Navigating the COVID-19 Pandemic in New Hampshire

K-12 School Re-Opening

Benjamin P. Chan, MD, MPH
NH State Epidemiologist
July 20, 2020
Purpose of This Call

• You are on the front lines of assessing and managing students with symptoms, and we want to support you

• School nurses help to relay important public health information/recommendations and local concerns/issues

• Investigating cases of COVID-19 in schools will involve school nurse participation and coordination
Goal of School Re-Opening

• Maximize the in-person educational experience
• Minimize risks of COVID-19 to students and staff
• Build in flexibility to allow multiple learning options and movement between learning models
• Continue to provide important community and social supports to families
Epidemic Curve for COVID-19 in the U.S.

https://coronavirus.jhu.edu/map.html, Data through 7/18/20

Current Peak: 77.3K
April Peak: 36.4K
Epidemic Curve for Select U.S. States

New York State
Peak: 11.4K

Massachusetts
Peak: 5.0K

Florida
Peak: 15.3K

Texas
Peak: 15.0K

California
Peak: 13.0K

https://coronavirus.jhu.edu/map.html, Data through 7/18/20
Epidemic Curve for Confirmed COVID-19 Cases in New Hampshire

https://www.nh.gov/covid19/dashboard/summary.htm
Number Tested for COVID-19 by PCR Test Result

https://www.nh.gov/covid19/news/updates.htm

Date Laboratory Test Completed

Number of People Tested

% of Specimens Positive
New COVID-19 Hospitalizations by Date of Admission

<table>
<thead>
<tr>
<th>Date of Hospital Admission</th>
<th>Number of New Hospitalizations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Hospitalizations
- 7-day Average
Number of COVID-19 Deaths by Date of Public Health Report Out

![Bar chart showing the number of COVID-19 deaths by date, with categories for Non-LTCF Associated and LTCF Associated. The x-axis represents dates from March 23 to July 30, and the y-axis represents the number of deaths ranging from 0 to 20. The chart shows a peak in deaths on May 6, with a significant number of deaths also on May 16 and May 28.]
Symptoms of COVID-19

- Fever or chills (including subjective fever)
- Cough
- Shortness of breath or difficulty breathing
- Sore throat
- Nasal congestion or runny nose
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Nausea or vomiting
- Diarrhea

How COVID-19 is Transmitted

• Person-to-person: respiratory droplets (primary)
  – Close physical proximity (within 6 feet highest risk)
  – Prolonged duration of contact (longer duration increases risk)
  – From a person who is symptomatic or asymptomatic

• Person-to-person: aerosols (airborne spread)
  – Not the primary means of spread
  – Certain circumstances can increase risk:
    • Aerosol-generating procedure (airway suctioning, intubation, high-flow oxygen, nebulizer administration)
    • Singing? Gyms? Band/wind instruments practices?
How COVID-19 is Transmitted

• Fomites (contaminated surfaces)
  – Not thought to be the main way the virus spreads
  – In laboratory controlled conditions, SARS-CoV-2 has been found to be able to survive for up to 72 hours on plastic & stainless steel. No survivable virus found after 24 hours on cardboard.
    • Median half-life: steel (5.6 hours), plastic (6.8 hours)
    • Reference: https://pubmed.ncbi.nlm.nih.gov/32511427/

• Animals-to-people?
  – Person-to-animal transmission has been documented (cats, dogs, tigers, mink, etc.)
  – Animal-to-person transmission still being studied

Isolation Recommendations for Symptomatic Individuals

- Symptomatic individual MUST wear a facemask
- Place person in a single-person room with the door closed (if safe to do so)
- Airborne Infection Isolation Rooms (AIIRs) not necessary
- Persons should have a dedicated bathroom, if possible
- Limit transport and movement of the person
- Clean and disinfect the room the person was in after they leave

Personal Protective Equipment (PPE) Recommendations


• Review and following NH public health guidance (see NH DPHS [HAN, update #18](https://www.dhhs.nh.gov/dphs/cdcs/alerts/documents/covid-19-update18.pdf)):
  
  – Outpatients: surgical face mask, gown, gloves, eye protection

    • Consider an N95 instead of a surgical face mask if person is known to have COVID-19, or person has significant symptoms that increase risk of aerosolizing respiratory droplets (e.g., sneezing, coughing, etc.)

  – Inpatients (hospitalized): N95 or higher level respirator, gown, gloves, eye protection
Face Masks Work!

Absence of Apparent Transmission of SARS-CoV-2 from Two Stylists After Exposure at a Hair Salon with a Universal Face Covering Policy — Springfield, Missouri, May 2020

M. Joshua Hendrix, MD; Charles Walde, MD; Kendra Findley, MS; Robin Trotman, DO

- Two hair stylists in Missouri developed respiratory symptoms and were subsequently diagnosed with COVID-19, but continued to work for 8 days (stylist A) and 5 days (stylist B) after developing symptoms
- Stylists worked for a combined 17 days while considered infectious; Exposed 139 clients
- Very high compliance with face mask use by stylists and clients
- Zero people developed COVID-19 (tested about 48% of exposed clients)
New Hampshire Grades K-12 Back-to-School Guidance

https://www.covidguidance.nh.gov/
Layers of Public Health Protection

- Symptom and temperature screening of students & staff
- Social distancing
- Cloth face coverings/masks
- Hand hygiene
- Limit group sizes and avoiding congregating (large common areas)
- Cohorting (grouping) students & staff
- Frequent cleaning and disinfection
Social Distancing in Classrooms

• Arrange classrooms to maximize physical distance between students

• Individual chairs/desks should be arranged so that students are spaced at least three feet apart with a goal of attempting to get chairs/desks six feet apart (six feet apart is preferred but may not be achievable)

• A study in The Lancet found that physical distancing of at least one meter was effective and “associated with a large reduction in infection,” although greater distances may be more effective

• All desks should face toward the front of the class

• Assigned seating

https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)31142-9/fulltext
Cloth Face Coverings – General Info

• Who should NOT wear cloth face coverings (CDC guidance): children < 2 years of age, or anyone who has trouble breathing, is unconscious, incapacitated, or otherwise unable to remove the mask without assistance

• “Source control” – cloth face coverings prevent dispersal of exhaled respiratory droplets from a person who may be infected with COVID-19 (symptomatic or asymptomatic)

• Cloth face coverings are NOT personal protective equipment (PPE) – while they may offer some protection, they have not been evaluated for effectiveness as PPE
Cloth Face Coverings – Classrooms

• Use of cloth face coverings in classrooms is left to the decision of local school districts:
  – Younger children (2 years of age or older) may have difficulty consistently and correctly wearing cloth face coverings
  – Work with younger children to get compliance
  – Older students can be expected to wear cloth face coverings more consistently

• Consider cloth face coverings in the context of other layers of protection and ability to social distance, cohort students, limit mixing between students, etc.

• Students and staff who can consistently wear cloth face coverings should
Cloth Face Coverings – Other School Settings

• Students should wear cloth face coverings in circumstances where they may come in close contact with others in uncontrolled settings (i.e., when moving around or interacting in groups):
  – School buses (at all times)
  – Entering or exiting the school building
  – Transiting in hallways and between classes
  – Arriving to/leaving a classroom
  – Engaged in group activities
First Line of Defense: Keep Symptomatic People Out of the Facility

- Develop a process for screening staff, students, and visitors daily for symptoms of COVID-19 or risk factors for exposure prior to entering the educational facility.
  
  - For staff and visitors, screening should occur on educational facility grounds just prior to, or upon entry of, the educational facility.
  
  - For students, the parents/guardians should be asked to screen their children for symptoms or risk factors daily before allowing the child to travel to school. A checklist of symptoms and risk factor screening questions should be provided to the parents/guardians.
  
  - Recommend educational facilities also consider implementing a second screening process for students (focused on asking about symptoms of COVID-19) at the facility (e.g., upon entry to the facility, or conducted by a teacher/aide as students arrive to their first class of the day).
Screening for Symptoms and Risk Factors

- COVID-19 symptom and risk factor screening should involve asking if the individual:
  
  o Has any symptoms of COVID-19 (list individual symptoms)?
  
  o Has had close contact with someone who is suspected or confirmed to have COVID-19 in the prior 14 days?
  
  o Traveled in the prior 14 days outside of New England (outside of NH, VT, ME, MA, CT, RI)?
    
Who to Exclude from School

• Anybody with new or unexplained symptoms, even if only mild symptoms

• Anybody who reports close contact with a person suspected or confirmed to have COVID-19

• Anybody who has traveled outside of New England (NH, VT, ME, MA, CT, RI) in the prior 14 days.
Who to Exclude from School – Examples

• Temperature of 100.4 F – Exclude & test
• Temperature 100.0 F – Exclude & test
• No fever, but person feels chilled and is having some body aches – Exclude & test
• New runny nose or nasal congestion – Exclude & test
• A person with new diarrhea in the last 24 hours – Exclude & test
• A person with a history of migraine headaches who reports a typical headache yesterday and all symptoms have since resolved – Monitor, no need to exclude
• A person with allergies who reports typical mild sore throat, sneezing, runny nose, etc. that has improved with an antihistamine – ????, suggest testing
How Long Does A Person Need to Stay Out of School For?

- Symptomatic and confirmed with COVID-19: See CDC’s “symptom-based strategy”
  1. At least 10 days have passed since symptoms first appeared, **AND**
  2. At least 24 hours have passed since last fever (off fever-reducing meds), **AND**
  3. Symptoms have improved

- Symptomatic but person refuses testing for COVID-19: Same as if confirmed with COVID-19

- Asymptomatic but tests positive: 10 days (assuming person remains asymptomatic, if person develops symptoms see above recs)

- Exposed to someone suspected or confirmed to have COVID-19: 14 days (assuming person remains asymptomatic)
  - Person cannot “test-out” of 14 day quarantine

- Traveled outside of New England: 14 days (from last day of travel)

What’s Needed for Symptomatic Student/Staff to Return to School?

- Negative test results and student feeling better (general return to school rules apply)
- Positive test result or No test results: allow back once student has met [CDC’s symptom-based criteria](https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptom-based-guidance.html) for removal from isolation
How Should You Manage a Student/Staff Who Has Symptoms of COVID-19?

• Mask the symptomatic person (covering nose and mouth)
• Place the symptomatic person in a private room with the door closed if safe to do so (at a minimum they should be separated from others)
• Record the symptomatic person’s temperature
• Perform a brief assessment of the person’s complaints or symptoms
• Keep any assessment brief and stay at least 6 feet away, to the extent possible
• If in the same room as the person, the nurse should wear a **surgical face mask**. Also wear **eye protection** (googles or face shield) if within 6 feet for brief periods of time, or if the person is unable to wear a face mask
• If prolonged close contact (within 6 feet of the person) is anticipated (including contact with the persons secretions/excretions), then wear all appropriate PPE: surgical face mask, disposable gown, gloves, and eye protection
• Send the symptomatic person home by private transportation
What Happens to Healthcare Personnel (HCP) Exposed to Someone with COVID-19?

<table>
<thead>
<tr>
<th>Exposure</th>
<th>Personal Protective Equipment Used</th>
<th>Work Restrictions</th>
</tr>
</thead>
</table>
| HCP who had prolonged\(^1\) close contact\(^2\) with a patient, visitor, or HCP with confirmed COVID-19\(^3\) | • HCP not wearing a respirator or facemask\(^4\)  
• HCP not wearing eye protection if the person with COVID-19 was not wearing a cloth face covering or facemask  
• HCP not wearing all recommended PPE (i.e., gown, gloves, eye protection, respirator) while performing an aerosol-generating procedure\(^1\) | • Exclude from work for 14 days after last exposure\(^5\)  
• Advise HCP to monitor themselves for fever or symptoms consistent with COVID-19\(^6\)  
• Any HCP who develop fever or symptoms consistent with COVID-19\(^9\) should immediately contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing. |
| HCP other than those with exposure risk described above                  | • N/A                                                                 | • No work restrictions                                                             |
|                                                                         |                                                                       | • Follow all [recommended infection prevention and control practices](https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html), including wearing a facemask for source control while at work, monitoring themselves for fever or symptoms consistent with COVID-19\(^8\) and not reporting to work when ill, and undergoing active screening for fever or symptoms consistent with COVID-19\(^2\) at the beginning of their shift.  
• Any HCP who develop fever or symptoms consistent with COVID-19\(^9\) should immediately self-isolate and contact their established point of contact (e.g., occupational health program) to arrange for medical evaluation and testing. |
What if you have multiple symptomatic students you’re managing at once?

• General principle: keep symptomatic people separate from other students and staff (separate rooms)

• If students are awaiting pick-up, look for monitored outdoor locations where students can wait separate from others

• Plan for how to expand nursing office capacity (both physical space and personnel)

• Any movement of a symptomatic person through the facility should be limited and person must be masked
Confirmed COVID-19 and Public Health Investigations – Who Gets Quarantined?

• People who have been in close contact to an individual with confirmed COVID-19 require a 14 day quarantine

• This will vary by classroom situation
  – In older age groups with consistent assigned seating, it may just be the 2-4 individuals seated around the person
  – In younger age groups where more classroom mingling occurs, it could be the entire classroom

• We (NH DPHS) will work with schools to notify and inform parents/guardians, students, and other staff
When Do You Call Public Health?

• Any questions, concerns, or need for additional guidance: 603-271-4496 (after-hours call 603-271-5300 and ask for the public health nurse on-call)

• Report any person who has been at your facility with suspected or confirmed COVID-19
  – You don’t need to report all symptomatic students, but if you have a high degree of suspicion for COVID-19, or if you have a symptomatic student and the parent/guardian refuses testing, please notify public health

• Help drafting communications and messaging
Is It Safe to Conduct Extra-Curricular Activities?

• Depends on the extra-curricular activity, location (e.g., indoors vs. outdoors), and ability to maintain physical distancing

• There should be no physical contact (at this stage in the pandemic)

• Avoid high-risk crowded situations (e.g., locker rooms)

• Anything that requires forced breathing (e.g., playing a wind instrument) or vocal cord vibration (e.g., singing) may need additional precautions
Other Guidance That May Apply

• Amateur & Youth Sports: 

• Health & Fitness: 

• Libraries: 

• Community Arts & Music Education: 

• Performing Arts: 
Educational Models

• In-person learning: physically bring as many students back to the classroom environment as possible

• Hybrid learning models: Some students are in-person and others are remote (limits class sizes, increases physical distancing, help to cohort)
  – Some families may self-select for full-time remote learning (e.g., students at higher risk for severe illness) even while in-person classes are conducted
  – Students alternate between in-person and remote instruction on a rotating/periodic basis (by day or week)

• Remote learning model: full-time instruction from home

• There is a need to maintain capacity for both in-person and remote learning
  – Rapidly changing pandemic
  – Students/families may not comfortable in the classroom
  – Students on quarantine need to continue learning
Additional Questions:

• Can fans be used in the classroom?

• How should siblings of students who are symptomatic be handled? Should they be excluded from school as well while awaiting test results?

• Is testing going to be offered for students and staff?
  – Mobile testing team at public health to respond to outbreaks and offer testing to exposed individuals
  – Otherwise, see available community testing options: https://www.dhhs.nh.gov/dphs/cdcs/covid19/documents/covid-testing-options.pdf

• When do you close a school because of COVID-19 and move to remote-learning? Any metrics?
Open for Additional Questions & Answers