

Clearing the Road to Opportunity

How autonomous vehicle transportation relieves youth transportation barriers

The Phoenix AV Youth Mobility Pilot tested one specific question: Can providing AV transportation safely reduce a well-documented barrier to youth opportunity?

In summer 2026, Legacy Institute partnered with Boys & Girls Clubs of the Valley (BGCAZ) in Phoenix, Arizona to answer that question. Phoenix was, at the time of the study, the only U.S. market where Waymo offered teen accounts, which is why the pilot was sited there. BGCAZ invited 30 of its teen interns, ages 14 to 17, to participate in a randomized trial. Fifteen received transportation scholarships and rode to and from their internships using Waymo teen accounts for the eight weeks of the program. The other fifteen arranged their own transportation, as BGCAZ interns normally do. Youth and their caregivers completed surveys at the start and the end of the summer. By the end, the two groups had diverged sharply on transportation stress and on family burden, and across 539 rides there were no safety incidents.

This was a small trial by design, and it opens the door to larger tests, and to the policy and funding decisions that will determine whether transportation keeps deciding which young people reach out-of-school programs, education, and work.

THE HEADLINE FINDING

86% → 43%

Share of AV-riding youth who said they felt stressed about getting to their internship, start of summer versus end. Among youth arranging their own transportation, the figure held at 42%.

539

RIDES DELIVERED

0

SAFETY INCIDENTS

\$593

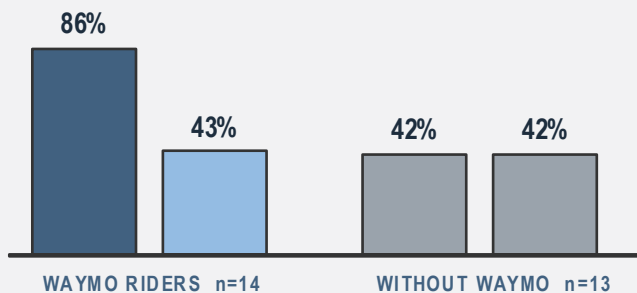
COST PER RIDER

9.6 min

MEAN WAIT

FINDING 1 · YOUTH

AV transport cut stress about getting to work in half



Left bar in each pair is baseline, right bar is endline. A 43-point drop among riders and no movement among youth without Waymo.

Riders: -0.43 scale points, $p=.008$, $d=0.83$ (large). Group difference: 0.43 points, $p=.031$, and a 43-point gap in binary change. Groups were not balanced at baseline: riders started at 86%, the comparison group at 42%. The result is the within-person drop among riders.

"Yes, the Waymo got me to my internship on time every day. If I didn't have Waymo, I probably couldn't work."

YOUTH, WAYMO GROUP

FINDING 2 · FAMILIES WITHOUT WAYMO

For families without Waymo, the burden grew over the summer

"Getting my teen to work is a challenge", families without Waymo (n=13)



"I worry about my teen traveling independently", families without Waymo (n=13)



Waymo families (n=14) held flat or fell on both measures. Bars show families without Waymo only (n=13).

Without Waymo: +0.38 points, $p=.018$, $d=0.88$. Waymo: -0.21 points. Group difference: 0.60 points, $p=.018$, survives BH-FDR correction. Composite burden scale ($\alpha=.814$): without Waymo +0.233, $p=.007$. Worry difference $p=.023$, binary analysis.

"I didn't have to worry about how he got there."

CAREGIVER, WAYMO GROUP, ENDLINE

FINDING 3 · SAFETY AND RELIABILITY

539 rides. Zero safety incidents.

Waymo delivered every ride the program required, with a corrected mean wait of 9.6 minutes and no safety incidents of any kind. Caregiver trust in the service started high and stayed high. Youth described riding alone in the vehicle as calming rather than frightening, and several said the absence of a driver was the reason it felt safe.

"It wasn't much different than in a normal car, knowing that it wouldn't get distracted with loud music or anything made it feel more safe."

YOUTH, WAYMO GROUP

What funders and policymakers can take from this

FIVE IMPLICATIONS

- 01 Transportation is a precondition, not a logistics line item.** The program only works if youth show up, and they only show up if they can get there.
- 02 Caregiver burden is the hidden cost.** As programs move to off-site placements, the daily logistics fall on working families: rising challenge, rising worry, lost shifts.
- 03 The technology is operational today.** Zero incidents over 539 rides, and caregivers who trusted the service at the start still trusted it at the end.
- 04 The cost is modest against the problem.** Roughly \$593 per rider for a full summer, versus families paying for gas, rideshare, or sacrificed work shifts.
- 05 This adds causal evidence where the field has had little.** Transportation-equity interventions for youth are understudied in community program settings. Replication at larger scale would establish how durable these effects are.

WHAT COMES NEXT

This small-scale pilot opens the door to more questions: whether the results hold across a school year rather than a summer, how to fund youth transportation through policy rather than pilot grants, what AV rides at scale would mean for the rideshare workforce, and whether the effect holds in the neighborhoods that today's AV service maps leave out. That overlap between service area, home, and program site was the binding constraint on this study, and the service area keeps expanding eastward into higher-income parts of the metro area. Legacy Institute will keep pursuing these questions and welcomes partners.

For organizations already operating where autonomous service exists, the findings are usable now: transportation is a budget line that buys attendance, and it may cost less than program leaders assume. For policymakers and funders, the more urgent question is access. Service maps are drawn in the permits, partnerships, and public agreements that cities negotiate as autonomous vehicles arrive city by city, and evidence that AV access measurably changes outcomes for low-income youth gives cities a reason to ask that those maps include low-income neighborhoods from the start. **Low-income young people are usually last in line for new transportation technology. This pilot was built to test whether they can be first.**

STUDY DESIGN

Randomized control trial. Treatment $n=15$ received AV (Waymo) rides to and from internship sites; control $n=15$ arranged their own transportation. Parents and caregivers were enrolled as a parallel arm. Teen accounts link a 14 to 17 year old's rides to a parent or guardian's account, which receives a receipt after every trip. Thirty youth ages 14–17, mean age 15.7, predominantly Hispanic and Latino (43%), Black and African American (17%), White (23%), and multiracial or other. Groups comparable on all youth demographics at baseline, but not on baseline transportation measures (see Limitations). Surveys at baseline (May 2026) and endline (July–August 2026); matched analysis of 14 treatment and 13 control youth and their caregivers. 38 Likert items across six domains, paired t-tests with BH–FDR correction and McNemar's exact test for binary change.

LIMITATIONS WITH THIS EVIDENCE

The primary stress finding is robust under paired t-test ($p=.008$) and binary analysis ($p=.031$). Under ANCOVA, which adjusts for baseline differences, it approaches but does not reach conventional significance ($p=.067$), reported here as a conservative check. Three parent items showed significant baseline differences, with treatment caregivers reporting higher burden at the outset, a chance imbalance of the kind expected at this sample size. The sample is small ($n=30$). Wellbeing and professional confidence items were at ceiling at baseline, leaving no statistical room to move, and no skills measure moved significantly in either arm. Long-term outcomes were not directly measured, but are identified in a logic model. The corrected mean wait excludes 73 pre-scheduled rides over 25 minutes, per the provider's guidance.

Funding and independence. Legacy Institute originated and designed the pilot and commissioned the independent evaluation. The AV Youth Mobility Pilot was funded by Legacy Institute and the Donnell-Kay Foundation. It was made possible by the staff and families of Boys & Girls Clubs of the Valley. The evaluation was designed and conducted independently by Radiant Global Insights. Waymo provided triplelevel data and operational support, but no financial support to Legacy Institute, BGCAZ, or this evaluation, and had no role in the analysis or in the findings reported here.

FULL DATA TABLES IN APPENDIX B OF THE TECHNICAL REPORT

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