



**Gradual Disengagement:  
A Portrait of the 2008-09 Dropouts in the Baltimore City Schools**

**A Research Report by the Baltimore Education Research Consortium**

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## **Gradual Disengagement: A Portrait of the 2008-09 Dropouts in the Baltimore City Schools Executive Summary**

This report paints a collective portrait of the Baltimore City Schools dropouts of 2008-09 to summarize some of the commonalities that join their individual stories together. After examining the surface level demographic characteristics of these dropouts, we probe more deeply into their behavioral characteristics in the years preceding the dropout event.

**Data and Methods --** This analysis used de-identified yearly administrative student-level data files from the Baltimore City Public Schools from 2008-2009 and the seven previous years. It focused primarily on the dropouts and graduates of 2008-09, merging in prior years' data on attendance, test scores, suspensions, and high school credits.

**Conclusions and Implications --** This report's analyses suggest the following:

- A large majority of eventual dropouts are overage for grade by the time they enter ninth grade for the first time. Grade retention patterns within the district (possibly influenced by accountability pressures related to test scores in the elementary and middle grades) could be contributing to the dropout problem and should be examined closely. It is important for alternatives to grade retention to be implemented to prevent the large numbers of overage students in middle and high schools.
- A majority of students who eventually drop out of high school enter ninth grade with a pattern of chronic absenteeism that goes back at least several years. These students require significant interventions to change longstanding habits of poor attendance.
- Significant interventions during the early middle grades are required to prevent most dropout outcomes. Prior research has shown that entrenched patterns for those entering ninth grade are extremely difficult to change.
- Most dropouts need to earn more than ten additional course credits to qualify for a high school diploma. Prior research has indicated that overage and under-credited students are unlikely to be successful in the regular high school setting.
- For current high school students aged 17 and older who have already become entrenched in patterns of chronic absenteeism and course failure and have not succeeded in earning many high school course credits, it appears that more non-traditional options for earning a high school diploma would be helpful.
- On the other hand, it is important not to track unsuccessful middle grades students into such alternative high school options. A more intensive focus on intervention and preventative measures during the middle grades is one of the most crucial directions for district efforts in reducing the dropout rate. Alternative high school options should be a short-term strategy that can be eliminated over time as the factors producing the need for them are addressed.

## **Gradual Disengagement: A Portrait of the 2008-09 Dropouts in the Baltimore City Schools**

Behind every dropout code entered into school district administrative files is a face and a story. A companion BERC report will tell some of those stories in more detail. This report paints a collective portrait of the Baltimore City Schools dropouts of 2008-09 to summarize some of the commonalities that join the individual stories together. After examining the surface level demographic characteristics of these dropouts, we probe more deeply into their behavioral characteristics in the years preceding the dropout event.

The task of recovering dropouts and raising the graduation rate in Baltimore City will require addressing the behavioral factors identified in previous research that push students off-track to graduation, particularly chronic absenteeism, suspensions, and course failure. Once students get off track in ninth grade, bringing them to successful high school graduation is extremely difficult. And ninth grade failure is also related to prior patterns of failure and low attendance. Previous research indicated that as many as half of high school dropouts in Philadelphia could be identified by patterns of course failure, low attendance, or behavioral problems in sixth grade. Longitudinal studies have supported the hypothesis that academic failure has a direct effect on student motivation, which in turn has a direct effect on dropout behavior.<sup>1</sup>

Researchers further hypothesize that interventions to reduce these behaviors associated with non-graduation will help increase graduation rates, though such intervention studies have not yet been underway long enough for graduation outcomes to be measured. As the America's Promise Alliance *Grad Nation*<sup>2</sup> toolkit suggests, a first step prior to organizing intervention strategies and evaluating their effectiveness is to describe the extent and concentration of these early warning indicators. This is the primary goal of this study. Descriptive analyses that include the age-by-credits-accrued status of dropouts also provide information necessary for districts to plan dropout recovery opportunities. This descriptive study of dropout characteristics should also motivate a district- and school-level focus on addressing early warning indicators in the middle grades to prevent dropout outcomes before they occur.

### **Research Questions**

1. To what extent are City Schools dropouts exhibiting early warning indicators of non-graduation (chronic absenteeism, behavioral problems, course failure) in prior years (including first-time ninth grade and the middle grades)? How do they differ from graduates on these characteristics? How does this vary by demographic group and school type?

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<sup>1</sup> See Allensworth & Easton, 2007; Balfanz, Herzog, & Mac Iver, 2007; Balfanz, Durham & Plank, 2008; Kaplan, Peck & Kaplan, 1997; Mac Iver, Balfanz, & Byrnes, 2009; Neild, 2009; Neild & Balfanz, 2006; Roderick & Camburn, 1999.

<sup>2</sup> See Balfanz, Fox, Bridgeland, & McNaught, 2008 and Balfanz, 2007.

2. How far away from graduation, in terms of credits accrued, are City Schools dropouts? What percentage of dropouts are overage and under-credited (probably needing alternative recovery options to complete high school)? What proportion of dropouts have a status in terms of age and credits earned that would allow for recovery within the regular high school setting?

## Data and Methods

This analysis used de-identified yearly administrative student-level data files from the Baltimore City Public Schools from 2008-2009 and the seven previous years (2001-02, 2002-03, 2003-04, 2004-05, 2005-06, 2006-07, and 2007-08). These files include demographic variables, school status variables (grade level, school, special education status, limited English proficiency status, etc.), attendance, test scores, suspensions, and course grades. Data analyses were conducted specifically for this report and may not match other published analyses exactly.

We focused primarily on the dropouts and graduates of 2008-09, merging in prior years' data on attendance, test scores, suspensions, and high school credits, as well as school and grade level for those students who were attending school in the district in middle school. Based on these student-level data, we created several variables describing student outcomes in prior years. This retrospective approach differs from more traditional cohort analyses in that it focuses on all students with a particular outcome (dropout vs. graduate) in a particular year, and then follows them backward in time through district records. It provides a complementary analysis to the traditional cohort study approach that follows students forward in time.<sup>3</sup>

## The Demographics of Disengagement

Baltimore City Schools data files from 2008-09 indicated a total of 1,646 students with dropout codes (very close to the 1,640 reported by MSDE).<sup>4</sup> Dropouts were more likely to be male (57%) than female (43%). They were also disproportionately special education students (29.3%, compared to 16.7% among all high school students, and 11.2% among graduates).

Nearly half of the dropouts (48.2%) were classified as ninth graders, and a quarter (25.4%) were tenth graders. The remaining dropouts were nearly evenly divided between the eleventh (14.4%) and twelfth grades (12.0%). The majority of dropouts (64%) were repeating the same grade in which they were enrolled in 2007-08.

Nearly three in four (72.7%) of the dropouts were 17 or older (born in 1991 or earlier) and nearly half (45%) were 18 or older (born in 1990 or earlier). Most (79.2%) were overage for grade (16 or older in ninth, 17 or older in tenth, 18 or older in eleventh, 19 or older in twelfth). Figure 1 summarizes the age distribution for those dropouts with available data.<sup>5</sup>

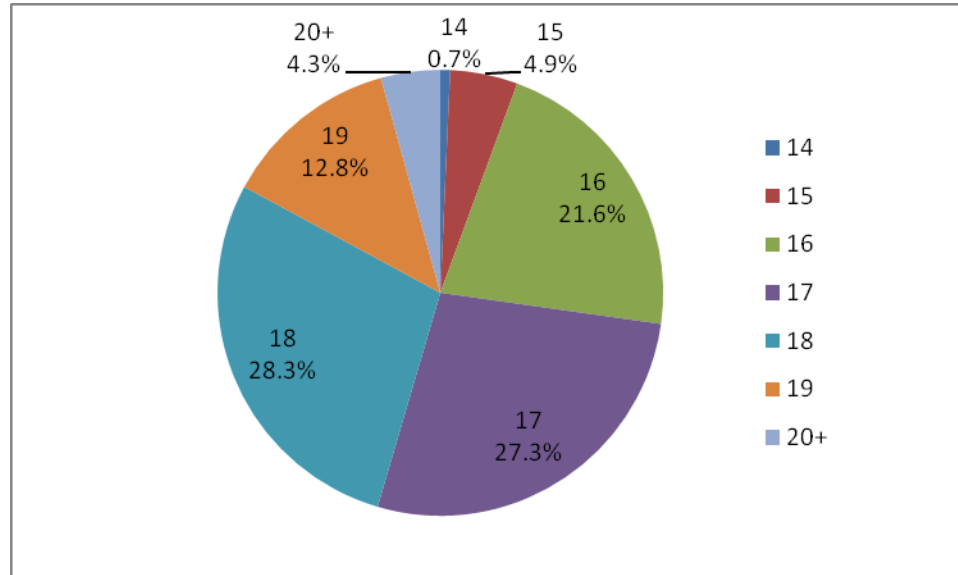
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<sup>3</sup> Because this analysis is not based on a traditional cohort, analyses are primarily descriptive. Modeling of graduation outcomes will be included in a forthcoming traditional cohort analysis.

<sup>4</sup> An additional 285 students were coded as transferring to a state (correctional) institution, but were not included in the analyses.

<sup>5</sup> Birth year was not available for 7.7% of the dropouts. Age calculations are approximate since they are based on just the year of birth. Calculations using exact date of birth (not available to BERC researchers) and exact date of withdrawal would probably yield slightly older results on average.

**Figure 1. Age Distribution of the 2008-09 Dropouts**



Data analyses were prepared specifically for this report and may not match other published statistics

Although only a handful of the 2008-09 dropouts (3.3%, 54 students) had not been enrolled in City Schools any of the three previous years, almost one in five (18.2%, 300 students) of the dropouts had not been enrolled in the district for at least one of the three previous years. In addition, about one in five of the 2008-09 dropouts had a final record dropout code in at least one of the three previous years. Some (but not all) of the dropouts with previous dropout codes were also part of the group who had not been enrolled in the district for all three previous years. One-third of the 2008-09 dropouts had either a prior dropout code or had not been enrolled for all three years.

These findings suggest that there is a sizable group of dropouts for whom interventions are extremely difficult to carry out because of their mobility in and out of the district. Some students are returning after a dropout event, but apparently need more intensive interventions to remain attached to school and graduate.

### **Behavioral Indicators of Disengagement**

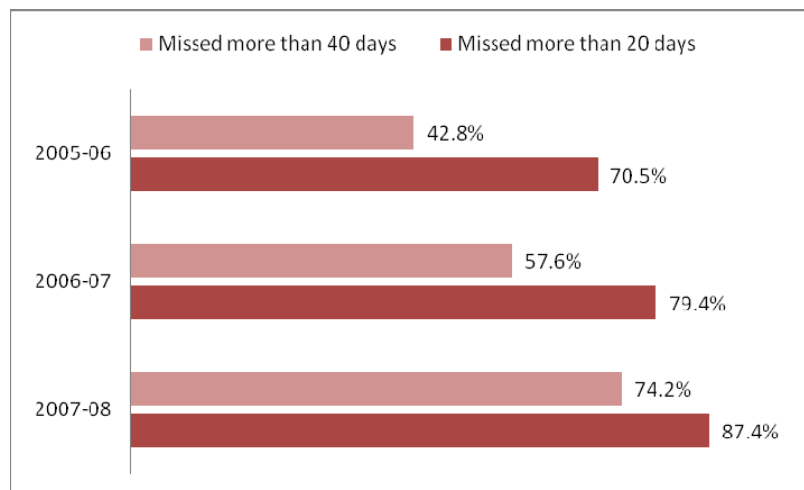
In this section we examine the behavioral factors identified in previous research that push students off-track to graduation, particularly chronic absenteeism, suspensions, and course failure.

#### *Attendance*

The large majority of dropouts had a pattern of chronic absence in the years prior to dropping out. As Figure 2 displays, dropping out was a gradual process of disengaging from school, as well as a reoccurring event for some students.

- Nearly nine in ten (87.4% of those enrolled) were chronically absent (missed more than 20 days) in 2007-08, and three in four (74.2% of those enrolled) were absent more than 40 days that year.
- Eight in ten (79.4%) were chronically absent in 2006-07, and more than half (57.6%) missed more than 40 days that year.
- Seven in ten (70.5%) missed more than 20 days in 2005-06 (42.8% were absent more than 40 days).
- More than half (53.5%) of the dropouts missed more than 20 days each of the three years prior to dropping out, and a quarter (25.5%) missed more than 40 days each of those three years.

**Figure 2. Percentage of 2008-09 Dropouts Chronically Absent in the Three Years Prior to Dropping Out**



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Female and male dropouts were similar in their rates of chronic absenteeism.

### *Suspensions*

Half (49.5%) of the dropouts had been suspended at least once in the three years prior to dropping out (compared to 24.0% of the 2008-09 graduates). Somewhat fewer (44.8%) of the dropouts had been suspended for at least three days in at least one of the three previous years (compared to 19.2% of the graduates). Only a small percentage of dropouts (5.9%) had been suspended each of the previous three years (compared to 1.6% of graduates).

### *Course Failure and Credit Accumulation*

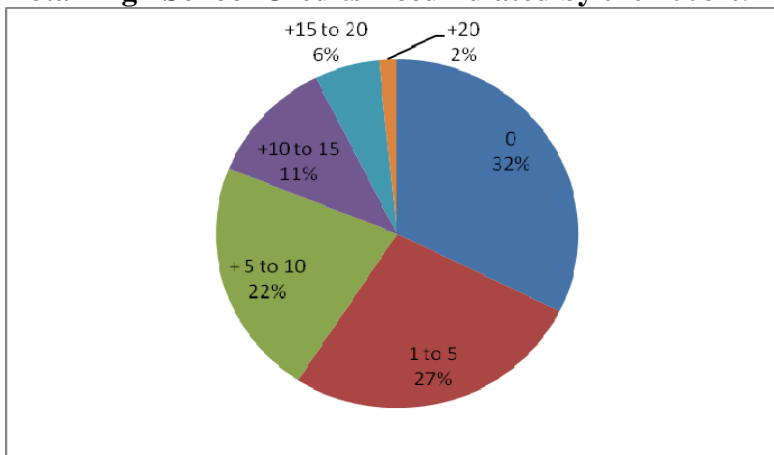
The 2008-09 transcript records were empty for students who dropped out that year, and thus none of the 2008-09 dropouts earned course credit in 2008-09. Among those 2008-09 dropouts with transcript records in 2007-08, nearly all (92.7%) had failed at least one course, and six in ten (63%) had failed four or more courses. Most (85.4%) of those dropouts with transcript data in 2006-07 had failed at least one course, and nearly half (48.5%) had failed four or more.

Female dropouts were somewhat less likely than male dropouts to have failed at least one course, particularly earlier in their high school years.

Four in ten (40.6%) of the 2008-09 dropouts earned zero credits in the two years preceding (2006-07 and 2007-08). Three quarters of the dropouts earned fewer than six credits during those two years (when the normal rate of credit accrual would be 14 to 16 credits, with at least 5.5 per year to arrive at 21 credits by the end of 12<sup>th</sup> grade). Nearly a third of the dropouts (31.6%) had no transcript records in 2007-08, and almost half (48.4%) had no records in 2006-07. Most of those without records were not yet enrolled in high school in the years in question, while the rest were primarily either not enrolled in the district or withdrew from a high school in the district and had no course grades on record.

On average, dropouts had accumulated a total of 5.2 credits over their entire high school career,<sup>6</sup> compared to an average of 24.6 credits for graduates. As Figure 3 portrays, a third of dropouts had earned no credits at all, and another quarter (26.9%) had earned between one and five credits total. Only a handful (5.9%) were within six credits of the 21 needed for graduation, while a small group of dropouts (25 students) had earned 21 or more credits.<sup>7</sup>

**Figure 3. Total High School Credits Accumulated by the 2008-09 Dropouts**



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Female dropouts had earned somewhat more credits than male dropouts (6.0 vs. 4.7). Even using a relatively liberal criterion regarding the ability of regular high schools to recover dropouts who are overage and under-credited,<sup>8</sup> six in ten of the dropouts in 2008-09 (nearly 1000 students) would probably need an alternative way of earning a high school credential.

<sup>6</sup> Records for each student were examined going back to 2001-02. A record of enrollment in ninth grade by 2001-02 could be located for all but 60 (3.6%) of the dropouts and all but 261 (6.0%) of the graduates. Ninth grade transcript data were available for 89.2% of graduates and 72.1% of dropouts. None of the 144 dropouts who were first-time ninth graders in 2008-09 had transcript data available (since they did not finish out the academic year).

<sup>7</sup>Besides a total of 21 high school credits, students also need credits in particular courses to meet graduation requirements. This report did not examine the actual courses in which credits were earned. Some of those who were within a few credits of graduation could have been missing required course credits or have not met HSA requirements.

<sup>8</sup> The criteria used to code students as candidates for alternative recovery options were: 18 or older and needing more than 10 credits to graduate, 17 and needing more than 15 credits, or 16 and needing more than 20 credits.

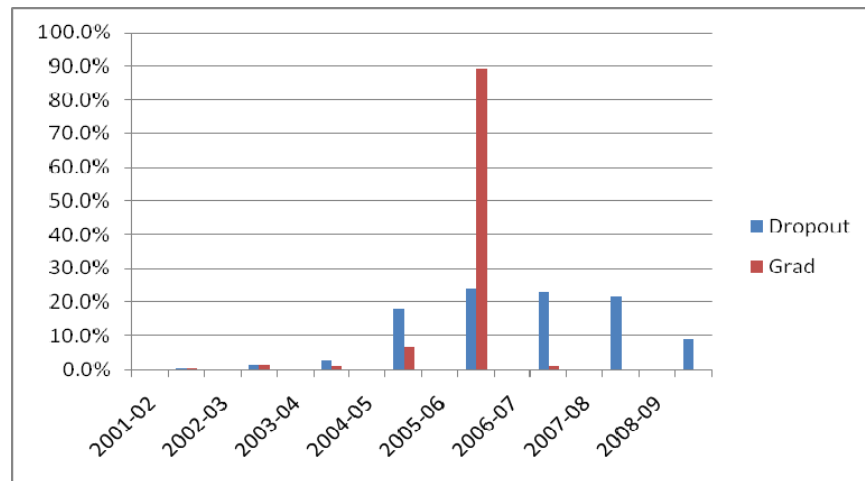
## School Characteristics

For the majority (57.3%) of the dropouts of 2008-09, the last school of record was either a large comprehensive high school or one of the smaller neighborhood high schools created by dividing the old comprehensive schools. A quarter (26.4%) of the dropouts attended an alternative school as the last school of record. Fewer dropouts last attended a vocational school (5.8%) or innovation/charter high school (9.2%). When dropouts were traced back to their first-time ninth grade school, however, almost half (47.2%) attended a different school just before dropping out than where they had begun high school.<sup>9</sup> A somewhat larger majority (64.9%) of dropouts began at comprehensive/neighborhood high schools, with 11.8% beginning at vocational schools and 7.6% at one of the innovation/contract schools. Roughly 10 percent of dropouts began ninth grade at an alternative school.

## Ninth Grade Warning Indicators

Because prior research has indicated that dropouts can be predicted by behavioral early warning indicators in ninth grade and even earlier, we traced backward through the longitudinal files to identify each student's first year in ninth grade. Figure 4 summarizes the distribution of first year in ninth grade for both dropouts and graduates in 2008-09. As expected, most graduates began ninth grade in 2005-06. It is important to note the persistence of a small group of older students who were still enrolled in the City Schools in 2008-09 after beginning high school more than six years previously – some of whom went on to graduate that year. Eight-five of the 2009 graduates had a prior dropout or other non-graduation code.<sup>10</sup> Some of those who dropped out in 2008-09 could well return and graduate eventually.

**Figure 4. First Year in Ninth Grade for Dropouts and Graduates of 2008-09**



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About 7 percent of the dropouts were missing data on age and excluded from this analysis. For another method of categorizing recovery options for students by age and credits needed, see Appendix A.

<sup>9</sup> By contrast, 16.3% of graduates had a different last school of record than their first-time ninth grade school. Additional qualitative research would be useful to ascertain the extent to which transfers between schools were involuntary and contributed to student disengagement from school.

<sup>10</sup> This group was disproportionately female (64.9%), as were graduates generally (58.7% female).



Roughly two-thirds of the 2008-09 dropouts were overage for grade when entering ninth grade for the first time (with about a quarter two or more years overage). By contrast, more than two-thirds of the 2009 graduates entered ninth grade on time, and few (less than 4%) were two or more years overage during the first ninth grade year.<sup>11</sup>

Average attendance rates during the first ninth grade year varied dramatically for graduates (92.0%) and dropouts (68.3%). From a different angle, Figure 5 summarizes rates of chronic absenteeism (missing more than 20 days of school) during the first-time ninth grade year for both students who graduated and students who dropped out of school in 2008-09. More than three-quarters (76.5%) of dropouts missed more than a month of school during ninth grade, compared to just 23.1% of graduates with a pattern of chronic absenteeism. More than half (55.5%) of dropouts missed more than 40 days of school during their first year in ninth grade, compared to just 6.4% of graduates with this level of chronic absenteeism in ninth grade.

Dropouts also differed dramatically from graduates in their first-time ninth grade course performance. Most (85.4%) dropouts failed at least one core course during that ninth grade year, compared to roughly a third (36.8%) of the graduates in 2008-09. Almost three in four dropouts (72.1%) failed at least two core courses, compared to 18.1% of graduates with the same ninth grade failure rate. Nearly half (43.6%) of dropouts failed four or more core courses in ninth grade (compared to 3.6% of graduates). Dropouts earned an average of 2.3 credits during the first ninth grade year, compared to 5.6 for graduates. Female dropouts were somewhat less likely than male dropouts to fail courses during the ninth grade year, and earned a higher number of credits on average during ninth grade than did male dropouts (2.5 vs. 2.0). But both males and females fell significantly behind in credits needed to stay on track to graduation during that ninth grade year, which significantly affected their probability of graduation.

Dropouts were also more likely than graduates to be suspended during their first-time ninth grade year (24.9% vs. 11.0%). Male dropouts were more likely than female dropouts to be suspended in the at ninth grade year (29.8% vs. 18.2%).

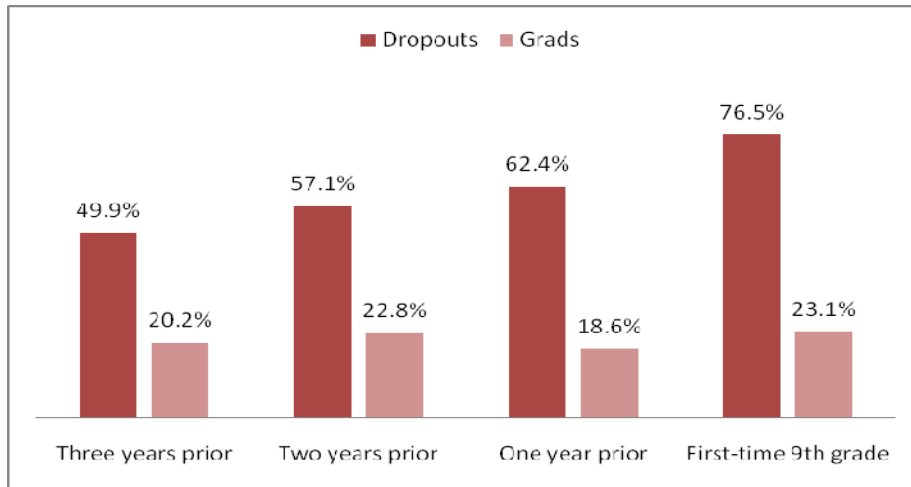
### **Middle Grades Early Warning Indicators**

Student records were traced back one, two, and three years prior to the first-time ninth grade year to examine early warning indicators during the middle grades. Most of the students were in eighth, seventh, and sixth grades, respectively, during these three years, but there were students who deviated from this pattern (primarily in being retained in grade during one or more years). Figure 5 compares the chronic absenteeism patterns of both the dropouts and graduates of 2008-09. Roughly half (49.9%) of the dropouts enrolled in the district three years prior to their first ninth grade year were chronically absent, compared to 20.2% of graduates. Among students who would drop out in 2008-09, the percentage missing more than 20 days of school grew steadily over the next three years, while it remained basically stable among those who would go on to graduate. Figure 6 shows the dramatic increase in the percentages missing more than 40 days of school among those who would go on to drop out in 2008-09.

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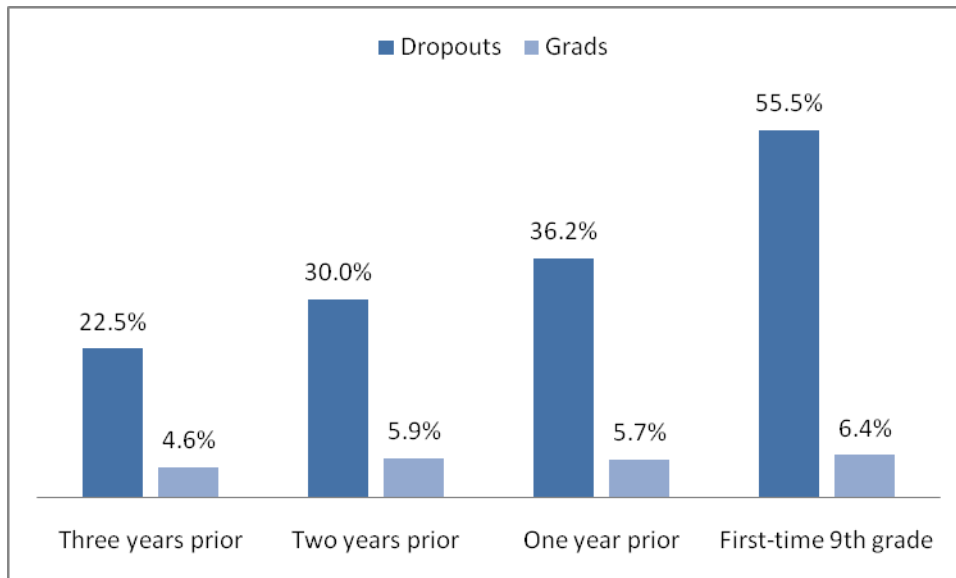
<sup>11</sup> These calculations are approximations based on birth year only.

**Figure 5. Percentage of Students Missing More than 20 Days of School in First Ninth Grade Year and Three Years Prior, by 2008-09 Outcome**



Data analyses were prepared specifically for this report and may not match other published statistics

**Figure 6. Percentage of Students Missing More than 40 Days of School in First Ninth Grade Year and Three Years Prior, by 2008-09 Outcome**



Data analyses were prepared specifically for this report and may not match other published statistics

## Proficiency Levels

Analyses of proficiency levels on middle grades MSA reading and mathematics tests indicated that about one in four dropouts (with data available) scored at proficient or above in reading (compared to 54% of graduates).<sup>12</sup> On the mathematics MSA, roughly one in ten dropouts scored at least proficient, compared to 30% of graduates.

## Conclusions and Implications

Analysis of administrative student record data can only begin to uncover factors associated with dropping out. Behind records of chronic absenteeism, suspension, and course failure are the life issues that contribute to these patterns of behavior. Issues related to family (caring for siblings, other relatives, or one's own children), finances (the need for employment), and health (both physical and mental) certainly contribute to the behavioral warning indicators, and future BEREC research will address these issues. But addressing the dropout issue begins with analyzing the factors that can alert schools to begin early interventions that could potentially get students back on track to graduation.

The preceding analyses suggest the following:

- A large majority of dropouts are overage for grade by the time they enter ninth grade for the first time. Grade retention patterns within the district (possibly influenced by accountability pressures related to test scores in the elementary and middle grades) could be contributing to the dropout problem and should be examined closely. It is important for alternatives to grade retention to be implemented to prevent the large numbers of overage students in middle and high schools.
- A majority of students who eventually drop out of high school enter ninth grade with a pattern of chronic absenteeism that goes back at least several years. These students require significant interventions to change longstanding habits of poor attendance.
- Significant interventions during the early middle grades are required to prevent most dropout outcomes. Prior research has shown that entrenched patterns for those entering ninth grade are extremely difficult to change.<sup>13</sup>
- Most dropouts need to earn more than ten course credits beyond those already accrued to qualify for a high school diploma. Prior research has indicated that overage and under-credited students are unlikely to be successful in the regular high school setting.<sup>14</sup>
- For current high school students aged 17 and older who have already become entrenched in patterns of chronic absenteeism and course failure and have not succeeded in earning

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<sup>12</sup> Since dropouts were in the middle grades at different times, the percentage at proficiency is an average from several different MSA years. The figure for graduates was based on the eighth grade year for the majority of students, Spring 2005.

<sup>13</sup> See, for example, Mac Iver, 2009.

<sup>14</sup> See, for example, Advocates for Children of New York, 2007.

many high school course credits, it appears that more non-traditional options for earning a high school diploma would be helpful. It is important to note that reading and mathematics skills of most dropouts are likely to require significant remediation to enable them to be successful in course work and pass tests (e.g., the HSA or GED).

- On the other hand, it is important not to track unsuccessful middle grades students into such alternative high school options. A more intensive focus on intervention and preventative measures during the middle grades is one of the most crucial directions for district efforts in reducing the dropout rate. Alternative high school options should be a short-term strategy that can be eliminated over time as the factors producing the need for them are addressed.

## **Appendix A**

### **Recovery Options for Dropouts, Based on Age and Credits Short of Graduation Status**

The chart on the next page summarizes the distribution of age and credits short of the 21 needed for graduation for the 2008-09 dropouts in Baltimore (excluding those missing data on birth date or credits). The method for categorizing recovery options was proposed by Steve Dobo, Executive Director of Colorado Youth for a Change, a dropout recovery initiative associated with the Colorado Graduates Initiative.<sup>15</sup> It includes four categories: 1) young enough for return to regular school for diploma; 2) young enough for catch-up program and return to regular school for diploma; 3) need new “older student campus” for high school diploma; and 4) need expanded programs for community college readiness and GED. According to this categorization, the majority (71%) of Baltimore’s dropouts are too old for recovery in the traditional high school setting and need some kind of alternative recovery option. Most of these could potentially earn a regular diploma, though some are so far behind in credits earned that a GED program and preparation for community college are probably a more reasonable alternative.

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<sup>15</sup> See Mac Iver, Balfanz, & Byrnes, 2009.

**Figure A. Distribution of 2008-09 Dropouts by Age and Number of Credits Short of 21 Required for Graduation**

Age	1 or less credits short	1+ to 3 credits short	3+ to 5 credits short	5+ to 10 credits short	10+ to 15 credits short	15+ to 20 credits short	More than 20 credits short	Total	Percentage of Students	Educational Program to Create	Number of Students	Percentage of Students
14	0	0	0	0	0	0	11	11	< 1%	Young enough for regular school Return to Regular School for Diploma	98	6%
15	0	0	0	0	5	12	58	75	5%			
16	0	0	0	9	39	93	188	329	22%	Young enough for regular school Catch Up Program & Return to High School for Diploma	351	23%
17	7	2	6	35	93	158	114	415	27%			
18	12	13	26	79	132	115	53	430	28%	Too old for traditional system, get diploma through new schools Older Student Campus for HS Diploma	798	53%
19	8	10	17	39	67	42	11	194	13%			
20+	5	2	6	16	15	18	4	66	4%	Too Old to get diploma, develop expanded GED programs Program for Community College Readiness + GED	273	18%
<b>Total</b>	32	27	55	178	351	438	439	<b>1520</b>	This graphic organizer was developed by Steve Dobo, Colorado Youth for a Change			
<b>%</b>	2%	2%	4%	12%	23%	29%	29%					

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