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Safely back to school after coronavirus closures

As they consider the path to reopening schools, systems can consider three questions: when to reopen, for whom, and with what health and safety precautions in place.

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Countries around the world remain at very different points of the COVID-19 pandemic, which means they face varying challenges, from overwhelmed healthcare systems to growing economic despair. In geographies beginning to emerge from the first wave of COVID-19 cases, the question of reopening schools is front of mind for many stakeholders. Schools provide not just learning and social support for students but also, crucially, childcare, without which many parents cannot return to work. However, reopening schools carries the public health risk of viral resurgence. Parents and teachers are understandably wary. How can education systems respond?

System leaders around the world—at the federal, state, and district levels—are grappling with three important questions related to getting students safely back into the classroom:

— When should schools reopen?

— For which segments of students and teachers (if not everyone) should schools reopen?

— What health and safety measures should schools adopt on reopening?

There isn't one right set of answers to these questions. Infection rates fluctuate across communities, as does capacity of healthcare systems; education systems vary in both structure and performance; and different communities have distinct cultural values that inform decision making. Significantly, leaders will be making decisions based on limited and rapidly changing epidemiological evidence and will therefore be forced to make difficult trade-offs to reopen schools. Once schools are deemed safe for in-person instruction, addressing re-enrollment, academic remediation, and possible viral resurgence will require new capabilities (see sidebar, "Post-pandemic capabilities for school systems").

When to reopen

Although most primary and secondary schools worldwide remain closed, some countries (most notably Sweden) have stayed open as of publication. Others, including China, Denmark, Japan, and Norway, recently reopened their schools, and many European countries have announced plans to reopen in the coming weeks or months. In the United States, 43 states and Washington, DC, have ordered or recommended keeping in-person schooling closed for the rest of the academic year.[1]

As school-system leaders weigh possible timelines, they can consider four interlocking components of reopening: risks to public health, schools' importance to economic activity, impacts on students' learning and thriving, and safeguarding readiness.

Risks to public health

The most critical question is whether reopening schools will lead to a resurgence of infection among students, staff, and the broader community. The evidence here is still nascent. Children's risk of contracting COVID-19 appears to be lower than that of adults. In China and the United States, the countries with the largest number of confirmed COVID-19 cases, children represent 2 percent of cases.[2] Emerging evidence also suggests that children are more likely to be asymptomatic, less likely to be hospitalized, and much less likely to die if they do develop COVID-19.[3]

Although the risk to students themselves appears relatively low, reopening schools will also expose teachers to risk—especially those who are older or immune-compromised—and might contribute to higher risk for the larger community. Children's role in transmitting the novel coronavirus is still unclear, making it difficult to estimate the extent to which reopening schools might contribute to resurgence. Potentially relaxed confinement measures outside the education sector add to the uncertainty.

[1] "Map: Coronavirus and school closures," *Education Week,* updated April 24, 2020, edweek.com.
[2] Jennifer M. McGoogan and Zunyou Wu, "Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: Summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention," *Journal of the American Medical Association,* February 24, 2020, Volume 323, Number 13, pp. 1,239–42; "Coronavirus disease 2019 in children—United States, February 12–April 2, 2020," *Morbidity and Mortality Weekly Report,* April 2020, Volume 69, pp. 422–26, cdc.gov.
[3] Yuanyuan Dong et al., "Epidemiology of COVID-19 among children in China," *Pediatrics,* April 2020, pediatrics.aappublications.org. COVID-NET hospitalization data are preliminary and subject to change as more data become available; see COVID-NET: COVID-19-Associated Hospitalization Surveillance Network, Centers for Disease Control and Prevention, updated April 18, 2020, gis.cdc.gov.

Post-pandemic capabilities for school systems

Besides safely reopening schools, education systems will have a daunting task in reenrolling students, helping students recover lost learning, and preparing for viral resurgence. New partnerships may help build capabilities for these tasks.

— *Reenrollment.* As schools reopen, some students may not return to class, for instance, because of parental concern about ongoing health risks, student leakage to the workforce to support financially struggling families, or student disengagement after frustrating remote learning experiences. Previous crises suggest that girls in developing countries are especially at risk of not returning to school.

— *Remediation.* Students who do return to school may need significant work to catch up on academics, especially in school systems that struggled to roll out effective remote learning. Students who lacked devices, internet access, or parental support— or who were already behind when the crisis began—will likely need the most help.

— *Resurgence.* Systems must also plan for local or national viral resurgence. Preparing means being ready for multiple waves of closures and reopening, which will entail blending remote and in-person learning.

These tasks will require resources and capabilities that many systems lack.

Maintaining a crisis nerve center through the process and beyond can enable a coordinated response through strong leadership, effective operations, and systems for ongoing data-processing and monitoring.[1] New forms of collaboration and communication may also be needed with other government agencies, with nongovernmental organizations, and— importantly—with parents.

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[1] Adi Kumar, Leah Pollack, Navjot Singh, and Catharina Wrede Braden, "Crisis nerve centers: Supporting governments' responses to coronavirus," March 2020, McKinsey.com.

Decision makers will therefore need to determine when to reopen schools in the context of reopening society at large.

Importance to economic activity
A major part of the sequencing puzzle is the importance of schooling in providing childcare. Workers with children under 15 years old in their household who have no alternate caregiver will likely need childcare before being able to return fully to work. The proportion of workers who cannot return to work without childcare varies significantly across countries—and even within them. In the United States, 16 percent of the workforce—representing 26.8 million workers—are dependent on childcare to work (exhibit). In Europe, where there is a higher proportion of dual-income families, thus fewer

stay-at-home parents to provide childcare, 20 to 30 percent of the workforce are likely dependent upon preschools and schools to resume work.[4]
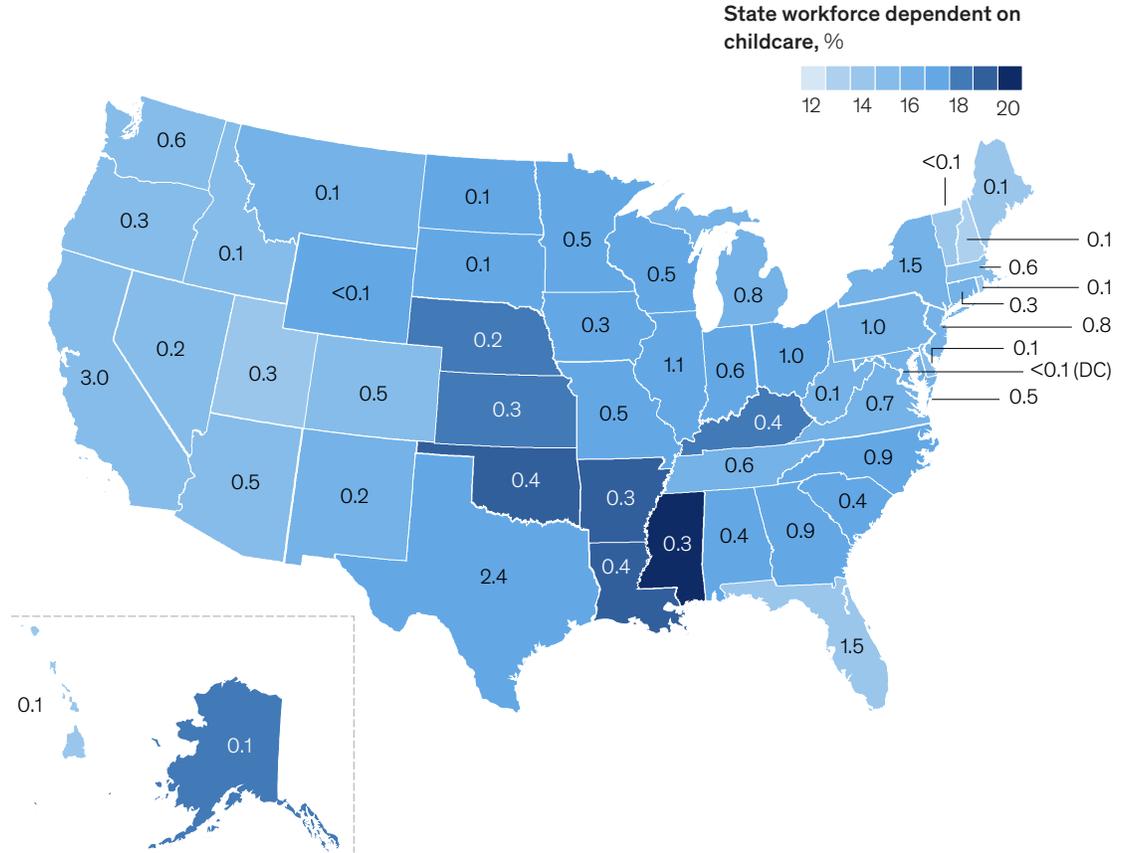
These numbers do not represent the full complexity of individual workers' family situations or obligations. While some workers, especially those with older children and who can fulfill their work responsibilities remotely, may be able to return part-time, their productivity will likely suffer. Conversely, the situation is much more challenging for those with younger children and who also cannot work remotely. While some families may lean on older siblings to provide childcare, doing so could significantly impair learning for those students. Other families may ask grandparents to watch children, but this solution puts one of the most

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[4] These estimates apply only to industrialized countries. In the United States, for example, 31 percent of households have at least one child at home. We assume that only children under 15 need an adult at home to provide care and that all workers in single-parent families require childcare, half of workers in dual-income families require childcare, and no workers in families with an existing stay-at-home parent require childcare.

Exhibit

Nearly 27 million Americans are dependent on childcare to work.

Total US workers dependent on childcare to return to work, by state, millions

State workforce dependent on childcare, %

12 14 16 18 20

(Map labels: 0.6, 0.1, 0.1, 0.3, 0.1, <0.1, 0.2, 0.1, 0.5, <0.1, 0.1, 3.0, 0.2, 0.3, 0.5, 0.5, 0.2, 0.4, 0.3, 0.5, 0.4, 2.4, 0.4, 0.3, 0.3, 0.4, 0.9, 0.6, 0.9, 0.4, 1.1, 0.6, 0.4, 1.0, 0.1, 0.7, 0.8, 1.0, 1.5, 0.1, 0.5, 0.6, 0.1, 0.3, 0.8, 0.1, <0.1 (DC), 0.5, <0.1, 0.1, 1.5, 0.1, 0.1)

Source: US Census Bureau: American Community Survey, Current Population Survey

vulnerable populations in this pandemic at risk. Our estimates may also underestimate the magnitude of the challenge. The proportion of workers under the age of 55 requiring childcare is even greater, as younger workers are the ones most likely to have dependent children. This poses a challenge for countries that wish to bring back younger workers first and protect older workers by keeping them safely at home.[5]

Where a significant proportion of workers rely on schools for childcare, reopening schools (at least for younger children) might be a prerequisite to tapping into the full productive capacity of the workforce. However, if the majority of parents can work from home while fulfilling childcare responsibilities or can access alternative childcare, schools might be able to stay closed for longer.

Student learning and thriving

Every year, students in the United States lose a month's worth of learning over the summer, with the sharpest learning declines in math, seen especially in low-income students.[6] Some researchers suggest

[5] See Jonathan Dingel, Christina Patterson, and Joseph Vavra, *Childcare obligations will constrain many workers when reopening the US economy,* Becker Friedman Institute for economics at The University of Chicago working paper, April 18, 2020, bfi.uchicago.edu; this paper includes an analysis of the impact on workers under the age of 55 but does assume that older siblings or grandparents could provide childcare to working parents.

[6] David M. Quinn and Morgan Polikoff, "Summer learning loss: What is it, and what can we do about it?," Brookings Institution, September 14, 2017, brookings.edu.

that despite systems' best efforts with remote learning, school closures caused by COVID-19 could be even more damaging. One recent analysis projects that students could return in the fall having progressed only 70 percent of a grade in reading and less than 50 percent of a grade in math during the 2019–20 school year.[7] If closures extend beyond the fall, this shortfall could be even greater, with negative consequences for individual students and society as a whole. If decision makers believe that their remote-learning offerings are effective and equitable enough to avoid learning shortfalls, then longer school closures may be feasible. However, an uneven rollout of remote learning represents lost learning for every day out of school.

Beyond academics, schools provide important social support, especially to vulnerable students. Indeed, 19 percent of reports of child abuse or neglect in the United States come through education personnel, and school closures have resulted in a steep drop in such reports.[8] This change suggests that school closures have shut down support sources for victims of abuse and neglect at the very moment that they are most vulnerable. And although abuse may be less visible to staff during school closures, governments and nonprofits worldwide have recorded higher rates of domestic violence since shutdowns began. Reports of domestic violence increased more than 30 percent in France,[9] 50 percent in India,[10] and 60 percent in Mexico.[11] With such high stakes, systems that can consistently deliver remote student services—nutrition, safety, and mental-health support—can likely weather longer closures than those who cannot.

Safeguarding readiness
The final consideration to weigh is school systems' ability to create and consistently follow effective health and safety measures to mitigate the risk of infection. School systems' infrastructure, budget, supply chains, policies, and culture all contribute to their ability to operate safely after reopening. For instance, a school with unused classroom space and enough classroom aides could stagger schedules, space desks at least six feet apart, and facilitate more but smaller classes. Conversely, schools with strapped budgets, overworked teachers, and crowded classes will have less flexibility. Furthermore, equipping or retrofitting schools for optimal hygiene and sanitation won't be effective if student behavior cannot or does not adhere to health and safety protocols.

If decision makers believe schools can realistically adopt health and safety protocols that can lower the risk of infection, schools can open earlier. However, if system leaders believe schools are unlikely to be able to limit transmission because they are, by definition, high-contact zones, then schools are likely to remain closed or to open later.

For whom to reopen
Reopening doesn't have to be an all-or-nothing decision. Schools could selectively reopen, making it easier to keep student groups small and dispersed. Countries are taking varied approaches in deciding which students should return to school first. Denmark and Norway have prioritized reopening pre-primary and primary schools to address childcare for parents who need to return to work. Such an approach can be appealing to decision makers who believe young children are among the lowest-risk groups for both infection and transmission.

Other countries have prioritized students in important transitional years. For example, final-year students in Germany have returned to school to take their final examinations. Physical distancing is easier—and in fact typical—in examination halls, and older students are more likely than younger ones to follow health and safety protocols.

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[7] Megan Kuhfeld and Beth Tarasawa, *The COVID-19 slide: What summer learning loss can tell us about the potential impact of school closures on student academic achievement,* NWEA, April 2020, nwea.org.
[8] Andrew M. Campbell, "An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives," *Forensic Science International: Reports,* April 2020, Volume 2.
[9] Elena Berton, "France to put domestic abuse victims in hotels after jump in numbers," Reuters, March 30, 2020, reuters.com.
[10] Rukmini S, "Locked down with abusers: India sees surge in domestic violence," *Al Jazeera,* April 17, 2020, aljazeera.com.
[11] John Holman, "Domestic abuse spikes in Mexico amid virus outbreak," *Al Jazeera,* April 10, 2020, aljazeera.com.

Alternatively, schools can consider identifying student segments with specific needs and reopening for them. For instance, low-income students, who are less likely to have reliable internet service and devices equipped to support remote learning and who are more likely to rely on school for nonacademic support, may gain academic and wellness benefits (including nutrition) from returning to school. Similarly, students with disabilities (especially ones that make remote learning particularly difficult) might be better served with educational specialists at school. Finally, the children of essential workers might return to school earlier since their parents may not have the option of staying home.

Just as it may be beneficial for some students to return to school, some teachers might be better served working from home. Teachers who are at a higher risk of developing COVID-19 can be identified in advance of school reopening and provide remote instruction to students who are also still at home.

These possibilities are uncharted for many school systems and may require adjustments in both logistics (especially for staffing) and mindsets. For instance, reopening schools for only some students may mean reframing or redefining truancy, especially if a significant number of families opt out of sending their children back to school due to safety concerns. As of publication, Australia's Northern Territory is letting families opt out of sending children back to school.[12] Such examples suggest that school systems may need to continue to offer some level of remote learning, even after most students are back in the classroom.

Health and safety measures to adopt

Like workplaces around the world, schools will need to adopt and enforce heightened health and sanitation protocols. However, schools will likely confront trade-offs between effectiveness and feasibility in implementing such measures.

Measures that can reduce viral spread may be less effective at providing childcare or optimizing learning. For example, alternating school days for different groups of students may facilitate physical distancing but may not fully meet parents' childcare needs and may create inconsistent learning environments for students. Limited budgets, infrastructure, and supplies of critical health and safety equipment may further complicate these challenges. Most importantly, some measures that are appropriate for adults will be difficult if not impossible to enforce in a school setting, especially for younger students.

Each school system will therefore need to evaluate its health and safety measures to fit its resources and capabilities across four major categories: physical infrastructure, scheduling and staffing, transportation and food service, and health and behavioral policies. Some example health and safety considerations can illustrate how systems can consider feasibility in a school environment.

School infrastructure can facilitate both physical distancing and hygiene protocols. For instance, designated entrances and exits for different student cohorts, sectioned off common spaces, and floor markings to direct foot-traffic flows can help students and staff maintain distance. Similarly, portable hand-sanitizing stations at entrances and common areas can promote regular hygiene—and all of these changes may be made at a reasonable cost. However, permanent changes to the physical environment, such as no-touch bathrooms or upgraded ventilation, may be unrealistic for many school systems' budgets—especially given the short time frames involved.

Outside of no-regrets decisions (such as canceling large gatherings), changes in scheduling and staffing are the most likely to affect student learning. For example, while staggered or part-time schedules can help reduce the number of people on campus at a given time, making it easier to maintain a safe distance, these schedules also reduce instructional time. An alternative approach is to divide students into cohorts—for example, by grade or floor—to reduce the level of contact among students and staff to only those within their

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[12] Judith Aisthorpe and Natasha Emeck, "NT schools stay open but optional for parents to send children to classes now: Chief Minister," *NT News,* March 23, 2020, ntnews.com.au.

cohort.[13] Secondary schools, where students tend to go to subject-specialist teachers' classrooms, could explore ways to keep consistent groups of students together and trade off some subject-specific learning for more safety.

Transportation and food service, which historically brought students and staff into close physical contact, can adapt to support the school community's health and safety—though the cost could be high. Increasing the number of bus routes, for instance, or organizing routes by cohort would reduce proximity and exposure but would require more drivers, funding, and sanitization between routes. School systems may instead offer incentives for private transport, but parents may be logistically or financially unable to take their children to school. Food service will also become more complicated: even with pre-boxed lunches and staggered lunch times, full compliance with physical distancing and hygiene may not be attainable, especially for young children.

Finally, systems need to consider which behavioral policies and norms are enforceable during the school day. Temperature checks for anyone entering a school campus may be sensible, yet contactless thermometers are expensive and may be in short supply. Schools will therefore need to decide whether to require everyone to check their temperature at home daily or have school personnel administer checks using standard thermometers. Schools can set up quarantine facilities for students with fevers, but if insufficient coronavirus tests are available it will complicate decisions on when entire student cohorts (or even the entire school) should be sent home.

Consistently wearing masks might also be difficult, if not impossible, to enforce among students. However, frequent scheduled campuswide handwashing and sanitation can help keep the environment and hands relatively clean. Enhanced cleaning of surfaces after the school day can be another vital element of promoting hygiene. Training and frequent reinforcement can help staff, parents, students, and entire communities stay updated on important health and sanitation practices.

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As school-system leaders consider a dizzying array of decisions, they will have to make difficult trade-offs using the best and most recent—but still incomplete—available evidence and the knowledge of their own resources and constraints. They will also have to involve parents, teachers, and students in the decision-making process.

As schools reopen under appropriate health and safety protocols, school leaders will then confront a new set of challenges, including reenrollment, remedial academic support, and possibly closing schools again in response to public-health needs. None of this work is easy, but the prize—students learning, parents working, and a virus in retreat—is worth fighting for.

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[13] Working and learning cohorts are already in use in the private sector; for an example, see Will Anderson, "How Austin factories are practicing social distancing," *Austin Business Journal,* March 23, 2020, bizjournals.com.

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