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Understanding Chronic Absenteeism and Examining a Strategy to Improve Attendance

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GEORGIA POLICY LABS

Appendix to:

Attendance Recovery Bus Pilot

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This appendix accompanies the report to provide supplementary results.

Methodology

To measure the effectiveness of the attendance recovery bus program on attendance, we take a "difference-in-differences" approach and estimate a model of the following form,

$$Y_{st} = \alpha_0 + \alpha_1 \text{After}_t \times \text{Pilot}_s + \alpha_2 \text{After}_t + \alpha_3 \text{Pilot}_s + \alpha_4 X_s + \alpha_5 \Lambda_s + \varepsilon_{st}$$

where Y_{st} is a proportion of students absent in school s on date t. After_t is a binary variable equal to 0 if the date t is before the pilot period (August 5, 2024–January 26, 2025), and 1 for the pilot period (January 27, 2025–May 22, 2025). Pilot_s is a binary variable equal to 1 for the two pilot schools (School A and School B), and 0 for the comparison schools (all other traditional elementary schools and all other South Fulton elementary schools). The coefficient α_1 represents the difference-in-differences estimate, capturing the effect of the pilot program on attendance. X_s is the vector of the student characteristics in school s, including the proportion of White, Asian, American Indian, Pacific Islanders, Multiracial, and Hispanic students, as well as the proportion of female students, students eligible for free or reduced-price meals, current English Learners, and students with identified disabilities. Λ_s is the vector of the school-week characteristics, including indicators for the first and last days of the week and the number of days in a week (e.g., 1 school day in the week, 2 school days in the week), which help capture within-weekly daily fluctuations in absence rates. ε_{st} is an error term.

In the case of test scores, we estimate a value-added model, comparing students' test scores prior to the pilot period with those during the pilot period (conditional on prior-period scores and individual student characteristics). The model takes the following form,

$$Y_{it} = \beta_0 + \beta_1 \text{Winter\_Score}_{it} + \beta_2 \text{Riders\_Category}_i + \beta_3 X_i + \gamma_i + \varepsilon_{it}$$

where Y_{it} represents the spring test score, measured in scale score units or national percentile rank, for student i in Math or ELA at the two pilot schools. Winter_Score_{it} controls for student i's winter test score. Riders_Category_i is the vector of binary indicators identifying whether the student falls into one of the recovery bus usage groups: 1–2 times riders, 3–4 times riders, and 5 or more riders. X_i is th vector of student-level

characteristics, including race/ethnicity, gender, English Learner status, and identified disability status. γ_i denotes grade level fixed effects, and ε_{it} is the error term. The coefficient vector, β_2, captures the impact of the pilot program on test score growth across levels of bus ridership.

Supplemental Results

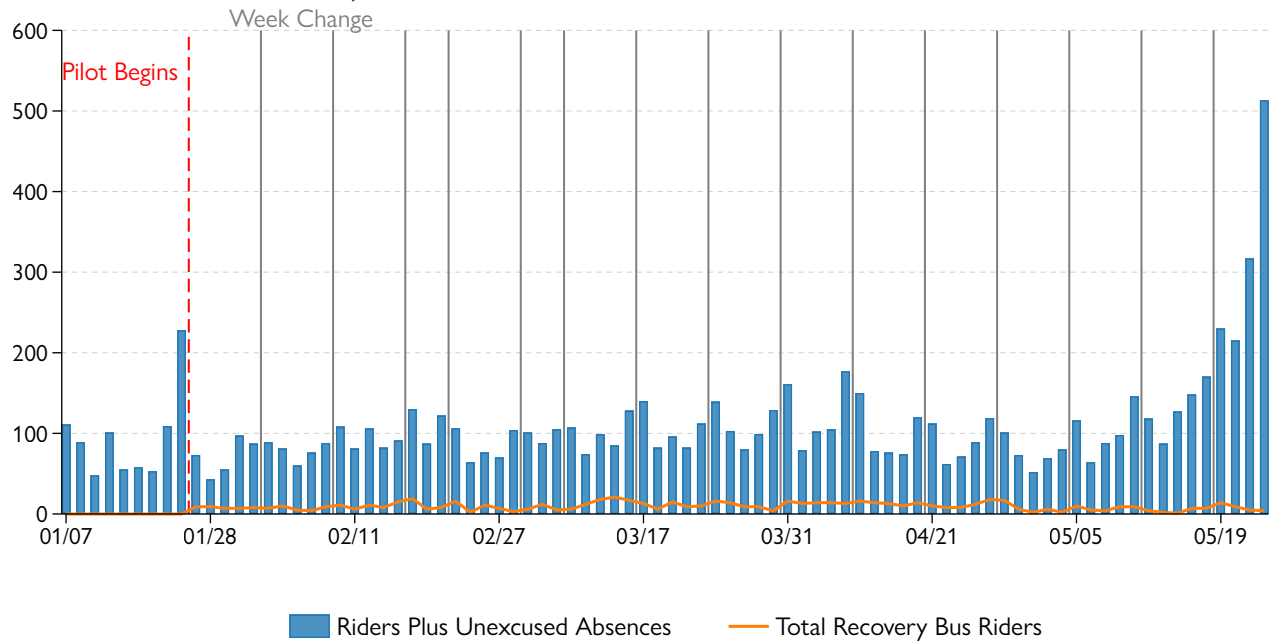Figure A1. Unexcused Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School A and School B Combined)

Figure A2. Unexcused Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School A)
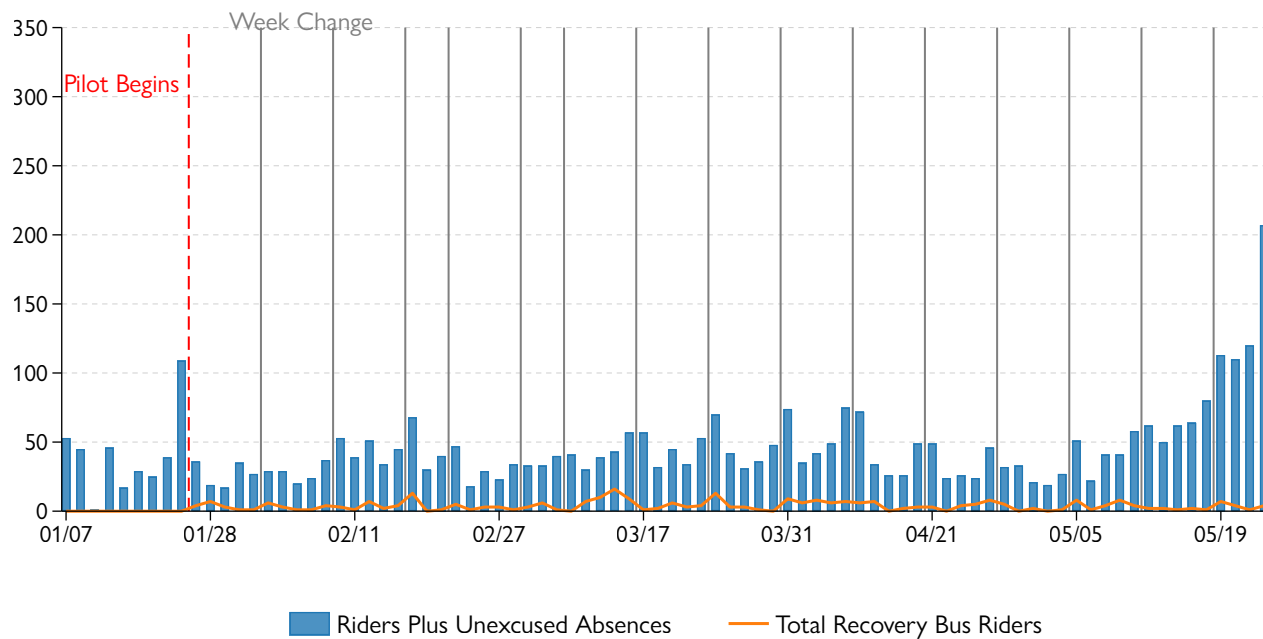

Figure A3. Unexcused Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School B)
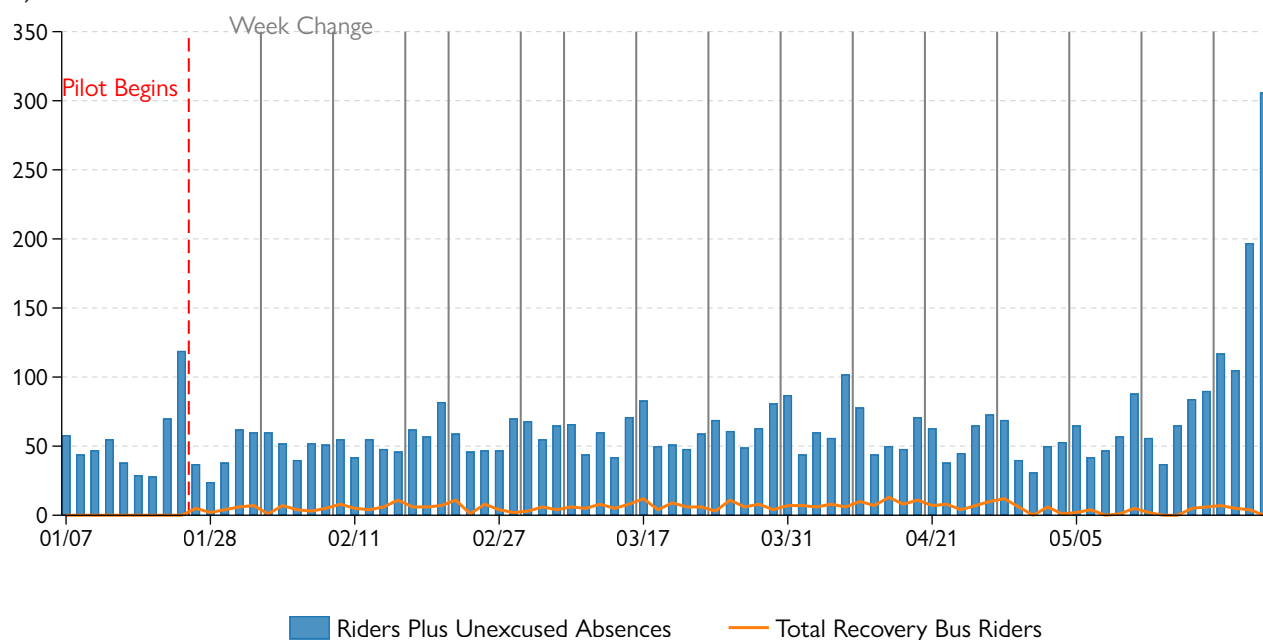
Figure A4. Total Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School A and School B Combined)
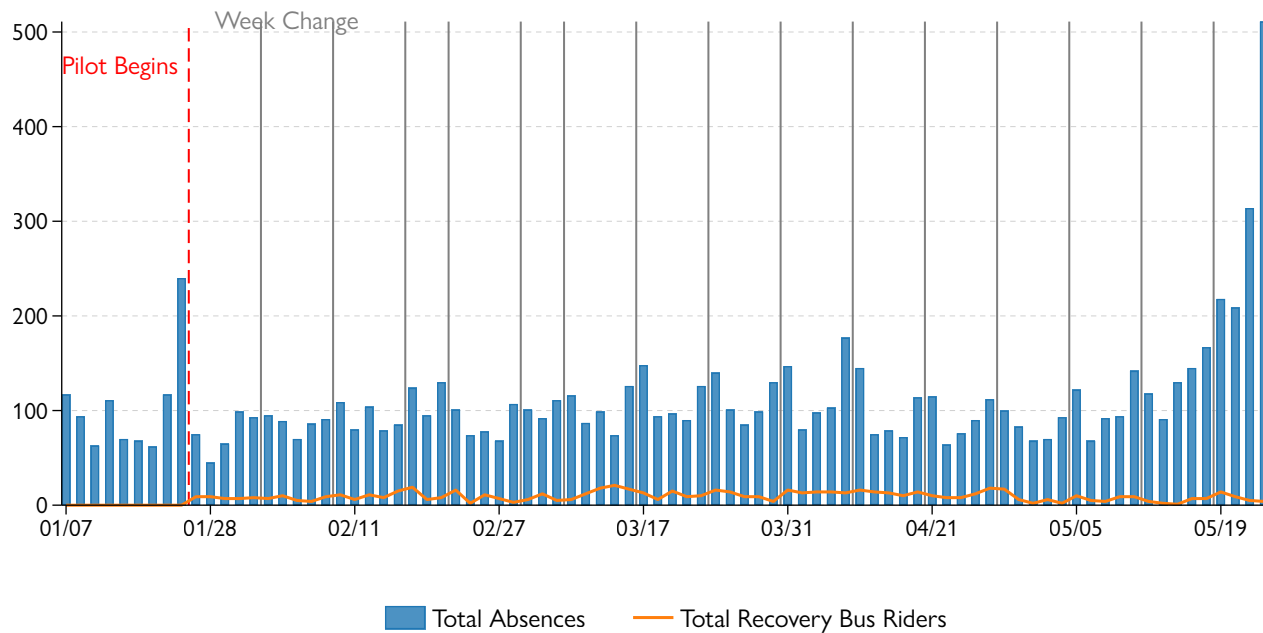

Figure A5. Total Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School A)
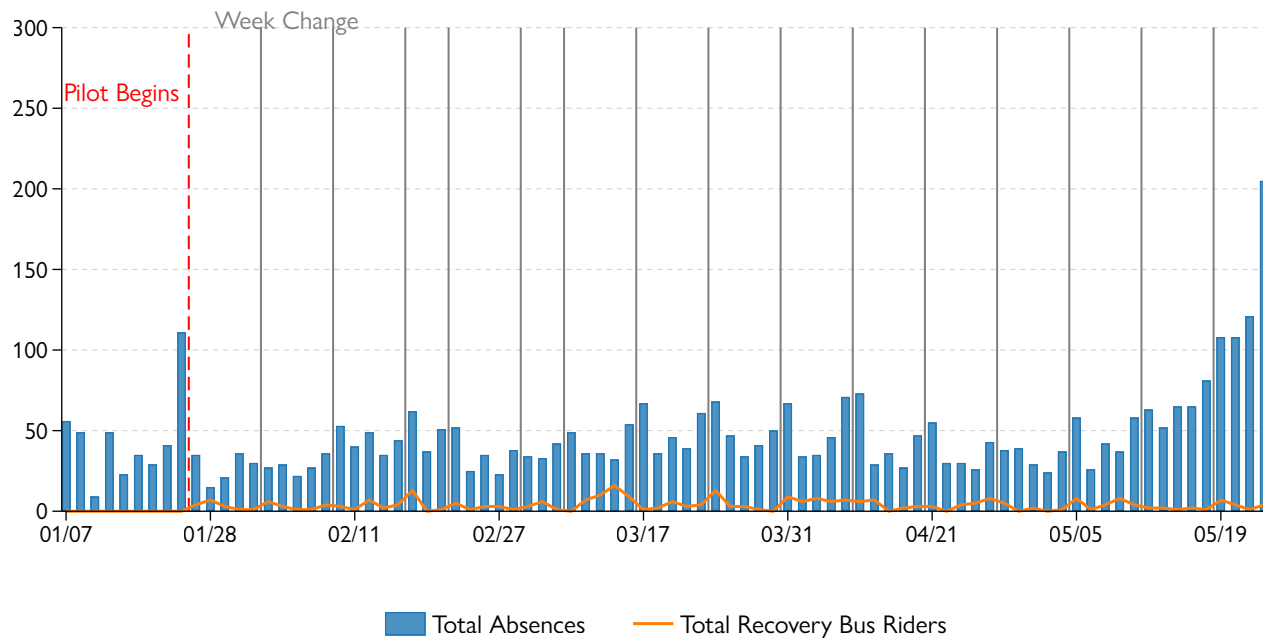
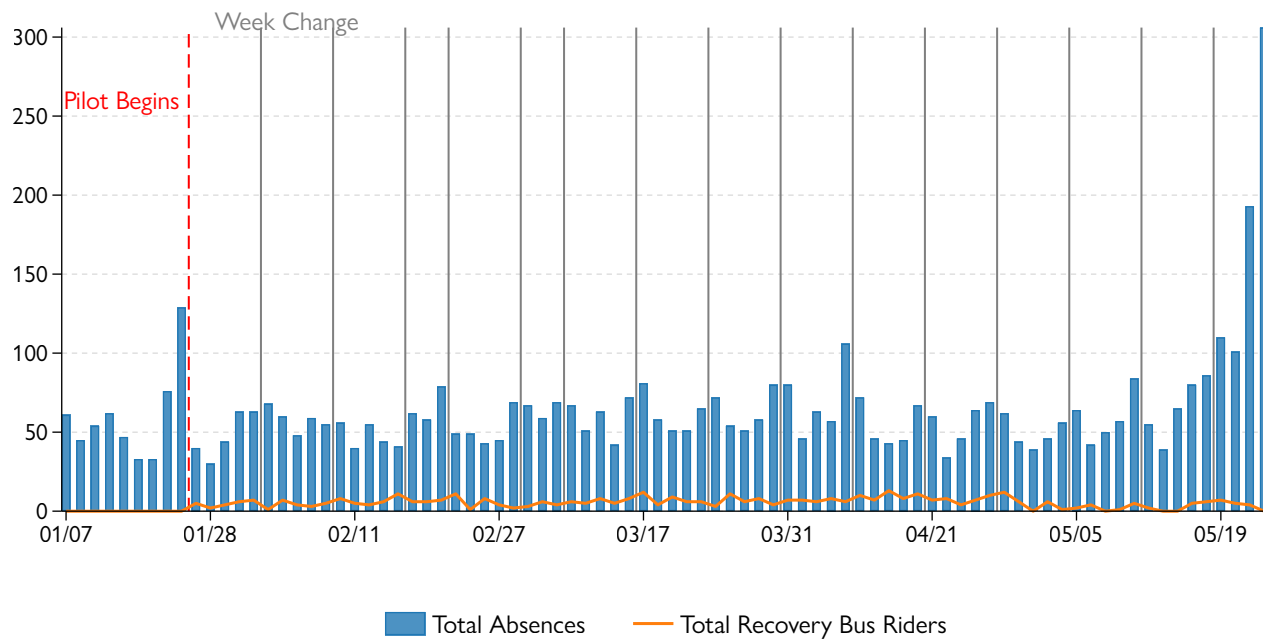Figure A6. Total Absences and Recovery Bus Riders by Day in Spring Semester SY 2025, Full Semester (School B)

Figure A7. Total Absences and Recovery Bus Riders by Day in Spring SY 2025, Excluding Last 2 Weeks (School A and School B Combined)
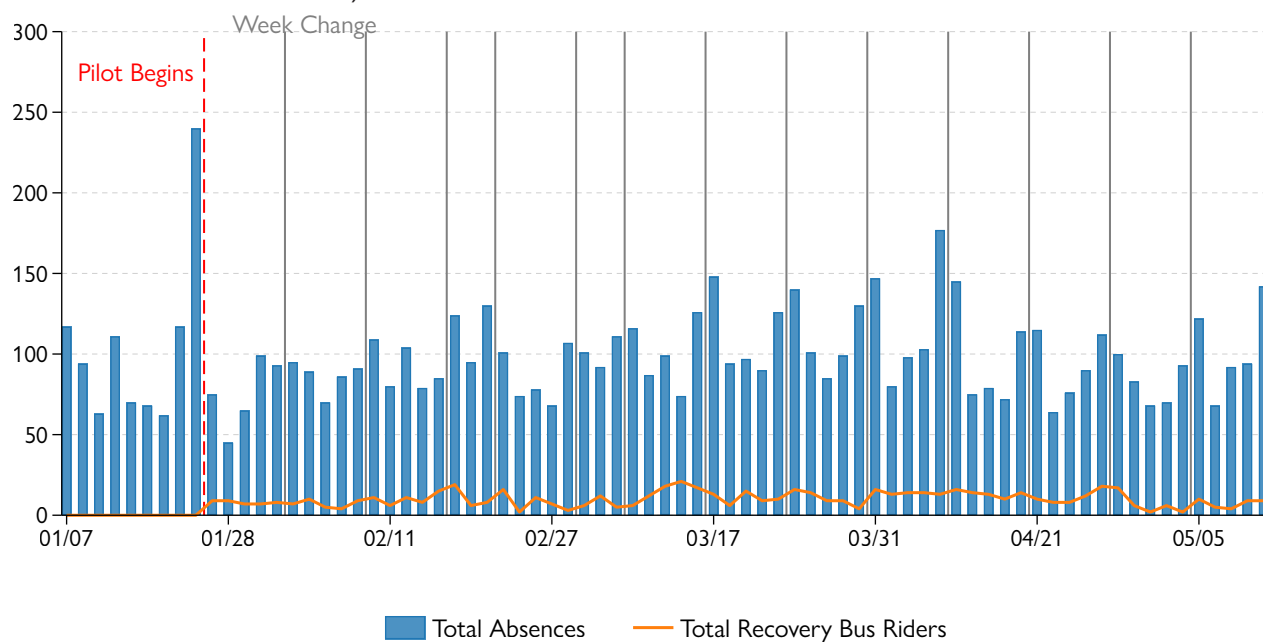
Figure A8. Total Absences and Recovery Bus Riders by Day in Spring SY 2025, Excluding Last 2 Weeks (School A)
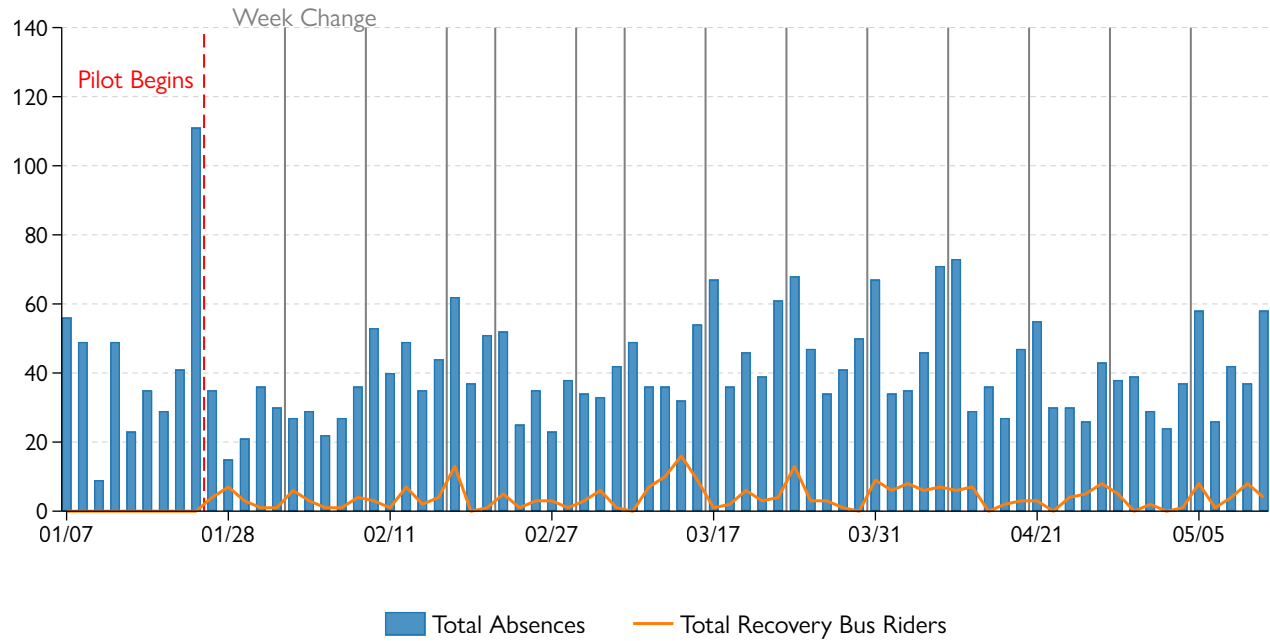

Figure A9. Total Absences and Recovery Bus Riders by Day in Spring SY 2025, Excluding Last 2 Weeks (School B)
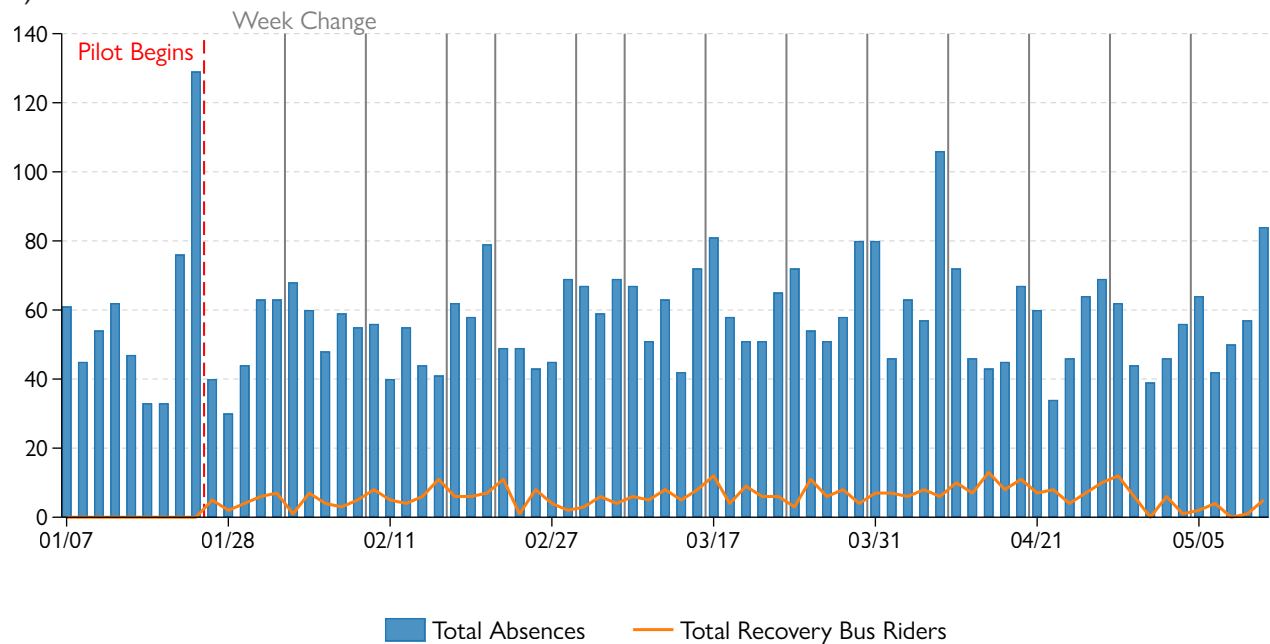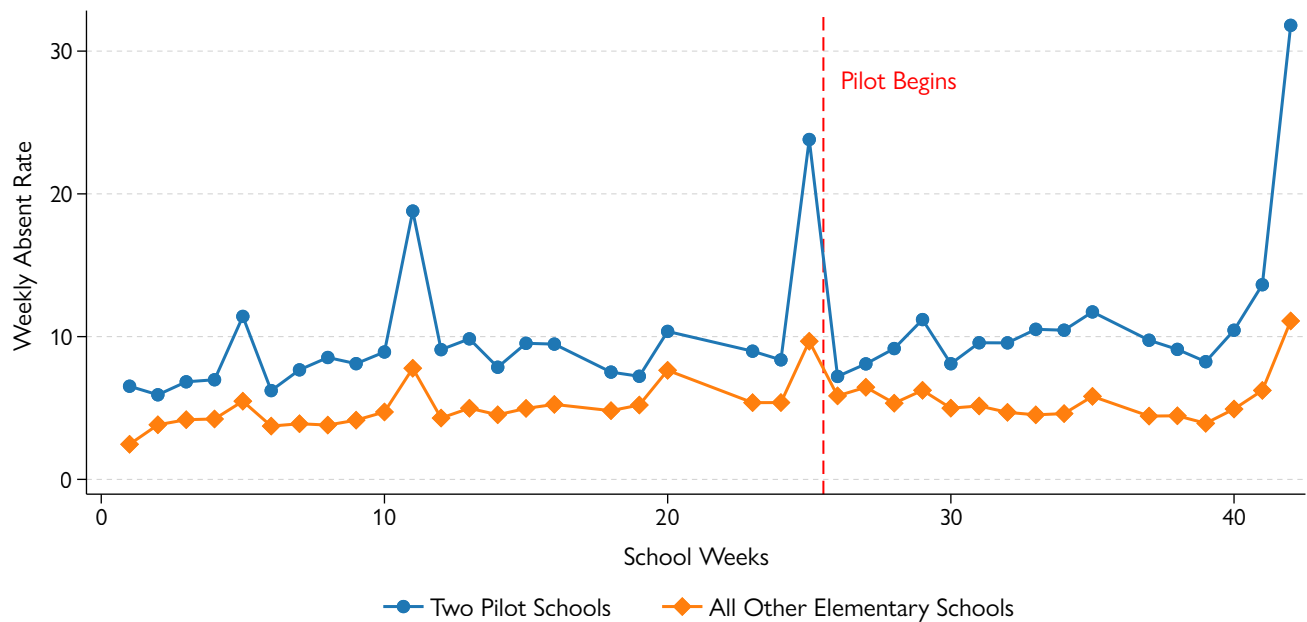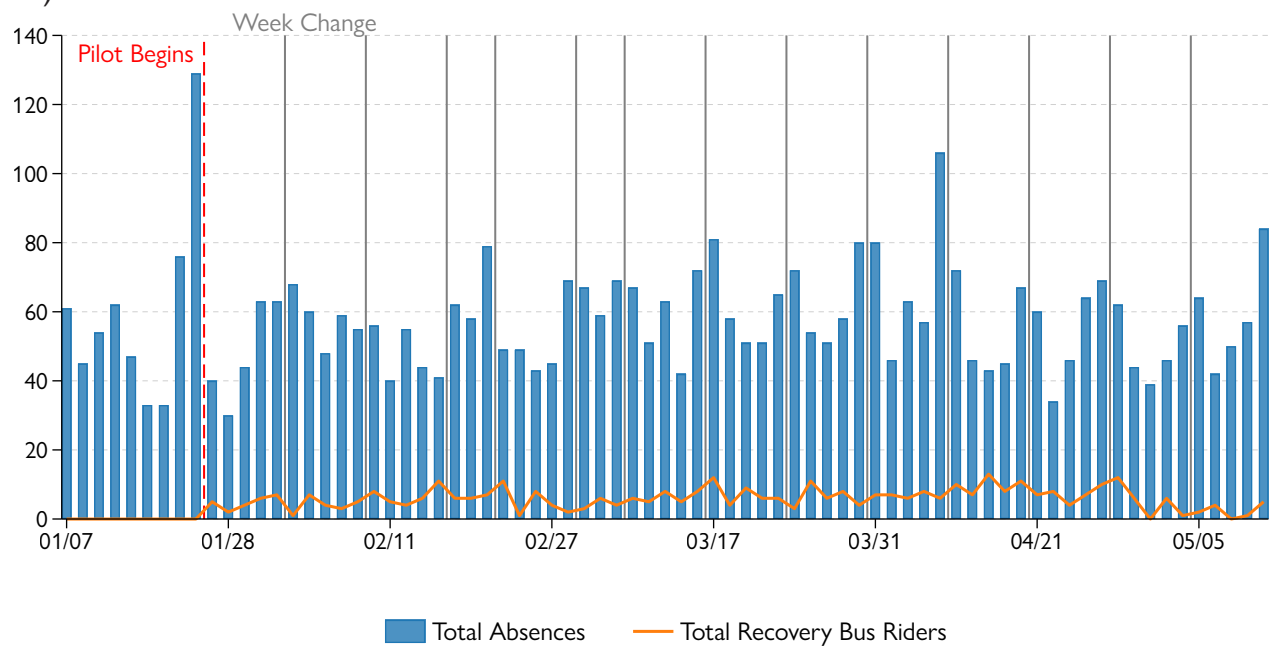
Figure A10. Weekly Absence Rate for Pilot Schools and All Other Traditional Elementary Schools in the District

Notes. Students were off the first 3 days of week 5 due to the Labor Day holiday, a teacher workday, and a professional development day. The first 3 days of week 11 were "Fall Break." Likewise, schools were closed the first 4 days of week 25, leading to a greater number of absences. We omitted the last week of the school year.

Figure A11. Weekly Absence Rate for Pilot Schools and Other Traditional Elementary Schools in South Fulton (Zones 1-3)
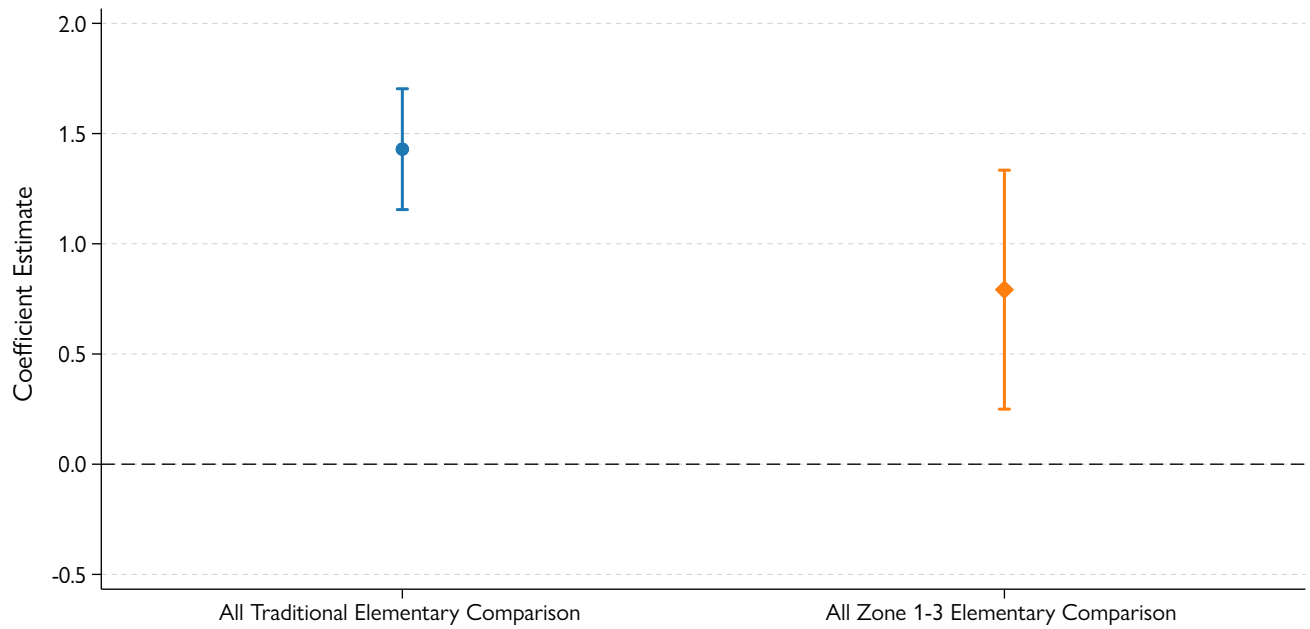

Notes. Students were off the first 3 days of week 5 due to the Labor Day holiday, a teacher workday, and a professional development day. The first 3 days of week 11 were "Fall Break." Likewise, schools were closed the first 4 days of week 25, leading to a greater number of absences. We omitted the last week of the school year.

Figure A12. Estimated Impact of Recovery Bus Pilot on School-Level Absence Rate Relative to All Traditional Elementary Schools and to South Fulton Traditional Elementary Schools (Zones 1–3), Full Semester

Notes. Vertical bars represent a 90% confidence interval. Coefficient estimate represents estimated change in the school-level percent absent, conditional on day of week, number of school days in week, and observable student demographic characteristics.

Table A1. Impact on the Absence Rate of Attendance Recovery Bus Pilot, Spring 2025

	All FCS Elementary Schools	All South FCS Elementary Schools
Pilot Schools X After (DID)	0.635***	0.279
	(0.168)	(0.263)
After	0.447***	0.853***
	(0.101)	(0.218)
Pilot Schools	2.211***	2.374
	(0.692)	(1.178)
First Day in Week	0.164	0.047
	(0.271)	(0.352)
Last Day in Week	0.179	0.732
	(0.254)	(0.416)
Additional Controls		
Student Demographics	✓	✓
Number of Weekly School Days	✓	✓
Constant	✓	✓
R-Squared	0.296	0.258
Observations	9,646	3,824

Notes. *p<.01, **p<.005, ***p<.001. The model drops pre-recovery bus pilot period with no school days, no in-person or late school opening days. We omitted the last week of spring semester in this regression, which has abnormally high absences. The number of comparison schools for all FCS elementary schools is 56, and the number of comparison schools for all South FCS elementary schools is 21.

Table A2. Impact on the Absence Rate of Attendance Recovery Bus Pilot, Full Semester

	All FCS Elementary Schools	All South FCS Elementary Schools
Pilot Schools X After (DID)	1.429***	0.786**
	(0.137)	(0.262)
After	0.857***	1.612***
	(0.130)	(0.255)
Pilot Schools	2.052***	2.369
	(0.693)	(1.155)
First Day in Week	0.029	-0.215
	(0.287)	(0.434)
Last Day in Week	0.057	0.541
	(0.266)	(0.475)
Additional Controls		
Student Demographics	✓	✓
Number of Weekly School Days	✓	✓
Constant	✓	✓
R-Squared	0.281	0.253
Observations	9.878	3,916

Notes. *p<.01, **p<.005, ***p<.001. The model drops pre-recovery bus pilot period with no school days, no in-person or late school opening days. The number of comparison schools for all FCS elementary schools is 56, and the number of comparison schools for all South FCS elementary schools is 21.

Table A3. Estimated Relationship Between Attendance Recovery Bus Pilot and Formative Assessment for Two Pilot Schools (Schools A and B), Spring 2025

	Math		Reading/ELA	
	Scale Score	National Percentile. Rank	Scale Score	National Percentile. Rank
1–2 Bus Rides	-1.61	-1.333	-1.444	-0.713
	-3.56	-2.894	-5.697	-2.779
3–4 Bus Rides	10.722	10.551*	-6.302	-4.448
	-7.357	-5.977	-11.074	-5.4
5+ Bus Rides	3.134	1.79	-0.908	-4.155
	-4.19	-3.411	-6.844	-3.336
Winter Test Score	0.925***	0.804***	0.928***	0.845
	-0.029	-0.026	-0.025	-0.024
Additional Controls				
Student Demographics	✓	✓	✓	✓
Grade FE	✓	✓	✓	✓
Constant	✓	✓	✓	✓
R-Squared	0.816	0.663	0.833	0.708
Observations	659	659	651	651

Notes. *p<.10, **p<.05, ***p<.01. The sample is the students who took both winter and spring tests in the two pilot schools.