

Improving school attendance among homeless children: Evaluating the attendance matters program

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ABSTRACT

Absenteeism is a prevailing concern in American education, and students experiencing homelessness are particularly vulnerable to high rates of school absenteeism. Despite this increased risk, we find no research in which the primary focus is assessing the efficacy of shelter-based programs that seek to reduce absenteeism among homeless children. Thus, we evaluate the Attendance Matters program, which sought to improve school attendance among homeless students in New York City shelters through interagency coordination, leveraging data to target scarce program resources, and employing evidence-based social work practices. We use administrative data in a quasi-experimental study to evaluate the program's effects on school attendance and, secondarily, on outcomes of proficiency and stability. Findings suggest that the program resulted in reductions in days absent and the absence rate among K-8 students, though findings for secondary outcomes and attendance outcomes for high school students were inconsistent across model specifications. Results, which likely understate actual program effects, have implications beyond this setting, as they suggest that a low-budget program leveraging evidence-based practices and existing resources can impact this seemingly intractable problem. Education and homelessness policymakers should seek opportunities to test replication in additional settings.

1. Introduction

Homelessness among school-aged children and adolescents is a relatively common phenomenon in the United States, though variation in measures of child and adolescent homelessness and the methods used to calculate them complicate efforts to pinpoint its scope. Estimates from the U.S. Department of Education suggest that between 1.3 and 1.5 million students were identified by local education agencies as lacking a “fixed, regular, and adequate nighttime residence” - meaning they were living in a shelter, doubled-up, in a hotel or motel, or unsheltered during the school year - while the U.S. Department of Housing and Urban Development's most recent Point-in-Time count estimates that more than 95,000 children under 18 experienced sheltered homelessness on a single night in 2020 (Henry et al., 21; [National Center for Education Statistics, 2019](#)).

Homelessness is linked to poor educational achievement and functioning generally. Though separating the effects of homelessness from those of poverty has proven difficult, growing evidence substantiates a causal association between homelessness and increases in school

absences - the number of days missed among elementary, middle, and high school students ([Cunningham, Harwood, & Hall, 2010](#); [Kearney, 2008](#)). [Buckner, \(2008\)](#) review of 25 studies did not find conclusive evidence of a causal relationship between homelessness and attendance beyond the effects of the poverty, though more recent studies are more suggestive of one ([Buckner, 2008](#)). Canfield and colleagues' person-centered approach finds that homelessness contributed to lower attendance among a subset of homeless students ([Canfield, Nolan, Harley, Hardy, & Elliott, 2016](#)), Deck found lower median attendance rates for sheltered students compared to poor, housed students ([Deck, 2017](#)), and Nolan and colleagues found that homeless students experienced truancy at up to nine times the rate of their housed peers ([Nolan, Cole, Wroughton, Clayton-Code, & Riffe, 2013](#)). Additionally, two separate studies leveraging administrative records found that attendance mediated relationships between homelessness and school achievement ([Fantuzzo, LeBoeuf, Chen, Rouse, & Culhane, 2012](#); [Tobin, 2016](#)). Many facets of homelessness can contribute to poor attendance, though Cassidy demonstrates that poor school attendance can predate entry into shelter ([Cassidy, 2020](#)). These include multiple relocations, stressful

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living conditions, social isolation, transportation challenges, rules that may impede parents' ability to take their children to school, logistical challenges with accessing basic services such as laundry or childcare, and a shelter environment that may not be conducive to school work and learning (Buckner, 2008; Pappas, 2016; Samuels, Shinn, & Buckner, 2010).

The consequences of absenteeism can be severe and long-lasting. For kindergarteners, chronic absenteeism is related to contemporaneous poor socio-emotional outcomes, and lower math and reading achievement in subsequent years (Gottfried & Hill, 2019; Jacobs & Lovett, 2017; Romero & Lee, 2007). More generally, absenteeism is predictive of lower academic achievement measured by grades, test scores, and high school graduation rates, sometimes more so than GPA and other more commonly used predictors (Balfanz & Byrnes, 2012; Gottfried & Hill, 2019; Jacobs & Lovett, 2017). In the longer-term, chronic absenteeism is correlated with poor health, unemployment, and negative financial outcomes. Furthermore, chronic absenteeism persists if not attended to, as most chronically absent students were chronically absent in prior years (Balfanz & Byrnes, 2013).

Students who are homeless, as a function of their low socioeconomic status and unstable housing, are more poorly situated to overcome the adversities resulting from poor school attendance than their peers and, therefore, addressing their absenteeism is an important priority. Past efforts to improve school attendance among homeless children support the importance of identifying those who are struggling, assessing them, and tracking their progress with administrative data. In addition, coordination across schools and other city agencies provides continuity of services and learning (Masten, Fiat, Labella, & Strack, 2015). For example, a New York City intervention that centered on school attendance and used schools as organizing hubs for community and social services found that participating students experiencing homelessness were 31% less likely to be chronically absent than similar students in comparison schools (Balfanz & Byrnes, 2013). Placing children in shelters close to their community of origin is also associated with greater stability, and improved school attendance (Cassidy, 2020).

1.1. The Attendance Matters program

The Attendance Matters (AM) program, a privately funded initiative implemented through a partnership between New York City's Department of Homeless Services (DHS) and Department of Education (DOE), the Gateway Housing Development Corporation, and three shelter providers, sought to address barriers to school attendance for children experiencing sheltered homelessness in New York City (NYC) during the 2018–2019 and 2019–2020 school years. New York City has the largest homeless population, and – reflecting the City's unique right to shelter – the largest population of sheltered homeless families with children of any municipality in the country, with 15,000 children sleeping in shelter each night (City of New York Department of Homeless Services, 2021; Henry, Mahathay, Morrill, Robinson, Shivji, & Watt, 2019). Shelters are largely run by a network of nonprofit providers and managed by the City's Department of Homeless Services, which has an annual budget exceeding \$1 billion (City of New York, 2021). Attendance rates among sheltered students in NYC range from 68% to 86%, depending on grade, and track 10 to 15 percentage points lower than the attendance rates of students in permanent housing (Pappas, 2016).

The Attendance Matters program was organized according to three program components:

1. Coordination across agencies
2. Use of data to identify students and track progress
3. Training in evidence-based practices

During its initial year, the 2018–2019 school year, Attendance Matters operated in five shelters, managed by three nonprofit agencies: BronxWorks, HELP USA, and Women in Need. Attendance Matters hired

an external program leader – the only new position for the pilot – to coordinate school absenteeism efforts with staff from the Department of Homeless Services, its contracted shelters, and the New York City Department of Education. Attendance Matters also established shelter-level teams that spanned agencies, on the logic that collective expertise could address the multiple causes of poor homeless student attendance. Case-level coordination was spearheaded by the program team leader who worked in conjunction with shelter caseworkers to identify K-8 students with high absenteeism.

The program built on existing tools and staff, leveraging existing daily school attendance data provided through systemwide DHS-DOE data-sharing efforts to identify students in need of intervention and to track their progress. The program team leader held weekly meetings at each participating shelter to review attendance data from DOE, which had previously developed processes with DHS for sharing daily school attendance updates on all DOE students in shelter. These data were analyzed to highlight progress and challenges faced by individual students and could be shared with other relevant staff. In turn, they could be supplemented by biopsychosocial assessments that are conducted for all families in shelter by Client Care Coordinators (i.e., social workers) and by family observations from other team members.

Attendance Matters also integrated evidence-based social work practices – notably motivational interviewing and trauma-informed care – into shelter-based efforts to reduce school absenteeism. In addition, the AM team received workshops on NYC education system basics, such as where to find help at school, educational rights of NYC students in shelter, DOE processes and services for children with special needs, and school discipline and suspension policies. The program provided trainings in these competencies to shelter and DOE staff on a quarterly basis. (Gateway Housing, 2020).

Coordination across the multiple government and nonprofit agencies and the incorporation of established social work practices allowed Attendance Matters teams to address a range of administrative, structural, and family and individual-level reasons for children to experience high levels of school absenteeism. Children in Attendance Matters programs missed school because of their own physical and mental health issues as well as challenges facing their parents and guardians, enrollment challenges and other administrative barriers within the school system, other childcare issues, and problems navigating transportation and other school pick-up and drop-off issues. Recognizing the role of parents in attendance and other academic outcomes (Epstein & Sheldon, 2002), Attendance Matters teams involved parents (or other guardians) in their efforts to address family practices and more structural barriers to improved school attendance (Gateway Housing, 2020).

While Attendance Matters focused on the K-5 population, the program included middle school students in two ways. First, issues of attendance were often tied to family-level factors and thus, efforts to solve the problems of one child often resulted in improvements for all related children. Second, discussions of poor attendance often explicitly included students in middle school children and occasionally those in high school, though the intervention was not tailored to the high school population. Consequently, we chose K-8 children as our main population of analysis, though we test findings against the K-5 population for consistency and against high school students, where we do not expect to see an impact. Because each shelter had only one Attendance Matters team, the program's focus was on children with the highest level of absenteeism, which meant not all children could be served. In addition, there were regular interagency meetings that brought together staff from AM-participating shelters, DHS and DOE officials, and the Attendance Matters program staff to monitor outcomes, troubleshoot common challenges, and identify best practices. More information about the program's operations, development, and implementation is available in a separate report (Gateway Housing, 2020).

This study evaluates the program's impacts in its first year of implementation, the 2018–2019 school year. The focus is on the pilot's primary outcomes related to school attendance; a secondary exploration

is whether the program has any effects on outcomes related to other measures of educational functioning, i.e., proficiency on language and math standardized tests, as well as school stability.

2. Methods

2.1. Data

Data are drawn from administrative records maintained by the NYC Department of Homeless Services (DHS) and the NYC Department of Education (DOE). Our reference population consists of all school-age children who spent time in a DHS Tier II shelter between July 1, 2015 and July 1, 2020. Tier II shelters, which provide families with individual apartments and offer on-site social services and security, are the most common form of temporary housing for homeless families in NYC. Some are directly operated by DHS; most are managed by non-profit providers. During our study period, homeless families were also placed in “cluster” apartments scattered in private buildings and in commercial hotels. We exclude students in these families from our analysis, given that the intervention we study is designed for Tier II settings. Accordingly, when we use the term “homeless” in this report, we are typically referring to residents of Tier II shelters.

For purposes of linking records across agencies, we include any sheltered individual served by a Tier II shelter who was between four and 21 years of age during at least some portion of the 2015–2019 school years as, in New York City, children are enrolled in Kindergarten in the calendar year in which they turn five and may remain in high school until the end of the school year in which they turn 21 (NYC Department of Education, 2002c, 2022a). Unless otherwise noted, all years refer to school years, which we define as beginning in July and ending in June and are named for their starting year (e.g., “2015” refers to the school year running from July 1, 2015, to June 30, 2016). In all, there are about 77,000 such candidate students in shelter. We link these candidates to DOE records for the 2015 through 2018 school years through a probabilistic match using SAS Link King software. We successfully matched 77% of candidate students who were homeless with DOE school records¹.

The administrative data systems used in this analysis allow us to observe students experiencing homelessness and their families in rich detail. The DHS data describes students’ circumstances of shelter entry and the particulars of their shelter spells like start and end dates. We follow DHS practice, and common practice in research using data from DHS in defining a homeless “spell” as a shelter stay inclusive of gaps up to 30 days (Culhane, Metraux, Park, Schretzman, & Valente, 2007). The DOE data include detailed student biographical information, enrollment, attendance, and standardized test scores.

2.2. Variables

2.2.1. Outcomes

Indicators of student attendance constitute our primary outcomes. We focus on two measures: days absent and the absence rate. Absent is defined as having missed a day (NYC Department of Education, 2022b); days absent is a count of missed school days, and absence rate is days absent divided by total school days. We also measure rates of chronic absenteeism and severe chronic absenteeism as operationalized by Attendance Matters, the former meaning that a student’s absence rate is between 10.0% and 19.9% and the latter meaning a student’s absence rate is 20.0% or greater (Gateway Housing, 2020). We choose multiple primary measures because school systems monitor absenteeism in different ways – some using the number of days missed and some using the percentage of days missed (the latter being used by NYC). In

addition, it is possible to have a significant impact on number of days missed without seeing an impact on chronic absenteeism rates.

We additionally study four secondary outcomes, which, while not the focus of AM, might reasonably be affected by its enhanced supports. The first is school changes, which is an indicator equal to one if a student experiences a non-structural school admission during the school year. Structural changes are those associated with leveling up, the leading examples of which are graduating from elementary to middle school between 5th and 6th grades and from middle to high school between 8th and 9th grades; in NYC DOE, these level-ups typically entail enrolling in a new school. The other secondary outcomes relate to academic performance. Per New York State guidelines, English proficiency is an indicator equal to one if a student scores level three or four on the relevant New York State standardized tests while those scoring levels one or two, or who miss the test, are defined as not proficient; math proficiency is defined analogously (New York State Department of Education, 2018). We define overall grade-level proficiency as being proficient in both math and reading; thus, proficiency is an indicator equal to one if a student is proficient in both English and math, and zero otherwise. Note that our data does not include proficiency measures for students in grades K–2 or for high schoolers, as these standardized tests are not administered to those grade levels.

2.2.2. Treatment

A student is counted as having received treatment if their main shelter was one of the five AM sites. We define a “main” shelter as one in which a homeless student spends the largest share of days during a homeless spell (i.e., a stay in shelter). For students with multiple spells within a school year, “main” is defined in reference to their first spell.

2.2.3. Covariates

Although aspects of the shelter assignment process are arguably quasi-random (due to, for example, capacity constraints) (Cassidy, 2020), the AM pilot is not a randomized controlled experiment and therefore, our analysis must account for potential confounding factors. Fortunately, detailed administrative data allow us to account for factors that could be related to treatment assignment (placement in an AM pilot shelter) and student outcomes, including:

- Circumstances of Shelter Entry: indicators for school year, month of shelter entry, grade level, school borough of origin, shelter borough, in-school-borough placement, and non-NYC origin.
- Student Characteristics: indicators for female gender, English language learner, disability (individualized education program (IEP)), subsidized school lunch, age in months, and category of race/ethnicity (White, Black, Hispanic, Asian, Native American, multi-racial, unknown).
- Family Characteristics: head female gender (indicator), head age (continuous), family size (count), number of students in family (count), and homeless shelter eligibility reason category (eviction, domestic violence, overcrowding, housing conditions, other, unknown).

Unless otherwise noted, references to “covariates” in our analysis denote this set of variables. Conditioning on these observable characteristics can help to compensate for the fact that treatment shelters were not randomly selected, though they cannot rule out differences in unobservable characteristics (which is why we pursue a difference-in-differences methodology). In the event treatment and non-treatment shelters are similar despite non-random assignment, the inclusion of additional covariates in the analysis will lead to more precise estimates of the coefficients of interest.

Table 1 summarizes the path from the raw data to our analytical sample. The unit of observation is a student-school year, and, as such, many students appear more than once. The Treatment column includes student-school years where the main shelter of a student’s homeless

¹ As expected, not all of these students have records within the 2015–2018 period, given our over-inclusivity.

Table 1
Sample Step Down.

	Control	Treatment	Total
Homeless K–12 Students 2015–18	49,851	1,239	51,090
2017 & 2018 School Years	24,334	1,239	25,573
Excluding Special Districts	23,020	1,175	24,195
With Current Year Attendance	22,489	1,147	23,636
With Prior Year Attendance	18,153	957	19,110

spell was one of the five AM Year 1 pilot shelters during 2018 (and thus exposed to AM treatment); the Control column includes all other shelters (including AM shelters in 2017, prior to program start). We observe 51,090 school years for students experiencing homelessness during the 2015–2018 period.² We focus on 2017 and 2018 so as to have a pre-Attendance Matters comparison period most similar to the Year 1 pilot (2018). Our analysis excludes special school districts, including students with disabilities, alternative schools, and charter schools, because data for these districts are less reliably observed and/or have different interpretations. This leaves us with 24,195 student-years observations; of which 23,636 have current-year attendance data. Henceforth, we refer to these 24,195 observations as our “Full Sample.”

Panel A of Table 2 breaks out row 3 of Table 1 in further detail, showing the distribution of students experiencing homelessness across school years and shelter settings. In all, 1,175 students were exposed to AM treatment, while 23,020 student-years serve as controls. Panel B provides the same breakout for a “continuing homeless” sample. These are students who were also homeless in the year prior to the school year in question. This subsample is of interest because it describes a subset of students with prolonged or recurring homelessness experiences.

2.3. Analytical methods

We use two quasi-experimental techniques to guard against unobservable differences between treatment and control conditions. The first is linear regression estimated by ordinary least squares (OLS) and conditioned on the covariates outlined above. The second is an extension of OLS: a difference-in-differences approach comparing treatment and control shelter pre- and during- the Year 1 Pilot.

Our estimating equation takes the general form:

$$\begin{aligned}
 outcome_{it} &= \beta' covariates_{it} + \gamma' outcomes_{i,t-1} + \delta 1\{year = 2018\} \\
 &+ \tau 1\{shelter = AMsite\}year = 2018\} \\
 &+ [shelter_s + provider_p + school_e + shelter_and_school_covariates] + \epsilon_{it}
 \end{aligned}$$

Table 2
Data and Sample Overview.

		2017	2018	Total
A. Full Sample	Control Shelters	12,072	10,948	23,020
	Treatment Shelters	0	1,175	1,175
	Total	12,072	12,123	24,195
B. Continuing Homeless Sample	Control Shelters	6,306	5,766	12,072
	Treatment Shelters	0	684	684
	Total	6,306	6,450	12,756

² We include the 2015 and 2016 school years (line 1 of Table 1) simply for context, as this is the universe for our data match. As described in the main text, the analysis focuses on the school year prior to Attendance Matters (2017) and Attendance Matters Year 1 (2018).

An outcome for student *i* in year *t* is a linear function of treatment, an indicator equal to one if a student’s main shelter is an AM Year 1 Pilot site and the year is 2018 (and zero otherwise), and the treatment effect is estimated by τ , our parameter of interest. Our multivariate linear regression specification (which we refer to as “OLS” for shorthand) controls for covariates whose associations with outcomes are measured by the vector β ; an indicator for school year (equal to 1 if the year is 2018 and 0 if 2017), with association δ ; and, importantly, student prior school year outcomes, the relevance of which are measured by parameter vector γ . The prior year outcomes we control for are days absent quartile, absence rate quartile, and an indicator for school change; we treat these controls as categorical because it allows us to append an additional category indicating that the prior year outcome is missing (as would be the case, for example, with kindergarteners), so as not to incidentally truncate the sample. We also estimate a more rigorous difference-in-differences (DD) specification that augments the OLS model with a set of dummy variables (fixed effects) indicating each student’s main shelter, shelter provider, and school of origin. These control for unobservable shelter, provider, and school effects that are constant across students experiencing homelessness and over time (e.g., location, quality, and amenities). In addition, we introduce three time-varying controls (shelter and school covariates) - the number of students in a shelter, the number of schools attended by students in a shelter, and the number of students experiencing homelessness in a school—to proxy for dynamic differences in student settings. As such, the DD model estimates changes in outcomes among students at treated shelters pre- and post-AM, relative to changes between the same periods among students in control shelters.

To assess the potential for heterogenous effects, we also conduct a supplementary analysis (Fig. 2), using the same estimating equations but where the outcomes are a series of binary variables for students belonging to quintiles of the attendance distribution.

2.4. Intent-to-treat analysis

This is conducted as an intent-to-treat (ITT) analysis. We treat the Attendance Matters program as a shelter level intervention and thus measure attendance for all students in AM shelters, but our records do not indicate to what extent each student received services resulting directly from the AM program. To some degree this was by design, as those with more intensive or complex needs received greater priority from the AM team, but it was also a function of limited staff and variability in the length of stay in shelters (i.e., students in an AM shelter for a whole year and who were receiving program services would have received more treatment than a similar student in that shelter for only a portion of the year). That our treatment measure is exposure rather than participation means that we are likely understating any relationship between receiving the AM intervention and changes in school attendance, stability, or performance.

This study was approved to assess the efficacy of the Attendance Matters program by the Institutional Review Board of New York City’s Center for Innovation through Data Intelligence as Study Number 20180001F.

3. Results

Table 3 presents descriptive statistics of our K-8 and high school samples, as well as balance tests contrasting mean differences in student characteristics of interest. AM students are like their untreated peers in demographics, circumstances of shelter entry, and prior year school performance. Most relevant to our analysis, there are no differences at baseline in attendance or school changes. This suggests that the assumptions of our OLS model are satisfied in terms of observable characteristics. Furthermore, Fig. 1, which shows the AM and control group means for several important educational metrics during the 2015 through 2018 school years, suggests that pre-trends in AM and non-AM

Table 3
Descriptive Statistics for Variables of Interest.

	K – 8 Students			High School Students		
	Treatment	Control	Diff.	Treatment	Control	Diff.
Grade	3.63	3.47	0.16*	10.13	10.14	-0.01
Days Absent Prior Year	24.56	23.82	0.73	30.6	31.17	-0.56
Absence Rate Prior Year (%)	15	15	0	21	22	-1
Chronically Absent in Prior Year (%)	63	60	4	56	61	-6
Severely Chronically Absent in Prior Year (%)	27	25	2	34	36	-1
Changed School in Prior Year (%)	30	30	0	19	20	-1
Homeless Prior Year (%)	64	60	4*	71	61	10**
School Year LOS	200.31	179.44	20.87**	214	189.25	24.75**
Length of Stay	519.8	481.24	38.56*	574.69	521.99	52.70**
Total School Days	164.63	163.78	0.85	157.06	148.63	8.43**
Days Absent	23.36	25.31	-1.95**	38.37	36.86	1.51
Absence Rate (%)	15	16	-1**	27	27	-1
Chronically Absent (%)	58	63	-5**	62	67	-5
Severely Chronically Absent (%)	26	28	-3	40	45	-5
Changed School (%)	36	41	-5**	24	27	-4
Proficient in English Language Arts Prior Year (%)	19	16	3	NA	NA	NA
Proficient in Math in Prior Year (%)	18	14	4**	NA	NA	NA
Proficient in Prior Year (%)	11	8	4**	NA	NA	NA
Proficient in English Language Arts (%)	17	19	-2	NA	NA	NA
Proficient in Math (%)	17	15	2	NA	NA	NA
Proficient (%)	10	9	1	NA	NA	NA

* p < 0.10.

** p < 0.05.

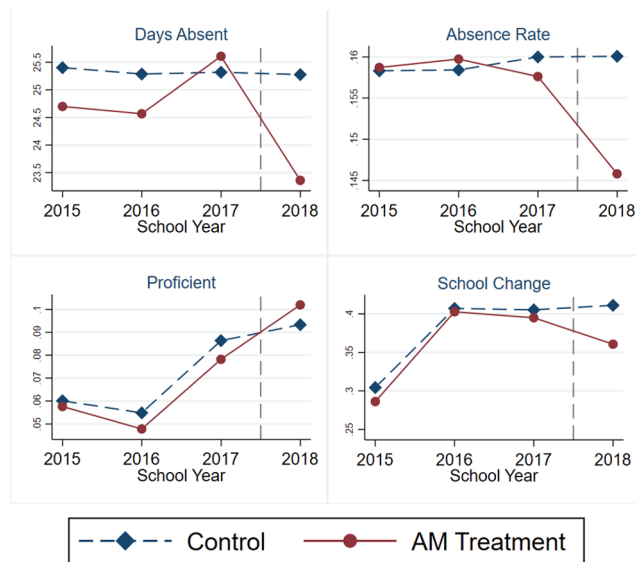


Fig. 1. Pre-Attendance Matters Trends for K-8 Students by Treatment Status.

shelters are comparable, meaning that our DD model can yield an even more credible comparison.

Apart from treatment-control balance, these descriptive statistics also make plain the profound educational challenges faced by students who are homeless. In our sample, the average homeless K-8 student is absent 25 days per year, or about 16% of the time. Sixty-three percent of K-8 students experiencing homelessness are chronically absent; 41% change schools in a given year; and 9% are proficient in both Math and English.

Table 4 presents our main results for K–8 students. Each row considers a different outcome. Column 1 provides outcome means for the control group. Columns 2 and 3 give our OLS and DD estimates, respectively, for the full sample; columns 4 and 5 do the same for the continuing homeless sample. Each cell reports the treatment effect; standard errors clustered by family are in parentheses and numbers of observations are in braces.

The most pronounced results for K-8 students are for our two primary

outcomes of interest – days absent and the absence rate. Depending on the model specification, exposure to AM is associated with significant decreases in absenteeism. A student whose primary shelter in 2018 implemented the Attendance Matters program had, on average, a reduction in days absent of 2.1 to 3.3 days (about a 10–15% decrease), compared to children in other shelters when controlling for potential covariates. We also observe statistically significant reductions in the absence rate varying from 1.3 percentage points to 1.7 percentage points. Results are consistently significant for our full sample; for models that included only students homeless in both the 2017 and 2018 school years, point estimates were consistently negative, but larger standard errors mean that we cannot rule out null effects. Participation in AM was associated with 2.9 and 4.5 percentage point decreases in the severe chronic absenteeism rates in the two models in which findings were significant, though the difference-in-difference models did not suggest an effect. We also saw notable drops (of between 2 and 4.4 percentage point) in the chronic absence rate, though only one of the four models was significant.

Exposure to Attendance Matters is associated with a reduction in the probability of school changes of between 2.5 and 7.4 percentage points, statistically significant in the full-sample OLS and continuing homeless DD specifications. While there is some noise in the estimates, AM appears to be associated with stability gains, at least for students with lengthy homelessness experiences. We do not, however, detect gains in proficiency among 3–8 graders.

Fig. 1, which shows trends in variables of interest in program and non-program shelters from 2015 through 2018, the first program year, supports these findings graphically. Days absent and absence rates track together in AM and non-AM shelters through 2017 before notable decreases in both in AM shelters in 2018. There are no such obvious changes in the proficiency and school change indicators for students in AM shelters the program’s first year.

We also ran models for K-5 students only and see largely confirmatory findings. We see statistical significance for three of our four models on days absent, on OLS models for absence rate, and both models for the full sample for the chronic absence rate.

For high school students, who were not targets of the Attendance Matters intervention, the scale of absenteeism is even more pronounced, with the average homeless high schooler missing 36.9 days per year in the control group. We do not find any statistically significant

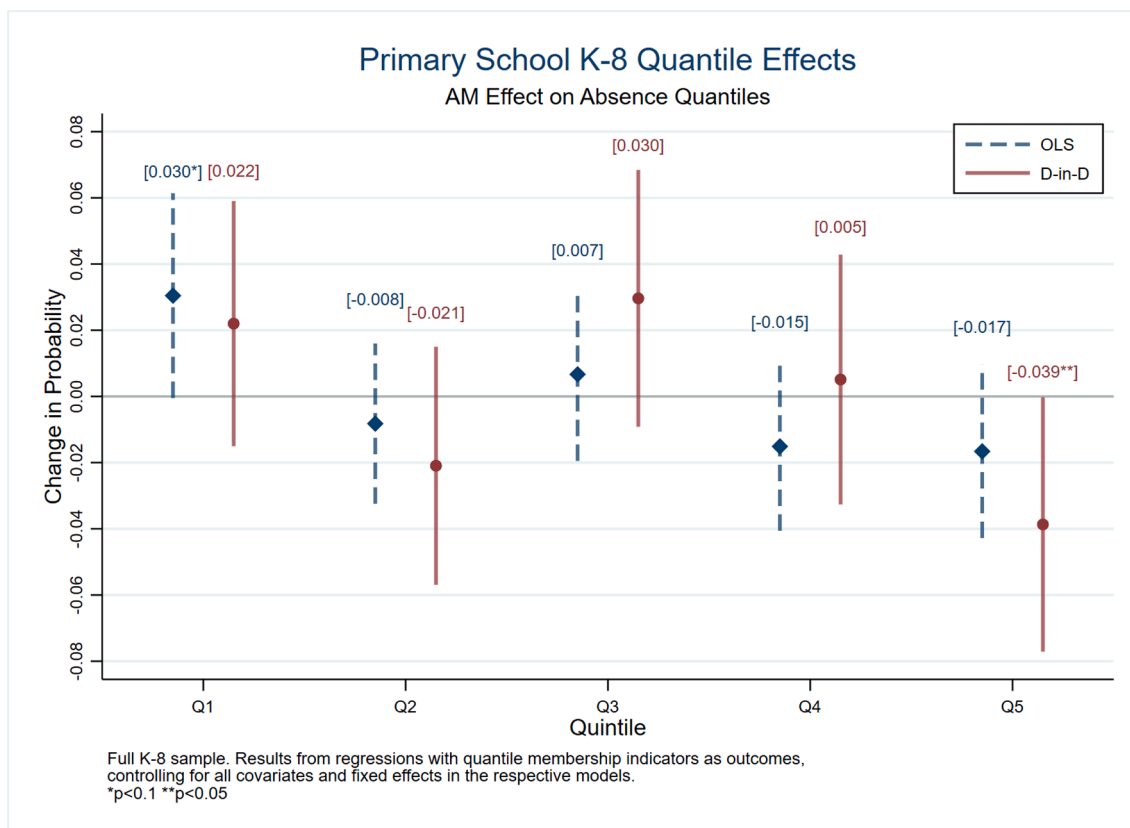


Fig. 2. Attendance Matters Effect on Absence Quantiles for K-8 Students.

associations between AM and attendance among this cohort of older students, as seen in Table 5. The DD point estimates for all four attendance measures are similar in magnitude to that among K-8 students, but we are unable to rule out null effects. On the other hand, AM may be associated with improvements in school stability: treated students are up to 7.6 percentage points less likely to change schools, significant in the OLS models for the full sample.

3.1. Distributional effects

It is useful to think about which students are most affected by AM, which we do by classifying treatment effects by where in the outcome distribution they take place. Fig. 2 plots the coefficient on AM treatment from regressions where the outcomes are binary indicators for membership in quintiles of the days absent distribution for K-8 graders (and controlling for main covariates). Results from the OLS model are in dashed navy and DD results are in solid maroon. Coefficients multiplied by 100 give the percentage point change in the likelihood of quintile memberships associated with AM. Bars give 95 percent confidence intervals. The evidence suggests AM effects are most concentrated at the extremes of the attendance distribution. AM students are more likely to have very few absences and they are less likely to have very many absences. However, the confidence intervals are wide, so these distributional results should be interpreted as suggestive.

4. Discussion

This first-year evaluation of the Attendance Matters program finds statistically significant positive effects on school attendance for K-8 students. Those in shelters participating in the program missed, on average, 2–3 fewer days of school and have an absence rate about 1.5 percentage points lower than their counterparts with no exposure to the program. Despite these gains, we do not see immediate improvements in

scores for standardized proficiency tests. The improvement in school attendance is a promising result for a small program evaluated in its initial and formative year operating in the city with the country’s largest shelter and public-school systems.

This is, to our knowledge, the first evaluation of an attendance-focused program situated within homeless shelters. Assessments of other attendance-focused programs (Epstein & Sheldon, 2002; Sheldon, 2007) suggest that AM’s coordination across systems and its enrollment of parents as allies in combatting absenteeism were likely critical components of its impact. More than 90% of school districts report at least one policy supporting parent involvement, and higher quality of school-family-community collaborations are associated with greater increases in school attendance (Epstein & Sheldon, 2002; Kessler-Sklar & Baker, 2000). Our findings have implications for the thousands of school-aged children in NYC shelters each year, as well as for children experiencing homelessness in school and shelter systems across the country. Though New York City’s scale and complexity offer unique challenges, the difficulties associated with school absenteeism – most commonly structural barriers associated with residential instability, poverty, and family practices – and the bureaucratic structures that manage homeless and education systems, are common across U.S. cities.

Though we do not weigh program benefits against costs, this evaluation suggests that a light-touch systems-level intervention leveraging existing data and service infrastructures can improve school attendance among homeless children. The combination of interagency coordination, data-centered performance monitoring, and evidence-based social work practice resulted in a significant effect on attendance with the addition of a single program leader spanning multiple shelters. While this evaluation did not find significant impacts between being in an AM shelter and academic proficiency, established linkages between improved attendance and academic achievement suggest that such downstream effects may be possible through a sustained intervention.

There are limitations to this study beyond the inherent difficulties of

Table 4
Regression Results for K-8 Students.

Outcome	Outcome Mean (1)	Full Sample		Continuing OLS (4)	Homeless DD (5)
		OLS (2)	DD (3)		
Days Absent	25.3** (20) {17,995}	-2.1** (0.07) {17,942}	-3.3** (1.1) {17,806}	-3.0** (0.9) {9,068}	-2.5 (1.5) {8,893}
Absence Rate	0.160** (0.127) {17,995}	-0.014** (0.005) {17,942}	-0.013* (0.007) {17,806}	-0.017** (0.006) {9,068}	-0.005 (0.01) {8,893}
Chronic Absence Rate	0.631** (0.483) {17,995}	-0.042** (0.019) {17,942}	-0.044 (0.027) {17,806}	-0.03 (0.025) {9,068}	-0.02 (0.038) {8,893}
Severe Chronic Absence Rate	0.283** (0.451) {17,995}	-0.029** (0.017) {17,942}	-0.030 (0.026) {17,806}	-0.045** (0.022) {9,068}	0.004 (0.035) {8,893}
School Change	0.407** (0.491) {18,089}	-0.043** (0.02) {18,034}	-0.034 (0.029) {17,901}	-0.025 (0.026) {9,122}	-0.074* (0.041) {8,951}
English Proficient	0.188** (0.391) {10,656}	-0.045 (0.017) {10,641}	-0.391 (0.023) {10,487}	-0.02 (0.022) {5,432}	-0.046 (0.035) {5,244}
Math Proficient	0.146** (0.353) {10,656}	0.014 (0.016) {10,641}	0.008 (0.021) {10,487}	0.023 (0.022) {5,432}	0.023 (0.033) {5,244}
Proficient	0.089** (0.285) {10,656}	0.013 (0.014) {10,641}	0.002 (0.017) {10,487}	0.02 (0.018) {5,432}	0.012 (0.026) {5,244}
Covariates	No	Yes	Yes	Yes	Yes
Prior Year Covariates	No	Yes	Yes	Yes	Yes
Difference-in-Difference	No	No	Yes	No	Yes
School Years	17,18	17,18	17,18	17,18	17,18

* p < 0.10.
** p < 0.05.

Table 5
Regression Results for High School Students.

Outcome	Outcome (1)	Full Sample		Continuing OLS (4)	Homeless DD (5)
		OLS (2)	DD (3)		
Days Absent	36.9** (37.7) {4,494}	3.4 (2.4) {4,448}	1.4 (3.4) {4,358}	5.6* (3.2) {2,409}	1.5 (5.2) {2,342}
Absence Rate	0.274** (0.272) {4,494}	0.011 (0.015) {4,448}	0.008 (0.022) {4,358}	0.035* (0.019) {2,409}	-0.013 (0.032) {2,342}
Chronic Absence Rate	0.672** (0.47) {4,494}	(0.031) (0.029) {4,448}	(0.006) (0.045) {4,358}	-0.047 (0.036) {2,409}	-0.101* (0.058) {2,342}
Severe Chronic Absence Rate	0.447** (0.497) {4,494}	-0.02 (0.028) {4,448}	0.015 (0.044) {4,358}	0.003 (0.035) {2,409}	-0.019 (0.059) {2,342}
School Change	0.274** (0.446) {4,931}	-0.060** (0.029) {4,872}	0.004 (0.042) {4,771}	-0.054 (0.036) {2,628}	-0.076 (0.546) {2,546}
Covariates	No	Yes	Yes	Yes	Yes
Prior Year Covariates	No	Yes	Yes	Yes	Yes
Difference-in-Difference	No	No	Yes	No	Yes
School Years	17,18	17,18	17,18	17,18	17,18

* p < 0.10.
** p < 0.05.

evaluating a program in its first year. As noted earlier, this is an Intent-to-Treat (ITT) study and because we cannot determine which, or how many, children at each Attendance Matters program received the intervention, or to what extent caseworkers may have worked with

them, we believe that our estimates represent a lower bound of the AM program’s impact. In addition, we know that there was meaningful variation in program conditions and implementation across sites. The shelters in which the program operated varied in capacity from 33 to 216 family units and spanned three nonprofit providers. In addition, shelters are idiosyncratic in leadership and staff, among other factors. Across shelters and especially across providers, program staff had to tweak elements of the program to suit each facility’s management styles, cultures, and constraints. Finally, our methods do not identify which program elements were most influential in decreasing absenteeism.

Despite acknowledged limitations, this evaluation suggests that, in its first year, the Attendance Matters program, guided by three commonly accepted best practices – interagency coordination, data-informed decisions, and evidence-based social work techniques – likely moved the needle on school attendance for a particularly high-risk population.

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CRedit authorship contribution statement

Dan Treglia: Conceptualization, Methodology, Supervision, Writing – original draft, Writing – review & editing. **Michael Cassidy:** Methodology, Formal analysis, Writing – original draft, Writing – review & editing. **Jay Bainbridge:** Conceptualization, Writing – original draft, Writing – review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Data availability

The authors do not have permission to share data.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.childyouth.2023.106880>.

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