



FosterEd Arizona Preliminary Evaluation Report

Prepared for
National Center for Youth Law

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Executive Summary

FosterEd, an initiative of the National Center for Youth Law, aims to improve the educational experience and outcomes of children and youth in foster care. FosterEd was piloted in Pima County, Arizona, between 2014 and 2016. Promising results from the pilot and the release of a report documenting that Arizona's students in foster care consistently underperform academically compared with their peers not in foster care¹ drove Arizona policymakers to action. The state legislature passed House Bill (HB) 2665, which Governor Doug Ducey signed into law. The bill includes provisions to establish and fund a statewide expansion of FosterEd.

FosterEd Arizona is guided by a framework that all foster youth should have an Education Champion, who supports their long-term educational success, and an Education Team of engaged adults, including the Education Champion, parents, other caregivers, teachers, representatives from the child welfare system, and behavioral health providers. The Education Team, coordinated by an Education Liaison, supports educational needs and goals through student-centered engagement. FosterEd recognizes that needs are individualized and all youth may not require the same level of time investment. For high-school-age youth with complex educational needs, Education Liaisons provide intensive services over a period of 1–2 years to ensure those young people are on a pathway toward high school graduation. Youth in kindergarten through grade 12 who have educational needs that can be addressed in a short period are served with responsive services for a period of 1–6 months.

RTI International is conducting a two-part evaluation of the FosterEd Arizona expansion: an implementation evaluation of FosterEd in Maricopa, Pima, and Yavapai Counties and an impact evaluation of the effectiveness of FosterEd on students' social, emotional, and academic outcomes. The evaluation will cover 2 program years. This report presents findings from the first year of the evaluation.

FosterEd's Supports

Since launch of the statewide expansion at the end of August 2017 to the beginning of August 2018:



388 youth have been served by FosterEd



76% of youth served with intensive supports and **81%** of youth served with responsive supports had an Education Champion identified



1,176 adults have served on youths' Education Teams



Youth and their teams set **810** educational goals

¹ Barrat, V. X., Berliner, B., & Felida, N. J. (2015). *Arizona's invisible achievement gap: Education outcomes of students in foster care in the state's public schools*. San Francisco, CA: WestEd. Authors' analysis of linked administrative data from the Arizona Department of Education and Arizona Department of Child Safety, 2012/13.

Students' Social and Emotional Well-Being

RTI, in close consultation with FosterEd staff, developed a student survey to measure relevant aspects of students' social and emotional well-being. The goal of the survey was to better understand youths' initial sense of self-efficacy, future orientation, and support from adults in their lives when they began receiving services from FosterEd, as well as to track any changes they experienced during their time with FosterEd. Students receiving intensive FosterEd supports are administered the survey when they join the program and again every 6 months. The baseline surveys demonstrate that FosterEd students have a generally positive sense of self-efficacy, with a mean of 3.2 on a scale of 1.0 (lowest) to 4.0 (highest), and a generally positive future success orientation (mean score of 3.2 on 1.0 to 4.0 scale). In a positive but somewhat surprising finding, the baseline survey indicates that nearly all foster youth receiving intensive FosterEd supports agreed as they entered the program that they had an adult in their lives who supported and encouraged their education (94% agreed or strongly agreed; mean 3.6).² The survey measures three other dimensions of adult supports.

This report presents a very preliminary look at potential changes in students' social and emotional well-being after being provided with FosterEd intensive supports. Of the 85 students who completed a baseline survey, only 33 (38%) had taken a 6-month follow-up survey by September 2018, in time for inclusion in this report. Readers are cautioned from drawing firm conclusions at this point because (a) most youth served with intensive supports by FosterEd in the 2017–18 school year had not yet completed a second survey in time for inclusion in this report and (b) the intended intensive support model calls for 1–2 years of intensive support, not just 6 months.

While not statistically significant, the direction of change is positive for future success orientation between the baseline and first 6-month follow-up surveys. There is no change between the baseline and first 6-month follow-up survey on the self-efficacy dimension. With regard to adult supports, two measures appear to decline ("Have adult who supports and encourages education" and "Sense of adult support scale"), but the differences are not statistically significant. There is no change between the baseline and first 6-month follow-up survey on the "Encouragement frequency from adults scale." While not statistically significant, the direction of change is positive for "Discussion frequency with adults scale" between the baseline and first 6-month follow-up surveys.

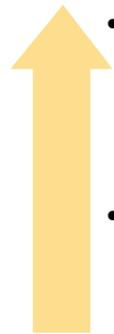
Students' Academic Indicators

Several of the long-term outcomes that FosterEd Arizona hopes to influence are related to how foster youth progress through the educational system. RTI analyzed data from the Arizona Department of Education and the Arizona Department of Child Safety to estimate the effect of the FosterEd program on the educational outcomes of participating students. The impact analyses rely on a propensity-score-based method called inverse probability of treatment weighting. This method mimics the design of a randomized experiment using observational data by removing observed baseline differences between foster youth receiving FosterEd intensive services (the treatment group) and foster youth not receiving FosterEd services (the comparison group).³

² The survey included instructions for youth to consider all adults other than the Education Liaison working directly with them in the FosterEd program.

³ Austin, P. C., & Stuart, E. A. (2015). Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. *Statistics in Medicine*. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/sim.6607>; Woolridge, J. M. (2007). Inverse probability weighted estimation for general missing data problems. *Journal of Econometrics* 141: 1281–1301.

The results shown in this Year 1 report provide preliminary evidence of FosterEd’s impact on the youth it serves with intensive supports. These preliminary results should be interpreted with some caution because, as of the analysis, no youth receiving intensive services had yet been served at least a year as intended in the program model. In fact, approximately one-fifth of the FosterEd youth included in the analyses had received services for less than 6 months. Although preliminary, the results do point to several promising findings:



- Receiving intensive FosterEd services increases the likelihood that a student will graduate, complete, or remain enrolled in school at the end of the year. FosterEd participation led to an 11 percentage point increase in the probability of positive status at the end of the 2017–18 school year (77% compared to 66%). This difference was statistically significant, meaning that a difference of this magnitude was unlikely to have been observed purely by chance.
- Receiving FosterEd intensive services increases the likelihood that students participate in statewide assessments. The odds of participation were 11 percentage points higher for the treatment group than the comparison group (57% compared to 46%), a statistically significant result.

In terms of whether students were continuously enrolled throughout the 2017–18 school year and students’ total out-of-school time (sum of absences and unenrolled days), the findings do not indicate any statistically significant results, suggesting that the outcomes of the treatment group were similar to those of the comparison group.

Recommendations

RTI offers the following recommendations as FosterEd continues to serve foster youth throughout Arizona. They each relate to the evaluation and therefore are directed both at FosterEd and RTI.

- 1** Reconsider the approach of limiting the adult support survey questions to adults in the youths’ life other than the Education Liaison.
- 2** Incorporate youth feedback into the evaluation.
- 3** Refine the evaluation plan to be able to also assess the responsive support tier.

I. Introduction

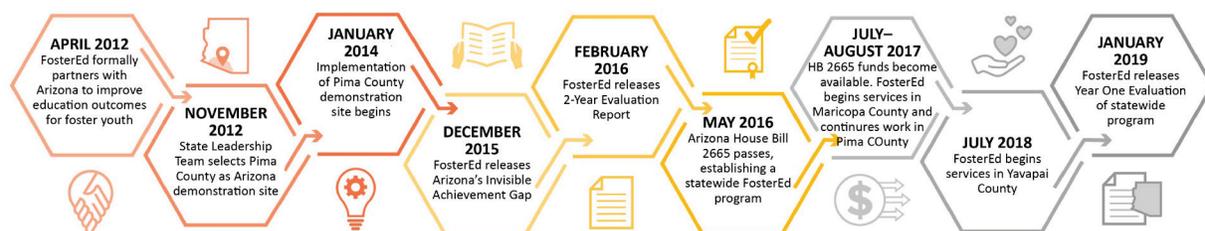
FosterEd, an initiative of the National Center for Youth Law (NCYL), aims to improve the educational experience and outcomes of children and youth in foster care. FosterEd has been piloted in counties in Arizona, California, Indiana, and New Mexico with positive results. RTI International, a nonprofit research organization, conducted independent evaluations of the Pima County, Arizona; Santa Cruz County, California; and Lea County, New Mexico pilots and found attendance and grade point averages improved for students served by the program.¹

After the launch of the Pima County, Arizona, pilot in 2014, FosterEd partnered with WestEd, a research organization, to produce *Arizona's Invisible Achievement Gap*. The report documented for the first time that Arizona's students in foster care consistently underperform academically compared with their peers not in foster care.² In fact, students in care consistently lag behind other vulnerable populations of students, such as low-income students, English language learners, and students with disabilities. The report stated that Arizona's students in foster care

- are consistently among the academically lowest performing subgroups in math and English;
- have the highest dropout rates;
- are more likely than the general population to be enrolled in the lowest performing schools; and
- are more likely to change schools during the school year.

With promising results from the Pima County pilot and stark data on statewide education indicators for foster youth, Arizona policymakers took action. In January 2016, leadership in the Arizona House and Senate introduced House Bill (HB) 2665, endorsed by a bipartisan group of more than 20 sponsors. The legislation included provisions to establish and fund a statewide expansion of FosterEd, providing \$1 million in state funding and an additional \$500,000 in state funding contingent on private matching funds. The bill passed and, in May 2016, Arizona Governor Doug Ducey signed HB 2665 into law. NCYL was selected as the nonprofit organization to implement the statewide program. **Figure 1** presents a timeline of the

Figure 1: FosterEd Arizona Timeline



Source: Image provided by the National Center for Youth Law.

¹ See Laird, J. (2016). *FosterEd Santa Cruz County: Evaluation final report*. Berkeley, CA: RTI International. http://foster-ed.org/wp-content/uploads/2017/01/Year-3-report-FosterEd_SCC_Draft-10-18-16.pdf; Laird, J. (2015). *FosterEd Santa Cruz County: Year 2 Evaluation*. Berkeley, CA: RTI International. <http://foster-ed.org/wp-content/uploads/2017/02/FosterEd-Santa-Cruz-County-Year-2-Evaluation.pdf>; Laird, J. (2016). *FosterEd Arizona: Year 2 Evaluation*. Berkeley, CA: RTI International. <http://foster-ed.org/wp-content/uploads/2017/02/FosterEd-Arizona-Year-2-Evaluation.pdf>; and Laird, J. (2018). *FosterEd New Mexico Evaluation Report*. Berkeley, CA: RTI International.

² Barrat, V. X., Berliner, B., & Felida, N. J. (2015). *Arizona's invisible achievement gap: Education outcomes of students in foster care in the state's public schools*. San Francisco, CA: WestEd. Authors' analysis of linked administrative data from the Arizona Department of Education and Arizona Department of Child Safety, 2012/13.

development of the Pima County Pilot and the Arizona statewide expansion.

RTI is conducting a two-part evaluation of the FosterEd Arizona expansion: an implementation evaluation of FosterEd in Maricopa, Pima, and Yavapai Counties and an impact evaluation of the effectiveness of FosterEd on students' social, emotional, and academic outcomes. The evaluation will cover 2 program years. This report presents findings from the first year of the evaluation. Yavapai County is not included in this report because youth in that county were not served by FosterEd during the first year of expansion.

The impact evaluation is guided by the following three research questions:

- **Research Question 1:** Does FosterEd improve students' self-efficacy, positive adult relationships, and future success orientation?
- **Research Question 2:** Does FosterEd improve students' academic outcomes, such as grade promotion, high school graduation, and performance on state assessments?
- **Research Question 3:** Within counties with sufficient FosterEd services to reach the majority of foster youth, are the academic gaps between foster youth and non-foster youth declining?

This report describes the first year of implementation of the expansion, from launch at the end of August 2017 to the beginning of August 2018. It also presents preliminary data from

surveys and education data of youth served by the program and a matched comparison group of foster youth in Arizona not served by FosterEd. The presentation of survey data and education data begin to address Research Questions 1 and 2. A final evaluation report to be released in December 2019 will contain additional implementation, survey, and education data and will address all three impact questions.

FosterEd Practice Model

Figure 2 depicts FosterEd's practice model, including its three key components. Each FosterEd model is customized for each county and state; however, the overall objectives remain consistent.

1 Education Champion

Parental involvement in education is one of the strongest predictors of a student's educational success. Foster youth often do not have anyone in their lives to champion their education by monitoring their academic progress and advocating for their educational needs. Collaboration with foster youth and their caretakers is often focused solely on the youths' immediate safety. Consequently, their educational needs are typically not sufficiently addressed in child welfare team meetings or service plans.

FosterEd aims to raise awareness about the educational needs of foster youth by identifying at least one person who can serve as a champion in

Figure 2: FosterEd Practice Model



Source: Image provided by the National Center for Youth Law.

this area. Ideally, this would be a biological parent or long-term caregiver—someone who can be part of a youth’s life for a long time and can continue to support the child educationally after state involvement ends. FosterEd recognizes that Education Champions (ECs) may need support to develop their capacity to serve youth effectively.

2 Education Team

FosterEd recognizes that to fully support the educational strengths and needs of youth, a team of adults must be engaged. This includes representatives from the children’s schools and the child welfare agency and behavioral health providers. Other adults in the youths’ lives (e.g., caregivers, coaches, or engaged relatives) may also be team members.

3 Student-Centered Engagement

FosterEd believes that positive engagement and empowerment at school starts with putting students at the center of their educational decision making. FosterEd is committed to giving students “voice and choice” in shaping every element of their education and believes it will lead to educational success, particularly for system-involved youth who have experienced the trauma and loss of control associated with involvement in the child welfare system.

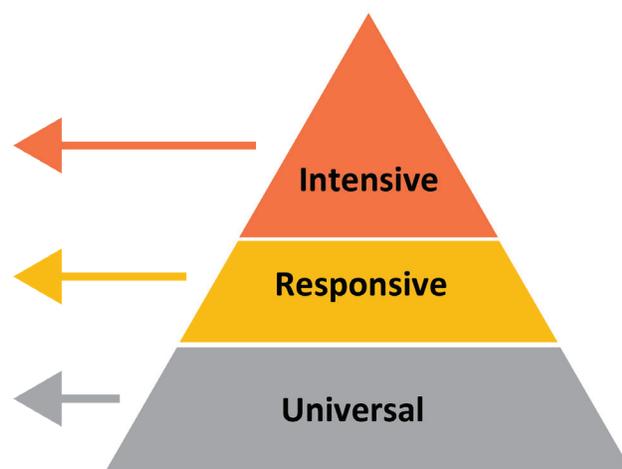
Figure 3: FosterEd Tiers of Support

“Intensive” Education Liaisons provide individualized and long-term (1- to 2-year) intensive supports (weekly) to highest need grade 9–12 students.

“Responsive” Education Liaisons provide short-term (1- to 6-month) youth-level interventions triggered by a pressing education need for grade K–12 students.

Successful implementation of system-level policies and practices ensuring youth are accessing academic and social and emotional interventions intended for all students.

Source: Image provided by the National Center for Youth Law, with some modifications from RTI.



The Critical Role of the Education Liaison

Education Liaisons (ELs) staff the FosterEd program. In Arizona, 10 ELs provided direct support to foster youth during the first year of statewide expansion.³ ELs identify a team of adults to support the youth educationally, identify an EC, and assist the youth and their team to develop and track educational goals and objectives. The ELs stay in regular contact with the youth and the team of adults. The EL role is further described in the next section about the three tiers of support provided by FosterEd.

In addition to ELs, FosterEd Arizona has a manager of youth development and volunteer engagement, a director of student supports and systems partnership, and a state director.

Three Tiers of Support

FosterEd recognizes that youth needs are individualized and may not require the same level of time investment. By tailoring its services, FosterEd can maximize the number of youth effectively served. FosterEd’s three tiers of support are depicted in **Figure 3**.

³ As of this report, two additional ELs have been hired to support implementation in Yavapai County.

Intensive Tier

For high-school-age youth with complex educational needs, ELs provide intensive services over a period of 1–2 years to ensure those young people are on a pathway toward high school graduation.⁴ During the 2017–18 school year, Intensive ELs were co-located at six high schools in Maricopa County and three high schools in Pima County.⁵ The schools were selected in consultation with the Arizona Department of Child Safety (DCS) and district and state education agency partners, based on available data of the high schools attended by relatively large numbers of youth in foster care. Intensive ELs serve youth at their co-located schools as well as youth who attend other high schools throughout Pima and Maricopa Counties.

ELs work with the school staff to identify youth in foster care who are at risk of not graduating high school. DCS and other community members can also refer students for intensive services. Indicators of risk include, for example, being credit deficient, having a history of discipline issues, low attendance, and having special education needs.

Once a youth in such a situation has been identified, the EL meets with the young person to describe the FosterEd program and seek participation. If the young person agrees, the EL obtains DCS and caregiver consent. When consent has been obtained, the EL meets with the young person to identify and develop goals.

FosterEd is committed to youth engagement that is empowering for young people. Therefore, the EL asks the young person about future goals. For example, a young person may aspire to be a music producer. The EL and youth will talk about how a high school diploma can help achieve this goal and targets to set to be on track to graduate (e.g., bring a current F in math, a required course, to at least passing). This process of setting goals can take

anywhere from one to four meetings, depending on the young person's interests, initial comfort in working with the EL, and extent to which goals were clearly articulated previous to meeting with the EL.

The young person receiving intensive FosterEd supports will meet in person with the EL at least every other week, typically at the school site. In between these meetings, the EL connects with the young person two to three times via text, phone, or by sending a note to class.⁶ These contacts may include an encouraging note about a test happening the next day, congratulations on a good grade on an assignment, or checking in about an action the young person was going to take toward one of their goals.

Each week the EL checks the young person's education data via the school's parent portal, to which ELs have access. The EL monitors the youth's attendance, homework completion, grades, behavior infractions, and course completion.

Once a month, during an in-person meeting, the EL reviews goals with the young person, documenting any updates. They also look ahead together at any key deadlines, such as college application or FAFSA (Free Application for Federal Student Aid) due dates.

The EL stays in frequent contact with the adult team members, communicating as needed with regard to actions the adults are taking in support of the youth's goal. The EL tries to attend any school-related or DCS-related meetings for the youth (e.g., Individualized Education Plan (IEP), school discipline, or Team Decision Making or Child and Family Team meetings). Once a semester the EL organizes a FosterEd and education-focused meeting that includes the youth and the adult team members. If the young person wants to lead the meeting, the EL provides support.

⁴ The intensive service tier was developed for and is only offered to high school youth. As an exception, during the 2017–18 school year, FosterEd served two middle school students with intensive supports. These Pima County youth had been served by FosterEd for several years prior to expansion.

⁵ For the 2018–19 school year, one Intensive EL is co-located at a high school in Yavapai County.

⁶ As shown in Figure 6, 53% of youth served with intensive supports reside in group homes. FosterEd reports to RTI that many of these young people either do not have cell phones or have restricted use of them due to group home rules. In such cases, ELs communicate with young people through notes.

Intensive ELs support approximately 20–25 students at any one time. FosterEd expects to serve these young people for 1–2 years. Intensive ELs continue to support youth 1 semester after high school graduation, so long as the youth agrees and is enrolled in or trying to enroll in a formal education program, such as a training program or a community college or 4-year college. Often this support includes connecting the young person with supports offered at the postsecondary institution.

Responsive Tier

Youth with needs that can be addressed in a short period are served by ELs “responsively” for a period of 1–6 months. Whereas the Intensive ELs focus on supporting high school youth, Responsive ELs serve youth in kindergarten through grade 12. During the 2017–18 school year, Responsive ELs were co-located in three Maricopa DCS offices and two DCS offices in Pima County.⁷ FosterEd has presented on the FosterEd program numerous times to DCS staff, specifically about the responsive tier of support. The fact that Responsive ELs are co-located at the DCS offices helps maintain awareness of the program and facilitates collaboration with DCS staff.

ELs receive referrals from DCS Specialists via an online referral form. FosterEd accepts referrals from DCS Specialists in any office throughout Arizona, so long as the student they are referring is residing in one of FosterEd’s service areas. The form includes a list of discrete educational concerns from which the DCS Specialist chooses to request FosterEd’s support.

- School mobility: transportation
- Immediate enrollment
- Enrollment in appropriate school, grade level, or course
- Obstacle to IEP/504
- Retention process support
- School discipline/behavioral concern
- Post-graduation planning and options counseling
- Credit recovery
- Other educational concern

A Responsive EL responds to the DCS Specialist within 48 hours to ask any clarification questions about the referral and for the DCS Specialist to sign a consent form enabling the FosterEd EL to work with the young person and access educational records. The EL then reaches out to the caregiver, biological parent, and youth (depending on the youth’s age) to explain the supports FosterEd can provide. The EL works with the adult team members and the youth, if of appropriate age, to refine a goal and identify steps for achieving that goal. For example, if the referral issue were “transportation to school of origin,” the EL would translate that goal more specifically for the team, such as “help arrange for transportation to and from Franklin Middle school” and list the steps the EL and other team members would take to help achieve this goal. The EL would then take any self-assigned actions and check in with team members who also have actions assigned to them. When the goal has been accomplished, the EL would tell all team members that, if no additional issues arise, they will end services in 2 weeks. If services were provided for more than a month, the EL would send a monthly email update to the team and call any team members who do not have email accounts.

Responsive ELs provide support to approximately 25–30 students at any one time, and their roster of students is expected to roll over three to four times a year. Thus, in the course of a year, Responsive ELs are expected to serve between 75 and 120 students.

Universal Tier

A third tier of the program involves promulgating best practices and advocating for policy change at the local and state levels to support the educational success of students in foster care. During the 2017–18 year, this was primarily accomplished by FosterEd staff conducting outreach activities to help inform stakeholders about the unique educational needs of foster youth. As of this report, FosterEd is in the process of hiring a director of policy and youth leadership who will focus on this third tier of the FosterEd program.

⁷ For the 2018–19 school year, one Responsive EL is co-located at a DCS office in Yavapai County.

Evaluation Data

RTI is incorporating multiple sources of data into the evaluation. **Table 1** briefly lists the data sources used for the first year of the evaluation. Additional information is provided in the relevant sections of the report. RTI expects to continue

using these data sources in the second year of the evaluation.⁸

Table 1: FosterEd Arizona Evaluation Data Sources for Year 1 Report

Quantitative Data	Report Section	Notes
Educational Case Planning Data	Section II	FosterEd tracks administrative data (e.g., number of youth served, number and relation of Education Champions) and educational case planning data (e.g., student goals and progress) in EdTeamConnect. These data were extracted and transferred to RTI in August 2018 for analysis and inclusion in this evaluation report.
Youth Social and Emotional Well-Being Survey Data	Section III	RTI developed a survey for foster youth receiving intensive supports designed to measure youths' self-efficacy, future orientation, and support from non-Education Liaison (EL) adults in their lives. ELs administer a <i>baseline</i> survey to youth as they enter FosterEd. Follow-up surveys are administered approximately every 6 months thereafter while youth receive FosterEd services. FosterEd transmits the surveys to RTI for data entry and analysis.
Education Data	Section IV	RTI established a data sharing agreement with the Arizona Department of Education (ADE) to access education data, including data regarding enrollments, absences, end-of-year status (e.g., promotion, graduation), and state standardized test participation and performance. The data sharing agreement includes provisions for protecting the data and identity of the students.
Child Welfare Data	Section IV	RTI established a data sharing agreement with the Arizona Department of Child Safety (DCS) to access child welfare data, including length of time in foster care and number of placements. RTI used the DCS data to identify foster youth in the ADE data and conduct analyses which compare educational outcomes of youth served by FosterEd and similar youth in foster care who are not served by FosterEd. The data sharing agreement includes provisions for protecting the data and identity of the students.

⁸ In evaluation Year 2, we expect to collect and analyze feedback on the FosterEd program from youth and adult team members, either via surveys or focus groups. If during the 2018–19 school year most foster youth in Yavapai County are served by FosterEd, we will examine whether academic gaps between foster youth and non-foster youth declined during that year (Research Question #3).

II. Students Served and Supports Provided by FosterEd

This section focuses on program implementation, describing the first year of the FosterEd Arizona statewide expansion, from launch on August 28, 2017, to August 3, 2018. It begins by presenting information about the foster youth served during that period. It then summarizes information about the adult team members identified to support the youth, education goals set by the youth and their teams, and progress made toward those goals. The data come from EdTeamConnect, FosterEd's educational case management data system, extracted for RTI.

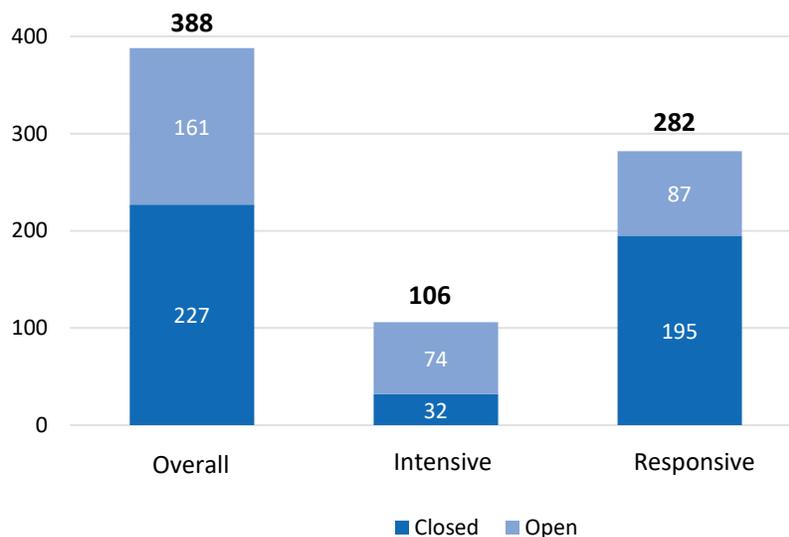
How Many Youth Were Served by FosterEd Arizona?

Between late August 2017 and early August 2018, FosterEd served **388** youth, with about three-

quarters supported via the responsive tier of service (**Figure 4**).

At the time the data were extracted, 161 youth had open services with FosterEd. Among those students, slightly more were receiving responsive services. With five Intensive ELs and five Responsive ELs, one might expect about 100 youth to have open intensive services and 125 youth to have open responsive services. The lower-than-expected numbers of open services is at least partially explained by the timing of the data extract: August 3, just before the start of the new school year. This is when FosterEd typically serves the fewest number of youth.

Figure 4: Total Number of Students Served, by Support Level



Note: One student was served twice, once at the responsive level and once at the intensive level. Therefore, the total number of unique students served is 387. Forty-seven students started being served in Pima County before the launch of the statewide expansion (on August 28, 2017). Nineteen of those students' supports were converted to the intensive level, and 28 were converted to the responsive level.

Source: EdTeamConnect data, extracted August 3, 2018.

Who Were the Youth Served?

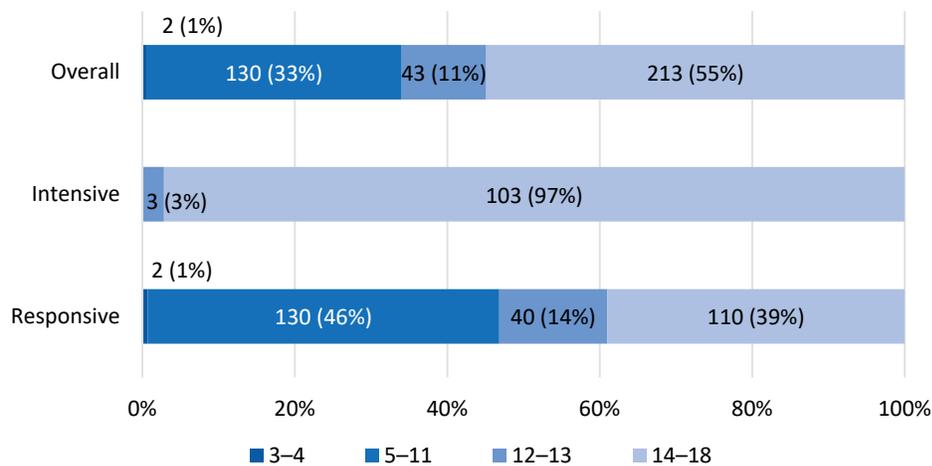
When considering the overall group of youth served by FosterEd, the largest overall share of youth served were ages 14 to 18, which most typically corresponds to high school students (Figure 5).

As should be expected given that the intensive tier of service was developed for and is only offered to older youth, the age distribution looks quite different between youth supported with intensive services compared with those served with responsive services. The vast majority of youth in the intensive service group were of high school age (97%), compared with just 39% of youth in the responsive group. Almost half (46%) of responsive youth were ages 5 to 11, which typically corresponds to elementary grades, while none of the intensive youth were in this age group, as is expected.

Two students ages 3 and 4 were served with responsive services. Although the FosterEd program is not designed for this age group, FosterEd will support preschool-age students under certain circumstances, most often when they attend a preschool operated by a public school district and/or they have an IEP.

FosterEd has served more males than females (Table 2). Hispanic students were the largest racial/ethnic group served, followed by White students. When considering the racial/ethnic composition of the intensive and responsive groups, the distributions are different. Higher percentages of White students and Black students were served with intensive supports compared with responsive supports, while smaller percentages of Hispanic students were served with intensive supports relative to responsive supports.

Figure 5: Number and Percentage of Students Served, by Age at Referral and Support Level



Note: *N* = 388 students. The age of referral of students who started being served in Pima County before the statewide expansion was calculated based on the expansion launch date of August 28, 2017.

Source: EdTeamConnect data, extracted August 3, 2018.

Table 2: Characteristics of Students Served

	Overall		Intensive		Responsive	
	Number of Students	Percent	Number of Students	Percent	Number of Students	Percent
Sex						
Female	162	42%	44	42%	118	42%
Male	224	58%	62	58%	162	58%
Other gender	1	0%	0	0%	1	0%
Race/ethnicity						
Black, non-Hispanic	52	13%	24	23%	28	10%
Hispanic ¹	167	43%	36	34%	131	47%
White, non-Hispanic	103	27%	37	35%	66	23%
Unknown/Other ²	65	17%	9	8%	56	20%
Child Has Special Education Needs						
Yes (either 504 or IEP)	178	46%	47	44%	131	47%
No (neither 504 nor IEP)	191	49%	59	56%	132	47%
Under evaluation ³	16	4%	0	0%	16	6%
No data entered	2	1%	0	0%	2	1%
Dependency Type						
Child welfare	359	93%	96	91%	263	94%
Dual status	28	7%	10	9%	18	6%
Total	387	100%	106	100%	281	100%

¹ Hispanic students may be any racial background.

² Other includes multiracial, Asian, American Indian/Alaska Native, and unknown.

³ A child is considered "Under evaluation" if s/he is not receiving any services and still needs to be evaluated for either a 504 or IEP.

Note: *N* = 387 unique students. One student was served in both intensive and responsive levels; the information shown in this table is for their most recent service level. IEP = Individualized Education Program.

Source: EdTeamConnect data, extracted August 3, 2018.

With regard to special needs status, 46% of the FosterEd youth had either an IEP or 504 plan, and an additional 4% of youth were being evaluated for special education services. Note that these relatively large percentages likely reflect the fact that many of the referrals FosterEd receives are for special education advocacy. Nevertheless, a 2015 Arizona statewide report

found that 23% of youth in foster care qualified for special education supports, compared with 11% of the statewide student population.⁹

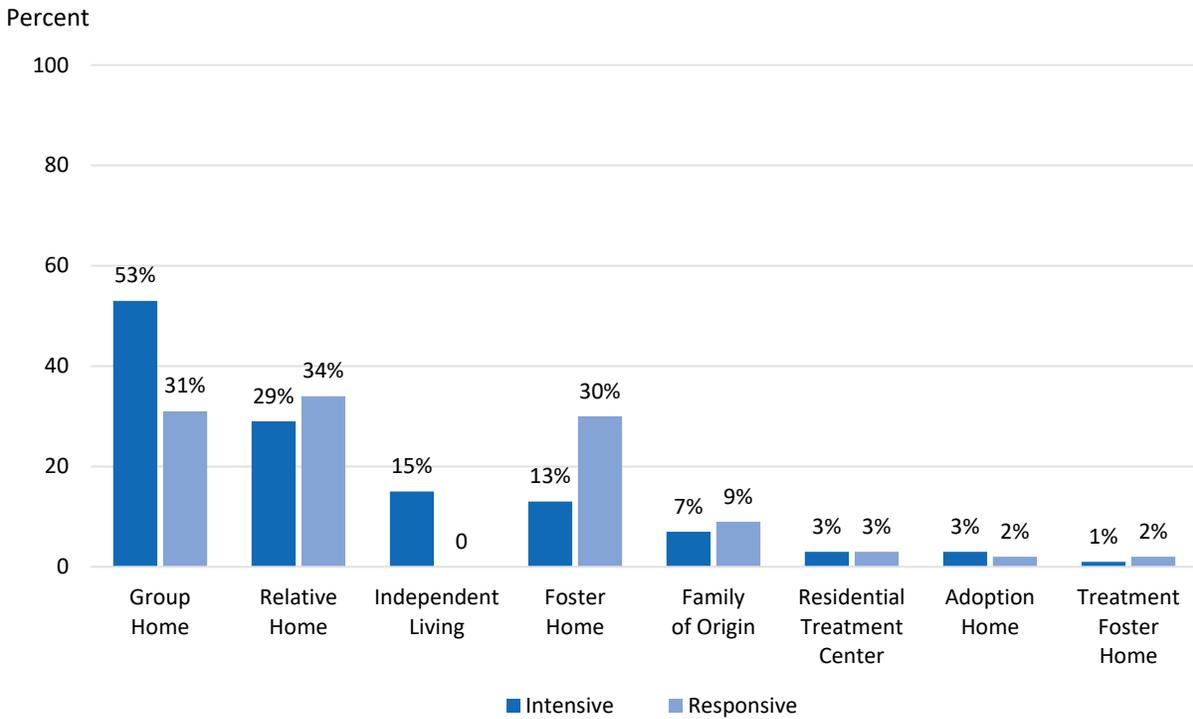
A small percentage of youth served by FosterEd were dual status (7%), meaning they are both under the care of DCS and under probation supervision via the juvenile justice system.

⁹ Barrat, V. X., Berliner, B., & Felida, N. J. (2015). Arizona's invisible achievement gap: Education outcomes of students in foster care in the state's public schools. San Francisco, CA: WestEd. Authors' analysis of linked administrative data from the Arizona Department of Education and Arizona Department of Child Safety, 2012/13.

Figure 6 shows the child welfare placement types youth experienced while being served by FosterEd. About half of youth supported with

intensive services, and almost one-third of youth supported with responsive services, lived in a group home.

Figure 6: Child Welfare Placement Types



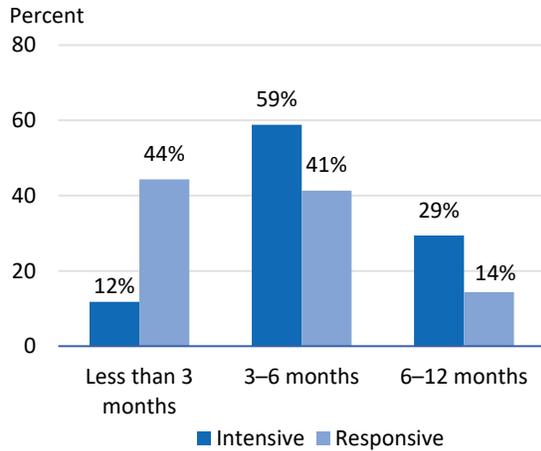
Note: N= 357. Thirty youth did not have child welfare placement information in EdTeamConnect and are therefore not included in this figure. Some youth had more than one placement type while they were served by FosterEd. This analysis includes all available placement type information (i.e., whether the youth ever experienced a given placement type) and percentages therefore sum to more than 100. Source: EdTeamConnect data, extracted August 3, 2018.

How Long Were Students Served by FosterEd?

Figures 7 and 8 report the length of time students were served by FosterEd, among those with closed and open services, respectively. As expected given

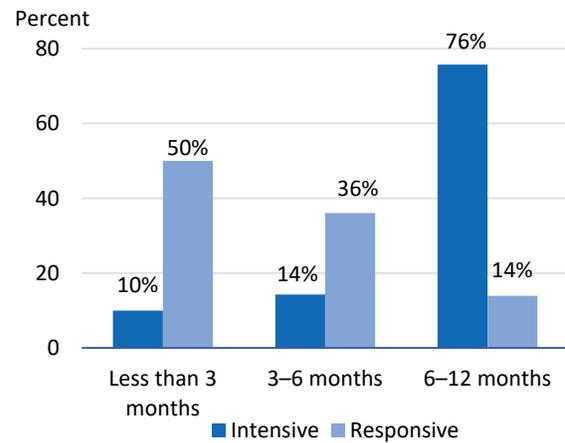
the model, students served with responsive supports tend to be served for shorter periods. For example, among youth with closed services, 29% in the intensive group were served for 6 to 12 months, compared with 14% of youth in the responsive group.

Figure 7: Length of Time Served, Among Students with Closed FosterEd Services



Note: *N* = 184 total youth who are no longer being served and whose referral date was after the launch of statewide expansion (August 28, 2017, or later).
Source: EdTeamConnect data, extracted August 3, 2018.

Figure 8: Length of Time Served, Among Students with Open FosterEd Services



Note: *N* = 156 total youth who are currently being served and whose referral date was after the launch of statewide expansion (August 28, 2017, or later). This includes one youth currently being served with a missing referral date.
Source: EdTeamConnect data, extracted August 3, 2018.

Table 3 lists the reasons for ending FosterEd services. Among youth provided with responsive services, the vast majority of FosterEd services were closed because the youths' goals had been met. However, most FosterEd intensive services closed for one of three other reasons: the caregiver refused continuing services, the youth refused continuing services, or the youth went AWOL.¹⁰ FosterEd intends to serve youth receiving intensive supports for 1–2 years. Thus, it is not surprising that most of the services for intensive-support youth ended because of youth or caregiver decline in service or because youth were no longer available to receive services.

Who Served on Youths' Teams?

A cornerstone of the FosterEd model is identification and engagement of adults in the participating youth's life to support the youth educationally. Some adults serve on many teams. For example, a child welfare worker may serve on more than one youth's team. There were 2,208 duplicated team members, including those who had served on more than one team.

Figure 9 shows that 1,176 unduplicated team members served on teams. The largest group of unduplicated team members were relatives or caregivers (e.g., biological parents, foster parents). The second largest group was mental health workers and other service providers, and the third largest group was child welfare workers, probation officers, and attorneys.

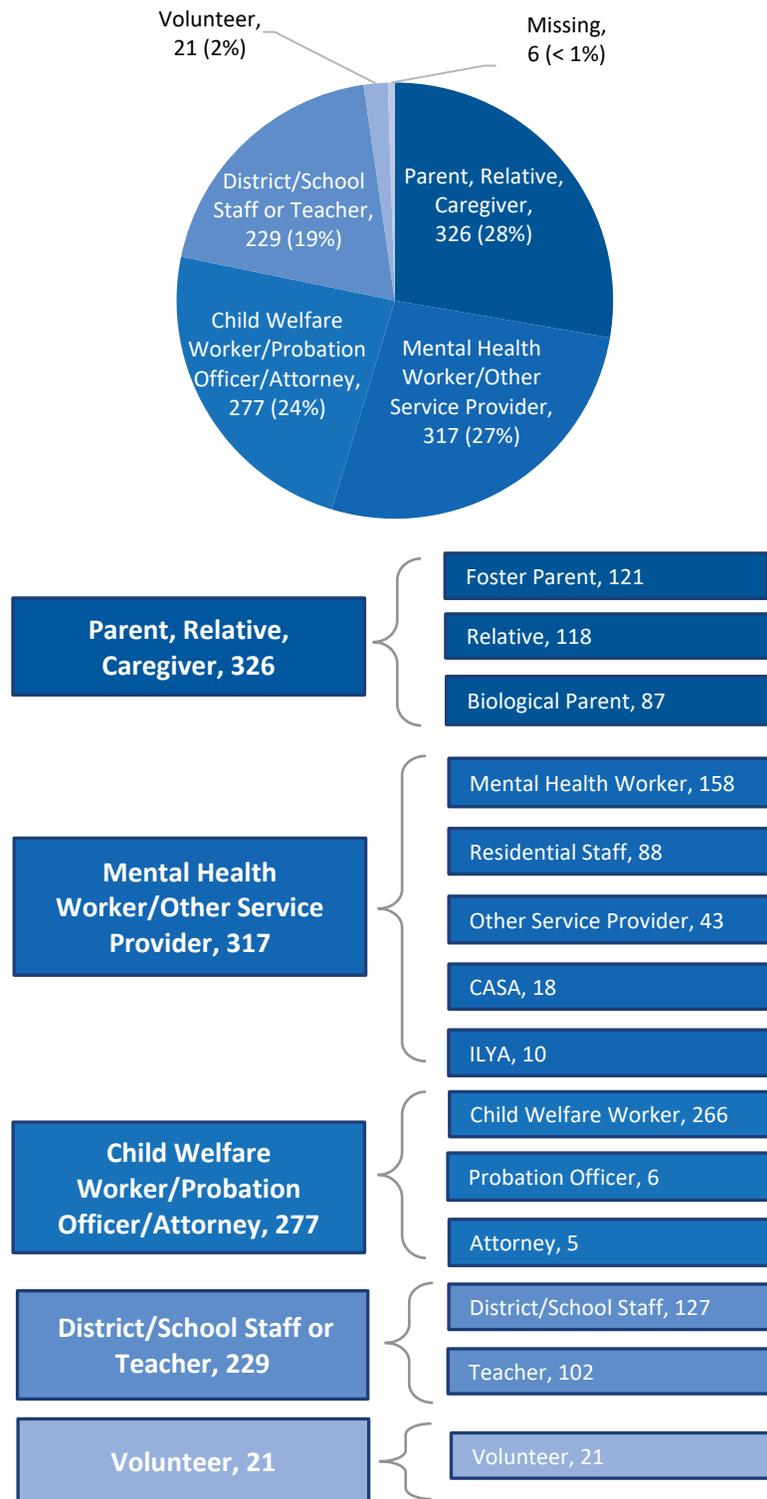
Table 3: Reason for Ending FosterEd Services

Reason	Overall		Intensive		Responsive	
	Number of Students	Percent	Number of Students	Percent	Number of Students	Percent
Goals met	189	83%	3	9%	186	95%
Services refused by caregiver	13	6%	9	28%	4	2%
Student went AWOL	11	5%	9	28%	2	1%
Services refused by student	7	3%	7	22%	0	0%
Student placed out of county	3	1%	2	6%	1	1%
Student placed out of service area	3	1%	1	3%	2	1%
Student placed out of state	1	< 1%	1	3%	0	0%
Total	227	100%	32	100%	195	100%

Source: EdTeamConnect data, extracted August 3, 2018.

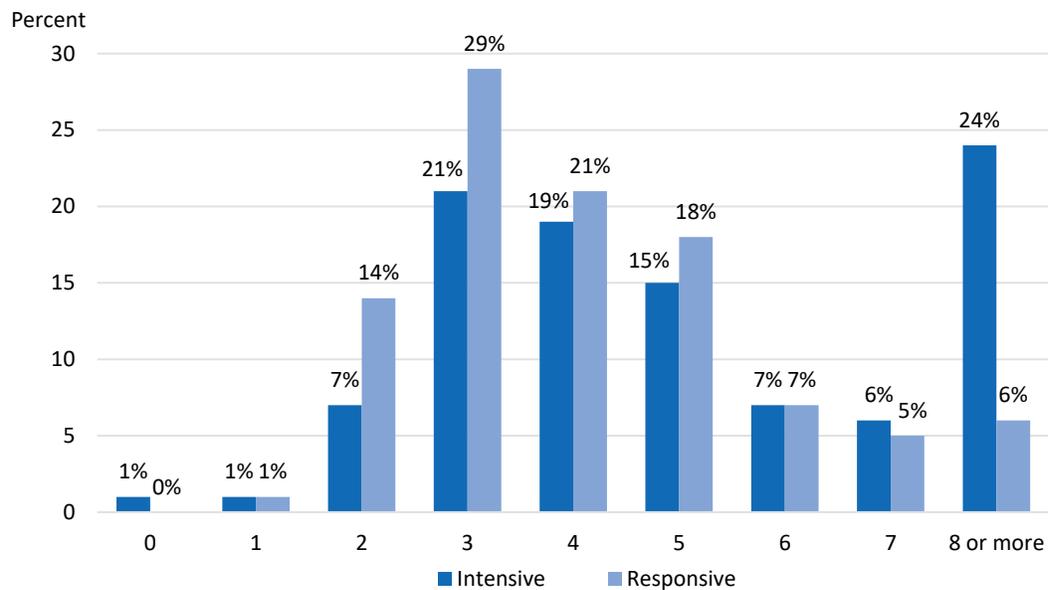
¹⁰ When a youth leaves the placement without permission, they are considered "AWOL" from foster care.

Figure 9: Nonduplicative Student Team Members



Note: CASA = Court Appointed Special Advocate; ILYA = Independent Living Young Adult program.
 Source: EdTeamConnect data, extracted August 3, 2018.

Figure 10: Total Number of Team Members, by Support Level



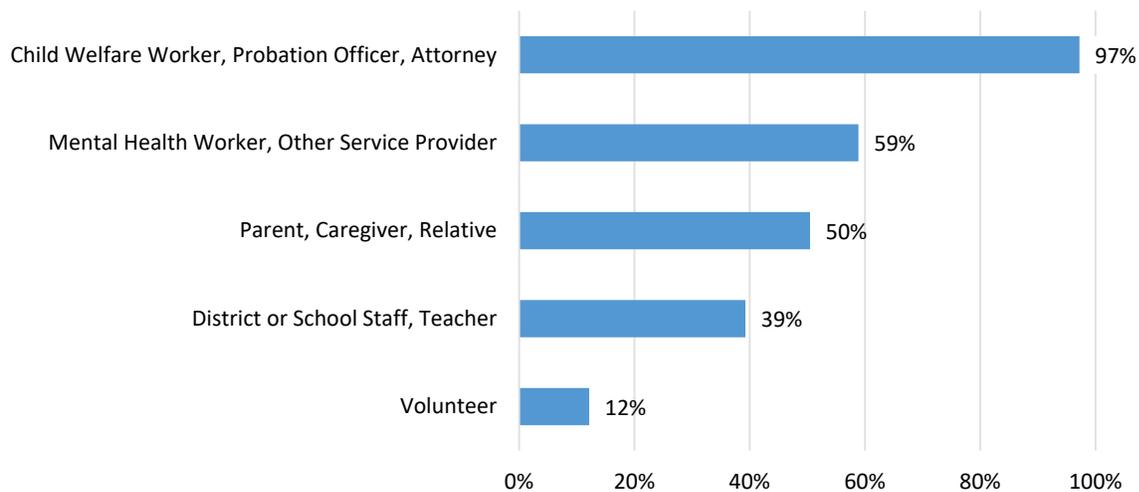
Note: Figure includes 107 youth with intensive supports and 281 with responsive support.
 Source: EdTeamConnect data, extracted August 3, 2018.

Figure 10 reports the percentage of teams by total number of adult members. For both the intensive and responsive groups, most youth have at least three adult team members (91% and 85%, respectively). However, youth in the intensive group were more likely to have six or more adult team members (37% versus 18% for the responsive group).

Figures 11 and **12** report the percentage of teams by member type, for the intensive and responsive groups, respectively. All or almost all of youth from

both groups have a child welfare worker, probation officer, or attorney on their team. One notable difference between the groups is the percentage who have a parent, caregiver, or relative on their team. Among the responsive group, 81% fit into this category, whereas only 50% among the intensive group do. This result is perhaps not surprising given that about 50% of youth who receive intensive services reside in a group home (**Figure 6**).

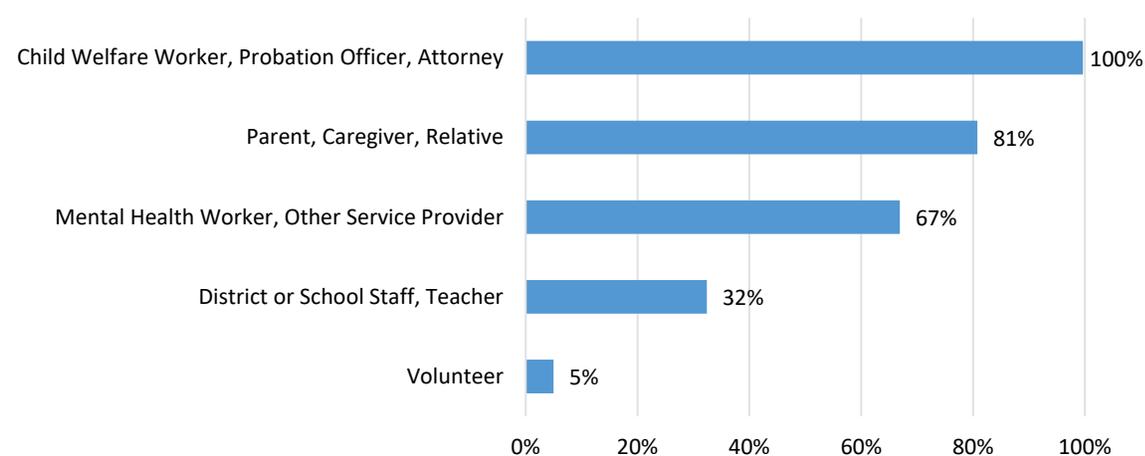
Figure 11: Percentage of Youth Receiving Intensive Supports with Key Roles on Team



Note: N = 107.

Source: EdTeamConnect data, extracted August 3, 2018.

Figure 12: Percentage of Youth Receiving Responsive Supports with Key Roles on Team



Note: N = 281.

Source: EdTeamConnect data, extracted August 3, 2018.

In addition to identifying adults in a youth’s life who can serve on the youth’s education team, the FosterEd EL works with the youth to identify a team member who can be the youth’s Education Champion (EC). **Table 4** reports the percentage of youth receiving intensive and responsive services for whom an EC was identified. About three-

quarters of youth in the intensive services group and 81% of youth in the responsive services group have an identified EC on their team. The final total row in **Table 4** reveals that there are more ECs than there are teams with an EC. This is because some teams have more than one EC.

Table 4: Percentage of Youth Receiving Intensive Supports with an Education Champion on Their Team

Education Champion	Intensive		Responsive	
	Frequency	Percent	Frequency	Percent
No	26	24%	53	19%
Yes	81	76%	228	81%
Total	107	100%	281	100%
Team Member Role of Education Champion				
Relative	52	54%	220	82%
Other Service Provider	22	23%	38	14%
Child Welfare Worker	10	10%	4	1%
Volunteer	8	8%	3	1%
District or School Staff	4	4%	1	0%
Missing	1	1%	2	1%
Total	97	100%	268	100%

Note: The total for team member roles is higher than the number of youth with an Education Champion ($N = 81$) because 24 of the 81 youth who had Education Champions had more than one.

Source: EdTeamConnect data, extracted August 3, 2018.

Among ECs of youth in the intensive services group, about half were a parent, caregiver, or relative, compared with 82% on responsive teams. ECs on intensive teams were more likely to be mental health and other service providers or child welfare workers, probation officers, or attorneys compared with ECs on responsive teams. Recall from **Figure 6** that about 50% of youth receiving intensive services reside in a group home.

How Many Unmet Educational Needs Were Identified and Addressed?

ELs work with youth and their adult team members to identify youths' strengths and needs and develop goals to address their unmet education-related needs. The goals may focus on helping youth to thrive by leveraging their strengths or improve in areas that need strengthening.

At the end of the first year of statewide expansion, a total **810** goals had been set for or by youth, including 364 for youth receiving intensive services and 446 for youth receiving responsive services. As expected given the different purposes

of the service tiers, youth in the intensive services group had a higher average number of goals than youth in the responsive services group (**Table 5**).

Table 5: Mean, Minimum, and Maximum, and Number of Goals for Students, by Student Level of Support

	Mean	Minimum	Maximum
Intensive	4.3	1	8
Responsive	2.0	1	5

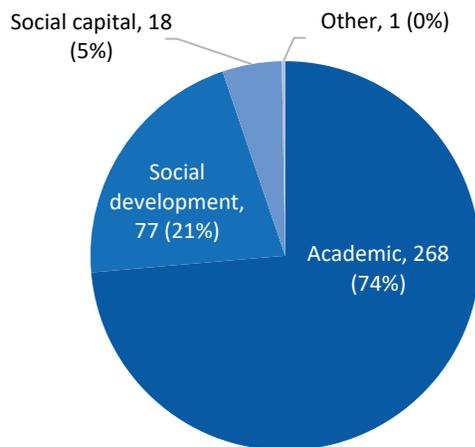
Note: $N = 364$ goals among students receiving intensive support; $N = 446$ goals among students receiving responsive support.

Goals from 15 students who were included in the table 2 are not represented here. Five students who received FosterEd supports prior to expansion were given a responsive or intensive designation after expansion but did not create any new goals. Ten additional students were being served in either responsive or intensive capacities but did not have goals entered prior to the data being pulled for analysis.

Source: EdTeamConnect data, extracted August 3, 2018.

Figures 13 and **14** report the types of goals set for youth. Among the intensive services group, about three-quarters relate to academics, and about 20% relate to social development. A small minority (6%) are social capital goals or "other" goals. Among the responsive services group, the vast majority of goals are academic, with the remainder being social development or "other" goals.

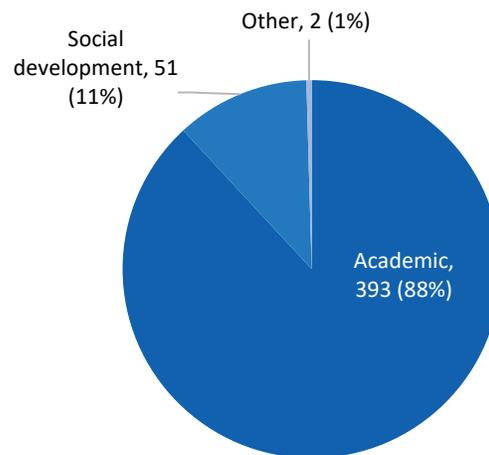
Figure 13: Total Number of Goals, Among Students Receiving Intensive Support, by Goal Category



Note: $N = 364$ total goals among students receiving intensive support.

Source: EdTeamConnect data, extracted August 3, 2018.

Figure 14: Number of Goals, Among Students Receiving Responsive Support, by Goal Category



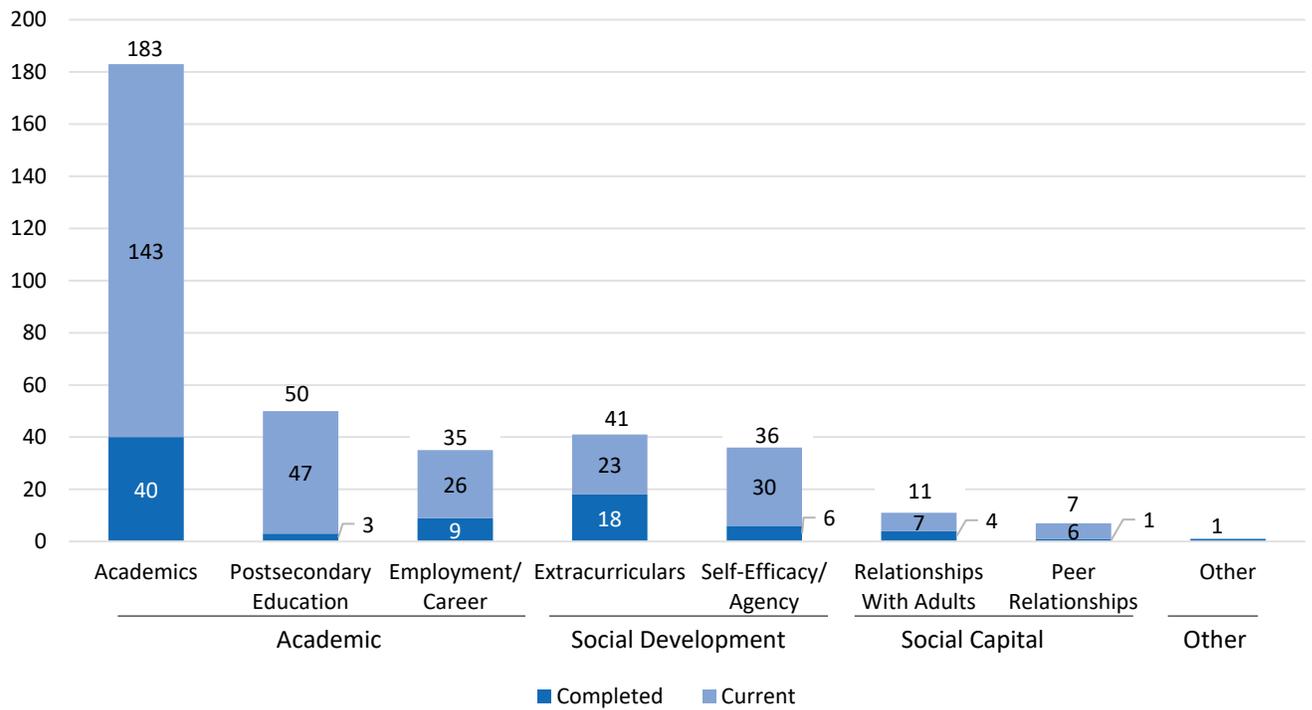
Note: $N = 446$ total goals among students receiving responsive support.

Source: EdTeamConnect data, extracted August 3, 2018.

The goals are further described in **Figures 15 and 16**, including the number of subcategory goals that have been completed and the number that are current. FosterEd has different goal subcategories for intensive and responsive services. Among youth receiving intensive supports, the largest subcategory of goals is academic, followed by postsecondary education goals and career goals. Among youth receiving responsive supports, the largest subcategory of goals is IEP/504 followed by enrollment in the appropriate school, grade level or course. FosterEd has different goal subcategories for intensive and responsive services because of the different tiers of engagement. The responsive tier is a short-term intervention

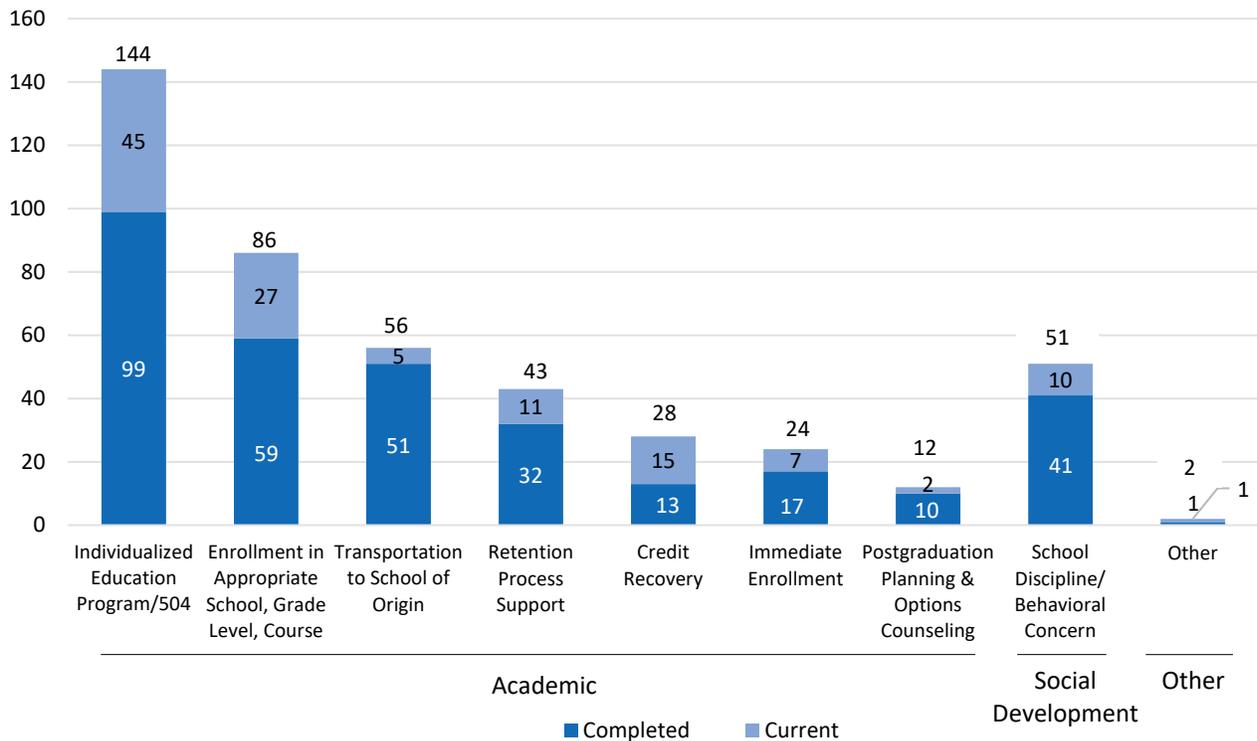
addressing barriers to school success. The subcategories shown in **Figure 16** are the types of issues that commonly arise for students in foster care and are listed as checkbox options for responsive services on FosterEd's referral form for DCS. The intensive tier, on the other hand, is a long-term and highly individualized engagement. There are fewer and different subcategories of goals, but the EL tailors the goal to the youth. Those goals are noted in EdTeamConnect, but they are so individualized that the descriptions are not shared with RTI and not easily summarized beyond the subcategories shown in **Figure 15**.

Figure 15: Number of Goals, Among Students Receiving Intensive Support, by Goal Category and Goal Status



Source: EdTeamConnect data, extracted August 3, 2018.

Figure 16: Number of Goals, Among Students Receiving Responsive Support, by Goal Category and Goal Status



Source: EdTeamConnect data, extracted August 3, 2018.

III. Students' Social and Emotional Well-Being

This section presents preliminary data from student surveys. In summer 2017, RTI developed a student survey in close consultation with FosterEd staff. After reviewing current literature and the FosterEd logic model, RTI identified previously validated scales with the potential to measure relevant aspects of students' social and emotional well-being. Modifications to existing scales were made only when necessary to reflect the target population of foster youth or to better align with the goals of the program.¹¹

The survey contained six scales, five of which had multiple items. The goal of the survey was to better understand youths' initial sense of self-efficacy, future orientation, and support from adults in their lives when they began receiving services from FosterEd. The goal was also to track any changes youth may experience during the course of their time with FosterEd.

All Intensive ELs participated in a training in how to administer the survey to their youth. ELs were instructed to administer the *baseline* survey to youth during their second in-person meeting.

Follow-up surveys were to be administered approximately every 6 months thereafter while youth were receiving FosterEd services.

As of the first week of September 2018, RTI had received responses from 85 unique students, 52 of whom had completed only one survey, 31 of whom had completed two surveys, and 2 of whom had completed three surveys.

Measures of Students' Social and Emotional Well-Being Upon Entering FosterEd

Results from the baseline surveys administered to youth between August 2017 and September 2018 are presented in **Tables 6** and **7**. Self-efficacy refers to youths' judgment about the ability to accomplish a task or succeed in an activity. Prior research has shown that students with higher self-efficacy (i.e., a stronger belief in their ability to succeed) are more likely to persist and succeed in educational pursuits.¹²

Table 6: Baseline Estimates for Self-Efficacy and Future Success Orientation

	Estimate (mean)	SD	Percentage "high" responses ³	Percentage "low" responses ³	Total # Responses
Self-efficacy scale ¹	3.20	.52	13%	11%	85
Future success orientation scale ¹	3.30	.57	15%	15%	85

SD=Standard deviation.

¹ "High" and "low" indicators were defined as youth who had scale means at least one standard deviation above or below the group mean.

² 4-level Likert responses from Strongly Disagree (1) to Strong Agree (4).

³ 3-level responses including (1) Never, (2) Once or twice, (3) More than twice.

¹¹ For example, an existing scale measured teacher supports for education, with the prompt "Indicate your level of agreement with each of the statements about teachers at your school." The statements included, "Care about me," "Listen to what I have to say," and "Care about whether I come to school." For the purpose of this evaluation we modified the prompt to "In general, adults in my life:" with the same set of statements following. This change was made to better align the scale with the goals of FosterEd, which include increasing adult, not exclusively teachers', support for youth education.

¹² Bandura, A. (1994). Self-efficacy. In V. S. Ramachandran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press. (Reprinted in H. Friedman [Ed.], *Encyclopedia of mental health*. San Diego: Academic Press, 1998); Pajares, F., & Urda, T. (Eds.). (2005). *Self-efficacy beliefs of adolescents*. Greenwich, CT: Information Age Publishing.

The baseline surveys demonstrate that FosterEd students have a generally positive sense of self-efficacy, with a mean of 3.2 on a scale of 1.0 (lowest) to 4.0 (highest). (See **Appendix A** for individual survey items associated with each scale). About 13% of students had “high” scale scores (at least one standard deviation above the mean) and 11% had “low” scores (at least one standard deviation below the mean).

FosterEd’s program is also designed to improve students’ future success orientation, including how positive and confident students feel about their plans and chances for success. Similar to self-efficacy, results from the baseline survey were generally positive (mean score 3.3). Equal percentages of students reported “high” and “low” responses (15%).

Led by ELs, FosterEd builds “teams” of adults to support foster youth in achieving their educational goals. An important component of the program is to surround youth with adults in their lives who they can trust and from whom they can receive advice and encouragement. **Table 7** presents results from the baseline survey questions that asked students about the support from adults in

their lives. It is important to note that students were asked to consider all adults other than the EL working directly with them in the FosterEd program.

In a positive but somewhat surprising finding, the baseline survey indicates that nearly all foster youth receiving intensive FosterEd supports agreed as they entered the FosterEd program that they had an adult in their lives who supported and encouraged their education (94% agreed or strongly agreed; mean 3.6). Youth also reported generally high levels of adult support on the eight-item scale (mean 3.3), with 24% of youth reporting “high” levels of adult support, and just 13% reporting “low” levels.

The final two survey scales asked students to respond to how often in the past 30 days adults in their lives either discussed various things with them or encouraged them. In general, at baseline, youth reported discussing school activities, current events or politics, and plans with adults once or twice in the last month (mean 2.1) and reported receiving encouragement from adults in their lives slightly more than once or twice a month (mean 2.2).

Table 7: Baseline Estimates for Adult Supports

	Estimate (mean)	SD	Percentage “high” responses ³	Percentage “low” responses ³	Total # Responses
Have adult who supports and encourages education ¹	3.59	.68	--	--	83
Sense of adult support scale ¹	3.30	.53	24%	13%	85
Discussion frequency with adults scale ²	2.09	.48	19%	15%	85
Encouragement frequency from adults scale ²	2.15	.54	13%	18%	85

SD=Standard deviation.

-- N/A (responses based on single question).

¹ 4-level Likert responses from Strongly Disagree (1) to Strong Agree (4)

² 3-level responses including (1) Never, (2) Once or twice, (3) More than twice.

³ “High” and “low” indicators were defined as youth who had scale means at least one standard deviation above or below the group mean.

Changes in Students' Social and Emotional Well-Being After Six Months of FosterEd Intensive Supports

This report presents what we consider to be a very preliminary look at potential changes in students' social and emotional well-being after being provided with FosterEd intensive supports. Of the 85 students who completed a baseline survey, only 33 (or 38%) had taken a 6-month follow-up survey by September 2018. We caution readers from drawing firm conclusions at this point because (a) the majority of youth served with intensive supports by FosterEd in the 2017–18 school year had not yet completed a second survey in time for inclusion in this report and (b) the intended intensive support model calls for 1–2 years of intensive support, not just 6 months.

Table 8 presents preliminary results for changes in self-efficacy and future success orientation. While not statistically significant, the direction of change is positive for future success orientation between the baseline and first 6-month follow-up surveys. There is no change between the baseline and first 6-month follow-up survey on the self-efficacy dimension.

Table 9 shows preliminary results for changes in the adult supports indicators. Two measures appear to decline ("Have adult who supports and encourages education" and "Sense of adult support scale"), but the differences are not statistically significant. There is no change between the baseline and first 6-month follow-up survey on the "Encouragement frequency from adults scale." While not statistically significant, the direction of change is positive for "Discussion frequency with adults scale" between the baseline and first 6-month follow-up surveys.

Table 8: Changes in Self-Efficacy and Future Success Orientation

	Baseline (mean)	First follow-up (mean)	Direction	Significance (p-value)	Total # Responses
Self-efficacy scale ¹	3.3	3.3	↔	NS ($p = .91$)	33
Future success orientation scale ¹	3.3	3.5	↑	NS ($p = .11$)	33

NS = Not statistically significant.

¹ 4-level Likert responses from Strongly Disagree (1) to Strong Agree (4).

Table 9: Changes in Sense of Adult Support

	Baseline (mean)	First follow-up (mean)	Direction	Significance (p-value)	Total # Responses
Have adult who supports and encourages education ¹	3.5	3.4	↓	NS ($p = .48$)	31
Sense of adult support scale ¹	3.4	3.3	↓	NS ($p = .22$)	33
Discussion frequency with adults scale ²	2.0	2.1	↑	NS ($p = .50$)	33
Encouragement frequency from adults scale ²	2.2	2.2	↔	NS ($p = .92$)	33

NS = Not statistically significant.

¹ 4-level Likert responses from Strongly Disagree (1) to Strong Agree (4)

² 3-level responses including (1) Never, (2) Once or twice, (3) More than twice.

IV. Students' Academic Indicators

Several of the long-term outcomes that FosterEd Arizona hopes to influence are related to how foster youth progress through the educational system. This section asks whether the FosterEd program positively impacted the educational outcomes of participating students. Using data from multiple administrative data systems, we compare the outcomes of foster youth receiving services from FosterEd to similar foster youth who were not served by the program.

Data and Methods

During the 2017–18 school year, researchers from RTI worked with NCYL, the Arizona Department of Education (ADE), and Arizona Department of Child Safety (DCS) to access administrative data from each data system. By linking student records from ADE, child welfare records from DCS, and EdTeamConnect records from FosterEd Arizona, RTI constructed a unique data file containing educational outcomes for foster youth receiving FosterEd intensive services (the treatment group) and foster youth not receiving FosterEd services (the comparison group). **Appendix B** provides details about the data linking process and results. We then used quasi-experimental methods to balance the treatment and comparison groups on multiple student educational, demographic, and child welfare characteristics to estimate FosterEd's effect on key educational outcomes.

Educational Outcomes

This report focuses on six educational outcomes of interest to the FosterEd program, given the

available data (see *Limitations* section): the student's completion status at the end of the 2017–18 school year; whether the student was continuously enrolled during the 2017–18 school year; the student's total out-of-school time, defined as the sum of absences during enrollment periods and total number of days unenrolled; whether the student participated in any standardized assessment, defined as taking a spring 2018 AzMERIT assessment or any AZELLA assessment; and mathematics and English achievement scores from the spring 2018 AzMERIT. **Appendix B** describes in greater detail the definition and construction of each outcome variable.

Defining the FosterEd and Comparison Youth

Although FosterEd Arizona served almost 400 foster youth with intensive and responsive services as of August 2018 (approximately 1 year after the launch of the statewide expansion of the program), the sample for this analysis was restricted in several ways. We focus on students who received intensive services, which restricts the sample to youth in grades 8 through 12, and we analyze outcomes for youth who were served by the FosterEd program for at least 2 months during the 2017–18 school year (**Figure 17**).¹³ The final number of foster youth in the treatment group is 80. The comparison group was restricted to include foster youth who were in grades 8 through 12 during the 2017–18 school year who did not receive any FosterEd services. The final size of the comparison sample is 4,549.¹⁴

¹³ This restriction on time served is set at a very low threshold to keep as many FosterEd youth in the treatment group as possible. However, because youth who receive intensive services are intended to participate in the program for 1–2 years, nearly all youth in the treatment group have received only a partial “dose” of services, which likely weakens the estimates of program effects. As a result, the following findings should be considered preliminary and interpreted with some caution.

¹⁴ There are actually 85 youth served by FosterEd who could potentially be in the comparison group, either because a) they started being served prior to a change in the FosterEd consent process which enabled FosterEd to share identifiable information about the youth with RTI to enable matching with ADE and DCS data, or b) because RTI was unable to identify the youth in the DCS and ADE data given differences in names and birthdates. Most of these FosterEd youth who could potentially be mistakenly in the comparison group were served with responsive supports (N= 77). Given the comparison group size of 4,549, at most 1.6% of the comparison group are actually FosterEd youth.

Figure 17: Changes in FosterEd Sample Size

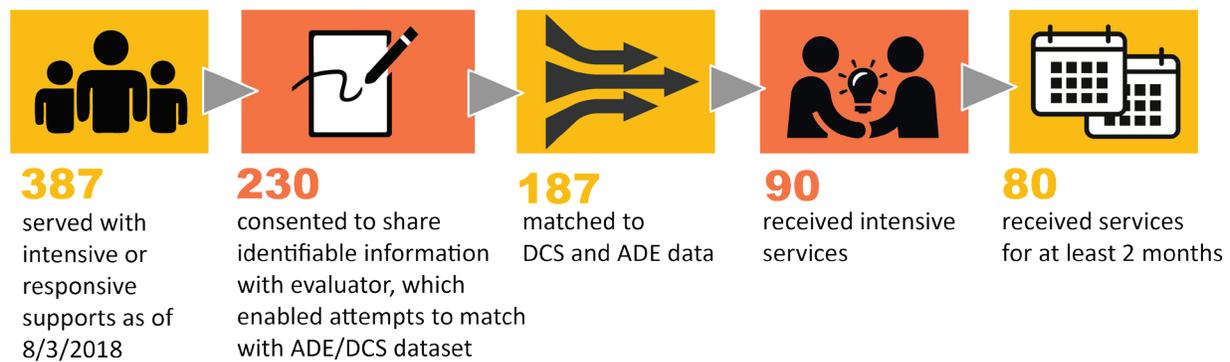


Table 10 presents the sample characteristics of foster youth in the study sample who did and did not receive FosterEd services during the 2017–18 school year. Student demographic and child welfare background characteristics are from 2017–18, while the educational characteristics are drawn from the school year prior to the launch of the FosterEd Arizona statewide expansion (2016–17).

FosterEd youth in the analysis sample were more likely to be male, in high grade levels, receiving special education services, and have participated in statewide assessments in 2016–17. In addition, compared with the comparison group, FosterEd youth had spent longer in the foster care system and had more placements.¹⁵

Table 10: Characteristics of Foster Youth Not Receiving and Receiving FosterEd Intensive Services

	Non-FosterEd Youth (N = 4,549)	FosterEd Youth Served for at Least 60 Days (N = 80)
Amount of Time Served by FosterEd		
2–3 months	–	1.3%
3–6 months	–	17.5%
6–12 months	–	70.0%
12 or more months	–	11.3%
Sex		
Male	52.3%	63.8%
Female	47.7%	36.3%
Grade Level		
8 or 9	39.0%	30.0%
10	22.8%	20.0%
11	20.4%	28.8%
12	17.8%	21.3%
Race/Ethnicity		
Hispanic or Latino ¹	47.5%	38.8%
Black	14.9%	18.8%
White	37.6%	42.5%
Receiving Special Education Services²		
No	72.3%	55.0%
Yes	27.7%	45.0%

¹⁵ Male (coefficient = .47; SE = .23; p = 0.04); grade level (coefficient = .21; SE = .09; p = .01); special education (coefficient=.76; SE = .23; p = .001); missing indicator for AzMERIT mathematics score 2016–17 (coefficient = -.54; SE = .24; p = .02); missing indicator for AzMERIT English score 2016–17 (coefficient = -.66; SE = .25; p = .007); total days in foster care (coefficient = .001; SE = .0001; p < .001); total number of placements (coefficient = .05; SE = .01; p < .001).

Table 10: Characteristics of Foster Youth Not Receiving and Receiving FosterEd Intensive Services—Continued

	Non-FosterEd Youth (N = 4,549)	FosterEd Youth Served for at Least 60 Days (N = 80)
Took AzMERIT Math Assessment 2016–17		
No	47.9%	35.0%
Yes	52.1%	65.0%
Took AzMERIT English Assessment 2016–17		
No	45.3%	30.0%
Yes	54.7%	70.0%
Had Continuous Enrollment in 2016–17		
No	49.5%	40.0%
Yes	50.5%	60.0%
Number of Schools Attended 2016–17 (mean)	1.9	1.8
Number of Days Out of School 2016–17 (mean)	42.8	33.0
Total Days in Foster Care (mean)	805.3	1,188.9
Total Number of Foster Care Placements (mean)	6.0	8.7

¹ The Hispanic or Latino category includes a small percentage of youth who were identified as American Indian/Alaska Native, Native Hawaiian or Other Pacific Islander, or Asian. These three racial/ethnic groups could not be shown separately due to small cell sizes.

² A small percentage of youth in the treatment and comparison groups were missing in this indicator, but due to small cell sizes in the treatment group, they cannot be shown separately. They are included in the “No” category.

Table 11 presents educational outcomes for non-FosterEd and FosterEd youth in the study sample. (See **Table B-1** in **Appendix B** for outcomes estimates for youth who were served by FosterEd for longer periods than 60 days.) Approximately three-quarters (76%) of the FosterEd sample successfully completed the 2017–18 school year, about half (49%) were continuously enrolled throughout the 2017–18 school year, and over half

(58%) participated in the spring AzMERIT assessment or took the AZELLA. Students in the FosterEd sample were out of school (either absent or unenrolled) for an average of 47 days during the 2017–18 school year. **Table 11** does not account for the differences between the FosterEd and non-FosterEd youth samples and therefore does not provide an estimate of the impact of FosterEd on educational outcomes.

Table 11: Unweighted Educational Outcomes for Foster Youth Not Receiving and Receiving FosterEd Intensive Services

	Non-FosterEd Youth (N = 4,549)	FosterEd Youth Served for at Least 60 Days (N = 80)
End-of-Year Completion Status (2017–18)		
Not enrolled at end of year	36.1%	23.8%
Graduated, completed grade, still enrolled	63.9%	76.3%
Continuous Enrollment Throughout 2017–18		
No	49.5%	51.3%
Yes	50.5%	48.8%
Total Out-of-School Days (2017–18) (mean)	45	47
Participated in Spring AzMERIT or AZELLA (2017–18)		
No	51.8%	42.5%
Yes	48.2%	57.5%
Mathematics Scale Score (mean)	3,653	3,651
English Scale Score (mean)	2,546	2,536

NOTE: Sample sizes for FosterEd youth for the out-of-school days analysis was $n = 76$; sample sizes for the mathematics and English scale scores were $n = 41$ and 33 , respectively.

Analytic Steps

The impact analyses rely on a propensity-score-based method called inverse probability of treatment (IPT) weighting to estimate the effect of receiving FosterEd intensive services on students' educational outcomes. The method mimics the design of a randomized experiment using observational data by removing the observed differences between the treatment and comparison groups and making treatment status independent of all baseline covariates.¹⁶ See **Appendix B** for additional details.

In the first step, we modeled the likelihood of receiving the treatment (i.e., receiving FosterEd intensive services) conditional on baseline covariates constructed from the merged ADE and DCS data file. We then estimated a weight for each student that was equal to the inverse of the probability of receiving the treatment (either receiving FosterEd services or not) that the student actually received. In the second step, we assessed the balance to ensure that the treatment group (FosterEd youth) and comparison group (non-FosterEd foster youth) were similar after weighting. Finally, we estimated the effect of receiving FosterEd intensive services on the six educational outcomes with weighted regression using the IPT weights.

Impact Analysis Results

The analysis results shown in this Year 1 report provide preliminary results for FosterEd's impact on the youth it serves with intensive supports. Preliminary results should be interpreted with some caution because, as of the analysis, no youth receiving intensive services had yet been served at least a year as intended in the program model. In fact, as shown in **Table 10** approximately one-fifth of the FosterEd youth included in the analyses had received services for less than 6 months. Although preliminary, the results do point to several promising findings. **Table 12** presents the impact estimates (as coefficients) for each of the six outcomes described above.

Positive results for end-of-year status and assessment participation

Results indicate that FosterEd had a positive impact on students' year-end status. Receiving intensive FosterEd services increased the probability that a student would have graduated, completed, or remained enrolled in school at the end of the 2017-18 school year by 11 percentage points. The probability of successful year-end status among foster youth was 66%, while the probability for FosterEd youth was 77% (**Figure 18**). This difference was statistically significant, meaning that we are unlikely to have observed a difference of this magnitude purely by chance.

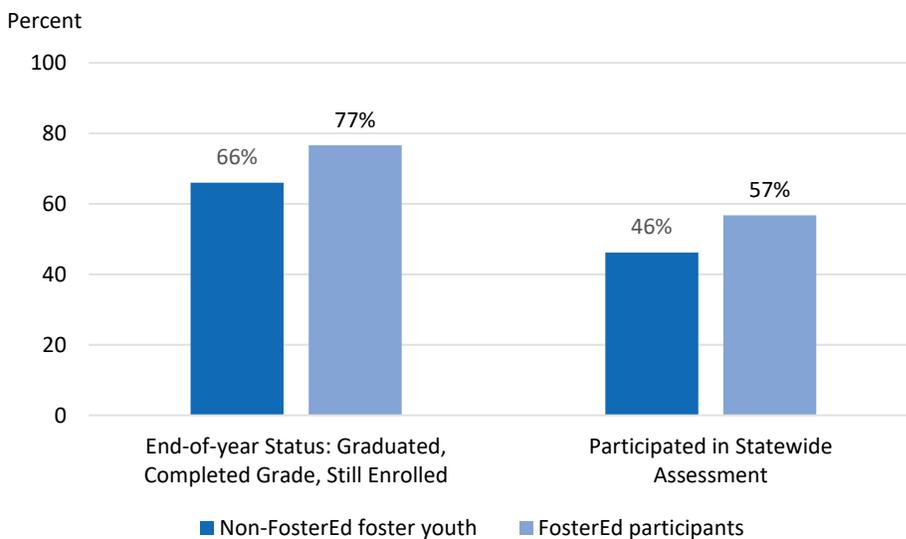
¹⁶ Austin, P. C., & Stuart, E. A. (2015). Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. *Statistics in Medicine*. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/sim.6607>; Woolridge, J.M. (2007). Inverse probability weighted estimation for general missing data problems. *Journal of Econometrics* 141:1281-1301.

Table 12: Weighted FosterEd Program Effect Estimates on Educational Outcomes

	Estimated Program Effect (Coefficient)	Standard Error	p-value	95% Confidence Interval	
Enrollment, Attendance, Persistence					
End-of-year status (2017–18):					
Graduated, completed grade, still enrolled	0.11 *	0.05	0.03	0.01	0.20
Continuous enrollment (2017–18)	-0.03	0.05	0.61	-0.13	0.08
Total out-of-school time	-1.22	4.65	0.79	-10.33	7.89
Participation and Achievement in Standardized Assessments					
Participated in statewide assessment	0.11 *	0.05	0.04	0.00	0.21
Mathematics achievement	-5.36	5.02	0.29	-15.20	4.48
English achievement	-7.47	4.33	0.09	-15.97	1.02

* $p < 0.05$.

Figure 18: Probability of Successful Year-end Status and Assessment Participation



Results also suggest that participation in FosterEd increases the probability that students participated in statewide assessments. Among foster youth not receiving FosterEd services, the probability of participation was 46%. Receiving FosterEd intensive services increased the probability of participation by 11 percentage points, to 57%. ($p < 0.05$).

No differences yet evident in remaining educational outcomes

In terms of whether students were continuously enrolled throughout the 2017–18 school year and

students’ total out-of-school time, the findings do not indicate any statistically significant results, suggesting that the outcomes of the treatment group were similar to those of the comparison group.

The analysis for students’ mathematics and English achievement as measured by the spring AzMERIT standardized test was limited by the number of foster youth participating in the assessment. Approximately 40% of both the treatment and comparison groups had valid spring assessment scores, reflecting the lack of representation of

foster youth in statewide standardized testing.¹⁷ The results from the sample available for this analysis indicate that the FosterEd program did not have a positive effect on math or English achievement scores, but the results were not statistically significant.

Discussion

The results from the first year of FosterEd Arizona, although preliminary, are promising. In the areas that the FosterEd program model focuses the most—helping students attend and persist in school through high school graduation—the impact analysis finds early positive results. FosterEd students are more likely to finish the school year than similar foster youth who are not receiving FosterEd services.

The current study has several important limitations that should be considered when interpreting the results. First, the analyses adjust for pre-treatment differences between youth who received FosterEd intensive services and foster youth who did not. The results can provide an unbiased estimate of program effects under the assumption that there are no remaining differences between the two groups given the observed covariates. Although many pre-treatment covariates were included (such as student background characteristics, education outcomes from the prior school year, and time spent in foster care), if these covariates do not fully capture differences between the treatment and comparison groups, then the program estimates may be biased.

In terms of the educational outcomes examined, some outcomes that may be most relevant to the work of FosterEd were not available within the ADE data system. Although academic achievement as measured by standardized tests can provide one measure of academic growth, academic outcomes as measured by course grades and credit accrual are more directly tied to the work done by ELs and teams within the FosterEd program model as they

can demonstrate academic persistence and engagement.

In addition, this report was limited by the amount of time youth had spent in FosterEd by the time the data was pulled for analysis. Because the program launched in August 2017, youth who were served from the very beginning were served for a maximum of 1 school year. However, many youth were enrolled in the FosterEd program throughout the school year, resulting in service times far less than a school year. All the foster youth in the treatment group were exposed to only a partial dose of FosterEd, which likely weakens the effect estimates and makes it more difficult to detect significant differences between the treatment and comparison groups.

Finally, in addition to youth not receiving a full year of intensive services, another potential limitation is that several of the outcome measures may include data prior to when the youth started receiving FosterEd services. For instance, if a youth was unenrolled for 30 days during the 2017–18 school year *prior* to receiving FosterEd services, those 30 days are included in the FosterEd youth's out-of-school time estimate even though it occurred prior to the youth's involvement with the program. More nuanced analyses may be possible in future reports to better isolate program effects.

¹⁷ The 2015 *Arizona Achievement Gap* report found that students in foster care were less likely than any other student group to participate in statewide testing. Citation: Barrat, V. X., Berliner, B., & Felida, N. J. (2015). *Arizona's invisible achievement gap: Education outcomes of students in foster care in the state's public schools*. San Francisco, CA: WestEd. Authors' analysis of linked administrative data from the Arizona Department of Education and Arizona Department of Child Safety, 2012/13.

V. Summary and Recommendations

The National Center for Youth Law has implemented a number of county-level pilots of FosterEd. Each has been accompanied by an independent evaluation and each yielded some promising results, although none incorporated a comparison group. The statewide expansion of FosterEd Arizona presents an opportunity to increase the evaluation rigor by comparing academic indicators for foster youth served by the program and foster youth not served by the program.

Although preliminary, the academic impact results presented in this report point to several promising findings:

- Receiving intensive FosterEd services increases the probability that a student will graduate, complete, or remain enrolled in school at the end of the year. FosterEd participation led to an 11 percentage point increase in the probability of a positive status at the end of the 2017–18 school year. This difference was statistically significant, meaning that a difference of this magnitude was unlikely to have been observed purely by chance.
- Receiving FosterEd intensive services increases the likelihood that students participate in statewide assessments. Relative to non-FosterEd youth, participation in FosterEd increased the probability of participation from 46% to 57%, a statistically significant result.

Preliminary analyses of other available academic indicators did not reveal any statistically significant results, suggesting that the outcomes of the FosterEd treatment group were similar to those of the foster youth comparison group.

RTI views the academic impact results presented in this report as reflecting positively on the FosterEd program, especially considering that these preliminary analyses were based on data from youth who had received only a portion of the intended “dose” of the intensive services model.

Preliminary analyses of data from the youth survey of social and emotional well-being revealed that as youth started receiving intensive supports, they had a generally positive sense of self-efficacy and a generally positive future success orientation. Almost all (94%) agreed or strongly agreed that they had an adult in their life who supported and encouraged their education.

The relatively high levels of social and emotional well-being measured by the baseline survey means that growth on these indicators may be difficult to observe. In fact, the very preliminary analyses conducted with a minority of the youth who had been supported with intensive services (N=33, 38%) did not yield any statistically significant differences between the baseline measures and the six-month follow up measures.

Recommendations

RTI offers the following recommendations as FosterEd continues to serve foster youth throughout Arizona. They each relate to the evaluation and therefore are directed both at FosterEd and RTI.

1

Reconsider the approach of limiting the adult support survey questions to adults in the youths’ life other than the Education Liaison.

In developing the youth social and emotional well-being survey, RTI and NCYL agreed to include measures of adult supports, intentionally focusing on adults in the youth’s life other than the EL. This was because FosterEd has been concerned that if strengthening adults supports is only accomplished through the EL relationship the impact will wane once the youth stops participating in FosterEd.

The baseline survey results suggest, however, that over 90% of youth supported by FosterEd enter the program reporting that they have an adult in their life who is supportive and encouraging of their education. Perhaps one of the potential contributions of FosterEd is that the EL provides

focused support for the youth's educational goals, and is able to leverage the support of other adults in the youth's life in ways that might not be readily apparent to the youth, or not captured in the current version of the youth survey.

FosterEd is wise to consider what happens when youth leave the program. Perhaps another potential contribution of the EL is that they can help youth to develop or more clearly articulate educational goals, and help youth become stronger advocates for themselves in educational settings. These skills can have lasting impacts even after the formal EL relationship has ended.

The exclusion of any data about the EL-youth relationship is currently a limitation of the evaluation. RTI recommends we work with FosterEd to adjust the evaluation methodology to more clearly attempt to understand the potential contributions of the adult team members and the EL in supporting youth. This could be accomplished by asking youth about their experiences working with the EL and their adult team members through an exit survey or focus groups.

2 Incorporate youth feedback into the evaluation.

Youth feedback on the FosterEd experience has not yet been a component of FosterEd's independent evaluations. RTI recommends that FosterEd and RTI prioritize collecting youth feedback in the second year of the FosterEd Arizona statewide evaluation. Doing so is consistent with FosterEd's commitment to youth-centered engagement and RTI's belief that beneficiaries of programs have unique expertise that is critical to understand and incorporate into program improvement efforts.

3 Refine the evaluation plan to be able to also assess the responsive support tier.

Almost three-quarters of the youth served by FosterEd since the launch of the statewide expansion have been supported by responsive services. Section II of this report offers a description of these youth and the supports they have been provided. The evaluation has not yet, however, examined whether and how youth provided with responsive supports benefit from FosterEd.

RTI and FosterEd originally expected to be able to include education data for youth served with responsive supports in the second year of the evaluation, and to use those data along with data from youth served with intensive supports to address the third Research Question: "Within counties with sufficient FosterEd services to reach the majority of foster youth, are the academic gaps between foster youth and non-foster youth declining?"

RTI and FosterEd should determine in the next few months whether the majority of foster youth in Maricopa County, Pima County or Yavapai County will be served with either intensive or responsive services during the 2018-19 school year, such that FosterEd would expect gaps between foster youth and non-foster youth to have closed during that school year. If FosterEd will not yet have reached most foster youth in any of the three counties during the 2018-19 school year, RTI and FosterEd should develop alternate plans to at least preliminarily assess the responsive support tier.

Appendix A: Youth Social and Emotional Well-Being Survey



Youth Survey: You are the expert about you!

Why am I being asked to complete this survey?

The FosterEd program is committed to helping you and other foster youth succeed in school and prepare for your future. We understand that there are many factors, other than academics, that play a role in succeeding in school, such as how well-supported students feel by the adults in their lives and their mindsets associated with their future possibilities. Your answers to this survey help us understand how we can best support you in those non-academic areas that are also important aspects of succeeding in school. We will be asking you to complete this survey about every six months to see if your perspectives and experiences change.

What do you want me to do?

This survey will take about 20 minutes to complete. This is not a test. There are no right or wrong answers. It is important that you read each question carefully. Please mark the response that best represents your answer.

Must I complete the survey?

No. Your participation is voluntary. However, we encourage you to take the survey so we can learn about you and learn what supports are most helpful to you.

Will my survey information be given to anyone else?

Your Education Liaison will see your answers. FosterEd will also share survey answers for all youth with researchers at RTI International who will be studying whether FosterEd is effective at supporting foster youth. When we share the survey answers with RTI, we will not give them your name or any other identifying information about you. They will combine your answers with the answers from all of the youth participating in FosterEd.

What if I have questions?

If you have a question, such as not understanding a word or knowing how to mark an answer, at any point while completing the survey, please ask your Education Liaison for help. If you want to know more about the study of FosterEd, you can contact Jen Laird at 510-665-8238, jlaird@rti.org.

THANK YOU!

About You

(Self-efficacy scale)

Question 1. Indicate your level of agreement with each of the following statements.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. I will be able to achieve most of the goals that I have set for myself.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. When facing difficult tasks, I am certain that I will accomplish them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. In general, I think that I can obtain outcomes that are important to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I believe I can succeed at almost anything to which I set my mind.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. I will be able to successfully overcome many challenges.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. I am confident that I can perform effectively on many different tasks.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Even when things are tough, I can perform quite well.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Adults in My Life

(Have adult who supports and encourages education)

Indicate your level of agreement with each of the following statements about the adults in your life.

Please do not consider your Education Liaison when answering the next four questions. Instead, think about other adults in your life, such as your caregivers, foster parents, aunts, uncles, grandparents, other relatives, teachers, counselors, CASA, coaches, or adult friends.

Question 2. I have at least one adult in my life who supports and encourages my education.

Strongly Disagree	Disagree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 3. In general, the adults in my life: **(Sense of adult support scale)**

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. Care about me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Listen to what I have to say.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Care whether or not I come to school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Give me a lot of encouragement.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Show me respect.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Know my strengths as a student.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Praise my efforts when I work hard.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Care about the grades I make.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 4. During the past 30 days, how often did you discuss the following with any adult in your life? **(Discussion frequency with adults scale)**

	Never	Once or twice	More than twice
a. Selecting courses or programs at school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. School activities that interest you	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Things you've studied in class	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Current events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Politics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Your plans for the future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Your interest in future jobs or careers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. Your plans for college	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Question 5. During the past 30 days, how often did any adult in your life do the following? **(Encouragement frequency from adults scale)**

	Never	Once or twice	More than twice
a. Encourage you to do well in school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Encourage you to take part in activities that are not part of class work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Help you get books or supplies you needed to do your school work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Praise or reward you for working hard on school work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Offer to help you with homework or a special assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Attend a school event	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Your Future

(Future success orientation scale)

Question 6. Indicate your level of agreement with each of the following statements about your future.

	Strongly Disagree	Disagree	Agree	Strongly Agree
a. When I think about my future, I feel very positive.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. I have a clear image of myself being successful in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. I know how I don't want my life to turn out.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. I have a good sense of what it takes to be successful as an adult.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. I am on the "right track" for future success.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. I try to make good choices to increase my chances for a good future.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. I see a strong connection between success in school and success in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. I am prepared to work hard to have a good life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. I feel confident that I have what it takes to be successful in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. I feel certain that I will graduate from high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. I plan to attend college after I graduate from high school.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. I see myself accomplishing great things in life.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For the Education Liaison to complete:

Youth's ETCID:

Date youth filled out the survey (MM/DD/YY) / /

MONTH DAY YEAR

Source of Scale for Q1: Chen, G., Gully, S.M., & Edan, D. (2001). Validation of New General Self-Efficacy Scale. *Organizational Research Methods, Vol 4* (1), 62 – 83. Scales for Q3-6 adapted from: Bowen, G. L., & Richman, J. M. (1997). *The School Success Profile*. Chapel Hill, NC: The University of North Carolina at Chapel Hill.

Appendix B: Academic Outcomes

Methodology

Data Matching Process

The first step in creating the unique data file containing the educational outcomes of foster youth was to define the populations of interest for the Arizona Department of Child Safety (DCS) and Arizona Department of Education (ADE) data prior to linking them. RTI constructed a child-level dataset from DCS files that contained any children who were at least 9 years old as of August 1, 2018, and who were in foster care at any point during the 2017–18 school year (August 1, 2017, to July 30, 2018). These restrictions resulted in 11,910 youth. The student-level files from ADE contained data from all public school students who were in grades 4 through 12 during the 2016–17 and 2017–18 school years ($N = 607,796$). The student-level file from FosterEd Arizona’s EdTeamConnect system included all youth of all ages served in both responsive and intensive tiers who had provided consent for NCYL to share identifiable data with RTI, which enabled RTI to attempt to match the student with the ADE dataset ($N = 230$).

Because the DCS and ADE data systems do not share a unique identifier, the second step was to conduct fuzzy matching to link foster youth in DCS to their educational records in the ADE files. To do this, RTI relied on similar fields across the two data systems, including first name, last name, birthdate, and gender. Prior to matching, the name fields in each data system were cleaned (spaces, hyphens, other nonalphabetical characters removed). The two data systems were then matched using the following strategies in order: direct matches on first name, last name, and birthday; direct matches on first name and last name with a manual review of birthday; use of the SOUNDEX function on a

concatenation of first name, last name, and birthdate.

The above steps resulted in 8,365 matches of DCS youth to records in ADE (70% match rate). Of the 230 FosterEd youth, 227 had corresponding data in the DCS data system. Of the 227 FosterEd youth with DCS data, 187 had corresponding data in the ADE data system as a result of the matching procedure and sample restrictions (i.e., students in grades 4 through 12 during the 2017-18 school year). Although the match rate from DCS to ADE overall was lower than that reported in the *Invisible Achievement Gap*, researchers for this report prioritized matches with a high level of certainty given that the purpose was not to provide a comprehensive account of educational outcomes for all foster youth in Arizona, but instead to construct a comparison group of students similar to those served by FosterEd.

Outcome Variables: Definition and Construction

Completion status. This is a dichotomous variable coded as 1 for students whose last enrollment during the 2017–18 school year indicated that the student had completed the academic year, and 0 otherwise. Students who completed the academic year could have experienced a variety of outcomes, including graduation; grade completion, promotion, or retention;¹⁸ or an indicator for continuing enrollment. Students who did not complete the academic year (coded as 0) had exit dates for their last enrollment that were prior to the end of the academic year and had not subsequently re-enrolled at another school.

¹⁸ RTI considered coding the “retained” outcome as not having completed the school year since grade retention could be considered a nonsuccessful end-of-year outcome. However, completing the school year, even with a retention, should be viewed as positive compared with having stopped attending school. In any event, the outcome of retention was rare for both the treatment and comparison groups (cell size too low to report).

Continuous enrollment. This dichotomous variable was coded as 1 for students who met either of the following criteria: (a) the student was enrolled in a single school during the 2017–18 school year and completed the school year there, or (b) the student had multiple enrollments during the 2017–18 school year, but the total number of days between enrollment periods (referred to as enrollment gaps) was no more than 7 days.¹⁹ Students who were enrolled in a single school but who left prior to the end of the school year or who had enrollment gaps larger than 7 days were coded as 0.

Total out-of-school time. Out-of-school time is a continuous variable that was constructed by summing the amount of time a student was reported absent during enrollment periods throughout the 2017–18 school year and the total number of days a student was unenrolled during the 2017–18 school year. Absences could be reported as fractions of days, including 0.25, 0.5, 0.75, and 1.0 days, such that total out-of-school time includes noninteger values.

Participation in statewide assessments. Assessment participation was coded as a dichotomous variable. Students were coded as 1 if they participated in the spring AzMERIT assessment, regardless of content area, test completion status, or score, or if they took the AZELLA assessment at any point during the 2017–18 school year. Students who did not take the AZELLA and did not participate in any spring AzMERIT assessment were coded as 0.

Mathematics achievement. Student mathematics achievement was measured using the AzMERIT assessment, Arizona’s statewide achievement test. Arizona public school students in grades 3 through high school take the assessment, either at their grade level (through grade 8) or as an end-of-course assessment (high school level). Because

students participating in FosterEd started receiving services throughout the 2017–18 school year, only spring assessment scores were included in the analysis. If students had more than one spring assessment, only the highest of the scores was retained. AzMERIT scores are vertically scaled to allow inferences about student growth over time.²⁰ Mathematics scores for grades 8 through 11²¹ range from 3566 (reflecting minimally proficient in grade 8) to 3839 (reflecting highly proficient in grade 11).

English achievement. Student English achievement was measured using the AzMERIT assessment, Arizona’s statewide achievement test. Arizona public school students in grades 3 through high school take the assessment, either at their grade level (grades 3–8) or as an end-of-course assessment (high school level). Because students participating in FosterEd started receiving services throughout the 2017–18 school year, only spring assessment scores were included in the analysis. If students had more than one spring assessment, only the highest of the scores was retained. English AzMERIT scores for grades 8 through 11 range from 2448 (reflecting minimally proficient in grade 8) to 2675 (reflecting highly proficient in grade 11).

Analytic Steps

The impact analysis to estimate the effect of receiving FosterEd intensive services on students’ educational outcomes relies on a propensity-score-based method called inverse probability of treatment (IPT) weighting. This method removes the observed differences between the treatment and comparison groups. The method also mimics

¹⁹ RTI decided to allow for apparent enrollment gaps of up to 7 days and still consider the youth continuously enrolled because weekend days could not be deleted when considering the ending date for one enrollment and the start date for the next enrollment. Additionally, many youth had more than two enrollment spells.

²⁰ American Institutes for Research. (2018). *Annual technical report: Arizona statewide assessment in English language arts and mathematics, 2017–2018 school year*. Washington, DC: Author.

²¹ See <https://cms.azed.gov/home/GetDocumentFile?id=5bed920b1dcb2511f439448e> for more detail. The three mathematics assessments following grade 8 are administered as end-of-course assessments for Algebra I, Geometry, and Algebra II instead of in grades 9, 10, and 11.

the design of a randomized experiment using observational data.²²

In the first step, we modeled the likelihood of receiving the treatment (i.e., receiving FosterEd intensive services) conditional on baseline covariates constructed from the merged ADE and DCS data file. The variables included were those related to treatment and outcomes. They included student background characteristics, including indicators for Black and White, whether the student received special education services, and student grade in 2017–18; characteristics of the student’s 2016–17 school year, including indicators for whether the student participated in the AzMERIT mathematics or English assessment; whether the youth had continuous enrollment, the number of schools attended, and the total number of out-of-school days; and characteristics of the youth’s time in foster care, including total time in removal episodes (in days) and total number of placements, either in paid or unpaid placements. We then estimated a weight for each student that is equal to the inverse of the probability of receiving the treatment (either receiving FosterEd services or not) that the student actually received.

In the second step, we assessed the balance to ensure that the treatment group and comparison

group were similar after weighting. **Table B-2** provides the raw and weighted standardized differences for each of the covariates included in the treatment model. Weighted standardized differences were close to zero for all covariates, and the overdispersion test indicates that we cannot reject the null hypothesis that the IPT model balanced all covariates.

Finally, we estimated the effect of treatment status (of receiving FosterEd intensive services) on the six outcomes using regression weighted with the IPT weights. Three outcomes relied on a weighted logistic regression model (end-of-year status; continuous enrollment; and participation in assessments), and three outcomes used a weighted linear regression (total number of out-of-school days; mathematics achievement; English achievement). Models for mathematics and English achievement also included regression adjustment for students’ 2016–17 score on the AzMERIT mathematics and English assessments, respectively, and students’ grade in school during the 2017-18 school year. All estimates present the average treatment effect on the treated (i.e., the effect of receiving FosterEd intensive services for the youth who actually received them).

²² Austin, P. C., & Stuart, E. A. (2015). Moving towards best practice when using inverse probability of treatment weighting (IPTW) using the propensity score to estimate causal treatment effects in observational studies. *Statistics in Medicine*. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1002/sim.6607>; Woolridge, J.M. (2007). Inverse probability weighted estimation for general missing data problems. *Journal of Econometrics* 141:1281-1301.

Table B-1: Unweighted Educational Outcomes for Foster Youth Receiving and Not Receiving FosterEd Intensive Services

	Non-FosterEd youth (<i>n</i> = 4,549)	FosterEd youth		
		Served for at least 60 days (<i>n</i> = 80)	Served for at least 120 days (<i>n</i> = 69)	Served for at least 180 days (<i>n</i> = 46)
End-of-Year Completion Status (2017–18)				
Not enrolled at end of year	36.1%	23.8%	23.2%	21.7%
Graduated, completed grade, still enrolled	63.9%	76.3%	76.8%	78.3%
Continuous Enrollment Throughout 2017–18 ¹				
No	54.5%	51.3%	47.8%	45.7%
Yes	45.5%	48.8%	52.2%	54.3%
Total Out-of-School Days (2017–18) (Mean)	45	47	46	45
Participated in Spring AzMERIT or AZELLA (2017–18)				
No	51.8%	42.5%	43.5%	47.8%
Yes	48.2%	57.5%	56.5%	52.2%
Mathematics Scale Score (Mean)	3,653	3,651	3,651	3,651
English Scale Score (Mean)	2,546	2,536	2,535	2,530

NOTE: Sample sizes for FosterEd youth served for 60, 120, and 180 days for the out-of-school days analysis were *n* = 76, 65, and 43, respectively. Sample sizes for the mathematics scale score were *n* = 41, 34, and 23, respectively. Sample sizes for the English scale score were *n* = 33, 28, and 18, respectively.

Table B-2: Balance Diagnostics for Inverse Probability of Treatment Weights

	End-of-year Status; Participated in Assessment			Continuous Enrollment			Out-of-School Time			Mathematics Achievement			English Achievement		
	Standardized Differences			Standardized Differences			Standardized Differences			Standardized Differences			Standardized Differences		
	Raw	Weighted		Raw	Weighted		Raw	Weighted		Raw	Weighted		Raw	Weighted	
Total Days in Foster Care	0.48	-0.03		0.50	-0.04		0.47	-0.03		0.48	0.00		0.35	0.00	
Total Number of Foster Care Placements	0.39	-0.03		0.43	-0.04		0.44	-0.04		0.52	-0.06		0.49	0.01	
Missing Indicator for Math Assessment 2016–17	-0.21	0.00		-0.14	-0.01		-0.18	0.00							
Missing Indicator for English Assessment 2016–17	-0.26	0.00		-0.19	0.00		-0.17	0.00							
Continuous Enrollment 2016–17	0.18	0.02		0.13	0.02		0.10	0.02							
Out-of-School Time 2016–17	-0.25	-0.01		-0.18	-0.02		-0.16	-0.02		-0.16	0.00		0.26	-0.02	
Grade	0.34	-0.01		0.38	-0.02		0.34	-0.01		0.59	-0.04		0.48	-0.01	
Special Education Status	0.31	-0.01		0.31	-0.01		0.35	-0.01		0.37	-0.03		0.39	-0.01	
Male	0.26	0.00		0.29	-0.01		0.31	-0.01		0.49	-0.01		0.39	-0.01	
Black	0.12	0.01		0.13	0.01		0.12	0.01							
White	0.17	-0.01		0.15	-0.01		0.22	-0.01		0.37	0.04		0.36	-0.01	
Number of Treated Observations	74			73			70			31			27		
Overidentification Test for Covariate Balance															
Chi-square	8.97			10.4			9.66			5.58			7.06		
p-value	0.71			0.58			0.64			0.69			0.53		

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