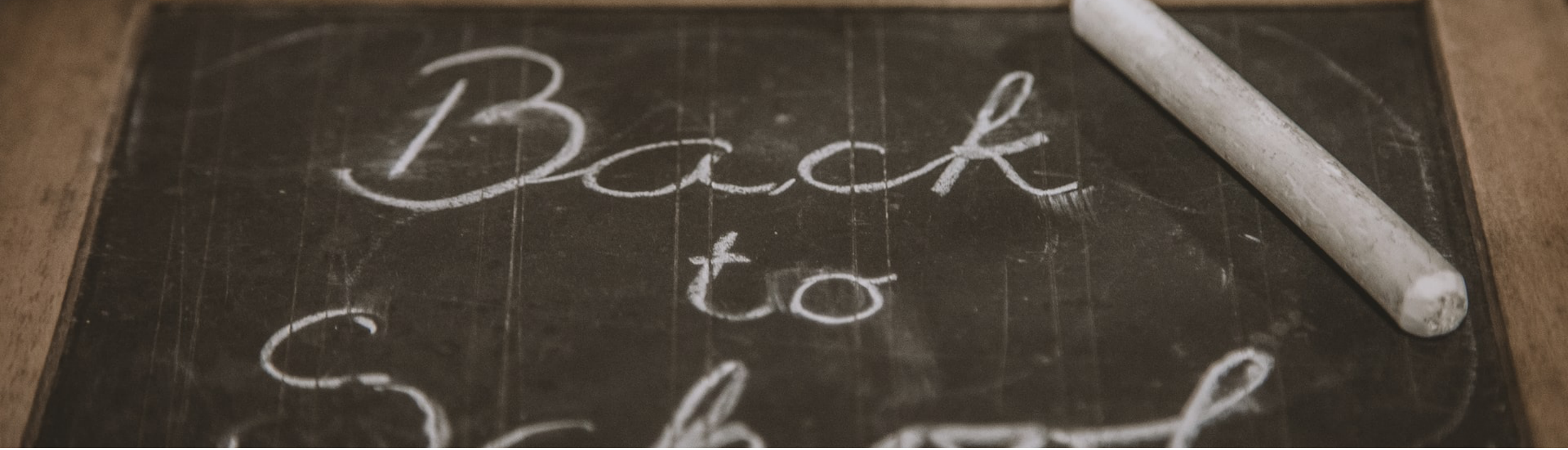
NORTHERN ILLINOIS RETURN TO SCHOOL METRICS

Drafted by the Northern Illinois Public Health Consortium Return to School Metrics Workgroup

Last Updated August 14, 2020



Getting back to school is critical

Besides a child's home, no other setting has more impact on a child's health and wellbeing than their school. But returning to school in the fall presents challenges amidst COVID-19. The Local Health Departments across the northern Illinois region are committed to bringing children back to school as soon as it is safe to do so.

In the absence of any benchmarks from the Illinois Department of Public Health (IDPH), this document contains guidance for school officials to use when considering a change in learning models. Schools will need to work closely with their Local Health Department to determine when the time is right to transition to different learning modes.

Our Method

Research

Reviewed all relevant academic material and guidance from other jurisdictions

Choose Framework

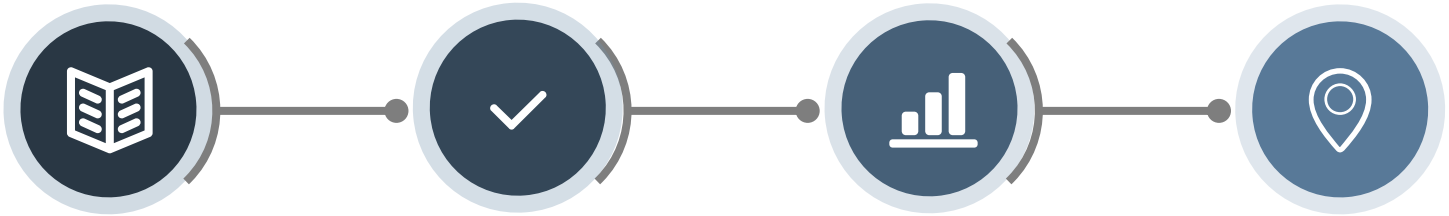
Reached consensus on a research-informed framework

Determined Metrics

Agreed on metrics that provided the greatest relevance to school re-opening

Set Thresholds

Evidence-based thresholds to guide the decision of return to transition learning models



Prerequisites

ISBE School Guidance

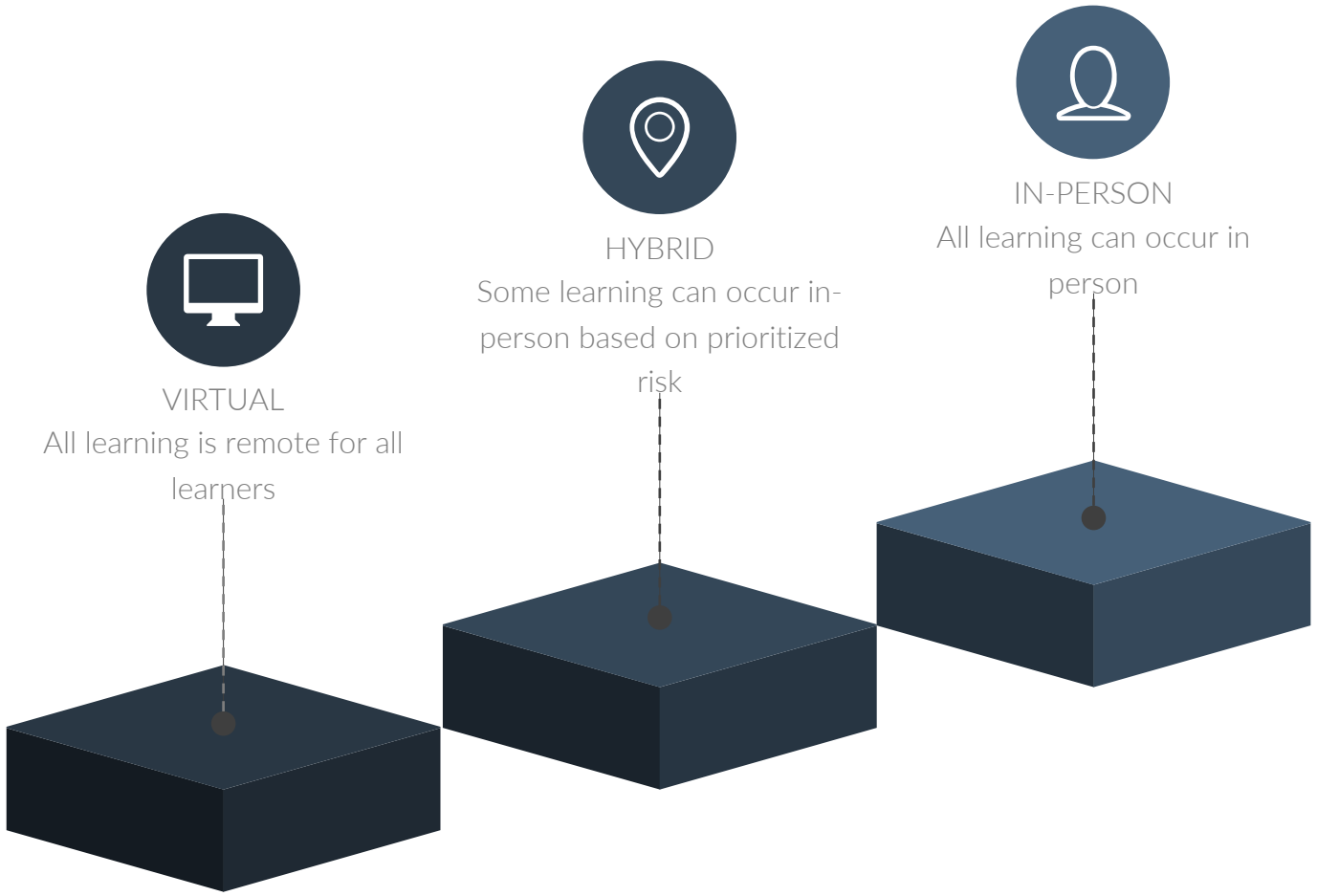
Be able to meet all IDPH School Checklist items to prevent the spread of COVID-19

IDPH School Guidance

Be able to meet all IDPH School Checklist items to prevent the spread of COVID-19

The Framework

Path to In-Person Learning



Interim Measures

When Will We Know the Time Is Right?

Schools are advised to first transition to hybrid learning from virtual learning before transitioning to full in-person learning.
Schools are advised to be in the previous phase for at least ten days before transitioning to the next.
Schools are advised to meet all three measures before transitioning to the next phase.
Local Health Departments will work closely with schools to monitor absenteeism, disease activity, and other indicators to further inform the transition between learning models

Measurement	Virtual All learning is remote for all learners	Hybrid Some learning can occur in-person based on prioritized risk	In-Person All learning can occur in person
Incidence Rate*	> 14 per 100,000 Population	7 – 14 per 100,000 Population	< 7 per 100,000 Population
COVID-19 Like Illness Admissions	< 7 out of 10 Days of Non-Increasing Value	7 out of 10 Days of Non-Increasing Value	7 out of 10 Days of Non-Increasing Value
Diagnostic Testing Turn-Around Time	> 10 Days	3 - 10 Days	< 3 Days

*Should be used together with other relevant epidemiological factors (e.g. rapid increase in cases, outbreaks, or significant shift in demographics of cases.

Incidence Rate

Community Tranmission

Calculation

This measure is calculated by dividing the total number of new confirmed cases each day by the total county population, then multiplying it by 100,000. This measure uses the 2019 U.S. Census estimate of population for each unit of analysis. New cases are reported on the date they are received by the Local Health Department.

Unit of Analysis

This measure will be analyzed at the county level. School districts that cross county borders will have specific instructions on which county to use.

Time Period

This measure will be assessed using a 7-day rolling average, rounded to the nearest whole number. A school district will be able to transition to the next learning phase once this rate has been below the threshold for at least seven consecutive days. To remain consistent with the Illinois Department of Public Health (IDPH), this measure will be reported with a three-day lag.

1. Arizona Department of Health (2020). *Safely Returning to In-Person Instruction*. https://www.azdhs.gov/documents/preparedness/epidemiology-disease-control/infectious-disease-epidemiology/novel-coronavirus/covid-19-safely-return-to-in-person-instruction.pdf
2. Illinois Department of Public Health (2020). *County Level Risk Metrics*. http://www.dph.illinois.gov/countymetrics

> 14[1]

Per 100,000 Population

7 - 14

Per 100,000 Population

< 7[2]

Per 100,000

COVID-19 Like Illness Admissions

Health System Capacity

Calculation

This measure will be the number of admissions for COVID-Like Illness across all ages, as reported through the National Syndromic Surveillance Program.

Unit of Analysis

This measure will be analyzed at the county level. School districts that cross county boarders will have specific instructions on which county to use.

Time Period

Released each week, this measure will be evaluated as the number of days of non-increasing value out of 10.

1. Illinois Department of Public Health (2020). *County Level Risk Metrics*. http://www.dph.illinois.gov/countymetrics

<7

Days out Of Ten Of Non-Increasing Value

7[1]

Days out Of Ten Of Non-Increasing Value

7[1]

Days out Of Ten Of Non-Increasing Value

Diagnostic Testing Turn-Around Time (TAT)

Public Health System Capacity

Calculation

This measure is calculated by taking the average number of days between when a diagnostic test sample is collected and when that test result is entered into the Electronic Lab Reporting System.

Unit of Analysis

This measure will be analyzed at the county level. School districts that cross county boarders will have specific instructions on which county to use.

Time Period

This measure will be assessed using a 7-day rolling average, rounded to the nearest whole number.. To remain consistent with the Illinois Department of Public Health (IDPH), this measure will be reported with a three-day lag.

1. Based on Northern Illinois Region's case investigation times, any tests results received ten days after specimen collection would likely result in a very low chance for intervention.
2. Ramdas, K., Darzi, A. & Jain, S. 'Test, re-test, re-test': using inaccurate tests to greatly increase the accuracy of COVID-19 testing. Nat Med 26, 810–811 (2020). https://doi.org/10.1038/s41591-020-0891-7
3. U.S. Health And Human Services (2020). *Senior Leader Briefing*.
4. Resolve to Save Lives (2020). *COVID-19 Resolve to Save Lives Report*. https://resolvetosavelives.org/

> 10[1]

Days

3 - 10

Days

< 3[2-4]

Days

Frequently Asked Questions

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Why did we choose the county as our unit of analysis rather than smaller aggregations? Using county level metrics aligns with established IDPH-reported county-level risk metrics, particularly with orange-to-blue triggers for warning levels of COVID-19 activity and severity. It is also representative of local activity in the community, since no individual, family, or school community lives in a "bubble" or silo from their broader surrounding community. Choosing the county aggregation makes providing the identified metrics doable, using data that is readily accessible to or already collected, analyzed, and reported by the Local Health Department. Data presented at county level in deidentified, aggregate form likely wouldn't warrant data sensitivity concerns that may need to be addressed with smaller units of analysis (e.g., school district).

Why did we choose COVID-19 Like Illness Admissions? COVID-19-like admissions was chosen as metric for two reasons. First, it is an indicator of COVID-19 severity that is available to all Local Health Departments in the region through CDC's BioSense Platform. Second, the metric is used by IDPH as part of the "County Level COVID-19 Risk Metrics" and "Illinois Regional COVId-19 Resurgence Criteria" to gauge the spread of COVID-19 in Illinois.

Frequently Asked Questions

Why did we choose a 7-day rolling average instead of a point in time measure for Incidence Rate and TAT? A 7-day rolling average was chosen for incidence rate and diagnostic testing turn-around time (TAT) to account for small fluctuations occurring in the data due to factors such as lower testing and reporting on weekends. A point in time measure would provide a distorted representation of COVID-19 activity if any anomalous activity were to occur. A 7-day rolling average therefore provides a more representative view of trend in time of COVID-19 activity in the community.

Why did we choose weekly as our time period for CLI instead of using another granularity? CLI hospital admissions will be evaluated on a weekly basis to align with current IDPH reported metrics for counties. The purpose of evaluating over a 10-day period rather than daily is the address day-to-day variations in admissions and provide a more stable evaluation period. We are recommending that increases in 7 of the 10 days of data warrant escalation. Monitoring CLI hospital admissions serves as a balance to the incidence rate and allows for evaluation of how many individuals with COVID-like illness require evaluation and care in a hospital setting.