

Town of Hamilton Board of Health

COVID-19 METRICS FOR HWRSD OPERATIONS

The metrics are presented with the understanding that we are still dealing with a fluid situation and must be prepared to be flexible when making decisions on the mode of teaching and learning we employ at a particular time. This is subject to change based on new scientific evidence, DESE guidelines, CDC guidelines, and medical guidance. The Hamilton Wenham School District and its Superintendent may take these guidelines into consideration when deciding the mode of Education, but they are not required to do so. The Guidelines are not intended to be a Public Health Order or mandate from the Hamilton Board of Health.

COVID 19 METRICS FOR HWRSD

INTRODUCTION

The metrics below were prepared collaboratively by the boards of health in Hamilton and Wenham in order to provide guidance on the reopening and operation of schools during the ongoing pandemic. The metrics are presented with the understanding that we are still dealing with a fluid situation and must be prepared to be flexible when making decisions on the mode of teaching and learning we employ at a particular time. This document provides a framework based on our current knowledge and is subject to change based on new scientific evidence and medical guidance.

PRINCIPLES

During this unprecedented time of global pandemic, we have limited experience and historical data on which to base our approach. Some of the decisions are being formulated as we learn about disease transmission and mitigation and this information is constantly evolving. We are working to balance protecting the public health and safety of all students and staff while providing for the educational needs of all children.

Metrics must be based on credible reliable and regularly-reporting sources. For COVID-19 that means almost exclusively the state DPH daily and weekly reports along with the continuous data reporting from the MAVEN (Massachusetts Virtual Epidemiologic Network), the state system used for tracking reportable infectious disease.

One important factor to consider should be a best estimate of the degree of compliance with safety protocols and mitigation strategies in the schools. An additional factor is the extent to which mitigation practices interfere with academic pursuits.

Metrics should be updated every day for data that is available on a daily basis.

Metrics should include data for every individual school, for the entire district, for the towns of Hamilton and Wenham, and for adjoining towns.

Metrics should be based on data on molecular test-positive cases

The metrics should be consolidated to recognize three operating models: all in-school learning, hybrid, and all-remote learning.

The District Health & Safety Task Force can decide to move to a more restrictive mode as soon as it is practical based on public health data. However, it will take 3-4 weeks of an established favorable trend in order to lessen the restriction in learning mode.

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BASIS for DEVELOPING METRICS

On August 11th, DESE promulgated metrics that “should serve as a **guide** as to whether schools should open using full-time in-person, hybrid, or remote models”. In this guidance, DESE uses the term “DESE **expectation** for learning model” in their color-coded chart of learning models as a function of DPH data. Clearly, this language means that DESE wants to avoid dictating to schools how to respond to DPH Covid-19 data for deciding on one of the color-coded metrics for learning models.

Further, in the DPH conference call with LBOH (local Boards of Health) on August 25th, DESE acknowledged that school districts and boards should use their own best judgement for how to incorporate DPH data in making decisions on learning models. Thus in this metrics section, we are using our best evidence based judgement to develop a set of metrics.

On August 21st, DESE stated in a guidance document published on its website:

"In an effort to assist all districts and schools in aligning with the DPH weekly report, DESE has assigned all school districts a “key municipality” (the city you should reference) that should be used to determine their alignment to the DPH health metric. The “key municipality” was derived by selecting the municipality where the greatest percentage of enrolled students in the district reside. While the DPH weekly report will change depending on the course of the virus, the assigned key municipality will remain constant for the 2020-21 school year."

Clearly, DESE wants to simplify and synchronize with the DPH weekly reports the basis on which a school district decides on one of the color-coded metrics to determine the learning model. But again, the DESE metric chart states that the learning model selection is their "expectation", **not a mandate**, corresponding to a given metric. Accordingly, because the number of students from Hamilton and from Wenham are quite similar, we should still be taking into account data from both towns, not just Hamilton, in making learning model decisions.

PROPOSED QUANTITATIVE & SEMI-QUANTITATIVE METRICS(see Footnotes for definitions of Metrics)

- Incidence rates, and trends in surrounding towns.

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- Number of cases, incidence rates, and trends in Hamilton and Wenham, individually and combined
 - Percent positivity and trends in Hamilton and Wenham
 - Number of positive case patients and trends in local hospitals (Beverly and NSMC)
- Number of cases and rate of change in each school and in the district; distinguish between cases in students and in teachers/staff
- For in-person learning modes, a semi-quantitative metric should be the school district's best estimate of how well students are adhering to safe practices for minimizing risk of Covid-19 transmission.

LEARNING MODEL NUMERICAL METRICS

Green – Full-time in school learning

- HWRSD: The school nurses and public health nurses will have daily communication to inform the metric of incidence of infection within the individual schools and the District, as well as the rating of students' level of compliance with the recommended mitigation strategies. The rating of mitigation strategy compliance shall be at least a 4 (Very Good).
- Hamilton and Wenham weighted average: 7-day average incidence rate < 4 per 100,000; and 14-day averages steady or declining
- Surrounding Towns (Amesbury, Beverly, Danvers, Essex, Gloucester, Ipswich, Manchester, Newbury, Peabody, Rockport, Salem, and Topsfield,) 7-day population-weighted average incidence rate < 4 per 100,000; and 14-day average steady or declining

See also the "Judgements Required" section below.

Yellow – Hybrid learning model

- HWRSD: The school nurses and public health nurses will have regular communication to inform the metric of incidence of infection within the individual schools and the District, as well as the rating of students' level of compliance with the recommended

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mitigation strategies. The rating of mitigation strategy compliance shall be at least a 3 (Good).

- Hamilton and Wenham weighted average: 7-day average incidence rate between 4 and 8 per 100,000; and 14-day averages steady or declining
- Surrounding Towns (Amesbury, Beverly, Danvers, Essex, Gloucester, Ipswich, Manchester, Newbury, Peabody, Rockport, Salem, and Topsfield): 7-day population-weighted average incidence rate between 4 and 8 per 100,000; and 14-day average steady or declining

See also the “Judgements Required” section below.

Red – Fully remote learning model

- The rating of mitigation strategy compliance is less than 3 (Good).
- Hamilton and Wenham weighted average: 7-day average incidence rate > 8 per 100,000; and 14-day averages rising
- Surrounding Towns (Amesbury, Beverly, Danvers, Essex, Gloucester, Ipswich, Manchester, Newbury, Peabody, Rockport, Salem, and Topsfield): 7-day population-weighted average incidence rate > 8 per 100,000; and 14-day average rising

See also the “Judgements Required” section below.

JUDGEMENTS REQUIRED

Once school starts (currently set for September 14th) then we will collect and track and report daily on cases and close contacts from the Schools among students, teachers and staff.

If one case: That case must follow Isolation Protocol and

The PHN and School Nurse must identify all Close Contacts and place them in Quarantine Protocol. Close Contacts may include those in the same classes with the case.

Do not close that school.

If greater than one case in the same school or in the district within 7 days: Those cases must follow Isolation Protocol and

The PHN and School Nurse must identify all Close Contacts and place them in Quarantine Protocol. Close Contacts are defined as those within 6 feet of distance for 15 minutes or more.

However, before taking any school or district-wide action, it is vital to understand the dynamics behind more than one case and so the district and BOH should consider whether it resulted

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from any close contact exposures among students or staff because of the potential following factors:

Responding to Confirmed Cases of COVID-19 in the School District Community

When a confirmed case of COVID-19 is identified in a school community, it is important for the school district to work closely with the BOH and School Nurses to identify whether the person who is ill was present on school grounds while infectious and whether there may have been asymptomatic and pre-symptomatic transmission of COVID-19. It is important that close contacts of students or staff with COVID-19 are quickly identified, informed of the need to quarantine at home, and encouraged to seek testing even if they are not showing any symptoms. Even if a close contact tests negative, they must remain in quarantine for a full 14 days as some people develop infection at the end of their incubation period. The CDC does not recommend universal testing of all students and staff at this time.

In addition to the identification and notification of close contacts, the school district should consider the questions outlined below in consultation with the BOH and School Nurses to determine whether additional mitigation strategies are needed to protect the school community.

1. **How many cases are there, and are they close in time together, or spread out over several weeks?** Sporadic, single confirmed cases are not necessarily worrisome on their own, especially if students or staff did not attend school while infectious or the potential exposures in the school setting are limited (e.g., few classrooms or activities are impacted). Multiple cases that are identified closer together in location and time (e.g., within one week) could indicate that a significant unidentified exposure occurred and/or that a higher level of transmission is occurring.
2. **Are new cases traceable to the school community or are they likely the result of a different exposure (e.g., household exposure, travel)?** It is concerning to see cases that can be clearly traced back to an exposure within the school setting, as it may be an indication that transmission is occurring between members of the school community. Cases that can be traced back to a different exposure such as a cluster of cases within a household or a likely exposure to a positive case while traveling indicate that attendance in school was not the likely source of illness.
3. **Where are the cases occurring, and do they have any common themes?** If cases seem to be concentrated based on a common trait such as a physical location (e.g., confined to one building within a school) or to a specific group within the school (e.g., a cluster of cases among food service workers), it may be possible to narrow down the exposure source and take more specific actions that do not necessarily require a change in the learning model used for the school or school system as a whole. Finding common

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themes among cases may also aid a school's efforts to modify practices to help prevent similar future exposures.

4. **How many close contacts does each case have?** Cases that have limited numbers of close contacts in the school setting (e.g., few classrooms or activities are impacted) are less likely to result in a needed shift between learning models for the whole school. Cases that have many close contacts across multiple classrooms and activities, or potential exposures in common areas or at larger school based gatherings/events where close contacts are not readily identifiable may complicate the ability to identify all or most close contacts, and may have a larger impact on the school community as a whole.

5. **Are students, parents, and staff forthcoming about close contacts?** When people are unwilling or unable to disclose their close contacts, it may be difficult to ensure that contact tracing can be effectively completed. When contact tracing cannot be fully completed, it is possible that exposed persons may not exclude for the recommended quarantine period of 14 days and could go on to develop symptoms of illness while in the school setting, thereby resulting in additional exposures.

6. **Is there other significant COVID-19 transmission in the surrounding community (e.g., a cluster of cases at a large local employer) that will likely impact families and staff?** For example, in communities that are currently experiencing or have very recently (within the last 14 days) experienced an outbreak in a large local employer or other setting where the families of many students and/or spouses of many staff work or visit, the nature of the community outbreak may increase the potential for community transmission in the school setting.

7. **Are you able to maintain your current learning model based on staffing?** Staffing is a critical component of school operations. When adequate staffing to support an in-person or hybrid learning model cannot be achieved, it may be necessary for schools to transition to an alternative learning model.

8. **How well are students adhering to safe practices for minimizing risk of infection and to what extent is that interfering with academic progress?** These are semi-quantitative assessments but important ones because they get to one of the most influential factors in determining the likelihood of spread of Covid-19 in the schools and, in a related matter, the degree to which this interferes with academic progress.

Assessment of mitigation strategy compliance & their impact on learning.

Teachers are invited to complete a two-item electronic survey daily, at meaningful time-points, to help assess our district's ability to maintain safe practices (thereby minimizing risk of Covid-19 spread) while also minimizing interruptions to academic progress

Ideally, teachers who remain in a single classroom with the same students should complete these items once at the end of the day. Teachers who work with different student groups throughout the day should complete these measures after each period.

1. How well are students adhering to safe practices for minimizing risk of infection? Poor compliance with safety protocols and mitigation strategies will increase the risk of Covid-19 transmission. The fundamental concept underlying the minimization of risk is to promote a combination of practices, not just a single practice, because no single practice alone can be perfect or sufficient. Here is the set of practices that together comprise the basic overall **strategy** for minimizing Covid-19 transmission risk among students:

- **face coverings / masks**
- **physical distancing**
- **hand hygiene**

Although these behaviors in aggregate are critical to minimizing disease transmission, non-compliance with any single practice can/should be used to guide responses. These practices will optimally be observed and recorded by teachers daily. Additionally, schools are encouraged to designate a staff member to randomly visit classes at regular intervals to also document observations. Using an electronic measure, we encourage teachers to answer the following question:

Overall, how would you rate your students' level of compliance with the recommended mitigation strategies (i.e., mask use, physical distancing, hand hygiene)?

- 1 – Poor Compliance with overall mitigation strategy (<50% of student body)
- 2 – Fair Compliance with overall mitigation strategy (50-75% of student body)
- 3 – Good Compliance with overall mitigation strategy (75-90% of student body)
- 4 – Very Good Compliance with overall mitigation strategy (91-99% of student body)
- 5 – Excellent Compliance with overall mitigation strategy (100% of student body)

Scoring: Each school is encouraged to designate a staff member to review scores at the end of each school day. A score between 1 and 3 warrants flagging for immediate remediation. This may include working with the classroom teacher to identify points of

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intervention. If compliance does not improve after 1 or 2 days, the school is encouraged to elevate concern and take additional action.

2. To what extent are mitigation practices interfering with academic pursuits? An equally important issue attendant to use of this overall strategy is its impact on student learning, that is, to what extent is the learning process impaired by our safety practices? We recognize that learning will look different this year; however, it's important to monitor the costs and benefits of in-school learning.

Thus, in parallel with the scoring of compliance with the mitigation strategy, the degree of academic interruption should be observed and recorded by teachers daily, at meaningful time-points.

Using an electronic measure, we encourage teachers to answer the following question:

To what extent do you believe our mitigation strategy interferes with learning (e.g., this may include teachers' ability to teach but also students' ability to learn)?

- 1 – Constant/complete interruption of/interference with the learning process
- 2 – Regular interruption of/interference with the learning process
- 3 – Some interruption of/interference with the learning process
- 4 – Occasional interruption of/interference with the learning process
- 5 – Very little to no interruption of/interference with the learning process

Scoring: Each school is encouraged to designate a staff member to review scores at the end of each school day. A score between 1 and 3 warrants flagging for immediate remediation. This may include working with the classroom teacher to identify points of intervention.

Footnotes:

1. Data for number of new cases, case rates, and local hospitalizations adjoining towns and Essex County will be evaluated by the Boards of Health in light of the fact that they include nursing homes and related facilities which have among the highest rates and the fact that several towns/cities have much higher population densities and percentages of at-risk groups. This impact on schools will be communicated by the BOH to the school committee or superintendent to inform decision making.

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2. Definitions

- Percent positivity - Total number of positive molecular COVID-19 tests in the last 14 days divided by the total number of molecular COVID-19 tests in the last 14 days
- Change in percent positivity - Change in percent positivity compared to the previous week's report. No Change= <0.10% difference in the percent positivity. Two Week Case Count - Total number of confirmed COVID-19 cases in the last 14 days
- Trends: The state uses - Number of new cases occurring during the current two-week period compared to the previous two-week period. Increase=number of new cases in the current two-week period higher than the number of new cases in the last two-week period. Decrease=number of new cases in current two-week period lower than number of new cases in the last two-week period. No change=number of new cases in the current two-week period equal to the number of new cases in the last two-week period. Trend is also the average daily incidence over 14 days as compared to average daily incidence over 7 days.
- Population numbers sourced from UMASS Donahue Institute Population Estimates Program
<http://donahue.umassp.edu/data/pep/dashboards/2018townpop/index.html>

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