

Exploring Secondary and Postsecondary Attainment Among Juvenile Justice-Involved Youth in Massachusetts

Prepared for the Massachusetts Department of Youth Services
and the Massachusetts Department of Elementary
and Secondary Education



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Introduction

The Commonwealth of Massachusetts has one of the strongest high school graduation rates in the country. Massachusetts youth who are involved in the **juvenile justice system**, however, graduate at rates more than **three times lower** than the public school student population statewide. **Twenty-six percent (26%)** of young people involved with the Department of Youth Services completed high school within five years, compared to **90% of students** statewide. The significantly lower graduation rate among this specific group of youth reflects the **systemic and personal barriers** to high school graduation and postsecondary success that they face before, during, and post-commitment.¹

The **Massachusetts Department of Youth Services (DYS)** revamped its educational programming nearly ten years ago to create “access to high-quality secondary and postsecondary education, career exploration, and workforce development opportunities for youth in DYS care and custody.”² Through a collaborative partnership with the **Massachusetts Department of Elementary and Secondary Education (DESE)**, DYS has developed an **asset-based, strengths-focused, equitable approach** to supporting education pathways for young people between the ages of 12 and 21 who have been committed to DYS custody. This study, therefore, set out to answer the following questions:

- At what rates are DYS-involved youth graduating from high school, earning a high school equivalency, or dropping out?
- What factors contribute to persisting towards a high school diploma or equivalency?
- How do young people fare in the educational system once they transition out of DYS?
- At what rate are DYS-involved youth enrolling in and completing postsecondary degrees?
- How might DESE and DYS continue supporting young people’s academic and career goals?

This report, generated as the result of a year-long partnership among DYS, DESE, and CERES Institute for Children and Youth at Boston University Wheelock College of Education and Human Development, represents the first time in Massachusetts history that DYS and DESE data have been integrated to analyze the relationships among **juvenile justice involvement and youth educational attainment**. The results and recommendations are designed to inform Massachusetts policymakers and practitioners who want to **sustain promising practices** and **strengthen strategic supports** for young people during and after justice system involvement.

¹ To date, however, there are few insights into the educational outcomes of youth in the juvenile justice system, and even fewer insights into the correlates that predict high school completion, college attendance, and workforce engagement.

² www.mass.gov/doc/dys-fy20-comprehensive-education-partnership-report/download

Exploring Secondary Outcomes Among Juvenile Justice-Involved Youth

Method

This section details the methodology used to analyze outcomes related to **high school completion and dropout** within our sample of young people previously involved with DYS. First, we describe the data used in the current report, which were provided by two state agencies—Massachusetts Department of Youth Services (DYS) and the Massachusetts Department of Elementary and Secondary Education (DESE). Then, we outline our process of sample selection—which was largely driven by availability of data and the need to chronologically align data from the two agencies. Next, we describe the current sample and the specific measures used to determine high school educational outcomes, student characteristics, and DYS-related factors.

Data

DYS and DESE provided data for the current study. The data from **DYS** included **commitment and discharge** information for youth who were discharged from DYS between 2015 and 2021. The **DESE** data contained information related to **student characteristics and educational enrollment status** for youth enrolled in Massachusetts public schools between the Fall of 2014 and the Spring of 2021. Unique student identifiers present in both the DYS and DESE data allowed us to merge the DYS- and DESE-provided data.

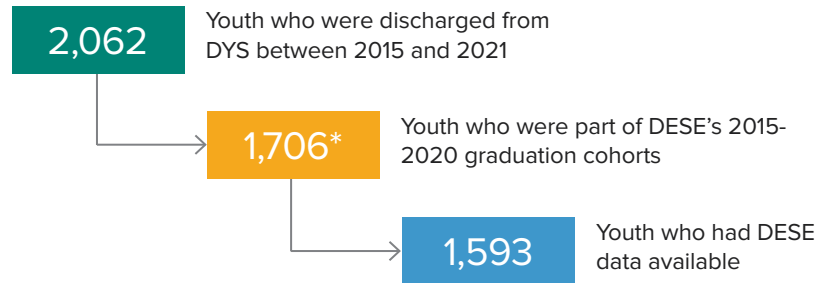
Sample Selection

A total of **2,062** youth who were discharged between 2015 and 2021 were included in the DYS data. To align these data with the data from DESE, we identified two subsets of DYS-involved students whose educational trajectories could be accurately accounted for in the DESE data. The two samples are described below. In addition, Figures 1 and 2 provide flowcharts outlining our sample selection procedures.

Sample 1 (N=1,593) was used for the analysis of **graduation, high school equivalency attainment, and dropout rates**. Given that DESE reports these rates based on **graduation cohorts** (see further discussion of graduation cohorts below), we elected to narrow the sample to DYS-involved students who were part of **DESE's 2015-2020 graduation cohorts** in order to allow for parallel comparisons. Of the 2,062 previously DYS-involved youth, 1,706 were part of the 2015 to 2020 graduation cohorts and 1,593 also had DESE data available.³

³ Youth who were missing data were primarily from graduation cohorts 2015 and 2016. It is likely that these students had already graduated, dropped out, or transferred out prior to or during the 2013-2014 school year, which is beyond our data coverage.

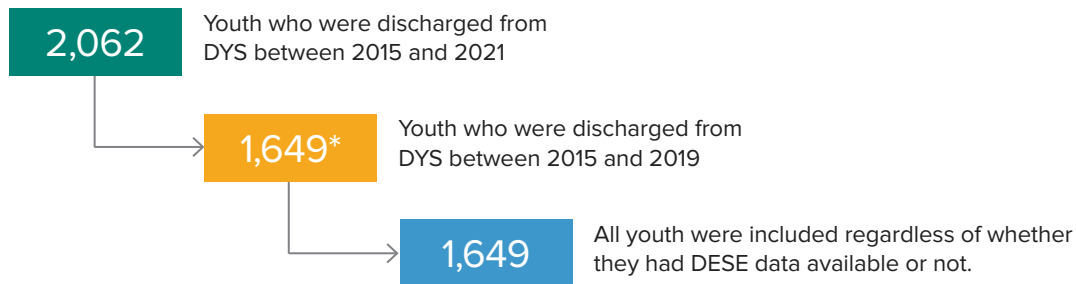
FIGURE 1. Sample selection process for analyses related to high school outcomes (Sample 1: N=1,593)



*We examined youth's four-, five-, and six-year high school educational outcomes since first enrollment in the 9th grade. Given that the available DESE data covered enrollment status up to the Spring of 2021, only youth who were part of DESE's 2015-2020 graduate cohorts were included in the sample to ensure adequate data coverage.

Sample 2 (N=1,649) was used for the analyses related to students' educational status in the school year following their discharge from DYS. The sample included 1,649 previously DYS-Involved youth who were discharged between 2015 and 2019. Although this sample included two fewer DYS discharge years, it was still slightly larger than Sample 1 since it was not limited by graduation cohort or whether youth had DESE data available. However, there were not meaningful differences between the two samples in terms of student characteristics or DYS-related factors. Table 1 on page 4 provides a complete description of Sample 1 and Sample 2.

FIGURE 2. Flowchart outlining the sample selection process for Sample 2



*We examined youth's educational status during the school year following discharge. Given that the available DESE data covered enrollment status up to the Spring of 2021, only youth who were discharged from DYS between 2015 and 2019 were included in the sample to ensure adequate data coverage.

Sample Description

The majority of the 1,593 youth in **Sample 1** were **male** (87.0%). About two-thirds of the youth were reported to have received **special education services** (SPED, 67.2%) and 13.8% were **English Language Learners** (ELL). The largest group of youth were identified as **Hispanic** (39.6%), followed by **Non-Hispanic White** (28.7%) and **Non-Hispanic Black** (25.9%).

Participants were roughly evenly distributed across the five **DYS-designated regions** (17.1% Central, 16.7% Metro, 21.0% Northeast, 24.3% Southeast, 20.9% Western), with the Southeast region representing a slightly higher percentage. In terms of the **seriousness of the offense** for which they were committed, most youth were classified as **non-youthful offender** (82.9%) and were assigned a lower (49.3%) or median (43.7%) offense grid. Most youth (72.9%) were **16 years of age or older** at their current commitment. After their mandatory commitment with DYS had ended, more than half (58.1%) of these youth **participated in the YES Initiative**.⁴ There were no meaningful differences in student characteristics or DYS-related factors between Sample 1 and Sample 2.

⁴ Youth Engaged Services (YES) is a voluntary post-commitment program for DYS-involved youth.

TABLE 1. Descriptions of Sample 1 and Sample 2 used in the analysis of high school educational outcomes

	SAMPLE 1	SAMPLE 2
STUDENT CHARACTERISTICS	(n=1,593)	(n=1,649)
Gender		
Female	207 (13.0%)	198 (13.8%)
Male	1386 (87.0%)	1233 (86.2%)
Race/Ethnicity		
Hispanic	630 (39.6%)	564 (39.4%)
Non-Hispanic Black	412 (25.9%)	374 (26.1%)
Non-Hispanic White	457 (28.7%)	414 (28.9%)
Non-Hispanic Others	94 (5.9%)	79 (5.5%)
English Language Learner Status		
Non-ELL	1373 (86.2%)	1240 (86.7%)
ELL	220 (13.8%)	191 (13.4%)
Special Education Status		
Non-SPED	522 (32.8%)	491 (34.3%)
SPED	1071 (67.2%)	940 (65.7%)
DYS-RELATED FACTORS		
YES participation		
Non-YES	668 (41.9%)	747 (45.3%)
YES	925 (58.1%)	902 (54.7%)
Region		
Central	272 (17.1%)	283 (17.2%)
Metro	266 (16.7%)	269 (16.3%)
Northeast	335 (21.0%)	330 (20.0%)
Southeast	387 (24.3%)	399 (24.2%)
Western	333 (20.9%)	368 (22.3%)
Offense grid		
Lower	784 (49.3%)	817 (49.7%)
Median	695 (43.7%)	714 (43.4%)
Higher	110 (6.9%)	114 (6.9%)
Youthful Offender Status		
Non youthful offender	1321 (82.9%)	1382 (83.8%)
Youthful offender	272 (17.1%)	267 (16.2%)
Age at Current Commitment		
At or older than age 16	1161 (72.9%)	1191 (72.2%)
Younger than age 16	432 (27.1%)	458 (27.8%)

Note: Percentages are reported based on non-missing values.

Measures

This section details how the constructs analyzed in the current report were measured. First, we introduce the three outcomes used to understand students' high school completion status (graduation, high school equivalency, and dropout) and assess where students were in their educational trajectories immediately following their discharge from DYS. We also describe how we measured student characteristics and DYS-related factors that may be related to variation in high school success.

Outcomes

High School Graduation: Students were identified as having graduated from high school if, based on DESE's designation, the student completed all of Massachusetts' high school diploma requirements within four, five, or six years of their first enrollment in 9th grade.

Five-Year High School Equivalency: Students were considered to have successfully earned a high school equivalency if they earned a GED or HiSet credential within five years of their first enrollment in 9th grade.

Five-Year High School Attainment: If a student received a high school diploma or earned a high school equivalency credential (GED/HiSET) within five years, they are considered to have a five-year high school attainment.

Five-Year High School Dropout: In line with DESE's criteria for designating a student's dropout status, participants were considered to have dropped out of high school within five years of their first enrollment in 9th grade if they met either of the following two criteria: (1) their last official enrollment status was "dropout" and they did not earn a high school equivalency within five years of their first enrollment in 9th grade; or (2) their last enrollment status was "in-state transfer," but there was no record of re-enrollment in a new school.

Enrollment Status after DYS Discharge: To examine the educational status of DYS-involved youth immediately after discharge, we looked at their enrollment status during the school year immediately following DYS discharge. Based on their DESE-specified enrollment status, students were classified as one of the following:

- **High School Graduate.** The youth had graduated from high school.
- **High School Equivalency.** The youth had earned a GED or HiSet credential.
- **Still Enrolled.** The youth was still enrolled in an in-state public school.
- **Non-graduate Completers.** The youth had received a certificate of attainment, rather than a diploma. Non-graduate completers tend to be special education students with significant cognitive challenges.
- **Dropout.** Enrollment status was marked as "dropout" without record of high school equivalency attainment.
- **Expelled.** The youth was expelled.
- **Transferred out.** The youth was marked as having transferred to in-state private, out-of-state (private or public), home-school, adult diploma program, or no longer receiving special education.
- **Deceased.** The youth was deceased.
- **Disappearing.** Although not an official enrollment category in the DESE data, we use the term "Disappearing" to classify students who (1) were not high school graduates, (2) did not earn a high school equivalency, and (3) had no enrollment status reported.

Student Characteristics

Gender: Youth were coded as either male or female.⁵

Race/ethnicity: Youth were coded as one of the following four categories: Hispanic, Non-Hispanic Black, Non-Hispanic White, and Other. The “Other” category included youth who identified as multi-racial or any other racial groups. Note that we do not include “other racial groups” in our statistical analysis since we would not want to imply that there is a systematic reason for clustering these groups together.

English Language Learner (ELL) Status: Youth were coded as either English Language Learner or Non-English Language Learner.

Special Education (SPED) Status: Youth were coded as special education students if they had ever received SPED services in any of the school years for which data were available.

DYS-Related Factors

Participation in the Youth Engaged in Services (YES) Initiative: The Youth Engaged in Services (YES) Initiative is a voluntary post-discharge reentry service program. Through the YES Initiative, youth can voluntarily choose to remain connected to and receive continued services related to education, employment, housing, mental health, etc. from DYS. Youth were coded as either YES youth or Non-YES youth based on whether they ever participated in the YES Initiative.

DYS Service Region:⁶ DYS places youth in one of five service regions based on their home addresses: Central, Metro, Northeast, Southeast, or Western Massachusetts.

Offense Grid: Offense Grid is a measure of offense severity, (ranging from 1 to 6, with 1 being the least severe offense and 6 being the most severe offense). In the current study, grid 1 and grid 2 were combined as “lower grid,” grid 3 and grid 4 were combined as “median grid,” and grid 5 and grid 6 were combined as “higher grid.”

Youthful Offender Status: Youth were coded as either a youthful offender or non-youthful offender. Youthful offenders are youth who committed a felony offense and at least one of the following: prior DYS commitment, firearms offense, offense which involves infliction or threat of serious bodily harm.

Age at Commitment: Youth were categorized based on whether they were younger than age 16 at their DYS commitment.

Timing of Discharge: Youth were categorized based on whether their four-year high school graduation date occurred before their discharge date or after their discharge date.

Graduation Cohort

DESE assigns every student to a **graduation cohort** based on the year in which they are anticipated to graduate if they complete high school **four years after they first enrolled in 9th grade**. For example, the 2015 graduation cohort consists of students who enrolled in 9th grade for the first time during the 2011–2012 school year (or, the student enrolled in 10th grade for the first time in the 2012–2013 school year, etc.). Accordingly, if a student in the 2015 graduation cohort completes high school within four years, they are expected to graduate in June of 2015. If a student in the 2015 graduation cohort completes high school in five years, they would graduate in June of 2016.

In the current report, we describe outcomes related to **graduation cohort** as well as **year of DYS discharge**. To illustrate the overlap between graduation cohort and year of discharge, **Table 2** provides a breakdown of the graduation cohort of students in each DYS discharge year. As demonstrated in the table, each DYS discharge year contains youth from

⁵ A third category for gender, “non-binary” has been added to the DESE data collection process but it was not available at the time the data for the current report were collected.

⁶ Office locations for each DYS service region can be viewed at mass.gov/orgs/departments-of-youth-services/locations.

multiple graduation cohorts. Conversely, each graduation cohort contains youth from multiple discharge years. **Although it is tempting, for example, to compare data from the 2019 graduate cohort with data from youth who were discharged in 2019, these two data points are not equivalent.** Each contains a wide mix of youth experiencing DYS commitment and high school coursework in different educational and sociopolitical contexts.

Analysis Plan

Using data from the **1,593** youth in **Sample 1**, we first calculated the four-year, five-year, and six-year⁷ graduation rates both by graduation cohort and year of discharge from DYS. To better understand whether subgroups of students are completing high school at different rates, we further broke down rates by the student characteristics and DYS-related factors described in the Measures section. This process was repeated for calculating the five-year high school equivalency rate and five-year dropout rate. Our approach for creating a denominator for determining graduation, high school equivalency, and dropout is outlined in Appendix.

Using data from the **1,649** youth in **Sample 2**, we reported students' last enrollment status in the school year immediately following their DYS discharge. For example, for youth who were discharged between January and August in 2015 (i.e., during the 2014–2015 school year), we looked for their last enrollment status during the 2015–2016 school year. For youth who were discharged between September and December in 2015 (i.e., during the 2015–2016 school year), we looked for their last enrollment status during the 2016–2017 school year.

TABLE 2. Tabulation of the overlap between graduation cohort and discharge year among Sample 1

YEAR OF DYS DISCHARGE	GRADUATION COHORT						TOTAL
	2015	2016	2017	2018	2019	2020	
2015	117	95	33	4	0	0	249
2016	11	127	104	28	2	0	272
2017	26	24	119	129	26	0	324
2018	23	26	25	128	90	20	312
2019	0	20	38	18	73	75	224
2020	0	0	29	30	25	71	155
2021	0	0	1	19	25	12	57
TOTAL	177	292	349	356	241	178	1,593

Statistical Modeling

A series of **multivariate logistic regression models** were used to examine the relationship between student and DYS-related factors and: (1) four-year graduation, (2) six-year graduation,⁸ (3) five-year high school equivalency, and (4) five-year dropout rates. In each model, all of the student characteristics and DYS-related factors described in the Measures section were used as covariates. This process allowed us to identify student and DYS-related factors that were statistically meaningful predictors of each of the four outcomes. Accordingly, when describing predictors of each outcome in the Results section below, we only describe student and DYS-related factors that were statistically significant (based on a standard of $\alpha < .05$). It should be highlighted that findings from these models are all correlational; therefore, causation cannot be determined.

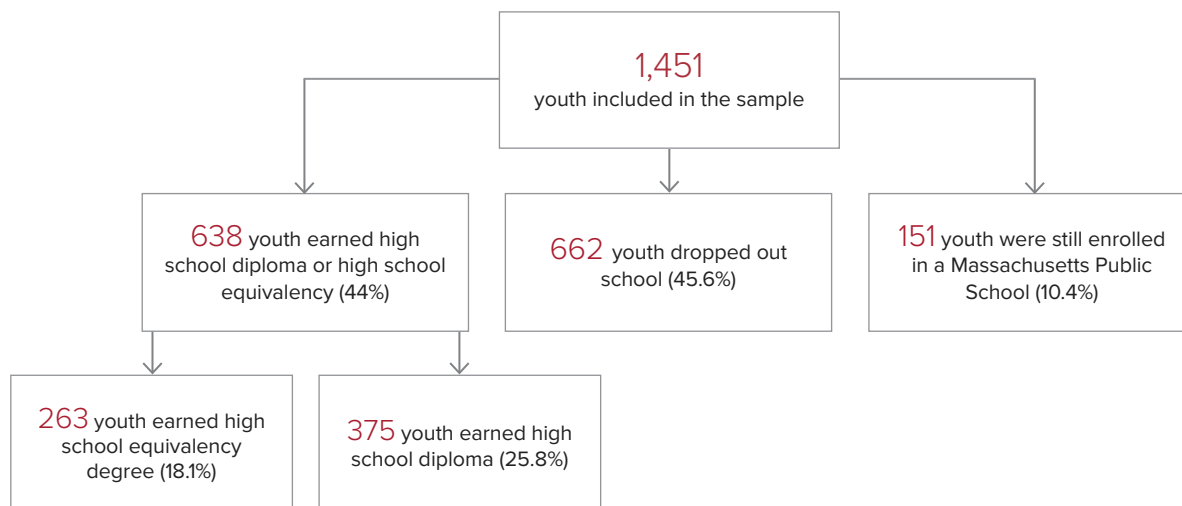
7 Within the data available to us, we were not able to capture six-year outcomes for the 2020 graduation cohort. As such, the denominator used to calculate the six-year graduation rate excluded students in the 2020 graduation cohort.

8 Here, we elected to focus on 4- and 6-year graduation rates (and not 5-year rates) to reduce redundancy in reporting. In addition, given that graduation rates among DYS-involved youth continue to rise at the 6-year graduation mark, we also wanted to understand how the predictors of graduation change when students are given two additional years to complete high school coursework.

Results

This section describes findings related to rates of high school graduation, high school equivalency, and high school dropout among DYS-involved youth and youth statewide. Although we describe patterns of high school graduation, high school equivalency, and dropout separately in the text below, Figure 3 below summarizes where the DYS-involved youth were in regard to their high school educational outcomes five years after first entering 9th grade.

FIGURE 3. Five-year high school outcomes (N=1,451)



*In line with DESE's procedures for calculating graduation and dropout rates, 142 youth in Sample 1 (N=1,593) who were deceased or transferred out were removed from the denominator.

High School Graduation

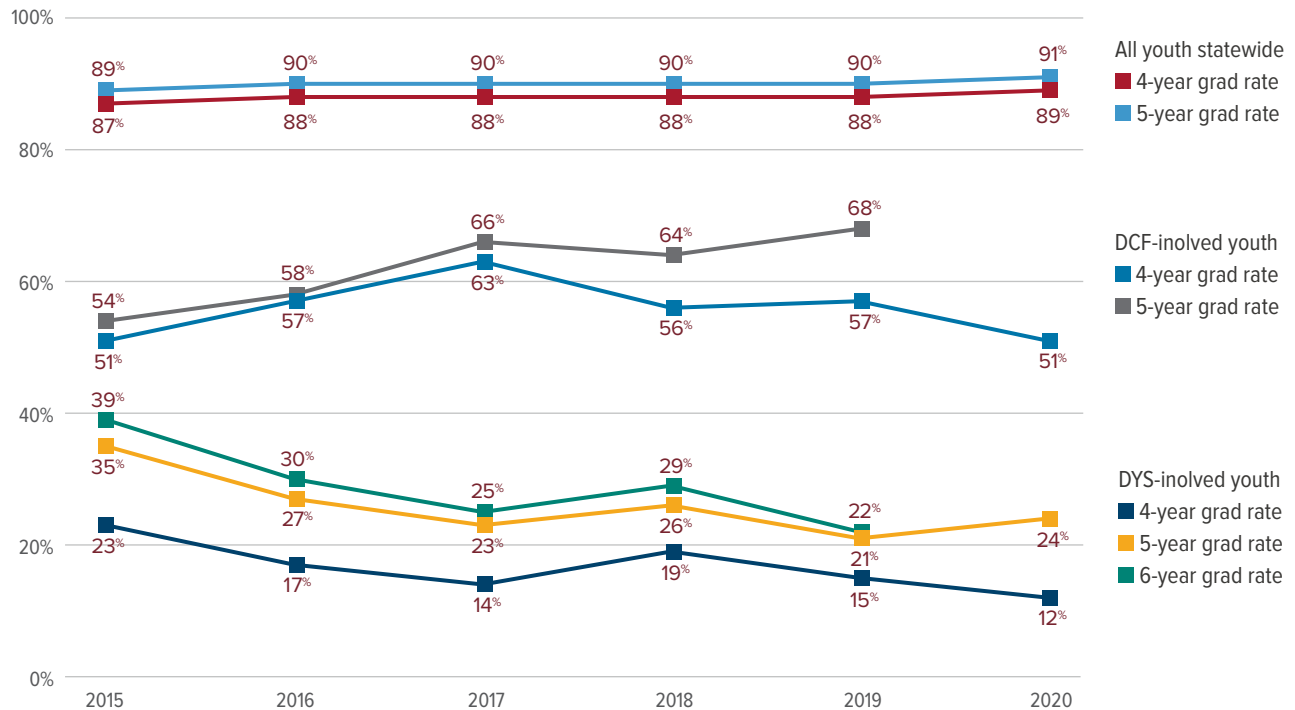
This section highlights key findings related to high school graduation among students in the 2015-2020 graduation cohorts. Unless otherwise noted, the numbers reported below represent the average experience of youth across these graduation cohorts.

Findings suggest that high school graduation rates among DYS-involved youth are dramatically lower than those of the Massachusetts public school student population statewide. In addition, between the 2015 and 2020 graduation cohorts, graduation rates among DYS-involved youth decreased. However, there is a notable trend suggesting that DYS-involved youth continue to persist in high school **past the four-year "on time" graduation cutoff**, with meaningful portions of youth going on to attain a high school diploma within five or six years. Although graduation rates improved between the four-year and six-year milestone among DYS-involved youth, youth still graduated at rates dramatically lower than the statewide average. These results suggest, though, that numerous DYS-involved youth continue to persist to complete high school after their expected graduation date and may benefit from continued support.

Although comparing graduation rates among DYS-involved youth and youth statewide helps contextualize diminished likelihood of graduation among DYS-involved youth, it is also useful to consider how DYS-involved youth fare in relation to other high need populations in the state of Massachusetts. To this end, we compared graduation rates among DYS-involved youth with graduation rates among youth in custody of the **Department of Children and Families (DCF)** and found that DYS-involved youth were graduating at substantially lower rates than youth in DCF custody. **Figure 4** shows the four-, five-, and six-year graduation rates for DYS-involved youth, youth in DCF custody, and youth statewide.

- Among all DYS-involved youth in the 2015-2020 graduation cohorts, 16.6% graduated on time and 25.8% graduated within five years; a 55.4% increase between four- and five-year rates.
- In comparison, the average four-year graduation rate for youth in DCF custody was **56.0%** and the average five-year rate was **62.0%**.⁹
- Statewide, the average four-year graduation rate for all youth was 88.8%; the average five-year rate was 90.0%, which is 3.5 times greater than for DYS-involved youth.¹⁰
- Statewide, between 2015–2019, the four- and five-year graduation rates **remained stable**. However, five-year graduation rates for DYS-involved youth ranged from as high as 35% for the 2015 graduation cohort to as low as 21% for the 2019 graduation cohort.

FIGURE 4. Graduation rates among DYS-involved youth, youth in DCF custody, and youth statewide between 2015-2020 graduation cohorts



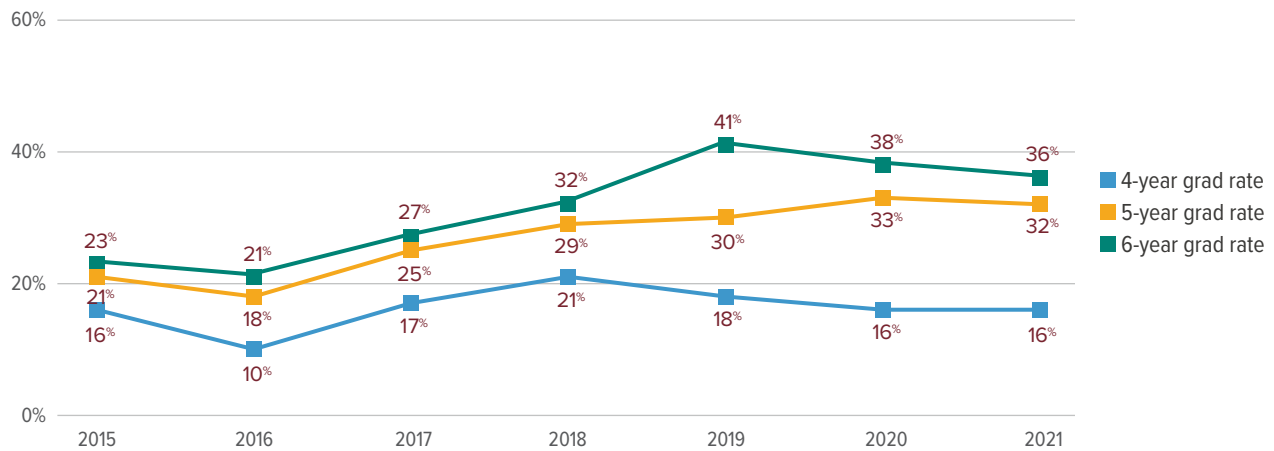
9 mass.gov/doc/dcf-annual-reportfy2021/download

10 Statewide average graduation rates were calculated by totaling the graduation rates between 2015-2020 graduation cohorts and dividing by 6. Graduation rates for DYS-involved youth were calculated by dividing the total number of graduates by the total number of potential graduates from the 2015-2020 graduate cohorts (see Appendix 1 for an explanation of how the denominator was created for each outcome).

High School Graduation Rates by Discharge Year

Examining graduation rates by graduation cohort allows us to compare graduation rates among previously DYS-involved youth with rates statewide. However, another informative way to categorize these youth is by **year of discharge from DYS**, which would allow DYS to consider youths' educational persistence in light of the varying policies and contextual factors associated with each year of discharge. When considering graduation rates by discharge year, there is a slight upward trend for five- and six-year graduation rates and a slight downward trend for four-year graduation rates. **Figure 5** provides the four-, five-, and six-year graduation rates for DYS-involved youth discharged between 2015–2021.

FIGURE 5. Graduation rates among DYS-involved youth by discharge year



High School Equivalency

Among DYS-involved youth, obtaining a high school equivalency (GED/HiSET) is a promising alternative to earning a traditional high school diploma. Indeed, DYS-involved youth earn a GED/HiSET at a far higher rate than students statewide (approximately 1%).

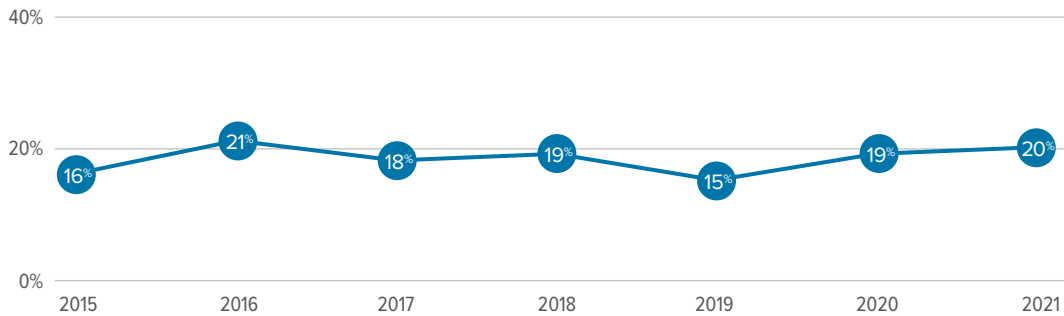
Among youth in the 2015–2020 graduation cohorts:

- On average, the five-year high school equivalency rate among previously DYS-involved youth was 18.1%.
- The large majority (78.0%) of DYS-involved youth who earned a high school equivalency within five years of 9th grade did so before discharge.
- As shown in Figure 7, the rate of high school equivalency attainment among previously DYS-involved youth was stable for the 2015-2019 high school cohorts (ranging only between 18.0%–20.2%), but decreased to 8.5% within the 2020 graduation cohort, likely due to the impact of the COVID-19 pandemic.
- Combining the five-year high school equivalency and high school graduation rates shows that, on average, **44.0% of previously DYS-involved youth complete a high school diploma or GED/HiSet within five years of 9th grade.**

High School Equivalency Rates by Discharge Year

When considering five-year high school equivalency attainment rates by **discharge year**, there is a slight upward trend from 2015 to 2021. **Figure 6** provides the five-year high school equivalency attainment rates for DYS-involved youth discharged between 2015–2021.

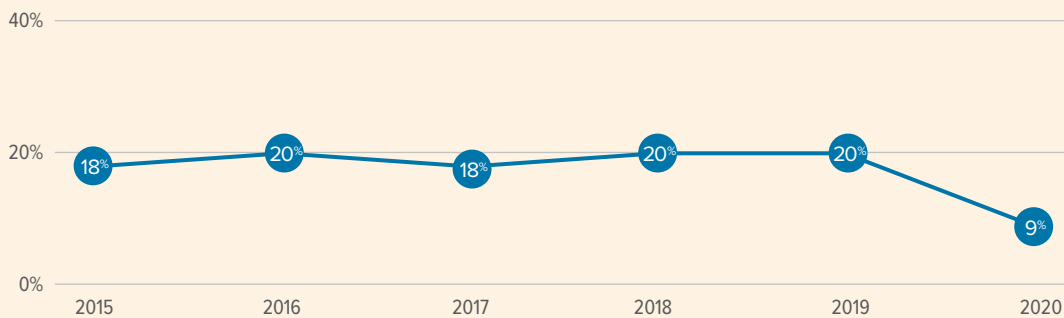
FIGURE 6. Five-year high school equivalency rates among DYS-involved youth by discharge year



THE IMPACT OF COVID-19 ON HIGH SCHOOL EQUIVALENCY ATTAINMENT

Figure 7 highlights high school equivalency rates among previously DYS-involved youth who were part of the 2020 graduation cohort—the cohort whose high school completion status was most directly impacted by the COVID-19 pandemic. Within the 2020 graduation cohort, only **8.5%** of the youth in our sample earned a high school equivalency within five years, compared with 20.2% of youth in the 2019 graduation cohort. This represents a **57.9% decrease** in the five-year high school equivalency attainment rate between the 2019 and 2020 graduation cohorts.

FIGURE 7. Five-year high school equivalency rates among DYS-involved youth by graduation cohort



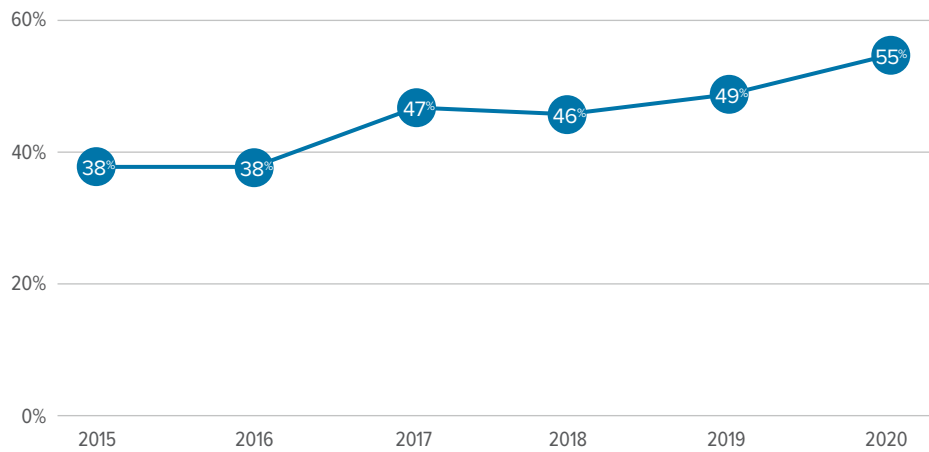
High School Dropout

In all, we found that dropout rates among DYS-involved youth are substantially higher than dropout rates statewide.¹¹ In the 2015-2020 graduation cohorts, the average five-year dropout rate among DYS-involved youth was 45.6% and the statewide dropout rate was 5.3%. To provide an alternative comparison point between DYS-involved youth and another high needs population, among all public high schools in Massachusetts, the school with the highest dropout rate (an alternative school serving a high-needs population) in the 2018-2019 school year reported that 40.4%¹² of their students dropped out. **Figure 8** displays high school dropout rates among DYS-involved youth by graduation cohort.

Among youth in the 2015-2020 graduation cohorts:

- 45.6% of DYS-involved youth dropped out of high school within five years of their first-time enrollment in 9th grade.¹³
- Between 2015-2020, DYS-involved youth were 88% more likely to drop out of high school each year than youth statewide.
- From 2015 to 2020, the dropout rate among DYS-involved youth followed a slightly upward trend while the dropout rate statewide remained stable.
- From 2019 to 2020, the dropout rate among previously DYS-involved youth jumped from 49.1% to 55.5%—an effect likely related to the COVID-19 pandemic. However, rates of dropout statewide between 2019 and 2020 remained stable at 5.5%, suggesting educational outcomes among DYS-involved youth may be disproportionately impacted by the pandemic.

FIGURE 8. Five-year dropout rates among DYS-involved youth by graduation cohort



¹¹ As highlighted in the section titled, “After DYS Discharge: Where Did Students Go?,” within the current sample of DYS-involved youth there are students who did not meet DESE’s official criteria for dropout but for whom we have (a) no record of high school graduation, (b) no record of high school equivalency attainment, and (c) no record of current enrollment, suggesting that the true dropout rate may be higher than the dropout rate that is officially recorded.

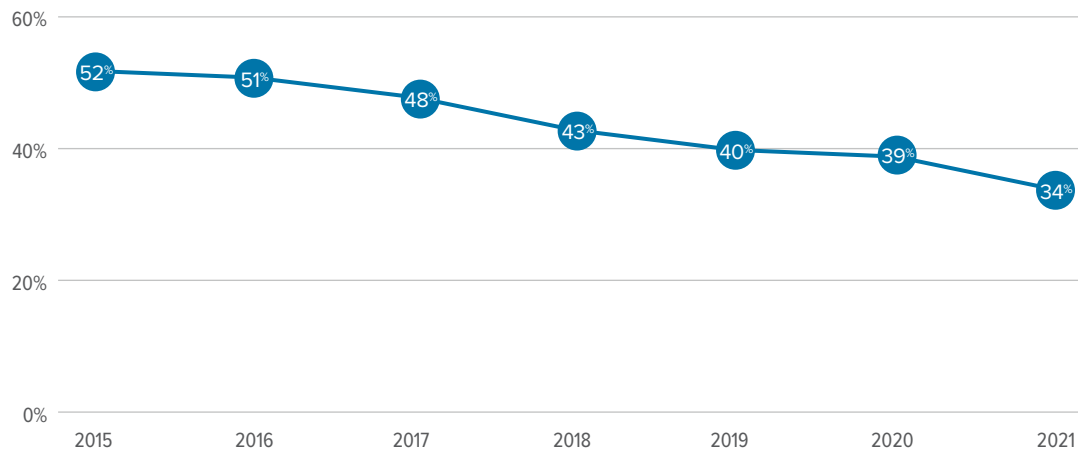
¹² profiles.doe.mass.edu/statereport/dropout.aspx

¹³ Based on the data available, we were not able to determine whether dropout occurred before, during, or after the student’s DYS commitment

High School Dropout Rates by DYS Discharge Year

High school dropout rates among DYS-involved youth appear to be **increasing** when considered by **graduation cohort**. However, dropout rates appear to be consistently **declining** when observed by **discharge year**. This is likely due to the previously described incongruence between graduation cohort and discharge year (see **Table 2**), and an increase in the number of youth who are being discharged after their expected graduation date in recent years (See section below for a discussion of how discharge after expected four-year graduation date is associated with higher graduation rates and lower dropout rates). For example, 48% of youth who were discharged in 2019 were discharged after their expected four-year graduation date. However, in the 2019 graduate cohort, only 34% of youth were discharged after their expected four-year graduation date.

FIGURE 9. Five-year dropout rate among DYS-involved youth by discharge year



Factors Correlated with High School Completion and Dropout

In addition to examining overall rates of high school graduation, high school equivalency attainment, and dropout, we also considered whether youth in certain subgroups demonstrated statistically meaningful differences in these outcomes. As described above, we used **multivariate logistic regression models** to examine links between high school outcomes and student characteristics and DYS-related factors.

Overall, the results of these models suggested that DYS-related factors—particularly **YES engagement, DYS service region, and the timing of discharge** in relation to students' expected four-year graduation date—predicted variation in the educational outcomes of DYS-involved youth. There were also some findings in relation to student characteristics suggesting that Hispanic and ELL students were less likely to achieve high school success, demonstrated by lower rates of graduation and high school equivalency attainment.

Differences Among Student Subgroups

Although we observed gender- and race/ethnicity-related differences in four-year graduation rates, there were no statistically significant gender or race/ethnicity-related differences in six-year graduation rates, suggesting that **gender- and race/ethnicity-related inequities in graduation rates may resolve when students are given additional time to complete high school**.

- Gender had a marginal effect, suggesting females were 36% more likely to graduate in four years than males (OR=1.46, $p=.08$). However, this difference disappeared for six-year graduation rates.
- Although non-Hispanic White students (OR=1.46, $p=.05$) were 38% more likely than Hispanic students to graduate in four years, this difference disappeared for six-year graduation rates.
- Non-Hispanic Black (OR=1.50, $p=.04$) students were 41% more likely to graduate in four years than Hispanic students, but this difference became marginal for six-year graduation rates (OR=1.39, $p=.06$).

Hispanic and non-Hispanic Black students were less likely to earn a high school equivalency than non-Hispanic White students. In addition, Hispanic students were more likely to drop out of high school than Non-Hispanic White and Non-Hispanic Black students. Similarly, ELL students were less likely to earn a high school equivalency and more likely to drop out than non-ELL Students.

- Non-Hispanic White students were 78% more likely to earn a high school equivalency in five years than non-Hispanic Black (OR=2.06, $p < .001$) and 75% more likely than Hispanic students (OR=2.00, $p < .001$).
- Non-ELL students were 80% more likely to earn a high school equivalency in five years than ELL students (OR=1.97, $p < .01$).
- Hispanic students are 32% more likely to drop out of high school than non-Hispanic White students (OR=1.71, $p < .001$) and 28% more likely than non-Hispanic Black students (OR=1.62, $p < .01$).
- ELL students are 24% more likely to drop out than non-ELL students (OR=1.54, $p < .05$).

For SPED students, the high school equivalency pathway was a popular alternative to a traditional high school diploma. These students were 104% more likely to earn a high school equivalency than non-SPED students (OR=2.34, $p<.001$). There were no other statistically meaningful differences in terms of student characteristics in rates of high school equivalency attainment or drop out among the subgroups we observed.

Differences by DYS-Designated Service Region

Secondary success was linked with students' **geographic locations**—as measured by their DYS service region. Students in the **Central** service region were more likely to graduate and less likely to drop out than students in any other regions. Students in the **Northeast** region were more likely to earn a high school equivalency than students in the Central and Southeast service regions, and less likely to drop out of high school than all other service regions except for the Central service region.

- Youth in the DYS Central service region were at least 51% more likely to graduate from high school within four years and at least 76% more likely to graduate in six years than youth in any other region. Figure 10 depicts the four-, five-, and six-year graduation rates by DYS designated regions.
- Students in the Northeast region were 60% more likely to earn a high school equivalency in five years than students in the Central region ($OR=1.79$, $p < .05$) and 64% more likely than youth in the Southeast ($OR=1.87$, $p < .01$) region.
- Students in the Metro ($OR=2.20$, $p < .001$), Northeast ($OR=1.45$, $p = .05$), Southeast ($OR=2.29$, $p < .001$), and Western ($OR=2.60$, $p < .001$) regions were 25-67% more likely to drop out than students in the Central region.
- Students in the Metro ($OR=1.46$, $p = .05$), Southeast ($OR=1.58$, $p < .01$), and Western ($OR=1.79$, $p < .01$) regions were 23-36% more likely to drop out than students in the Northeast region. Figure 11 displays dropout rates by DYS region.

FIGURE 10. Graduation rates among DYS-involved youth by DYS region

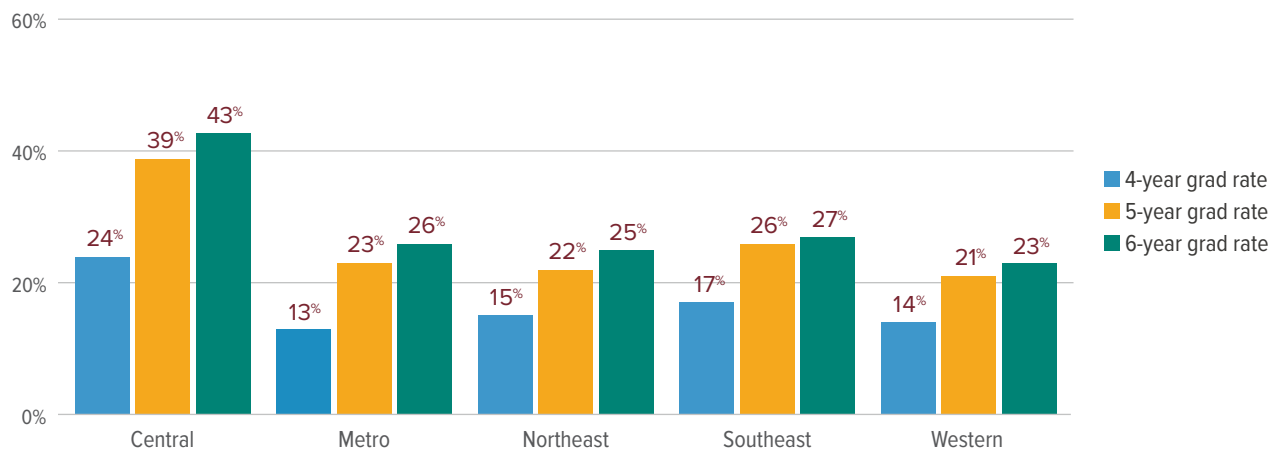
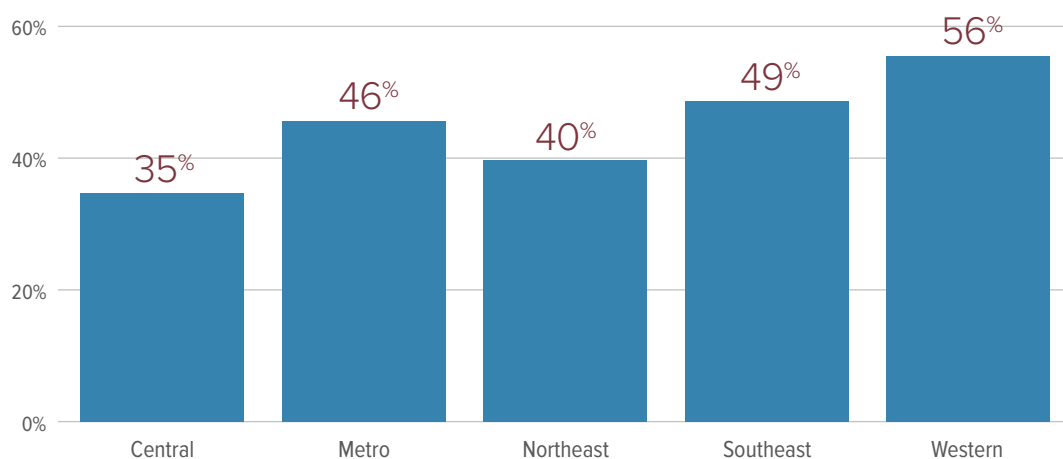


FIGURE 11. Five-year dropout rate among DYS-involved youth by DYS region



Differences by Offense Severity

In the current dataset, two measures indicated the severity of the offense for which youth were committed to DYS: offense grid level and youthful offender status (see the **Measures** section for a full description). Youth who were assigned a higher grid level were less likely to drop out. Although youthful offenders and non-youthful offenders were equally likely to graduate in four or six years, youthful offenders earned a high school equivalency at higher rates.

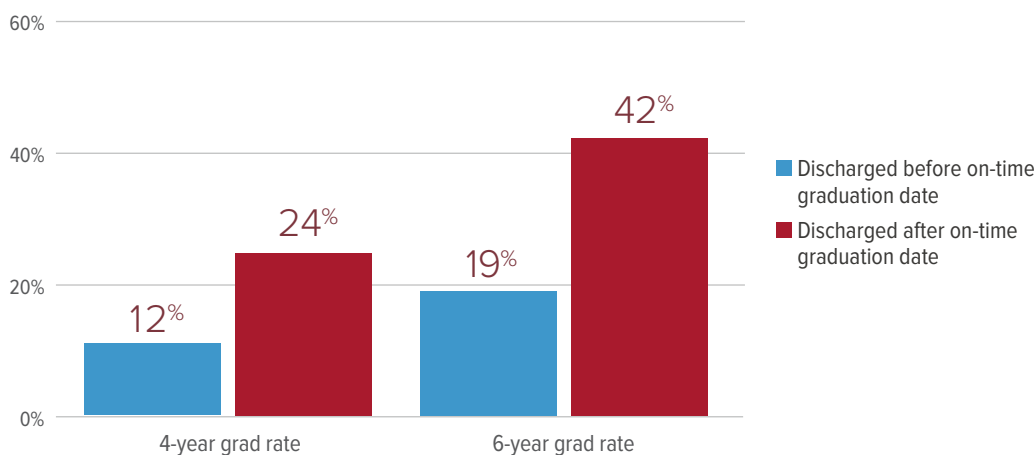
- Youthful offenders (OR=2.21, $p < .01$) were 84% more likely to earn a high school equivalency than non-youthful offenders.
- Youth who were assigned a lower (OR=1.97, $p < .05$) or median (OR=1.78, $p < .05$) offense grid level were 59% and 49%, respectively, more likely to drop out than those who were assigned a higher grid level.

Differences by Timing of Discharge

Youth who were discharged after their expected four-year graduation date tended to be more successful with high school outcomes than youth who were discharged before their expected four-year graduation date. Students whose DYS commitment extended beyond their expected on-time graduation date were more likely to graduate from high school and less likely to drop out.

- Youth whose DYS discharge occurred after their expected four-year graduation date (OR=2.68, $p < .001$) were 126% more likely to graduate in four years and 132% (OR=3.17, $p < .001$) more likely to graduate in six years.¹⁴ Figure 12 displays the relationship between timing of discharge to expected graduation and graduation.
- Youth whose DYS discharge occurred before their expected four-year graduation date (OR=2.35, $p < .001$) were 68% more likely to drop out of high school.

FIGURE 12. Graduation rates and timing of discharge to on-time graduation date



Differences by YES Initiative Participation

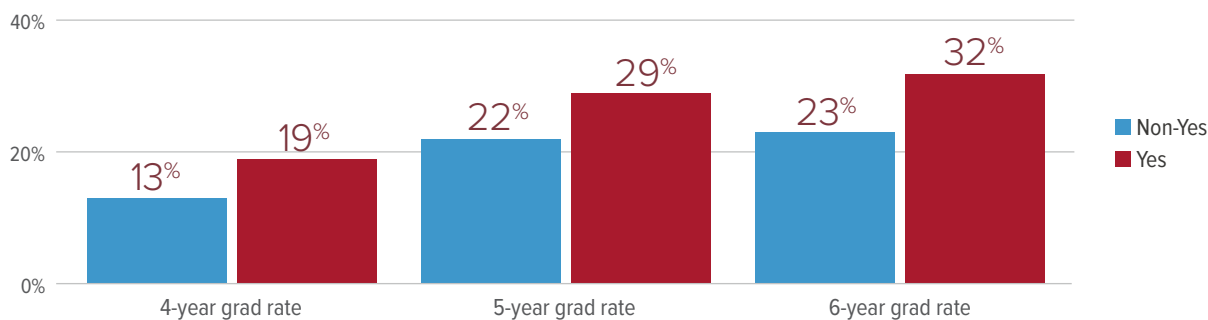
Youth who enrolled in the YES Initiative following their discharge from DYS were more likely to graduate high school, and less likely to drop out. Although these findings **suggest** that the YES Initiative may promote graduation and decrease the rate of dropout among DYS-involved youth, it should be highlighted that these findings are correlational; therefore,

¹⁴ It is notable that youthful offender status overlapped significantly with the timing of discharge to graduation date—99% of the youthful offenders were discharged after their expected graduation date.

causation cannot be determined. Although the analytic models used to generate these findings controlled for the student characteristics and DYS-related factors described in the Measures section, there may be other factors that were not accounted for, but that were responsible for the observed relationship between YES participation and high school success. Participation in the YES Initiative is voluntary and youth who are academically inclined, or have already achieved some level of academic success, may be more likely to engage in YES.

- Youth who participated in the YES Initiative were 47% more likely to graduate in four years ($OR=1.58$, $p < .01$) and 50% more likely to graduate in six years ($OR=1.77$, $p < .001$) than youth who did not participate in YES (Figure 13 depicts the four-, five-, and six-year graduation rates by YES enrollment).
- Youth who did not participate in the YES Initiative were 24% more likely to drop out ($OR=1.51$, $p < .001$).

FIGURE 13. Graduation rates among DYS-involved youth by YES Initiative participation



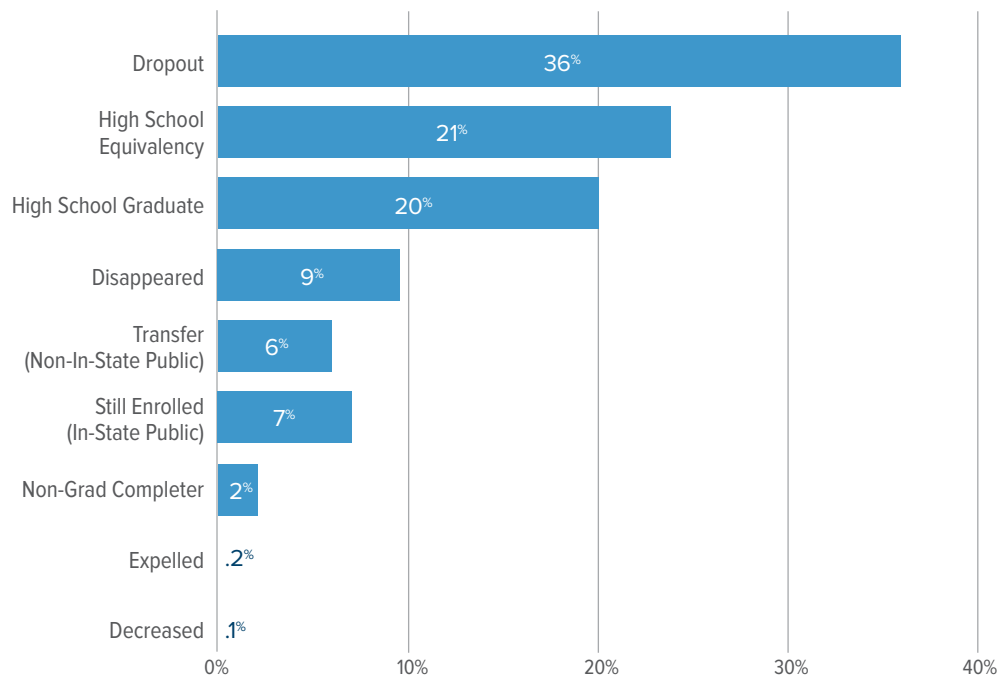
After DYS Discharge: Where Did Young People Go?

In this section, we examine where students were in their educational trajectories during the school year following DYS discharge. As described in the **Method** section, these analyses included a sample of **1,649** previously DYS-Involved youth who were discharged from DYS between 2015 and 2019.

Of the **1,649** students in Sample 2, **1,501** had valid educational status codes, suggesting that a public high school in Massachusetts or a high school equivalency testing center was aware of each student's educational status. Alternately, **148** students had no data regarding their educational status, suggesting that there was no public school in Massachusetts or high school equivalency testing center that was aware of the student's educational status in the school year following their discharge from DYS. **Figure 14** displays the percentage of youth in each post-discharge enrollment category.

- 325 (19.7%) had earned a high school diploma
- 341 (20.7%) had earned a high school equivalency
- 107 (6.5%) were still enrolled in a Massachusetts public high school
- 598 (36.3%) had officially dropped out or been expelled from high school
- 98 (5.9%) transferred to an in-state private school, out-of-state school, home-school, or Massachusetts adult diploma program
- 31 (1.9%) were classified as non-graduate completers
- 1 was deceased
- 148 (9%) had disappeared from the Massachusetts educational system

FIGURE 14. Enrollment status of DYS-involved youth in the school year following discharge



Some Students Persist After Discharge, but Most Drop Out

The results delineated above suggest that in the school year following discharge, approximately 48.8% of youth are on positive educational pathways—**19.7%** of youth had graduated from high school, **20.7%** had earned a high school equivalency, **1.9%** had completed high school requirements, and **6.5%** were currently enrolled in school.

The remaining 844 (**51.2%**) youth appeared to be on less stable educational pathways. Primarily, they were either official high school dropouts, or disappeared from the public education system. A small portion of these students went on to earn a high school equivalency. In all, 10 of the 844 (1.2%) students who had dropped out or disappeared from the education system in the school year following discharge earned a high school equivalency.

WHAT HAPPENED TO THE 148 “DISAPPEARING” YOUTH?

As outlined in the Measures section, we coined the term “Disappearing Youth” to describe the 148 (9.0%) youth in Sample 2 who (1) were not high school graduates, (2) did not earn a high school equivalency, and (3) had no enrollment status reported during the school year following DYS discharge. For a comparison point, statewide, fewer than 1% of students were classified as “student’s status/location unknown,” suggesting that **DYS youth are disappearing from the Massachusetts educational system at a rate that is substantially higher than the statewide rate.**

It is possible that a portion of these students transferred to out-of-state schools or in-state private schools without informing their Massachusetts public school. However, it is also possible that these students have disengaged from school without informing their Massachusetts public school; meaning their educational progress is no longer being monitored by the state. In the current report, we define “dropout” based on DESE’s established definition of high school dropout (as described in the Measures section). However, this calculation does not include students who have disappeared from the educational system altogether. As such, if we consider that a portion of the 148 DYS-involved youth who disappeared from the DESE system and did not earn a high school equivalency may also be dropouts, this suggests that the dropout rate among DYS-involved youth **may be higher** than the officially reported rate.

Exploring Postsecondary Outcomes Among Juvenile-Justice Involved Youth

Method

In this section, we detail the methodology used to analyze outcomes related to postsecondary achievement within our sample of previously DYS-involved youth. First, we describe the data used to analyze postsecondary outcomes. Next, we outline our process of sample selection, describe the current sample, and introduce the specific measures used to capture postsecondary enrollment, institutional characteristics, and degree attainment. Finally, we describe how the data were analyzed using both quantitative and qualitative approaches.

Data

We had access to two datasets from the National Student Clearinghouse (NSC).¹⁵ The first dataset (the “graduate file”) contained postsecondary enrollment information as of Spring 2022 for Massachusetts public high school students who graduated between 2013 and 2021. The second dataset (the “non-graduate file”) contained postsecondary enrollment information as of Spring 2019 for students who were ever enrolled in a Massachusetts public school between the 2010-2011 and 2017-2018 school years, but who were not currently enrolled or a graduate from a Massachusetts public school during the 2018-2019 school year. This non-graduate file includes those who were in grades 8 through 12 or special education beyond 12th grade.

Sample Selection

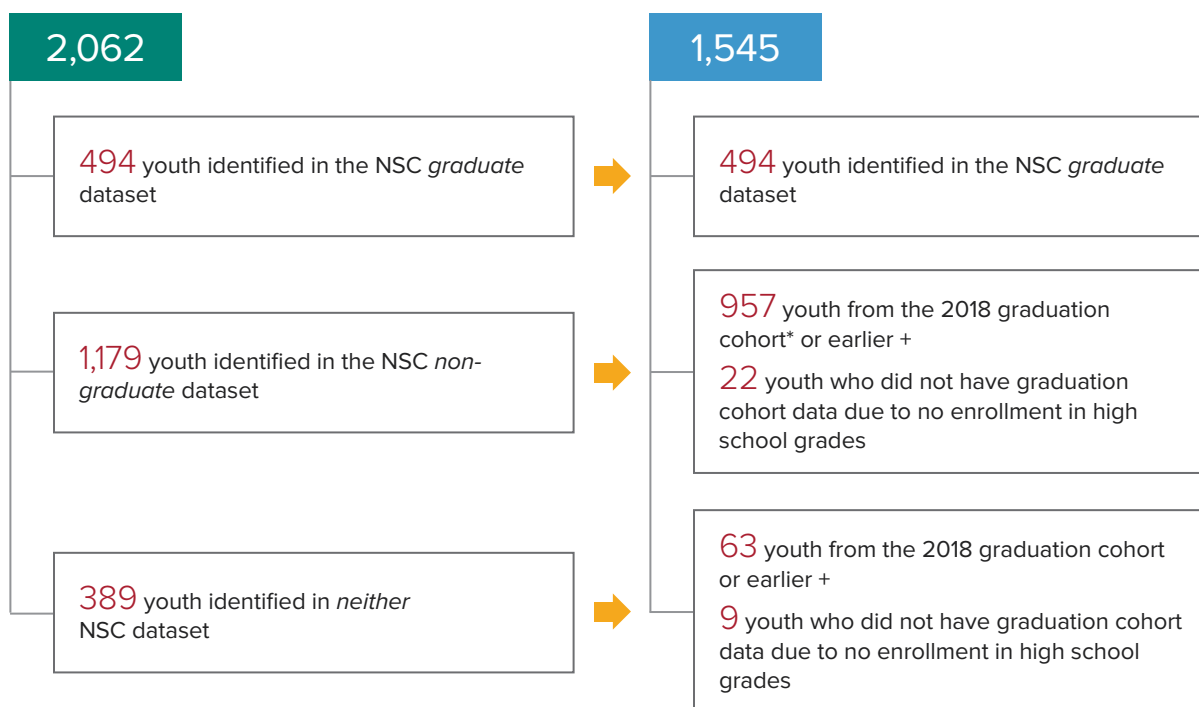
The DYS data included a total of 2,062 youth who were discharged from DYS between 2015 and 2021. In all, 494 youth included in the DYS datafile were identified in the NSC graduate file and 1,179 were identified in the NSC non-graduate file. In the non-graduate file, we used graduation cohort as a proxy for graduation date and limited our sample to students who were expected to graduate by June 2018 (and, therefore, potentially appear in the NSC data by Spring 2019), leaving us with 979 youth in the non-graduate file.

A total of 389 youth were not identified in either NSC dataset. Of these, we were able to retain 72 youth who were not enrolled in high school as of data collection but were expected to graduate by June 2018 based on their prior enrollment records. The remaining 317 youth were excluded from our analyses of postsecondary outcomes. It is possible that these are valid missing cases—these individuals may not have finished high school by the Spring of 2022 or earned a high school equivalency by the Spring of 2019. However, we caution that it is also possible that these individuals are missing for other reasons unrelated to our data procedures, and may have introduced bias in the results we report here by artificially deflating the denominator used to report postsecondary enrollment and completion rates.

In all, the final sample for postsecondary outcomes analysis included 1,545 youth. Figure 15 provides a graphic display of our sample selection procedures.

¹⁵ The National Student Clearinghouse (NSC) collects data on postsecondary enrollment and degree information for high schools and school districts throughout the United States.

FIGURE 15. Sample selection process for analyses related to postsecondary outcomes (N=1,545)



*Given that the NSC non-graduate dataset we accessed covered postsecondary data through Spring 2019, only youth who were part of the 2018 graduation cohort or earlier were included in the sample to ensure adequate data coverage.

Sample Demographics

As seen in Table 3, the majority of the 1,545 previously DYS-involved youth identified in the current sample were male (87.5%). About two-thirds of the youth received special education services at any time (SPED; 65.8%) and 12.7% were English Language Learners (ELL). The largest group of youth identified as Hispanic (38.1%), followed by Non-Hispanic Black (28.1%) and Non-Hispanic White (26.0%).

Participants were roughly evenly distributed across the five DYS-designated regions (Central 17.6%, Metro 17.1%, Northeast 19.9%, Southeast 25.1%, and Western 20.4%), with the Southeast region representing a slightly higher percentage. In terms of the severity of offense, most youth were classified as non-youthful offenders (77.1%) and were assigned a lower (46.6%) or median (44.8%) offense grid. **After their mandatory commitment with DYS had ended, more than half (53.8%) of these youth participated in the YES Initiative.**

TABLE 3. Descriptions of sample used in the analysis of postsecondary educational outcomes by postsecondary enrollment status

	OVERALL SAMPLE	EVER ENROLLED	NEVER ENROLLED
STUDENT CHARACTERISTICS	(N=1,545)	(N=246)	(N=1,299)
Gender			
Female	193 (12.5%)	51(20.7%)	142 (10.9%)
Male	1352 (87.5%)	195 (79.3%)	1157 (89.1%)
Race/Ethnicity			
Hispanic	588 (38.1%)	84 (34.2%)	504 (38.8%)
Non-Hispanic Black	434 (28.1%)	61 (24.8%)	373 (28.7%)
Non-Hispanic White	402 (26.0%)	75 (30.5%)	327 (25.2%)
Non-Hispanic Others	121 (7.8%)	26 (10.6%)	95 (7.3%)
English Language Learner Status			
Non-ELL	1171 (87.3%)	192 (92.3%)	979 (86.4%)
ELL	170 (12.7%)	16 (7.7%)	154 (13.6%)
Special Education Status			
Non-SPED	458 (34.2%)	65 (31.3%)	393 (34.7%)
SPED	883 (65.8%)	143 (68.8%)	740 (65.3%)
DYS-RELATED FACTORS			
YES participation			
Non-YES	714 (46.2%)	90 (36.6%)	624 (48.0%)
YES	831 (53.8%)	156 (63.4%)	675 (52.0%)
Region			
Central	272 (17.6%)	45 (18.3%)	227 (17.5%)
Metro	264 (17.1%)	38 (15.5%)	226 (17.4%)
Northeast	307 (19.9%)	50 (20.3%)	257 (19.8%)
Southeast	387 (25.1%)	50 (20.3%)	337 (25.9%)
Western	315 (20.4%)	63 (25.6%)	252 (19.4%)
Offense grid			
Lower	718 (46.6%)	106 (43.3%)	612 (47.2%)
Median	691 (44.8%)	107 (43.7%)	584 (45.1%)
Higher	132 (8.6%)	32 (13.1%)	100 (7.7%)
Youthful Offender Status			
Non youthful offender	1191 (77.1%)	158 (64.2%)	1033 (79.5%)
Youthful offender	354 (22.9%)	88 (35.8%)	266 (20.5%)

Note: Percentages are reported based on non-missing values. There were 204 missing values for the overall sample on ELL and SPED. There were 4 missing values for the overall sample on offense grid level.

Measures

This section details how the postsecondary constructs analyzed in the current section, including enrollment, institutional characteristics, and graduation, were measured. The procedures for measuring student characteristics and DYS-related factors are outlined above in the previous section.

Postsecondary Enrollment: A student was considered to have ever enrolled in college if they had at least one postsecondary enrollment reported in the NSC datasets by the time of data collection (Spring 2022 for high school graduates and Spring 2019 for non-graduates).

Institutional Characteristics: Institutional characteristics were reported based on students' first college enrollment record. The current analysis reports whether the college was a two-year or four-year institution and a public or private institution.

College Graduation: College graduation status was reported as of time of data collection in the NSC dataset (Spring 2022 for high school graduates and Spring 2019 for non-graduates).

Analysis Plan

First, we report the overall postsecondary enrollment rates and compare patterns of enrollment between high school graduates and non-graduates with a high school equivalency. Next, we describe the timeline from high school graduation to first college enrollment among high school graduates and report the characteristics of the institutions where students first enrolled among all 246 youth. Then, we report college graduation rates and common trends in students' pathways to postsecondary success. Finally, using a qualitative approach, we offer exemplars to describe the college pathways for three previously DYS-involved youth who successfully earned postsecondary degrees.

Results

Postsecondary Enrollment

Overall, **246 (15.9%)** previously DYS-involved youth had at least one enrollment record in the NSC data. This suggests that these youth, at some point in time, enrolled in a postsecondary institution. It is important to note, however, that of the 246 youth with enrollment records, 116 (47.2%) had only one enrollment record. Comparatively, across the state of Massachusetts, postsecondary enrollment rates by district in the 2018-2019 school year ranged from 31.4% to 97.0%.¹⁶ Figures 16 and 17 display postsecondary enrollment rates by graduate cohort and discharge year, respectively.

Of the 494 previously DYS-involved youth in the sample who graduated from high school, 125 (25.3%) had at least one enrollment record at a postsecondary institution. **Interestingly, high school graduates and those with a high school equivalency appeared to enroll in postsecondary institutions at a similar rate.** Among the previously DYS-involved youth with a high school equivalency, 26.3% enrolled in a postsecondary institution. However, this rate is substantially lower than the 43% of high school equivalency earners nationally who enroll in postsecondary education.¹⁷

In the data available, we were only able to align the timing of high school completion and college enrollment among students who earned a high school diploma. Of the 125 high school graduates who enrolled in a postsecondary educational institution, **almost half (47.2%)** enrolled the same year they graduated from high school. One third (33.6%) enrolled during the year following high school graduation and an additional 10.4% enrolled two years after graduation. The remaining 8.8% of students enrolled three to six years after graduation.

¹⁶ profiles.doe.mass.edu/statereport/gradsattendingcollege.aspx

¹⁷ census.gov/newsroom/blogs/random-samplings/2012/02/high-school-equivalency-recipient-have-lower-earnings-are-less-likely-to-enter-college.html

FIGURE 16. Postsecondary enrollment rates by graduate cohort

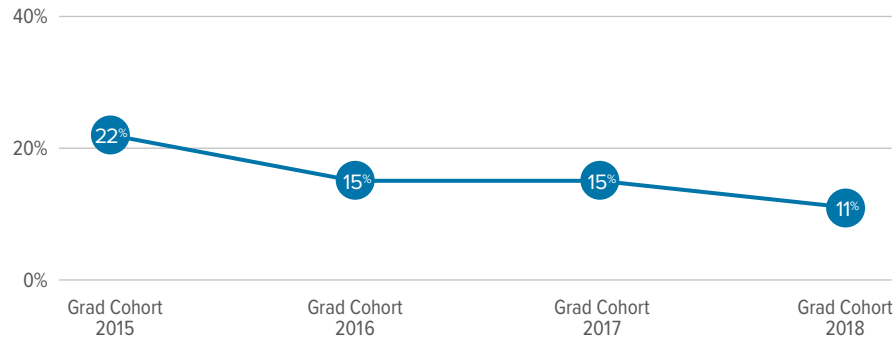
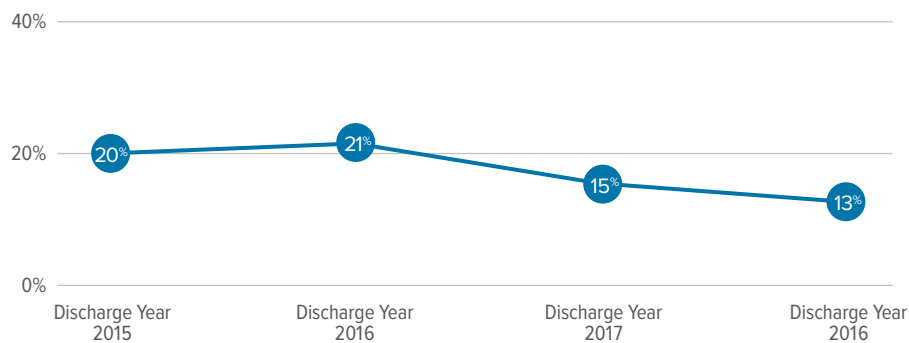


FIGURE 17. Postsecondary enrollment rates by discharge year



Institutional Characteristics

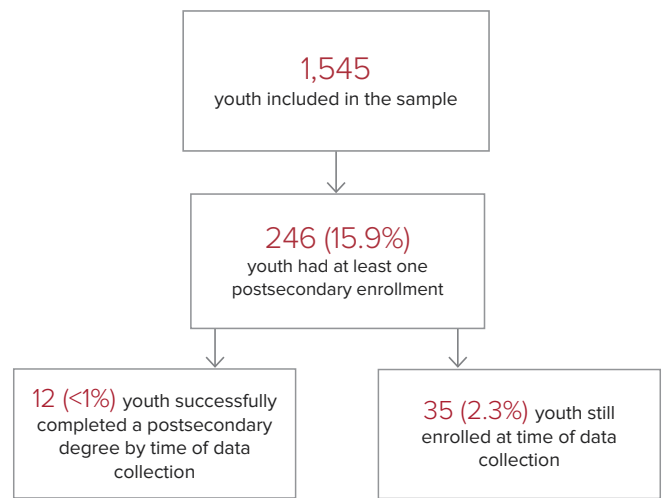
The 246 students with at least one postsecondary enrollment record tended to move among different institutions throughout their enrollment. The vast majority (80.1%) first enrolled in two-year public institutions. A smaller portion (16.3%) enrolled in four-year institutions.

Postsecondary Degree Attainment

Twelve young people in the current sample of youth successfully completed postsecondary degrees by the time of data collection (Spring 2022 for high school graduates and Spring 2019 for non-graduates). This represents less than 1% of the entire sample of 1,545 previously DYS-involved youth and 5% of the 246 youth who were enrolled in a postsecondary institution at any time. Thirty-five of the 246 (14.2%) youth were still enrolled as of time of data collection. Thus, 199 (80.9%) of the 246 youth who enrolled in a postsecondary institution may be non-completers. Comparatively, national statistics suggest that approximately 60% of students who enroll part-time at two-year institutions drop out of college.

Among the 12 youth who earned postsecondary degrees, eight were YES participants, ten were high school graduates and two were non-graduates with a high school equivalency. Six students earned a Bachelor's degree from a four-year institution, three students earned an Associate's degree from a two-year institution and three students earned Certificates. Figure 18 describes the postsecondary enrollment and graduation rates among our sample of DYS-involved youth.

FIGURE 18. Summary of postsecondary enrollment and graduation rates among DYS-involved youth (N=1,545)



Pathways to College Graduation Among DYS-Involved Youth

The small number of DYS-involved youth who graduated from a postsecondary institution inhibits our ability to conduct statistical testing on this sample. **Even descriptive statistics derived from this sample should be interpreted with caution as there is not a sufficient sample size to generate meaningful, generalizable insights.** As such, in this section we first note common trends in these students' postsecondary pathways. Next, we highlight the path through postsecondary institutions for three youth, using a qualitative approach to describe the various pathways to successful graduation that these 12 students took.

The majority of students who graduated from a postsecondary institution **completed high school within four years.** Of the 10 high school graduates who went on to earn a postsecondary degree, eight graduated high school in four years and two graduated high school in five years. Students who completed high school in four years also represented the full pool of students who earned Bachelor's degrees—of the six students who earned a Bachelor's degree, all graduated high school in four years.

Postsecondary **enrollment shortly after high school** graduation appeared to be a common theme within this group of college graduates. Among the 10 students in this group with high school diplomas, eight enrolled in a postsecondary institution within 16 months of graduating from high school. In addition, these students tended to pursue a postsecondary diploma with few disruptions. The majority of these graduates (n=6) completed their coursework with no interruptions in enrollment and a small portion of students experienced only one interruption (n=3).

Although patterns described above highlight shared experiences in the educational trajectories of these 12 college graduates, there is no clear pattern to the overlap between their educational pursuits and their DYS commitment or YES engagement. For some of the 12 students, postsecondary enrollment did not overlap at all with DYS commitment or YES engagement. For others, postsecondary enrollment began during their DYS commitment and some remained engaged in the YES Initiative throughout their postsecondary career.

Profiles of Postsecondary Degree Earners

In offering postsecondary exemplars, we describe the college pathways for three previously DYS-involved youth who successfully earned postsecondary degrees. In order to preserve the students' anonymity, we have left out references to student characteristics, dates of their DYS commitment, discharge, and postsecondary enrollment, and details surrounding their course of study.

Student 1

Student 1 was discharged from DYS and graduated (on-time) from high school at approximately the same time, having completed the last 1.5 years of their high school coursework during their DYS commitment. Immediately following high school graduation, Student 1 enrolled in a four-year public college, where they remained consistently enrolled full-time for three years. Because Student 1 also engaged in summer coursework, they were able to graduate from this four-year institution in 3 years. Student 1 was continuously engaged in the YES Initiative throughout their college career.

Student 2

Student 2 was committed to DYS for approximately one year and earned a high school equivalency during their commitment. They participated in YES for five months following DYS discharge. Approximately a year and a half after aging

out, Student 2 enrolled in a two-year public institution. The student stayed enrolled half time or three-quarters time for approximately 1.5 years before earning a Certificate.

Student 3

Student 3 completed their high school diploma within five years of their first enrollment in 9th grade, with the last year of their high school coursework coinciding with their DYS commitment. After completing high school, the student immediately enrolled in a two-year institution while still committed to DYS. After one year of three-quarters time enrollment, Student 3 transferred to a new two-year institution around the time of DYS discharge, where they remained enrolled half time or less for four years. There was one interruption in enrollment status—the student withdrew for one semester during their third year. In spite of the interruption in enrollment, Student 3 successfully completed their associates degree in five years.

Looking Ahead: Considerations for Future Research and Policy Development

Based on our examination of the available data, we found several factors that play a role in DYS-involved youth's attainment of a diploma or high school equivalency, as well as their potential enrollment in postsecondary education programs. These findings highlight important points of intervention for promoting educational success within this population, and prompt questions regarding how to best support youth through these various points of entry.

- **Timing.** Young people enter and leave DYS at various points on their educational journeys and that timing impacts their later success. How can providers identify the most promising intersection between DYS commitment and discharge and where students are on their educational path to increase a young person's likelihood of academic success?
- **Place.** DYS-involved youth are more (or less) likely to graduate and drop out of high school based on the geographic service region. What are the educational systems youth are leaving and returning to in these regions and what supports are needed to ensure that youth have equal opportunities for success, regardless of geography?
- **Pathways.** DYS-involved youth pursue a variety of non-traditional paths through high school and postsecondary education. How can we better understand what academic pathway is the best fit for each student? When should students be encouraged to continue to persist towards a high school diploma and when should the alternative, high school equivalency pathway be pursued? How can students be supported as they select a pathway through post-secondary education?
- **YES Involvement.** YES involvement was an important predictor of high school success and post-secondary enrollment. What are the specific services and supports that YES provides that allow students to continue on their educational journey? How can providers ensure that the services that are the most helpful are offered to all young people enrolling in YES? And, how can more young people be encouraged to enroll in YES?

Also, in light of the findings related to youth whose commitment period overlapped with the early months of the COVID-19 pandemic—it appears that youth whose education was disrupted by the events of 2020-2021 may need more specific supports in order to successfully continue toward a secondary credential.

Next Steps and Further Considerations

Findings from the current study lead to several implications and future directions **for practitioners, policymakers and researchers, including the need to more closely analyze the barriers to attainment** of a diploma or high school equivalency credential and the supports that are necessary to help support all young people to enroll in postsecondary education pathways. Not all of these questions will be relevant to all audiences. Each segment, though, may spark ideas for future quantitative or qualitative research; changes in policy or practice; or conversations among system leaders about more effective service coordination during and after a period of DYS commitment.

Time and Timing

- Given the meaningful positive difference in **four-year** and **six-year** graduation rates, DYS and DESE may want to further explore the factors that contribute to young people's continued educational engagement and persistence on their path to graduation. Specifically, what is the individual educational experience between the on-time/scheduled graduation and years 5 and 6?
- Young people discharged **prior** to their expected on-time graduation date are less likely to graduate than those committed **beyond** their expected graduation date, with the latter being **68% more likely** to have graduated. Explore

why this is so, and if there are ways to help ease the transition out of DYS commitment to ensure young people stay on a path to graduation.

- Among high school graduates, college enrollment seems **more likely** if it happens soon after high school completion. Of the 125 high school graduates who enrolled in college, almost half (47.2%) enrolled immediately after their high school graduation. One third (33.6%) enrolled one year after graduation and an additional 10.4% enrolled two years after graduation. Future research may explore whether the same pattern holds among youth who attained high school equivalency and what support and resources should be in place to facilitate the transition to postsecondary education.

Place

Considering feeder districts and variation among DYS-designated service regions:

- Are there patterns of degree attainment with regard to which schools students attend pre- or post-commitment? (e.g.: What feeder high school did they come from? Where did they return to?)
- Does the Central region have any insights as to why their graduation rates are higher than all other regions? For example, describe the partnership between Worcester Public Schools and DYS and key personnel within each entity. What differentiates the Central region's approach to supporting young people post-commitment to attain a high school diploma?
- Why are dropout rates higher in some regions (eg: Western)? Describe the intake process (if any) for a student returning to school post-commitment.
- Are all DYS regional offices connected to regional workforce investment boards or other organizations that focus on preventing and re-engaging youth who have dropped out of school?
- How and where are GED/HiSET courses offered in each region? What is the approach of the Northeast region, specifically? Is this unique to them?

Pathways to Postsecondary Education and Careers

Consider creating an individualized educational success plan for each young person that puts them on a path to a high school diploma, or equivalent, within six years, building in coursework and experiences to help them earn a credential that has relevance in the labor market.

- While in DYS care (commitment), do youth receive advice on different possible **educational pathways** (eg: diploma vs. high school equivalency) and the effects of each on their postsecondary options and potential earnings?
- Were DYS-involved youth given opportunities during their high school experiences to earn postsecondary credits or work toward earning a workforce credential? What might be the facilitating factors?
- What supports are available to DYS-involved youth once they re-enter a secondary school? How many return to the same school that they attended prior to DYS commitment vs. go to a new school? How are young people made aware of other diploma-granting or GED/HiSET programs available to them while in commitment or upon exiting commitment?
- Looking at longer term wages and job placement, are there differences between high school graduates and non-graduates who have attained a high school equivalency (GED/HiSET)?
- Are DYS-involved youth more successful at certain higher education institutions (public, private, 2-year, 4-year, etc.), when enrolled in certain degree programs and areas of study?

YES Involvement

- Is there a causal link between involvement with the YES Initiative and educational attainment among DYS-involved youth? If so, what are the supports provided in YES that facilitate educational attainment during their period of involvement with the YES Initiative, and how might those be replicated for them in other contexts?
- How do case workers develop relationships with schools and other educational providers? Are there certain partnerships that have been in existence for a longer period of time?
- Who from local education or workforce partners are supporting DYS caseworkers to navigate educational and employment options for justice-involved youth?

Other Questions About Barriers to High School Completion

In addition to these questions that draw directly on the report's findings, DYS and DESE may also wish to consider other questions about barriers to high school completion, and what services and supports are available to youth within their commitment period as well as in their transition back to a home community. Other questions relative to barriers to high school completion include:

- Did young people experience interrupted enrollment in the years prior to DYS commitment? Consider reviewing student-level data related to unexcused absences, in-school and out-of-school suspension.
- At what rate did DYS-involved youth repeat entire grade levels or specific subjects?
- On average, how many secondary schools or alternative education programs did young people attend during their high school years?
- What statewide or local partnerships exist to focus on positive educational outcomes for justice-involved youth? Given the low numbers of DYS-involved young people who attain a high school diploma after six years, consider establishing a work group of DYS and DESE personnel to explore additional coordination and supports to help more young people persist to a high school diploma or equivalency.

Programming and Supports Across Systems

- Which educational programs were young people enrolled in while in DYS "commitment"? Did some educational programs contribute to better academic outcomes?
- With high rates (~70%) of youth on an unstable educational path immediately after DYS discharge (dropped out, transferred, missing from the educational data system), what can be done to support students and help them **bridge the transition** from DYS educational programming to educational programming in the community?
- Once a young person leaves DYS care (commitment), **what services and supports** exist to prevent them from dropping out of school and stay on their path to attain their high school equivalency, high school diploma and/or enroll in postsecondary education (e.g., peer mentoring, counseling, coaching)? Are there financial or other individual benefits that can only be accessed if enrolled in school?
- What additional services and supports exist for **English learners** in DYS care? What additional supports are available for English Learners to support their transition from DYS commitment to an educational setting?
- Do caseworkers work with school administrators and other educators to help students **transition out of commitment** to an educational setting?
- Youthful offenders, whose commitment is more likely to be a longer-term residential placement, are more likely to graduate from high school. What supports are available to them once they leave commitment? How do their job placement and wages compare to older offenders with shorter length commitment?

In Conclusion

When youth are committed to DYS care during their high school years, and then released to their home communities, both their overall educational experience and the transition from place to place require intentional support from multiple systems. The findings in this report suggest that the individuals and systems supporting this group of youth may need to prepare for a longer path to attaining key educational milestones. Policymakers and practitioners could focus on the question, **whose kids are these?** Meaning, who is responsible for supporting these youth as they transition out of DYS care and attempt to re-enter the public education system. When we all answer “**our kids**,” then we may be more likely to apply what we know about high school persistence and postsecondary success to this group of young people who need not only caring adults, but systems of support and care, to stay on a path to adult success.

Appendix

Creating a Denominator

Calculation of **graduation, high school equivalency attainment, and dropout rates** can be impacted by the manner in which the denominator is created. In these calculations, the denominator represents the pool of students who are considered to have valid data. From that pool of students, we identify the number who have successfully achieved the outcome of interest, and turn this into a percent. However, creating the denominator is not always straightforward.

As previously described, our initial sample of 2,062 DYS-involved youth was narrowed down to a sample of 1,593 youth who **were in the 2015-2020 graduation cohorts AND had DESE data available**. Given that we were unable to determine whether missing DESE data meant a) the youth had graduated or transferred out and their data pre-dated the data we were provided or b) the youth had dropped out or became disengaged from school, we only included those who had available DESE data in our final sample. Using these guidelines meant that we had less data availability in earlier graduation cohorts (2015-2017), but full data availability in more recent cohorts (2018-2020).

Of the 1593 students identified for inclusion, 127 were identified as “deceased” or “transferred out” within 4 years of high school enrollment; 142 were identified as “deceased” or “transferred out” within 5 years of high school enrollment; 128 were identified as “deceased” or “transferred out” within 6 years of high school enrollment. In line with established procedures at DESE, these students were removed from the denominator in all calculations of graduation, high school equivalency attainment, and dropout.

For the report of **enrollment outcomes after DYS discharge**, the denominator is the same as the sample size (n=1,649).

Acknowledgements

The team at the CERES Institute extends our gratitude to the Massachusetts Department of Youth Services (DYS) and Massachusetts Department of Elementary and Secondary Education (DESE) for their support of this project. Special thanks to Dr. David Chandler, Director of Research at DYS; Kate Sandel, Senior Policy Analyst at DESE; and Dr. Elana McDermott, Research and Policy Analyst at DESE, for their partnership throughout this project.

SUGGESTED CITATION

Lynch, A.D., Zaff, J.F., Huang, Y., Cole, M.L., Hynes, M. (2022). Exploring Secondary and Postsecondary Attainment Among Juvenile Justice-Involved Youth in Massachusetts. Boston, MA: CERES Institute.



The CERES Institute for Children & Youth at Boston University Wheelock College of Education & Human Development is dedicated to community-engaged research and evaluation. Our work is premised on the belief that the best solutions for strengthening programs for children, youth, and families emerge by authentically partnering the expertise in communities with the expertise of community-engaged researchers and evaluators. Through a co-constructive process, communities and community-engaged researchers can identify the core problems that young people are facing, design solutions that capitalize on the inherent assets of young people and their communities, and continually learn and improve on these solutions until positive education and life outcomes are realized for all. Importantly, these partnerships should result in community-based organizations building their internal capacity to learn and improve.

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