



## HERO School Testing: Summary Report

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The [Utah Health and Economic Recovery Outreach \(HERO\) Project](#) began in May 2020 as a collaborative statewide testing and analysis project to understand the community-based spread of Covid-19. The goal of the HERO Project was to collect and utilize high-quality local data to help inform decision-makers seeking to guide Utah's citizens and economy through a safe return to normalcy. One year later, the project team is wrapping up its reporting on community testing, impacts of Covid-19 on Utah businesses and consumers, school testing, work in long-term care facilities, and vaccine uptake, impact, and implications. This report summarizes and synthesizes the [HERO Project's work in K-12 schools](#). All [previous reporting](#) on HERO Project testing and other projects in K-12 schools is located on the HERO Project website.

### Background on School Testing

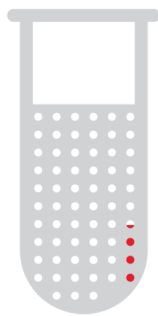
The HERO Project conducted testing for over 3,700 participants in schools between October 2020 and May 2021. The primary goal of school-based testing was to provide convenient access to Covid-19 testing to students, faculty, and staff to enhance safety in school communities by reducing transmission. With increased testing, schools could better identify both symptomatic and asymptomatic cases, reducing the occurrence of school outbreaks that prevented in-person learning. Additionally, the HERO team sought to collaborate with other groups to better understand the epidemiology of Covid-19 in school settings to assist policymakers with designing and implementing strategies to help promote safe in-person learning.

### Testing Results: 2020-21 School Year

During the 2020-21 school year, students had a higher rate of positive tests than did staff and teachers, but both groups were relatively low.

#### students

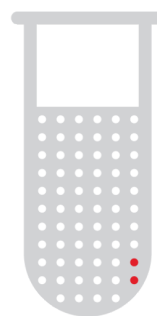
2,440 students tested



**3.4%**  
positive results

#### staff & teachers

1,263 staff & teachers tested



**2.0%**  
positive results



**104**

participating  
schools



**6,161**

PCR tests



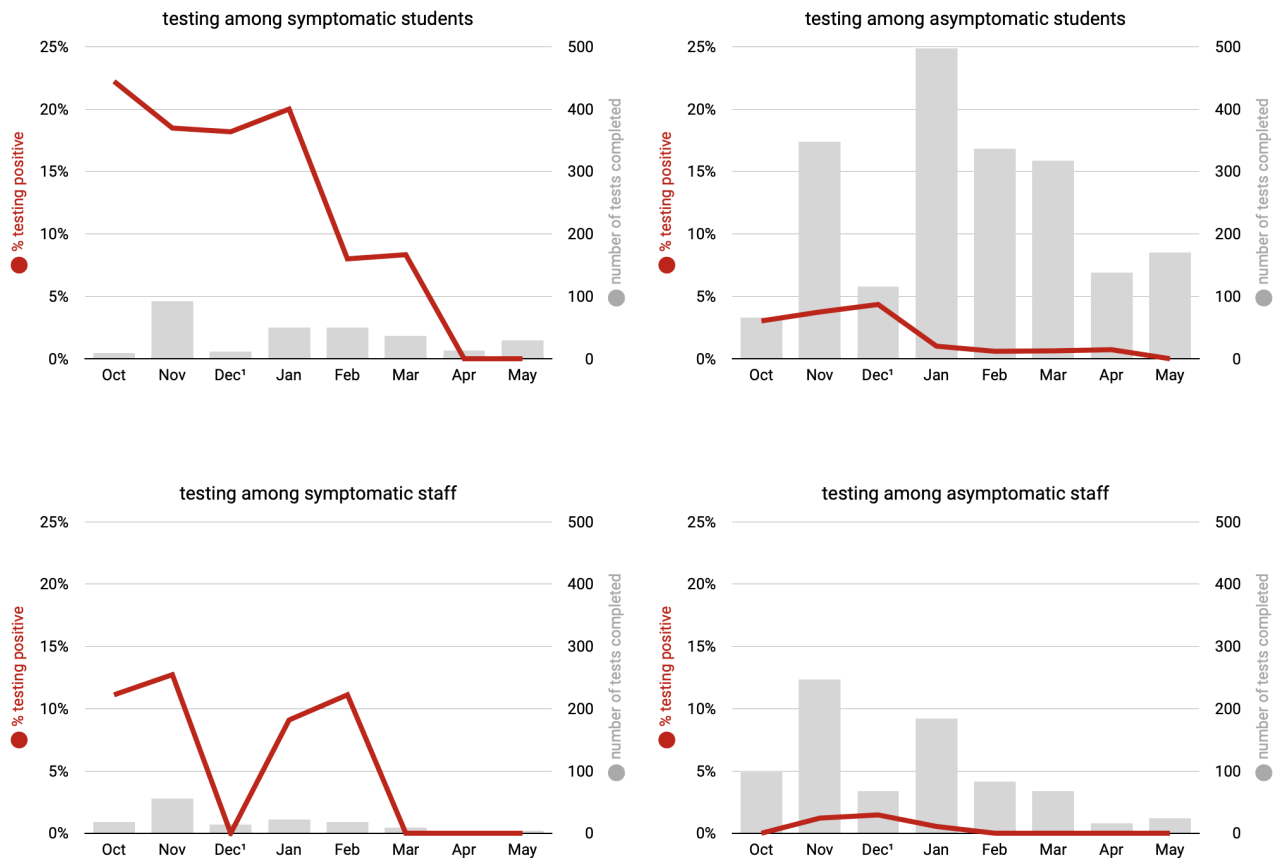
**3,703**

participating students  
& school staff

## Rates of Infection Across Time

Intensive testing took place every month with the exception of December, due to the winter break limiting the amount of time students and staff were in school. Positivity rates were substantially higher for symptomatic compared to asymptomatic students. However, it was notable that the positivity rate among asymptomatic students was nearly 5% during November and December. Positivity rates decreased for all groups beginning in January 2021, as shown in the figures below.

### HERO Project K-12 testing results



<sup>1</sup> December testing included only the first two weeks due to Winter Break, decreasing the sample size as compared to other months.

## Additional School-Based Projects and Findings

In addition to testing and tracking infection rates across time, the HERO Project conducted several additional research and analysis projects in collaboration with other partners. These studies helped develop evidence to assist schools in making more informed decisions on policies such as length of quarantine after exposure, physical spacing of students in classrooms, and statewide testing policies for participation in extracurricular activities and continuation of in-person learning. The HERO team was able to collaborate with local, state, and national partners for many of these projects.

### Elementary School Transmission Study

The HERO Project collaborated with the CDC and a local school district to study the rate of in-school transmission in elementary schools during December 2020 and January 2021, a period of high community transmission in Utah. [The study](#) found that with adherence to prevention strategies, including universal masking, in-school transmission was lower than 1%. Students in these classrooms were spaced 3 feet apart on average, which contributed to the CDC's revised guidelines emphasizing that 3 feet, rather than 6, can be safe in many situations. This study also showed that close-contact exposures in which both individuals used masks were associated with low transmission risk, supporting the state policy to not routinely require quarantine in these situations. A [follow-up study](#) emphasized the value of on-site school-based testing as a strategy to help reach underserved populations. See [March](#) and [April](#) reports for further discussion.

### Risk of Learning Models Study

A fall 2020 analysis in collaboration with UDOH and Salt Lake County Health Department compared Covid risk across five Salt Lake County school districts (four with in-person instruction and one with online-only). Elementary and middle school students residing in districts with in-person learning had the same infection risk as those in a district with remote learning. However, high school students in the districts using in-person learning had a 60% higher risk than those residing in a remote district. See the [March](#) report for more.

### Length of Quarantine After Exposure

HERO leaders compared the risk of infection with different quarantine approaches, timeframes, and

testing requirements. This work provided evidence to support modified quarantine guidelines utilized in Utah and recommended by CDC that included earlier return with testing for school and other settings. See the [March](#) report for more.

### High School Students Survey

In a collaboration with two Salt Lake-area school districts and one additional high school, the HERO team surveyed high school students about the impact of the pandemic and their behaviors related to it. Over 1,500 students, approximately 6% of the total student body in these schools, completed the survey. Results highlighted the substantial burdens high school students faced due to Covid during the 2020-21 school year. See [April](#), [May](#), and [June](#) reports for further discussion.

### Analysis of Covid-19 Testing Policy

Along with state and national partners, the HERO team completed an evaluation of two statewide testing policies for schools: [Test to Stay](#) and [Test to Play](#). The study found that these two strategies preserved over 100,000 student-days of in-person instruction and allowed student-athletes to compete in 95% of the more than 11,000 scheduled winter events. This analysis demonstrated that implementation of school-based testing strategies was feasible, sustainable, and effective in identifying and isolating cases. See the [June](#) report for more.

### Student & Staff Vaccination Plans

The HERO team has begun a series of focus groups with educators and high school students to explore their attitudes, plans, and potential barriers to vaccination. The findings of these focus groups will be described in a future report.

# Acknowledgments

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Senior advisors to the project are Taylor Randall, MBA, PhD; Natalie Gochmour, MS; and Michael Good, MD. The Project team includes Andrew T. Pavia, MD; Julio Delgado, MD, MS; Adam Hersh, MD; Krow Ampofo, MD; and Tom Greene, PhD. The following teams and centers supported the project:

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This report was developed by the Sorenson Impact Center at the University of Utah's David Eccles School of Business in partnership with the HERO Project leadership. Sorenson Impact works with public, nonprofit, and private sector stakeholders to develop, structure, and mobilize capital for innovative and data-driven approaches to difficult social and public health challenges. This report was created by Austin Hendrickson and Allison Nicholson and designed by Alicia Pangman.

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