ROADMAP TO HEALTHY SCHOOLS

Building Organizational Capacity *for* Infection Prevention and Control (IPC)

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COVID Collaborative

EDMOND J. SAFRA Center for Ethics

BROWN School of Public Health

NEW AMERICA

WITH SUPPORT FROM RIOS PARTNERS

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This operational Roadmap to Healthy Schools is intended to offer guidance regarding questions about organizational best practices that can support an effort to reduce the risk of disease transmission, specifically novel coronavirus SARS-CoV-2 and the disease it causes, COVID-19. It recognizes that infection prevention and control has not been in the core mission of schools, that schools are already undertaking measures to increase IPC in support of health and safety, and that schools across the country have different local contexts and capacities to implement these recommendations.

The recommendations in this Roadmap can be considered and integrated into practice simultaneously to a return to in-person learning and are not intended as a prerequisite. Adherence to any information included in this Roadmap will not ensure successful treatment in every situation, and the user should acknowledge that there is no “zero risk” scenario. The Roadmap recognizes that each jurisdiction, building, and situation is unique and some of the guidance contained in this Roadmap may not apply to all settings.

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Foreword

During the COVID-19 pandemic, we have seen schools and districts work tirelessly as they have tried to balance the health of students and school personnel with the need to prevent widespread learning loss for a generation of young people. This has been difficult, taxing work—especially as more schools have begun reopening for in-person learning.

The COVID Collaborative, Harvard's Edmond J. Safra Center, Brown School of Public Health, and New America came together a few months ago to offer support to schools, districts, and decision makers on the frontlines as they implemented infection prevention and control (IPC) measures to navigate this once-in-a-generation crisis. We recognized that schools were not built for this purpose and believed they might benefit from IPC in health systems and from emerging models across schools, districts and states.

We wanted to make sure that whatever we produced was rooted in the needs on the ground, and representative of all the players involved in school-based IPC. We established a task force that brought together representatives from across health and education, experts in epidemiology, organizational design, and infection prevention and control; associations representing teachers, principals and superintendents; and public health institutions and professional associations. This Roadmap is the product of that effort.

We recognize that many places are already deep in the work of integrating the CDC's guidance on infection prevention and control into how their schools operate. We also know that there are some schools at the start of this process. Our aim was to produce a resource in this Roadmap that can meet schools and districts where they are and provide recommendations on both *who* should take on the various elements of infection control at the state, local, and school levels, and *how* it can be done. We have included case studies from schools and districts that have managed to reopen their schools safely for in-person learning this year to share insight and inspiration from their stories and practices.

We are grateful for the leadership of those serving our education and health systems at the state, district, and school levels. We hope these resources are useful in the work of supporting safe and sustainable in-person learning during this pandemic. As the country emerges from this national crisis, we know that such efforts will also help prepare our schools and communities for other health challenges—from flu outbreaks to future pandemics.

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Executive Summary

The goal of safely and sustainably reopening K–12 school buildings for in-person learning is widely recognized as critical to minimizing the impact of academic, social, emotional, and mental strains brought forth by the COVID-19 pandemic. In order for in-person learning to succeed on an ongoing basis, schools must be able to offer safe environments, taking into account high levels of community spread of COVID-19. Health and safety are foundational for learning and educating. Based upon scientific research and case studies, we now know that robust, school-based infection prevention and control (IPC) programs are essential to establishing this solid foundation. Infection prevention and control consists of a set of practices to reduce the risk of disease transmission and achieve healthy and safe workplaces. By providing layered protection strategies, IPC programs can reduce transmission to at or near zero levels, even where there is high community spread. While this is not the only aspect of health that is foundational to learning, it is a vital element that schools should employ to provide the safest strategies and environmental modifications to suppress the transmission of the SARS-CoV-2 virus.

Thanks to updated guidance from the Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA),[1] and a robust body of scientific evidence,[2] we now have concrete information about the key components of a multilayered mitigation strategy: universal and correct use of masks; maintaining healthy facilities, including improved ventilation and air filtration; handwashing and respiratory etiquette; symptomatic testing and contact tracing in combination with isolation and quarantine; physical distancing; cleaning; and vaccination. In addition, a comprehensive prevention approach that combines asymptomatic testing (whether screening or surveillance) with these mitigation strategies can assist with evaluating the effectiveness of infection prevention and control efforts and can ensure that all members of the school community are as safe from infection as possible.

Many states, territories, local educational agencies (LEAs), tribal authorities, schools, unions, and employees have already been hard at work to make schools safe, and many schools are already providing in-person instruction. Taken together, comprehensive planning, training, and adoption of mitigation strategies constitute practices commonly known as infection prevention and control.[3]

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[1] CDC, "Community, Work, and School," Centers for Disease Control and Prevention, February 11, 2020, https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html; "Protecting Workers: Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace | Occupational Safety and Health Administration," January 29, 2021, https://www.osha.gov/coronavirus/safework.

[2] "The Science Is Clear: Layered Infection Prevention and Control Measures Allow Return to Safe In-Person Learning," April 26, 2021, https://static1.squarespace.com/static/5f85f5a156091e113f96e4d3/t/6088352ca985de7585b38684/1619539244698/Scientific+Consensus+Statement+Schools+4.26.21.pdf.

[3] The phrases "infection prevention" and "infection control" are both common substitutes for this phrase.

A school-based infection prevention and control program[4] would:

1. Sustain safe in-person learning;
2. Ensure schools are prepared for other outbreaks of infectious diseases (e.g., seasonal influenza) and for future pandemics;
3. Be modeled on infection prevention and control in the healthcare sector, with school-based infection prevention and control (IPC) teams supported by city/county/tribal situation rooms[5];
4. Support COVID-19 testing and contact tracing;
5. Integrate promising practices and (where available) validated best practices from schools and districts and from existing successful occupational safety and health models; and
6. Include processes of continuous quality improvement, including data collection and reporting, so that the program continues to evolve and improve over the school year.

While many educational stakeholders have been working on infection prevention and control and have been developing a wide array of partnerships with public health officials to do so, formalizing this area of activity for the K–12 sector is critical.

Current guidelines developed by the CDC and other groups are often implemented piecemeal without the context of a comprehensive approach to IPC. Additionally, educators—defined broadly to include the breadth of employees in schools, as described in more detail in the Workforce Implications section—often do not have access to health officials or experts to help them interpret health guidance. Without a thorough understanding of evidence-based IPC practices at the building level, there is an increased risk of a disjointed and inconsistently observed package of prevention and control components. Integration is

[4] We want to acknowledge the early work done on infection prevention and control in schools by all of our Task Force members, particularly the Healthy Schools Network's "National Call to Action: The Pandemic v. Schools: States Must Guide Schools on Reopening and Slowing Spread of Virus, Healthy Schools Network and New Jersey Work Environment Council, July 2020. http://www.healthyschools.org/data/files/PandemicvSchools.pdf

[5] The term "situation room" is used to designate a team-based partnership between local public health and LEAs and schools and to distinguish from the school-based teams.

crucial for minimizing any school-related transmission, including classroom, lunchroom, and sports-related transmission.

With the knowledge of **what** to do now clearly articulated by the CDC and scientific experts, implementing this function effectively for K–12 schools now requires focusing on **who** should do the work of infection prevention and control and **how** it should get done. This Roadmap provides general guidance on these questions, with a focus on building organizational capacity. The Roadmap is structured with the twin understandings that state and local governmental structures and labor-management collaboration take many forms and can differ between and within states, and that, to be effective, IPC initiatives must be shaped to align with those contexts.

We recommend five core organizational functions for successful K–12 infection prevention and control:

1. Stand up local, county, and tribal "situation rooms".[6]
2. Form and train school-based infection prevention and control (IPC) teams.
3. Assess and invest in ventilation, filtration, and related building upgrades.
4. Train the whole school community on IPC.
5. Analyze and respond to workforce implications.

In addition, schools need support from across all jurisdictional levels of our federalist system—from LEAs, tribal authorities, states, and federal agencies, among other jurisdictions. As education leaders and stakeholders work with public health officials to translate the what of IPC into a site-specific who and how, this Roadmap serves as a guide and bridge between these two critical questions. COVID relief funds provide an opportunity for schools to invest in these solutions.

[6] These situation rooms link local public health officials to LEAs and schools to support school-based IPC, from hazard assessments and planning to implementation, review, revision, and trouble-shooting.

Effective K–12 Infection Prevention and Control

Infection prevention and control programs must be developed at the level of the school building and must align with local educational agency and state plans, CDC guidance, and the applicable guidance of federal or state occupational safety and health agencies.[7] The translation of guidance into IPC plans is site specific. Planning, implementation, review, and revision are part of a process involving both local- and district-level engagement. The healthcare sector has long treated infection prevention and control as a core organizational function, and the K–12 sector can draw lessons from this other context.

Infection prevention and control in schools entails the following duties:

- Collect, analyze, and interpret health data and contextual information in order to track infection trends including equity impacts, plan appropriate interventions, revise plans, measure success and failure, report relevant data to public health agencies, and transparently provide information on data and policies to school employees and the school community.

- Identify scientifically-based infection prevention practices by working in consultation with public health agencies, and collaborate with school teams and (where applicable) union representatives in the design, implementation, assessment, and revision of plans.

- Work to prevent community associated infections in a school setting by implementing actions to limit their transmission, including eliminating sources of infection, modifying workplaces, changing behaviors, and providing necessary materials and equipment.

- Educate school personnel, students, families, guardians, caretakers, and the public about infectious diseases and how to limit their spread, and identify appropriate training needs for infection control team members and school personnel; ensure that infection control plans and resulting policies are clearly communicated in languages and formats appropriate for all students and members of the school community.

Diverse school systems across the country have experienced a successful and safe return to in-person learning and maintained low in-school transmission rates (see scientific consensus statement) through the implementation of five core organizational functions:

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[7] As OSHA explains, the OSH Act "covers most private sector employers and their workers, in addition to some state and local government employers and their workers in the 50 states and certain territories and jurisdictions under federal authority." OSHA also notes, "Workers at state and local government agencies are not covered by OSHA but have OSH Act protections if they work in states that have an OSHA-approved State Plan. OSHA rules also permit states and territories to develop plans that cover state and local government workers only. In these cases, private sector workers and employers remain under federal OSHA jurisdiction." For more information, see: "State Plan Frequently Asked Questions | Occupational Safety and Health Administration," accessed April 27, 2021, https://www.osha.gov/stateplans/faqs.

1. Stand up local, county, and tribal “situation rooms”.
2. Form and train school-based infection prevention and control (IPC) teams.
3. Assess and invest in ventilation, filtration, and related building upgrades.
4. Train the whole school community on IPC.
5. Analyze and respond to workforce implications.

While the nomenclature for the first four functions has varied from jurisdiction to jurisdiction, these four functions appear repeatedly across contexts where in-person learning is proceeding in healthy and safe ways. Urban, suburban, and rural schools can stand up these functions, even if the form they take in each context may vary.

The fifth function requires increased attention across most contexts. Some school systems may have existing formal structures that can encompass the functions of an IPC program, while others may need to develop the organizational structure for these functions to occur. Successful implementation of infection prevention and control programs involves addressing the workforce implications of adding a new function and organizational capacity to the suite of functions already carried out in schools and by school personnel. Collaborative labor-management engagement, including through collective bargaining when applicable, and existing labor-management health and safety committees, are also important components of the successful development, implementation, review, and revision of infection control plans.

Throughout this Roadmap, we provide concrete examples of what these organizational functions may look like in specific contexts. These examples do not reflect the results of an efficacy study; we have not had the opportunity to evaluate the implementation of these functions in a controlled study. Instead, we are looking at real-world effectiveness based on promising practices and implementer reports of positive results. We have drawn examples from contexts that have achieved low in-school transmission. We share these examples in order to make the recommended organizational functions more concrete and operationalizable. They are examples of promising practices for the K–12 sector and align with best practices validated in the healthcare sector. They are not meant to suggest that they are the only organizational option for achieving successful IPC programs.

FIVE CORE FUNCTIONS OF INFECTION PREVENTION AND CONTROL

	Stand up local, county, & tribal public health "situation rooms"	Form and train school-based IPC Teams	Assess and invest in ventilation and filtration	Train the whole school community on IPC	Analyze and respond to IPC program workforce implications
DESCRIPTION	Designated team of local/county/tribal ***public health experts that supports*** school-based ***IPC teams***	Multidisciplinary body responsible for ***school-wide IPC planning and implementation***	***Assessment of*** all school building ***ventilation & filtration systems and investing*** in upgrades to achieve target air quality	***Training*** to equip schools and school communities ***with IPC knowledge and skills***	***Assessment of IPC program impact on workforce***, including categories of personnel, changes to duties, changes to staff time, hazard assessment, etc.
TARGET OUTCOMES	Coordinated and mutually reinforcing ***collaboration between public health*** and ***education*** sectors to achieve zero or near-zero transmissions in schools	***Educators are equipped*** to make IPC tradeoff decisions ***and IPC teams are trained*** to help their schools stay healthy	***Healthy school buildings*** that provide at least 4 to 6 air changes per hour	***Students and school communities understand IPC and their individual role*** in keeping the community safe and healthy	School ***personnel are trained, equipped, and*** fairly ***compensated*** for their contractual responsibilities
ACTIONS	***Local/County/Tribal Public Health*** • Stand up "situation room" ***LEAs/principals/workers' reps*** • Establish relationship between "situation room" and school-based IPC teams once created	***LEAs/workers' reps*** • Provide training for all IPC teams ***Principals/school staff/ workers' reps*** • Identify IPC team members • Align on responsibilities • Establish operational protocols	***LEAs*** • Issue RFP for ventilation/filtration system assessment • Use federal funding to invest in recommended upgrades	***LEAs/workers' reps*** • Contract out and provide IPC training for school staff ***Principals/school staff/ workers' reps*** • Provide IPC training for school staff • Reinforce IPC training in schools	***LEAs/principals/workers' reps*** • Conduct collective bargaining, if applicable • Analyze and respond to workforce implications

RECOMMENDATION 1

LEAs should review their IPC program for the presence of all five core functions of IPC programs and formalize them where they are functioning in an ad hoc way. State COVID task forces should ensure that state education agencies assist LEAs in achieving all five functions in support of their IPC program, even if under different nomenclature.

Stand Up Situation Rooms

LEAs and schools do not typically house experts in infectious disease, epidemiology, occupational safety and health, and disease prevention. Schools need decision-making support from experts in order to make the highly context-specific judgments necessary to plan, implement, and revise site-specific infection prevention and control programs. Where school nurses are present, this expertise may be available to LEAs and campuses. School nurses, particularly those with administrative roles, can serve as liaisons to local health departments, federally qualified health centers, and school-based health centers, where applicable. In addition to needing local public health experts to provide decision support, LEAs and schools also need local public health authorities as partners to implement testing and contact tracing as well as to support quarantine, isolation, and case reporting and analysis. Multidisciplinary forms of expertise are needed to provide decision support for implementation partnerships. Consequently, a situation room should be designed to incorporate representatives from different public agencies and disciplines. The exact configuration and operations of a situation room, and even the nomenclature, may vary from system to system. Below are several examples of situation rooms in different school settings.

CASE STUDIES: FORMING A SITUATION ROOM

New York City (NY) Department of Education

New York City Department of Education (NYC DoE) is an urban school district, consisting of about 1600 public schools that serve a diverse population of 1.1 million students. Its student population is 41% Hispanic, 26% Black, 16% Asian, and 15% White. NYC DoE opened on September 21st, 2020, to hybrid and remote learning. Approximately 25% of students attended in-person learning at reopening. NYC DoE observed remarkably low transmission within its public schools. One study found that out of 200,000 people tested in NYC public schools between October and December, only 0.4% were positive for COVID-19.[8]

NYC DoE operates a cross-agency coordination center, or Situation Room. The Situation Room receives, investigates, and acts on reports of COVID-19 infection in students, teachers, or staff associated with the public school system. Agencies include: the Department of Education, Department of Health and Mental Hygiene; Department of Buildings, and Health and Hospitals Test

[8] "New, Peer-Reviewed Study: Safety & Health Measures Keep COVID-19 Transmission in NYC Schools Low," The official website of the City of New York, March 10, 2021, http://www1.nyc.gov/office-of-the-mayor/news/175-21/new-peer-reviewed-study-safety-health-measures-keep-covid-19-transmission-nyc-schools-low.

& Trace Corps. The Situation Room receives reports of COVID-19 cases associated with schools through self-reporting, public health surveillance, and direct results of monthly randomized screening testing. Situation Room personnel work with relevant city agencies to verify that every reported case is associated with a public school. Each case prompts contact tracing, which is conducted in collaboration with school administrators. The Situation Room also manages data collection and reporting on case counts and tracing. It operates a data portal of all COVID-19 cases associated with in-person learning at a public school, using Microsoft Dynamics and Salesforce to analyze and track data of COVID-19 cases investigated and their close contacts. This situation room is notable for its tight focus on case response.

Manatee County (FL) School District

Manatee County School District is a suburban district located in Manatee County, Florida serving 50,200 students across 47 public schools, 13 charter schools, and 3 non-traditional public schools. Roughly 36% of students are Hispanic, 13% are Black, 44% are White, and 2% are Asian. Manatee serves a majority minority population with a high migrant population and 35% of its students are Spanish-speaking. On August 17, 2020, Manatee reopened its schools to in-person instruction. Originally opening to 50% of students in person, Manatee now serves 85% of students in person and 15% remotely. Despite increased density, Manatee has not seen large increases in case counts, with the vast majority of cases introduced from the community. It has not had to close any of its schools due to large outbreaks.

Manatee County School District operates a situation room at the district level, called the District Operational Command Center (DOCC). The DOCC is responsible for data collection and analysis, public and internal COVID communications, and contact tracing. It functions as a central source to which principals and assistant principals turn for response coordination, 24/7 communication, and various COVID-related needs. This situation room includes a communications team, a risk management team, district leaders (including the district's Chief of Safety and Head of Strategy), and epidemiologists from Manatee County's Health Department. The DOCC joins weekly Zoom meetings with the county government and Health Department, as well as Manatee County's emergency management calls.

Detroit (MI) Public Schools Community District

Detroit Public Schools Community District (DPSCD) is an urban district located in Detroit, Michigan. DPSCD consists of 107 schools and serves about 50,000 students. Its student population is 82% Black, 14% Hispanic or Latino, 3% White, and 1% Asian. DPSCD opened on September 8th, 2020, to three modes of learning: virtual learning, learning centers, and in-person classes. DPSCD halted in-person learning in November. It reopened for in-person learning in February 2021, when in-person attendance hovered around 15%. To date, Detroit has observed only nine situations of in-school transmission. It is currently operating 100% remote due to the high community transmission rates but plans to reopen learning centers on April 26 and currently plans to reopen in-person

learning on May 1. Detroit has prioritized teacher and family choice in reopening for in-school learning. Building trust remains a key element in Detroit's reopening strategy.

Detroit Public Schools Community District employs a situation room in the form of a collaborative group of district and local public health leaders. This group consists of representatives from the district's Office of School Health and Wellness, the Chief Health Officer, Deputy Superintendents, and the Detroit Health Department, as well as the Wayne, Oakland, and Macomb County Health Departments, depending on residence. Principals and relevant cabinet members or supervisors may also be involved in the group's function. This group provides an open line of communication between the school district and Detroit city (or county) health authorities, with the goal of providing feedback, guidance, and alignment between local health authorities and school district operations. To begin, the group instituted regularly scheduled meetings. The creation of this formal structure allowed its members to generate informal sessions and build relationships and clear lines of communication, for the purpose of real-time, daily crisis response. This group has worked on both developing the district's reopening plan and managing the day-to-day operations of case responses, quarantine guidelines, contact tracing concerns, and overall data tracking related to COVID. They have designed communication templates for the district, with district leadership consulting with the Wayne County and Detroit Health Departments. Finally, this collaborative structure has facilitated data sharing between the school district and local health department.

While the organizational capacity developed to support IPC is not yet supporting a full return to in-person learning in Detroit, it is providing needed infrastructure to pave the way to a full build-out of an IPC program capable of supporting in-person learning for all learners. This example underscores that the project of trust-building is also fundamental. Situation rooms may be a necessary part of trust-building, but they will not be sufficient on their own.

Westchester County, New York

Westchester County, New York, consists of 40+ school districts that serve a diverse population of 145,000+ students. School districts vary in size, ranging from large urban districts to smaller village districts. Faced with the demands of the early pandemic, Westchester County built organizational capacity to support infection control across its schools. It has seen minimal transmission in school buildings, with most spread occurring in contexts other than classrooms. Most positive cases detected by the district have been attached to athletics-related exposures.

Westchester County employs a situation room at the county level in the form of a COVID-19 School Reopening Working Group. Established by the County Executive, the working group acts as an intermediary between the Westchester County Health Department and the county's school districts. It provides support to the school districts through guidance, identification of PPE requirements, and facilitating procurement, communication, training, and data infrastructure. The working group includes the Commissioner of Health for Westchester County, the county's infectious disease epidemiologist, the Assistant Commissioner of Health, who specializes in environmental health, and

the Department of Community Mental Health Deputy Commissioner, who acts as team leader of the working group and liaison to the school superintendents.

This working group provides several key functions for school districts. It interprets state and medical guidance to ensure consistency and reliability across districts, and it directly provides instruction on athletics. It works with the county's emergency services department to ensure PPE access, procurement, and storage for districts. It provides policy supports for superintendents through consistent communication. Westchester County Executive George Latimer and his executive team participate in a Monday morning call with all 43 Westchester County school superintendents to respond to questions and provide guidance on COVID-related issues. The working group lead works closely with the head of Westchester superintendents, directly communicating about 15 times a week. The working group creates and disseminates educational videos on both medical and environmental health. The working group also provides direct support for multidisciplinary teams that implement infection control in schools, perform contact tracing, and report cases. The county working group trains these school-based teams, specifically teaching school-level COVID coordinators contact tracing and exposure guidelines. The working group also creates standardized templates and tools for school-based teams to manage and report data.

RECOMMENDATION 2

Whether using the nomenclature of "situation rooms" or another nomenclature, LEAs and local/tribal public health authorities and/or federally qualified health centers should establish ongoing organizational partnerships to support school-based K–12 infection prevention and control programs.

Form and Train School-Based Infection Prevention and Control Teams

FORM TEAMS

States and local jurisdictions often issue infection prevention and control guidelines that must then be tailored to the individual school context and environment. School-based IPC teams play a role in informing school leaders to create and maintain healthy schools. IPC teams support LEAs in the development of IPC policies and lead school efforts in the planning and implementation of schoolwide infection prevention and control measures. IPC teams coordinate closely with and are supported by state, local, territorial, or tribal public health authorities. They also engage educators, caregivers, students, and the school community in IPC through training, transparent communication, and reporting, building on or establishing effective systems for labor-management collaboration, including collective bargaining when applicable.

Each school will need to tailor IPC teams to meet their own contexts, organizational structures, and specific needs.[9] Typically, IPC teams would need to include the school principal or designee and, where applicable, a union representative or designee in order to support access to district resources and strong partnership, communication, and coordination. Schools may also set up Health and Safety Committees, per OSHA guidance or other strategies, or Wellness Teams, per U.S. Department of Education guidance. (Please refer to the agency documents listed in the resource guide at the end of the Roadmap for specifics.) Schools would need to decide whether they are merging the three functions into one team or creating multiple teams. Below is an example of forming an IPC Team.

[9] The CDC report Getting Schools Ready for In-Person Learning: How to Plan and Execute a COVID-19 Mitigation Walkthrough (December 1, 2020) includes a checklist that provides a good overview of a foundational exercise that could direct and prioritize the activities to be undertaken by an IPC team; "Getting Schools Ready For In-Person Learning: How to Plan and Execute a COVID-19 Mitigation Walkthrough | National Prevention Information Network | Connecting Public Health Professionals with Trusted Information and Each Other," December 1, 2020, https://npin.cdc.gov/publication/getting-schools-ready-person-learning-how-plan-and-execute-covid-19-mitigation.

Cambridge (MA) Public Schools

Cambridge Public Schools (CPS) is an urban district of Cambridge, Massachusetts, in Greater Boston. CPS consists of 17 schools and roughly 6,700 students. It serves a student population that is 40% White, 25% African American, 14% Hispanic and Latino, 12% Asian American & Pacific Islander, and 8% multiethnic and other. CPS began remote learning in March 2020. In early August, the school board approved a plan for limited reopenings in elementary schools, conditional on robust infection control and low community spread. In-person learning began in these settings in mid-October, for families who opted in. As community cases spiked, CPS returned to remote learning in mid-December, but reopened school buildings in early January 2021. Limited in-person learning for all students began in early March. As of April 5, elementary schools have returned to full in-person learning, while upper schools will transition beginning April 28.

As part of their reopening procedures, CPS established an infection control team[10] for each school. The purpose of this team is to monitor health and safety practices to identify areas for improvement and education. Infection control teams are made up of administrators, school health personnel, maintenance, food services, and clerical staff, educators, and a family liaison, who were trained to help students and staff understand and implement infection control measures.

The IPC teams monitor health and safety practices and identify areas for improvement and education. Specifically, they are tasked with:

- Reviewing and updating school safety and facilities measures to prepare for in-person learning;
- Assisting in infection control training and continued education for staff, parents, and students;
- Receiving and communicating feedback about areas of concern and needed improvements; and
- Meeting monthly with other school infection control teams and school leadership for shared learnings and discussion.

In the period from October 16 through Dec 31, 2020, prior to the introduction of IPC teams and with only a subset of students returned for in-person learning (K-2 and special needs), CPS had six cases of in-school transmission across its schools. In the period from January 11 to April 23, 2021, with IPC teams in place, the district has seen one case of in-school transmission. School populations increased on March 1 and again on April 5 as additional grades were brought back for in-person learning. See COVID-19 Data Dashboard - Cambridge Public Schools (cpsd.us).

[10] "CPS COVID-19 Safety & Facilities Manual - Google Docs," April 13, 2021, https://docs.google.com/document/d/1XtUFRjKa9O9qZ9n-JphustSTvr73N41xIlfDkEvHy0k/edit.

What should I consider when standing up my school's IPC team?

While IPC teams will have the same set of core responsibilities, their composition will vary based on the individual school context. When standing up your school's IPC team, school leaders should consider three core elements:

RESPONSIBILITIES: *What will the IPC team do?*

- **Collect, analyze, and interpret health data; plan** appropriate **interventions**; revise plans; **measure** success and failure; and **report** relevant data.
- **Identify scientifically-based IPC practices** by **working** in consultation **with public health agencies**.
- **Collaborate with school teams and workers' representatives** in the design implementation, assessment, and revision of IPC plans.
- Conduct **hazard assessments**.
- Work to **prevent community associated infections in schools** by implementing actions to limit their transmission.

COMPOSITION: *Who should be on the IPC team?*

- IPC teams should be **multidisciplinary**, reflecting each setting and function within a school.
- **IPC teams often include**–
    - School health personnel
    - Instructional staff
    - School principal or designee
    - Facility services personnel
    - Non-instructional staff
    - School community members
    - Union representative or designee, where applicable
- School leaders should **designate** an individual to serves as **the lead** for the IPC team in collaboration with IPC team members.
- Establishing the IPC team should include an **analysis of workforce implications** and engagement with workers' representatives as needed.

LOGISTICS: *How will the IPC team operate?*

- When standing up the IPC team, consider the following **operational questions**:
    - How frequently will the team meet?
    - How will they engage with local/county/tribal situation rooms?
    - How will they communicate with the school community?
    - How will the IPC team execute its responsibilities?
- Once aligned on these core questions, **codify and communicate IPC team processes** so that the IPC team and all relevant stakeholders clearly understand how the IPC team will operate.

RECOMMENDATION 3

LEAs should formally designate an IPC team in each school building.

TRAIN TEAMS IN IPC

Training in infection prevention and control strategies is important to safely and sustainably reopening school buildings for in-person learning. It will also provide long-term payoffs in increased effectiveness for addressing flu and other outbreaks. However, substantial gaps exist in resources available to train school stakeholders on IPC strategies. Current guidelines developed by CDC and other groups are often received and interpreted without the context of a comprehensive approach to IPC. OSHA and CDC's National Institute for Occupational Safety and Health (NIOSH) provides strategies and tools for this purpose, but the absence of a thorough understanding of evidence-based IPC practices at the building level increases the risk of a disjointed and inconsistently observed package of prevention and control components. There continues to be a need for compact, easily navigable resources and modules designed for the context of education specifically.

School-based IPC teams should be equipped, trained, and appropriately compensated to develop and implement infection prevention and control protocols in their schools.

IPC training focuses on understanding eight core topics of infection prevention and control that will equip IPC teams to plan and implement IPC in their school setting and train their school communities to stay healthy and safe. Core components of IPC knowledge include:

1. Infection transmission in adults and children
2. Respiratory protection
3. Hand hygiene
4. Selection and use of personal protective equipment (e.g., eye protection, gloves) and face masks for source and exposure control
5. Environmental cleaning and disinfection, including training on the use, misuse, and storage of chemicals

6. Clean air (ventilation and filtration)
7. School logistics, including classroom transitions, recess, lunch, hallways, bathrooms, water fountains/bubblers, staff meetings, gatherings, visitor access, sports/extracurricular activities, transportation to and from school, etc.
8. Physical distancing

In addition to these eight components, K–12 IPC training should also include knowledge to support:

- Hazard assessment
- Screening of students and staff for symptoms/exposure
- COVID-19 testing
- Contact tracing
- Vaccination communication

Implementing an IPC training program involves both the initial training and a recurring training program to continually build IPC knowledge and skills that will keep schools healthy regardless of the pandemic or infectious disease outbreak of the day. The training on testing could reasonably include training on other diseases like flu and strep. Reinforcing IPC training throughout the educational setting is expected to support the behavioral and cultural change required to maintain healthy schools even beyond the current pandemic. Additionally, the IPC team may consider the need to regularly review, update, and improve the training based on new learnings, performance against key metrics, and user feedback. The Networked Improvement Model[11] provides a framework for continuous improvement based on improvement science. This model creates a structured network and process for individuals and organizations to develop and test IPC training programs and spread and scale improvements to drive learning.

Development of a training program for IPC in schools helps ensure that our educational system has the necessary knowledge and organizational know-how to effectively deliver in-person learning and keep our school communities safe. Here are several examples from different school settings of training IPC teams and other similar school-based teams.

[11] "Quality Improvement Approaches: The Networked Improvement Model," Carnegie Foundation for the Advancement of Teaching, February 24, 2017, https://www.carnegiefoundation.org/blog/quality-improvement-approaches-the-networked-improvement-model/.

Hamilton County, Ohio

Hamilton County Public Health provides infection control training for the county's 22 public school districts through its Infection Control Assessment Response (ICAR) tool. The ICAR tool was originally developed by the CDC for use in congregate long-term-care facilities. It includes a questionnaire and conversation guide that enables local health officials to assess and assist in infection control implementation. The Hamilton County Public Health adapted the ICAR tool to support COVID-19 infection control in district schools.

When a school outbreak occurs, the county health department provides assessment, training, and recommendations for school administrators. The county conducts a "Tele-ICAR," or a virtual conversation between county health and school staff. From the county, this conversation includes the school's point of contact in the county health department and a communicable disease specialist or health educator. School staff include the school's principal, superintendent, nurse, educators, and maintenance representatives. Using the ICAR tool, county health representatives interview staff on facility practices to identify COVID needs and convey key IPC messages. The goal of this conversation is to create dialogue and share information. The county health department provides instruction for implementing IPC. It answers questions and clarifies health guidance. It also delivers concrete recommendations for rectifying gaps in infection control and improving existing measures, providing best practices tailored to the capacity of schools. The county health department has conducted a Tele-ICAR with almost every school in Hamilton County, with many schools participating in multiple Tele-ICARs. Follow-up is dependent on an individual school's decision. Some schools have used this communication line to build long-term capacity against common infectious diseases such as the seasonal flu.

The county health department's communicable disease specialists and epidemiologists work to frequently update the ICAR toolkit. The health department also provides guidance for IPC risk assessment, data collection tools, and communication templates. It is currently creating a pamphlet with best practices to supplement the ICAR toolkit.

Whitefish Bay (WI) School District

Whitefish Bay School District (WFBSD) is a suburban district located in Milwaukee County, Wisconsin. Its four schools serve a student population that is 76% White, 6% Asian, 7% African American, 6% Hispanic or Latino, and 6% two or more races. On August 3, 2020, the school board approved a blended (hybrid and cohorted) learning model with a virtual option. As community cases spiked in September and October, WFBSD remained open but emphasized stricter monitoring and infection control in all schools. In November, due to critical staff absences and rising case rates, all schools reverted to virtual learning. However, once community cases declined in December, the School Board approved returning to blended learning. In early February 2021, a phase-in learning model—with four days of in-person learning—was implemented at elementary

schools. As of mid-March, over 85% of WFBSD students are attending all schools in-person four days a week, with a virtual option. The WFBSD has maintained a flexible approach to learning modalities, with an emphasis on supporting in-person learning to the greatest extent possible and informed by key experts and invested stakeholders across the community.

The School Board recruited a team of community members with public health expertise to serve as a School Board-charged ad hoc Health Advisory Committee. This team reviewed the latest evidence on reopenings to deliver localized metrics, protocols and practices, and community education. Community members and parents applied as volunteers. The team consisted of multidisciplinary health professionals, including Whitefish Bay's local Public Health Director. The committee regularly updated FAQs to guide sustained and expanded in-person learning, and it held open, public monthly meetings. Meeting participation included two designated board members, the superintendent of schools, and designated members of district leadership (including the district nurse and director of Buildings & Grounds/Facilities.)

The Advisory Committee also created a risk mitigation assessment toolkit[12] to support school-level IPC implementation. School Leadership Council teams used this tool to perform walkthroughs and evaluate school buildings. The toolkit prioritized three key areas: built environments, case management/ containment, and extracurriculars and athletics. Checklists equipped schools with the knowledge needed to assess buildings across all areas of risk mitigation, evaluate and communicate real-time improvement strategies, and share learnings with other districts as they contemplated reopening from all-virtual modalities. The checklist provided detailed guidance on behavioral practices, distancing, PPE usage, cleaning, and air quality improvements. It also outlined a color-coded scoring framework that allowed schools to evaluate their capability for safe and sustained in-person learning. The school principals share these domain-specific scores with families in weekly narrative reports. While the Health Advisory Committee did not participate in IPC assessment or implementation, it met with district and school leadership to conduct training and recalibrate the risk assessment checklist based on school feedback. The Advisory Committee is currently disbanded, but its members continue to communicate with district and school board leadership on specific epidemiologic and risk mitigation questions, as well as to review and edit sports protocols and community communications.

This case highlights the centrality of training being provided for school leadership teams that took on the responsibility of infection prevention and control.

[12] "Introduction: COVID-19 in Schools: Risk Mitigation Assessment Toolkit" (Whitefish Bay School District Community Health Advisory Committee), accessed April 27, 2021, https://drive.google.com/file/d/1zRirK7udhp8xFXetc_nv0f_GQQZvARxc/view.

RECOMMENDATION 4

The U.S. Department of Education, Department of Health and Human Services/CDC, Environmental Protection Agency, Labor Department (OSHA), and/or state OSH agencies should survey existing training materials to identify what already exists and what additional material is needed, and contract with vendors to create K–12 IPC training materials.

RECOMMENDATION 5

State education agencies should create a list of well-credentialed providers of IPC training, or the state education agency (SEA) and/or LEA should contract with well-credentialed providers of IPC training to equip IPC teams in all school buildings with the professional knowledge needed for a successful IPC program at the building level.

Assess and Invest in Ventilation and Filtration

Ventilation and filtration are important to infection prevention and control in schools, especially in the context of a virus that travels through the air via aerosols. It is now clear that building ventilation plays a key role in mitigating airborne transmission.[13]

With regard to school air quality, we recommend schools target four to six air changes per hour, which is achievable in most classroom spaces.[14] CDC guidance recommends opening windows as a low-cost method of introducing more fresh air into a classroom.[15] As per CDC guidance, however, do not open windows and doors if doing so poses a safety or health risk (e.g., risk of falling, triggering asthma symptoms) to occupants in the building. If windows cannot be opened, purchasing portable cleaners with HEPA filters can achieve the recommended improvements in air quality.[16]

Where necessary, schools should consider upgrading their mechanical systems for better indoor air quality. As these systems may take a while to upgrade, temporary measures must be implemented as well.

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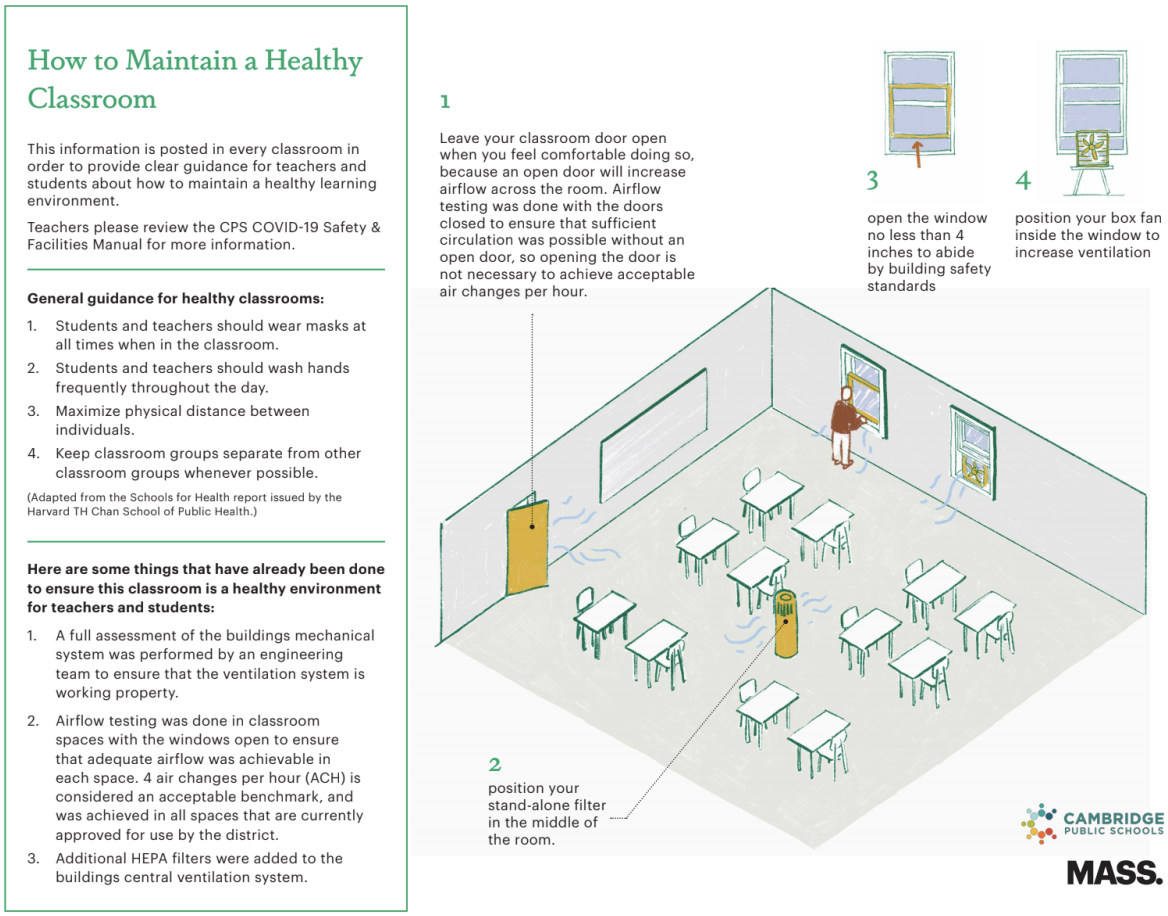
[13] "Schools and the Path to Zero: Strategies for Pandemic Resilience in the Face of High Community Spread," December 18, 2020; https://globalepidemics.org/wp-content/uploads/2021/01/SchoolsandthePathtoZero_wFAQ.pdf; "Ventilation in Schools and ChildCare Programs," February 26, 2021, https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/ventilation.html;"Schools & Universities" (ASHRAE Epidemic Task Force, October 7, 2020), https://www.ashrae.org/file library/technical resources/covid-19/ashrae-reopening-schools-and-universities-c19-guidance.pdf; Michael Griffith and Allie Pearce, "The Air We Breathe: Why Good HVAC Systems Are an Essential Resource for Our Students and School Staff," *Learning Policy Institute* (blog), December 8, 2021, https://learningpolicyinstitute.org/blog/covid-hvac-systems-essential-resource

[14] Joseph Allen et al., "5 Step Guide to Checking Ventilation Rates in Classrooms," Harvard Healthy Buildings Program, Schools For Health, October 2020, https://schools.forhealth.org/ventilation-guide/.

[15] For a helpful visualization of the impact of opening a window, see Nick Bartzokas, Mika Gröndahl, Karthik Patanjall, Miles Peyton, Bedel Saget, and Umi Syam, "Why Opening Windows Is a Key to Reopening Schools," *New York Times*, February 26, 2021, https://www.nytimes.com/interactive/2021/02/26/science/reopen-schools-safety-ventilation.html

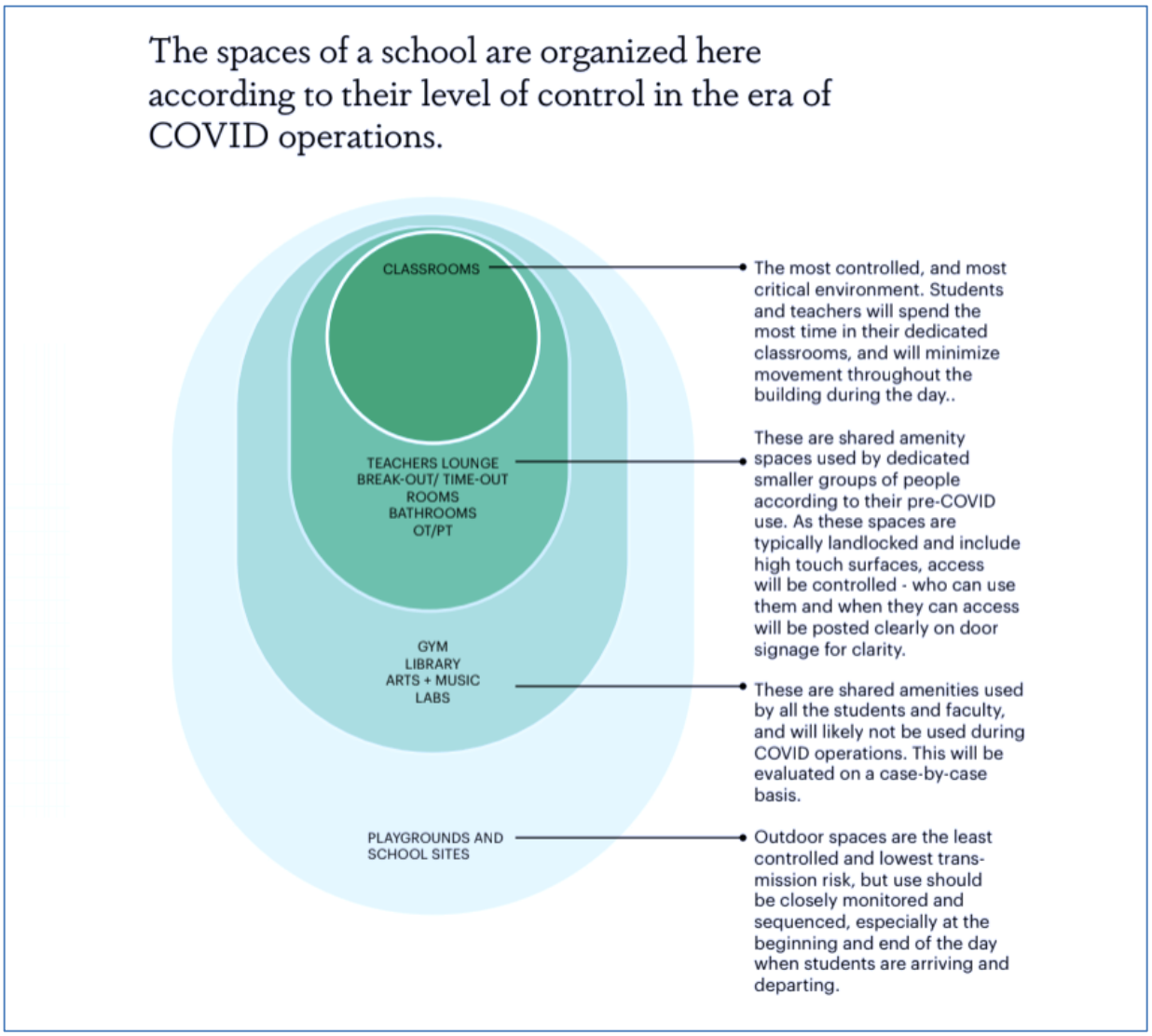
[16] School safety protocols often require windows and doors to remain closed. Building leaders will need clarification from their district about which directive they should follow when. An IPC team will need to take on the work of reconciling guidance about closed windows emerging from safety protocols with health guidance about the need for ventilation.



A Case Study — A visualization of a healthy schools approach, produced by MassDesign for Cambridge Public Schools (MA), Fall 2020

In addition to classrooms, schools must consider air quality in hallways, common areas like gyms and cafeterias, and high-risk areas such as bathrooms, isolation rooms, and health offices. Where necessary and feasible, schools should consider upgrading their ventilation systems for better circulation. Schools should also account for the logistics of classroom changes, breaks, and the end of the school day. Proper ventilation and filtration controls may extend beyond the school environment, into transportation and extracurricular settings. Specific needs and solutions may vary on a school-by-school basis and should be guided by each school's and district's infection prevention and control protocols. Expert resources are available that provide ways to identify effective filtration systems, and tag those which should be avoided.[17]

[17] "Schools for Health: COVID-19," Harvard School of Public Health, accessed April 27, 2021, https://schools.forhealth.org/.



A Case Study — An analytic tool produced by MassDesign for Cambridge Public Schools (MA) to assist their building evaluations, Fall 2020

Strategies for improving school air quality include increasing outdoor air, use of high efficiency MERV-13 filtration (or the highest level of filtration compatible with the school's system), changing filters more often, installing portable HEPA filters, installing UV emitters, sealing edges of filter sections with sheet metal, and disabling demand control ventilation. Devices to monitor indoor air quality (IAQ), such as CO2 monitors, to provide feedback to staff and teachers to make decisions to protect themselves and their students may also be helpful, provided that schools have capacity to manage calibration of device monitors and training to interpret the data. Recommendations are likely to be building-by-building and zone/system specific.

Also note: one type of device that is getting installed widely but lacks efficacy data (and can generate secondary pollutants) is bipolar ionization. There are two forthcoming pieces from groups of scientists that mention concerns with this technology but as yet there are no published studies.

In sum, goals for healthy schools and education facilities should include:

- Fresh ventilated air of between 4 to 6 air changes per hour (ACH) in all learning spaces to resist airborne disease transmission and to promote infection control (including COVID-19 and the annual flu virus);
- Mechanical ventilation strategies that improve annual energy performance and deliver life-cycle cost savings for school districts;
- Devices to monitor indoor air quality (IAQ), such as CO_2 monitors, to provide feedback to staff and teachers to make decisions to protect themselves and their students;
- Facilities that reduce risk of exposure to environmental health hazards and support student health needs;
- Classrooms with access to daylighting to reduce lighting costs and to improve learning outcomes;
- Material choices of furniture, finishings, and surfaces that are natural, non-carcinogenic materials;
- Flexible exterior learning spaces that can accommodate students in all climatic conditions during a health crisis; and
- Learning spaces that are child-centered.

These goals are supported by recent guidance from the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE),[18] a report from the United States Green Building Council (USGBC) on upgrades for school buildings,[19] and recommendations from the Healthy Buildings Program of the T.H. Chan School of Public Health at Harvard University.[20]

The expertise necessary to move this work forward can be difficult for LEAs to access. Consequently, state education agencies can fill a recognized gap by assisting districts in this work on evaluating and improving ventilation and facilities. States should also provide assistance with data management, including helping to establish metrics and metadata that can be used consistently across all districts.

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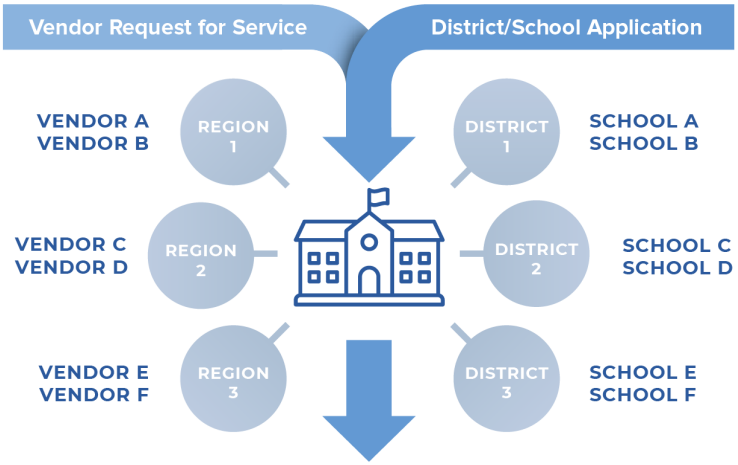
[18] "Core Recommendations for Reducing Airborne Infectious Aerosol Exposure" (ASHRAE Epidemic Task Force, January 6, 2021), https://www.ashrae.org/file%20library/technical%20resources/covid-19/ashrae-reopening-schools-and-universities-c19-guidance.pdf.
[19] "Five Guiding Principles | U.S. Green Building Council," March 2021, https://www.usgbc.org/resources/five-guiding-principles.
[20] "Schools for Health: COVID-19."

Contract structure, and subsequent deployment of funds, could have a significant impact on enabling at-scale implementation of Assessments (commissioning inspection and testing) and Improvements (maintenance, repair, replacement, and/or upgrades) within spending deadlines connected to COVID relief funds. To accomplish a similarly scaled pooled-testing program for Massachusetts schools, the state matched service providers and schools through a two-part process:

1. Districts or schools provide initial information about their current or planned operations, contact information, and a statement of assurance to opt-in to the program.

2. Vendors respond to statewide request for response for requisite services.

This contracting and vendor selection process significantly reduced the learning curve with required services and speed of vendor selection.



A similar contract and implementation structure could be advantageous to enable rapid and quality assessments for healthy school and education facilities that provide both near-term modular solutions and enable flexibility in long-term capital projects. Operational, geographic, and economies of scale could be achieved through statewide facilitation of contractor/vendor matching and could reduce the learning curve for school districts to select qualified contractors/vendors. The following are examples of ventilation assessments and upgrades in different school settings.

Cleveland (OH) School District[21]

Cleveland Metropolitan School District is the 2nd largest district in Ohio. It consists of 104 schools, serving around 38,000 students. The student population is 64% African-American, 16% Hispanic or Latino, 15% White, and 4.2% classified as other. CMSD opened for remote learning in September 2020. It purchased and distributed over 13,500 WiFi hotspots and 27,000 devices to bridge the digital divide.[22] The district opened for in-person hybrid learning in March 2021. It divided students into three priority groups, opening to students with high needs on March 8. On March 22, it opened for in-person learning to all students.

Cleveland School District has invested in building infrastructure in an effort to reopen schools for in-person learning. The district had made building-specific adjustments to improve air quality, considering HVAC system age and capacity in school buildings. In their modern school buildings, they changed over 1500 filters, increasing the frequency of changes from 2 to 4 times a year. In older buildings that lacked modern HVAC systems, they purchased and installed over 900 air purifiers. To control spacing and density, the district created smart sheets to indicate occupancy in classrooms. Since building characteristics varied school to school, school staff, teachers, and principals worked to configure school flow. After gathering recommendations from building staff, the district provided signage to direct movement flows. The district also adjusted staffing hours to enable an environmental specialist to inspect the building before staff arrive, and to allow for general building cleaning at night.

Kenosha (WI) Unified School District (KUSD)[23]

Kenosha School District (KUSD) is a suburban district located in Kenosha County, Wisconsin. Its 43 schools serve about 21,000 students. Its student population is 48% White, 30% Hispanic or Latino, 14% Black, 2% Asian, and 7% two or more races. KUSD shifted to remote learning on March 12, 2020, and kept its buildings closed for the remainder of the academic year.[24] On September 16, the school district returned to in-person learning – as the only large public school district in

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[21] "National Safe School Reopening Summit to Include President Biden, Vice President Harris, First Lady Jill Biden, Education Secretary Miguel Cardona, and More | U.S. Department of Education," March 22, 2021, https://www.ed.gov/news/press-releases/national-safe-school-reopening-summit-include-president-biden-vice-president-harris-first-lady-jill-biden-education-secretary-miguel-cardona-and-more; "National Safe School Reopening Summit - YouTube," March 24, 2021, https://www.youtube.com/watch?v=ZFLuX74yPbY.

[22] "Cleveland Schools Scramble for Fix to Digital Divide as School Starts Remotely - Cleveland.Com," August 20, 2020, https://www.cleveland.com/education/2020/08/cleveland-schools-scramble-for-fix-to-digital-divide-as-school-starts-remotely.html.

[23] "COVID Response and Relief Planning Recommendations," Wisconsin Department of Public Instruction, February 8, 2021, https://dpi.wi.gov/crrsaa/response-relief-covid.

[24] Terry Flores, "Kenosha Unified Buildings Closed for Rest of School Year," Kenosha News, April 17, 2020, https://www.kenoshanews.com/news/kenosha-unified-buildings-closed-for-rest-of-school-year/article_484fbc6b-bad8-5390-81ab-5f2b2de5f8f0.html.

Wisconsin to do so.[25] After a class action grievance filed by Kenosha teachers in October, KUSD returned to full virtual learning on November 30, and extended remote learning until January 25, 2021.[26] [27] Kenosha now accommodates both virtual and in-person learning, with 55% of parents choosing in-person learning format in April.[28]

As part of the KUSD planning process for reopening schools, KUSD evaluated the CDC/ASHRAE recommendation and replaced their Minimum Efficiency Reporting Value (MERV) 8 filters with MERV 11 filters around May/June of 2020, based on filter availability and concerns that the increased filtration level could create a pressure drop that would reduce airflow to unacceptable levels, especially when the filters were at the end of their useful life.

In September and October, KUSD brought in a third-party engineer and HVAC testing and balancing contractor to test air flows in representative classrooms at 10 schools representing the district's ventilation systems' various types and ages. They were tested with the used MERV 11 filters as well as with either new MERV 11 filters or new MERV 13 filters (if they were available from their filter supplier). In addition, the engineer's environmental crew took classroom carbon dioxide (CO_2) readings in every classroom as a further measure of maintaining acceptable air flow rates and air quality as part of the evaluation.

As a result of that study, the third-party engineer advised that KUSD could transition to MERV 13 filters at every school in the district except one, where they kept MERV 11 filters because the entire school is served by rooftop units that are more susceptible to a coil freeze in extreme weather if there is a reduction in the airflow past the coil.

RECOMMENDATION 6

States should assist districts with facilities assessments and facilities data management (metrics and metadata definitions) and work to determine which operational standards should be applied at the state level. Additionally, states should identify resources and technical assistance to help districts get good value from their facilities-related spending.

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[25] Renae Cassimeda and Evan Blake, "Hundreds of Kenosha, Wisconsin Teachers Call in Sick to Force Schools to Close," World Socialist Web Site, September 23, 2020, https://www.wsws.org/en/articles/2020/09/23/keno-s23.html.
[26] Jackson Danbeck, "Kenosha School Board Approves Move to Virtual Learning over Holidays," November 17, 2020, https://www.tmj4.com/news/coronavirus/kenosha-teachers-union-files-grievance-against-school-district-over-covid-19-safety-demands-100-virtual-learning.
[27] "1/6/21 Learning Update," Kenosha Unified School District, January 6, 2021, https://www.kusd.edu/news/1621-learning-update.
[28] "Return 2020," Kenosha Unified School District, November 30, 2020, https://www.kusd.edu/return-2020.

Train the Whole School Community

Making health and safety foundational to learning and education requires an all-of-community approach. Well-trained IPC teams with enhanced IPC knowledge are ideally positioned to have responsibility for training the whole school community on infection prevention and control—from personnel to students, families, and caretakers. Training can take many forms, and should include:

- General communications (such as handouts, newsletters, and community Q&As, online or in person);
- Signage and visualizations (showing, for example, proper mask wearing, coughing etiquette, or reminding everyone that if you feel sick, you shouldn't come to school); and
- In-person and online training modules.

In taking on this responsibility, IPC teams should work with educators, communications specialists, and community members to ensure materials and trainings meet the needs of diverse community members. For example, educators should be involved in developing or running student trainings to ensure they are developmentally appropriate and engaging for students of various ages. Educators, communications specialists, and community members can help ensure that trainings and materials for the broader community reflect cultural competencies, are provided in the languages spoken in the community, and take health literacy into account.

Training and education should be accompanied by relevant communications and public engagement strategies to communicate not just the what—e.g., proper handwashing—but also the why—e.g. "so we can all be at school together safely." An engagement strategy should build on and institutionalize the collaboration among families, educators and administrators built during the pandemic. It should draw on the work many community organizations are already doing in and with schools, for example to provide food security, tutoring, or mental health support. An engagement strategy should also address stigma and lift up student and community voices.

The CDC's K-12 Covid 19 Mitigation Toolkit provides a useful training checklist:

Training and Communication

Items for Assessment	Completed	In-Progress	Not Started	Not Feasible
Is there a plan to provide education and training to staff and students on everyday protective measures to reduce the spread of germs at school and outside of school?	◯	◯	◯	◯
Are signs and other visuals, such as posters, displayed in common areas of the school to promote everyday protective measures and describe how to stop the spread of germs?	◯	◯	◯	◯
Is there a plan to make all trainings and communications available in languages that staff and students understand and accessible to persons with disabilities?	◯	◯	◯	◯
Is there a plan to send regular communications (e.g., email, social media, flyers, phone messages in accessible formats) about everyday behaviors that reduce the spread of COVID-19 to staff, students, parents, caregivers, and guardians?	◯	◯	◯	◯

RECOMMENDATION 7

LEAs should coordinate and support how school-based IPC teams conduct training for their school communities.

Analyze and Respond to Workforce Implications of IPC Programs

To understand the workforce implications of introducing an IPC program, it is important to understand the categories of personnel in schools and the categories of impact on roles introduced by running an infection prevention and control program and integrating infection control practices into the business of the school. The implications are threefold, affecting those who: (1) are involved in the development, review, and revision of plans; (2) have new or different tasks related to implementing plans; and (3) are affected by the implementation of policies, such as by their own or someone else's quarantine or isolation.

Effective labor-management engagement and collaboration will be crucial to identifying relevant workforce implications in any particular setting, to developing consensus on how to address those implications, and to establishing the trust to facilitate success. All of the following categories of workforce implications may in turn have implications for collective bargaining or other labor-management agreements, and labor-management collaboration will be essential to ensure that changes are appropriately made and implemented.

CATEGORIES OF PERSONNEL

In addition to classroom teachers, employees fall into several broad categories, including clerical services; custodial and maintenance services; food services; health and student services; paraeducators; security services; skilled trades; technical services; transportation services; nurses; physical therapists; and specialized instructional support personnel (e.g., counselors, psychologists, social workers, occupational therapists, library media specialists, and speech language pathologists). Everyone's role is affected by infection control programs. Some roles are affected more than others.

School health-related employees, custodial and maintenance staff, and employees engaged in certain high-risk activities (for example, those working with special needs students who need assistance with eating or toileting) will see a particularly significant role impact.

CATEGORIES OF IMPACT

Changes to Duties

IPC planning (including review and revision) will require additional work, and some of the current duties of those developing plans may need to be transferred to others. The need to transfer duties

from some employees to make room for IPC responsibilities will have downstream effects on the job descriptions of other employees. Attention must be paid to the workload and work overload implications of those duties and to the appropriate collective bargaining or other labor-management requirements in place to address them. Additional staff may be necessary to ensure the safe and effective implementation of an IPC program. This includes staff with direct responsibilities for developing and administering the program, and staff necessary to maintain the continuity of educational services due to the implementation of policies. For instance, changes in class size that are necessary for IPC goals may require increases in educator personnel. Given the diverse flows of funds available to schools for COVID response, careful budget planning will be necessary to navigate through the development of COVID response budgets and to sustainable post-COVID budgets.

Changes to Staff Time

IPC practices involve multiple strategies that may change how some staff time is used, including engineering controls, changed practices, program adaptation, communications, and universal practices. Some of these practices meaningfully change the structure of existing roles. For example, engineering needs may change custodial roles, and adjustments to class schedules may mean an erosion of educator prep time, break time, or lunch time. School and district leaders should engage with educators and their representatives (unions and other representatives, as applicable) to assess the range of impacts specific to their school and to determine appropriate response strategies. In addition, there may be maintenance, food service, janitorial, and other contractors in a school. These contractors will have their own management and training requirements and may also have their own union representation. Schools need to engage these contacts on a regular basis as well.

Hazard Assessment

Different roles within a school building will encounter different levels of risk related to IPC responsibilities. As mentioned above, school health-related employees, custodial and maintenance staff, and employees engaged in certain high-risk activities will see a particularly significant role impact. A hazard assessment should be conducted to identify the risks faced by different categories of personnel and to develop strategies of mitigation.

Human Resources Needs

Key functions of human resources at the LEA level may be needed to support the build out of an IPC program for schools supported by that LEA. These include:

1. Working with school IPC teams to ensure they receive the support and training they need;

2. Working with school IPC teams to ensure that all members of the school community (including parents/guardians, caretakers, and visitors) receive the training that they need;

3. Establishing policies and processes for facilitating accommodation requests, sick leave and contingency planning;
4. Providing socio-emotional learning (SEL)/trauma support;
5. Ensuring that policies and plans are clearly communicated in relevant languages and formats; and
6. Making sure that the enforcement of IPC plans does not rely upon or reinforce stereotypes, penalize those without financial means, or bolster punitive measures.

RECOMMENDATION 8

LEAs should work, in collaboration with employee representatives and/or unions, to conduct an analysis of the context-specific workforce implications of introducing and formalizing the function of IPC programs and developing appropriate responses to those implications. Labor-management collaboration, including bargaining when appropriate, is an important component of ensuring that the workforce implications of IPC plans are understood and appropriately addressed.

Provide Supports Across Jurisdictions

While infection control is site-specific and should be planned and carried out at the level of the school building, in alignment with the LEA, the work done by local educational agencies and schools does not occur in isolation.

K–12 IPC depends on often-unprecedented levels of partnership between health and education agencies at both the state and the local level. For these new partnerships to succeed, it is critical to clarify where responsibility and accountability lie and where stakeholders should be engaged, consulted, or informed. In conditions of rapid change and innovation, decision-makers need to design organizational processes with a greater than usual emphasis on stakeholder engagement.

The following functions are critical at each jurisdictional level, as are partnerships across the jurisdictional levels to achieve alignment.

Local Educational Agencies

- In alignment with state guidance, set LEA-wide policies for PPE, cloth-masking, cleaning and disinfection, hygiene (including hand hygiene), screening, testing, quarantine, contact tracing, vaccination, data management and reporting, remote work and accommodations, and program adaptation priorities.

- Develop strategies for and conduct equity, ventilation/filtration, and hazard analyses.

- Address budget and workforce implications and use effective labor-management collaboration, including collective bargaining when applicable. Attention must be paid to contexts in which co-responsibility and accountability between LEAs and labor unions exists.

Local Public Health

- Advise on LEA-wide policies for PPE, cleaning and disinfection, hygiene (including hand hygiene), screening, testing, quarantine, contact tracing, vaccination, data management and reporting.

- Staff situation room to support implementation of infection prevention and control by conducting testing, contact tracing, case response, quarantine and isolation support, and troubleshooting.

State Public Health and State Education Agencies

- Set statewide requirements for physical distancing, clean air, masking, PPE, hygiene and disinfection, mealtime, nursing/health staffing, training requirements, and data reporting.

- Assist districts with facilities assessments and facilities data management and work to determine which operational standards should be applied at the state level. Additionally,

states should identify resources and technical assistance to help districts get good value from their facilities-related spending.

Decision-makers at all jurisdictional levels are strongly advised to assist in the resolution of jurisdictional confusion. Key questions to consider include:

- What is the role of the state public health and state education agency in all components of statewide guidance when necessary?
- What is the role of federal agencies, state public health, state department of education, county/city public health, city councilors and mayors, and LEAs in determining available funding sources?
- What is the role of county/city public health, city councilors and mayors, and LEAs in setting LEA-wide policies and processes when necessary?
- What is the role of principals and school-based IPC teams when developing school-level infection prevention and control plans and adaptations?
- What is the role of state public health, state department of education, county/city public health, city councilors and mayors, LEA, and principals in planning the infection prevention and control budget and analyzing and planning for workforce implications?

The organizational structure of roles and responsibilities supporting effective infection prevention and control in K–12 will vary from jurisdiction to jurisdiction and across urban, suburban, and rural contexts. To assist in the work of clarifying jurisdictional roles and responsibilities, we append a model RAECI chart. A RAECI chart is a tool or framework that provides clarity on roles and responsibilities when multiple stakeholders need to be involved in developing and executing complex processes.

This **RAECI** chart outlines five key roles in the development and implementation of infection prevention and control in schools. It is not necessary to include every role for each function or activity.

RESPONSIBLE	This is the person/organization that does the work and is responsible for action or implementation. There can be shared responsibility.
ACCOUNTABLE	This is the person/organization that approves the work. They are ultimately answerable for the activity or decision. There should be one accountable person or organization.

ENGAGED	This is the person/organization who is engaged via inclusion in the development, implementation, review, and revision of infection prevention and control plans.
CONSULTED	This is the person/organization to keep in the loop. They provide subject matter expertise and a fresh perspective. This is a two-way conversation.
INFORMED	This is the person/organization to keep updated. They need to know when the action is taken. This is generally a one-way communication.

This RAECI chart adds the category of "Engaged" to the traditional "RACI" chart. This is because school personnel and other key stakeholders must be involved in the development and implementation of infection prevention and control policies and protocols. Engagement is critical for building trust and creating a safe environment while working or studying in schools, using school transportation, and engaging in school-related activities. Building trust involves how school leaders make decisions, how well they engage unions (where applicable), how well they incorporate school personnel in decision-making processes, how well they communicate around decision-making, policies, and implementation, and how well their decisions include an aligned focus on the health and safety of everyone in school settings, not just students but also school personnel and visitors.

RAECI charts are used across a wide variety of sectors, industries, and organizations as a decision-making tool to clarify where accountability lies and identify the partners that need to be engaged and consulted for an effective outcome. Completing a RAECI chart is a collaborative exercise that should involve all key stakeholders to generate trust and create clarity on roles and responsibilities. Typically, the process owner (the individual(s) accountable for a process or group of related processes) takes the lead on building the RAECI for their department's processes, engaging and consulting the relevant stakeholders and partners for input and alignment.

The RAECI chart in Appendix B is framed around four steps needed in developing and implementing infection prevention and control programs in the school setting, reflecting the interactions and necessary coordination and collaboration between the different jurisdictions involved in IPC in a school setting: statewide guidance; local educational agency (LEA)-wide policies; school-level infection control plans; and implementation. Then, we have listed the core IPC processes or steps under each grouping. These are the processes for which each state/LEA will need to assign roles and responsibilities in collaboration with local/county/tribal public health departments, workers' representatives, educators, and administrators. The chart provides a centralized, visual decision-making tool for determining and communicating responsibilities across a complex set of infection prevention and control (IPC) functions. Because of the great variation across jurisdictional contexts, **this RAECI chart is not intended as guidance, but rather as a prompt for the categories of analysis that jurisdictions should consider.**

RECOMMENDATION 9

Decision-makers at all jurisdictional levels are strongly advised to assist in the resolution of jurisdictional confusion. The appended model RAECI chart highlights where states have critical jurisdictional choices to make. The organizational structure of roles and responsibilities supporting effective IPC in K–12 schools will vary from jurisdiction to jurisdiction and across urban, suburban, and rural contexts. Therefore, this RAECI chart is not intended as guidance, but rather as a prompt for the categories of analysis that jurisdictions should consider.

Summary Recommendations

RECOMMENDATION 1

LEAs should review their IPC program for the presence of all five core functions of successful IPC programs and formalize them where they are functioning in an ad hoc way. State COVID task forces should ensure that state education agencies assist LEAs in achieving all five functions in support of their IPC program, even if under different nomenclature.

RECOMMENDATION 2

Whether using the nomenclature of "situation rooms" or another nomenclature, LEAs and local/tribal public health authorities and/or federally qualified health centers should establish ongoing organizational partnerships to support school-based K–12 infection prevention and control programs.

RECOMMENDATION 3

LEAs should formally designate an IPC team in each school building.

RECOMMENDATION 4

The U.S. Department of Education, Department of Health and Human Services/CDC, Environmental Protection Agency, Labor Department (OSHA), and/or state OSH agencies should survey existing training materials to identify what already exists and what additional material is needed, and contract with vendors to create K–12 IPC training materials.

RECOMMENDATION 5

State education agencies should create a list of well-credentialed providers of IPC training, or the state education agency (SEA) and/or LEA should contract with well-credentialed providers of IPC training to equip IPC teams in all school buildings with the professional knowledge needed for a successful IPC program at the building level.

RECOMMENDATION 6

States should assist districts with facilities assessments and facilities data management (metrics and metadata definitions) and work to determine which operational standards should be applied at the state level. Additionally, states should identify resources and technical assistance to help districts get good value from their facilities-related spending.

RECOMMENDATION 7

LEAs should coordinate and support how school-based IPC teams conduct training for their school communities.

RECOMMENDATION 8

LEAs should work, in collaboration with employee representatives and/or unions where applicable, to conduct an analysis of the context-specific workforce implications of introducing and formalizing the function of IPC programs and developing appropriate responses to those implications. Labor-management collaboration, including bargaining when appropriate, is an important component of ensuring that the workforce implications of IPC plans are understood and appropriately addressed.

RECOMMENDATION 9

Decision-makers at all jurisdictional levels are strongly advised to assist in the resolution of jurisdictional confusion. The appended model RAECI chart highlights where states have critical jurisdictional choices to make. The organizational structure of roles and responsibilities supporting effective IPC in K–12 will vary from jurisdiction to jurisdiction and across urban, suburban, and rural contexts. Therefore, this RAECI chart is not intended as guidance, but rather as a prompt for the categories of analysis that jurisdictions should consider.

Appendix A: Key Resources

Resource	Description
Scientific Consensus Statement	Overview of scientific consensus on COVID mitigation strategies in school settings.
Core Operational Guidance on Mitigating the Spread of COVID in School Settings	
CDC Guidance: Operational Strategy for K-12 Schools through Phased Prevention https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/operation-strategy.html	Summary document outlining CDC guidance for school operations (as of March 19, 2021)
OSHA Guidance on Mitigating and Preventing the Spread of COVID-19 in the Workplace https://www.osha.gov/coronavirus/safework	OSHA guidance to help employers and workers identify risks of being exposed to and/or contracting COVID-19 in the workplace and to help them determine appropriate mitigation steps
CDC Guidance: Getting Schools Ready for In-Person Learning: How to Plan and Execute a COVID-19 Mitigation Walkthrough https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/321420-Walkthrough.pdf	CDC checklist that provides a foundational exercise that could direct and prioritize the activities to be undertaken by an IPC team
CDC Toolkit: K-12 Schools COVID-19 Mitigation Toolkit https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/FINAL-0321420_B_K-12_Mitigation_Toolkit508.pdf	
CDC: Strategies for Protecting K-12 School Staff from COVID-19 https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/k-12-staff.html	Workplace health and safety strategies for administrators related to protecting educators and school staff
CDC: Monitoring and Evaluating Mitigation Strategies in K-12 Schools https://www.cdc.gov/coronavirus/2019-ncov/php/monitoring-evaluation-k-12.html	Resource to support monitoring and evaluation of COVID-19 mitigation strategies in schools
CDC: COVID-19 Vaccine Toolkit for School Settings and Childcare Programs https://www.cdc.gov/coronavirus/2019-ncov/vaccines/toolkits/schools-childcare.html	Toolkit designed to provide COVID-19 vaccine information to staff in schools and childcare programs
ED: COVID-19 Handbook Volume 1: Strategies for Safely Reopening Elementary and Secondary Schools is available at https://www2.ed.gov/documents/coronavirus/reopening.pdf	Closely aligned with the CDC Operational Strategy for K-12 Schools Through Phased Prevention.

ED: COVID-19 Handbook Volume 2: Roadmap to Reopening Safely and Meeting All Students' Needs https://www2.ed.gov/documents/coronavirus/reopening-2.pdf)	To further address providing safe and healthy learning environments, addressing lost instructional time, and supporting educator and staff stability and well-being.

Facilities and Ventilation

EPA Supports Healthy Indoor Environments in Schools During COVID-19 Pandemic https://www.epa.gov/iaq-schools/epa-supports-healthy-indoor-environments-schools-during-covid-19-pandemic	Set of health and safety resources to consult when responding to COVID-19 in facilities
CDC Guidance: Ventilation in Schools and Childcare Programs https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/ventilation.html	CDC resource to help schools translate CDC guidance on ventilation in buildings for school settings
CDC Guidance: Ventilation in Buildings https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html	Updated CDC guidance (as of March 23, 2021) and tools to improve ventilation
Ventilation: 5-step guide to checking ventilation rates in classrooms https://schools.forhealth.org/wp-content/uploads/sites/19/2021/01/Harvard-Healthy-Buildings-program-How-to-assess-classroom-ventilation-10-30-2020-EN_R1.8.pdf	Step-by-step guide with visuals to support ventilation assessments in schools

Some Supports for IPC Training

Carnegie Foundation for the Advancement of Teaching: Quality Improvement Approaches: The Networked Improvement Model https://www.carnegiefoundation.org/blog/quality-improvement-approaches-the-networked-improvement-model/	Model to support continual learning and improvement of processes and systems within the school context
CDC: What School Nutrition Professionals and Volunteers at Schools Need to Know about COVID-19 https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/school-nutrition-professionals.html	CDC resource with information and tips to support school nutrition professionals and volunteers
CDC: Handwashing: Clean Hands Save Lives https://www.cdc.gov/handwashing/index.html	CDC guide on effective handwashing
CDC: Use Masks to Slow the Spread of COVID-19 https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/diy-cloth-face-coverings.html	CDC guide on the correct use of masks

Appendix B: RAECI Chart and Role Cards

What is a RAECI Chart?

A RAECI chart is a tool or framework that provides clarity on roles and responsibilities when multiple stakeholders need to be involved in developing and executing complex processes. This RAECI Chart outlines five key roles in the development and implementation of infection prevention and control in schools. It is not necessary to include every role for each function or activity.

- **Responsible** = This is the person / organization that does the work and is responsible for action/ implementation. There can be shared responsibility.
- **Accountable** = This is the person / organization that approves the work. They are ultimately answerable for the activity or decision. There should be one accountable person or organization.
- **Engaged** = This is the person / organization who is engaged via inclusion in the development, implementation, review, and revision of infection prevention and control plans.
- **Consulted** = This is the person / organization to keep in the loop. They provide subject matter expertise and a fresh perspective. This is a two-way conversation.
- **Informed** = This is the person / organization to keep updated. They need to know when the action is taken. This is generally a one-way communication.

This RAECI Chart adds the category of “Engaged” to the traditional “RACI” chart. This is because educators and other key partners must be involved in the development and implementation of infection prevention and control policies and protocols. Engagement is critical for building trust and creating a safe environment while working or studying in schools, using school transportation, and engaging in school-related activities. Building trust involves how school leaders make decisions, how well they engage unions (where applicable), how well they incorporate educators in decision-making processes, how well they communicate around decision-making, policies, and implementation, and how well their decisions include an aligned focus on the health and safety of everyone in school settings, students but also educators and visitors.

Why Use a RAECI Chart?

RAECI Charts are used across a wide variety of sectors, industries, and organizations as a decision-making tool, clarifying where accountability lies and the partners that need to be engaged and consulted for an effective outcome. The appended RAECI chart provides a centralized, visual decision-making tool for determining and communicating responsibilities across a complex set of IPC functions.

Infection prevention and control is always site-specific. K-12 infection prevention and control programs must be developed at the level of the school-building, but they must also align with district or LEA plans. Planning, implementation, review, and revision are part of a process involving both local- and district-level engagement. Collaborative labor-management engagement, including through collective bargaining when applicable, and existing labor-management health and safety committees, are also important components of the successful development, implementation, review, and revision of infection control plans.

The work done by LEAs and schools does not, however, occur in isolation. Instead, success depends on critical supports at all other levels of our federalized, jurisdictional system. As LEAs already engaged in implementing IPC can confirm, coordination and collaboration across the public health and education sectors and with the broader school community are critical to successful IPC in K-12 schools.

Who Completes the RAECI Chart?

Completing a RAECI Chart is a collaborative exercise that should involve all key stakeholders to generate trust and create clarity on roles and responsibilities. Typically, the process owner (the individual(s) ***accountable*** for a process or group of related processes) takes the lead on building the RAECI, engaging and consulting the relevant stakeholders and partners for input and alignment.

How Do I Complete the RAECI Chart?

As noted above, completing the RAECI Chart for implementing infection prevention and control in schools should be a collaborative exercise. All relevant stakeholders, most of whom are listed in the RAECI chart, should be involved in the designation of roles and responsibilities for each process or step required for standing up and managing an IPC program in schools.

- First, the ***accountable*** body for a process should designate an individual(s) to convene the relevant stakeholders to complete the recommended allocation of roles and responsibilities (i.e., who should be responsible, accountable, engaged, consulted, and informed) for each infection prevention and control process.
- Once the group is convened, review the IPC functions listed in the RAECI Chart to ensure that it captures all relevant tasks based on local context.
- Then, fill out the RAECI Chart to align around who should be responsible, accountable, engaged, consulted, and informed for each task. Key jurisdictional decision points are highlighted in yellow in the RAECI Chart.

The RAECI Chart is Complete. Now What?

Now that your team has aligned around the roles and responsibilities for implementing IPC in schools, it is important to create the processes and tools that will equip each stakeholder with easily digestible information on their responsibilities, reinforce accountability, surface areas of confusion, and ensure transparent communication. Based on promising practices from a variety of sectors and industries, we would recommend the following next steps for your consideration.

- **Communicate** the purpose and relevance of the RAECI Chart to the broader school community.
- **Develop role cards** (see appended template) that outline the core responsibilities for the individual stakeholder.
- **Schedule regular check-ins** with the core group of stakeholders to discuss and clarify areas of confusion in implementing the RAECI Chart.
- **Modify and improve the RAECI Chart** in collaboration with the key group of stakeholders. Solicit feedback broadly and identify what works and what does not work in your context.

Recommendation

This model RAECI chart is intended to serve as a tool to clarify and communicate K-12 IPC responsibilities across the public health and educational sectors. Decision-makers at all jurisdictional levels are strongly advised to assist in the resolution of jurisdictional confusion. The organizational structure of roles and responsibilities supporting effective infection prevention and control in K-12 will vary from jurisdiction to jurisdiction and across urban, suburban, and rural contexts. **Therefore, this RAECI chart is not intended as guidance, but rather as a prompt for the categories of analysis that jurisdictions should consider.**

RAECI stands for...

- **R**esponsible → This is the person / organization that **does the work and is responsible for action/ implementation**. There can be shared responsibility
- **A**ccountable → This is the person / organization that **approves the work**. They are ultimately answerable for the activity or decision.
- **E**ngaged → **Engaged** via inclusion in the development, implementation, review, and revision of infection control plans
- **C**onsulted → This is the person / organization to **keep in the loop**. They provide subject matter expertise and a fresh perspective. This is a two-way conversation.
- **I**nformed → This is the person / organization to **keep updated**. They need to know when the action is taken. This is generally a one-way communication.

Role	Components	Federal Agencies	State Depts Public Health	State Depts of Ed	County / City / Tribal Public Health / "Situation Room"	City Councilors and Mayors	LEAs	Principals	School-based Infection Prevention and Control Teams/Health Staff/Health Committee/ COVID-19 Committees	School health-related staff, staff engaged in certain high-risk activities (e.g., working with special needs students who need assistance with eating or toileting), custodial and maintenance staff*	Educators (classroom teachers and paraeducators)	School Staff*	Advocacy bodies / Unions	Other (After school providers, etc)	Parents / Guardians / Caregivers / PTA	Students
	Function															
	Infection Control Deliverable															
STATE-WIDE GUIDANCE																
	Set State-wide Guidance and Standards for Infection Prevention and Control (IPC), Including Physical Distancing, Masking, PPE, etc	C/I	R/A	E	C/I	C/I	C/I	I	I	E	I	I	I	I	I	I
	Set Requirements Around Staffing, Staff Training in IPC, and Data Reporting	C/I	R/A	E	C/I	C/I	C/I	I	I	E	I	I	C	C	I	n/a
LEA-WIDE POLICIES													I	I		
	Set LEA-wide Policies for IPC, incuding Mask Wearing, PPE, Testing, Quarantine, Contact Tracing, and Vaccination	n/a	R/C	C	R/C	I	R/A	E/C/I	R/E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I
	Set Data Management & Reporting Processes	n/a	R/C	C	R/A	I	R/A	E/C/I	R/E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	I
	Determine available funding sources	C	R/A	R/A	R/A	I	R/A	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	n/a
	Set LEA-wide Policies on IPC Program Adaptation and Accommodations and Manage LEA-wide Communications	n/a	I	I	C/I	I	R/A	R/A	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I
	Conduct Hazard Analysis and Collective Bargaining, if Applicable	n/a	I	I	I	I	R/A	R/A	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I	E/C/I
SCHOOL-LEVEL INFECTION PREVENTION AND CONTROL PLAN																
	Develop School-Specific Ventilation, Hygiene, and Disinfection Plans and Program Adaptations	n/a	E/I	C/I	C/I	C/I	R/A	R/A	R	E	E	E	E	E	E/C/I	E/C/I
	Develop School-Specific Implementation Plan for Screening, Quarantine, Contact Tracing, Data Management, and Communications	n/a	E/I	I	C	C/I	E/A	R/A	R/A	E	E	E	E	E	E/C/I	E/C/I
IMPLEMENTATION																
	Manage Daily Operations of Infection Control Program	n/a	n/a	I	I	I	C/A	R/A	R	A*/E	R/A/E	E	E	E	E/C/I	E/C/I
	Oversee Data Management and PPE	n/a	n/a	I	I	I	R/A	R/A	R	E	E	E	E	E	E/C/I	E/C/I
	Implement Infection Prevention and Control (including cases response, testing, quarantine)	n/a	n/a	I	I	I	R/A	R/A	R	E	E	E	E	E	E/C/I	E/C/I
EVALUATION...																

*In addition to classroom teachers, employees fall into broad categories, including clerical services; custodial and maintenance services; food services; health and student services; paraeducators; security services; skilled trades; technical services; transportation services; nurses; counselors; psychologists; physical workers; physical therapists; occupational therapists; library media specialists; and speech language pathologists

ROLE CARD OVERVIEW

OBJECTIVE

Role cards are a visual tool that provides users with a quick and easy resource to understand their responsibilities in a school's infection prevention and control (IPC) program. They clarify the Model RAECI* Chart so that individuals and teams know how to transact on their roles and responsibilities.

IPC role cards are designed to encourage consideration of options for establishing and communicating roles and responsibilities when developing effective IPC plans in schools. They are not intended as guidance, but rather as a prompt for the categories of analysis that jurisdictions should consider.

HOW TO USE

Each role card has three components:

1. Entities involved in IPC
2. IPC functions and tasks
3. Roles and responsibilities

Once a locality has aligned on the roles for the IPC tasks outlined in the Model RAECI Chart, we recommend building a simple role card that communicates the expectations for each stakeholder and who they should engage and consult for each task.

*__RAECI__ - Responsible, Accountable, Engaged, Consulted, Informed

THREE-STEP PROCESS
to Align on Infection Prevention and Control (IPC) Roles

First, identify a POC for all entities involved in IPC for schools

ENTITY

The organizations / people who need to be involved in IPC plans for schools

Then, align on IPC functions for your local context

FUNCTIONS

The IPC-related tasks that need to be assigned to the appropriate entity

Finally, assign roles for each function and build your RAECI Chart

ROLES

The responsibilities for each entity when engaging in an IPC function or task

Now, you're ready to develop role cards.

ROLES to Implement IPC in Schools

When completing the RAECI chart and role cards for K-12 IPC, work with all relevant stakeholders to determine who should be responsible, accountable, engaged, consulted, and informed for each function based on local contexts.

R	A	E	C	I
RESPONSIBLE	**ACCOUNTABLE**	**ENGAGED**	**CONSULTED**	**INFORMED**
Does the work: • Responsible for action/ implementation • Can be shared responsibility	**Approves the work:** • Ultimately answerable for the activity or decision • No more than one	**Included in co-creation and execution:** • Included in the development, implementation, review, and revision of infection prevention and control plans	**Kept in the loop:** • Subject matter experts • A fresh perspective • A two-way conversation	**Kept updated:** • Needs to know when the action is taken • One-way communication

EXAMPLE: STATE PUBLIC HEALTH

Group the stakeholder's tasks by their role. In some cases, a stakeholder may have two roles.

State Public Health

Sets statewide IPC guidance and supports development of LEA-wide IPC policies

Provide a one sentence description of the key role of this stakeholder

Responsible and Accountable

- Set statewide standards for physical distancing, clean air (ventilation and filtration), masking, PPE, hygiene, mealtime
- Set statewide staffing and guidance around nurses
- Set statewide training and data reporting requirements
- Determine available funding sources

Consulted

- LEA-wide policies mask wearing, PPE, cleaning, hygiene, screening, testing, quarantine, contact tracing, and vaccination
- Ventilation and filtration assessment and funding
- Data management and reporting processes

Engaged

- School-specific implementation plan for screening, quarantine, contact tracing, data management and reporting, communications, community training, and workforce implications

Informed

- Case responses, testing, contact tracing, quarantine, troubleshooting, and equity analysis

* Example only: Specific roles and responsibilities need to be decided by each state/LEA

The links below provide access to a customizable template for the RAECI Chart and Role Cards. For ease of use, please download the templates as Excel or PowerPoint files and modify as needed based on your local context and needs.

- RAECI Chart
- Role Cards