



Two Connecticut State Interventions to Address Pandemic Effects on K-12 Students

Eric J. Brunner

Alexandra J. Lamb

Stephen L. Ross

University of Connecticut

K-12 students in Connecticut experienced large learning losses leading up to and during the 2020-21 school year following the onset of the Covid-19 pandemic. Further, like other states, schools in Connecticut experienced a dramatic increase in chronic absenteeism that has persisted into the present. Among many other efforts, the Connecticut State Department of Education (CSDE) launched two initiatives to support students, families, and schools in pandemic recovery: the Learner Engagement and Attendance (LEAP) program and the High Dosage Tutoring (HDT) program. This policy brief describes the evaluation of these two programs. Both evaluations were funded by the Center for Connecticut Education Research Collaboration (CCERC), a partnership between CSDE, The University of Connecticut, and other institutions of higher education across the state.

During the pandemic, the federal government provided an unprecedented amount of funds to states and districts to support both pandemic era schooling and pandemic recovery. These funding sources included the Elementary and Secondary School Emergency Relief (ESSER) program and the American Rescue Plan Act (ARPA). Together, such COVID relief funds provided the funding for the two programs described here, LEAP and HDT.

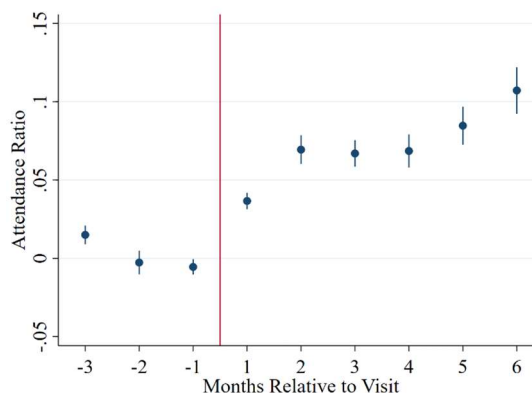
Learner Engagement and Attendance Program

To address the concerning rates of chronic absenteeism, the State of Connecticut launched the LEAP program. This program was designed to support school districts in conducting home visits with students identified as chronically absent in a targeted sample of 15 large and mostly urban school districts. LEAP began in the summer of 2021 and continued into the 2021-22 school year. For the 2022-23 school year and beyond, the State of Connecticut expanded the LEAP program to reach more students in the 15 districts. In 2022-23, an

additional 12,000 students received home visits and school follow-up in addition to the approximately 8,500 students who received home visits in 2021-22.

To evaluate the LEAP program, we estimated event studies that compared student attendance rates prior to receiving a LEAP home visit to their attendance rates after receiving the home visit, where students who had not yet been treated provide a control group. Figure 1 below presents effects of the LEAP program on attendance for the 2022-23 school year.

Figure 1. Impact of LEAP Program on Attendance

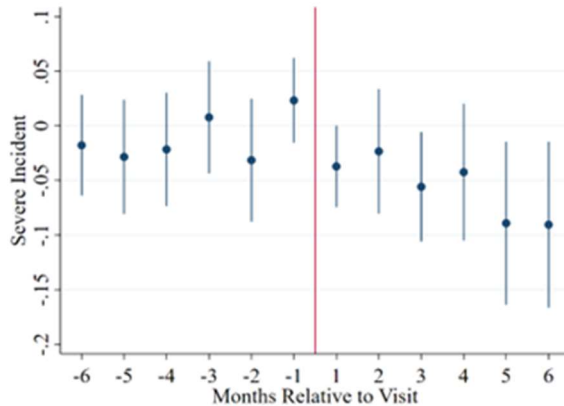


Attendance rates are relatively stable leading up to treatment (home visit) but jump up shortly after a visit. Six months after treatment attendance rates rise by 10 percentage points relative to attendance rates among students not yet treated by LEAP. These attendance improvements were observed at all grade levels but are largest for students in grades 9-12 with attendance rates rising by nearly 15 percentage points 6 months after the first LEAP visit.

Finally, while we did not find effects of LEAP on Smarter Balanced test scores, we do find substantial reductions in the frequency of disciplinary incidents among treated students. Figure 2 presents a similar event study except the outcome is whether a student was recorded as having a severe disciplinary incident. Prior to the home visit, there is no evidence

of any trends in disciplinary incidents among students treated by LEAP relative to not yet treated students. After the intervention, Figure 2 shows a reduction in the likelihood of a disciplinary incident over time with the effect peaking at approximately a 10-percentage point reduction in the likelihood of an incident 5-6 months after treatment.

Figure 2. Impact of LEAP on Disciplinary Incidents



High Dosage Tutoring (HDT)

Many districts in Connecticut used COVID relief funds to build tutoring programs in their schools. In 2023-24, CSDE offered additional grant funds to school districts to build robust tutoring programs with more explicit, research-based parameters for implementation. CSDE awarded funds to 43 school districts, including several charter schools and magnet school systems, to implement HDT in mathematics for 6th - 9th grade students. Under HDT, almost 3,700 students received high intensity tutoring in 2023-24.

To examine the impact of the HDT program, we compared 6th – 8th grade Smarter Balanced test scores in the year prior to tutoring (2022-23) to test scores after receiving tutoring (2023-24). Specifically, we compare how student achievement changed between 2022-23 and 2023-24 among students that were treated by the HDT program during the 2023-24 school year (treatment group), to the change in student achievement across the same years among students that were not treated by the HDT program (control group). We augment this difference-in-differences model by matching treatment and control samples to be very similar on

race, ethnicity, free and reduced-price lunch eligibility, whether an English learner, whether the student has one or more disabilities, 2022-23 attendance rates and discipline incidents in 2022-23.

Table 1 presents treatment effect estimates for the probability that a student’s performance on the math exam is at level 3 or higher (proficient). The estimated coefficient on the variable “Treated Student” captures the difference in student pre-treatment achievement between students that participated in the HDT program and those that did not. For example, the results in column 1 imply that prior to treatment, students that participated in the HDT program were 38 percentage points less likely to meet math proficiency standards. The estimated coefficient on the variable “Treated Student Post Treatment” captures the impact of participation in the HDT program. For students participating in HDT, there was a 7.5 percentage point increase in math proficiency rates, as well as 6.5% of a standard deviation increase in test scores. Notably, these estimates are very stable as we add controls for student outcomes in 2021-22, suggesting that effects are unlikely to be due to students being selected into the program based on unobserved factors that might have independently led to student test score improvements.

Table 1. HDT Program and Math Proficiency

	(1)	(2)	(3)	(4)
Treated Student	-0.377*** (0.0283)	-0.182*** (0.0227)	-0.182*** (0.0227)	
Treated Student Post Treatment	0.0758*** (0.0174)	0.0754*** (0.0197)	0.0755*** (0.0197)	0.0755*** (0.0197)
Observations	66,298	66,298	66,298	66,298
2021 Math Test	No	Yes	Yes	Yes
All Controls	No	No	Yes	Yes
Student Fixed Effects	No	No	No	Yes

Taken together, these two programs, LEAP and HDT, offer promising effects on student outcomes, and thus are strong candidates for continued funding. As these ongoing evaluations demonstrate, targeted programs with consistent and fully funded implementations are helping Connecticut students recover from the pandemic.