

POLICY BRIEF

Transportation, Choice and Parental Priorities: An Analysis of Detroit's GOAL Line Program

Danielle Sanderson Edwards, *Michigan State University*

Kaitlin Anderson, *Michigan State University*

Emily Mohr, *Michigan State University*

June 2019

EPIC

Education Policy
Innovation Collaborative
RESEARCH WITH CONSEQUENCE

DISCLAIMER

This research result used data collected and maintained by the Community Education Commission (CEC) and/or Education Policy Innovation Collaborative (EPIC). Results, information and opinions solely represent the analysis, information and opinions of the author(s) and are not endorsed by, or reflect the views or positions of grantors, the CEC or any employee thereof.



Education Policy
Innovation Collaborative
RESEARCH WITH CONSEQUENCE

JUNE 2019

Transportation, Choice and Parental Priorities: An Analysis of Detroit's GOAL Line Program

By Danielle Sanderson Edwards, Kaitlin Anderson, Emily Mohr

OVERVIEW AND PURPOSE

In May 2018, the Community Education Commission (CEC), a non-profit partnership between education leaders, citizens, and the office of the Mayor of Detroit, created GOAL Line: a free bus service that transports Detroit students to one of ten schools in northwest Detroit, and takes students to free afterschool care at the city's Northwest Activities Center.¹ Each morning, participating students board a GOAL Line bus at the participating school closest to home. Each afternoon, a GOAL Line bus transports students to afterschool care, if they use it, and then finally back to the school closest to home at the end of the day. Students also have the option to ride directly to the stop of their choice, if they do not participate in afterschool programming. GOAL Line schools include schools in Detroit Public Schools Community District (DPSCD)—the city's traditionally organized public school district—as well as public school academies (charter schools). An explicit objective of the program is to encourage Detroit residents to remain in or return to Detroit who otherwise may send their children to a school outside of the city under the state of Michigan's expansive inter-district choice program.

This policy brief analyzes GOAL Line ridership and afterschool attendance for October 2018 through January 2019. In addition, it links the ridership and attendance data to parent responses on a December 2018 survey administered by the Education Policy Innovation Collaborative (EPIC) at Michigan State University. The key goal is to assess patterns of

GOAL Line use. Specifically, we consider 1.) overall patterns of GOAL Line ridership; 2.) patterns of consistent or frequent ridership; 3.) patterns of new and persistent ridership; 4.) the use of GOAL Line to attend afterschool care; 5.) parental satisfaction with GOAL Line, and 6.) GOAL Line ridership and neighborhood residence in Detroit.

This analysis is important because it provides information not only to policymakers and stakeholders in Detroit, but also in other metropolitan areas where students have multiple forms of school choice in and around city limits. Research in other cities has shown that while families prioritize academic outcomes when they decide between multiple schooling options, access to afterschool care and distance from home also play a major role in their decision.² Recent research has also pointed to large differences in parents' access to personal transportation and in the extent to which public transportation is available to support a choice of schools beyond what local districts assign.³ As such, this policy brief shows how policymakers might couple alternatives to traditional district-based school transportation systems with services like afterschool care to affect and support school choice decisions.

KEY FINDINGS INCLUDE:

- **Parents of GOAL Line riders are satisfied with the service, with more frequent riders reporting higher rates of satisfaction.** A higher percent of consistent riders (those who ride at least once a month or once a week), frequent riders (students who have rode GOAL Line at least 25% of possible opportunities), and morning riders are very satisfied or satisfied with GOAL Line than their counterparts.
- **GOAL Line may also encourage students to remain in schools within the city.** A higher percent of parents of frequent riders reported considering sending their child to outside schools compared to parents of less frequent riders. Relative to families of students who use GOAL Line less often, a higher percent of parents of consistent riders, frequent riders, and morning riders reported keeping their child in Detroit because of GOAL Line.
- **Most GOAL Line riders live in northwest Detroit.** Consistent and frequent riders live near GOAL Line schools but closer to their morning and afternoon bus stops than their attended school on average.
- **Ridership increased 6% over the course of the school year.** GOAL Line gained 141 riders after October 2018 and 63 of them joined in January. However, 111 of fall semester riders did not use GOAL Line in January.
- **GOAL Line provides a particular service to afternoon riders.** The average number of afternoon rides per rider is 3 to 4 times more than the average number of morning rides. 63% of riders have never ridden GOAL Line in the morning while only 2% of riding have never used GOAL Line in the afternoon.

- **GOAL Line primarily provides access to afterschool care.** On average, 84% of afternoon riders use GOAL Line to attend afterschool care, ranging from 64% to 91% of afternoon riders attending afterschool care on a given day. 77% of all rides are in the afternoon. This means that approximately 64% of all rides are used to travel to and from afterschool care.
- **Most individuals ride GOAL Line relatively inconsistently.** On average, students ride GOAL Line about 20% of possible opportunities to ride. 52% of riders have used GOAL Line at least once each month; only 12% have ridden GOAL Line at least once each week.

DATA AND DEFINITIONS:

DATA:

This brief focuses on using the bus ridership reports for October through January collected by the Community Education Commission and analyzed by EPIC. This reports also uses the contact roster⁴, the survey results⁵, and the afterschool attendance log.⁶ There are 484 unique student-by-school combinations.⁷ There are 71 days of GOAL Line ridership data (for October through January) including indicators of whether the student rode in the morning and/or the afternoon.⁸ There were generally 142 opportunities to ride (although not all schools operated every day of bus operation). 71 days represents about 40% of a typical 180-day school calendar. Daily afterschool attendance records are available for 54 days (between October 22, 2018 and January 25, 2019) out of the 71 days for which ridership data are available. Additionally, EPIC administered a survey to all parents who signed up for GOAL Line and were included in the contact information as of December 10, 2018. Out of 134 responses, 130 had at least one student in our ridership data.⁹

DEFINITIONS:

Monthly Consistent Rider - a student who rides the bus at least once each month (October-January). 253 riders (52%) have ridden the bus at least once a month.

Weekly Consistent Rider - a student who rides the bus at least once each of the fifteen weeks for which we have ridership data. The bus operated every school day and at least three days each week. Fifty-six riders (12%) have ridden the bus at least once every week.

Frequent Rider - a rider who has ridden the bus at least 25% of all (morning and afternoon) rides since the month they started riding. For example, someone who started riding in October would need to ride at least 35 times (out of 142 opportunities) to be considered a frequent rider while someone who started riding in January would need to ride at least 7 times (out of 26 opportunities) to be considered a frequent rider. 181 riders (37% of riders) are considered frequent riders. As mentioned later in the report, 63% of riders have never ridden GOAL Line in the morning. Thus, someone who has ridden over half of their afternoon rides (but never in the morning) would have ridden 25% of all possible rides.

New rider - a student whose first ride was not in October, the first month of data. 141 students (29%) have started riding GOAL Line since October 31.

Stopped Riding - we consider a student to have stopped riding GOAL Line if they did not ride it at all during the month of January. 111 students (23%) have stopped riding GOAL Line.

TOTAL GOAL LINE RIDERSHIP

On average, students ride GOAL Line about 20% of possible opportunities to ride. As seen in Table 1, while the average number of rides per month has decreased over time, students have had fewer opportunities to ride the bus each month due to holidays and inclement weather. Combined, usage rates are pretty similar across all fourth months. The average number of afternoon rides is 3 to 4 times more than the average number of morning rides.

TABLE 1. Number of Rides Per Month for All Riders.

Number of Rides for All Riders					
	October	November	December	January	Total
Average Number of Rides	10.0	7.7	5.9	5.1	28.6
Average Number of Morning Rides	2.4	1.7	1.4	1.1	6.6
Average Number of Afternoon Rides	7.6	6.0	4.5	3.9	22.0
Operating Days	23	20	15	13	71
Opportunities to Ride	46	40	30	26	142
AVERAGE RATE OF RIDING	22%	19%	20%	20%	20%

Note: N=484; Average rate of riding is created by dividing the average number of rides by the opportunities to ride; At least one school on GOAL Line was open each of the operating days.

To account for the smaller number of opportunities that new riders have had to use GOAL Line, we present in Table 2 the average number of rides and average rate of riding by the month a student started riding GOAL Line. On average, new riders have lower rates of GOAL Line use.

TABLE 2. Number of Total Rides by 1st Month of Use for GOAL Line

Rides by First Month of Use for GOAL Line				
First Month of Ride	N	Average Total Rides	Opportunities to Ride	Average Rate of Riding
October	343	37.1	142	26%
November	47	13.7	96	14%
December	31	6.6	56	12%
January	63	4.4	26	17%

CONSISTENT OR FREQUENT RIDERSHIP

Consistent use of GOAL Line

We define monthly consistent riders as those who rode GOAL Line at least one each month (Oct. – Jan.). We define weekly consistent riders as those who rode at least once each week. Rates of consistent use, overall, are in Table 3.

Over half of riders use GOAL Line at least once a month. Knowing that almost 30% of GOAL Line riders did not start riding until November or later, estimations indicate that 74% of the original riders use the service at least once a month. Seventy-one percent of original riders consistently use GOAL Line in the afternoon. Only 12% of GOAL riders have ridden at least once in the morning every month. These numbers are much lower for weekly consistency. Only 12% of riders have ridden at least once every week. These findings may imply that families use GOAL Line on the occasions when they are unable to pick up their child from school or arrange other after school care or activities.

TABLE 3. Percent of Consistent Riders.

Percent of Consistent Riders		
	N	Percent
Monthly Consistent Rider	253	52%
Monthly Consistent Morning Rider	58	12%
Monthly Consistent Afternoon Rider	242	50%
Weekly Consistent Rider	56	12%
Weekly Consistent Morning Rider	19	4%
Weekly Consistent Afternoon Rider	50	10%

Note: Percentages are out of total N=484. A monthly consistent rider is a student who rides the bus at least once each month (October-January). If he or she rides at least once a month in the morning, he or she is considered a monthly consistent morning rider. If he or she rides at least once a month in the afternoon, he or she is considered a monthly consistent afternoon rider. Similarly, weekly consistent riders are students who ride the bus at least once each week. If a student rides at least once a week in the morning, he or she is considered a weekly consistent morning rider. If he or she rides at least once a week in the afternoon, he or she is considered a weekly consistent afternoon rider.

Frequent Ridership of GOAL Line

We define frequent riders as those who have taken at least 25% of the possible rides since the month they began riding GOAL Line. Frequent morning riders and frequent afternoon riders are those who rode at least 50% of the morning rides, or 50% of the afternoon rides, respectively. Thus, if a student is a frequent afternoon rider, he or she is generally also a frequent rider overall, since 50% of afternoon rides are roughly 25% of all possible rides. According to Table 4, which displays the number and percentage of students who are frequent riders according to these definitions, 37% of students are frequent riders.

TABLE 4. Percent of Frequent Riders.

Percent of Frequent Riders		
	N	Percent
Frequent Riders	181	37%
Frequent Morning Riders	50	10%
Frequent Afternoon Riders	150	31%

Note: Frequent riders are defined as those who have taken at least 25% of the possible rides since the month they began riding GOAL Line. Similarly, frequent morning rider and frequent afternoon rider indicate someone who rode at least 50% of the morning rides, or 50% of the afternoon rides, respectively. Percentages are out of total N=484.

NEW AND PERSISTENT RIDERSHIP

As shown in Table 5, in total, the GOAL Line has gained 141 riders after October and 63 of them joined in January. While we cannot identify the exact reason for the new influx of riders in January, it may be due in part to switching schools and/or new routines at the beginning of a new semester, to possibly inclement weather, or possibly to recruitment efforts or increased awareness. Please note that we do not break down new riders by school or grade because they not included in our contact information, which was received prior to when they began accessing services.

While new ridership is a good sign, almost as many students have stopped riding the GOAL Line after October. **Overall, 63% of riders have never ridden GOAL Line in the morning while only 2% of those riding have never used GOAL Line in the afternoon.** Similarly, 73% of survey respondents reported that their children do not use GOAL Line in the morning. According to the parental survey EPIC administered, 60% of respondents whose children do not use GOAL Line in the morning reported it was easier to take their child to school.

TABLE 5. Number of New Riders, Stopped Riders Per Month.

New and Stopped Riders per Month		
	N	Percent
First Ride In October	343	71%
First Ride in November	47	10%
First Ride in December	31	6%
First Ride in January	63	13%
Total New Riders after October	141	29%
TOTAL	484	100%
January Rider	373	77%
Last Ride in October	40	8%
Last Ride in November	26	5%
Last Ride in December	45	9%
Total Stopped Riding	111	23%
TOTAL	484	100%
Never Morning Riders	306	63%
Never Afternoon Riders	10	2%

Note: Percentages are out of total N=484.

GOAL LINE RIDERSHIP AND ACCESS TO AFTERSCHOOL CARE

According to the afterschool attendance and ridership data collected by CEC and described above, 84% of afternoon riders on an average day use GOAL Line to attend afterschool care. This ranges from 64% to 91% of afternoon riders attending afterschool care on a given day. 77% of all rides are in the afternoon. This means that approximately 64% of all rides are used to travel to and from afterschool care. These patterns are confirmed by survey responses. 57% of survey respondents reported that their child attended GOAL Line afterschool programming with another 20% on a waiting list for afterschool care. Additionally, 60% of respondents reported free afterschool care is one of the reasons their children use GOAL Line services.

Of the 285 GOAL Line riders who have ever attended afterschool care, the average attendance rate is about 44% (about 24 of 54 days that have afterschool attendance and ridership data October 22-January 25). Combined with the low rates of consistent weekly use and the low rates of frequent riders, this may imply that GOAL Line is mainly used for afterschool care as needed when parents are unable to pick up their children.

As Table 6 indicates, middle school students (grades 6-8) make up a smaller percent of students attending afterschool care (18%). In particular, 6th and 7th graders have lower average afterschool care attendance rates.

TABLE 6. Average Attendance Rate of Afterschool Care Students by Grade.

New and Stopped Riders per Month			
Grade	N	Percent	Average Attendance Rate
Missing Grade	10	4%	2%
K	31	11%	53%
1st	30	11%	53%
2nd	56	20%	56%
3rd	44	16%	53%
4th	27	10%	70%
5th	35	12%	41%
6th	19	7%	34%
7th	13	5%	21%
8th	16	6%	43%
TOTAL	281	100%	49%

Note: Percentages are out of total 281 GOAL Line students on the afterschool roster and the GOAL Line contact list.

RIDERSHIP FREQUENCY AND PARENT SATISFACTION

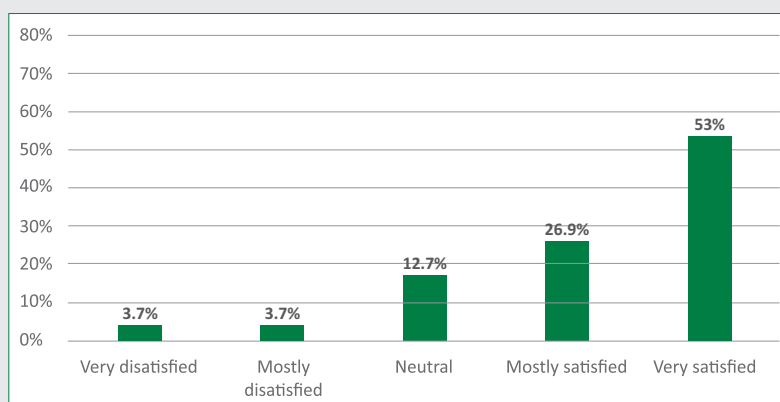
In December of 2018, EPIC administered an email-based survey to each parent/guardian with a valid email address in the GOAL Line contact information. We only sent one survey per parent/guardian, even if that individual was listed as the contact for multiple children. Of the 134 survey respondents, 130 had at least one child ride GOAL Line since October 1st. Survey responses are linked to the ridership behavior of the respondent's oldest child who rode GOAL Line between October 1st and January 25th.

Survey respondents were asked a few questions related to their satisfaction with their GOAL Line experience, as well as their school choices including:

1. How do you rate your child's experience with GOAL Line services?
2. Did you consider sending your child outside the city of Detroit for school this year, whether district or charter?
3. Was GOAL Line a factor in your choice of school for your child this year?

Overall, survey respondents indicated they were very satisfied (53% of respondents) or mostly satisfied (27%) with GOAL Line services (see Figure 1).

FIGURE 1: How do you rate your child's experience with GOAL Line services? (N=134)

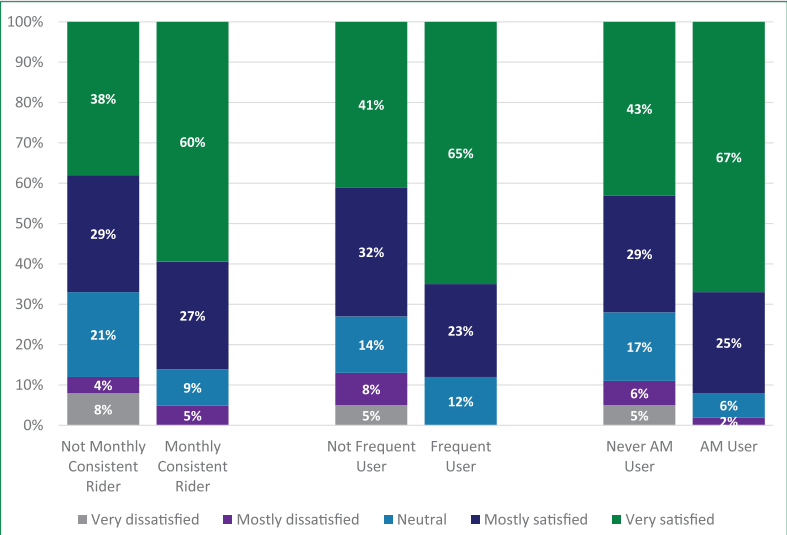


Approximately 31% of respondents said they considered sending their child to school outside of Detroit this year, and 42% indicated that GOAL Line was a factor in their schooling decision for their child, with about 30% indicating this allowed them to keep their child in a Detroit (DPSCD or charter) school.

Figures 2, 3, and 4 analyze differences in responses to these three key survey questions for monthly consistent riders, frequent riders, and riders who never rode in the morning compared to their counterparts.

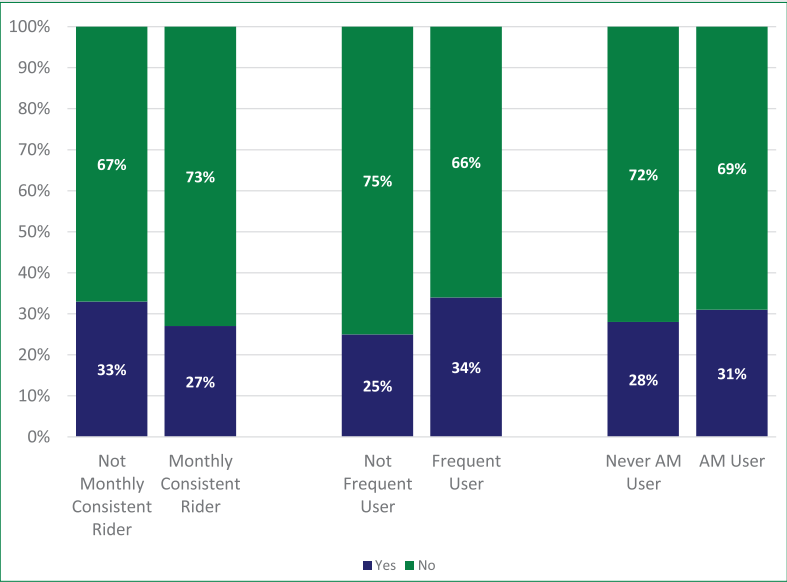
As shown in Figure 2, a higher percent of consistent riders, frequent riders, and morning riders are very satisfied with GOAL Line than their counterparts, and the total share of very satisfied and satisfied is higher for these three groups as well. While none of the monthly consistent riders were very dissatisfied, about 8% of those who do not ride monthly indicated they were very dissatisfied. Similarly, zero frequent riders reported being very dissatisfied or mostly dissatisfied.

FIGURE 2: Parent Satisfaction of GOAL Line by Student Riding Behavior.



Note: Survey question: “How do you rate your child’s experience with GOAL Line services?” Monthly consistent rider is defined as a student who rides GOAL Line at least once a month for all months in the data. Frequent rider is defined as a rider who has taken at least 25% of the possible rides since the month they began riding GOAL Line.

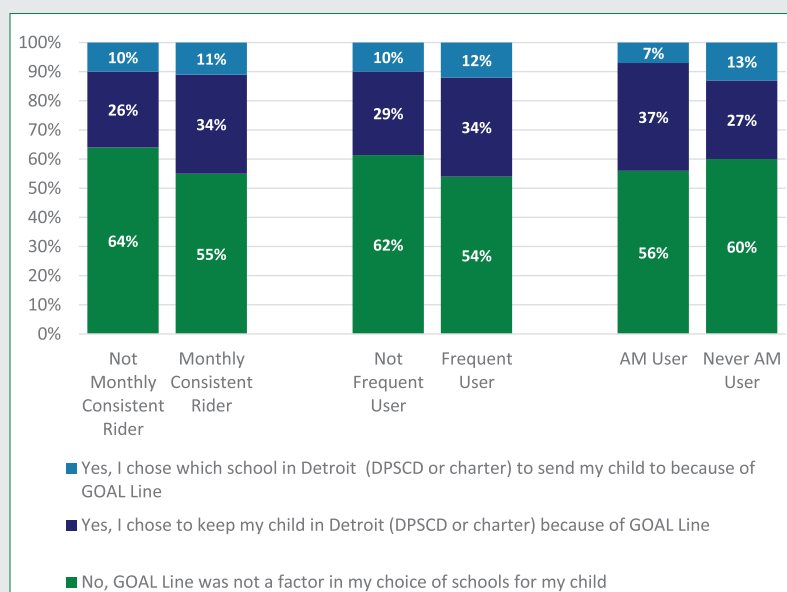
FIGURE 3: Considered Outside Schools by Riding Behavior.



Note: Survey question: “Did you consider sending your child outside the city of Detroit for school this year, whether district or charter?” Monthly consistent rider is defined as a student who rides GOAL Line at least once a month for all months in the data. Frequent rider is defined as a rider who has taken at least 25% of the possible rides since the month they began riding GOAL Line.

Figures 3 and 4 relate to families' school choice decisions. When comparing across groups, as shown in Figure 3, there were only minimal differences in the rate of considering outside schools, except that a higher percent of frequent riders considered outside schools. As shown in Figure 4, a higher percent of consistent riders, frequent riders, and morning riders reported keeping their child in Detroit because of GOAL Line.

FIGURE 4: GOAL Line was a Factor in Choice of School by Student Riding Behavior



Note: Survey question: "Was GOAL Line a factor in your choice of school for your child this year?" Monthly consistent rider is defined as a student who rides GOAL Line at least once a month for all months in the data. Frequent rider is defined as a rider who has taken at least 25% of the possible rides since the month they began riding GOAL Line.

GOAL LINE RIDERSHIP AND NEIGHBORHOOD LOCATION

Students riding GOAL Line live predominantly in northwest Detroit, but there are students using GOAL Line living throughout the city (few students live downtown). Figure 5 indicates the location of GOAL Line schools. The size of the dots is proportional to the number of GOAL Line students attending that school.

We also show in Figure 6 the location of student residences for all riders. Most GOAL

Line riders live in northwest Detroit with heavy concentrations living close to the GOAL Line schools. Our ability to compare residence patterns for the different types of riders is somewhat limited because GOAL Line riders of all types tend to be clustered near GOAL Line schools, so we focus only on mapping total riders. However, we also use geocoded addresses for students to calculate the average drive time to their school attended, their morning stop, and their afternoon stop, where morning and afternoon stops are defined in the contact data, not necessarily the ridership data.

Table 7 compares the average drive times from home to school attended, morning bus

Figure 5:
Location of GOAL
Line Schools

Note: Each dot indicates there is at least one GOAL Line school within that census tract. The size of the dot is proportional to the number of GOAL Line students attending a school in that census tract.



Figure 6:
Map of Residences
for All Riders

Note: Each dot indicates that at least five riders of GOAL Line and on the GOAL Line contact list lives within that census tract. Dot sizes are proportional to the number of frequent riders living in the census tract.



stop, and afternoon bus stop for students with different riding behaviors. On average, students live at least 5.5 minutes away from their bus stop and their school is less than two minutes farther away. Differences in drive times by type of rider are relatively small. This suggests that students are not using GOAL Line primarily to reach otherwise distant schooling options.

The most notable difference is that students who stopped riding GOAL Line live closer to their school, their morning and their afternoon bus stops than students who rode in January.

TABLE 7. Distance to School, Morning Bus Stop, and Afternoon Bus Stop by Riding Behavior.

	School Attended		Morning Stop		Afternoon Stop	
	N	Average Drive Time	N	Average Drive Time	N	Average Drive Time
Not a Monthly Consistent Rider	174	7.2	73	6.4	161	6.6
Monthly Consistent Rider	250	8.4	128	6.3	225	6.8
Not a Weekly Consistent Rider	405	8.0	182	6.4	367	6.8
Weekly Consistent Rider	19	7.2	19	5.5	19	5.3
Not a Frequent Rider	262	7.8	100	6.9	234	6.9
Frequent Rider	162	8.2	101	5.7	152	6.5
Stopped Riding	88	6.7	35	5.6	84	5.8
Rode in January	336	8.3	166	6.5	302	7.0

Note: Estimated drive times from student's home census block to school, morning bus stop, and afternoon bus stop are calculated assuming normal traffic using HERE Application Programming Interface.

IMPLICATIONS

This policy brief has examined patterns of ridership in and parental satisfaction with Detroit's GOAL Line bus loop. The key takeaways are that ridership is much stronger in the afternoon and is primarily used to travel to/from afterschool programming. Most individuals ride relatively inconsistently, which may indicate that GOAL Line is used primarily as a solution on certain days when parents do not have other options for either transportation or afterschool care. However, among those that do use GOAL Line consistently and at high rates, they are much more likely to be very satisfied with the program, and were more likely to report keeping their child in a Detroit school (charter or

district school) because of GOAL Line.

These results have a number of implications. The first is “if you build it, they will come.” GOAL Line riders do not live particularly far from the schools they attend, yet ridership increased at least for the first part of the year we examined, suggesting that GOAL Line has filled a need for some parents in northwest Detroit. The second implication points to what that need actually is. The fact that GOAL Line ridership is primarily an afternoon activity—far more students ride at the end of the school day than at its beginning—indicates that many parents are able to find other means of transportation in the morning, while the bus loop provides support for afternoon transportation. This may be simply because parents are working in the afternoon but are available to provide transportation themselves in the morning before school. If that is the case, then access to transportation and the distance students travel from home to school may be barriers to school choice, but not simply because no transportation exists at all or because schools are prohibitively far. Programs like GOAL Line may simply alleviate other trade-offs families face when selecting schools. This possibility is underscored by the third implication of this brief’s results: the extent to which afterschool care appears to drive GOAL Line participation. That the bus loop not only provides afterschool transportation, but afterschool care as well—and that highly satisfied parents say that GOAL Line affected their decision to remain in a Detroit city school—indicates that the existence of school choice programs on their own may not be enough to provide the opportunity parents need or expect when they consider for schooling options for their children. Additional supports like transportation and afterschool care represent one potential way that policymakers can expand such opportunities in a targeted way.

Citations

¹ <https://www.detroitsschoolsguide.com/wp-content/uploads/2018/07/DPGS-FULLProof2.pdf>

² Harris, D. N., & Larson, M.F. (2015) Demand, Information, and the Market for Schooling: Evidence on Revealed Preferences from Post-Katrina New Orleans Education Research Alliance for New Orleans Technical Report <https://educationresearchalliancenola.org/files/publications/120717-Harris-Larsen-Demand-Information-and-the-Market-for-schooling.pdf>; Lincove, J. A., Cowen, J. M., & Imbrogno, J. P. (2018). What's in Your Portfolio? How Parents Rank Traditional Public, Private, and Charter Schools in Post-Katrina New Orleans' Citywide System of School Choice. *Education Finance and Policy*, 13(2), 194-226.

³ Urban Institute Student Transportation Working Group. (2018). The road to school: How far students travel to school in Denver, Detroit, New Orleans, New York City, and Washington, DC. Washington, DC: Urban Institute; Cowen, J., Sanderson Edwards, D., Sattin-Bajaj, C., & Cosby, M. (2018). *Motor City Miles: Student Travel to Schools in and Around Detroit*. Washington, DC: Urban Institute.

³ Doherty, K.M. & Jacobs, S. (2015). State of the states: Evaluating teaching, leading and learning. Washington, D.C.: National Council on Teacher Quality. Retrieved from <http://www.nctq.org/dmsView/StateofStates2015>

⁴ The contact roster contains directory information about the 660 students who have signed up to use GOAL Line including school attended, grade, morning pick-up and afternoon drop-off locations, address, parent email, and emergency contact information. EPIC received this file on December 10th, 2018. Thus, they do not have any contact information for riders who signed up for GOAL Line after this date.

⁵ In collaboration with the CEC, EPIC sent an email-based survey concerning GOAL Line participation, satisfaction, and GOAL Line's role in their choice of school to all parents/guardians of students on the GOAL Line contact list from December 13th, 2018 to December 24th, 2018. 375 emails were sent, 134 parents responded. Of the 134 respondents, 130 had at least one child riding GOAL Line.

⁶ Daily afterschool attendance records indicate the name, school, and an indicator for whether the student attended afterschool programming. We use afterschool attendance data from October 22nd, 2018 to March 8th, 2019.

⁷ There appears to be three possible students that attended two schools on the GOAL Line. Because at least one of these students seem to be riding the bus on the same days at both schools, we cannot rule out that they are two students with the same name. Thus, we treat each student-by-school combination as one rider.

⁸ Afternoon rides were counted as one ride even if a student rode twice (once from school to afterschool programming, and once from afterschool programming to another stop).

⁹ For parents who have multiple students riding GOAL Line, the ridership data of the oldest child was used because parents were asked to answer these questions for their oldest child if they had multiple children using GOAL Line.



Education Policy Innovation Collaborative

MICHIGAN STATE UNIVERSITY
201 Erickson Hall | 620 Farm Lane
East Lansing, MI 48824

(517) 884-0377
EPICedpolicy@msu.edu
www.EPICedpolicy.msu.edu