been reported since school reopening in England (5).
Nonetheless, even in countries or regions where community spread was low, infection control measures are still necessary; Denmark and Norway and England avoided outbreaks by also limiting class size and student interactions, among other steps (4, 5, 12). In contrast, the return of most students to school in countries with higher levels of community transmission (e.g. Germany, Chile) has been accompanied by increased school transmission and outbreaks (7, 12, 13).

There is no agreed-upon international criteria or thresholds for the level of community transmission deemed safe for schools to reopen (14, 15). Public health indicators that are used to determine level of community transmission and disease severity levels can be examined to help inform decisions related to school operations (16). Communities can use the following indicators for assessing the virus’s spread: (i) changes in newly identified COVID-19 cases, (ii) percentage of positive tests for SARS-CoV-2, and (iii) hospitalizations (e.g. COVID-related hospitalizations, ICU bed occupancy), (14, 16, 17). It is suggested to look at trends over the course of two weeks instead of looking at one day or one value (14).

Proposed indicators and threshold levels of community transmission in different countries

**New York:** It was announced that schools will reopen only if the positivity rate (or share of tests that are positive for the coronavirus) in a region stays below 5% over a 14-day average (Jones and Hildebrand 2020).

**Oregon:** Among other requirements, counties must meet two criteria three weeks in a row: (1) positivity rate of 5% or less (2) 10 or fewer cases per 100,000 residents in preceding 7 days (Munday and Hares 2020).

**Arizona Department of Health Services (ADHS):** It is recommended that the following benchmarks be met prior to offering any in-person learning:

- **Cases:** a two week decline in number of cases or two weeks with new case rates below 100 per 100,000 (ideally below 5)
- **Percent positivity:** two weeks with less than 7% positivity (ideally below 5%)
- **COVID-like Illness Syndromic Surveillance:** two weeks with hospital visits due to COVID-like illness below 10% (ideally below 5%)
The CDC recommends the following thresholds for the different indicators of community transmission (17) (Table 1).

Table 1 Selected indicators and thresholds for community transmission

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Lowest risk of transmission</th>
<th>Lower risk of transmission</th>
<th>Moderate risk of transmission</th>
<th>Higher risk of transmission</th>
<th>Highest risk of transmission</th>
</tr>
</thead>
<tbody>
<tr>
<td>i- Number of new cases per 100,000 persons within the last 14 days</td>
<td>&lt;5</td>
<td>5 to &lt;20</td>
<td>20 to &lt;50</td>
<td>50 to ≤ 200</td>
<td>&gt;200</td>
</tr>
<tr>
<td>ii-Percentage of RT-PCR tests that are positive during the last 14 days</td>
<td>&lt;3%</td>
<td>3% to &lt;5%</td>
<td>5% to &lt;8%</td>
<td>8% to ≤ 10%</td>
<td>&gt;10%</td>
</tr>
<tr>
<td>iii- Hospitalization-Related Indicators:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of hospital inpatient beds in community that are occupied</td>
<td>&lt;80%</td>
<td>&lt;80%</td>
<td>80 to 90%</td>
<td>&gt;90%</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Percentage of intensive care unit beds in the community that are occupied</td>
<td>&lt;80%</td>
<td>&lt;80%</td>
<td>80 to 90%</td>
<td>&gt;90%</td>
<td>&gt;90%</td>
</tr>
<tr>
<td>Percentage of hospital inpatient beds in community that are occupied by patients with COVID-19</td>
<td>&lt;5%</td>
<td>5% to &lt;10%</td>
<td>10% to 15%</td>
<td>&gt;15%</td>
<td>&gt;15%</td>
</tr>
</tbody>
</table>

2. Rigorous surveillance system focused on testing, contact tracing and isolation of cases

Reopening of schools can form part of the next step of gradual relaxing of lockdown if combined with strong surveillance and robust test–trace–isolate system at national level, with school-level stratified monitoring (6, 11, 12, 18, 19). In several countries in the European Union and England, the presence of a robust test–trace–isolate system enabled early detection and isolation of staff and students which was critical to prevent progression to an outbreak in most cases (4, 5). In Australia, where extensive testing, tracing and quarantine strategies exist for the population (in addition to other public health mitigation measures), children and teachers did not
contribute significantly to COVID-19 transmission via attendance in educational setting (11).

Several modelling studies in France, UK, Germany, Sweden, Denmark and Norway predicted that school reopening would require large-scale trace-testing-isolation infrastructure and strategy (12, 18, 19). In the UK, it was estimated that in the absence of a large-scale testing, contact tracing, and isolation strategy (covering between 59% and 87% of people with symptomatic COVID-19 infection across different scenarios), reopening schools with full time or in part-time rotas starting September 2020, alongside reopening society, is likely to induce a second pandemic wave of COVID-19 (18). Any significant return of students to schools, particularly in countries with a high incidence, should not be considered unless a swift and robust test and trace infrastructure, with school-level stratified monitoring is in place to enable facilitated testing and monitoring of cases among staff and students over time scales (12, 19).

3. School readiness and capacity to implement and maintain COVID-19 prevention and control measures

Safe reopening of schools will require investments to improve basic sanitation facilities, environmental controls and a number of other measures such as operational changes (e.g. reduced classroom sizes, physical distancing in classes), provision of personal protection, and screening of staff and students for symptoms (4, 20). Considering that only half of schools globally have access to water and soap for hand washing, with lower levels in LMICs (21) and public schools are often overcrowded which may facilitate transmission of virus (20), reopening schools without any precautions will yield substantial risk for students, family members of students and especially teachers/staff (22, 23). Even as community transmission is lowered, adherence to some set of school-based interventions is needed to reduce the excess risk of symptomatic illness at all levels of education (22).

The CDC proposed assessing school’s ability to adhere to the following key mitigation strategies (17):

→ Consistent and correct use of masks
→ Social distancing to the extent possible
→ Hand hygiene and respiratory etiquette
→ Cleaning and disinfection
→ Contact tracing in collaboration with local health department
Preparing for school reopening

Decision-makers at the national and regional levels (in collaboration with representatives of different constituencies including school staff, families, local health officials, municipalities and other key stakeholders as needed), should consider the below recommended actions in preparing for school reopening during the pandemic.

Key recommended actions to be considered as part of preparing for school reopening:

- Form decision-making taskforce
- Provide clear national guidance on parameters for decision making on school reopening
- Reopen schools in a staged fashion
- Promote equity in reopening
- Ensure that schools have access to ongoing support from public health officials
- Prioritize set of strategies and measures for mitigating the spread of COVID-19
- Develop tailored protocols and policies
- Address financial burdens for schools and districts
- Adopt principles of risk communication
- Monitor and evaluate the situation and epidemiology of COVID-19
1. Form decision-making taskforce

To inform decisions on reopening schools and school operations, decision-makers and education leaders should establish a mechanism (e.g. a task force) to seek input from representatives of different constituencies including school staff, families, local health officials, municipalities and other key stakeholders. The cross-sector taskforce should (24):

→ Identify educational priorities and community values in relation to reopening of schools;
→ Determine a plan for informing ongoing decisions about schools including establishment of a communication plan;
→ Be explicit about financial, staffing and facilities-related constraints;
→ Liaise with communities to advocate for needed resources

2. Provide clear national guidance on parameters for decision-making on school reopening/closure

Decisions to reopen or close schools should be guided by a risk-based approach, informed by cross-sectoral and context-specific evidence, with the aim of maximizing the educational and health benefit for students, teachers, staff and the wider community, and helping prevent COVID-19 outbreak in the community (25). Decision-making should be done together with subnational stakeholders so that actions are based on an analysis of each local context (9).

Analysing the context-specific benefits and risks enables prioritization of schools (or components of schools) for reopening, prioritization and implementation considerations of risk mitigation measures within schools and communities, and areas of focus for remote learning (9).

National policies should provide clear guidance for sub-national assessment and decision-making (9). They should also outline the clear authorities and mechanisms for collaboration of the multiple agencies and organizations involved in the public health

In Denmark, the decision of when and how to reopen schools was made jointly by the central government and the Parliament. This allowed for municipal councils (similar to school districts in the U.S.) to develop their own plans, and school leaders and teachers to do the same for each individual school based on guidelines from the National Board of Health (Vegas 2020).
In Japan, schools reopened following the proposal of the government to give priority for some grades, including first- and sixth-grader at elementary schools; however, the decision on when and whether or not to reopen schools has been left to local municipalities based on the number of COVID-19 cases in the area (Melnick et al. 2020).
and education landscape. School leaders can develop their own plans for safe reopening of schools based on national guidance, taking into consideration local context and community needs. A platform can be established to enable ongoing communication between government and school leaders.

Decision makers should regularly/periodically assess their decision on whether to open or close schools considering the following (9, 25):

| Local situation and epidemiology of COVID-19 where the school(s) are located | → Trends in COVID-19 cases and degree of community transmission  
→ Impact of current epidemiologic situation on community movement (current movement restrictions in place, availability of safe transport, etc.)  
→ Current public health and healthcare capacities  
→ Population density and adherence to social distancing and good hygiene practices  
→ Ability of public health officials to quickly detect and respond to new cases, to avert new outbreaks  
→ Ability of local health authorities to swiftly trace contacts in school (including degree of accessibility to information needed to trace contacts if a case or outbreak occurs in the school)  
→ Level of exposure between the school population and higher-risk groups (e.g. elderly and those with underlying medical conditions) in the community and ability to take sufficient mitigations efforts to shield/protect higher-risk groups |
| --- | --- |
| School setting and ability to maintain COVID-19 prevention and control measures | → Importance of in-person classroom instruction to achieve target learning outcomes (foundational, transferable, digital, job-specific)  
→ Availability and accessibility of high-quality remote learning (for respective learning outcomes, age groups and for marginalized groups)  
→ Ability to sustain current remote learning approach, including learning achievements, and social-emotional wellbeing, taking into consideration pressure on caregivers and other context-specific factors  
→ Capacity of school to maintain safe school operations to mitigate risks, such as: physical distancing (i.e. size of classroom, seating arrangements, spacing); ventilation; and water, sanitation and hygiene practices  
→ Readiness and ability of teachers and educational authorities to adapt to different administrative and learning approaches including ability and readiness to implement prevention and control measures  
→ Availability of time and resources to plan and implement changes to timetables/schedules, and physical structure to enable social distancing and support for teachers and vulnerable students.  
→ Number of staff at risk for severe disease (age-groups and underlying conditions)  
→ Number of children with underlying conditions or special needs  
→ Travel modality of school population to and from school |
3. Reopen schools in a staged fashion

Schools should be reopened in a staged fashion, by age groups (e.g., primary schools or for different groups of students), geographical location (depending on level of transmission) or limited to a few days of the week. Staging allows monitoring of the impact of reopening on new infections locally before opening further schools or sections within schools (12, 19, 26, 27).

A phased reopening of schools has begun in Taiwan, Denmark, Norway, China, Japan, France and Germany. Most countries have prioritized re-opening schools for younger children, primarily preschools and primary schools (28-30). This aligns with emerging evidence suggesting that opening primary schools and day care facilities may have a more limited effect on the spread of COVID-19 in the community compared to secondary/high schools, particularly within smaller class sizes and in the presence of mitigation measures (7).

Re-opening of nursery and primary schools could be considered a strategy to be implemented at an early stage of school re-opening efforts, while putting in place measures to do it safely. In Denmark, where the public health system showed the capacity to promptly identify and trace COVID-19 cases, the government took the decision to send children up to 11 years old back to school while ensuring safety measures are in place to limit any spread of the virus (28). In Ontario, elementary school students will attend school five days per week, with 300 minutes of instruction per day while remaining in one cohort for the full day, including recess and lunch. Most secondary schools will start the school year in an adapted model of part-time attendance with class cohorts of up to 15 students alternating between attending in-person and online. Where possible, students on remote learning days would participate in synchronous learning for a period of each school day (31).
4. Promote Equity in Reopening

As part of the planning process for reopening schools, it is important to take into consideration existing disparities within and across schools as well as disparities among students and families (e.g. staffing shortages, overcrowding, remote learning infrastructures, access to technology, resources for staffs, students and families, etc.) (24).

Special considerations could be provided to the following student segments with specific needs (8, 32):

→ Low-income students who are less likely to have reliable internet service and devices equipped to support remote learning

→ Students who are more likely to rely on school for non-academic support (including nutrition)

→ Students with special education needs (that make remote learning particularly difficult)

→ Children of essential workers whose parents may not have the option of staying home

Schools that have greater numbers of such children should be provided with additional resources for space, new staffing, and educational technology. Efforts should be invested in offering more in-school time to those children at greatest risk, while ensuring safety and providing access to appropriate educational technology for all (8, 32).
Measures to reduce inequalities in learning and education

**Simplify curricula and adopt catch up strategies to cover learning losses**

Governments should consider simplified curricula specifically targeting areas where learning loss will be most consequential for learning progression in the subsequent school year. Such strategies are urgently needed in lower grades where literacy is critical for progression to higher grades. For students in higher grades, learning continuity should be prioritized for students with high risk of dropout. Schools should also adopt supplementary teaching, tutoring, catch up classes, and extra-curricular non-formal learning activities to mitigate inequalities that might have been created or exacerbated for most marginalized groups.

**Address potential stigma and discrimination**

Aftermaths of COVID-19 could include heightened risks of stigma and discrimination including bullying especially for the most marginalized children. Therefore, the Ministry of Education should support schools in setting up plans in advance to address discrimination and stigma and to prevent violence and bullying in schools.

**Make learning material accessible**

Schools should work closely with families to make learning material (e.g. books, writing material) available. Efforts should prioritize the poorest households to provide resources including school supplies and emergency food as needed. Schools should also work with local authorities and related ministries to guarantee student access to internet, computers, laptops or tablets.

**Use alternate resources to amplify learning**

Local authorities can consider educational broadcasting to support remote learning for those who do not have access to the internet. In some settings, successful remote learning options include radio and television. In households where such resources are not available, low cost speakers or devices can be provided to broadcast short lessons in communities. SMS and phone calls may also be used to encourage and remind students to stay engaged in learning. Combining low tech solutions with other interventions such as opportunities for interactive engagement, outreach from teachers, and access to learning materials is more effective.
Measures to reduce inequalities in learning and education

**Make use of family engagement to facilitate learning**

Importance of family engagement in enhancing learning is often overlooked in mainstream planning of education systems. Parents and siblings support especially in the poorest households can add significantly to learning outcomes and is not linked to parental literacy levels. Support can take the form of creating dedicated time for children to learn, providing sufficient instruction and tips to support the needs of students while learning remotely, or teaching parents to engage children in talk and answering questions.

**Encourage outreach and support from teachers, school and community leaders**

Teachers, school and community leaders know much about the individualized needs of children in their care and can help ensure that families and students are aware of available learning resources and opportunities as well as maintain motivation and engagement. Leaders at the district level should have a fair understanding of the disadvantages and barriers to school attendance for children within their catchment's areas. During COVID-19 closures, they have an important role to play in supporting schools and teachers to find context-specific solutions, which may range from “drive-by loudspeaker announcements” to SMS messages, phone calls, or even household visits (while respecting physical distance).

**Provide financial and regulatory support to families to incentivize school attendance**

It is important to ensure that any health safety measures put in place by schools do not create additional barriers for the most marginalized children return to school to come to school (e.g. school can provide masks and not request from parents/caregivers to cover such costs). Local authorities should consider providing paid parental leave to working parents whose children are expected to be at home on a regular basis. Focus should also be on ensuring that private education providers, including low fee schools and religious schools, are monitored to avoid unregulated fee increments that add burdens on households.

**Improve access to vulnerable groups**

Provide adequate learning opportunities and alternative technology options to students with special needs. Develop a plan for students with disabilities to determine the needs for compensatory education to adjust for lost instructional time. Acknowledge that different grades have different needs and respond differently to remote learning. Younger students need more guidance, social interaction and tactile learning opportunities, which cannot be provided using remote options.

Source: Armitage & Nellums, 2020; Dorn et al 2020; Munday and Hares 2020; UNESCO 2020
5. Ensure schools have access to ongoing support from public health officials

Government must help ensure that all schools and municipalities have access to the appropriate public health expertise locally to monitor and maintain the health of students and staff.

Once schools have been designated for reopening, coordination and partnership with local (at regional/district/municipal level) public health officials is critical to assess school facilities for minimum health standards, consult on school plans for COVID-19 mitigation and communicate regularly about the local situation of the pandemic (24). Specific activities include:

→ Assessment of school facilities’ readiness to ensure provision of minimum required health and safety standards to support COVID-19 mitigation strategies;

→ Consultations on proposed plans for mitigating the spread of COVID-19;

→ Development of a protocol for monitoring data on COVID-19 to enable (1) tracking of community spread and (2) making decisions about changes to the mitigation strategies in place in schools and when school closures might be necessary;

→ Establishment of procedures if students or staff become unwell;

→ Delivery of COVID-19 related prevention and health promotion training to staff, school community and students;

→ Participation of local (at regional/district/municipal level) public health officials along with schools, teachers and parents in shared decision-making about when it is necessary to initiate closure of schools for in-person learning

Local health authorities could collaborate with public health departments and school leaders to adopt a tiered testing approach (33):

→ Test all students and staff with symptoms

→ Develop a schedule to randomly select a proportion of students and staff for testing to identify asymptomatic individuals (e.g. using pooled testing strategy)
6. **Prioritize the set of strategies and measures for mitigating the spread of COVID-19 in school settings**

Schools must adopt multiple COVID-19-related strategies and measures to maintain individual and community health and allow schools to remain open (9, 22, 24, 34).

Despite the limited evidence about the relative effectiveness and cost-effectiveness of different strategies, the concurrent implementation of multi-faceted strategies by many countries has shown promise for reducing transmission (5, 28-30). Based on what is currently known, schools could prioritize the adoption of a combination of: strategies to reduce class density (e.g. small cohorts), transmission mitigation strategies (e.g. use of masks, healthy hand hygiene solutions, physical distancing; frequent surface cleaning; limiting large gathering), strategies for screening, contact tracing and isolation to decrease COVID-19 prevalence; and strategies to protect staff and students at higher risk of severe COVID-19 (4, 5, 22, 24, 28, 34).

Contextualization and adaptation based on available resources will be critical to respond to local needs and conditions (9).

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**Overview of key measures adopted by countries where COVID-19 transmission, so far, has not significantly increased following school reopening**

→ Most commonly adopted measures involved increasing physical distance, regulating recreational activities and mealtimes to limit interactions, wearing facemasks, increasing hygiene practices among students and staffs, intensifying cleaning and disinfection of school premises and reducing class size

→ Most countries initially reopened schools for specific ages or grades only with more schools reopening for younger than for older students.

→ A number of countries adopted some degree of staggering the time of arrival, dismissal, and break times within the school

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Source: Fadlallah et al. 2020
7. Develop tailored protocols and policies

A description of the key Protocols and policies for mitigating the spread of COVID-19 is provided below (35):

→ Develop protocols on physical distancing regulations in and outside of classrooms, staggering schedules for arrival and dismissal, meal times and temporarily moving classes outdoors, and reducing class size

→ Adopt guidelines on handwashing, use of masks and other protective equipment, procedures for cleaning/disinfecting facilities and safe food preparation.

→ Develop policies to safeguard the health of staff, teachers and students who are at higher risk (due to age or other underlying medical conditions). This includes modifying attendance policies for teachers’ absences and supporting them as well as students with remote and blended teaching and learning if they cannot attend in person.

→ Provide guidance to parents and caregivers on school re-opening procedures and safety considerations

→ Revise school’s safeguarding and bullying policies and include prevention of stigmatization against COVID-19 in school.

School should develop, revise and tailor the protocols and policies for mitigating the spread of COVID-19.

8. Address financial burdens for schools

Governments can support school re-opening by providing resources to schools to enable them to implement the set of strategies and measures needed to safeguard health and mitigate the spread of COVID-19 in school settings (24). Schools with poor infrastructure and limited resources will need additional financial support to meet basic health and safety standards and creative problem solving and trade-offs may be necessary. Mechanisms such as school block grants and cash transfers (conditional or unconditional) could be considered (9). Efforts could be invested to mobilize local financial, human resource support or in-kind contributions through school management committees, parent-teacher associations and other community networks. Local businesses may also be approached to support the return-to-school effort through donations, loans or purchase of innovations that support teaching and learning (9).
9. Adopt principles of risk communication

Communication around COVID-19 and schooling have ongoing relevance as the pandemic continues, and risks in schools need to be managed and communicated carefully with all stakeholders (36, 37).

→ Prepare for two-way communication
  › Establish systems for communicating between sectors (education, health, social, economy, teacher unions and parents’ associations) and engage trusted spokespeople from key stakeholder groups
  › Consult affected groups (such as parents, students or teachers with health concerns) and take their concerns and needs into account.

→ Communicate early and often, particularly when action may go against public demand. Unify communicated messages from all parties to avoid creating confusing and public distrust.

→ Be clear and detailed in the evidence and rationale for a policy and its underpinning values.

→ Establish transparent criteria for school closure and its reversal to create levels of predictability and enable planning and reduce the risk of politicization. Communicate these criteria with the public.

→ Correct misinformation and put to rest any public doubt or fear.

→ Be explicit and open about uncertainty
  › Respect and trust the audience
  › Anticipate and tolerate early strong reactions
  › Ensure empathy characterizes communication in a situation of fear and anger, avoiding a tone of admonishment or attempts to delegitimize public concern.
  › Emphasize benefits that can connect a policy with public values.
10. **Monitor and evaluate the situation and epidemiology of COVID-19**

As schools reopen, it is critical to monitor and evaluate the situation and epidemiology of COVID-19 (nationally and within school settings), and adapt decisions and measures as necessary. Ministries of education and health, decentralized authorities and school leaders need to develop monitoring and evaluation frameworks for measuring and benchmarking progress (38).
Initiation of School Re-Opening

This section provides guidance for school administrators when decision to re-open has been made. It highlights the key measures and strategies that should be considered within school settings to enable safe reopening. Dialogue with teachers, staff and their representative organizations is essential in developing and implementing these measures and strategies.

Measures are to be implemented according to the following pillars:

- **Communication**
- **Health and Safety**
  - Protect vulnerable populations and safeguard well-being (including mental health)
  - Integrate hygiene and respiratory etiquette into daily routine
  - Enforce routine cleaning and disinfection
  - Support mask use and protective facial coverings
- **Administrative Measures**
  - Revise attendance policies
  - Enhance staffing and training
  - Regulate meetings and visits
  - Limit physical education and extracurricular activities
  - Prohibit large assemblies and celebrations
- **Operational & Environmental Modifications**
  - Reduced capacity (smaller groups, rotations and staggering times)
  - Increase spacing and physical distancing
  - Ensure adequate ventilation and air flow
  - Reorganization of school transportation
- **Education and Learning Approach**
  - Screening, contact tracing and isolation strategy
    - Screening
    - Testing and isolation
    - Contact tracing and quarantine
    - School closure
1. Communication

→ Develop a proper communication system to ensure continuous and regular communication with school community (teachers, students, parents, staff) regarding updates on school re-opening (and closure) and guidelines about limiting exposure to COVID-19 including latest scientific information regarding COVID-19 to enhance their health literacy (16, 25, 31, 35, 39, 40). Maintain continuous two-way communication through the use of various channels such as periodic discussions, integration of relevant topics/materials into the curriculum, printed and/or audio-visual materials, etc.

→ Designate a staff member such as the school nurse, as the primary contact person to address any COVID-19 related concerns. Ensure that this designated staff member received the proper training for the tasks required including risk communication. Parents, caregivers and staff should be provided with that person’s contact information (16, 40).

→ Inform parents, caregivers and guardians of safety measures to minimize their concerns and elicit their support (31, 40).

→ Explain COVID-19 related measures to students (40) and inform them of available psychosocial support services at schools (25).

→ Post signs at entrances and throughout the school premise to remind students, staff, visitors and parents/ caregivers of the COVID-19 related guidelines (e.g. physical distancing, hand-washing, appropriate entrance/ exit practices, maximum capacity in common areas, new rules within playgrounds and school grounds, screening requirements, and availability of hand sanitizer, etc.) (31)

→ Develop checklists for parents, students and staff to help them decide whether students/ staff should attend school, taking into account the local epidemiology of COVID-19 (25):
  › Does the student/ staff have any underlying medical conditions and/or vulnerabilities?
  › Have they recently been ill, or do they have any COVID-19 related symptoms?
  › What kind of support is needed within their home environment?
  › Are there special considerations regarding school transport?
  › Ask parents to report any COVID-19 suspected cases within their households and inform them to keep their children at home in such cases.
› Ask parents to keep their children at home in case of experiencing any of the COVID-19 symptoms.

→ Develop a set of policies and procedures on notifying parents/caregivers of any detected and suspected case of COVID-19 and potential risk to students who were in contact with confirmed or suspected cases (35, 39, 41, 42).

→ Establish a communication systems for (16):
  › Individuals (students, teachers, staffs, parents) to self-report COVID-19 symptoms, a positive test for COVID-19, or exposure to someone with COVID-19
  › Notify local health authorities of COVID-19 cases
  › Notify individuals (staffs, students, parents, etc.) of any COVID-19 exposures while maintaining confidentiality in accordance with privacy laws

Regular communication with families, staff and other partners should include:

→ Updates about COVID-19 status in school and community

→ Notification when COVID-19 cases are detected in school (while avoiding any disclosure of personally identifiable information and following privacy requirements) along with providing guidance on the next steps.

→ Explanation of what parents, students, teachers and staff can expect when returning to school; in particular:
  › Importance of staying home when sick and staying home to monitor symptoms if in close contact with a person who tested positive for COVID-19
  › Guidance on COVID-19 symptom screening at home
  › Physical distancing measures in place
  › Expectations regarding wearing masks and if masks will be available from school.
  › Hygiene practices in place

→ Actions undertaken to prevent COVID-19 transmission in school buildings, facilities and buses

→ Actions that families and households can take to help prevent spread of COVID-19 and to manage potential anxiety

→ Decisions about operational status, and potential use of virtual learning if COVID-19 cases are identified among students, teachers, or staff

→ Guidance on caring for someone who is sick and for parents, guardians and caregivers who are sick

→ Guidance on how to reduce stigma

Source: CDC 2020
2. Health and safety

*Protect vulnerable populations and safeguard well-being (including mental health)*

→ Establish policies to protect staff, teachers and students who are at high risk due to age or underlying medical conditions, with plans to cover absent teachers and continue remote education to support students unable to attend school in person (9, 40).

→ Conduct a risk assessment for teachers and other staff (considering age, chronic conditions and other risk factors), and identify those who are immunocompromised or at a higher risk of severe illness, then implement a staggered approach for returning to school (8, 32). Train teachers at high risk to serve as remote learning experts or assume more administrative tasks where there is less contact with other individuals (8, 32).

→ Coordinate with parents and guardians who are older than 65 years or have chronic health conditions, or children with underlying health conditions, who may be legitimately concerned for the risk of transmission within their household and, accommodate individual circumstances to the extent possible (8) including arranging for alternative learning/teaching methods (16, 26, 39, 43).

→ Establish a system to provide the necessary support to address the mental health needs of students and staff once schools reopen (2, 31, 44).

→ Ensure adequate support is provided for students with disabilities and children who have complex needs including those who struggle to maintain good hygiene (43, 44) and address any unintended segregation of these students and potential consequences thereof (39).

→ Re-establish regular and safe delivery of essential services such as critical nutrition and school feeding, sanitation and hygiene, vaccination campaigns, and protection referrals for all and specialized services for children with disabilities (9).
Integrate hygiene and respiratory etiquette into daily routine

→ Encourage everyone to carry out hygiene measures frequently, regardless of local community transmission rates or the infection status of other people around them (10).

→ Ensure the availability of sufficient hand soap or alcohol-based sanitizer (ideally fragrance free), disposable paper towels and tissues, and clean water at school (10, 16, 25, 39, 40, 44). If possible, upgrade doors and soap dispensers so that these are operated without touch or using elbows (43, 45). Consider installing portable handwashing stations around school and near classrooms to minimize movement and congregations in bathrooms (39).

→ Provide fragrance-free hand sanitizer stations around the school premises, on buses, and in areas where access to soap and water is difficult. Students aged below nine should only use hand sanitizer under adult supervision (39, 42, 43).

→ Train both students and staff on proper handwashing techniques and reinforce these by providing verbal reminders and placing visual cues such as handwashing posters with instructions on proper hand washing practices, stickers, and other materials in highly visible areas (10, 25, 26, 31, 35, 39-41, 44, 46).

→ Remind students to wash their hands or use hand sanitizer before and after eating, playing outdoors and riding the school bus (2, 10, 44). Provide help to young children and students with special needs when washing their hands; disinfectant cleaning wipes can be used as an alternative for young children and special needs students (16, 44).

→ Facilitate opportunities to meet handwashing frequency guidance by building time into daily routines for frequent hand hygiene, especially for young children (39).

→ Remind students and staff to cough and sneeze into their elbow or cover their mouths with tissue. They should immediately discard tissues after use and wash their hands with soap and water for at least 20 seconds (10, 16, 39-41).
→ Avoid sharing foods/drinks and avoid drinking from water fountains (41).
→ Sanitize student and staff belongings upon arrival (43).
→ Ensure all non-disposable food service items are handled with gloves and washed with dish soap and hot water or in a dishwasher (10, 16).

| When to wash hands | ➔ Before leaving home and when arriving home
|                | ➔ When arriving at school/after-school program (if offered)
|                | ➔ After coughing/sneezing
|                | ➔ After going to the toilet
|                | ➔ Before and after meals
|                | ➔ After using shared tools or surfaces
|                | ➔ After coming in from outdoor activities/breaks
|                | ➔ When their hands are visibly dirty

| Alcohol based disinfectant | ➔ Alcohol-based disinfectants can be used when no hand washing facilities are available.
|                          | ➔ Alcohol based are ineffective on wet or visibly dirty hands
|                          | ➔ Alcohol-based disinfectants are suitable when away from the home or far from washing facilities
|                          | ➔ Use wet wipes on visibly dirty hands before using alcohol based disinfectant if washing facilities are not available

| Cough etiquette and respiratory hygiene | ➔ Provide paper towels in a readily accessible place for use by pupils/staff
|                                           | ➔ Use tissue to wipe nose and cover a cough
|                                           | ➔ When paper towels are not available, it is recommended that pupils/staff cough or sneeze into their elbow when necessary.
|                                           | ➔ Avoid touching the face or eyes. This can be difficult for young children, but older pupils and staff should be encouraged to follow this advice.
|                                           | ➔ Do not touch mask or face covering

Source: (10, 39)
Enforce routine cleaning and disinfection

→ Set and enforce clear guidelines for custodial staff including a schedule, material to be used, safety precautions and frequency of cleaning (16, 25, 40, 44)

→ Ensure sufficient staffing levels to meet facility cleanliness requirements (39, 40). Use sodium hypochlorite at 0.5% (equivalent 5000ppm) for disinfecting surfaces and 70% ethyl alcohol for disinfection of small items (35). Avoid mixing cleaning products such as peroxyacetic acid, sodium hypochlorite (bleach), or quaternary ammonium compounds as they release toxic fumes (16, 39).

→ Provide appropriate equipment for custodial staff and ensure that staff wear gloves and masks while cleaning (39, 43) and wash their hands after cleaning has been carried out, even if gloves have been worn (10).

→ Provide water and sanitation, make sure trash is removed daily and ensure that staff follows environmental cleaning and decontamination procedures in classrooms and all other school areas (35, 39, 40, 44).

→ Sanitize schools completely before re-opening (and conduct regular sanitization) and make sure that facilities are properly ventilated to avoid inhalation of fumes from cleaning products (16, 39, 43, 47). Do not use cleaning products near children and ensure safe and correct use and storage of cleaning and disinfection supplies (including storing products securely away from children) (10, 16, 39).

→ Clean playground equipment with high-touch surfaces regularly and after use (2, 44). Encourage the use of toys and equipment that are easy to clean and close off playground areas that include dress up sections, indoor soft play areas and reading corners with soft furniture (43).

→ Ensure thorough cleaning of buses between uses (2, 44).

→ Clean and disinfect frequently touched surfaces (e.g. desks, chairs, door handles, hand rails, dining tables, toilets, sinks, seats and benches, doorframes, elevator keys, teaching aids, book covers, playground equipment, shared equipment, etc.) within the school and on school buses at least daily or between use as much as possible (2, 10, 25, 39, 40, 42-44). Use keyboard covers for computers to facilitate cleaning between users (2).
→ Encourage students to wipe clean their own desk daily (alcohol based solution) (10).

→ Leave items that cannot be cleaned daily unused and out of reach for a period of 48 hours (72 hours for plastics) (10, 44).

→ Prohibit sharing of supplies, equipment and resources (including personal electronic devices, books, learning aids, costumes, fabric toys and stuffed animals, sports, art and science equipment, keyboards etc.) and disinfect them at least once daily or after each use or before sharing with another group (2, 10, 16, 26, 39, 40, 43, 44, 47).

→ Close off areas when a positive case is confirmed and do not use until after proper cleaning and disinfection which should ideally be done 24 hours after case is confirmed. If 24 hours is not feasible, wait as long as possible before beginning cleaning and disinfection to minimize potential for exposure to respiratory droplets (16, 39, 41).

Develop a protocol for cleaning and disinfecting the school if and when a positive case is identified. This includes:

--- Clean and disinfect all areas (e.g., offices, bathrooms, and common areas) used by the person with COVID-19, focusing especially on frequently touched surfaces

--- Carry out cleaning (using soap or detergent) prior to disinfecting and carry out waste disposal

--- Open doors and windows to increase air circulation

--- Use disposable cleaning equipment if possible

--- Remove all items that cannot be cleaned and store in a sealed container for 7 days

--- Clarify when area can be returned to normal use

(Ontario Ministry of Education 2020, CDC, 2020)
Support mask use and protective facial coverings

→ Develop school wide guidelines in line with existing national policies with regard to wearing masks or facial covering. Provide students, staff and parents with information and training on proper use of masks (cover nose and mouth), removal, and daily washing and maintenance of cloth face coverings (2, 16, 39, 44, 48). They should also be reminded not to touch the front of their facemasks while in use or when removing it (48).

→ Provide medical masks and eye protection (i.e. face shield) for all teachers and other staff of school boards, and require all teachers and staff to wear masks at all times, with reasonable exceptions for medical conditions (31, 43, 49). The CDC does not recommend use of face shields for normal everyday activities or as a substitute for masks because of a lack of evidence of their effectiveness for source control (50).

→ Provide surgical masks and disposable gloves to employees engaged in symptom screening, office staff and food service employees (39).

→ Ask students to wear masks especially in cases where physical distancing cannot be maintained (according to school and local recommendation by age groups). Require students to wear facemasks in instances where social distancing is compromised (39, 40, 43, 46). Students who are in general good health can use non-medical or cloth masks (2, 10, 39) while those with underlying health conditions (e.g. cystic fibrosis, cancer or immunosuppression), should, in consultation with their medical providers, wear a medical mask (51).

→ Allow exceptions for use of face masks for students and staff who have trouble breathing, students and staff with sensory difficulties, those who fall unconscious, incapacitated, or otherwise unable to remove a face covering without assistance (2, 16, 31, 39, 40, 43).

Recommendations regarding the use of masks and facial covering by students, teachers and other personnel in schools vary across countries with some enforcing such measures (CDC 2020; California Department of Education 2020; Knowledge and Human Development Authority 2020; Saudi Ministry of Education 2020; UNICEF, WHO & IFRC 2020) and others making them optional or allowing exceptions for specific age groups among students (United Kingdom Department of Education 2020; Johansen et al. 2020). Some countries require students over the age of 6 to wear masks at all times (Knowledge and Human Development Authority 2020; The Local 2020) whereas others specify that those in grades 4 and over should wear masks while on school premises (Government of Ontario 2020).
WHO and UNICEF recommendations on mask use among children (WHO 2020)

Children aged **12 and above** should wear a mask under the same conditions as an adult

Decision to use masks for children aged **6-11** should be based on the below factors:
- Extent of community transmission where the child resides
- Child’s ability to use the mask safely and appropriately
- Access to masks as well as laundering
- Sufficient adult supervision and instructions on how to safely put and take off masks
- Potential impact of mask use on learning and psychosocial development (in consultation with teachers, parents and/or health providers)
- Degree of interactions with other individuals at high risk of developing serious illness (e.g. elderly and those with other underlying health conditions)

Children aged **5 years and under** should not be required to wear masks

3. Administrative measures

*Revise Attendance and sick leave policies*

Communicate clearly and consistently with parents/caregivers what the expectations are concerning school attendance before the start of the new school year (44).

Ensure daily records of classes, seating charts, and bus cohorts are kept for contact tracing purposes (31).

Allow more flexibility with school attendance (16, 25) but record, monitor and follow up on absences to identify abnormal patterns and inform health authorities of any large increases in absenteeism by students and staff due to respiratory illnesses (35, 44). Prepare an absence management system to monitor student and teacher attendance (52). Waive doctors’ notes and excuse absence in cases of high community transmission (25).

Enforce a policy for students and staff to stay home if they are unwell or exhibit any symptoms that may be typical of COVID-19 and seek testing and medical attention (2, 25, 31, 47). Adopt more flexible sick leave policies to incentivize students and staff to remain at home when sick or when caring for sick family members (25).
Examples of school attendance policies

→ In Denmark and Norway, in-person attendance will be voluntary for the 2020-2021 school year and school employees over the age of 60 or those with designated health risks have been given the option to contribute to school operations from home. If not attending in-person, students will be required to attend school remotely.

→ In Finland, the Prime Minister noted that once schools reopen, local authorities and schools could not continue with remote education, and students who want to stay home to complete the school year would need special permission.

→ In the UK, while school attendance was not mandatory in March 2020, it will be mandatory again from the beginning of the autumn term. The usual rules on school attendance will apply.

→ In New South Wales, students must attend school unless they are feeling unwell or have a medical certificate stating that they are unable to return to school.

Source: CDC 2020, UNESCO 2020; Jones and Hildebrand 2020; United Kingdom Department of Education 2020; Government of New South Wales 2020

Enhance staffing and training

→ Devise planned deployment strategies that are based on an assessment of human resources gaps resulting from: staggered or part-time schedules; teachers’ own family obligations and personal risk factors; teacher’s ability to travel to school safely; and capacity to ensure a minimum number of hours of daily instruction time (9).

→ Ensure staffing levels are sufficient to meet unique facility cleanliness, physical distancing, student learning, and health and safety needs to address COVID-19. Recruit additional teachers and staffs if needed (10, 25, 39).

→ Ensure teachers’ rights and working conditions are protected during back-to-school efforts. Anticipate the psychological and social-emotional impact of the pandemic on teachers and education support staff, and ensure that resources and support services are accessible and available to any members of the school community (38).

→ Rotate and adjust staff schedules (through negotiations) to accommodate new student schedules and avoid overcrowding (39).

→ Conduct cross-training of staff and teachers to account for potential absences in critical job functions and positions (16, 35).
Train health staff and safety officials at school to ensure that health and safety protocols, including on how to handle potential cases of COVID-19, prior to the start of the school year (31, 43). Schools must have at least one staff member, that holds certification in pediatric first aid and CPR, available at all times (43).

Train teachers on how to talk to and help students during and after the COVID-19 pandemic to provide an adequate support system (resources from child/ youth mental health agencies can be used) and refer students who need support to mental health professionals at school or other designated areas (2, 31, 53).

Hold virtual staff training when possible and ensure physical distancing for in-person training (39).

**Regulate meetings and visits**

Replace in-person meetings (staff or parent meetings) with virtual meetings (10, 43). If meetings are held in-person, the following guidelines should be implemented (10):

- Do not allow people from different families to wait in the same room (for staff-parent meeting)
- Enforce hand washing prior and after meetings
- Maintain physical distancing, of at least one meter between individuals
- Impose a maximum capacity of people within meetings based on room size (ensuring physical distance between people)
- Enforce wearing of masks
- Consider using outdoor spaces or well ventilated rooms for meetings

Limit non-essential visitors and parents/ caregivers and establish health and safety protocols for essential visitors (16, 39, 44).

Keep a record of staff and visitors, including their contact information and the visit dates for contact tracing purposes (31, 43, 44).

Require visits from cleaning staff, catering staff, deliveries and contractors to be held outside of school hours if possible (39, 44).
Limit physical education and extracurricular activities

→ Suspend all indoor and inter-school sports activities (29).

→ If physical education (PE) is to be continued:
  › It should be limited to activities that do not involve physical contact with other students or equipment and use outdoor spaces as much as possible (10, 39).
  › All staff, trainers and students should practice physical distancing during the PE lesson and abide by visible markers on the floor to indicate appropriate spacing (43).
  › During PE lessons, masks will not be required when engaging in strenuous physical activities as long as individuals adhere to physical distancing measures (43). If showers are necessary, students must remain in their cohorts to limit the number of students in the changing rooms at the same time (10).

→ Encourage offering extra-curricular activities in a digital format (43).

Prohibit large assemblies and celebrations

→ Abstain from hosting large gatherings and activities such as sporting events, assemblies, dances, celebrations, field trips and graduation, and explore virtual options when applicable (16, 31, 35, 40, 41, 43, 44).

→ If an event, assembly, or a student club is held, physical distancing and use of masks is required (according to protocols), spaces/equipment should be disinfected between every use, and the number of people should be restricted (16, 31, 41).
4. Operational & environmental modifications

*Enforce reduced capacity (smaller groups, rotations and/or staggering times)*

→ Develop an arrival and drop-off schedule that is in a staggered format to minimize contact between students who are not in the same classroom (16, 25, 40, 44, 46).

→ Split classes so that only half of each class attends at any one time, particularly for classes with large number of students (26) and consider early/late start times and blended learning models (25, 39).

→ Ensure the number of students in the classroom does not exceed maximum capacity when desks are placed 1.5-2m away from each other. Group students within the same grade into cohorts (also referred to as bubble or pods). The cohort (composed of students and teachers) interacts with each other throughout the school day to limit the potential of crossover to other students, teachers, and staff within the school. Cohorts should not mix even for school and after school activities (2, 10, 16, 25, 26, 39, 40, 43, 44). Each cohort should still maintain safe physical distancing during the day and abide by other safety measures (10).

→ Cohorting can be implemented as part of the traditional model with all students attending school in person, or as part of a hybrid/blended learning model where students may alternate in-person or remotely. Different cohorts attend school on alternating days for in-person and online sessions. Schools should adopt different models for students in different grades bearing in mind that this method is commonly used for students in elementary school or younger (17).

→ Minimize movement around classrooms and require students to stay in class while teachers move between classrooms (2, 25, 39, 43, 54).

→ Reduce break times and schedule recess in a staggered way, keeping in mind to alternate where and when students/staff take their breaks to avoid students from different classes coming into contact where

There is no evidence on maximum size of students per cohort, however, smaller cohorts are associated with lower transmission rates (CDC 2020). Countries like Denmark, Norway and New Zealand (where schools have reopened with no significant increase in COVID-19 transmission so far) have limited class size to maximum of 10 -15 students per class in addition to reopening schools in stages, with younger students first (Norway: Max of 15 for grades 1-4 and Max of 20 for grades 5-7; Denmark: class size was limited to 10 to 11 students, and staff were limited to working with 1 or 2 classes) (Fadlallah et al. 2020; Munday and Hares 2020).

In some US states, group sizes (including teachers) should not exceed 10 in total while in others, maximum size is 15 for children 3 years and older (Fantini et al. 2020).
possible (2, 10, 25, 44, 47, 54). If this is not possible, students should stay within their class and have their meals at their desks (25, 40).

→ If cafeteria is to remain operational, stagger lunch time to reduce number of students in the cafeteria at one time and consider using alternative locations or outdoor spaces (2, 43). Require students to eat with their cohort at the cafeteria (2, 10, 49). Do not offer buffet meals, serve food in single portions, on separate trays and with disposable plates, cups and cutlery and suspend use of shared tables and self-service for condiments (39, 49)

*Increase spacing and physical distancing*

→ Rules on distancing should reflect the multiple factors that affect risk, including ventilation, occupancy, and exposure time (Jones et al 2020).

→ Instruct staff, students and parents to maintain physical distance from others at all times while on school premises, inside classrooms, at pick up and drop off zones, bus stops and while boarding and disembarking from school bus (25, 39, 40, 49).

→ Encourage and model physical distancing and avoid unnecessary touching such as shaking hands, hugging and unnecessary physical contact (9, 10, 40).

→ Avoid staff congregation in meeting rooms, break rooms and bathrooms and avoid grouping staff together for training or staff development (10, 39).

→ Avoid congestion on the way in and out of classrooms and in changing rooms and toilets (10, 40).

→ Separate entrances and exits to reduce crowding (40, 49) and communicate pick up and drop off arrangements with parents to enable them to physically distance from one another and from staff (41).

→ Install physical barriers (plastic flexible screens, sneeze guards and partitions) in areas where it is difficult for individuals to maintain distancing (e.g., reception desks or between bathroom sinks) (16, 39).
Within classrooms and offices, consider re-arranging desks with one individual per desk, all facing in the same direction with 1.5-2 m spacing (55, 56). Whenever possible, use other larger spaces for instructional activities (e.g., lecture halls, auditoriums, outdoors) to maintain physical distancing between students (31, 39).

In corridors and other shared spaces where physical distancing is difficult, use one-way systems to promote distancing and reduce face-to-face interactions (55). Mark the floor with signs ensuring 1.5-2m for line ups.

Establish zones for other school spaces, such as playgrounds, for use by different subgroups of students based on a staggered schedule (55).

Close shared spaces (dining halls and playgrounds with shared equipment) if it is not possible to stagger schedules or disinfect between and after use (16).

Consider strategies to limit physical interaction during meal preparation and meal service if these are to remain operational (e.g., serving meals in classrooms, increasing meal service access points, staggering cafeteria use) (39). Ensure that all children have their own eating and activity space, which helps ensures that children maintain a safe distance from each other (10).

Keep each child’s belongings separated from others’ and in individually labelled containers or areas (16).

Limit the materials students bring into school each day to essentials (lunch boxes, books, and stationery) (44). Ensure toys are not brought from home (10).

Assign lockers by cohort and clean them after each use or eliminate lockers altogether (2).

Ensure adequate ventilation and air flow

Ensure that classrooms and assembly areas are well ventilated (40, 42, 47).

Maximize central air filtration systems for heating, ventilation and air conditioning (39). Consider running the systems at maximum outside airflow for two hours before and after times when the building is occupied (according to the manufacturer’s recommendations). Regularly
inspect, maintain and clean heating, ventilation and air conditioning systems (51).

→ Ensure proper ventilation in school by opening windows, doors, increasing air flow, and making sure that fans/ventilation systems operate properly (16, 35, 39, 43, 47). If opening of windows poses a safety or health risk, then they should remain closed (16, 39).

→ Open windows on the bus open if weather allows to ensure proper ventilation (and avoid re-circulating air) (2, 25, 31, 40, 43).

→ Move lessons outdoors as much as possible (25).

<table>
<thead>
<tr>
<th>Measures within classrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ Determine maximum class capacity while maintaining a distance of at least 1.5 – 2 meters and space desks accordingly</td>
</tr>
<tr>
<td>→ Split the class into cohorts and allow them to attend based on a staggered schedule (do not allow cohorts to mix across or with each grade)</td>
</tr>
<tr>
<td>→ Ensure proper sanitization of classrooms and good ventilation</td>
</tr>
<tr>
<td>→ Ask students to wear masks especially in cases where physical distancing cannot be maintained (according to school and local recommendation by age groups)</td>
</tr>
<tr>
<td>→ Teachers should wear masks at all times</td>
</tr>
<tr>
<td>→ Avoid sharing supplies between students and keep belongings separate in labelled containers</td>
</tr>
<tr>
<td>→ Do not allow students to bring toys to school</td>
</tr>
<tr>
<td>→ If students have their meal in class, plan for cleaning and trash removal</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures in common areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ Stagger arrival and departure time for different classes to avoid overcrowding</td>
</tr>
<tr>
<td>→ Assign congregation areas at schools (before entry to classrooms)</td>
</tr>
<tr>
<td>→ Separate school entrance and exit to avoid crowding (if possible)</td>
</tr>
<tr>
<td>→ Schedule breaks at different times to avoid overcrowding in common areas including hallways, bathrooms, cafeterias and playgrounds</td>
</tr>
<tr>
<td>→ Avoid student movement between classrooms; ask teachers to rotate instead</td>
</tr>
<tr>
<td>→ Apply markings on floors to help students maintain safe distance and post signage around campus to remind students about the importance of physical distancing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measures in playgrounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>→ Stagger recess time to avoid crowding in playgrounds</td>
</tr>
<tr>
<td>→ Make sure that students stay with their cohorts during recess</td>
</tr>
<tr>
<td>→ Clean playground equipment before student return to class and after use and invest in playground equipment that is easy to clean</td>
</tr>
</tbody>
</table>
Reorganizing school transportation

→ Determine maximum capacity for students of each vehicle while meeting physical distancing objectives (26, 39, 40, 44). Some recommend a maximum bus capacity of 30% (43).

→ Create seating plan based on maximum capacity and develop bus routes that accommodates capacity limitations (39). If needed, expand the fleet of school buses or develop different pickup schedules (2, 31, 33, 39, 44).

→ Mark or block seats that must be left vacant, for example, seat one student on a bench on either side of the bus and skip a row (16, 25, 39) so that physical distancing of at least 1.5-2 meters can be maintained (43).
→ Organize queuing and boarding (40, 44) and seat students from the rear of the bus forward to prevent students from walking past each other. Afternoon runs should be boarded based on the order in which students will be dropped off (students who get off first should board last and sit in the front) (39).

→ Measure temperature of students and staff before boarding bus (40, 43). In countries that use bus stops, screening should be conducted prior to drop off at the bus stop. Bus drivers or monitors cannot perform these screenings as they may face a situation in which a student has a high temperature yet the parent has left (2).

→ Require facemasks or facial coverings to be worn at all time on the bus (2, 31, 39, 40, 43, 44).

→ Ensure drivers practice all safety actions and protocols (wear face covering). Use of physical barrier (e.g., plexiglass) to separate driver from students is preferable (2, 16, 40).

→ Open windows on the bus if weather allows to ensure proper ventilation (and avoid re-circulating air) (2, 25, 31, 43).

→ Keep and maintain records of school groups/cohorts within classrooms and on buses and record and monitor absences (31, 40, 43).

→ Reduce number of adults on bus unless their presence is essential (2).

→ In case a student shows symptoms while on the bus, the student should be dropped off at home immediately and asked to get tested for COVID-19 (43).

→ Encourage alternative modes of transportation for students who have other safe options, including walking or biking and for those who have underlying chronic conditions (2).

5. Education and Learning Approach

Bearing in mind the likelihood that blended and remote learning options will be adopted (at least to some extent) for the upcoming academic year, administrators should consider linking curricula, revising teaching strategies and investing in remote learning technologies. Schools can identify appropriate options that balance in-person with remote learning strategies and leverage on age-appropriate technology options and make sure to link them to specific learning objectives (8).
→ Anticipate the potential impact of lost instructional time and social emotional development on students (2).

→ Plan curriculum changes and adjustments to instructional practices based on an assessment of gaps in knowledge and skills of students, and make use of regular formative assessment to identify students’ strengths and assess gaps to ensure students have fundamental building blocks and skills needed (31, 44). Support students in transitioning to next grade, and recognize the impact of their prolonged absence from the classroom on educational attainment including the difficulties in learning new concepts due to stress or family situations that are compounded by the pandemic (2).

→ Consider shortening the academic year(s) and following an accelerated syllabus that focuses on core subjects (37). Consider developing alternative academic calendars based on different public health scenarios, taking into consideration modalities to be used for remote learning (9).

→ In developing the revised curriculum, schools should determine the required number of learning hours for students to meet educational goals and identify which can be sufficiently achieved through remote learning and which require in-person instruction (53). Acknowledge that different grades have different needs and respond differently to different learning modalities. Younger students need more guidance, social interaction and tactile learning opportunities, which cannot be provided using remote options. They also cannot focus for long periods of time, which necessitates support from parents. For this age group, hybrid models that combine remote and in-person learning may not fully address their needs (53).

→ Develop a plan for students with disabilities to determine the needs for compensatory education to adjust for lost instructional time (2, 31). Additionally, focus on students experiencing the greatest challenges including learning difficulties and financial hardship. These students require the most attention and guidance in a remote learning environment (53). Consider a variety of delivery options which could include in-person teaching and hybrid/blended models (31).

→ Consider blended models where one cohort can attend school in person while the second cohort can dial in (or view a pre-recorded session) and attend the class remotely (53).
Remote education should align as closely as possible to in-school provision. Students engaged in remote learning should be provided with sufficient support to master the curriculum requirements and make good progress (44).

For students engaged in remote or blended learning, attendance should still be recorded. Students should be provided with a daily schedule of subjects/courses with opportunities for frequent, live contact with a teacher and expectations for synchronous learning (8, 31).

Set clear expectations and guidelines for teachers on how to check work and assess progress and allow them to adjust the pace or difficulty of educational material in response to questions or student assessments (44).

Support teachers in developing remote learning models and implementing educational plan. Schools need to listen to teachers concerns and work collaboratively with them to create solutions. It is also important to train teachers and equip them with the skills they need to deliver the material and fulfil curricular requirements (53).

Implement innovative teacher support methods, such as online professional development, coaching, or use of tutors to help bring capacity development efforts to scale more rapidly. This training and skills building can also be integrated into formal pre- and in-service teacher trainings (9). Engage with parents and provide them with sufficient instruction and tips to support the needs of students while learning remotely (53).

Expectations from schools teaching students remotely (Government of Ontario 2020; United Kingdom Department of Education 2020):

- Develop an educational plan that has an equivalent length to the core teaching and contact hours students receive in school
- Assign meaningful, ambitious and motivating work to students on different subjects
- Develop a planned and well-sequenced curriculum that builds incremental skills and has sufficient clarity on what should be taught and practiced on each subject with clear linkages to curriculum.
- Provide clear explanations of new content delivered in-person or remotely through other resources including audio-visual materials
- Assess student progress and set a clear expectations for teachers on how to conduct assessments
- Allow teachers and encourage them to adjust the pace or difficulty of material taught in response to student progress and comprehension
Online learning (including within a blended/rotating model) can be made more effective and equitable, through (UNESCO, 2020):

→ Assuring all students access to the internet and availability of computers, laptops or tablets.

→ Adopting a proper Virtual Learning Environments (VLE), while taking into consideration teachers’ pedagogical and technological readiness and students’ and parents’ digital competences.

→ Using educational broadcasting to support remote learning for individuals lacking access to the internet.

→ Providing financial and regulatory support (e.g. publicly funded parental leave) to working parents whose children are required to be at home on a regular basis.

→ Improving availability of learning technology and supporting students with special educational needs and/or disabilities

→ Supporting teachers in enhancing their digital competences through workshops and training courses, which could be integrated into their continuous professional development.

→ Ensuring training support include mechanisms shared and understood by teachers, parents and caregivers to monitor and provide feedback on the progress of learning done remotely

→ Involving parents in the design and implementation of the online strategy so they fully comprehend what is taught and why. Parents should also be informed of the emotional challenges that online learning entails, and learn how to support their children emotionally and in their daily home school tasks
6. Screening, contact tracing and isolation strategy

Schools should create a policy on screening requirements as well as on the course of action when suspecting or identifying COVID-19 case among students, teachers and staff (25).

**Screening**

→ Provide COVID-19 self-assessment tools to parents, caregivers and staff (31).

→ Require teachers and staff to measure their body temperature and self-screen for symptoms before going to work (31, 39, 46).

→ Ask parents to measure children’s body temperature before dropping off at bus or at school. School should also measure body temperature of students, teachers and staff upon entering school campus or buses (16, 25, 39, 40, 43, 47) while keeping safe physical distancing and avoiding crowded line-ups. Provide parents with “report cards” or tracking sheets that they can use to enter their children’s temperature every day. These report cards can be validated by the teachers upon student arrival to school (31, 46).

→ Assess the feasibility of conducting temperature checks for large numbers of staff and students upon entering school campus as well as the time it takes to conduct these screenings (2). If body temperature of students and staff will be measured upon entering school campus, use thermometers that do not require direct skin contact. Personnel who take the temperatures should wear protective gear such as, gloves, eye protection, and masks and make sure to properly clean the thermometers after each use (39).

→ Ask students and staff about any potential COVID-19 symptoms that they might have experienced within the last 24 hours including fever, and if there are any suspected COVID-19 cases within their household (WHO 2020)(39).

→ Require students and staff who feel unwell or have flu like symptoms to stay home and consider getting tested (depending on the existing policy related to testing) (41).

→ Ask parents to provide school with students’ health history particularly history of allergies which should be kept in mind when screening for COVID-19 symptoms at school (39). Encourage parents to maintain their
children's vaccination schedule up to date and check recommendations for flu vaccines

→ Monitor students and staff for symptoms and identify those who suddenly become unwell with a new and persistent cough, high temperature, or loss of, or change in their normal sense of taste or smell (40).

Testing and isolation

→ Create testing plans in consultation with local public health officials (16).

→ Refer individuals with COVID-19 signs or symptoms to a healthcare provider for evaluation on whether testing is needed (16, 40).

→ Establish guidelines for triaging students or staff who exhibit symptoms (keeping in mind that not all symptoms are COVID-19 related) (39), and establish a set of procedures to separate sick students and teachers without creating stigma (25, 35, 40).

→ Identify and set up an isolation area where students or staff exhibiting symptoms (such as fever, cough, or shortness of breath) can stay until they can be transferred home or to a healthcare facility (16, 25, 43, 49). Require students or staff exhibiting symptoms to immediately wear a mask and wait in an isolation area until they can be transported home or to a health care facility (10, 31, 39, 40, 43, 44). Supervise isolated students or staff while maintaining physical distancing (10, 31, 44). If isolated student or staff require using a toilet, the toilet should then not be used by anyone else until it has been properly cleaned (10, 44).

→ Establish procedures for safely transporting anyone who is sick to their home or to a healthcare facility. Symptomatic students should not take public transportation (10, 16, 31). Parents who are exhibiting symptoms should not pick up their symptomatic children and arrange for solutions for collecting their children (10). In cases where an ambulance is requested, make sure paramedics are informed that they are transporting a potential COVID-19 case (16).

→ Work with local health officials to trace contacts and determine who should be referred for testing. Schools are not expected to directly administer the tests, instead, referring students, teachers and staffs to outside health providers, or school-based clinics (if they have the capability to conduct testing) (16).
Contact tracing and Quarantine

→ Immediately report suspected and/or confirmed cases of COVID-19 within the school to the local health authority (e.g. ministry of health or designated public health unit) and provide relevant information (such as attendance and transportation records) to support case management and contact tracing (25, 31, 40, 42, 47).

→ Local health authority will determine any additional steps required, including but not limited to the declaration of an outbreak and closure of classes and/or schools (31, 40).

→ Notify parents and students when a decision is made to make the school non-operational for onsite attendance to enable the contact tracing process to take place and/or to have the school site thoroughly cleaned (41).

→ Quarantine students and staff who spent more than 15 minutes in a proximity of 2 meters with the positive case, from the day of symptoms onset, or the day of the positive PCR test; those who feel sick should remain at home while they wait for test results (10, 25, 31, 40, 41, 43). When it is determined that a student was not in close contact to a confirmed case of COVID-19 in the school community, parents should still monitor for symptoms and seek treatment if appropriate. In such cases, students and staff are not required to self-isolate and can continue to attend school (41). Some countries recommend that everyone at school who has been in close contact with the student or staff member should be tested (49) or sending a mobile testing unit to the school to test students and staff who may have come in contact with the individual who tested positive (44).

→ Require students and staff who test positive for COVID-19 to stay at home to monitor their symptoms (16, 40). In case they tested positive without experiencing symptoms but develop symptoms during home isolation, they should restart the full isolation period from the day they

Schools must keep records of:
- classes
- seating charts
- bus cohorts
- daily visitors who are approved to enter the school

Records should be readily available for public health authorities for contact tracing purposes.

Quarantine policy
(Fadlallah et al. 2020)

Many countries (e.g. Denmark, Norway, Netherlands, New Zealand, Germany, Australia, China, Russia, Scotland, Canada, France, UAE, Jordan) require students and school staff showing COVID-19 symptoms, or those that have been in contact with a suspected or confirmed COVID-19 case to stay at home until symptoms resolve.
develop symptoms (44). Do not allow symptomatic individuals to return to school until they have fully recovered (39, 40, 42, 43).

School closure

→ Follow up with ministry of health when schools have two or more confirmed cases within 14 days or overall rise in absenteeism due to suspected or confirmed COVID-19, in which case they may have an outbreak (44).

→ Develop contingency plans for closing classrooms or schools in the event that students or staff contract COVID-19 (29). If a student, teacher or staff within the school community tested positive for COVID-19, assessing the level of risk is important to determine if, when, and for how long part or all of a school should be closed (16).

→ Closure decision and duration is contingent on number of cases identified, extent of close contacts who tested for SARS-CoV-2, and level of community transmission. One case of COVID-19 does not warrant closing the entire school, especially if levels of community transmission are low. Schools should consider (1) community transmission levels, (2) number of cases identified within the school; and (3) extent of close contact with individuals who tested positive. The school should work collaboratively with local health officials to determine if continued closure is warranted (16).

→ Some countries recommend full shutdown of schools when more than two cases are detected (47, 57).

School closure policy
(Fadlallah et al. 2020)

Taiwan: If one or more students or staff in a class is confirmed to have COVID-19 then that class should be suspended for 14 days; in high school this should apply to all classes the person attended. If two or more cases are confirmed in a school, the school is closed for 14 days. If one third of schools in a city or district are closed, then all schools must close (Melnick et al. 2020; UNESCO 2020).

Germany: Only the class with a confirmed case will be suspended for 14 days while other classes continue normally.

Belgium: Students returning from high infection areas are required to stay at home for 14 days before coming to schools.

Canada: Any student or staff who develops COVID-19 symptoms while in school should be immediately separated from others until they are able to go home; they should not use public transportation and should be supervised per school policy.
Post-Opening Phase

Once schools have re-opened, the following should be closely monitored (25):

→ Compliance with school policies and required preventive measures.
→ Effectiveness of screening and symptom-reporting, and testing and tracing of suspected cases
→ Trend in school dropouts as well as absenteeism among staff and students
→ Number of cases in children, teachers and staff within school setting, and frequency of school-based outbreaks in the local area and the country
→ Effects of implemented policies and measures on educational objectives and learning outcomes
→ Effects of implemented policies and measures on health and well-being of school community (student, teachers, staff, parents and other family members)
→ Assessment of impact of remote teaching on learning outcomes

Based on data emerging from this monitoring, further adjustments should be made to continue to provide the school community with the safest environment possible. Non-compliance with school policies and required preventive measures should be addressed in a timely manner. Schools should also consider the potential for re-closure and reopening depending on rate of COVID-19 transmission within school settings and community levels.

Additionally, school administrators should continue to:

→ Share information on COVID19 with students, staffs and parents to manage fears and anxiety and promote self-care strategies and prevention measures
→ Keep students and parents informed about the measures being implemented to ensure their collaboration and support.
→ Reinforce preventive behaviors and make sure students and staff have sufficient opportunities to engage in such behaviors including wearing masks and hand hygiene
→ Encourage and model physical distancing and avoid unnecessary touching such as shaking hands, hugging and unnecessary physical contact [7, 18, 19].
→ Ensure that cleaning and disinfection measures are effective and regular including availability of adequate supplies and materials
→ Maintain adequate air flow and ventilation
→ Prioritize psychosocial support and socio-emotional learning activities in the reopening period
→ Monitor teachers’ situations related to deployment, teacher rights and working conditions (including working and teaching hours).
→ Review and assess the learning needs of students:
  › Support teachers to conduct formative assessments of children’s learning to inform teaching practices and need for additional support
  › Revise student assessment methods and focus resources on important examinations that are more critical
  › Implement teaching support methods including professional development for teachers
  › Conduct an inclusive, participatory review to update or develop a school’s educational continuity plan based on learnings from COVID-19.
  › Prepare for return to remote learning in case of surge in community transmission and to supplement in-person instruction with blended model
  › Share lessons and best practices for educational continuity with the school administrator, teachers staff and Ministry of Education.
Roles of Parents/Guardians, NGOs and municipalities in school reopening

Parents/guardians, NGOs and municipalities have important roles in supplementing the efforts of governments and school administrators in school reopening. The specific roles of each entity are detailed below.

Parents and guardians

Parents and guardians can support the safe reopening of schools through the following ways:

→ Consider the following factors before sending their child to school (25):
  › Does the child have any underlying medical conditions and vulnerabilities?
  › Has the child recently been ill, or do they have any COVID-19 related symptoms (35, 39, 41, 42)
  › What kind of support is needed within the home environment?
  › What are the potential arrangements for school transportation?
→ Measure their child’s body temperature before sending them to school (31, 46).
→ Provide school with child’s health history including history of allergies (39).
→ Keep their child at home if they have come in contact with suspected or confirmed COVID-19 case or if they develop COVID-19 symptoms, and report to school and health authorities immediately (WHO, 2020).
→ Continue to monitor symptoms even if their child was determined not to have been in close contact with suspected or confirmed COVID-19 patient (41).
→ Wear masks while on school premises (making sure to cover nose and mouth) and maintain physical distance at drop off and pick up (2, 16, 39, 44).
→ Avoid unnecessary touching such as shaking hands, hugging and unnecessary physical contact (10, 35).

There is no reference in any of the guidance documents to daily washing of school uniforms or any clothes. In their updated guidance, the Government of Ireland concluded that there is no evidence to suggest that requiring children to wear freshly laundered uniforms or clothes every day is an effective measure to limit COVID-19 transmission. School uniforms or clothes should be laundered regularly in line with usual good hygiene. If uniforms or clothes are visibly dirty or soiled, they should be laundered (Government of Ireland 2020).
→ Comply with school guidelines regarding pick up and drop off arrangements (41).

→ Refrain from attending schools and arrange for alternate transportation arrangements if parents are exhibiting symptoms of COVID-19 (10).

→ Provide their child with age-appropriate information about COVID-19 and empower them to protect themselves by teaching them about physical distancing, hand hygiene, respiratory hygiene and wearing face coverings as appropriate. Role model these behaviours and make them the norm in the household (48).

→ Provide masks or washable cloth face covering for their child as appropriate.

→ Encourage children to walk or cycle to school where safe and appropriate or provide alternative to public transportation (if feasible).

→ Do not allow children to bring toys to school.

→ Learn how to support their children emotionally and in their daily home school tasks including needs of students if learning remotely.

→ Comply with all measures advised by government and schools to reduce the risk of COVID-19.

→ Discuss different aspects of the pandemic and explain all measures adopted at the school to minimize stigma.

**Non-governmental Organizations**

Non-governmental organizations (NGOs) (including social service agencies, nonprofit organizations, formal and informal community groups, civil society organization, faith-based organizations, etc.) can provide support to schools, local health officials and government officials in the school reopening process through the following ways (58-61):

→ Provide critical education and resources to the most vulnerable children during the COVID-19 pandemic.

→ Provide learner-support materials to all learners, especially those living with disabilities; low income families; and those living in rural, remote, and conflict-affected communities.

→ Help in experimenting with new educational approaches, sourcing educational content and developing strategies to support nationwide distance learning and working with government officials to plan for leveraging these approaches.
→ Support schools and government officials in training teachers, administrators, and other education personnel on safety and hygiene measures (disinfection, safe distancing, hand washing, use of masks, respiratory etiquette, waste management) to be adopted during face-to-face classes.

→ Sensitize and mobilize communities to encourage re-enrolment and regular attendance of children. NGOs that work with marginalized communities can play a critical role in ensuring girls who are most vulnerable to child marriage and dropout in addition to children who are threatened by child labor return to their classrooms once schools reopen.

→ Implement remedial programs for accelerated learning to mitigate learning loss and reduce learning inequalities.

→ Help in fundraising and allocating grants to schools/learning facilities to procure soap, water, hand sanitizer (containing at least 60% alcohol), paper towels, tissues, disinfectant wipes, masks, and no-touch trash cans, etc.

→ Participate with local authorities in broader COVID-19 community response efforts (e.g., sitting on community response committees) and collaborate with other organizations to coordinate activities or limit duplication of efforts, where possible.

→ Support in monitoring and evaluation frameworks, establishing monitoring teams, tools, and schedules to track and report progress on safe school reopening and operations

**Municipalities**

Municipalities can provide support in the schools’ reopening process through the following ways (28, 61-64):

→ Be prepared to inform, and respond to, school reopening/reclosing decisions. Develop plans for both the district, and for individual schools, to open, close, re-open, and re-close as transmission rates and conditions change in the area.

→ Support in development of specific metrics that will inform movement between phases, depending on how higher and lower risk scenarios fluctuate (metrics may include average case counts, public health capacity for testing and contact tracing, and healthcare capacity, within the area of each municipality).
→ Develop a wide communication strategy and inform concerned stakeholders (such as school boards, teachers, staff, students, and parents) that in-person school may not be advisable during a certain period of time based on the risk threshold and current epidemic trajectory within an area.

→ Prioritize measures that decrease community transmission in order to increase the likelihood of in-person education, through reiteration and proper enforcement of COVID-19 control strategies within the community (such as social distancing, mask wearing, hygiene practices, and potential business closures, etc.).

→ Support in disinfection activities of schools and learning facilities within their area.

→ Conduct a rapid assessment and determine funding requirement for schools’ infrastructure and facilities (such as classrooms, furniture, WASH, and ICT facilities) to meet and sustain prescribed safe school reopening requirements.

→ Inform national authorities and school leaders about areas of concern as well as community or organizational resources that might be helpful in responding to changing circumstances in the community.

→ Prepare for continued economic disruption and job loss if school does not fully reopen in-person through the identification and contextualization of supportive family/economic policies implemented in other regions to facilitate working families amid school closures, these include:
  › Increased family leave
  › Increased physical space allotted for education, such as permitting classes to take place in public parks, libraries, conference centers, museums, etc.
  › Increased funding for online education
  › Provision of masks to all school-based individuals

→ Provide safe transportation options for school personnel, parents and students, including safe cycling and walking environment.
References
References


27. UNESCO. Education: From disruption to recovery 2020.


Knowledge to Policy Center draws on an unparalleled breadth of synthesized evidence and context-specific knowledge to impact policy agendas and action. K2P does not restrict itself to research evidence but draws on and integrates multiple types and levels of knowledge to inform policy including grey literature, opinions and expertise of stakeholders.