BALTIMORE CITY'S INVESTMENTS IN CHILDREN AND FAMILIES: A REVIEW OF OUTCOMES, BEST PRACTICES, AND FINANCING FOR Baltimore's PROMISE

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Authors:
Deborah S. Harburger, MSW, Senior Policy Analyst & Director, Fiscal Strategy
David McNear, Independent Fiscal Policy Consultant
Rhea Acuña, MSPPM, Senior Research Analyst
Sarah Nadiv, MA, Early Childhood Research Supervisor
Elizabeth Greeno, PhD, LCSW-C, Research Assistant Professor
Mathew Uretsky, MSW, MPH, Program Manager
Michelle Zabel, MSS, Clinical Instructor & Director

Subject matter expertise, editing, and technical support were provided by The University of Maryland, Baltimore, School of Social Work:
Richard P. Barth, PhD, MSW, Professor & Dean
Becky Bertell Lieman, MSW, Health Educator/Policy Analyst
John Cosgrove, MSW, Senior Research Analyst
Jill Farrell, PhD, Research Assistant Professor
Therese Hackford, MSW, Health Educator/Policy Analyst
Jennifer Lowther, LCSW-C, Clinical & Quality Initiatives Director
Lisa McGarrie, MSW, LIFT Local Project Director
Jennifer Mettrick, MS, MPH, Director of Implementation
Ryan Shannahan, MSW, Health Educator/Policy Analyst

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Every youth will be born healthy,
Every youth will enter kindergarten ready to succeed in school,
Every youth will achieve at grade level in school,
Every youth will graduate high school, prepared for the next step without remediation, and
Every youth will earn quality, post-secondary credential or receive training, and are career-ready.

INTRODUCTION & BACKGROUND

Baltimore's Promise is a newly launched non-profit organization dedicated to improving cradle to career outcomes for Baltimore City's children and youth. Baltimore's Promise has identified a series of outcomes that it is striving to achieve in order to create and sustain a Baltimore where children are healthy and educated, and well-equipped to lead productive careers and lives.

At the request of Baltimore's Promise and with the support of the Annie E. Casey Foundation, The Institute for Innovation & Implementation at the University of Maryland, Baltimore School of Social Work conducted a best practices and financing review around the specified outcome areas in July and August 2014. This review built upon those conducted over the past decade in Baltimore and addressed indicators, best practices, and activity in Baltimore City, as well as the funding for programs and interventions for each of the identified outcome areas. The literature and best practices review used many of the same questions that framed the fiscal year (FY) 2011 Baltimore City fund maps, but also sought to examine the impact other factors may have on the specified outcome areas. This document was developed by The Institute and David McNear, a private consultant who was the primary author of the FY06 and FY11 children's budget matrix and FY11 fund maps. The FY11 work was conducted by Mr. McNear and The Institute under contract with the Annie E. Casey Foundation. Mr. McNear was the primary author of the FY13 budget matrix and fund maps included in this document.

This review examined questions related to policy and funding, with the fund map focusing on federal, state, and local operational spending in FY13. Information also was requested from the philanthropic community. The children's budget matrix was completed using the same template as in prior years to allow for consistency, and focused on children ages 0-18. The following questions were posed by Baltimore's Promise to guide the review of the five outcomes[1]:

Outcomes:

1. How do we currently define these outcomes in Baltimore City and in Maryland?
2. How should we define these outcomes?

Indicators:

3. How should the indicators outlined above be defined?
4. Are reliable data readily available for the indicators outline above? Are there measures that can serve as proxy measures for the indicators outlined above?
5. Are the indicators outlined above shown to be key predictors of the outcomes? What is the strength of association between these indicators and the intended outcomes?

[1] Questions were modeled after those employed by the B'More for Healthy Babies and Grade Level Reading Campaign's literature review process.

Practices, Policies, Programs & Interventions

6. What are the evidence-based, research-informed, and promising practices and interventions associated with improving the outcome? For each intervention,
    a. What is the strength of its association to improving the outcome?
    b. How is the practice defined and how does it measure success?
    c. What is the expected impact of the intervention, if implemented with fidelity?
    d. Does this intervention exist in Baltimore City and, if yes, on what scale?
    e. Does this intervention currently exist in Maryland outside of Baltimore City?

Funding

7. In FY13, how much operational funding was provided to programs serving Baltimore to address the outcome (federal, state, local, and philanthropic)?
8. How does the FY13 funding level compare to funding from fiscal year 2011 and prior years?
9. How does the proposed FY15 funding level compare to funding from prior years?
10. What are the types (e.g. public, private) of funds and sources of the funds supporting the programs? What are the names of those programs?

This document is designed to be a starting point for the work of Baltimore's Promise, with the extensive knowledge and expertise of the Board of Directors and staff shaping and building upon the information presented in order to improve the lives of children, youth and families in Baltimore.

USING AN ECOLOGICAL FRAMEWORK AND RESEARCH ON ADVERSE CHILDHOOD EXPERIENCES AND TOXIC STRESS TO GROUND THE WORK

This review applies an ecological perspective to the outcomes identified by Baltimore's Promise. The ecological perspective is premised on the idea that cause and effect for any outcome will depend on who the individual is and where the phenomena are occurring; specifically, causality will be impacted by a child's sex, temperament, age, neighborhood, and culture (Garbarino, 2014).

Bronfenbrenner (2005) characterized four interacting elements that work in concert to influence a person's development: proximal processes (aka everyday interactions), the person (e.g. temperament, genetics), context (community, neighborhood, classroom and family factors) and time (chronological exposure to daily interactions and the historical context in which a child is developing). Garbarino (2014) suggests that the fifth interaction is the macrosystem, which includes elements such as public policy and national culture.

The ecological framework lends itself to a focus on the roles of adverse childhood experiences (ACE), trauma and toxic stress on developing children. The Adverse Childhood Experiences (ACE) study collected data from a national sample of 17,000 adults regarding their exposure to specific stressors during childhood, including growing

> "The complexity of human development is such that good intentions are insufficient… How do we move beyond American good intentions, particularly when we are talking about kids in extreme situations? …We must look deeply and from a well-grounded theoretical foundation."
> *Garbarino, 2014 (p.3)*

up in households in which there was recurrent physical or emotional abuse; sexual abuse; alcohol and/or drug abuse; chronic depression, mental illness, institutionalization, or suicidality; domestic violence; one or no parents; or an incarcerated household member (Felitti et al., 1998). Although the initial ACE Study sample was collected almost 20 years ago, interest in, and use of, the ACE methodology remains high.

Thousands of articles have been published using the ACE questionnaire to examine associations among ACEs and a myriad of negative health and social outcomes across the lifespan. Findings from the original study suggested that exposure to these types of experiences during childhood is quite common; two-thirds of study participants reported at least one ACE, and more than one in five reported three or more. Moreover, the study documented **a graded positive relationship between the number of episodes of adverse experiences during childhood and the development of a myriad of health risk behaviors and diseases during adulthood,** including increase in health risk behavior, mental health disorders, and physical disease in adulthood (Anda, et al., 2006; Edwards, Holden, Felitti, & Anda, 2003; Felitti et al., 1998).

There is an allostatic load[2] associated with ACEs, and the essential mechanism thought to explain the link between ACEs and negative outcomes is the disruption of brain circuitry and other organ and metabolic systems that occurs as the result of exposure to persistent stress. Strong, frequent, or prolonged activation of the body's stress response system can result in changes in brain architecture and physiologic dysregulation that are the precursors of social, emotional, and cognitive impairments that form the basis for chronic, stress related physical and mental illness (Shonkoff, 2010). In fact, **chronic exposure to toxic stress (chronic exposure to adversity) can lead to the release of stress hormones that physically damage a child's developing brain** and have impact well into adulthood, including cognitive effects such as a loss in IQ and a decrease in performance on memory tasks (Jouriles et al., 1998; Shonkoff, 2012).

Moreover, there is a **multigenerational impact,** and, as demonstrated by the ACE study, parents who themselves have experienced multiple episodes of adverse childhood experiences are at increased risk for physical and mental health problems, substance abuse, domestic violence, unintended pregnancy, adolescent pregnancy, and even fetal death. These conditions may lead to compromised, suboptimal caregiving behavior, thus threatening repetition of the cycle of ACEs in the next generation.

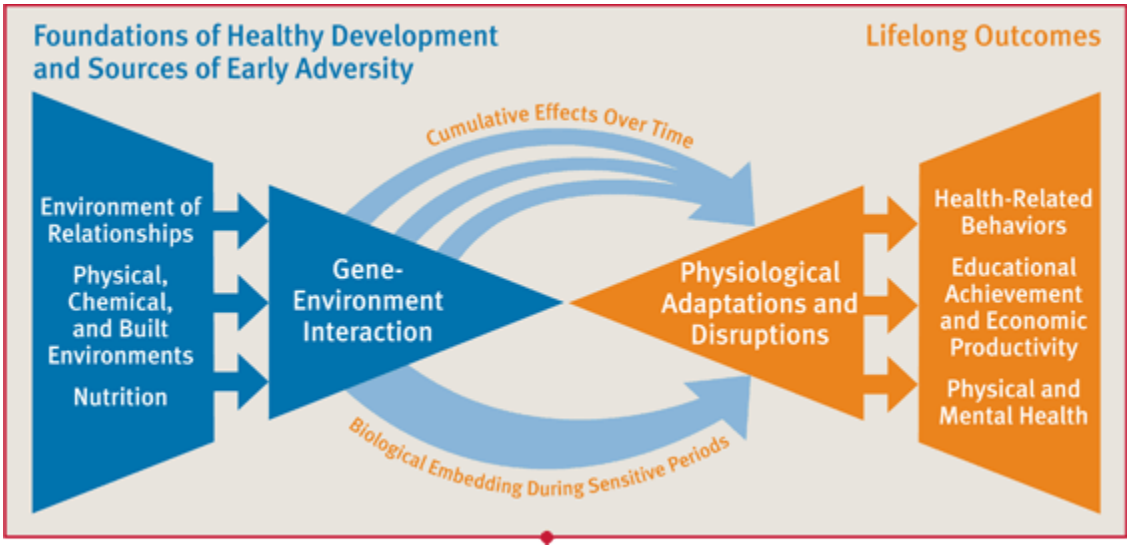
A solid body of evidence suggests that poverty, crime, psychological distress, and physical illness are phenomena that tend to cycle through multiple generations (Chase-Landsdale, Wakschlag, & Brooks-Gunn, 1995; McLoyd, 1998). In addition, according to the World Health Organization (WHO) and the International Society for Prevention of Child Abuse and Neglect (ISPCAN; 2006) factors that place a parent at increased risk for maltreating their own child include depression and other mental health problems; social isolation; financial difficulties; lack of knowledge regarding child development and unrealistic expectations; lack of parent/child attachment and failure to bond; parents' own history of maltreatment as a child; use of excessive punishment, and, positive valuation of corporal punishment. Parental risk is also associated with negative

[2] Allostatic load refers to the "cumulative biological burden exacted on the body through attempts to adapt to life's demands" (Seeman, McEwen Rowe & Singer, 2001, abstract).

outcomes related to child development. For example, maternal depression in the first two years of a child's life is a potent predictor of physiological indicators of stress (Ashman et al., 2002) as well as behavioral difficulties in the child (Cohn, et al., 1996; Lyons-Ruth, Zoll, Connell, & Grunebaum, 1986).

While the effects of toxic stress are structural, chemical, neuropsychological, chromosomal, cognitive, and social-emotional, **environmental factors can buffer the impact of the stress**. Such factors can include the consistent presence of a caring and responsive adult who helps the child cope with stressors. Evidence suggests that the presence of a caring and responsive adult serves as a protective factor that reduces the impact of exposure to chronic stress for young children. Such caregivers provide important opportunities to observe, learn, and practice healthy, adaptive responses to adverse experiences (Shonkoff & Garner, 2012). Fisher and colleagues (2005) have also shown that a therapeutic home environment can have a positive effect on the cortisol dysregulation that often accompanies exposure to persistent stress. Additionally, recent research conducted by Slopen, McLaughlin, and Shonkoff (2014) found that social interventions focused on the individual and family have potential to mitigate the effects of toxic stress on neuro-biological functioning.

The image below from Harvard's Center for the Developing Child depicts the interaction between the systems outlined by Bronfenbrenner and Garbarino above. This graphic shows the interplay of the environment of relationships; physical, chemical and built environment; and nutrition with the child's own genetic makeup, and how both the timing of such interactions and the cumulative effects of the interactions have implications for lifelong outcomes (Goldberg, 2014). At the end of this section is a document from the Center for the Developing Child that articulates this framework in additional detail.



Goldberg, 2014

B'More for Healthy Babies (BHB), a collaborative effort led by the Baltimore City Health Department and the Family League of Baltimore City, Inc., observes that "low-income women in

Baltimore City experience high rates of interpersonal and social trauma and exhibit trauma-related risk factors—including depression, anxiety, substance use, numbness, and avoidance—for adverse pregnancy and parenting outcomes" (2013, p.6). BHB found that the women and families served through BHB and home visiting programs have experienced high levels of childhood abuse, severe family dysfunction, poverty, housing instability and homelessness, smoking and substance abuse, community violence, and ongoing interpersonal violence. Additionally, they found that refugees and immigrants who have settled in Baltimore have reported experiencing violence (BHB, 2013).

For school-age children, the various risk factors come together in a highly complex manner. For example, school-level concentrations of student risk factors such as lead exposure, child maltreatment and homelessness can impact individual student academic outcomes (Bryk, Sebring, Allensworth, Easton, & Luppescu; 2010; Fantuzzo, LeBouef & Rouse, 2014). In addition, living in economically disadvantaged neighborhoods has been demonstrated to negatively impact academic achievement. There seems to be a racial component to this phenomenon as well; black youth are 20% less likely to graduate high school compared to white youth living in the same neighborhoods (Wodtke, Harding & Elwert, 2011). This is compounded by the negative effects that exposure to violence and the resulting trauma can have on student's rates of absenteeism, suspensions, standardized test scores and GPA (Lepore & Kleiwer, 2013; Sharkey, Schwarts, Ellen & Lacoe, 2014).

In the following sections, each outcome is explored in terms of the indicators used to measure it and the risk and protective factors that have the power to mediate the indicators and improve outcomes for children, youth and families.

HEALTH CARE REFORM

Health care reform, steered by The Patient Protection and Affordable Care Act of 2010 (ACA), has accelerated the pace of change and set forth strategies for enhancing our nation's health systems. Maryland, as an early adopter of health care reform and an innovator in behavioral health integration, continues to move its system forward – a process informed by and aligned with national, state and local level initiatives.

Across the country, the quality of somatic and behavioral health service delivery is at the forefront of a rapidly evolving system of care. Data from the *Faces of Medicaid* report on children's behavioral health highlight the ever-growing need to address the concomitant issues of quality and cost of care. While only 10% of children in Medicaid are accessing behavioral health services nationally, these same youth represent 38% of the total Medicaid spending for children (Pires, Grimes, Allen, Gilmer, & Mahadevan, 2013).

The Centers for Medicare & Medicaid Services (CMS) and the Substance Abuse and Mental Health Services Administration (SAMHSA) within the U.S. Department of Health and Human Services have been leaders in this effort, demonstrating a commitment to quality oversight and continuous quality improvement for states, communities, grantees and system partners. CMS has adopted the "triple aim" of improving quality, improving effectiveness, and reducing costs, and SAMHSA has adopted a similar focus. Millions of dollars have been awarded by the newly established CMS Innovation Center to study progressive models of service delivery that improve the quality of care while positively impacting the health of individuals and communities and realizing economic efficiencies for the system. This multi-pronged approach, adopted by multiple federal agencies, has not been limited to the realm of somatic health care; in fact, during this same time period, the behavioral health care community has been developing and refining a quality framework for innovative and impactful practice.

Findings from over thirty years of system of care work at the client- and system-level have given states a launching point to implement quality programming and oversight for children's behavioral health care. As Baltimore's Promise seeks to improve outcomes for children and families in Baltimore, it is critical to remain aware of the fast pace of health care reform in order to take advantages of the opportunities that may be posed in terms of integrating physical and behavioral health care and increasing the availability of preventative health services.

RACIAL & ETHNIC DISPARITIES

The discussion of child outcomes requires the acknowledgement and understanding of the racial and ethnic disparities that pervade today's society. Racial and ethnic disparity is a highly debated and often contentious issue that has been shaped by "historical, theoretical, epidemiologic, socioeconomic, and policy trends" (Fluke, Jones Harden, Jenkins, & Ruehrdanz, 2011, p. 10). This pervasive dynamic is exhibited in various fields including education, economics, child welfare, and criminal justice (Fluke et al., 2011). It is well documented that relative to their white counterparts, certain racial and ethnic groups – in particular Black/African American, American Indian, Hispanic, and Southeast Asian groups – face challenges and barriers that impede a child's capacity and ability to succeed. These disparities are evident before birth and persist across a child's lifetime (American Psychological Association, 2012).

In Baltimore City, where the Black/African American population comprises more than 60 percent of the total population, racial and ethnic disparities are pronounced:

- Education - Nearly one quarter of the African American population (ages 25+) do not hold a high school diploma compared to 14.1 percent of the White population (U.S. Census Bureau, 2012b; U.S. Census Bureau, 2012c)
- Poverty – Almost one-third (30.3%) of the Black/African American population lives below the poverty level compared to 13.2 percent of the white population (U.S. Census Bureau, 2012d; U.S. Census Bureau, 2012e)

- Income - The median household income of $30,511 for Black/African American residents is nearly half of the median household income of white residents ($57,386) (U.S. Census Bureau, 2012f, U.S. Census Bureau, 2012g)
- Juvenile Justice - The relative rate index (RRI) for the juvenile arrests of minorities in FY13 compared to white youth was 13.40; a rate of 1.0 indicates no disproportional contact, with higher rates indicating greater disproportionality. This rate was statistically significant (Department of Juvenile Services, 2013).
- Infant Mortality - The infant mortality rate of Black/African American infants in Baltimore City in 2012 was 12.7 per 1,000 infants compared to 3.3 for white infants (DHMH, 2013b).

These limited examples provide a brief glimpse of the extent of the racial and ethnic disparities that persist in Baltimore City. The mechanisms through which racial and ethnic disparities penetrate different fields are complex, stimulating ongoing research and debates (Fluke et al., 2011). **However, there is broad agreement that building an infrastructure that successfully supports cradle to career outcomes means addressing the underlying racial and ethnic disparities present. Throughout the review of indicators and risk and protective factors, attention is drawn to racial and ethnic disparities within the data for Baltimore City, Maryland, and the U.S.**

METHODS, PROCESS & RESULTS-BASED ACCOUNTABILITY

The indicators that define the outcome areas are influenced by a multitude of factors that can lead to a change, positive or negative, in the outcomes. These determinant factors are often referred to as risk and protective factors. The US Department of Health & Human Services (2014, p.1) uses the following definitions of risk and protective factors:

> **Risk factors** refer to the stressful conditions, events, or circumstances (e.g. maternal depression, substance abuse, family violence, persistence poverty) that increase a family's chances for poor outcomes, including child abuse and neglect. **Protective factors** are conditions or attributes of individual, families, communities, or the larger society that mitigate risk and promote healthy development and well-being. Put simply, they are the strengths that help to buffer and support families at risk.

Risk and protective factors are reciprocals and are often grouped together. The differences primarily arise from perspectives, with risk factors focusing on the risks and protective factors focusing on the assets (University of Kansas, 2014).

The links and relationships between the risk and protective factors and the desired outcomes are not straightforward. Risk and protective factors exist in multiple levels: individual, group, environment, and system (University of Kansas, 2014). The influences they exert on the outcomes are often a source of arguments due to the heterogeneity of the effects and varied measurement techniques. However, it is necessary to understand the relationships and links in existence in order to gain a comprehensive perspective of the problem and formulate a solution.

Implementing change in the cradle to career continuum will require the reduction of risk factors and strengthening of protective factors.

A results-based accountability framework (Friedman, 2005) was applied to the outcomes articulated by Baltimore's Promise. Multiple stages of research were conducted in order to provide an in-depth analysis of the outcome areas. The main search vehicles utilized were University of Maryland, Baltimore's Health Services and Human Services Library; Google Search; and Google Scholar. Journal articles, governmental reports, and documents published by renowned foundations and non-profit organizations were reviewed to inform the content of this report.

The purpose of the initial research was to identify indicators used to measure the outcome areas. Primary indicators were selected based on their communication power (ability to communicate to a broad range of audiences), proxy power (ability to say something of importance about the outcome or result desired and ability to stand alone), and data power (quality data available on a timely basis) (Friedman, 2005). In order to provide relevant information to Baltimore City and Maryland, greater attention was directed towards indicators used within the state of Maryland.

After defining the risk factors, the study shifted to defining common risk and protective factors that were highly associated with the outcome indicators. The research operated under the premise that it would not define all risk and protective factors involved but would focus on risk and protective factors that were often cited and well documented in existing literature. Keywords that were utilized include: adverse birth outcomes, school readiness, academic performance and achievement, college readiness, and career readiness.

With the outcome indicators and related risk and protective factors established, a more targeted research approach was undertaken. The risk and protective factors are one component of the "story behind the baseline," or the deeper understanding of the indicator and what it portrays.

Therefore, the next level of research focused on the "effects" and "relationships" between the risk and protective factors and the outcome indicators. Special attention was given to meta-analyses and published literature reviews that synthesize the extensive body of research that have already been conducted.

Key subject matter experts were also consulted throughout the development of this document, as noted in the acknowledgements section.

TAB B: OUTCOMES & INDICATORS FOR BALTIMORE'S PROMISE

No single outcome area or indicator can be viewed in isolation. As discussed above, various aspects of both genetics and the environment interact with each other. The importance of early childhood—beginning with the prenatal period—cannot be overstated with regard to its implications for healthy development. Each developmental period has a scaffolding effect, building upon prior history, experiences and development. However, risk and protective factors throughout the lifespan have mitigating effects and the trajectory of indicators at the individual and population levels that are trending in the wrong direction can be addressed while the pace of progress on other indicators is accelerated. Babies born healthy are better positioned to enter kindergarten ready to learn, which makes them more likely to be reading on grade-level. Children reading and performing on grade-level are more likely to complete high school and move on to post-secondary education or training. The discussion below is designed to highlight the risk and protective factors that are most likely to be able to impact the indicators and outcomes and to establish a baseline for the work of Baltimore's Promise.

The tables that follow provide an overview of the indicators for each outcome, how they are defined, their current value, and how the indicator has changed over the past three years.

DATA OVERVIEW OF BALTIMORE CITY INDICATORS & RISK/PROTECTIVE FACTORS

NOTES:

- The *change over time* figures are raw numbers and do not reflect percentage changes.
- All data provided are for Baltimore City.
- Data sources are identified within each outcome section and additional detail on the measures are provided there as well.
- **+** indicates a numerical increase; **-** indicates a numerical decrease
- Changes in green indicate that the indicator has been moving in the right direction; changes in red indicate that the indicator has been moving in the wrong direction. Changes in **black** indicate no movement.

TABLE 1: OUTCOME 1: BABIES BORN HEALTHY

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
Pre-term Birth Rate	% of births occurring before 37 weeks	2012	**15.4%**	**0.0**	-0.6
Low Birth Weight Rate	% of births with infants weighing ≤ 5.5 lbs.	2012	**11.8%**	-0.2	-1.0
Infant Mortality Rate	Infant deaths per 1,000 live births	2012	**9.7%**	-0.8	-3.8

TABLE 2: OUTCOME 2: CHILDREN ENTER KINDERGARTEN READY TO LEARN & SUCCEED

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
Kindergarten Assessment					
Social & Personal	% of students identified as fully ready in Social	2014	**75.0%**	-2.0	+9.0
Language & Literacy	% of students identified as fully ready in Language	2014	**69.0%**	-1.0	+13.0
Math	% of students identified as fully ready in Math	2014	**71.0%**	+2.0	+11.0
Science	% of students identified as fully ready in Science	2014	**62.0%**	**0.0**	+10.0

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
Social Studies	% of students identified as fully ready in Social Studies	2014	66.0%	-1.0	+16.0
Arts	% of students identified as fully ready in Arts	2014	80.0%	-2.0	+14.0
Physical Development	% of students identified as fully ready in Physical Dev.	2014	88.0%	0.0	+9.0
Composite	% of students identified as fully ready overall	2014	76.0%	-2.0	+9.0

TABLE 3: OUTCOME 3: CHILDREN ACHIEVE GRADE-LEVEL READING AND MATH

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
Maryland State Assessment (MSA)–Reading					
Grade 3	% of student reaching advance or proficient levels	2014	55.9%	-9.0	-13.5
Grade 5	% of student reaching advance or proficient levels	2014	73.9%	-0.3	-2.2
Grade 8	% of student reaching advance or proficient levels	2014	54.7%	-7.3	-6.7
Alternative MSA–Reading					
Grade 3	% of student reaching advance or proficient levels	2014	84.7%	+11.7	-4.0
Grade 5	% of student reaching advance or proficient levels	2014	78.3%	+7.6	-5.8
Grade 8	% of student reaching advance or proficient levels	2014	82.7%	-5.3	-0.9
MSA– Math					
Grade 3	% of student reaching advance or proficient levels	2014	47.0%	-21.1	-26.4

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
Grade 5	% of student reaching advance or proficient levels	2014	42.5%	-22.5	-22.3
Grade 8	% of student reaching advance or proficient levels	2014	28.5%	-9.4	-6.6
Alt. MSA–Math					
Grade 3	% of student reaching advance or proficient levels	2014	80.6%	+29.2	-6.7
Grade 5	% of student reaching advance or proficient levels	2014	72.5%	+9.1	-12.9
Grade 8	% of student reaching advance or proficient levels	2014	75.3%	+0.6	-1.1
High School Assessment-Algebra	% of students who have taken and passed	2013	64.1%	+1.4	N/A
High School Assessment-English	% of students who have taken and passed	2013	64.2%	+0.0	N/A

TABLE 4: OUTCOME 4: YOUTH GRADUATE FROM HIGH SCHOOL PREPARED FOR COLLEGE OR VOCATIONAL TRAINING

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
5 Year Adjusted Cohort High School (HS) Graduation Rate	% of students within the cohort who graduate within 5 years of HS enrollment	2012	**71.7%**	+1.1	N/A
4 Year Cohort HS Dropout Rate	% of students within the cohort who leave school within the four year period	2013	**12.1%**	-2.0	-11.7
High School Program Completion					
University System of Maryland Course Requirements	% of high school graduates who met the requirement to qualify for the University System of Maryland	2013	**75.6%**	+1.3	N/A
Rigorous High School Program	% of high school graduates who completed a rigorous course of study	2013	**5.4%**	N/A	N/A
Post-Secondary Enrollment	% of students who receive a diploma and enrolled in any post-secondary institution 12 months after HS graduation	2012	**50.6%**	-1.2	-4.5
College Readiness					
College and Career Preparation (CCP)	% of students who meet at least one of the CCP criteria	2011	**68.7%**	+1.1	N/A
College Remediation Rate	% of recent HS graduates who needed to take remediation courses in college	2011	**76.1%**	+0.2	+10.7

TABLE 5: OUTCOME 5: YOUTH EARN A POST-SECONDARY CREDENTIAL OR RECEIVE VOCATIONAL TRAINING AND ARE CAREER-READY

Measure	Definition	Current		Change	
		Year	Level	Over-the-Year	Three Year
6 Year College Graduation Rate for MD 4 Year Public Institution (Statewide)	% of undergraduate in a cohort that graduated within 6 years of enrollment	2011	**61.6%**	-1.7	-3.10
Retention Rate for MD 4 Year Public Institution (Statewide)	% first-time, full time undergraduate that returned for the second year	2011	**82.5%**	+0.4	+1.7
Educational Attainment (Ages 18 – 24)					
Less than High School	% of youths (18 – 24) whose highest education attained is less than high school	2012	**18.6%**	-2.0	-2.6
High School Graduate	% of youths (18 – 24) whose highest education attained is a high school diploma	2012	**27.5%**	-1.1	-3.1
Some College or Associate's	% of youths (18 – 24) whose highest education attained is some college or an associate's degree	2012	**40.7%**	+0.3	+8.6
Bachelor's Degree or Higher	% of youths (18 – 24) whose highest education attained is a bachelor's degree or higher	2012	**13.2%**	+2.9	-2.9
Youth Unemployment Rate	% of youths (16-24) who are currently in the labor force and unemployed	2008-2012	**26.5%**	+0.5	+1.3

TREND OVERVIEW OF RISK AND PROTECTIVE FACTORS MEASURES

Measure	Definition	Related Outcome					Current		Change	
		1	2	3	4	5	Year	Level	Over-the-Year	Three Year
Maternal Health		✓								
Expecting Mothers who Smoke	% of births to women who smoked during pregnancy						2012	**10.0%**	-1.0	N/A
Prenatal Care										
Late or No Prenatal Care	*% of births to women who received late or no prenatal care*						*2009*	***4.7%***	*-1.4*	*-0.5*
1st Trimester Prenatal Care	*% of births to women who started receiving prenatal care in the 1st trimester*						*2009*	***77.3%***	*+3.6*	*-2.5*
Births to Adolescents		✓			✓	✓				
Teen Birth Rate	Live births per 1,000 females aged 15-19						2012	**46.9%**	-3.8	-17.5
Socioeconomic Background		✓	✓	✓	✓	✓				
Living Below Poverty Level	% of population living below the poverty level						2012	**24.8%**	-0.3	+3.8
WIC Participation	WIC Average State Fiscal Year Participation						2012	**28,778**	-53	-593
Households Receiving Food Stamps	% of households with children under 18 receiving food stamps						2012	**45.9%**	-0.3	-10.7
Uninsured Children	% of individuals under 18 w/out insurance coverage						2012	**5.4%**	+0.3	-2.4

Measure	Definition	Related Outcome					Current		Change	
		1	2	3	4	5	Year	Level	Over-the-Year	Three Year
Students with Free and Reduced Meal										
Elementary	*% of students receiving free/reduced price meals*						*2014*	***89.1***	*+0.5*	*+4.7*
Middle	*% of students receiving free/reduced price meals*						*2014*	***88.3***	*+1.2*	*+5.8*
High School	*% of students receiving free/reduced price meals*						*2014*	***77.0***	*+0.6*	*+7.6*
Family Characteristics			✓	✓	✓	✓				
Victims of Child Maltreatment (Statewide)	Average monthly reports of child maltreatment in FY						2014	**483**	-5	-20
Children in Foster Care	Number of children in foster care (end of calendar year)						2013	**2,541**	-433	-1,753
Household Head's Educational Attainment	% of children who live in household headed by an individual with less than a HS diploma						2009	**17.0%**	-3.0	N/A
Children in Single Parent Households	% of children under 18 who live in single parent households						2012	**69.0%**	+2.0	+6.0
Student Mobility										
Elementary	*% of students who move or withdraw from school after the first day*						*2013*	***30.1%***	*-2.7*	*-2.4*
Middle	*% of students who move or withdraw from school after the*						*2013*	***27.9%***	*-2.7*	*-2.5*

Measure	Definition	Related Outcome					Current		Change	
		1	2	3	4	5	Year	Level	Over-the-Year	Three Year
	first day									
High School	*% of students who move or withdraw from school after the first day*						*2013*	***34.5%***	*-1.1*	*-0.1*
Parents who Lack Secure Employment	% of children under 18 whose live in households where neither parent has a regular, full time job						2012	**50.0%**	-3.0	+4.0
Student Characteristics			✓	✓	✓	✓				
Attendance Rate										
Elementary	*% of students present in school, on average*						*2014*	***93.2%***	*-0.8*	*-1.5*
Middle	*% of students present in school, on average*						*2014*	***93.5%***	*-0.1*	*-0.1*
High School	*% of students present in school, on average*						*2014*	***81.8%***	*-0.3*	*-0.5*
Chronic Absences										
Elementary	*% of students absent for more than 20 days*						*2013*	***15.8%***	*+2.6*	*+1.9*
Middle	*% of students absent for more than 20 days*						*2013*	***16.1%***	*+0.2*	*-1.4*
High School	*% of students absent for more than 20 days*						*2013*	***39.8%***	*-1.5*	*-2.1*
Suicide Attempt	% of HS survey respondents who seriously considered attempting suicide during the past 12 months						2013	**15.7%**	N/A	N/A

Measure	Definition	Related Outcome					Current		Change	
		1	2	3	4	5	Year	Level	Over-the-Year	Three Year
Alcohol Use	% of HS survey respondents who had at least one drink of alcohol on one or more of the past 30 days						2013	**26.5%**	N/A	N/A
Cigarette Use	% of HS survey respondents who smoked cigarettes on one or more of the past 30 days						2013	**10.1%**	N/A	N/A
Marijuana Use	% of HS survey respondents who used marijuana one or more times during the past 30 days						2013	**23.2%**	N/A	N/A
Academic Preparedness						✓				
ACT	Composite Mean Score for the ACT						2013	**17**	-1	+1
SAT	Composite Mean Score for the SAT						2013	**1120**	+17	-17
School Environment				✓	✓					
Per Pupil Expenditures	Funds spent on education in relation to the number of student						2013	**$14,973**	-183	N/A
Instructional Staff per 1,000 Pupils	Full time equivalent (FTE) instructional staff per 1,000 students						2013	**63.5**	-2.2	N/A
Professional Staff per 1,000 Pupils	Full time equivalent (FTE) professional per 1,000 students						2013	**10.9**	-0.5	N/A
Instructional Assistant per 1,000	Full time equivalent (FTE) instructional						2013	**17.8**	-2.0	N/A

Measure	Definition	Related Outcome					Current		Change	
		1	2	3	4	5	Year	Level	Over-the-Year	Three Year
Pupils	assistants per 1,000 students									
Classes Not Taught by Highly Qualified Teachers	% of classes not taught by highly qualified teachers						2013	27.1	-3.4	N/A
Suspension Rate	% of students suspended for any reasons						2013	7.3%	-1.9	-1.1

OUTCOME 1: BABIES BORN HEALTHY

DEFINING BABIES BORN HEALTHY

The outcome *babies born healthy* is a priority of the City of Baltimore, the State of Maryland, and the U.S. Department of Health and Human Services. Since 1999, the Maryland Children's Cabinet has made this one of eight outcomes it tracks with regard to child well-being. It is also the call to action and the foundation of B'more for Healthy Babies (BHB), a partnership between the Baltimore City Health Department and the Family League of Baltimore City (FLBC; the local management board for Baltimore City), whose vision is that "all of Baltimore's babies are born at a healthy weight, full term, and ready to thrive in healthy families" (B'More for Healthy Babies , 2014).

This outcome has been defined by the Maryland Children's Cabinet using the indicators of infant mortality, low birth weight, and births to adolescents. However, **it is recommended that Baltimore's Promise define *babies born healthy* in terms of the following indicators:**

- **Pre-Term Birth Rate:** Births occurring to babies prior to the 37th week of gestation.
- **Rate of Babies Born at Low Birth Weight:** Infants weighing less than 2500 grams (5.5 pounds) at birth
- **Infant Mortality Rate:** Deaths of infants less than one year old, per 1,000 live births.

Although tracked by the State of Maryland, *births to adolescents* is *not* recommended as an indicator for *babies born healthy* because it is a *risk factor* for a poor outcome, not an indicator *of* the outcome. As discussed further below, adolescents who give birth are at greater risk for low birth weight babies, pre-term births, and infant mortality.

All three indicators are highly interrelated. For example, babies born prior to 37 weeks of gestation (pre-term births) are at-risk for being born at a low birth weight; both are risk factors for infant mortality. Therefore, efforts to promote *babies born healthy* will require a comprehensive approach, incorporating all three measures.

PRE-TERM BIRTH

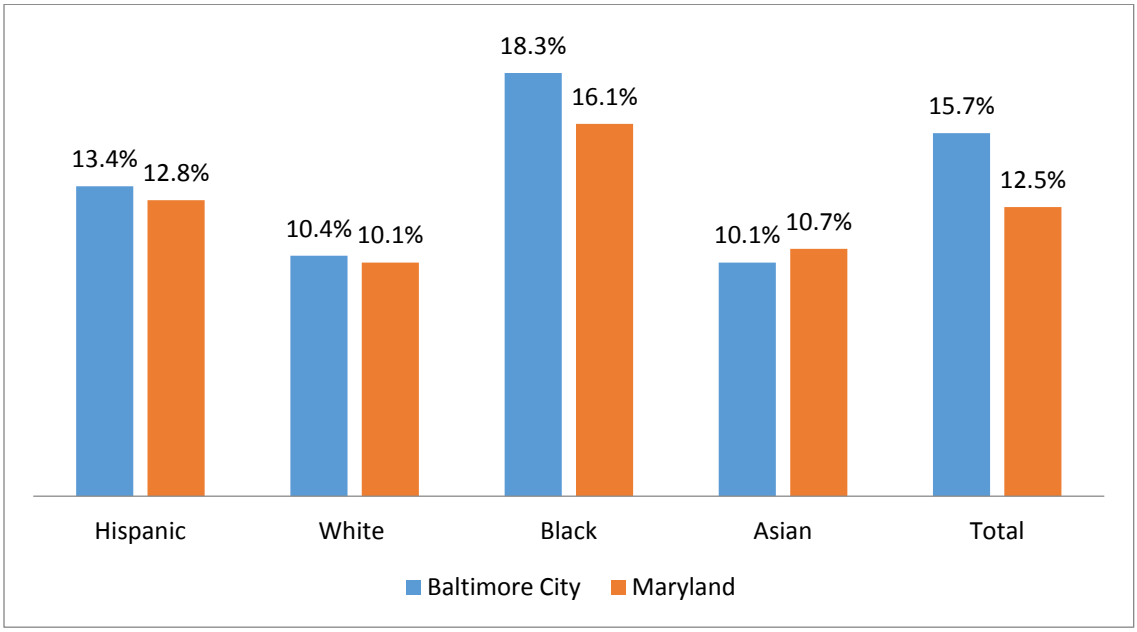
Pre-term births are those that occur prior to the 37th week of pregnancy (March of Dimes, 2013; Center for Disease Control and Prevention, 2013). Babies born prematurely are not fully developed and are at greater risk for infant mortality and serious short-term and long-term health problems (The American College of Obstetrician and Gynecologists , 2013; National Research Council, 2007). Children born prematurely are also at increased risk for neurodevelopmental, behavioral, social-emotional, and educational problems, including problems with attention and executive functioning (National Research Council, 2007).

Relative to other developed countries, the United States persistently posts the highest preterm birth rate, with the most recent rate at 11.5 percent in 2012 (Painter, 2013). Preterm birth rates in Baltimore City and Maryland are worse than the U.S average. **The 3-year average pre-term birth rate for Baltimore City has decreased by 1.5 percent since 2006-2008 but remains high at 15.7 percent for 2010-2012.** During the same time period, the State of Maryland also

experienced a similar decrease at 1.7 percent, bringing the statewide average down to 12.8 percent.

To place these figures into perspective, the March of Dimes has a 2020 goal to reduce preterm births to no more than 9.6% of live births; the Healthy People 2020[3] goal is to reduce preterm births to no more than 11.4% of live births (Healthy People, 2014). With recent rates of 15.7% and 12.8% respectively, Baltimore City and Maryland have to make considerable progress in order to achieve these goals.

FIGURE 1: PRETERM BIRTH BY RACE/ETHNICITY, BALTIMORE CITY AND MARYLAND, 2010-2012 AVERAGE



SOURCE: MARCH OF DIMES PERISTATS

There are wide disparities across racial and ethnic groups in regards to pre-term births (See Figure 1). In 2010-2012, babies born in Baltimore City to Asian mothers were the least likely to be born pre-term. For example, Black/African American mothers were almost twice as likely to give birth to a preterm baby compared to Asian mothers (March of Dimes, 2014). The preterm birth rates were the highest for Blacks/African Americans: 18.3 percent in Baltimore City and 16.1 percent in Maryland. Although the preterm birth rate for Blacks/African Americans has shown slight improvements, it has continuously remained above 18 percent (see Table 6). Hispanic pre-term birth rates follow at 13.4 percent in Baltimore City and 12.8 percent in Maryland. The rate for babies born to Hispanic mothers has remained consistent at nearly 13 percent after experiencing a low of 12.1 percent in Baltimore City in the 2008-2010 average.

Whites have shown the most improvements in pre-term births in both Baltimore City and Maryland. Between the 2006-2008 and 2010-2012 period, preterm births for White mothers

[3] Healthy People 2020 is an initiative of the U.S. Department of Health and Human Services that provides 10-year national objectives for improving the health of all Americans.

decreased by 9.8 percent in Maryland and 13.3 percent in Baltimore City (from 11.2% to 10.1% and from 12.0% to 10.4% respectively).

TABLE 6: PERCENTAGE OF BIRTHS THAT WERE PRE-TERM (GESTATIONAL AGE <37 WEEKS), 2006-12 (IN 3-YEAR AVERAGES), MARYLAND STATEWIDE AND BALTIMORE CITY, BY RACE/ETHNICITY OF MOTHER

	2006-08 Average		2007-09 Average		2008-10 Average		2009-11 Average		2010-12 Average		Avg. 3-YR Period Change (%)	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
Black non-Hispanic	17.1	19.1	16.9	19.2	16.5	18.8	16.3	18.4	16.1	18.3	-1.5	-1.1
White non-Hispanic	11.2	12.0	10.8	11.4	10.5	11.2	10.3	10.7	10.1	10.4	-2.5	-3.5
Hispanic	12.7	13.4	12.6	12.8	12.6	12.1	12.8	12.9	12.8	13.4	0.2	0.1
All Births	13.3	16.8	13.1	16.7	12.8	16.2	12.7	15.9	12.5	15.7	-1.5	-1.7

SOURCE: MARCH OF DIMES PERISTATS

LOW BIRTH WEIGHT

Being born at a low birth weight (weighing less than 2,500 grams) or a very low birth weight (weighing less than 1500 grams) has been associated with increased mortality and morbidity. The Centers for Disease Control and Prevention (CDC) observed that low birth weight "is the single most important factor affecting neonatal mortality and a significant determinant of post-neonatal mortality. Low birth weight infants who survive are at increased risk for health problems ranging from neurodevelopmental disabilities to respiratory disorders" (2009, n.p.). Martin, Hamilton, Osterman, & Curtin (2013) found that in 2010, 22 percent of infants born at very low birth weight did not survive their first year, while just over 1 percent of low birth weight babies and only 0.2 percent of infants born at a weight of 2,500 grams or more did not survive their first year. For those who survive beyond their first year, low birth weight babies are more likely to experience cognitive delays and chronic health conditions (Bailey & Byrom, 2006).

Healthy People 2020 has established an objective that only 7.8 percent of live births will be classified as low birth weight and 1.4 percent as very low birth weight by 2020 (Healthy People, 2014). In 2010, an average of 8.1 percent and 1.4 percent of all live births in the U.S. were classified as low and very low birth weight respectively.

Both Baltimore City and Maryland have experienced modest improvements in reducing the percent of births that are low birth weight over the past several years, with an average annual change of 2% from 2007-2012. However, as with pre-term births, racial and ethnic disparities in low birth weight data are striking. In 2012, **the percentage of low birth weight births to black,**

non-Hispanic mothers was more than double the percentage of low birth weight births to white, non-Hispanic mothers. I*nfants born to Hispanic mothers represented the lowest percentage of low birth weight babies, at 4.5% in Baltimore City in 2012. The percentage of low birth weight babies born to Hispanic mothers in 2012 was lower in Baltimore City than for the overall state of Maryland. F*or black and white mothers, however, the percentage was greater than for the state overall.

TABLE 7: PERCENTAGE OF BIRTHS THAT WERE LOW BIRTH WEIGHT (<2,500 GRAMS), 2007-12 MARYLAND STATEWIDE AND BALTIMORE CITY, BY RACE/ETHNICITY OF MOTHER

	2007		2008		2009		2010		2011		2012		Avg. Annual Change (%)	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
Black	13.0	15.1	13.2	14.9	13.1	15.3	12.1	14.0	12.6	14.0	12.6	14.7	-0.5	-0.4
White	7.1	7.4	7.2	8.7	7.2	8.0	6.9	7.3	6.7	6.9	6.8	6.8	-0.8	-1.2
Hispanic	7.3	7.8	7.1	6.9	6.6	5.9	7.0	6.5	7.2	8.2	7.0	4.5	-0.7	-7.0
All	9.1	12.8	9.3	12.8	9.2	12.8	8.8	11.7	8.9	11.6	8.8	11.8	-0.6	-1.5

SOURCE: MARYLAND VITAL STATISTICS ADMINISTRATION, 2013

Similarly, the percentage of babies born at a very low birth weight (weighing less than 1500 grams at birth) has been declining since 2007 in Baltimore City and across Maryland. **The percentage of very low birth weight babies born to Black, non-Hispanic mothers is three times the percentage born to White, non-Hispanic mothers.** Baltimore City made progress in reducing the percent of very low birth weight babies born to black mothers. However, there was an increase in the percent of very low birth weight babies born to white mothers over this time period.

TABLE 8: PERCENTAGE OF BIRTHS THAT WERE VERY LOW BIRTH WEIGHT (<1,500 GRAMS) 2007-12 MARYLAND STATEWIDE & BALTIMORE CITY, BY RACE/ETHNICITY OF MOTHER

	2007		2008		2009		2010		2011		2012		Avg. Annual Change	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
Black	3.2	3.5	3.2	3.3	3.2	3.6	3.1	3.7	3.1	3.4	3.1	3.1	-0.6	-2.2
White	1.2	1.1	1.2	1.2	1.1	1.3	1.0	1.1	1.0	1.0	1.1	1.1	-1.5	0.6
Hispanic	1.3	1.0	1.4	0.9	1.3	N/A*	1.2	1.3	1.3	1.2	1.3	1.0	0.2	N/A
All	1.9	2.7	1.9	2.6	1.8	2.8	1.8	2.8	1.8	2.6	1.7	2.4	-2.2	-2.2

	2007		2008		2009		2010		2011		2012		Avg. Annual Change	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
**Percentages not available when there were <5 events in the numerator.*														

SOURCE: MARYLAND VITAL STATISTICS ADMINISTRATION, 2013

INFANT MORTALITY

Infant mortality – the death of an infant within the first year of life – is both an indicator for babies born healthy and its own, terrible outcome. The death of a child – at any age – is a devastating loss for the family and community. The CDC (2014) states that infant mortality is a significant public health issue that is "often used as an indicator to measure the health and well-being of a nation, because factors affecting the health of entire populations can also impact the mortality rate of infants" (para. 2).

> "Infant mortality is one of the most critical indicators of the overall health of a population."
>
> Maryland Department of Health and Mental Hygiene (DHMH), 2014

In the U.S., the infant mortality rate was 6.7 per 1,000 live births in 2006; by 2011, the rate decreased slightly to 6.1 (MacDorman, Hoyert, & Matthews, 2013). Healthy People 2020 has established a goal of no more than 6.0 infant deaths per 1,000 live births. Maryland made reducing infant mortality one of its 16 strategic goals, with a target of reducing infant mortality by 10 percent by 2017 (Maryland State, n.d.). **Baltimore City has made significant progress in decreasing infant mortality, bringing the rate from 13.5 in 2009 to 9.7 in 2012, registering an average annual decrease of 2.4 (see Table 9).** During that same time, Maryland reduced the rate from 7.2 to 6.3, with an average annual decrease of 2.4 percent. Although there was a 6.8% change in the average infant mortality rate in Baltimore City from the 2003-2007 time period to the 2008-2012 time period, the change was not statistically significant (DHMH, 2013b).

The decrease in infant mortality rate exhibited since 2009 in Baltimore City was primarily driven by improvements among the African American population. Between 2009 and 2012, the infant mortality rate decreased from 18.5 percent to 12.7 percent, representing a drop of 31.3 percent. The White population exhibited a sharp increase in Baltimore City between 2007 and 2008 with the infant mortality rate jumping from 1.8 percent to 7.3. However, the infant mortality rate has since stabilized, ranging between approximately 3 and 4 percent since 2009.

TABLE 9: RATE OF INFANT MORTALITY (DEATH OCCURRING TO A PERSON <1 YEAR OF AGE) PER 1,000 LIVE BIRTHS, 2007-12
MARYLAND STATEWIDE AND BALTIMORE CITY, BY RACE/ETHNICITY†

	2007		2008		2009		2010		2011		2012		Avg. Annual Change	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
Black	14.0	15.5	13.4	14.3	13.6	18.5	12.0	14.8	12.2	14.6	10.4	12.7	-5.5	-2.5
White	4.6	1.8	5.2	7.3	4.1	3.5	4.2	4.0	4.3	4.0	3.8	3.3	-3.0	50.1
Hispanic	3.8	N/A *	3.2	N/A *	3.1	N/A *	4.1	N/A *	3.0	N/A *	5.5	N/A *	14.0	N/A
All	8.0	11.3	8.0	12.1	7.2	13.5	6.7	11.0	6.7	10.5	6.3	9.7	-4.6	-2.4

**Figures not available when there were <5 events in the numerator; †Infant deaths based on race of decent; live births based on race of mother*

SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

RISK AND PROTECTIVE FACTORS ASSOCIATED WITH *BABIES BORN HEALTHY*

The National Center for Health Statistics has identified the five leading causes of infant mortality, which together account for over 57 percent of all deaths of infants across the nation: serious birth defect; preterm birth and birth before 37 weeks gestation; Sudden Infant Death Syndrome (SIDS); maternal complications of pregnancy; and, victims of injuries (e.g. suffocation). In Maryland in 2012, the five leading causes of infant death accounting for over 67 percent of infant deaths were disorders related to short gestation and unspecified low birth weight (27.7 percent); congenital abnormalities (15.3 percent); SIDS (10.3 percent); maternal complications of pregnancy (e.g., premature rupture of membranes & cervical incompetence; 7.2 percent); and complications of the placenta, cord and membranes (5.2 percent) (DHMH, 2013b). **The majority of the causes of adverse birth outcomes and infant mortality are related to the health of the mother and baby prior to and during pregnancy and delivery, which is the focus of the discussion of risk and protective factors.**

MATERNAL HEALTH AND WELLBEING

Maternal health affects pregnancy outcomes through multiple mechanisms, with socioeconomic and biological factors playing prominent roles in the relationship (Abu-Saad & Fraser, 2010). A healthy pregnancy requires **sufficient nutritional intake** to support the development of the fetus and prepare the mother for a safe delivery (Abu-Saad & Fraser, 2010). For example, being extremely under or over weight increases the risk of poor birth outcomes (Nagahawatte & Goldenberg, 2008). Furthermore, **managing chronic physical health conditions,** such as asthma, is also critical to the health of the mother and fetus: "Uncontrolled asthma can cause serious complications…including high blood pressure, toxemia, premature delivery…for the baby, complications of uncontrolled asthma include increased risk of stillbirth, fetal growth retardation, premature birth, low birth weight and a low APGAR score at birth" (American College of Asthma, Allergy, and Immunology, 2010, n.p.).

Behavioral health is an essential component of overall health. Mental health disorders, such as depression, mood disorders, and anxiety, can impact birth outcomes and increase the risk of pregnancy complications. A study assessing the effects of major depression during pregnancy found that "the risk of poor outcomes rose by 5-7 percent for each point increase in [the Beck Depression Inventory] scale" (Gold & Marcus, 2008, p. 393). Exacerbating the risks, mothers who suffer from certain mental illnesses (e.g. bipolar disorder, schizophrenia, post-traumatic stress disorder) are more likely to partake in risky behaviors during pregnancy, such as substance abuse and neglect of prenatal care (Gold & Marcus, 2008).

Furthermore, there is widespread consensus that **substance use and abuse** during pregnancy correlates with poor birth outcomes. Smoking has been recognized as one of the most preventable behavioral risk factors in improving birth outcomes (Cnattingius, 2004). Most studies have consistently associated tobacco use with the following adverse pregnancy outcomes: preterm birth, stillbirth, and perinatal and neonatal mortality (Cnattingius, 2004). The use and abuse of substances (e.g. alcohol, tobacco, and illicit drugs) during pregnancy restricts the development of the fetus which can lead to persisting consequences on a child's life: "Recent studies document a negative effect of prenatal exposure [of nicotine] on infant

neurobehavior as well as on long-term behavior, cognition, language and achievement" (Behnke & Smith, 2014, p.1016). Some long term adverse effects that have been documented are cognitive deficiencies and lower academic achievement (Behnke & Smith, 2014).

A pivotal component of ensuring sufficient health for the mother and the fetus during pregnancy is **prenatal care**. Prenatal care is a cost-effective preventive care service, guiding mothers during pregnancies and monitoring the health conditions of the mother and child. Vintzileos, Avanth, Smullian, Scorza, and Knuppel (2002)conducted a large cohort study and found that prenatal care was associated with fewer neonatal deaths. This association was stronger for births that occurred at a gestational age of at least 36 weeks and in the presence of high-risk conditions.

Unfortunately, the racial and ethnic disparities with regard to poor birth outcomes and infant mortality cannot be explained by receipt of prenatal care:

> At least in one major area there is now a strong scientific consensus: Differences in prenatal care are unlikely to explain racial disparities in prematurity and low birth weight. Black/white disparities in receipt of prenatal care have narrowed markedly over time, particularly with major expansions of Medicaid maternity care coverage beginning around 1990, without concomitant narrowing of birth-outcome disparities. (Braveman, 2013, n.p.)

Although the associations between maternal health and pregnancy outcomes are well-known, researchers have difficulties directly measuring the strength of the relationship between specific health elements and birth outcomes. Experiments have been inconsistent due to the effects of interacting factors and many findings are derived from cohort studies due to ethical issues presented by clinical studies (Abu-Saad & Fraser, 2010).

AGE

Pregnancy is inherently associated with risks; however, giving birth within certain age ranges is associated with higher risk levels. Specifically, relative to other reproductive age cohorts, the **risk for pregnancy complications is higher for adolescent and advanced aged mothers (45+)** (Carolan, 2012; Chen, Wen, Fleming, Demissie, Rhoads, & Walker, 2007; Healthy Teen Network, 2010).

Baltimore City has seen a downward trend in teenage pregnancies. In 2012, there were 46.9 teenage births per 1,000 female teenage residents (age 15 -19). Just ten years prior, in 2002, Baltimore City reported 80.1 teenage births per 1,000 teenage girls (DHMH, 2002; DHMH, 2012a). Even with this downward trend, rates remain high and prevention of teenage pregnancies continues to be a priority in campaigns to improve pregnancy outcomes (Solano, McDuffie, & Powell, 2007).

Teen pregnancies are more likely to result in poor pregnancy outcomes. A retrospective cohort study conducted by the OMNI Research Group examined nearly 4 million births by women less than 25 years of age between 1995 and 2000 in an attempt to isolate the effects of teenage pregnancy on birth outcomes from common external factors (i.e. biological, social, and environmental factors). **The study concluded that teenage pregnancy is associated with a higher**

risk of preterm birth, low birth weight, and infant mortality, with the youngest age groups posing the greatest risks (Chen et al., 2007).

The *Strategic Plan to Reduce Teen Births in Baltimore City* (Healthy Teen Network, 2010) observed that "poverty is both a risk factor for and a consequence of teen births" and that risk and protective factors exist at the individual, family, neighborhood, and community levels; repeat births to teen mothers (16 percent of all births to youth in Baltimore) are of particular concern. Kirby (2007) identifies the following risk and protective factors associated with teen pregnancy:

> Results of some 450 studies demonstrate that risk and protective factors are both very numerous and extremely diverse. They stem from a teen's biological makeup… home and community environments (especially the sexual values expressed and modeled by the home and community and the disadvantage or disorganization of the home and community), the teen's friends and peers… the teen's romantic partners, and the teen's own sexual values and attitudes. They also include connection to family, school, and other groups or institutions that discourage risky sexual behavior, encourage responsible behavior, or both. (p. 13-14)

Teens are also more likely to participate in behaviors risky to fetuses, such as smoking and underutilization of prenatal care. A longitudinal study that assessed the nutritional intake of 156 pregnant teens (aged 18 or younger) revealed insights on poor dietary intake of teenage mothers. Within their surveyed population, at least 74 percent did not meet the requirements for vitamin D, vitamin E, Magnesium, Iron, and Calcium (Lee et al., 2014).

Pregnancy at advanced ages (45+) has also been linked to poor birth outcomes. Although affecting only a small share of births, this subset of pregnancies have been growing in recent years as technological advances offer more options for later pregnancies (Carolan, 2012). In 2000, there were 107 births to women over age 45 in Maryland; 5% of those births were in Baltimore City (DHMH, 2000). By 2011, there were 196 such births, but Baltimore City continued to represent a small percentage of them (6%) of those births (DHMH, 2000; DHMH, 2012). A review of literature addressing outcomes for later pregnancies have provided support that advanced aged pregnancies were associated with increased risks for infant mortality, low birth weight, pre-term birth and still birth (Carolan, 2012). Furthermore, expecting mothers in this age group were also more likely to develop chronic illnesses during pregnancies, such as diabetes and high blood pressure. However, the study does acknowledge the limited number of studies that have been conducted for this population (Carolan, 2012).

SOCIOECONOMIC BACKGROUND

Many health conditions are associated with socioeconomic status, with individuals in the lower economic stratum experiencing greater propensities for poor pregnancy outcomes. Blumenshine, Egerter, Barclay, Cubbin, & Braveman (2001) reviewed recent articles published between 1999 and 2007 to evaluate the associations between poor birth outcomes and socioeconomic factors. They specifically looked for associations with the following

socioeconomic factors: "personal or household income, educational attainment, occupational class, assets/wealth, or a related measure such as percentage of the federal poverty level" (p. 264). Of the 106 studies reviewed, 93 found a significant association between at least one socioeconomic factor and a birth outcome. The most frequently cited socioeconomic measures were occupation, income, and education (Blumenshine et al., 2010).

Socioeconomic measures can potentially influence pregnancy outcomes through multiple avenues. Some examples include housing instability and health services utilization:

- Housing Instability - Being homeless is associated with factors that magnify pregnancy risks. Pregnant women characterized by housing instability tend to be vulnerable to inadequate health care, poor nutrition, and violent environments (Costa, 2012). A retrospective cohort study conducted in an inner city hospital located in Toronto revealed that preterm birth rates increased significantly for homeless mothers. Compared to women with stable housing, the preterm birth rate for homeless women were 13.1 percentage points higher at 19.4 percent (Little, Shah, Vermeulen, Gorman, Dzendoletas, & Ray, 2005). In Baltimore City, about 4 percent of pregnant women reported an incidence of homelessness within 12 months prior to delivery (Costa, 2012).

- Health Services Utilization - Relative to their wealthier counterparts, low income women tend to access fewer health care services. The disparity in utilization can partially be explained by affordability and access to quality health care. Dubay, Joyce, Kaestner, & Kenney (2001) attempt to measure the effects of expanding coverage to uninsured women on pregnancy outcomes, specifically through the 1986 Medicaid expansion. Their study compared the pregnancy outcomes of two time periods: 1980-86 (pre-expansion) and 1986-93 (post-expansion) (p. 375). The study presented evidence suggesting that expanding insurance coverage resulted in reductions in delayed prenatal care and improvements in rates of low birth weight. Findings demonstrated that delayed prenatal care decreased by 6.0 percentage points, while rate of low birth weight declined by 0.26 percentage points (pp. 392-396).

Neighborhood context can also perpetuate the adverse impacts of individual-level socioeconomic components. Residents of high-poverty areas are isolated from social capital and exposed to unfavorable environmental conditions, magnifying the barriers faced by the low-income population (US Department of Housing and Urban Development, 2011).

Socioeconomic factors pervade other risk factors that negatively impact birth outcomes. Therefore, addressing issues related to poverty is often cited in recommendations to mitigate adverse birth outcomes for all populations, as well as for populations at greater risk, such as black, non-Hispanic mothers:

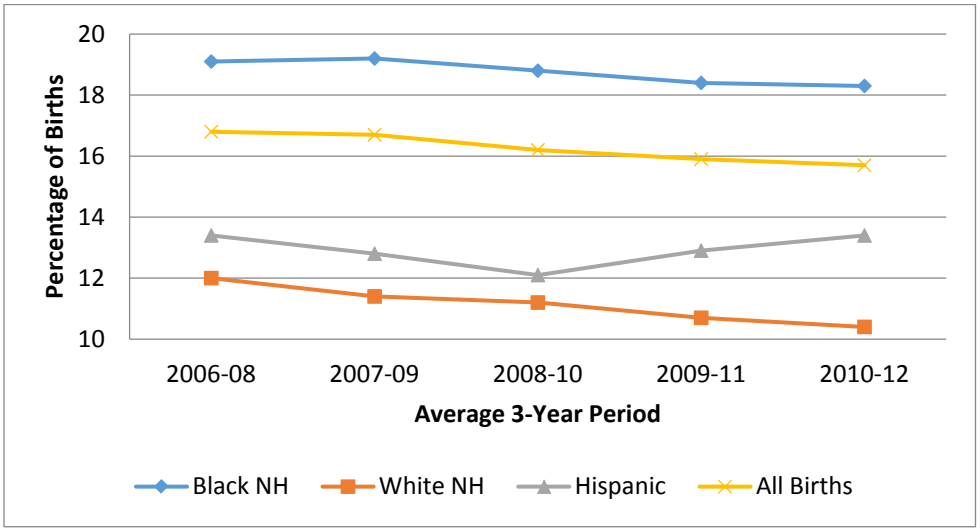
> Among the biologically plausible hypotheses [regarding the mechanisms that explain prematurity and low birth weight and the racial disparities in them] are a major role for stress and adversity experienced throughout life, not only during pregnancy, which would mean that intervening during pregnancy may be too little and too late. Unmeasured

> experiences in early childhood and across a woman's life before conception could be important sources of stress that could explain racial disparities…It makes scientific sense to focus on social advantage and disadvantage—including not only socioeconomic factors but also potentially subtle, chronically stressful experiences related to our legacy of racial discrimination—as plausible contributors to black/white disparities in birth outcomes. (Braveman, 2013, n.p.)

For *babies born healthy,* impacting low birth weight and preterm births have great potential to impact the infant mortality rate as well as the outcome as a whole.

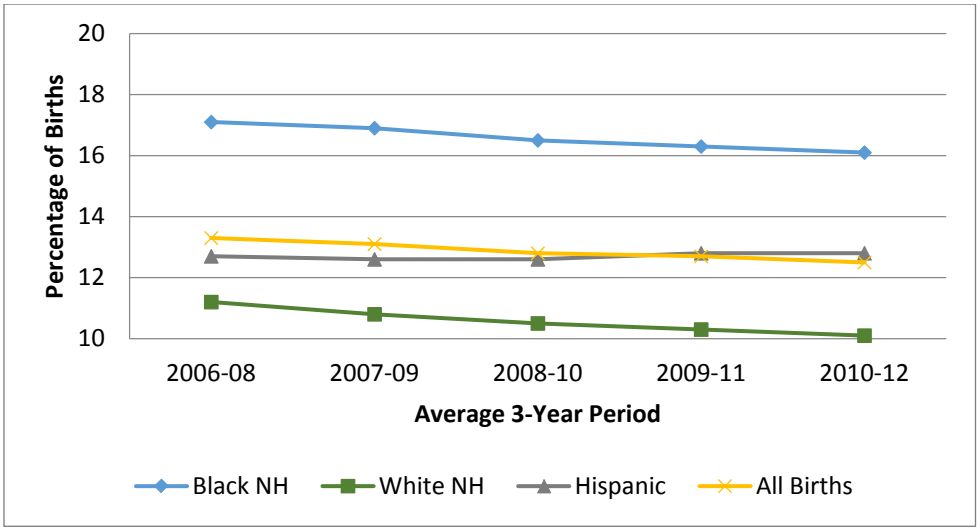
PRE-TERM BIRTHS

FIGURE 2: BALTIMORE CITY PRE-TERM BIRTH RATES BY RACE/ETHNICITY, 2006-2012



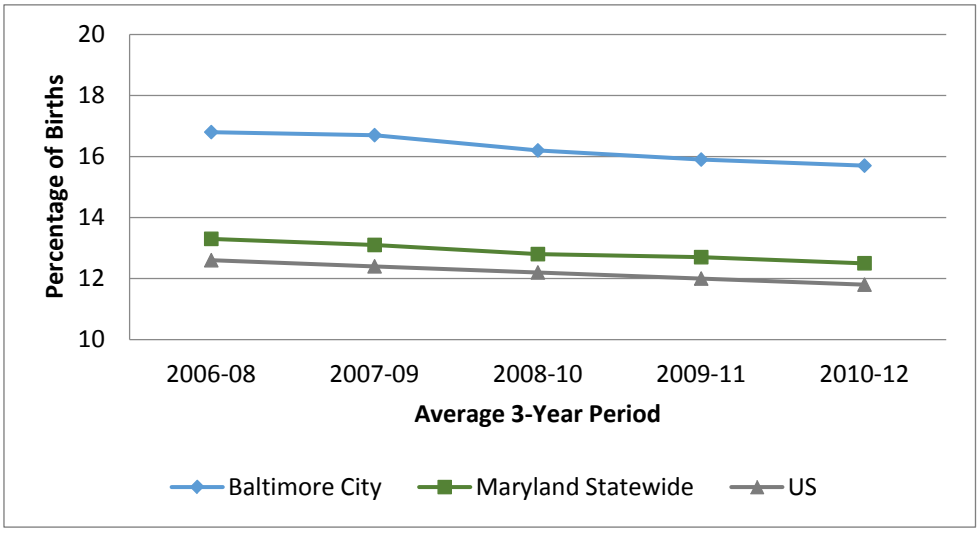
SOURCE: MARCH OF DIMES, PERISTATS

FIGURE 3: MARYLAND STATEWIDE PRE-TERM BIRTH RATES BY RACE/ETHNICITY, 2006-2012



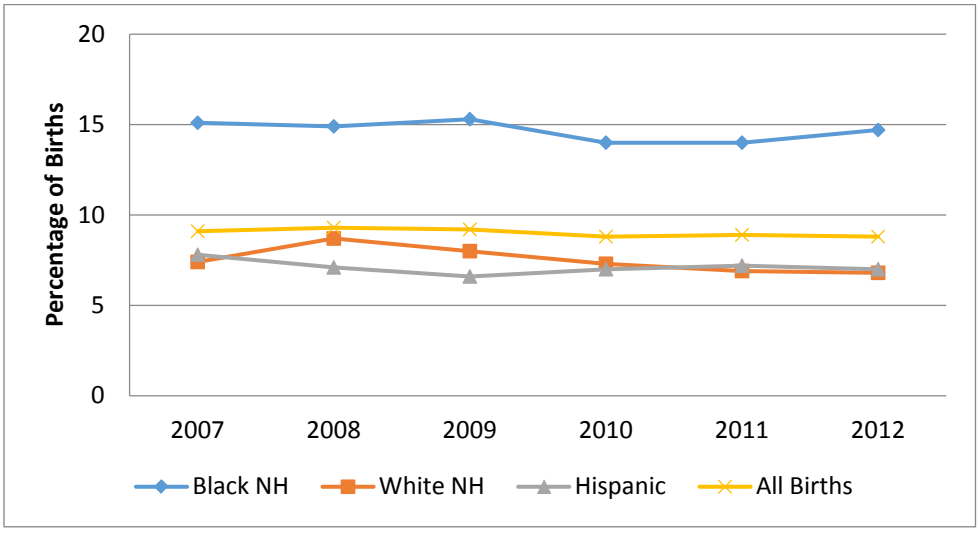
SOURCE: MARCH OF DIMES, PERISTATS

FIGURE 4: GEOGRAPHICAL COMPARISON OF PRE-TERM BIRTH RATES, BALTIMORE CITY, MARYLAND, AND U.S., 2006-2012



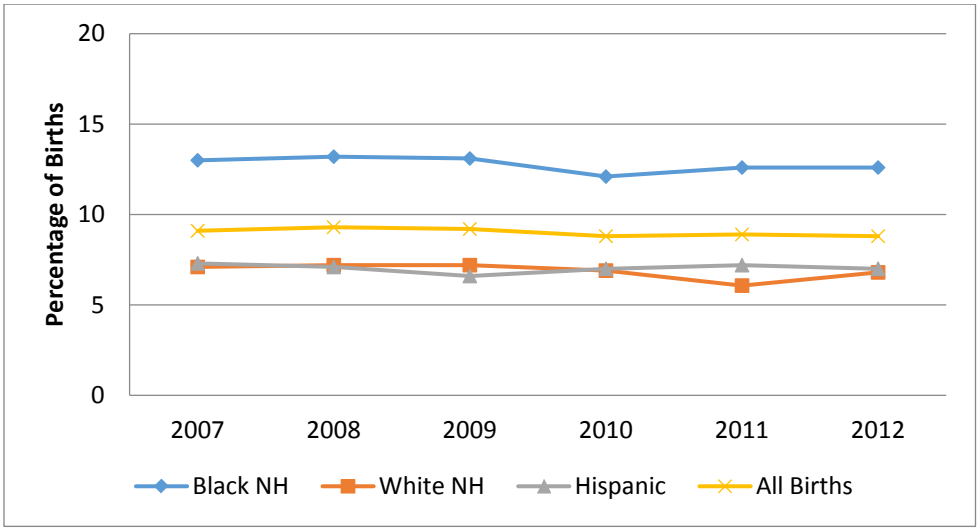
SOURCE: MARCH OF DIMES, PERISTATS

FIGURE 5: BALTIMORE CITY LOW BIRTH WEIGHT RATES BY RACE/ETHNICITY OF MOTHERS, 2007-2012



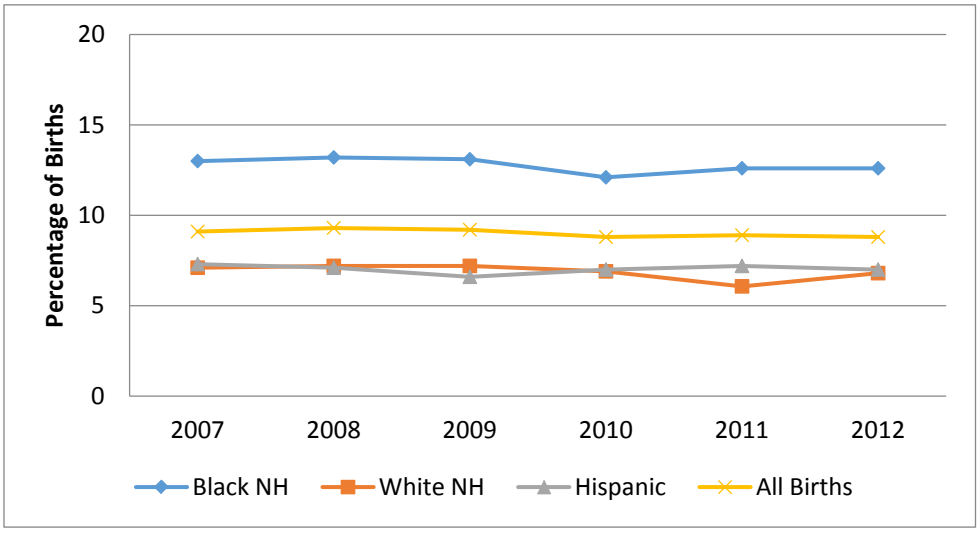
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 6: MARYLAND LOW BIRTH WEIGHT RATES BY RACE/ETHNCITY OF MOTHERS, 2007-2012



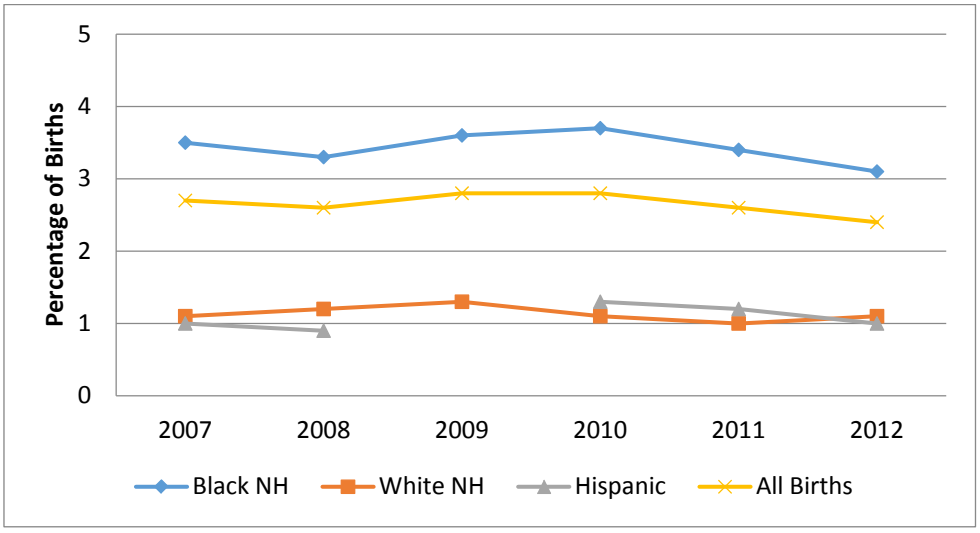
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 7: GEOGRAPHIC COMPARISON OF LOW BIRTH WEIGHT RATES, BALTIMORE CITY, MARYLAND, AND US, 2007-2012



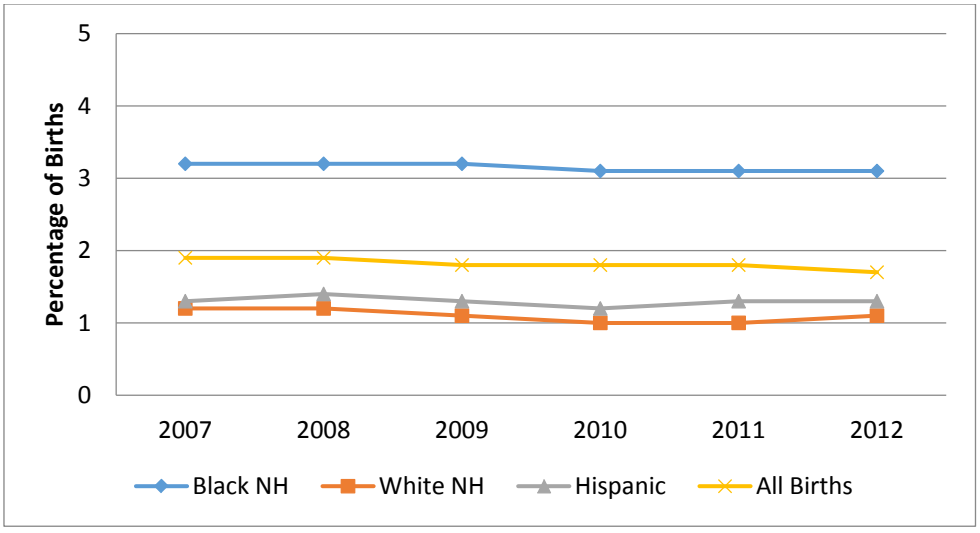
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 8: BALTIMORE CITY VERY LOW BIRTH WEIGHT RATES BY RACE/ETHNICITY OF MOTHERS, 2007-2012



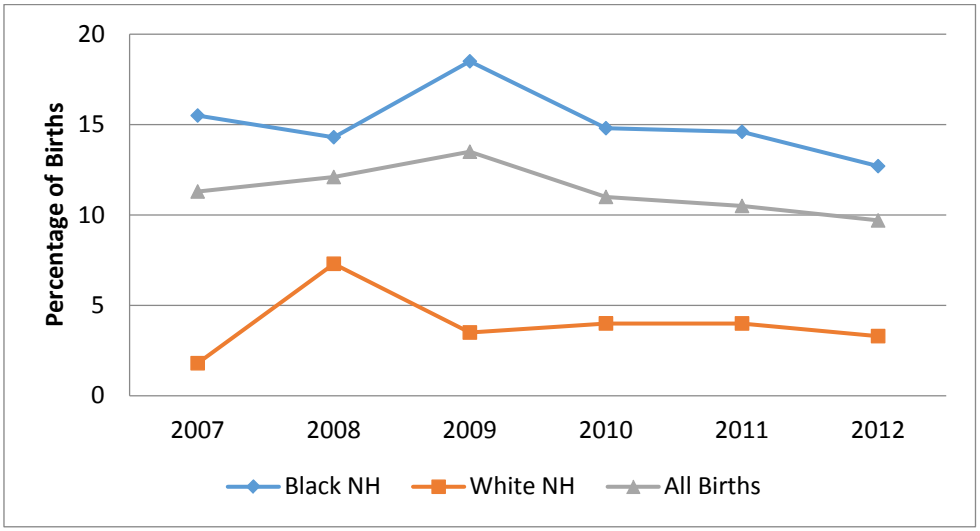
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 9: MARYLAND VERY LOW BIRTH WEIGHT RATES BY RACE/ETHNICITY OF MOTHERS, 2007-2012



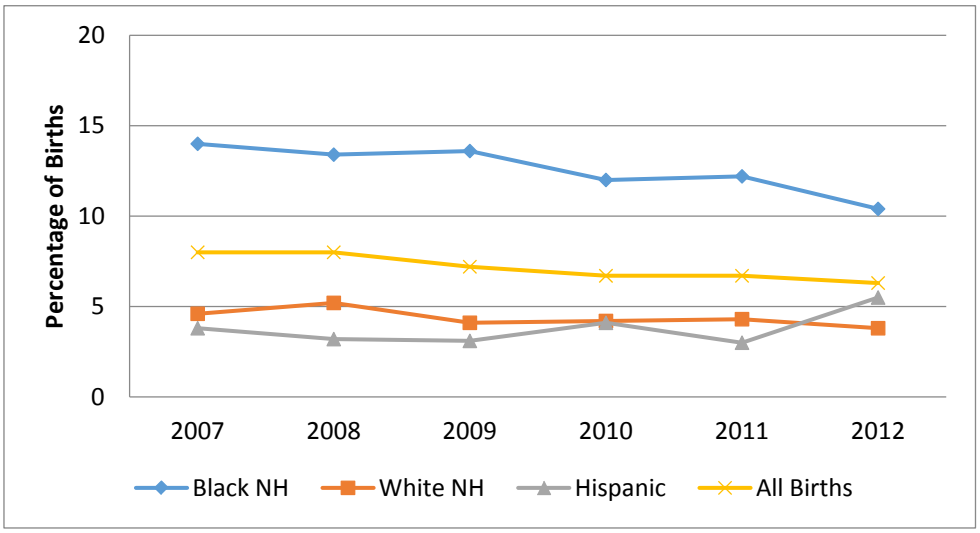
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 10: BALTIMORE CITY INFANT MORTALITY RATES BY RACE/ETHNICITY OF MOTHERS, 2007-2012



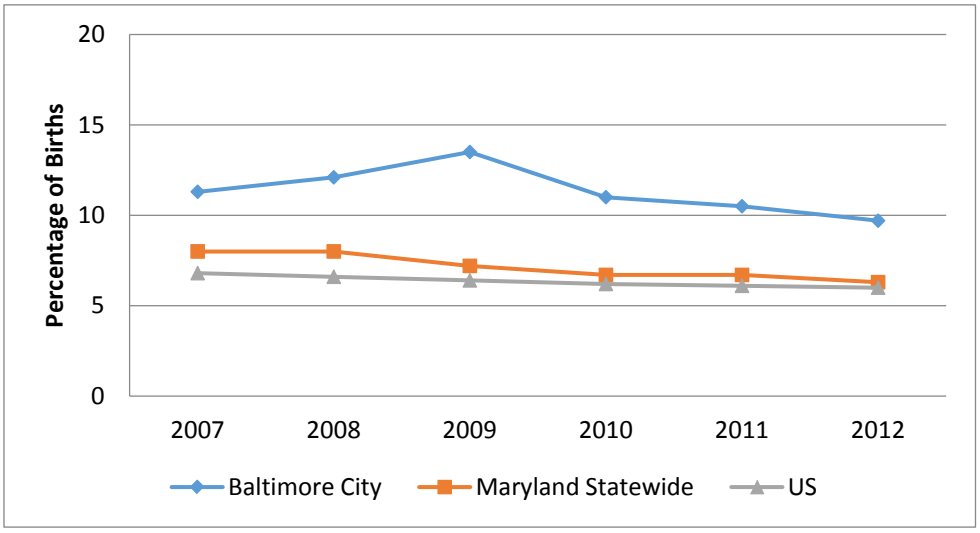
SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 11: MARYLAND INFANT MORTALITY RATES BY RACE/ETHNICITY OF MOTHERS, 2007-2012



SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

FIGURE 12: GEOGRAPHIC COMPARISON OF INFANT MORTALITY RATES, BALTIMORE CITY, MARYLAND, AND U.S., 2007-2012



SOURCE: MARYLAND STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE

DEFINING "CHILDREN ENTER KINDERGARTEN READY TO LEARN AND SUCCEED"

Early childhood is a time of remarkable and rapid transformation: from the time of conception to the first day of kindergarten, a child's developmental pace exceeds that of any subsequent stage of life (National Research Council, 2000). It is essential to capitalize on this time of absorptive development by ensuring a secure foundation for building a healthy and successful future. Children who are ready for school are twice as likely to complete middle school with strong academic and social skills (Grannis & Sawhill, 2013). This trend is evident in Baltimore City, where a longitudinal study demonstrated that students who entered school ready to learn in kindergarten continued to achieve well into 6th grade compared to their counterparts who continued to lag behind in math (Baltimore City Public Schools, 2014c).

School readiness is far more complicated than a child's chronological age. While children generally enter kindergarten at age five, there are a number of competing, often quite nuanced, factors that contribute to a child's success. In general, **readiness typically has been defined as a child's skills, behaviors, or attributes in relation to the expectations of individual classrooms or schools**. However, "although researchers, educators, parents, and policymakers agree that a child's future academic success is dependent on being ready to learn and participate in a successful kindergarten experience, the exact definition of readiness depends on who is doing the defining" (Ackerman & Barnett, 2005, p.2).

Over the past decade, kindergarten teachers' views on school readiness have shifted from academics (such as knowing the letters of the alphabet or shapes and colors) to nonacademic skills (such as having good social skills and self-regulation). The Early Childhood Longitudinal Study-Kindergarten (ECLS-K) study found that teachers rated many nonacademic skills, including not being disruptive, as essential as and more important than traditional academic skills (Lin, 2003).

> The Maryland Model for School Readiness defines school readiness as "**the state of early development that enables an individual child to engage in and benefit from early learning experiences.** As a result of family nurturing and interactions with others, a young child in this stage has reached certain levels of social and emotional development, cognition and general knowledge, language development, and physical well-being and motor development. School readiness acknowledges individual approaches toward learning as well as the unique experiences and backgrounds of each child."
>
> *Maryland State Department of Education, 2009 (p.8)*

For the purpose of assessing Baltimore City's progress to-date, the outcome of children entering kindergarten ready to learn and succeed should be defined by:

Maryland Model for School Readiness (MMSR) Work Sampling System (WSS) School Readiness: Percent of kindergarten students who are identified as fully ready for kindergarten according to the Maryland Model for School Readiness Work Sampling System.

Beginning with the 2014-2015 school year, the outcome should be measured by the **percent of children identified as ready for kindergarten** according to the Ready for Kindergarten (R4K) Assessment.

MARYLAND MODEL FOR SCHOOL READINESS

From 2001-2013, the Maryland Model for School Readiness (MMSR) was used as the standardized assessment of school readiness across all 24 local school districts in Maryland. The MMSR framework defined standards and assessments of learning expectations for young children and guided educators and parents to fully support the development of the child during these critical years (Maryland State Department of Education, 2014k). As part of the MMSR, the Work Sampling System (WSS) was administered to children in the fall of kindergarten. The WSS includes measures in seven developmental domains:

- Social and Personal Development
- Language and Literacy
- Mathematical Thinking
- Scientific Thinking
- Social Studies
- The Arts
- Physical Development and Health

Based on the WSS, students are identified as:

- *Fully Ready*: The student consistently demonstrates the skills, behaviors, and abilities needed to meet kindergarten expectations.
- *Approaching Readiness*: The student inconsistently demonstrates the skills, behaviors, and abilities needed to meet kindergarten expectations successfully, and requires targeted instructional support in specific areas.
- *Developing Readiness*: The student does not demonstrate the skills, behaviors, and abilities needed to meet kindergarten expectations successfully, and requires considerable instructional support in seven areas.

During the 2013-2014 school year, teachers rated 76 percent of students in Baltimore City as fully ready to learn. This is slightly below the statewide average of 83 percent. For both the state and the city, teachers rated students the highest in Physical Development and the lowest in Science. For all seven developmental domains, Baltimore City students were below the statewide average with pronounced city-state gaps in Science (-10 percentage points) and Social Studies (-11 percentage points).

Among the racial/ethnic groups, smaller proportion of Hispanic students met fully ready standards in Baltimore City (69 percent) and Maryland (73 percent). Hispanic students appeared to face the most difficulties in Science and Language & Literacy. The highest performing racial/ethnic groups in Baltimore City and Maryland were Native Hawaiian/Pacific Islander and White, respectively. In Baltimore City, approximately the same percentage of white and Black/African American students was identified as fully ready: 76 percent and 77 percent respectively. This contradicts the statewide trend where 88 percent of White kindergarten students were identified as fully ready, while only 80 percent of African American students were fully ready.

TABLE 10: PERCENTAGE OF KINDERGARTENERS RATED AS "FULLY READY" BY RACE/ETHNICITY IN MARYLAND AND BALTIMORE CITY, SY 2013 - 2014

	Social & Personal		Language & Literacy		Math		Science		Social Studies		Arts		Physical Develop.		Composite	
	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC	MD	BC
American Indian/Alaskan Native	82	72	71	78	72	78	69	67	77	61	85	83	88	83	82	78
Asian/Pacific Islander	84	80	80	73	84	76	76	59	79	63	85	75	89	88	86	45
Black/African American	76	75	72	70	73	71	68	63	74	67	84	81	88	88	80	77
Native Hawaiian/ Pacific Islander	83	94	79	75	78	81	75	69	81	81	86	88	90	100	87	94
White	84	76	79	71	83	72	80	65	84	67	87	78	91	87	88	76
Hispanic	77	73	60	57	64	59	60	48	65	53	81	74	88	86	73	69
Two or More Races (Non-Hispanic/Latino)	80	89	75	72	78	74	74	70	79	70	84	81	89	83	84	76

Aggregated Data	80	75	73	69	76	71	72	62	77	66	85	80	89	88	83	76

SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, GETTING READY

For the past five years, school readiness in Baltimore City have been on an upward trend. Between SY 2009-2010 and SY 2013-2014, the percentage of kindergarten students in Baltimore City deemed fully ready by teachers increased by 12 percentage points from 64 percent to 76 percent. Although Baltimore City continues to perform below state levels, the gap has been decreasing over time. During SY 2013-2014, the city-state gap was only -7 percentage points, compared to -14 percentage points in SY 2009-2010.

Both the White and Black/African American population groups have exhibited steady increases in school readiness over the past five years. The percentage of White students demonstrating full readiness in Baltimore City have consistently been below statewide averages. Although improvements have been made in recent years, the city-state gap among the White population continues to be in the double digits at -12 percentage points in SY 2013-2014. School readiness for the Black/African American population has remained close to 80 percent for the past couple of years for both the state and Baltimore City. The Black/African American population in Baltimore has consistely performed slightly better than the statewide average; however, the gap has been closing.

READY FOR KINDERGARTEN (R4K)

The 2014-2015 school year marks the launch of R4K, a comprehensive new assessment system for early childhood education. Building upon the successes of the MMSR, the Maryland State Department of Education and the Ohio Department of Education developed this new assessment system to advance the continuous improvement of early care and education programs and help early childhood educators improve learning opportunities for young children (Ready at Five, 2014). R4K aligns with Maryland's new standards for K-12 education based on the Common Core Standards (CCS) and it provides an opportunity to measure the needs and progress of children from ages 36-72 months (3-6 years of age). R4K uses the following seven domains, which were based upon the MMSR domains:

- Social Foundations
- Language and Literacy
- Mathematics
- Science
- Social Studies
- The Arts
- Physical Well-Being and Motor Development

R4K has two components, the first of which is an early learning assessment that measures progress of learning across five levels of learning advancements in the seven domains. The Kindergarten Assessment will be administered to all incoming kindergarteners between the first day of school and the end of October, providing a snapshot of school readiness levels while also identifying individual needs of children (Ready at Five, 2014).

The score cut-off for "school readiness" based on the Kindergarten Assessment has not been defined by the Maryland State Department of Education (which is working with the Ohio Department of Education on its development and implementation). However, once established, it will be used to track the progress of children in Maryland.

RISK AND PROTECTIVE FACTORS ASSOCIATED WITH *CHILDREN ENTERING SCHOOL READY TO LEARN* (SCHOOL READINESS)

Children who enter kindergarten with low levels of school readiness are at greater risk for progressively falling behind in the ensuing academic years, an impact which can last all the way through secondary school. Early educational experiences are the building blocks for children's long term academic achievement and lifetime success. Measuring school readiness is challenging because it is multidimensional and involves the interaction among a set of experiences, circumstances, and relationships. There are many interrelated factors that can contribute to a child's ability to enter school ready to learn, making it difficult to isolate the effects of a singular factor. Nevertheless, "we cannot expect children to learn if they come to school hungry or poorly nourished, if they are ill, if they have poor or no health care, and if they do not have the support of families and communities" (NCREL, 1995, para. 2).

PARENTS & FAMILIES

A child needs to live in a safe, stable, and nurturing environment in order to develop and successfully adapt to school. Primary caregivers play a critical role in this process as they mediate the child's initial introduction to novel environments, situations, and relationships. Among the most powerful protective factors influencing the positive adjustment of young children is the quality of attachment to their primary caregivers (Bowlby, 1969; Lieberman, Padron, Van Horn, & Harris, 2005; Pawl, 1995; Steele & Steele, 2005). A consistent and responsive caregiver serves as a source of emotional regulation for a child under stress. This leads to the development of internal self-regulatory capacities and the development of an efficient stress response system in the child (Schuder and Lyons-Ruth, 2004). A child possessing strong self-regulation skills has greater ability to follow teacher's directions, express positive social behavior among peers, and communicate verbally with adults (Blair, 2003). These are behaviors that are primarily developed and nourished by the adult presence in a child's life. A young child "translates cues from adults," which helps the child to "regulate thoughts, emotions, and behaviors" (Florez, 2011).

Young children who are securely attached to their parent(s) have been found to show less intense stress responses when faced with threats compared to children whose attachment was insecure (Malekpour, 2007). Insecure, and in particular a disorganized pattern of attachment is commonly found in children who have been physically and psychologically abused and neglected (Lyons-Ruth, 2006).

Child-caregiver interactions are vital to the cognitive development of a child. A review of 11 studies on the effects of family behaviors and interactions on child readiness for school concluded that, "what families do with their children is strongly associated with child readiness" (Boethel, 2004, p. 29). In particular, the study highlights the use of cognitive stimulation strategies (e.g. reading to a child) and positive parent practices (e.g. sensitivity to a child's emotional outburst) as being closely associated with school readiness (Boethel, 2004).

The socioeconomic situation of the family, as discussed further below, also has significant implications. In a landmark study, Hart & Risley (2004) found that children living in impoverished households heard less than one-third of the words heard by children from higher income families, which translates to an estimated 30 million fewer words by age four. Additionally, the children from lower income families heard 125,000 more words of discouragement than encouragement; children from higher income families heard 560,000 more words of praise as opposed to discouragement, establishing a gap in vocabulary growth and language development from an early age (Orr, 2012).

NORMATIVE CHILD DEVELOPMENT

All children develop at different rates, but children who are ready for school have reached certain levels of social emotional, language, cognitive, and fine and gross motor development. Developmental delays in one or more domains can prevent a child from entering school ready to learn. Developmental delays are also relatively common in early childhood, affecting between 10 and 18 percent of children (Boyle, Decoufle, Yergin-Allsopp, 1994; Glascoe, 2000). Research has demonstrated that life outcomes can be positively enhanced by early identification of developmental concerns coupled with the appropriate interventions (Barnett & Belfield, 2006).

Early detection and treatment of developmental delays not only leads to improved outcomes for children individually, but also reduces costs to society. In particular, early intervention has been shown to be effective in improving outcomes for children who are at increased risk for developmental delays or later academic underachievement, based on socioeconomic, medical, or other risk factors (Berlin, Brooks-Gunn, & McCarton, 1998; Center on the Developing Child, 2010; Guralnick & Bricker, 1987; see http://www.nectac.org/~pdfs/pubs/importanceofearlyintervention.pdf for additional information).

Fortunately, there are many well-proven early intervention strategies that can either lessen or eliminate delays. The plastic nature of the developing brain and the influence of early experiences make early childhood an optimal time for intervention (National Research Council, 2000; Shonkoff, 2003). In order to benefit from early interventions, however, children with developmental delays must be identified and referred at a young age.

Attendance at early childhood care and education programming presents an opportunity to identify students who may be suffering from developmental disabilities. Preschool programs in Maryland offer screening services for developmental delays and disabilities that can identify a child's difficulties and needs. Early diagnosis of developmental delays in a child can better inform the responses of parents and other stakeholders and mitigate unfavorable consequences

PARTICIPATION IN EARLY CHILDHOOD CARE AND EDUCATION

About 75 percent of four year old children are enrolled in early childhood education programs (Barnett, 2008). As early childhood care and education plays an increasing role in child development, researchers have attempted to measure the short-term and long-term outcomes of various early care and education interventions. However, the implementation of preschool programs greatly varies, impeding the estimation and generalizability of program

Extensive data are available from the Maryland Family Network and the Maryland Child Care Resource Network on child care demographics in Baltimore City in 2014. Among the data featured in this profile are information on the supply of regulated early childhood programs and education, the costs of various child care programs compared with incomes, and population information. See http://mdchildcare.org/mdcfc/pdfs/demographics/2014%20Demographics/BaltCity.pdf

impacts. Furthermore, selection bias presents challenges for researchers as participants and non-participants tend to systematically differ in both observable and non-observable characteristics (Gormely Jr. & Phillips , 2005). Studies have found positive child outcomes associated with early childhood care, with disadvantaged youth experiencing greater benefits (Votruba-Drzal, Coley, Maldonado-Carreño, Li-Grining & Chase-Lansdale, 2010).

Earlier randomized experiments conducted in the 1960s and 1970s, such as the Abecedarian Project and the High Scope/Perry Preschool Project, have allowed researchers to measure the extent of the effects of early childhood interventions. Longitudinal follow-ups for both projects demonstrated that, on average, students in the treatment groups registered higher grades, scored higher on standardized assessments, and completed more years of schooling. Other long-term effects include lower incidences of teenage pregnancies and higher earnings (Boethel, 2004).

Recently, multiple studies have been conducted to measure the impact of Head Start, a federal program intended to promote school readiness among low income youths initiated in 1965 (Center for Mental Health in Schools, 2008). A randomized study evaluating the short-term effects of Head Start conducted by Abbot-Shim, Lambert, and McCarty (2003) found participants demonstrated advantages in literacy and health outcomes. In a quasi-experimental research study of Head Start in Tulsa, Oklahoma, researchers observed positive effects pertaining to mathematics and literacy. Evidence from multiple studies have exhibited support for the short-term benefits of participating in Head Start; however, studies have also suggested that learning gains experienced from Head Start diminished over time (US Department of Health and Human Services, 2012).

It is important to note that outcomes deduced from any preschool program are highly dependent on the program quality. Research has identified that programs with "well-educated, adequately paid teachers, small classes (no more than 20 children), and reasonable staff-child ratios (less than 1:10) have repeatedly produced short- and long-term educational gains" (Barnett, 2008, p. 19). Design and implementation of early childhood care and education programs need to be considered when evaluating the size of the program effects. Even so, there is an array of early childhood programs in real-world settings with positive effects on children's cognitive and behavioral outcomes (Camilli, Vargas, Ryan, & Barnett, 2010; Barnett, 2011).

In a study of young children in low-income neighborhoods, researchers found that higher quality child care protected against behavior problems in middle childhood and that the reverse was true as well: children attending lower quality child care showed more elevated behavior problems than their peers by mid-elementary school (Votruba-Drzal et al., 2010).

In 2013-2014, 15.4 percent of kindergartners in Baltimore City had not attended any formal child care, nursery, pre-K or family day care program in the year prior to kindergarten. In 2013-2014, kindergarteners who had attended the public pre-K programs the year prior to entering kindergarten were more likely to be fully school-ready than the average kindergartener in Baltimore City (81 percent versus 76 percent) (Maryland State Department of Education, 2014k).

Regular attendance in pre-school programs is an important component to school readiness. Only 75.8 percent (n=899) of children who were chronically absent (missing 20 or more days from school) from Pre-K entered kindergarten ready to learn as compared with 85.8 percent (n=3,235) of children not chronically absent (Baltimore City Public Schools, 2014c).

SOCIAL AND BEHAVIORAL COMPETENCE

Research has shown that the social and behavioral competence in young children can predict their academic performance in the first grade, exceeding the predictive powers of demonstrated cognitive skills and family backgrounds. In fact, around 48 percent of children with problem behaviors in kindergarten have been placed in special education by the 4th grade (Fox & Smith 2007). A growing number of childcare providers struggle to address the behavioral health needs of young children, and a startling number of young children in the U.S. are being expelled from their preschool classrooms (Gilliam, 2005). Assistance with children's challenging behaviors is the greatest need identified by preschool administrators and educators (Busecmi, Bennett, Thomas, & DeLuca, 1996; Yoshikawa & Zigler, 2000), who often have had little training in behavior management or ways to promote social and emotional competence (Scott & Nelson, 1999). Teachers, administrators and family members identify this lack of knowledge and skill as the greatest challenge to effective practice even more than finances, collaboration and attitudes (Fox & Smith 2007). Teachers report that challenging behavior is their number one training need and promoting social emotional development as the second (Fox & Smith, 2007).

Young children with challenging behaviors are more likely to experience early and persistent peer rejections, punitive contacts with teachers, unpleasant family interaction patterns, and school failure. If left unaddressed, these patterns of antisocial behavior have the potential to develop into more chronic behavioral health disorders, which are associated with negative outcomes across various domains for youth. In fact, over 65 percent of students identified with emotional and behavioral disorders drop out of school, leading to poor job outcomes, limited income, and a pattern of failure that persists into adulthood (Fox & Smith 2007).

SOCIOECONOMIC BACKGROUND & EXPOSURE TO HIGH QUALITY RESOURCES AND EARLY LEARNING OPPORTUNITIES

Much of the childhood learning gap comes from the impact of living in low-income communities where children are less likely to have the supports necessary for healthy growth and development: "Before even entering kindergarten, the average cognitive score of children in the highest [socioeconomic status (SES)] group [were] 60% above the scores of the lowest SES group" (Lee & Burkam, 2002, p. 2). In Baltimore, 74 percent of the kindergarteners receiving Free and Reduced Meals (FARM) were rated as ready for kindergarten compared to 85 percent of their peers who were not receiving FARM (Baltimore City Public Schools, 2014c). However, targeted interventions can help reduce achievement gaps induced by poverty children –assuming that continuing high quality program keeps the gap from re-opening (Grannis & Sawhill, 2013).

A family's socioeconomic status has strong implications for the type, quantity, and quality of resources and learning opportunities that a child is exposed to at an early age. These variations, often largely linked to poverty, have been shown to create early disparities among children (Johnson & Theberge, 2007). Multiple factors that are associated with poverty have been linked to a child's readiness to learn. Many elements of poverty reinforce and amplify the school readiness gap; for example:

- Low-income students tend to be geographically concentrated in low-income neighborhoods, which may have lower quality schools and fewer resources: from 2008-2012, 30 percent of all children in Baltimore City lived in a census tract with a poverty rate of 30 percent or more (National KIDS Count, 2012). In 2012, 19 percent of children under age 18 in Baltimore City lived in families with incomes less than 50 percent of the federal poverty level, which was $11,641 for a family with two adults and two children (National KIDS Count, 2012). Living in low-income neighborhoods has been associated with the limited availability of libraries, recreational centers, educational activities, and other neighborhood services that support the holistic development of a child (Kelly, 2010). Generally speaking, teachers in schools located in "less affluent neighborhoods" face greater challenges as they instruct a larger share of children with developmental and behavioral difficulties while utilizing fewer resources. For example, Hertzman, McLean, Kohen, Dunn, & Evans (2004) found that the share of students identified as having developmental difficulties increased from 6 to 38 percent in Vancouver neighborhoods as the wealth of the neighborhoods declined.

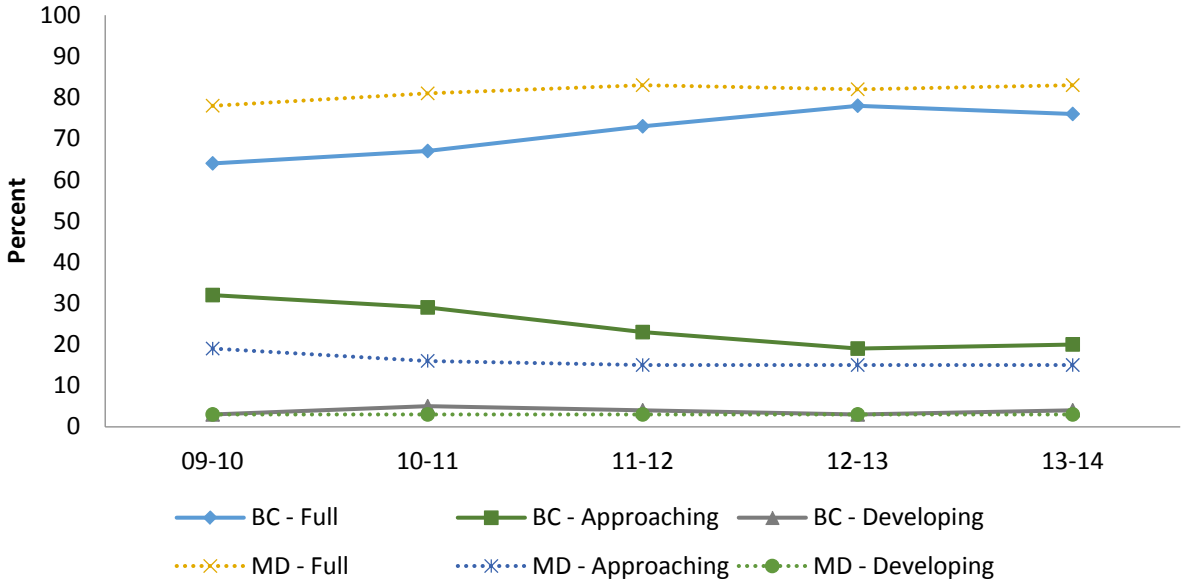
- Food insecurity can adversely affect the healthy development of a child. The U.S. Department of Agriculture measures a range of food security and defines very low food security as "multiple indications of disrupted eating patterns and reduced food intake" (United States Department of Agriculture , 2014). Relative to their food-secure counterparts, children who experienced food insecurities are twice as likely to suffer from poor health and two-thirds more likely to exhibit developmental delays (Hickson, Ettinger de Cuba, Weiss, Donofrio, & Cook, 2013). Eighty-six percent (86 percent) of elementary, middle and high school students in Baltimore City received free- and reduced-price meals in 2014 and 123,035 Baltimore City households participated in the Supplemental Nutrition Assistance Program (SNAP) in Fiscal Year 2013 (National KIDS Count, 2014q; National KIDS Count, 2014r). Although both of these programs (FARM and SNAP) are intended to address the problems associated with food insecurity, the number of participants illustrates the magnitude of the problem in Baltimore City.

- Low-income families tend to be characterized with lower parental educational attainment, which is often due to multiple factors, including economic ones. Parents with higher educational attainment tend to perpetuate beneficial educational practices at home. Youths from low-income families tend to be passive learners, obtaining lessons through observations. In comparison, educated parents tend to engage the child in active learning interactions – facilitating communications, encouraging educational goals, and disseminating effective learning practices (Kelly, 2010).

- Children who are poor are much more likely to develop behavior problems, which can disrupt their academic success. Campbell (1995) estimated that approximately 10-15 percent of all typically developing preschool children have chronic mild to moderate levels of behavior problems; children below the poverty level can have prevalence rates that approach 30 percent (Qi & Kaiser 2003).

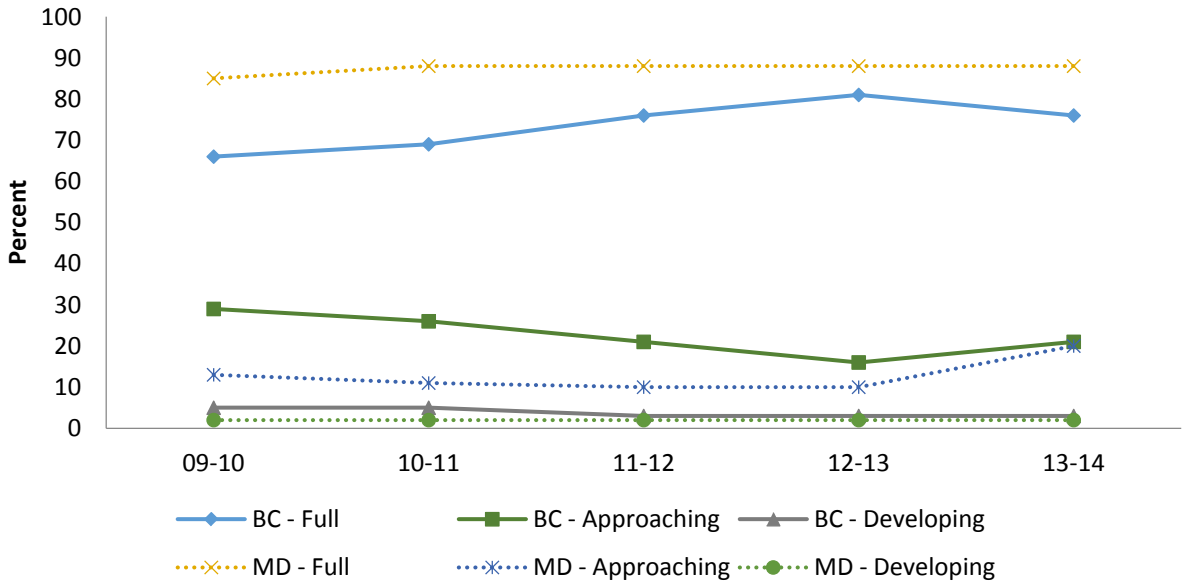
- A brief from the Robert Wood Johnson Foundation found that "lower-income parents generally face more obstacles to being optimally responsive and stimulating to their children. Even middle-class parents—especially those who are single—often face major obstacles to optimal parenting that cannot be overcome by providing information and training on parenting. Key elements of many successful early childhood programs therefore have included not only early education and stimulation for preschool children, but also support and training for their parents and caregivers to improve children's experiences at home"(p.6).

FIGURE 13: PERCENTAGE OF KINDERGARTEN STUDENTS BY SCHOOL READINES FROM SY 09-10 TO SY 13-14, TOTAL POPULATION, BALTIMORE CITY (BC) & MARYLAND (MD)



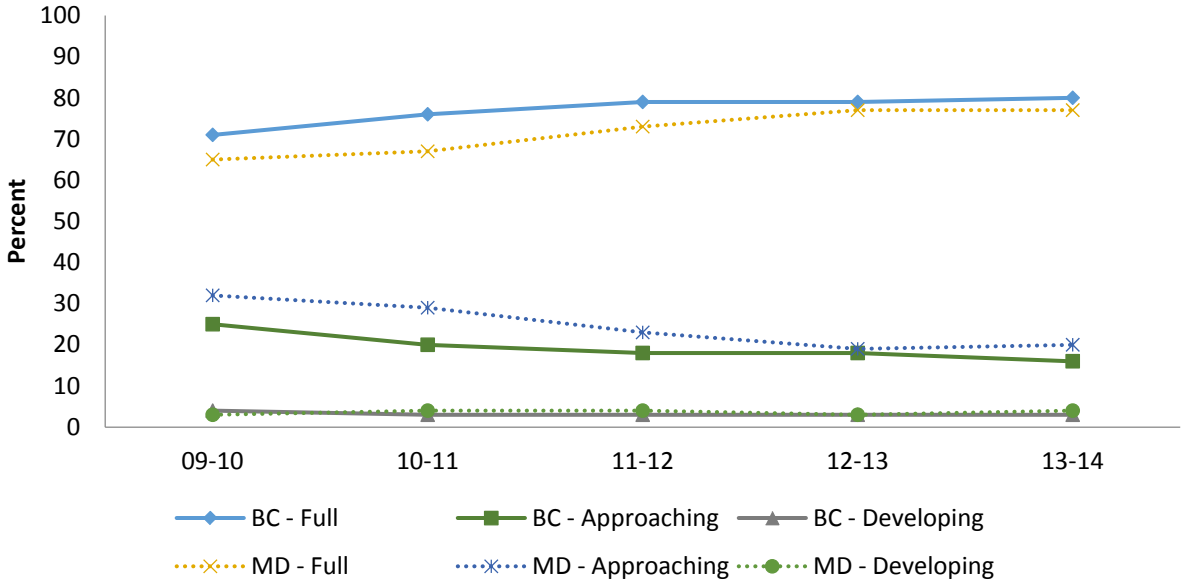
SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION

FIGURE 14: PERCENTAGE OF KINDERGARTEN STUDENTS BY SCHOOL READINESS FROM SY 09-10 TO SY 13-14, WHITE, BALTIMORE CITY (BC) & MARYLAND (MD)



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION

FIGURE 15: PERCENTAGE OF KINDERGARTEN STUDENTS BY SCHOOL READINESS FROM SY 09-10 TO SY 13-14, AFRICAN AMERICAN, BALTIMORE CITY (BC) & MARYLAND (MD)



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION

DEFINING "CHILDREN ACHIEVE GRADE-LEVEL READING AND MATH"

It is critical for children and youth to remain on or above grade-level in reading and math. Strong evidence has supported the strong connection between early achievements and college and career readiness; falling behind is costly, and efforts to bridge the gap are not always successful. Reading proficiently by the end of third grade has been identified as being a significant milestone in a child's educational career:

> Up until the end of third grade, most children are learning to read. Beginning fourth grade, however, they are reading to learn, using their skills to gain more information in subjects such as math and science, to solve problems, to think critically about what they are learning, and to act upon and share that knowledge in the world around them. (Annie E. Casey Foundation, 2010, p. 9).

In a longitudinal study of 26,000 Chicago Public Schools students, researchers found that third-grade reading level is a significant predictor of eighth-grade reading level, and that eighth-grade reading achievement, ninth-grade school characteristics, and individual ninth-grade course performance explain most of the differences in graduation and college enrollment rates among students who were in *below, at,* or *above* grade level groups in third-grade (Lesnick, Goerge, Smithgall, & Gwynne, 2010). In another longitudinal study, ACT Inc. administered the EXPLORE standardized test to 800,000 eight graders across the nation. Based on the test scores, almost 30 percent of 8th grade students were identified as "far off track", scoring one standard deviation below benchmarks. Of the "far off track" 8th graders, only 3 percent and 10 percent reached college readiness benchmarks in math and reading, respectively, by 12th grade (Dougherty & Fleming, 2012).

> "One in six children who are not reading proficiently in third grade fail to graduate from high school on time, four times the rate for children with proficient third-grade reading skills." (Hernandez, 2012, p.6)

Maryland, like much of the nation, is undergoing a transition period as it implements the CCS. Maryland is part of a consortium of states, the Partnership for Assessment of Readiness for College and Careers (PARCC), which is developing a common set of assessments that are aligned to the CCS. The PARCC Assessments will be introduced in Maryland in the 2014-2015 school year (Maryland State Department of Education, 2014u). The CCS are designed to support students to achieve college and career readiness (Maryland State Department of Education, n.d.).

For the purpose of assessing Baltimore City's progress to-date, the outcome of children achieving grade-level reading and math should be defined by the following indicators:

- **Maryland State Assessment (MSA)--Reading**: Percent of children in grades 3-8, by grade level, who achieve a score of *advanced* or *proficient* on the MSA in reading
- **Maryland State Assessment (MSA)--Math**: Percent of children in grades 3-8, by grade level, who achieve a score of *advanced* or *proficient* on the MSA in math

- **Alternative Maryland State Assessment (ALT-MSA): Reading:** Percent of children in grades 3-8, by grade level, who achieve a score of *advanced* or *proficient* on the ALT-MSA in reading
- **Alternative Maryland State Assessment (ALT-MSA): Math:** Percent of children in grades 3-8, by grade level, who achieve a score of *advanced* or *proficient* on the ALT-MSA in math
- **High School Assessment (HSA)—Participation**: Percent of students who have taken the HSA, by grade level and by subject (algebra/data analysis, biology, English, and government)
- **High School Assessment (HSA)—Performance:** Percent of students who have taken and passed the HSA, by grade level and by subject (algebra/data analysis, biology, English, and government)

Beginning with the 2014-2015 school year, the outcome of children achieving grade-level reading and math should be defined by the following indicators:

- **PARCC Assessments—ELA/Literacy:** Percent of students, grades 3-11, by grade level, who have achieved a level 3, 4 or 5 on the PARCC Assessments for ELA/Literacy
- **PARCC Assessments—Math:** Percent of students, grades 3-11, by grade level, who have achieved a level 3, 4, or 5 on the PARCC Assessments for Math
- **PARCC Assessments-K-2:** Percent of students, grades kindergarten-2nd, by grade level, who have achieved the identified cut-off score for ELA/Literacy and Math
- **High School Assessment (HSA)—Participation**: Percent of students who have taken the HSA, by grade level and by subject (biology and government)
- **High School Assessment (HSA)—Performance:** Percent of students who have taken and passed the HSA, by grade level and by subject (biology and government)

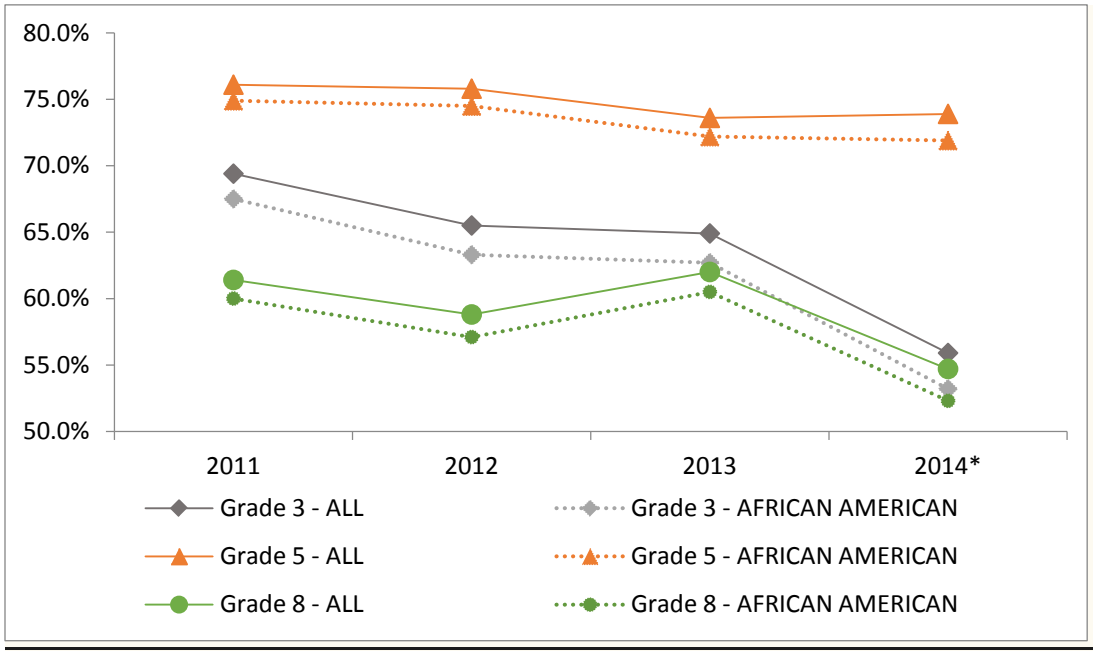
MARYLAND STATE ASSESSMENT (MSA)

The MSA is an annual test that is administered to students in grades 3 through 8. The reading and mathematics tests are administered annually and the science test is administered in grades 5 and 8. The MSA is designed to show how well students have learned the reading, mathematics, and science skills outlined in the Maryland State Curriculum. Scores are classified as advanced, proficient, or basic based on the cut scores established (MDK12, 2014c). The Alternative MSA (ALT-MSA) is the assessment program for students with significant cognitive disabilities. It measures the student's progress on attainment of Mastery Objectives in reading and mathematics in grades 3-8 and 10 and in science for students in grades 5, 8 and 10. The decision to administer the ALT-MSA to a student is made by the student's Individualized Education Program (IEP) team based on a set of guidelines. Student scores are classified as advanced, proficient or basic (MDK12, 2014a). The 2013-2014 school year was the last year for the MSA and the ALT-MSA, with the introduction of the PARCC Assessments in the 2014-2015 school year. Some students participated in a pilot test of the PARCC Assessment in the 2013-2014 school year in lieu of the MSA (Maryland State Department of Education, 2014a).

As illustrated by Figure 16 and Figure 17, recent trends in MSA Reading and Math among students in Baltimore City show that noticeable declines in the most recent test year. Prior to 2014, a larger share of students in the earlier grades was reaching proficient or advanced levels. Another troubling trend exhibited is the differences in the scores for Black/African American students as compared to all Baltimore City students. During the time period examined (2011-2014), compared to the city-wide average, fewer Black/African American students exhibited scores of proficient or above in MSA Reading and Math. On average, the percentage of Black/African American students scoring proficient or better on the MSA reading is about two percentage points below the city-wide Reading average and roughly three percentage points below the city-wide Math average.

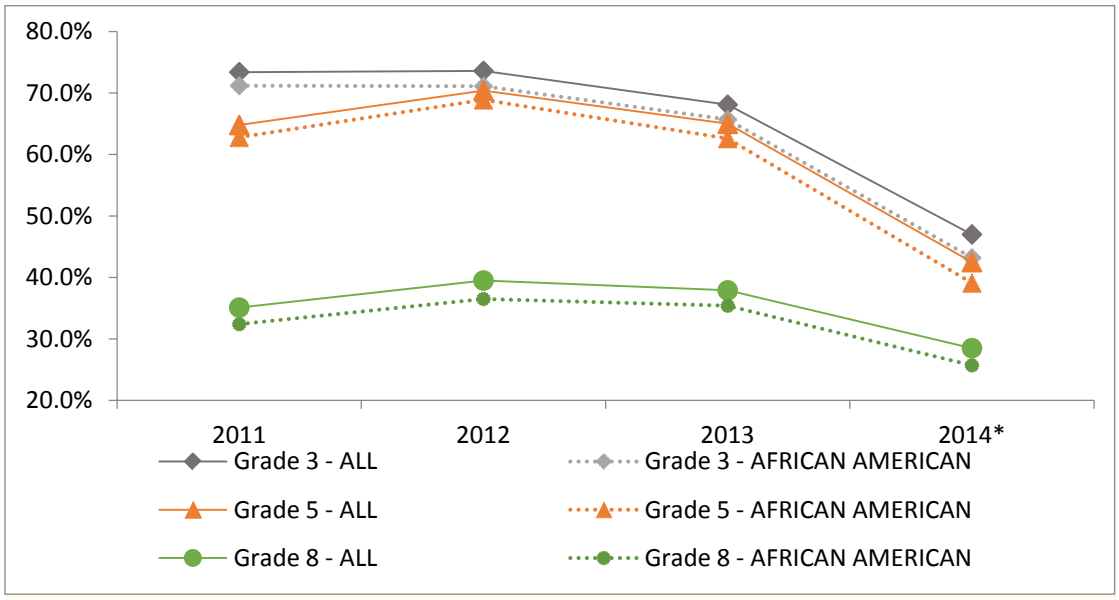
The figures illustrate the declines that occurred in this past year's testing. The Maryland State Department of Education and local school systems across the state observed that the decreases were not unexpected due to the transition to the CCS (Baltimore City Public Schools, 2014d; Bowie, 2014). The Baltimore Sun reported that "some educators blamed the poor showing on the fact that teachers were uncertain about the new material and that students knew the scores this year wouldn't count" and that "just as Maryland was transitioning from its Maryland School Performance Assessment Program in 2002 to the MSA, the state reported some of the worst reading and math scores in the previous 10 years. Some of the declines were comparable to those seen this year" (Bowie, 2014, p.1). The Baltimore Sun also observed that the scores across Maryland were still higher on average than they were when the tests were first administered in 2003. Additionally, they noted that 40,000 students statewide participated in pilot testing of the PARCC assessment instead of the MSA, which may have also impacted the results (Bowie, 2014).

FIGURE 16: PERCENTAGE OF STUDENTS ACHIEVING PROFICIENT OR ADVANCED LEVELS IN MSA READING, 2011-2014, BALTIMORE CITY



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD
*2014 Reading MSA data do not include entire student population due to the PARCC field test.

FIGURE 17: PERCENTAGE OF STUDENTS ACHIEVEING PROFICIENT OR ADVANCED LEVELS IN MSA MATH, 2011-2014, BALTIMORE CITY



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD
*2014 Math MSA data do not include entire student population due to the PARCC field test.

HIGH SCHOOL ASSESSMENTS (HSA)

Maryland requires that all students achieve testing requirements in order to receive a high school diploma. Students can meet the requirements by passing each of the HSAs. Substitutions for the HSAs include the Advanced Placement (AP) or International Baccalaureate (IB) Tests or the Modified HSA, an alternative for students with disabilities who meet specific participation criteria. Students must pass all four exams (algebra/data analysis, biology, English, and government) or achieve a combined total score of 1602 on the four exams in order to meet the testing requirement on the HSA. Students who have passed the HSA-related course, are making satisfactory progress toward graduation, and have participated in locally-administered or approved assistance but who have not passed an HSA test after two attempts may be eligible for a Bridge Plan for Academic Validation. This Bridge Plan consists of the completion of one or more project modules with in a content area (MDK12, 2014b).

> "Eighth-grade reading achievement, ninth-grade school characteristics and individual ninth-grade course performance explain most of the differences in high school graduation and college enrollment rates for students who were in the *below*, *at*, and *above* grade level groups in third grade" (Lesnick, Goerge, Smithgall & Gwynne, 2010, p.4).

In 2013, 58.6 percent of 11th graders in Baltimore City had taken and passed all of the required HSA tests; 34.4 percent have taken all tests but have not fulfilled graduation requirements (See Table 11). **The performance of Baltimore City students is significantly below the statewide average.** In Maryland, 87.0 percent of 11th grade students have taken and passed all the required HSA exams. For both the State and Baltimore City, the Black/African American population is behind their counterparts. **Only 57.0 percent of Black/African American 11th graders in Baltimore City have passed all required HSA exams;** the statewide average for the Black/African American population of 74.8 percent is well below the overall statewide average.

TABLE 11: 2013 HSA PARTICIPATION AND STATUS, ALL GRADE 11 STUDENTS

	Baltimore City		Maryland	
	% Taken All & **Met**	% Taken All & **Not Met**	% Taken All & **Met**	% Taken All & **Not Met**
All Students	58.6	34.4	87.0	10.5
Black/African American	57.0	36.3	74.8	21.3
American Indian	88.1	9.5	84.9	10.2
Asian	61.0	31.7	93.0	4.6
White	69.5	22.0	94.7	3.9

SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, 2014 MARYLAND REPORT CARD

PARCC ASSESSMENTS

The PARCC Assessment has five levels of student performance. Each level has additional policy, general content, and grade- and subject-level claims as to the meaning of the level of achievement. Results on the PARCC English Language Arts (ELA)/Literacy and mathematics assessments will be reported according to numerical scaled scores and performance levels. Student results on PARCC ELA/literacy and mathematics assessments will be reported to "classify student performances into categories that describe the knowledge, skills and practices students in the category are typically able to demonstrate, including the consistency with which they can demonstrate these traits. Each PARCC performance level will have a specified minimum scaled score associated with it, which will be determined through a standard-setting process in summer 2015. The following are the five levels of student performance (PARCC, 2012):

- Level 5—Distinguished Command: Students performing at this level demonstrate a distinguished command of the knowledge, skills, and practices embodied by the Common Core State Standards assessed at their grade level.

- Level 4—Strong Command: Students performing at this level demonstrate a strong command of the knowledge, skills, and practices embodied by the Common Core State Standards assessed at their grade level.

- Level 3—Moderate Command: Students performing at this level demonstrate a moderate command of the knowledge, skills, and practices embodied by the Common Core State Standards assessed at their grade level.

- Level 2—Partial Command: Students performing at this level demonstrate a partial command of the knowledge, skills, and practices embodied by the Common Core State Standards assessed at their grade level.

- Level 1—Minimal Command: Students performing at this level demonstrate a minimal command of the knowledge, skills, and practices embodied by the Common Core State Standards assessed at their grade level.

At this time, the performance standard for the K-2 PARCC assessments is not known. These indicators should be reviewed and updated as necessary on an annual basis as the CCS and PARCC Assessments are fully implemented.

RISK AND PROTECTIVE FACTORS ASSOCIATED WITH GRADE-LEVEL PERFORMANCE

Combinations of internal and external factors contribute to a child's performance in school. Researchers have identified a combination of economic, sociological, and psychological factors that can potentially influence academic achievement. Frequently discussed risk and protective factors are family characteristics, socioeconomic background, school environment, and student characteristics.

Family Characteristics

A stable home environment supports a child's success in school, and an important aspect of this is housing stability. Families may experience transient housing for a variety of reasons, for example, loss of income, increasing housing costs, breakdown of a family unit (e.g. divorce, separation, death of a caregiver), or domestic violence. Insecure housing can be difficult for children; students who experience multiple moves are faced with "discontinuities in learning environment that alter or weaken instructional, school, and peer ecologies" (Reynolds , Chen, & Herbers , 2009, p. 4). Multiple moves have been linked to lower academic performance in math and reading and higher dropout rates. A meta-analysis of school mobility and achievement found that moving during elementary school can setback math and reading learnings by 3 to 4 months (Mehana and Reynolds, as cited in Voight, Shinn, & Nation, 2012).

Families who provide a solid structure and are sensitive to the needs of the children can help mitigate negative stressors. One key protective factor is **parental involvement** in the school setting and the child's education. Parental involvement is a multidimensional concept that includes various activities, such as teacher communication, at-home learning, and school engagement (Georgiou, 1997). The literature evaluating this relationship has been largely qualitative and the limited quantitative studies have revealed contradicting effects; however, a meta-analysis of quantitative studies examining the overall effects of parental involvement revealed a medium sized correlation with academic achievement, with certain aspects of parental involvement having stronger associations (Fan & Chen, 2001).

Parental involvement in their child's educational endeavors is related to parents' educational background. As discussed above with regard to school readiness, the education level of parents indirectly impacts a child's performance through various avenues (Davis-Kean, 2005, p. 294). The educational attainment of parents, especially mothers, has been broadly mentioned as an important predictor of a child's academic performance. Alexander et al. observed that educated parents from higher income groups formulated expectations that paralleled student's academic performance, while less educated, low-income parents formed unrealistic expectations (Alexander, Entwisle, & Bedinger, 1994, pp. 295-298). The effect of parental education on student performance is reflected in the standardized test scores of students. In 2013, the average scores for the National Assessment of Educational Progress (NAEP) Reading Assessment was 255 for youths with parents with only a high school education, while youths with college educated parents registered an average score of 278 (U.S. Department of Education, 2013).

Socioeconomic background

Historically, students from lower socioeconomic background show weaker academic performance than their counterparts with higher socioeconomic status. A growing evidence base suggests that the gap is widening. Reardon (2011) argues that the "achievement gap between children from high- and low-income families is roughly 30 to 40 percent larger among children born in 2001 than among those born twenty-five years earlier" (p.1). One reason for the achievement gap across income categories is that low-income households have fewer financial resources that can be directed towards the advancement of a child's academic development. More than ever, wealthier parents are investing in tutors, music lessons, and

other recreational activities aimed at comprehensive child development (Tavernise, 2012). Kornich & Furstenberg (2013) examined data from the Consumer Expenditure Survey to estimate the difference in parental spending between high- and low-income parents. On average, parents at the top 10 percent of income earners spend about nine times more per child than parents at the bottom 10 percent in 2007.

Furthermore, a family's socioeconomic status has implications for the schools that are available to them. Low-income students are more likely to be concentrated in under-resourced schools, **amplifying the negative effects of poverty**. This has been illustrated by the stark differences in academic performance across urban, rural, and suburban schools. In contrast to their suburban counterparts, students in urban and rural areas tend to start school at a disadvantage largely due to differences in socioeconomic measures. The University of New Hampshire's Carsey Institute quantified the difference in the reading achievement of Kindergarteners and 3rd graders by geographic designations using the Early Childhood Longitudinal Study data. On a 0 to 212 scale, the average rural-suburban (-3 points) and urban-suburban (-2 points) gap was statistically significant, but minimal. However, both gaps were notably wider in 3rd grade with the rural-suburban gap at -8 points and the urban-suburban gap at -6 points (Graham & Teague, 2011).

Moreover, living in an impoverished environment exposes students to **stressors** that are detrimental to academic achievement. Examples of stressors and traumatic events that tend to occur with greater frequencies among low income households are "living in overcrowded, substandard housing or unsafe neighborhoods; enduring community or domestic violence, separation or divorce, or the loss of family members; and experiencing financial strain, forced mobility, or material deprivation" (Jensen, 2009). As discussed above regarding ACE and toxic stress, the level and frequency of exposures that low-income children have to acute and chronic stress can have significant effects on their cognitive development, negatively impacting educational outcomes (Jensen, 2009).

Another avenue where socioeconomic factors can impact academic achievement is through **health**. Kids who are born into impoverished families are more likely to experience poorer health during the fetal stages and across their life course (Case, Fertig, & Paxson, 2005). Poor health translates to poor academic achievement as kids who suffer from poor health have been associated with lower concentration and engagement in the classroom. Research has documented that "healthy, happy, active and well-nourished youth are more likely to attend school, be engaged, and ready to learn" (WestEd & Philip R. Lee Institute for Health Policy Studies, 2011, p. 2).

Furthermore, certain health conditions, such as vision problems, asthma, and hearing loss, have been shown to impede with a child's ability to perform in school (Eide, Showalter, & Goldhaber, 2008). Cohodes et al. found that simply **increasing access to health care services for children can have positive long term effects.** In particular, by studying the effects of Medicaid expansion on children during the 1980s and 1990s, they found that "a 10 percentage point increase in

Medicaid eligibility between the ages of 0 and 17 decreases the likelihood of not completing high school by approximately 5%, increase college attendance by 1.1% to 1.5%, and increase the 4-year college completion rate by 3%-3.5%" (Cohodes , Kleiner, Lovenheim, & Grossman, 2014, p. 31).

School environment & student characteristics

Emerging policy reform efforts across the nation have focused on identifying features that are essential to fostering an effective school climate. Various instructional and organizational practices in school contribute to providing a productive learning environment for children and working environment for the staff; ineffective practices can actually widen the achievement gap (Caro, 2009). At the organizational level, principals play a key role in shaping school climate. In order for schools to function efficiently, principals must be able to articulate the goals of the school, motivate staff and students, and provide adequate support to teachers. A solid working relationship between the principals and teachers characterized by trust and respect will positively benefit the students (Gulsen & Gulenay, 2014).

Although multiple factors contribute to students' educational outcomes, certain individual characteristics of students are correlated with higher levels of academic performance. Past studies have indicated the "engagement in school and perceived academic competence . . . strongly predict improved reading and mathematics achievement" (Akey, 2006, p. 1). Students who are disengaged are more likely to be characterized by chronic absenteeism which is linked to poor academic performance and eventual dropout. Students who are not attending class are not receiving the instruction and content knowledge necessary to meet learning goals (Schoeneberger, 2012). Furthermore, a lack of school commitment has been identified as a risk factor for problem behaviors among teens, such as: substance abuse, teen pregnancy, and delinquency (National Center for School Engagement). On the other hand, engaged students "display curiosity, a desire to know more, and positive emotional responses to learning and school" (Akey, 2006, p. 3).

A student's perception of their ability to succeed in school is a good indicator of the level of engagement a student possess. In order for students to perform well in school, they must believe that they are capable of learning the material and achieving positive results. A student lacking this conviction is less likely to attempt coursework and put forth adequate efforts in school (Akey, 2006). Students' beliefs about school largely determine school related behaviors and effort levels. Meeting performance levels in school requires a substantial amount of commitment and effort by the student.

The Campaign for Grade-Level Reading—nationally and in Baltimore—has identified three strategy areas upon which they are focusing to turn the curve on grade-level reading across the nation: school readiness, school attendance, and summer learning. The importance of school readiness has already been discussed. Chronic absence from school has been found to be predictive of lower levels of achievement at the end of fifth grade, and lower income children have been found to lose as much of two months of reading achievement during the summer

break (Smith, 2011-2012). The strength of the association between absences and academic grades has been shown to increase as children progress through elementary school (Morrissey, Hutchison & Winsler, 2014).

The percent of students who are absent from school more than 20 days for grades 1-5 has been fairly steady in Baltimore since 1993 (Maryland State Department of Education, 2014b) The rate of chronically absent students is much greater in Baltimore City than in the rest of the state; in 2013, 6.6% of students in grades 1-5 statewide were absent from school more than 20 days during the school year, compared with 15.8% of students in Baltimore City. The rate is not much higher for Black/African American children in grades 1-5 (16.7%) than white children in grades 1-5 (15.4%) in Baltimore City in 2013 (Maryland State Department of Education, 2014b).

The National Summer Learning Association highlights the losses experienced by children—particularly low income students—during the summer, in the absence of academic intervention. They note that, at best, students showed little or no academic growth and, at worst, they lose 1-3 months of learning. Additionally, researchers have found that summer loss is greatest in math and spelling, and that for disadvantaged students, reading scores were disproportionately affected (National Summer Learning Association, 2004).

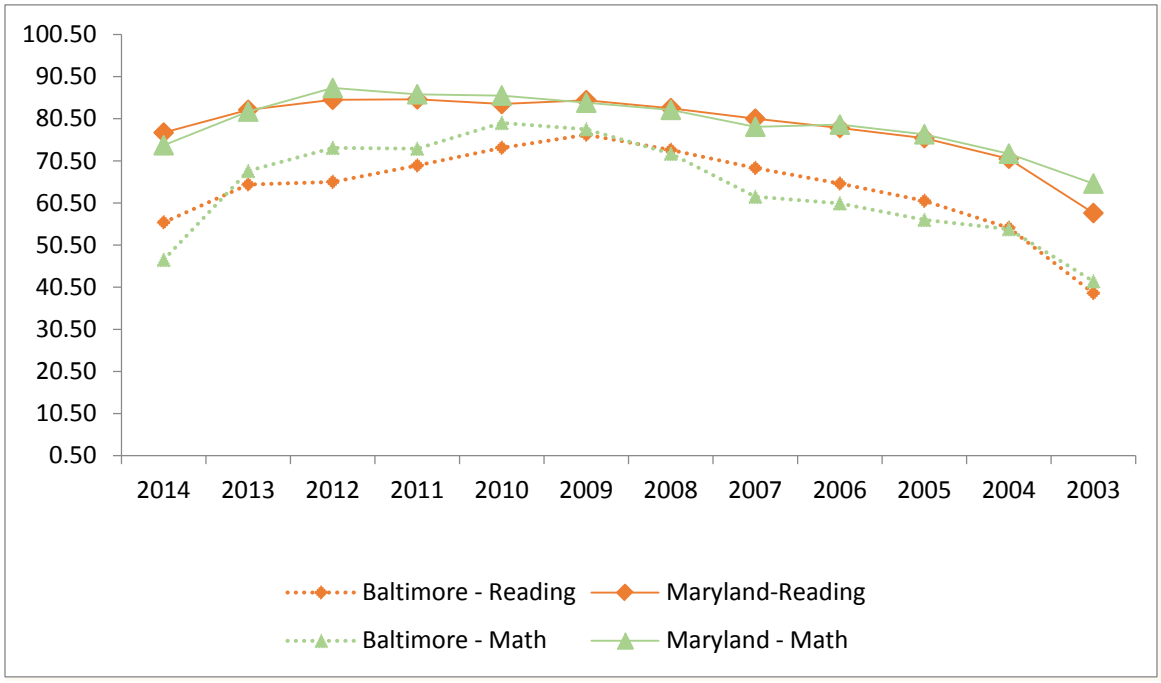
Baltimore City Public Schools administers the school climate survey annually to students, parents and teachers. The following are the data for school years 2012-2014 for the dimension scores and the questions in the "other" questions. Ratings for each question are available online, as are surveys for individual schools and data going back to 2007 (see http://www.baltimorecityschools.org/Page/24839). These survey results address many of the school and student-level characteristics discussed above, including perceptions of school climate and school safety, resources, and the school climate.

TABLE 12: BALTIMORE CITY PUBLIC SCHOOLS—SCHOOL SURVEY

	Students			Parents			Teachers		
Year	**2012**	**2013**	**2014**	**2012**	**2013**	**2014**	**2012**	**2013**	**2014**
Respondents	41,148	39,206	42,279	9,256	12,143	16,766	5,718	5,430	6,036
Response Rate	71%	67%	72%				64%	63%	72%
The Administration Dimension Score		59.5	62.7	78.7	84.2	81.4	78.1	77.8	83.6
Creativity & the Arts Dimension Score	54.4	61.9	68.2	85.3	90.0	88.6	63.5	77.3	81.1
Physical Environment Dimension Score	30.5	30.8	47.8	82.4	83.7	86.2	46.9	46.6	62.4
Grit Dimension Score (Students Only)	85.8	78.7	78.5						
Learning Climate Dimension Score	39.7	40.4	40.8	91.9	92.6	91.5	79.9	74.9	80.8
Meaningful Work Dimension Score								93.4	96.3
Family Involvement Dimension Score	71.3	71.5	72.6	79.5	81.9	79.6	83.4	85.9	88.7
School Resources Dimension Score	68.4	68.0	68.8	77.4	80.6	82.0	74.5	76.5	81.1
School Safety Dimension Score	54.0	58.0	60.4	86.0	87.5	87.9	69.6	71.8	77.7
Satisfaction with School Dimension Score	76.6	75.2	75.3	85.0	84.0	84.7	87.1	89.8	91.9
Other:									
Regular on-time attendance is important to my child's success in school/ It is important for me to come to school every day.	92.3	91.7	91.0	98.2	96.9	97.5	99.0		

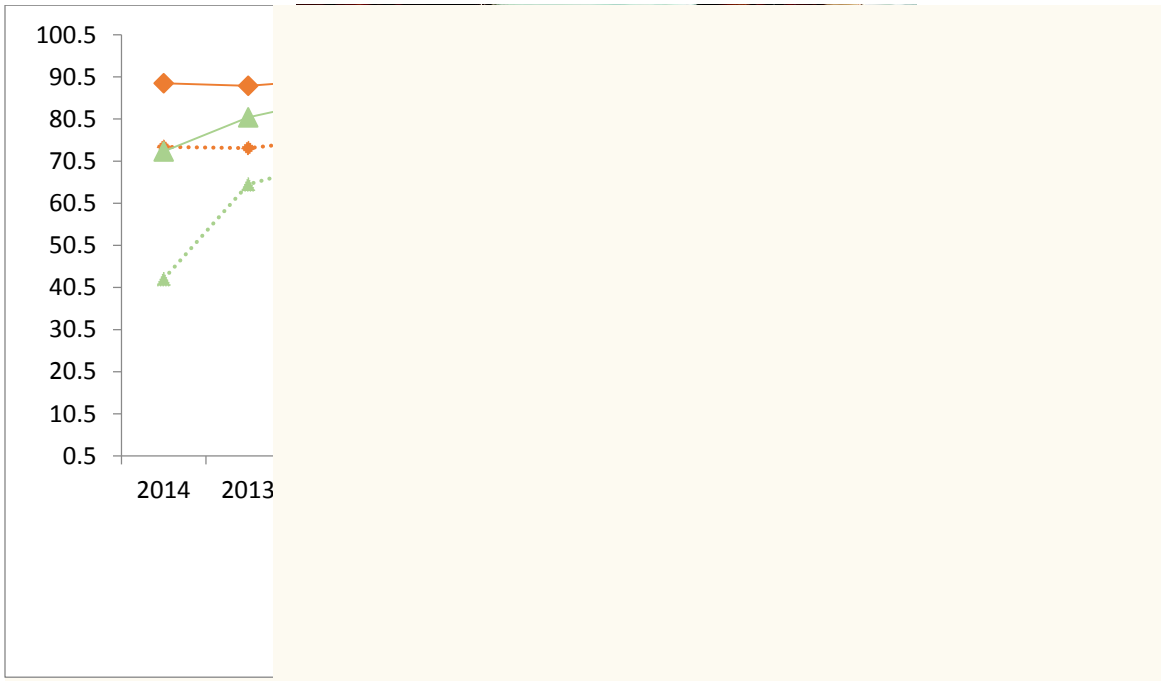
CHILDREN ACHIEVING GRADE LEVEL READING & MATH DATA SNAPSHOT

FIGURE 18: PERCENTAGE OF STUDENTS ACHIEVING PROFICIENT AND ADVANCED LEVELS IN MSA -READING AND –MATH, GRADE 3



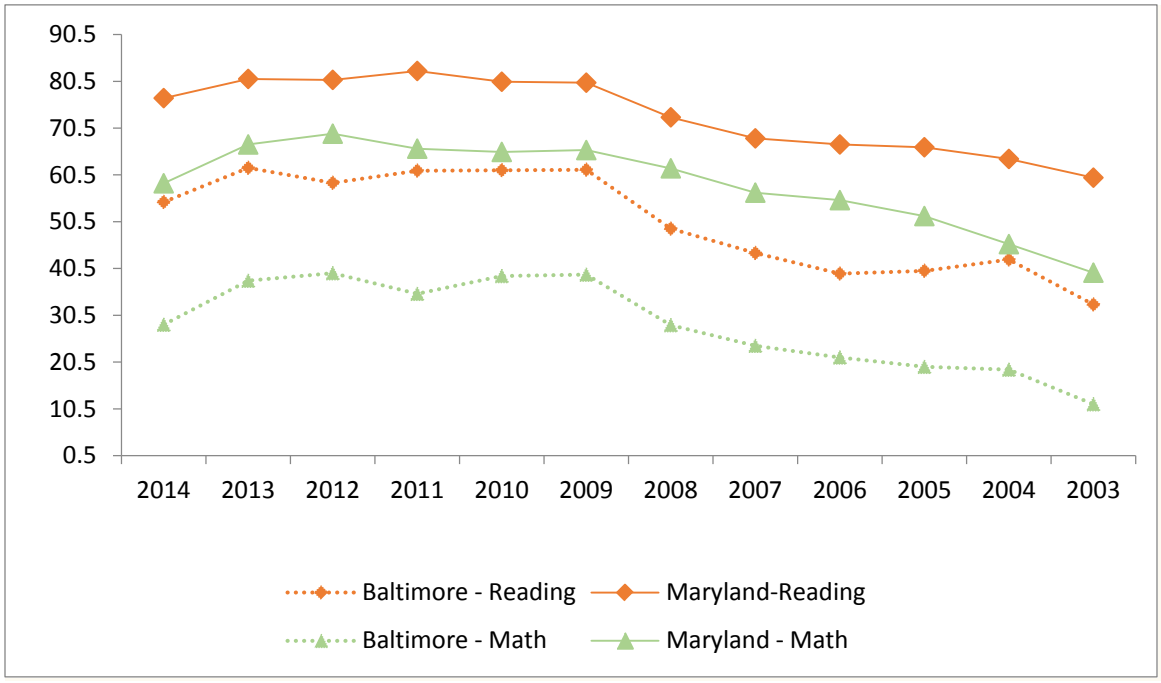
SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 19: PERCENTAGE OF STUDENTS ACHIEVING PROFICIENT AND ADVANCED LEVELS IN MSA -READING AND –MATH, GRADE 5



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 20: PERCENTAGE OF STUDENTS ACHIEVING PROFICIENT AND ADVANCED LEVELS IN MSA -READING AND –MATH, GRADE 8



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

OUTCOME 4: YOUTH GRADUATE FROM HIGH SCHOOL PREPARED FOR COLLEGE OR VOCATIONAL TRAINING

Leaving school without earning a high school diploma or passing a General Educational Development (GED) has been associated with multiple undesirable outcomes including lower lifetime earnings (Rouse, 2005), higher rates of unemployment (U.S. Department of Labor, 2010), poor health outcomes (Pleis, Ward & Lucas 2010), high rates of incarceration (Aud et al.), and increased reliance on welfare (Levin & Belfield, 2007 as cited in Chapman, Laird, Ifill, & Kewal Ramani, 2011). As previously discussed, there have been movements toward increasing academic standards to ensure that youth graduate from high school with the skills, knowledge, and experience to be able to handle the rigors of post-secondary education and careers. Maryland is striving to improve education for all students by implementing new, higher standards for student learning. In particular, the Maryland College and Career Ready Standards were implemented across schools in SY 2013-2014 to establish more rigorous goals and evidence based practices that better align with the Common Core Standards (MDK12, 2014d)

Youth graduate from high school prepared for college or vocational training will address two primary components: (1) receiving a high school diploma and (2) obtaining the preparation required to enroll and succeed in post-secondary institutions. The following indicators encompass the primary components of the outcome:

- High School Completion: Acquisition of a high school diploma that denotes the students successful completion of secondary education
- Program completion: Fulfillment of the course requirements to enroll in the University System of Maryland and/or an approved Career Technology Education Program
- Post-secondary enrollment: Enrollment in a post-secondary institution following high school graduation
- College Readiness:
    - Successfully met College and Career Preparation (CCP) standards
    - Percent of high school graduates who require remediation in post-secondary educational institutions

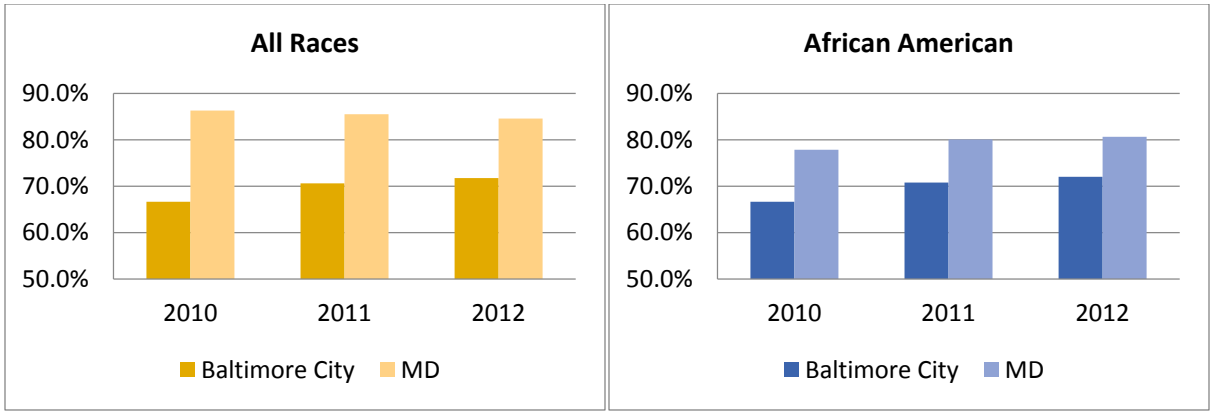
HIGH SCHOOL COMPLETION

Two common measures of high school completion are graduation rates and dropout rates. The five year adjusted cohort graduation rate includes the number of students who earn a high school diploma within five years of ninth grade enrollment. The 4 year adjusted cohort dropout rate accounts for students who leave schools for any reasons (with the exception of death) and do not transfer to another school district within the four year period (Maryland State Department of Education, 2014f). Recent trends among graduation and dropout rates in Baltimore City indicate a positive trajectory.

Although graduation rates have been increasing in Baltimore City, it still falls behind the statewide average (See Figure 21). The five year adjusted graduation rate in Baltimore City was 71.74 in 2012, notably below the statewide five year adjusted rate of 86.32. The gap is also exhibited among the African American population. The graduation rate for the African

population in Baltimore City was 72.02, well below the state rate for the African American population of 80.66.

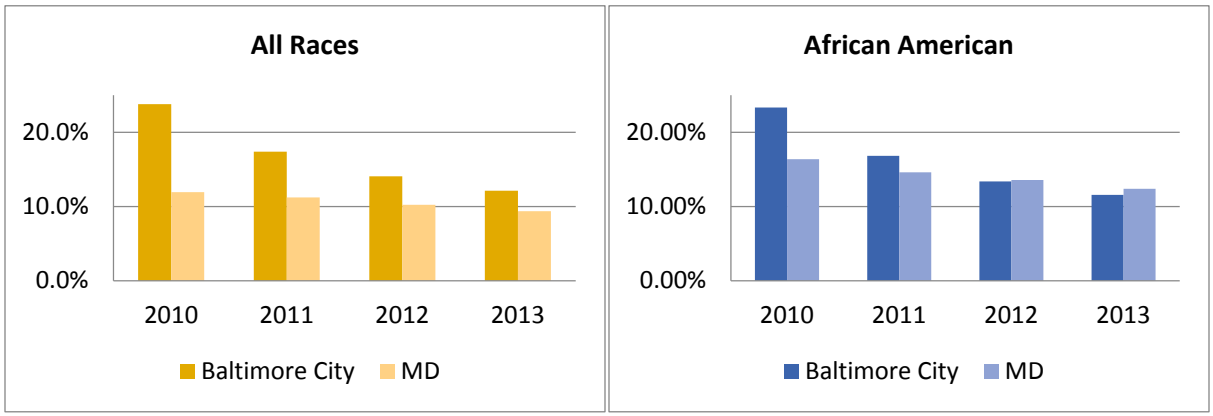
FIGURE 21: 5 YEAR ADJUSTED COHORT HIGH SCHOOL GRADUATION RATE BY 4-YEAR GRADUATING CLASS YEAR



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

Dropout rates have been on a downward trend in Baltimore City, decreasing from 23.8 percent in 2010 to 12.1 percent in 2013 (See Figure 22). The Maryland average dropout rate has also been declining during the same time period, but at a slower pace. Between 2010 and 2013, the statewide average dropout rate decreased from 11.9 to 9.4 percent. The African American population has contributed largely to the decline in overall dropout rates, with the dropout rates for the African American population decreasing by 11.8 percentage points in Baltimore City and 4.0 percentage points in Maryland.

FIGURE 22: 4 YEAR ADJUSTED DROPOUT RATE



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

PROGRAM COMPLETION

The Maryland State Department of Education (2014g) identifies students who completed course requirements that would qualify them to be admitted in the University System of Maryland and a state approved Career and Technology Education Program. Furthermore, the state tracks the

percentage of students who complete a rigorous high school program. **Students meeting at least four of the six criteria upon graduation are designated as having completed a rigorous course of study during high school:**

1. A grade B or better in at least two credits in the same foreign language;
2. A grade B or better in at least one credit in math beyond Algebra II and Geometry;
3. A grade B or better in at least four credits in science;
4. A grade B or better in at least two credits in an advanced technology education course;
5. An SAT score of at least 1,000 or an ACT score of at least 20 or both; OR
6. A cumulative grade point average of at least 3.0. (Maryland State Department of Education, 2014g)

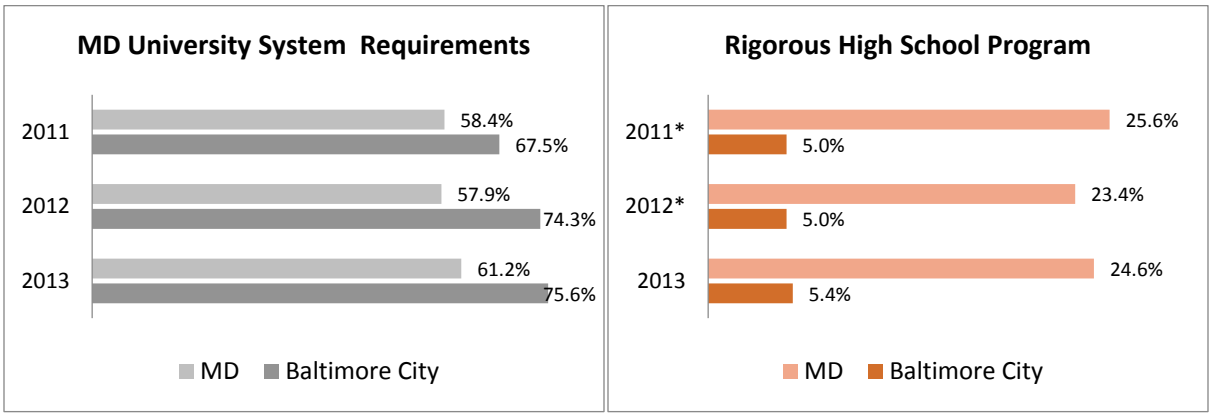
The indicator for a rigorous high school program can be viewed as a measure of the rigor and quality of the high school education obtained by the student. In general, these indicators are a reflection of the academic preparedness of students upon high school graduation.

Figure 23 illustrates the percentage of high school graduates who completed the course requirements to be admitted to the University System of Maryland and who met the criteria for completing a rigorous high school program.

About three-fourths of high school graduates in Baltimore City met the requirements to qualify for the University System of Maryland, notably above the statewide average of roughly 60 percent.

However, only about **five percent of high school graduates completed a rigorous high school program,** compared to the statewide average of 24.6 percent. This trend suggests that Baltimore City students are meeting the requirements to enroll in college, but are not necessarily prepared to handle the rigors of college coursework.

FIGURE 23: PERCENTAGE OF STUDENTS WHO MEET THE HIGH SCHOOL PROGRAM COMPLETION REQUIREMENTS, BALTIMORE CITY AND MARYLAND



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

* Actual percentages were not published. Source only indicated that the percentages 5
5.0 percent or below.

Maryland has established Career and Technology Education (CTE) Pathways for students. In these programs, students take academic courses and participated in work-based learning opportunities. Students can graduate from high school with industry certification or college credit. The Maryland State Department of Education has established career clusters for the CTE pathway, and more than 20 Baltimore City middle and high schools offer state-approved CTE programs within these clusters:

- Arts, Media and Communication
- Business, Management and Finance
- Career Research and Development (a career exploration program)
- Construction and Development
- Consumer Services, Hospitality and Tourism
- Environmental, Agriculture and Natural Resources
- Gateway to Technology (a middle school program focused on science, technology, engineering and math)
- Health and Biosciences
- Human Resource Services
- Information Technology
- Manufacturing, Engineering and Technology
- Transportation Technologies

(Baltimore City Public Schools, 2014a).

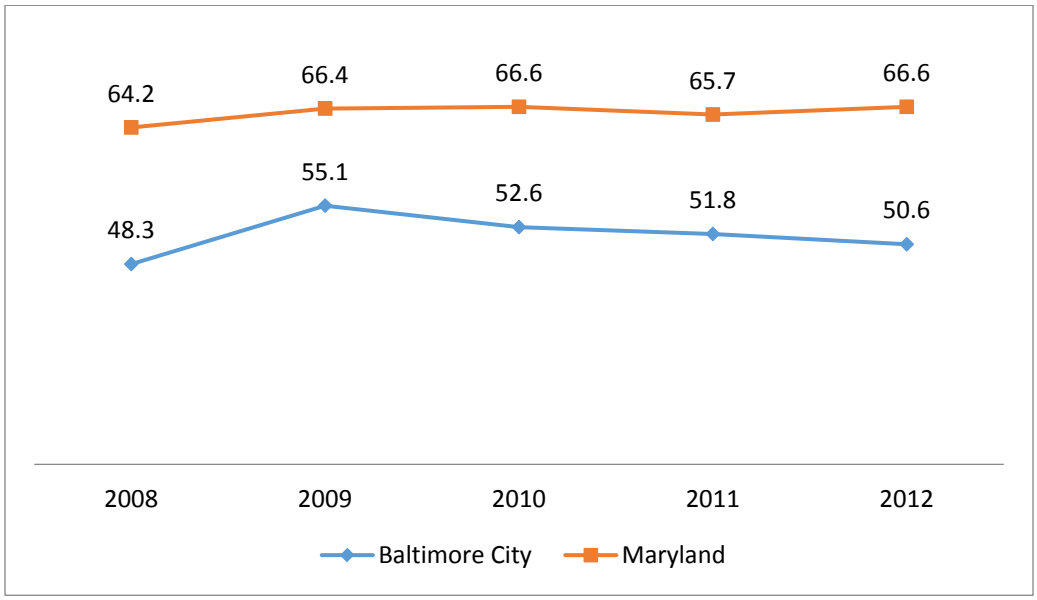
In 2013, fewer than 5% of all Baltimore City high school diploma students met CTE Program requirements alone. However, 19.5% (893 students) met *both* University System of Maryland and CTE Requirements. Across Maryland, 8.1% of high school diploma students met CTE Program Requirements alone and only 11.1% met *both* University System of Maryland and CTE Requirements (Maryland State Department of Education, 2014g; Maryland State Department of Education, 2014r).

POST-SECONDARY ENROLLMENT

Although job prospects and earnings will depend on a variety of factors, such as degree and school choice, researchers agree that earning post-secondary credentials is associated with higher earnings (College Measures , 2013). A recent report found that 20.4% of adults in the Baltimore Metropolitan Region without a high school diploma are unemployed, compared with an overall 9.7% unemployment rate (Opportunity Collaborative, 2014).

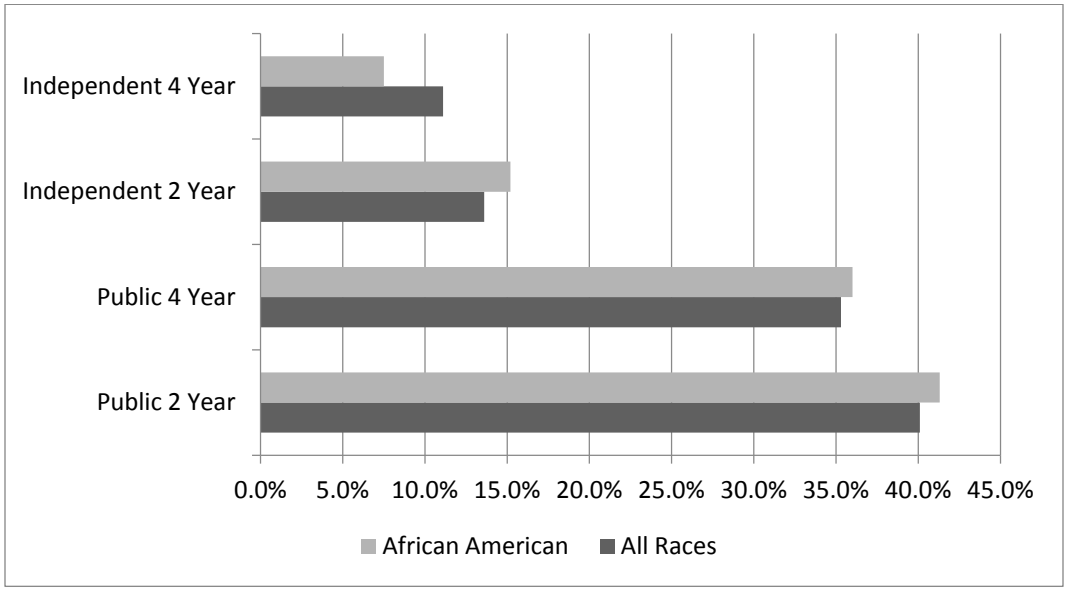
In Fall 2013, approximately 2,400 high school graduates in Baltimore enrolled into a post-secondary institution, representing 50.6 %of recent high school graduates (See Figure 24). Since 2008, college enrollment of Baltimore City graduates has consistently been trailing the statewide average by about 14 percentage points. A similar share of the African American and White high school graduates in Baltimore City appears to be enrolling in college. In 2011, 70.9% of all Maryland high school graduates enrolled in a college or university across the country; only 57% of all Baltimore City high school graduates enrolled in a college or university during that same time period (Maryland State Department of Education, 2014h; Maryland State Department of Education, 2014s). Black/African Americans followed a similar pattern exhibited by all races in terms of the types of schools attended. The majority of Baltimore City graduates attended public institutions, with a slightly higher share attending two year institutions (Maryland Higher Education Commission, 2014a).

FIGURE 24: COLLEGE ENROLLMENT 12 MONTHS AFTER HIGH SCHOOL GRADUATION



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 25: ENROLLMENT BY COLLEGE TYPE OF FIRST TIME, FULL TIME FRESHMEN FROM BALTIMORE CITY, FALL 2013



SOURCE: MARYLAND HIGHER EDUCATION COMMISSION

COLLEGE READINESS

Completing high school is not the same as being prepared for college. While there are not any universally accepted definitions or indicators of college readiness there is work underway to fill that gap. Various actors have been working to define college readiness and identify indicators that can adequately measure progress towards college readiness goals:

- The Bill and Melinda Gates Foundation invested in the development of College Readiness Indicator Systems (CRIS) framework, which identified three factors as key to college success: academic preparedness, academic tenacity and college knowledge (John W. Garden Center, 2014).
- Achieve Inc., a nonprofit organization working to reform the educational system to improve college and career readiness of high school graduates, defines college readiness as possessing the "English and mathematics knowledge and skills necessary to qualify for and succeed in entry-level, credit bearing college course without the need for remedial coursework" by the time a student earns a high school diploma (Achieve, Inc., 2014).
- The US Department of Education has pushed states to adopt and improve college and career readiness standards and develop systems to measure progress. It has encouraged states to work with post-secondary institutions to ensure that standards and curricula reflect the expectations and demands of higher institutions. New programs and grant opportunities have been developed to offer support for states to meet the challenges ahead (US Department of Education, 2011).

"Students will receive an education that not only leads to a high school diploma, but also success in college, career, and life after graduation"

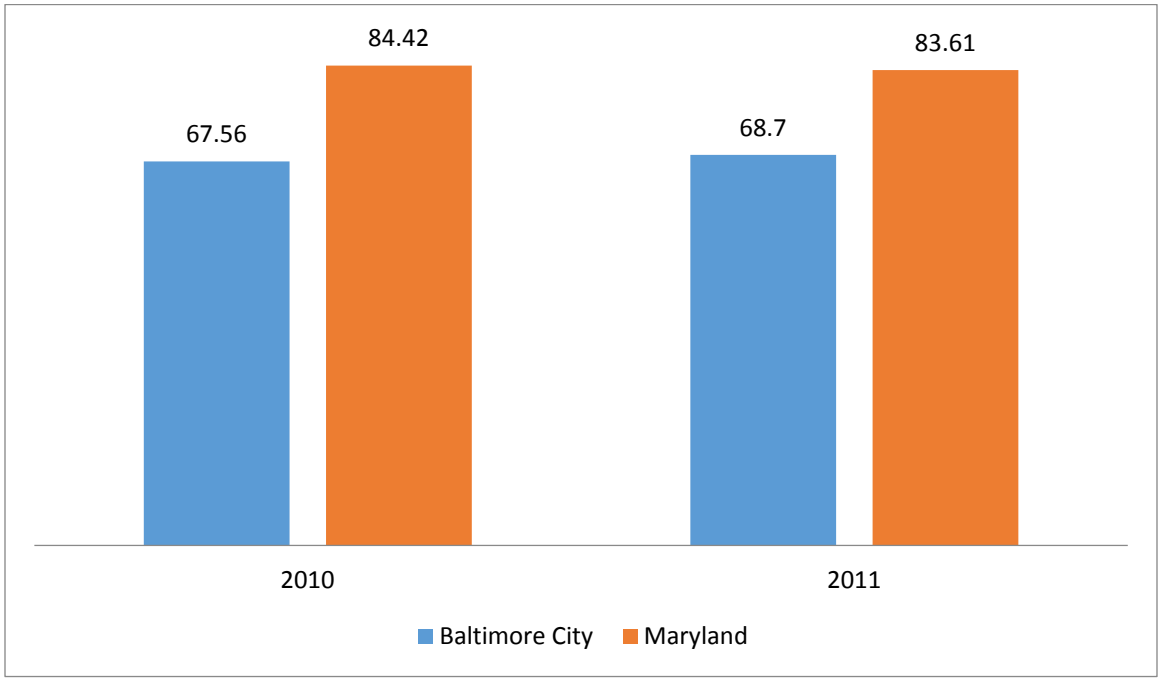
(Maryland State Department of Education, 2014, p. 1).

In recent years, Maryland has been revising and developing education standards so that "as students' progress through the grades, they will build the skills and the demand of the 21st century workplace" (Maryland State Department of Education, 2014, p. 1). Currently, the Maryland State Department of Education utilizes the **5-Year Adjusted Cohort Graduation Rate** and the **College and Career Preparation (CCP)** to measure the college and career readiness of students. High school graduates who meet at least one of the following criteria are considered successful for CCP:

- Earn at least a 3 on an Advanced Placement (AP) exam or at least a 4 on an International Baccalaureate (IB) exam
- Obtain advanced standing in a career and technology program
- Enrolled in a post-secondary institution within 16 months of completing high school. (Maryland State Department of Education, 2012)

Although limited, existing CCP data shows that Baltimore City students are trailing their state counterparts in terms of college and career readiness. About 70 percent of students are prepared for college, while the state average is approximately 85 percent (See Figure 25).

FIGURE 26: PERCENTAGE OF STUDENTS MEETING CCP REQUIREMENTS



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

Following recent movements across the nation, efforts are underway to improve the current system to better define and measure college and career readiness. At the center of revising standards and increasing accountability in college and career readiness in Maryland is PARCC. On October 2012, the PARCC Governing Board and the Advisory Board Committee finalized the academic knowledge and skills a student must demonstrate in high school to be recognized as college and career ready:

> Students who earn a College and Career Ready Determination by performing at level 4 in ELA/literacy and enroll in College English Composition, Literature, and technical courses requiring college – level reading and writing have approximately a 0.75 probability of earning college credit by attaining at least a grade of C or its equivalent in those courses.
>
> Students who earn a PARCC College- and Career-Ready Determination by performing at level 4 in mathematics and enroll in College Algebra, Introductory College Statistics, and technical courses requiring an equivalent level of mathematics have approximately a 0.75 probability of earning college credit by attaining at least a grade of C or its equivalent in those courses. (PARCC, 2012 , p. 4)

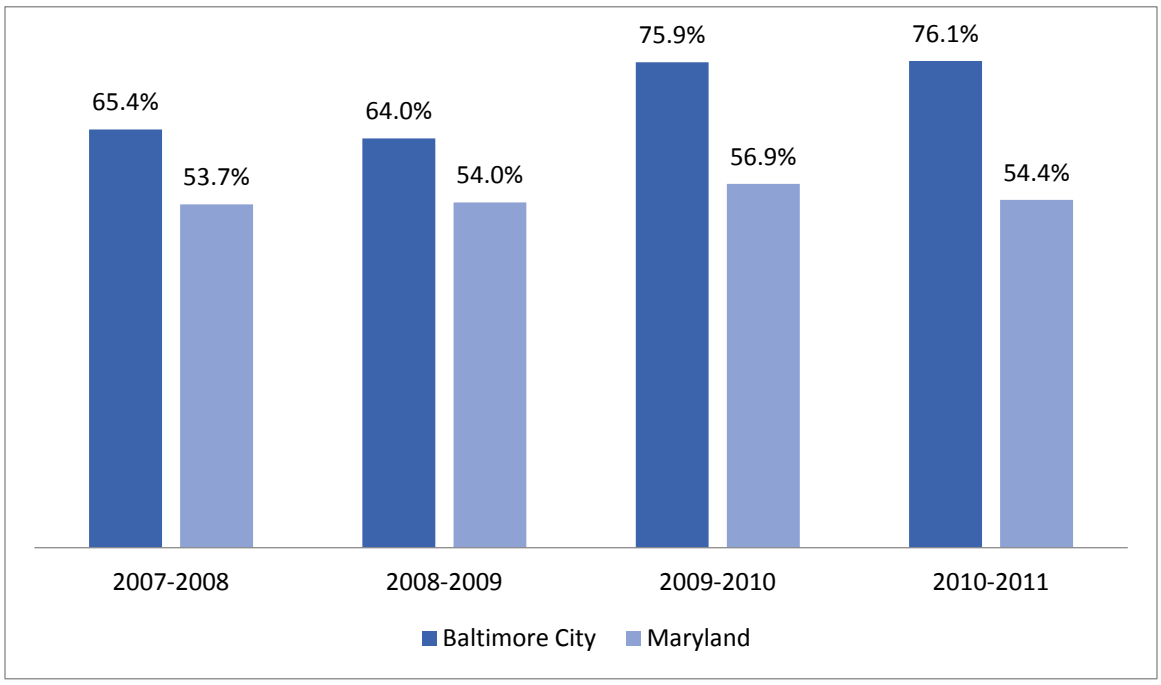
PARCC acknowledges that the above standards only measure academic factors and do not address the non-academic factors that contribute to the college readiness of students. States will need to supplement the information provided by PARCC in order to obtain a broader

understanding of the college readiness of its student population (PARCC, 2012 , pp. 3-4).

In Maryland, the College and Career Readiness Completion Act of 2013 (effective 7/1/13) introduced new high school curriculum and graduation requirements in Maryland. By **the 2015-2016 school year, students must be assessed for college readiness using acceptable college placement cut scores.** Students who are not achieving college readiness by the end of grade 11 will be placed in transition courses, which will be implemented by the 2016-2017 school year. By December 2014 and every two years thereafter, the Governor's P-20 Leadership Council must report to the General Assembly on the progress of implementing college and career readiness and college completion strategies (Oliver & Gilli, 2013). *Additional information on these efforts will inform the tracking of this indicator.*

As referenced in the performance standards of PARCC, part of being college ready is the ability to pass entry-level courses without the need for remedial courses. **Remediation** is costly and students who attend remediation courses are less likely to graduate (National Conference of State Legislatures, 2014). The high rate of remediation required across the country is a reflection of the disconnection between post-secondary institutions and the K-12 system (National Conference of State Legislatures, 2014). Compared to the state, **a larger share of Baltimore City graduates are in need of remediation when enrolling in college** (See Figure 27). Over three-quarters (76.1%) of Baltimore City graduates require remediation, well above the statewide average of 54.4 percent. Among the 24 jurisdictions in Maryland, Baltimore City ranks number one, followed by Garrett County (72.6 percent) and Washington County (70.3 percent).

FIGURE 27: REMEDIATION RATES OF RECENT HIGH SCHOOL GRADUATES BY PLACE OF RESIDENCE



SOURCE: MARYLAND HIGHER EDUCATION COMMISSION

RISK & PROTECTIVE FACTORS

Baltimore City acknowledges that significant changes will need to be made in order to enhance our schools and improve the educational outcomes of our students. Studies have shown that both individual and system (i.e. schools, family, and community) level factors have an effect on college readiness. **Many of the risk and protective factors associated with high school graduation and college readiness build upon those discussed for the outcomes of school readiness and grade-level performance.**

Recently, new Baltimore City Schools CEO and Baltimore's Promise Board of Directors Member, Dr. Gregory Thornton, said that tackling college readiness will be a "major part of the reform effort moving forward." However, he underscored that p**reparing students for college must be a multifaceted, systemic approach that starts as early as kindergarten** (Green, 2014).

> Many of our kids don't come to high school ready, and then the high school carries the weight of it all . . . As we look down the road, this is not a high school initiative, it's a K-12 initiative. ... [Students] are obviously not getting the opportunities throughout that are required for them to be successful.
>
> *Gregory E. Thornton, EdD., CEO, Baltimore City Public Schools, in Green, 2014*

Some of the risk and protective factors associated with high school graduation and college and career readiness include the following:

- *Family characteristics* – A family structure that can provide a stable home, set academic aspirations for students, and offer supplemental resources can facilitate success (Kim , 2008).
- *Socioeconomic background* – Nonacademic factors that impede a student's academic achievement are often related to poverty. Research has shown that "poverty keeps students from attending school regularly, diminishes their ability to pay attention in class, and undermines a foundational driver of positive student behavior" (Balfanz, 2013). Wightman & Danziger (2014) found that young adults from low-income families were significantly less likely to complete high school than those from middle- and upper-income families, and that those young adults whose parents had grown up in a low-income home (i.e., their grandparents had low incomes) had a significant association with not completing high school.
- *School environment* – Certain characteristics of schools have shown to be positively correlated with college readiness. In general, schools that provide high quality teaching, offer challenging curriculum, and provide resources to help students overcome academic and non-academic barriers have led to improvements in high school completion (Legters & Blalfanz, 2009).
- *Student characteristics* – Student characteristics include an individual's attitude towards school, level of engagement with peers and teachers, and academic commitment (Stewart, 2007). These individual factors are shaped early in the student's academic career and largely dependent on the other factors mentioned above.

Nationally, of the four million first-time freshmen who entered high school in 2005, nearly a quarter did not graduate with their class (Chapman, Laird, Ifill, & KewalRamani, 2011). In 2013, 86.8 percent of all 9th graders in Maryland were promoted to 10th grade; in Baltimore City, only 65.5% of 9th graders were promoted to 10th grade (Maryland State Department of Education, 2014f).

Much effort has been expended attempting to understand the factors that influence a student's decision to drop out and develop strategies to encourage retention. Rumberger (2012) argued that both institutional and individual perspectives are essential in conceptualizing determinants of academic performance. It is hard to overemphasize the impact of context in considering a complex phenomenon such as dropout. Even after controlling for student characteristics such as racial and ethnic background, socio-economic status and initial academic skills, the school has a distinct impact on student-level academic performance and psycho-social functioning (Rutter & Maughan, 2002). As noted earlier, school-level concentrations of student risk factors such as lead exposure, child maltreatment and homelessness can have a measurable impact on individual student academic outcomes (Bryk, Sebring, Allensworth, Easton, & Luppescu; 2010; Fantuzzo, LeBouef & Rouse, 2014).

The risk and protective factors are a mix of input and process factors. Input factors include the demographic and academic composition of the school; structural resources; student race/ethnicity, gender and socioeconomic background. These are factors over which schools have little or no control. In contrast, process factors are malleable and open to intervention at the individual and/or institutional level. These include availability and distribution of key resources such as qualified teachers, parent liaisons, counseling staff, and class size as well as many of the intangibles that contribute to school climate (Caldas, 1993; Lamdin, 1996).

As noted above, attendance is critical to student success. A growing body of research have linked poor attendance to difficulties in reading and math (Carroll, H. 2010; Dunn, Kadane & Garrow, 2003) non-promotion (Neild & Balfanz, 2006) and dropout (Rumberger, 1995; Jimmerson et al., 2000, Schoeneberger, 2012).

Bowers and Sprott (2012) have identified four main factors or conditions that contribute to student dropout: (1) consistent academic struggles; (2) becoming bored or disengaged with the educational process; (3) displaying behaviors that are disruptive in the school environment; and, (4) quiet disengagement due to life events. Student-level performance measures such as low-course credits in the ninth grade, course failure in English or Math , and current semester GPA have been found to be most effective at detecting the largest proportion of future dropouts (Bowers, Sprott, & Taff, 2013).

Other risk and protective factors frequently used by researchers to predict dropouts, such as attendance, behavior, and course grades in sixth and eighth grades (Balfanz, Herzog, & Mac Iver, 2007) are highly accurate but do not fully capture all of the youth who are most at-risk for dropout. However, these indicators can work as both a flag for identifying students in need and a preliminary assessment of a child's individual need (Bowers, Sprott, & Taff, 2013).

These risk and protective factors tend to focus directly on student behaviors and outcomes, which cannot be fully understood outside the context of the family and the community. As more and richer sources of administrative data have become available researchers have begun to link data sets, allowing them to model the impact of multiple sources of risk over time. This has shed some light on the unique and combined effects that a child's family and financial background can have on their prospects of academic success. For example, a recent study of a cohort of third graders attending Philadelphia Public Schools found that children who had stayed in emergency shelter as an infant were more likely to have poor math achievement and higher rates of truancy (Fantuzzo, LeBoeuf, Brumley, & Perlman, 2013).

As we strive to impact student outcomes it is important that educators look outside of the classroom to family and community factors that can impact a student's ability to engage in school. For example, the economic downturn and the recession that followed have created conditions for homelessness to infiltrate middle class families (Duffield & Lovell, 2008). The National Center for Homeless Education (NCHE, 2012) reported an 11 percent increase in students who were identified as homeless by school districts between 2009 and 2011, with over one million students reported spending a portion of the school year homeless. Baltimore City Public Schools reports that the number of students identified as homeless has doubled from 2008 to 2013. In the 2012-2013 school year, 2,716 students in Baltimore City Schools were identified as homeless (Baltimore City Public Schools, 2014b).

Taking into account factors outside of school is especially critical in traditionally underserved communities. Housing stability, child protection, and behavioral health problems are among the barriers that prevent students from learning even before they set foot on school grounds. Experiences of maltreatment and neglect have been linked to poor school outcomes including higher rates of retention, absenteeism, lower grade point averages and lower standardized test scores (Romano, Babchishin, Marquis, & Frechette, 2014). Likewise, researchers have found that students with anxiety and depression are more likely to experience learning delays and poor academic achievement (Romano et al., 2014).

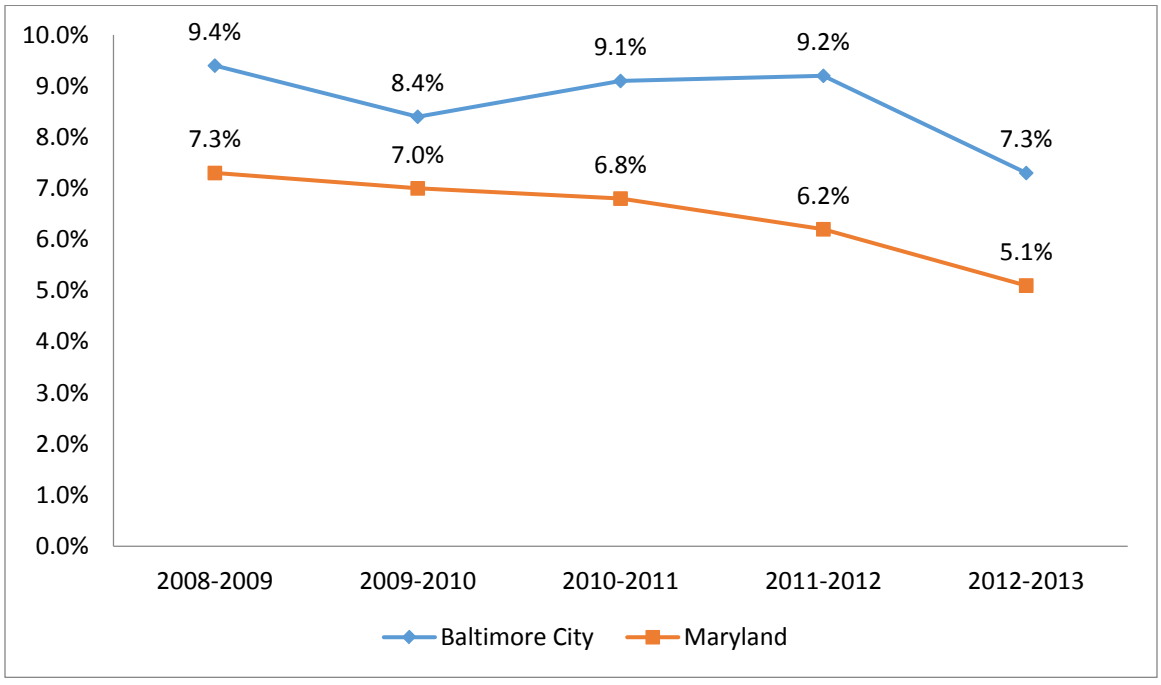
Neighborhood-level risk factors also seem to play an outsized role in determining the academic outcomes of their residents, especially among minority youth. In one study, non-black children living in the most disadvantaged neighborhoods were seven percent less likely to graduate compared to students in the most advantaged neighborhoods, whereas black youth in the same neighborhoods were 20 percent less likely to graduate (Wodtke, Harding & Elwert, 2011). In addition there seems to be a dosage effect: the more time an individual lives in relative disadvantage, the stronger the negative effects (Crowder& South, 2011). This is compounded by the negative effects that exposure to violence and trauma can have on students' rates of absenteeism, suspensions, standardized test scores, and GPA (Lepore & Kleiwer, 2013; Sharkey, Schwarts, Ellen & Lacoe, 2014). All of these risk factors are significantly associated with a reduced likelihood of graduation (Bowers & Sprout, 2013).

Baltimore City has implemented innovative interventions in an attempt to improve high school completion among its students. In 2008, Baltimore City Public Schools initiated an effort to address high-levels of absenteeism among their students. A workgroup consisting of district staff and community partners helped to bring resources and new perspectives on the effect of

chronic absenteeism on student achievement. This led to the development of the Office of Achievement and Accountability, which has spearheaded efforts to provide school personnel with the tools they need to identify student who are most at risk of not graduating. Individual and aggregate data concerning early warning signs of dropout, based on the research conducted in Baltimore by Balfanz et al. (2007), are presented to key school and district level staff via a data dashboard. This effort promises to provide district and school staff with the information they need to identify youth who are at risk of eventual drop out, providing an opportunity to assess district, school and individual progress toward graduation.

These and other efforts such as the prioritization of evidence based interventions over suspension, the strengthening of students support teams and increased capacity for alternative school placements represent significant opportunity to build on current momentum towards improving outcomes for the most vulnerable student in Baltimore. The opportunity for success is evidenced by the district-wide reduction of suspensions from 7,354 in the 2008-2009 school year to 5,822 in the 2012-2013 school year (National KIDS Count, 2008-2012g).

FIGURE 28: PERCENTAGE OF STUDENTS SUSPENDED FOR ANY REASON DURING THE SCHOOL YEAR, BALTIMORE CITY AND MARYLAND



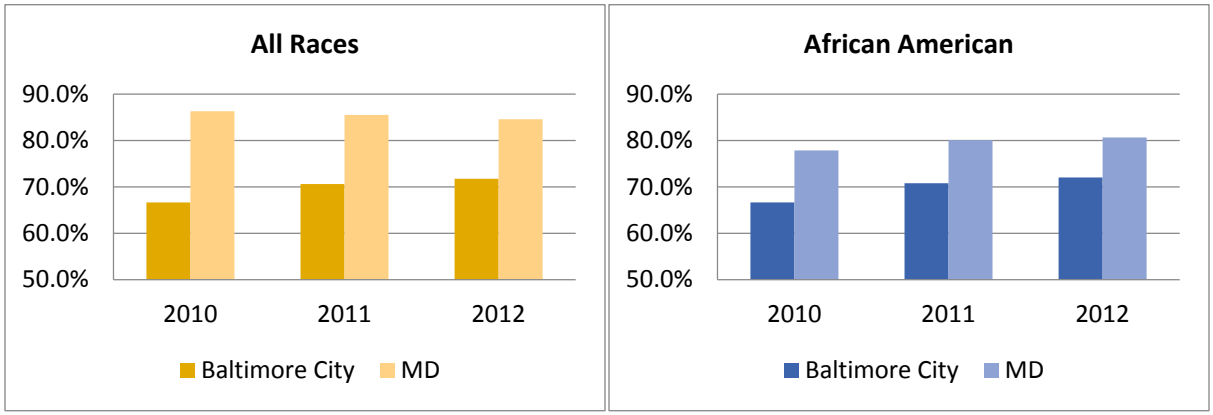
SOURCE: NATIONAL KIDS COUNT, KIDS COUNT DATA CENTER

Additional work is needed to deconstruct the factors affecting high school completion into their component parts so that providers can tailor interventions to meet student needs. For example, although it is well established that absenteeism is positively correlated with the risk for a multitude of poor outcomes, including lower standardized test scores in reading and math (Dunn et al., 2003; Gottfried, 2009; Lambin, 2001), increased risk of retention and eventual dropout

(Balfanz et al., 2007; Barrington & Hendricks, 1989; Jimmerson et al., 2000, Schoeneberger, 2012), a direct focus on attendance can distract us from identifying personal or family troubles that will continue to interfere with academic success regardless of attendance. A broader conception of the determinants of high school graduation and subsequent post-secondary enrollment is necessary in order to improve the educational outcomes of the most vulnerable population and strengthen the pathways to education and labor market successes.

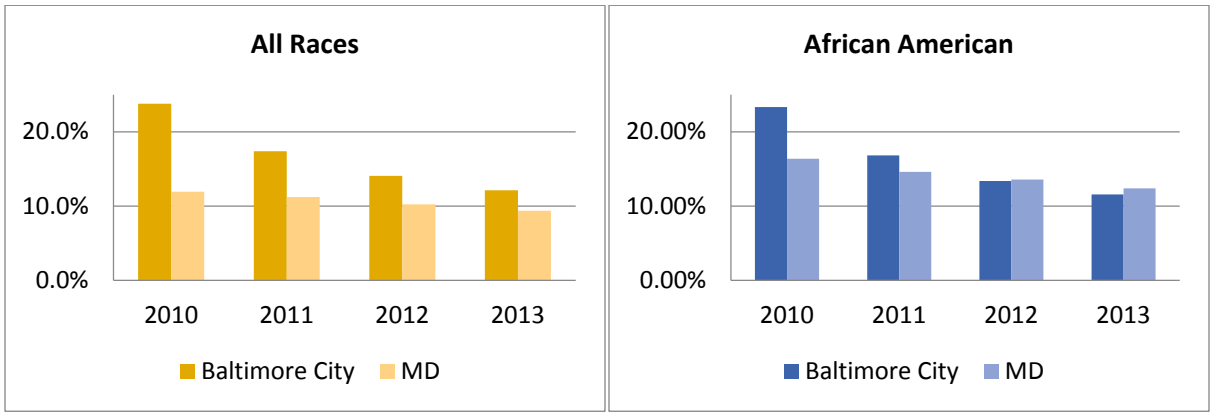
YOUTH GRADUATE FROM HIGH SCHOOL PREPARED DATA SNAPSHOT

FIGURE 29: 5 YEAR ADJUSTED COHORT HIGH SCHOOL GRADUATION RATE, BY 4-YEAR GRADUATING CLASS YEAR



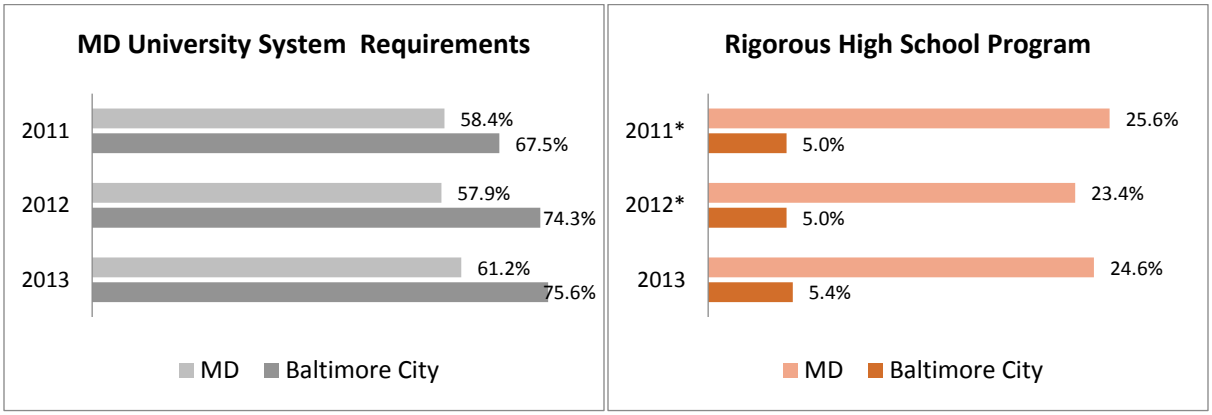
SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 30: 4 YEAR ADJUSTED DROPOUT RATE



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

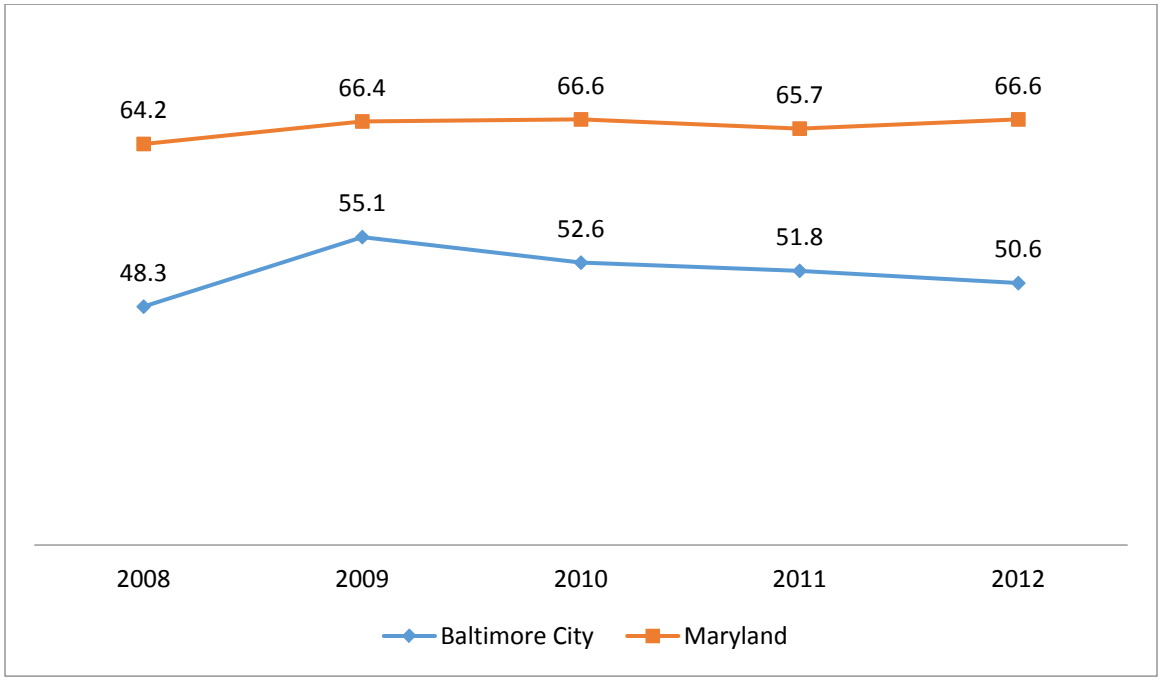
FIGURE 31: PERCENTAGE OF STUDENTS WHO MEET THE HIGH SCHOOL PROGRAM COMPLETION REQUIREMENTS, BALTIMORE CITY AND MARYLAND



* Actual percentages were not published. Source only indicated that the percentages 5 5.0 percent or below.

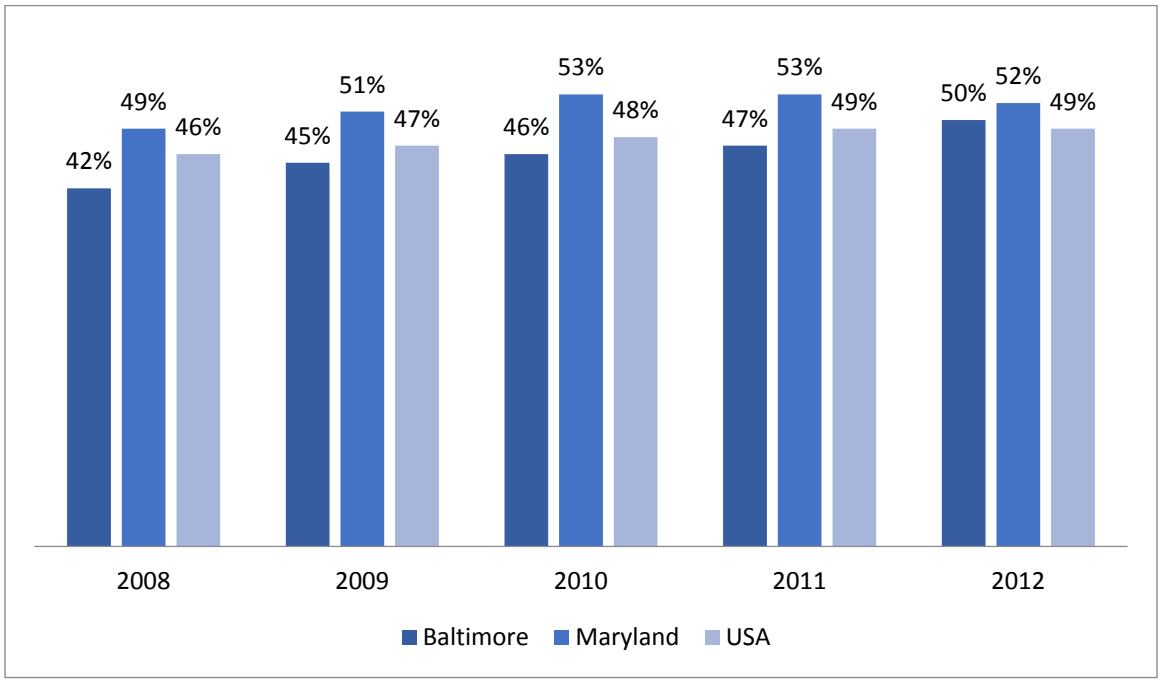
SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 32: NATIONWIDE COLLEGE ENROLLMENT 12 MONTHS AFTER HIGH SCHOOL GRADUATION



SOURCE: MARYLAND STATE DEPARTMENT OF EDUCATION, MARYLAND REPORT CARD

FIGURE 33: YOUNG ADULTS (18-24) ENROLLED IN OR COMPLETED COLLEGE



SOURCE: NATIONAL KIDS COUNT, KIDS COUNT DATA CENTER

OUTCOME 5: YOUTH EARN A POST-SECONDARY SCHOOL CREDENTIAL OR RECEIVE VOCATIONAL TRAINING AND ARE CAREER READY

Recent movements in education reforms have evolved from focusing on high school completion to a broader outlook encompassing post-secondary outcomes. As discussed above, existing literature has supported the strong connection between higher education and the future livelihood of individuals and the competitive status of the nation. Not only do college graduates experience higher salaries and lower unemployment rates, they also have expressed higher satisfaction with their jobs (Pew Research Center, 2014). In response to the demand for improvements in post-secondary educational outcomes, the U.S. Department of Education has pushed college and career readiness to the forefront of education reform:

> Today, more than ever, a world-class education is a prerequisite for success. America was once the best educated in the world. A generation ago, we led all nations in college completion, but today, 10 countries have passed us. . . . We must do better. Together, we must achieve a new goal, that by 2020, the United States will once again lead the world in college completion. We must raise the expectations for our students, for our schools, and for ourselves—this must be a national priority. We must ensure that every student graduates from high school well prepared for college and a career. (U.S. Department of Education, 2010, pp. 1-2)

The future landscape of Baltimore City will hinge on the ability of our youth to successfully transition to their adult lives and compete in the labor market. Measuring progress towards the outcome, y*outh earn post-secondary school credentials or receive vocational training and are career ready,* will require the consideration of post-secondary completion and career readiness. The three indicators listed below address the primary components of Outcome 5:

- Degree Completion: The completion of a post-secondary degree or certification program
- Educational attainment: The highest level of education completed for young adults aged 18 -24.
- Youth unemployment: Individuals aged 16 – 24 who are currently in the labor force and unemployed

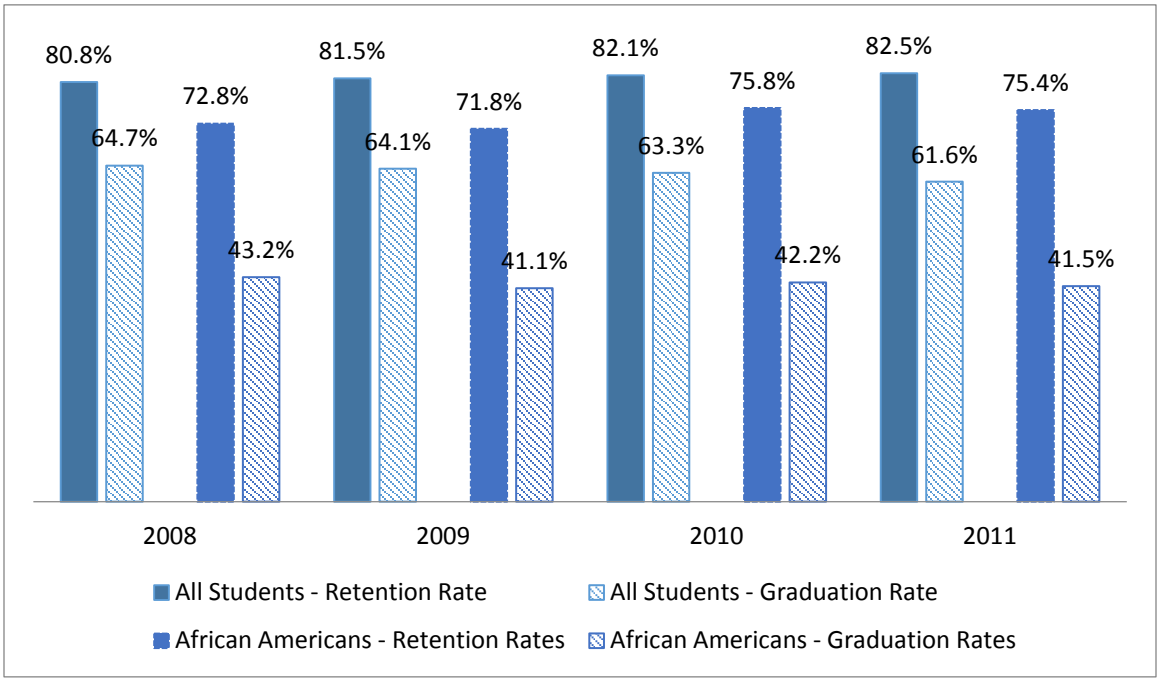
The Maryland's Children's Cabinet and the Governor's Office for Children measure the extent to which children are successfully transitioning into adulthood by examining educational attainment and youth employment. Degree completion should be added to the list of indicators in order to measure progress towards the acquisition of post-secondary credentials. Degree completion reveals how many students are persisting through their post-secondary education and finishing in reasonable time.

DEGREE COMPLETION

Postsecondary degree attainment has lasting consequences as it is estimated that 78 percent of jobs will require skills attained beyond a high school diploma (Future of the U.S. Workforce, 2012). However, the benefits of post-secondary education are not accrued to an individual who does not complete the degree. Therefore, it is also important to track the retention rates of students, or the rate of students who return to the school after the first year. Low retention rates can be a reflection of broader challenges that require additional support and services from institutions (Valentine, Hirschy, Bremer, Novillo, Castellano, & Banister, 2011, p. 215). Post-secondary institutions with low retention rates often also record low graduation rates. Among four year public institutions in Maryland, University of Maryland – College Park posted the highest retention rates among new, full time freshmen enrolling during the fall of 2011 (93.7 percent) and the highest 2011 six year cohort graduation rate (81.9 percent). Coppin State University registered the lowest retention rate at 65.4 percent and also posted the lowest graduation rate at 19.7 percent.

Differences in graduation and retention rates are also evident across racial groups. Figure 34 shows the graduation and retention rates among all students and African American students attending four year public institutions in Maryland. The graduation rate refers to the six year cohort graduation rate, meaning the 2011 graduation rate refers to students who initially enrolled as first-time, full-time freshmen during the fall of 2006. The 2011 retention rate refers to the proportion of first-time, full time students who enrolled in the fall of 2011 and returned to continue their second year. The rates for black/African American students were isolated to illustrate the racial disparities in retention and graduation rates. Additional information on retention and graduation rates broken down by four-year public institution, race, and receipt of Pell grants is available from the Maryland Higher Education Commission's 2014 Data Book (see http://www.mhec.state.md.us/publications/research/AnnualPublications/2014DataBookL.pdf).

FIGURE 34: STATEWIDE RETENTION AND GRADUATION RATES FOR MARYLAND'S FOUR-YEAR PUBLIC INSTITUTIONS



SOURCE: MARYLAND HIGHER EDUCATION COMMISSION

In recent years, the state retention rates have remained steady at about 80.0 percent, increasing from the 70 percentile range. The retention rates for African American students continue to be below the statewide averages, hovering around 70.0 to 75.0 percent. The racial disparity is more evident in the graduation rates. In 2011, the six-year graduation rates for all student was 61.6 percent, while the graduation rates for African American students was 20.1 percentage points lower at 41.5 percent. This gap has consistently remained above 20 percentage points. Exploration of this gap will require an in-depth look at the varying rates at different public institutions as well as across populations and student characteristics, as the rates vary considerably from one institution to another.

Another alternative to college that students can take in order to acquire post-secondary credentials is receiving a vocational education. In particular, post-secondary vocational training can be a viable option for youth who have faced barriers and challenges within the traditional K-12 education system. These programs offer affordable and flexible options that can lead to living wage employment. Table 13 highlights the wages for occupations in the Baltimore City metropolitan statistical area that require training after high school but do not require a four year college degree.

TABLE 13: SELECTED HIGH DEMAND OCCUPATIONS, 2013

Occupation	Average Hourly Wage	Education Requirement
Registered Nurses	$37.14	Associate's Degree
Computer Support Specialists	$26.93	Some college, no degree
Paralegals and Legal Assistants	$24.98	Associates degree
Licensed Practical and Licensed Vocational Nurses	$24.45	Postsecondary non-degree award
Civil Engineering Technicians	$23.13	Associates degree
Heating, Air Conditioning, and Refrigeration Mechanics and Installers	$22.71	Post-secondary non-degree award
Emergency Medical Technicians and Paramedics	$20.69	Postsecondary non-degree award
Dental Assistants	$17.49	Postsecondary non-degree award
Veterinary Technologists and Technicians	$15.36	Associates degree
Nursing Aides, Orderlies, and Attendants	$13.64	Postsecondary non-degree award

SOURCE: BALTIMORE REGIONAL TALENT DEVELOPMENT PIPELINE STUDY, 2013

In Maryland, approximately 30,000 students attend private career schools to receive training and credentials in a wide range of occupations, including allied health, computer, cosmetology/barber, real estate, tax, and truck driving/mechanics. Overall, private career schools exhibit a 70 percent completion rate and a 60 percent employment rate (Maryland Higher Education Commission, 2014a). Figure 35 provides more detailed information by occupational sectors. The Truck Driving/Mechanics programs registered the highest completion and employment rate, 78 percent and 71 percent respectively. The cosmetology/barber sector posted the lowest completion rate at 53 percent. The lowest employment rate was recorded by Allied Health (51 percent) (Maryland Higher Education Commission, 2014a).

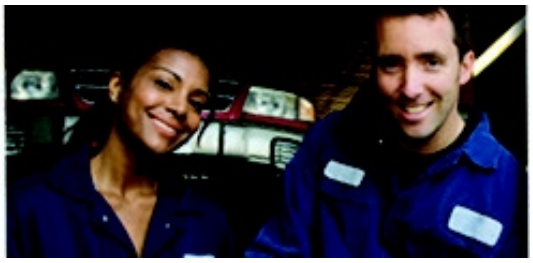
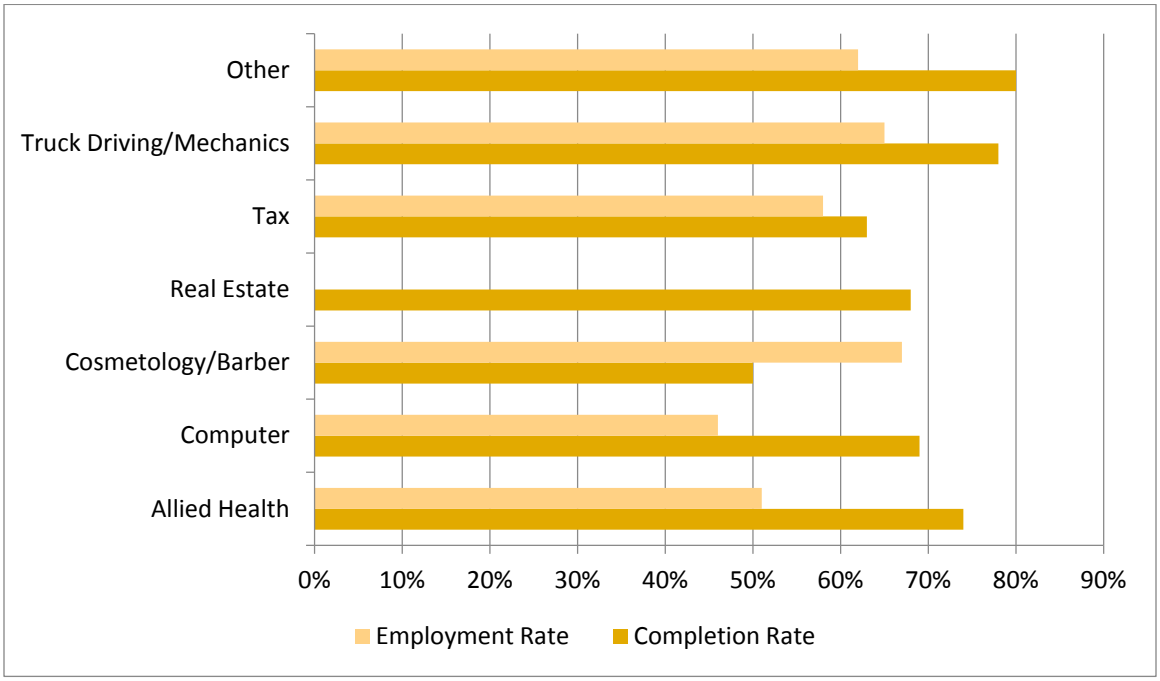


FIGURE 35: EMPLOYMENT AND COMPLETION RATE OF PRIVATE CAREER SCHOOLS IN MARYLAND BY SCHOOL TYPE FOR STUDENTS ENROLLED JULY 2011 – JUNE 2012



SOURCE: MARYLAND HIGHER EDUCATION COMMISSION, PRIVATE CAREER SCHOOLS ANNUAL REPORT, 2014

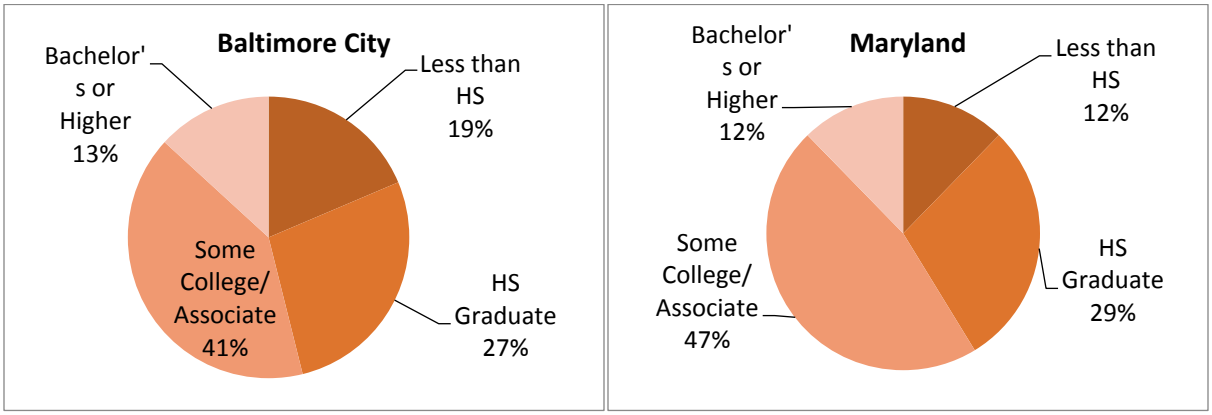
EDUCATIONAL ATTAINMENT

Educational attainment is a measure of the human capital available in an area. Cities around the nation are competing to attract educated workers since they induce knowledge sharing, spur innovations, and increase productivity (Gennaioli, La Porta, Lopez-de-Silanes, & Shleifer, 2011). Education attainment can also be a telling factor of the existing social inequality in an area. Lower educated individuals are more likely to live in poverty and experience unemployment. In Baltimore City, the poverty rate for individuals with less than a high school education was 33.0 percent and the unemployment rate was 24.6 percent (US Census Bureau, 2008-2012a). In comparison, the poverty rate for individuals with at least a bachelor's degree was 7.5 percent and the unemployment rate was 3.9 percent (US Census Bureau, 2008-2012a).

Figure 36 compares the highest educational attainment of young adults (18-24) living in Baltimore City to the statewide average. The proportion of the young population with a bachelor's degree is similar between the state and Baltimore City. The major disparity between the state and the city can be found among young individuals with less than a high school diploma or some college/associates degree. **A larger share of the young adult population in Baltimore City has not received a high school diploma**, 18.6 percent in Baltimore compared to 12.3 percent for

the state. Furthermore, 46.5 percent of the young population in Maryland obtained some college or an associate's degree relative to only 40.7 percent in Baltimore City.

FIGURE 36: EDUCATIONAL ATTAINMENT OF YOUNG ADULTS (AGES 18 -24), 2012



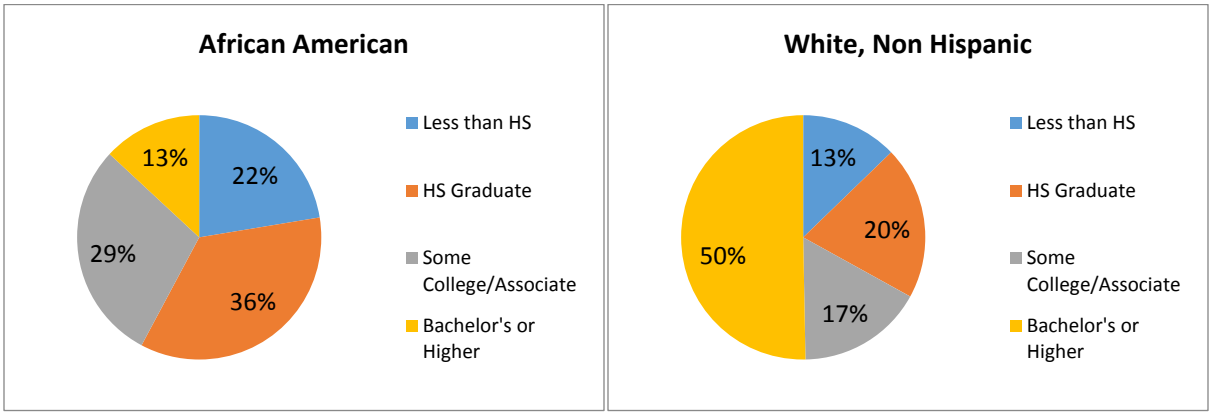
SOURCE: US CENSUS BUREAU, 2012 AMERICAN COMMUNITY SURVEY (1 YEAR SURVEY)

Educational attainment also has been found to vary by income status and ethnicity (Stillwell, Sable, & Plotts, 2011). While low-income students enter postsecondary education at high rates, they are less likely than non-low income students to earn a postsecondary degree (Stillwell et al., 2011). For low-income young adults, 51 percent of white students enrolled in college compared to 37 percent of black/African American students. Of these students, 14 percent of white students compared to 6 percent of black students earned a college degree (Stillwell et al., 2011).

Figure 37 exhibits the educational distribution of the black/African American and white populations (ages 25+) in Baltimore City. The educational gap between the two racial groups is evident: approximately half of the White population living in Baltimore City possess a bachelor's degree or higher, compared to only 13 percent of the African American population. The

educational attainment group with the largest proportion of the African American population is high school graduate or equivalent, accounting for 36 percent. Furthermore, a notable minority (22 percent) of the African American population living in Baltimore City did not complete high school.

FIGURE 37: EDUCATIONAL ATTAINMENT FOR POPULATION AGES 25+, BALTIMORE CITY, 2012



SOURCE: US CENSUS BUREAU, 2012 AMERICAN COMMUNITY SURVEY (1 YEAR SURVEY)

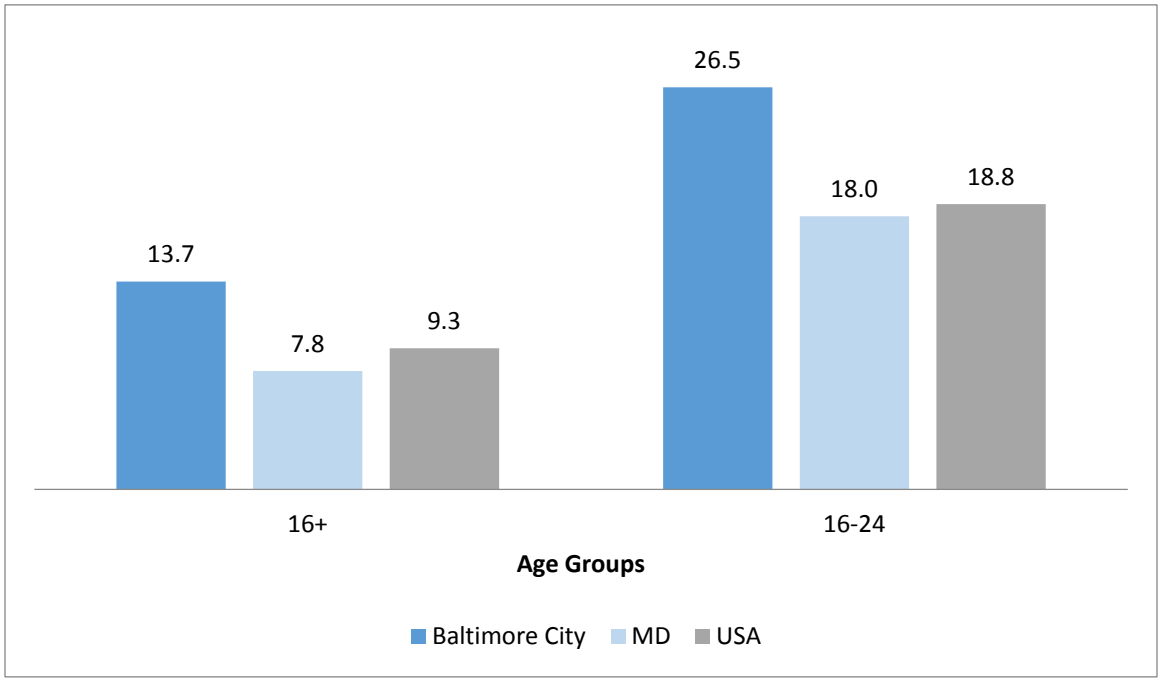
YOUTH UNEMPLOYMENT

Youth unemployment is one indicator that measures if a youth possess the required basic skills and knowledge to successfully function in an entry-level position (Conley, n.d.). Employment during this age group is critical as it can have persistent effects on an individual's future employment opportunities and earnings (Kawaguchi & Murao, 2014). Kawaguchi & Murao (2014) found that youth who experienced higher unemployment rates between ages 16 -24 tended to face higher unemployment rates during the ages of 25 – 34. Furthermore, summer employment plays an important role in introducing new young entrants to the labor force, especially for low income and minority teens who have limited connections and knowledge of the job market (Harris, 2007).

The labor market in Maryland is faring slightly better than the nation. According to the 2008 – 2012 American Community Survey, the 2012 unemployment rate for Maryland at 7.8 percent was 1.5 percentage points below the nationwide unemployment rate of 9.3 percent. For both geographic areas, the youth unemployment rate was significantly higher. The unemployment rates for Maryland and the nation was at roughly 18 percent.

Relative to the state and the nation, the labor market in Baltimore City has experienced bigger challenges. The city's unemployment rate continues to be in the double-digits, at 13.7 percent. The young population have fared worst with unemployment rate at a staggering 26.5 percent.

FIGURE 38: UNEMPLOYMENT RATES FOR POPULATION AND YOUNG ADULT (16-24) POPULATION



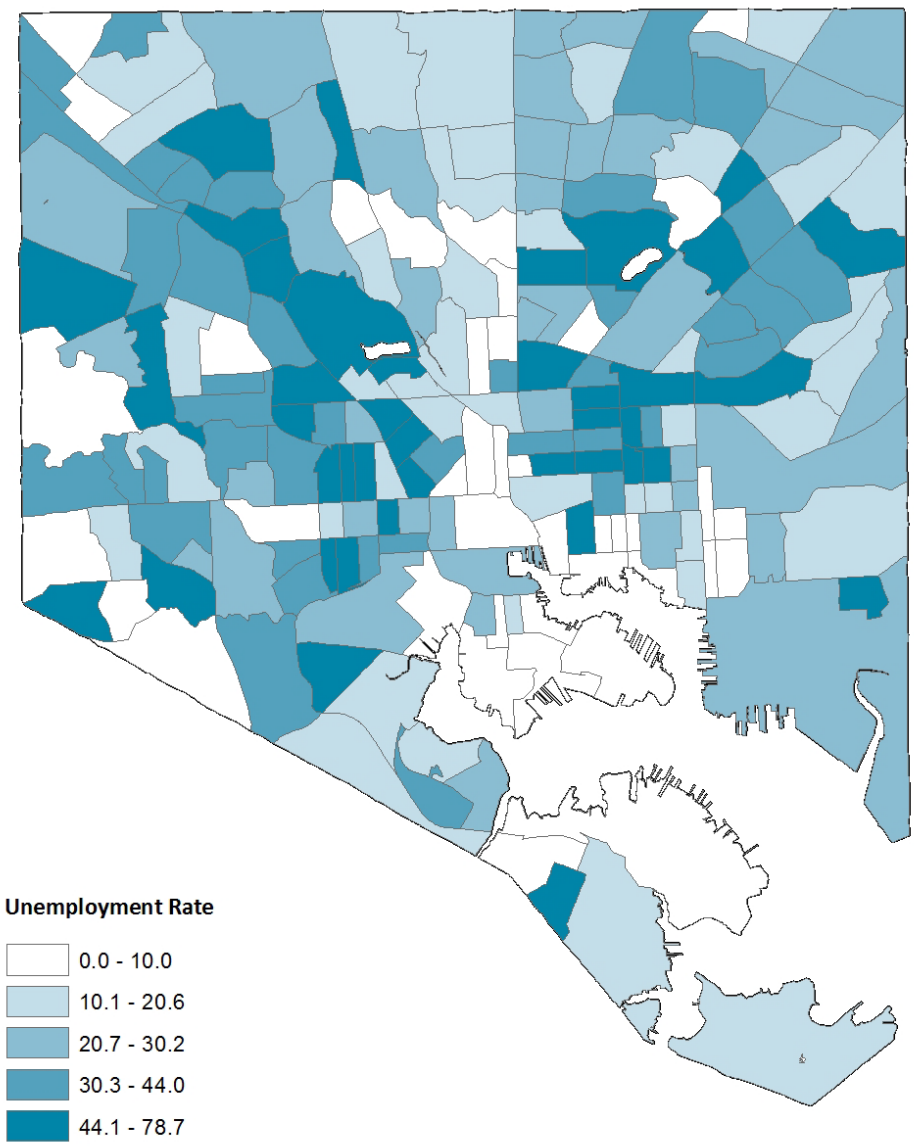
SOURCE: US CENSUS BUREAU, 2008-2012 AMERICAN COMMUNITY SURVEY (5 YEAR SURVEY)

TABLE 14: 2011 RETENTION RATES AND 6-YEAR COHORT GRADUATION FOR MARYLAND'S FOUR YEAR PUBLIC INSTITUTIONS

	Retention Rates			Graduation Rates		
	All Students	African American	Difference	All Students	African American	Difference
Maryland	82.5%	75.4%	7.1	61.6%	41.5%	20.1
Bowie State University	71.3%	72.3%	-1.0	37.1%	37.4%	-0.3
Coppin State University	65.4%	63.7%	1.7	19.7%	19.2%	0.5
Frostburg State University	72.1%	75.9%	-3.8	52.4%	47.4%	5.0
Salisbury University	83.1%	78.8%	4.3	73.1%	70.4%	2.7
Towson University	85.5%	91.1%	-5.6	69.9%	63.0%	6.9
University of Baltimore	72.9%	75.0%	-2.1	-	-	-
University of Maryland - Baltimore County	83.5%	85.0%	-1.5	67.8%	65.3%	2.5
University of Maryland - College Park	93.7%	94.9%	-1.2	81.9%	74.6%	7.3
University of Maryland - Eastern Shore	68.6%	68.1%	0.5	37.0%	37.7%	-0.7
Morgan State University	71.7%	72.2%	-0.5	30.7%	29.9%	0.8
St. Mary's College of Maryland	85.5%	80.4%	5.1	79.4%	60.0%	19.4

SOURCE: MARYLAND HIGHER EDUCATION COMMISSION, 2014

FIGURE 39: MAP OF YOUTH UNEMPLOYMENT RATE (16-24) BY CENSUS TRACT, BALTIMORE CITY, 2008 – 2012



Source: 2008-2012 American Community Survey (5 Year Estimates)

POST-SECONDARY EDUCATION AND CAREER READINESS

When evaluating post-secondary completion and career readiness it is important to be aware of the multiple elements that could contribute to its progression, many of which have been referenced with regard to the other outcome areas:

- *Socioeconomic background* – Various aspects of the socioeconomic background of a student relate to college completion and career readiness. For example, students from low income families are more likely to be first generation students. First generation students tend to be at a relative disadvantage since they do not have parents who are familiar with the college-application or enrollment processes (Demetriou & Schmitz-Sciborski, 2011).

- *Academic preparedness* – One of the most telling indicators of college completion is the student's high school experience. The average national dropout rate for high school was 4.1 percent with dropout rates being higher for males, 3.6 percent versus females, 2.7 percent (Stillwell et al., 2011). Maryland's dropout rate for 2008-2009 was 3.0 percent. There is a disparity in dropout rates in terms of ethnicity status. Almost twice as many Black youth dropout of high school compared to white youth with rates of 3.9 compared to 2.3 youth (Stillwell et al., 2011). The first year of college requires foundational skills that are fostered through high quality schools. Students who are able to obtain good grades from challenging high school course courses are more likely to complete college and earn a degree (DiPrete & Buchmann, 2014). Many youth who struggle with educational opportunities often have had challenges in their childhood and teen years that include living in poverty, living with a single, poorly educated parent, attending low-performing schools, and lacking positive role models (Annie E. Casey Foundation, 2012).

- *College affordability* – Rising tuition has threatened college affordability for many families. Trends have pointed to students increasing employment hours while in school which tends to have negative consequences towards their academic progression. Findings from the University of California-Davis Time to Degree Task Force reported that "25 percent of students who do not graduate in four years report they could not take a full course load because they had to work" (Bound, Lovenheim, & Turner, 2007, p. 43). Many young adults do not have financial support from their families, as evidenced by the high rates of poverty referenced earlier.

- *School environment* – Services such as career and academic counseling, learning centers, and office hours are resources that have shown to provide a more integrated learning community, thereby benefitting undergraduate retention. Students who feel connected with the campus community are more motivated to pursue their career goals (Booth, Cooper, Karandjeff, Purnell, Schiorring, & Willett, 2013).

- *Employment Opportunities*- Many young adults are not able to find jobs that were once available almost exclusively to young adults or college-age students. Entry level jobs at

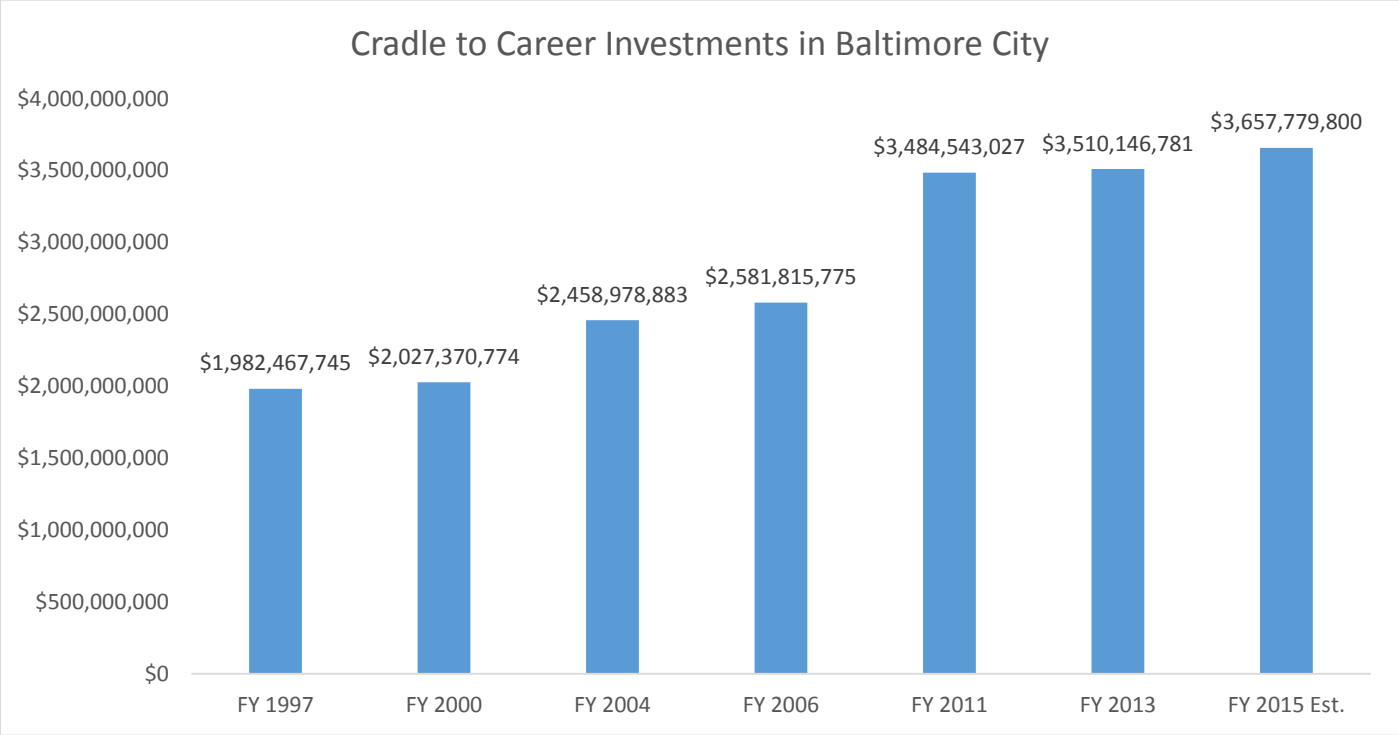
fast food restaurants or retail stores are not guaranteed for young adults and may go to older workers. Youth who struggle to get a job and stay in school are more likely to be less educated, come from low-income families, and belong to a racial or ethnic minority (Annie E. Casey Foundation, 2012).For young adults to thrive, positive work experiences will help to develop self-management skills as well as learn to meet day-to- day needs and demands (2012). Prior research suggests that youth who do not have early work experiences are more likely to experience later unemployment (Annie E. Casey Foundation, 2012).

TAB C: BALTIMORE CITY FY13 FUND MATRIX & MAPS

Baltimore City Cradle to Career Investments

Flat Funding Landscape: After Surging Funding Levels, Stingy Spending Growth in FY 2013

$3.51 billion in FY 2013 total spending on Baltimore City children, youth and families, up $25.6 million from $3.48 billion in FY 2011. FY 2015 investments are currently estimated to grow by $147.6 million from FY 2013, including an increase of $98 million in Medicaid payments, related to the Affordable Care Act's Medicaid expansion.

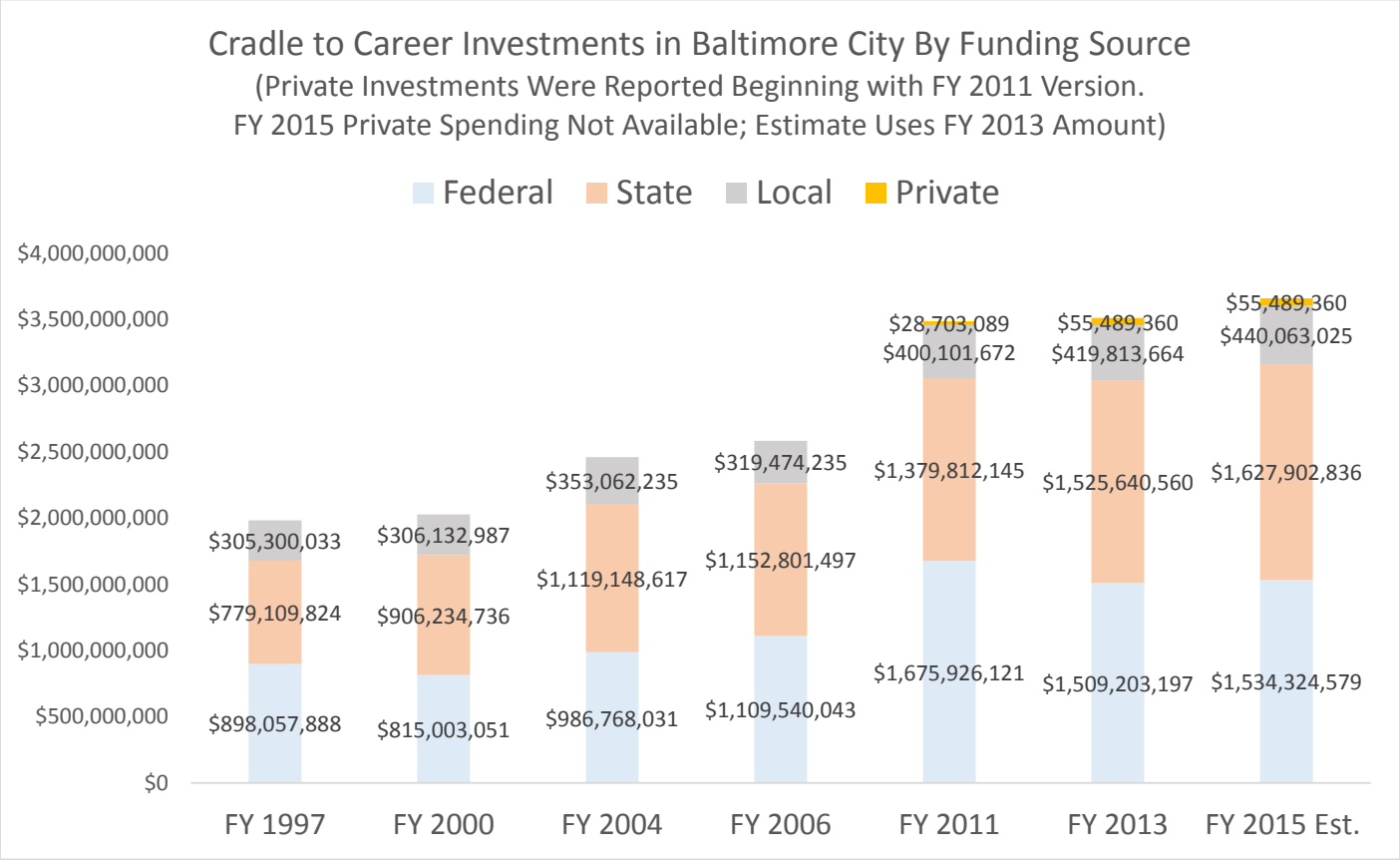


Per Child Cradle to Career Spending

Between July 2011 and July 2013 Census estimates, the overall Baltimore City population increased by 1,117 people, while the population under age 19 dropped by 2,419 children. Despite the slight increase in total spending, the drop in the number of children resulted in a per child spending increase from FY 2011 to FY 2013 of $542.

Fiscal Year	Number of Children Under 19	Per Child Spending
1997	167,001	$11,871
2000	160,454	$12,635
2004	154,200	$15,947
2006	150,386	$17,168
2011	151,892	$22,941
2013	149,473	$23,483

Change by Funding Source

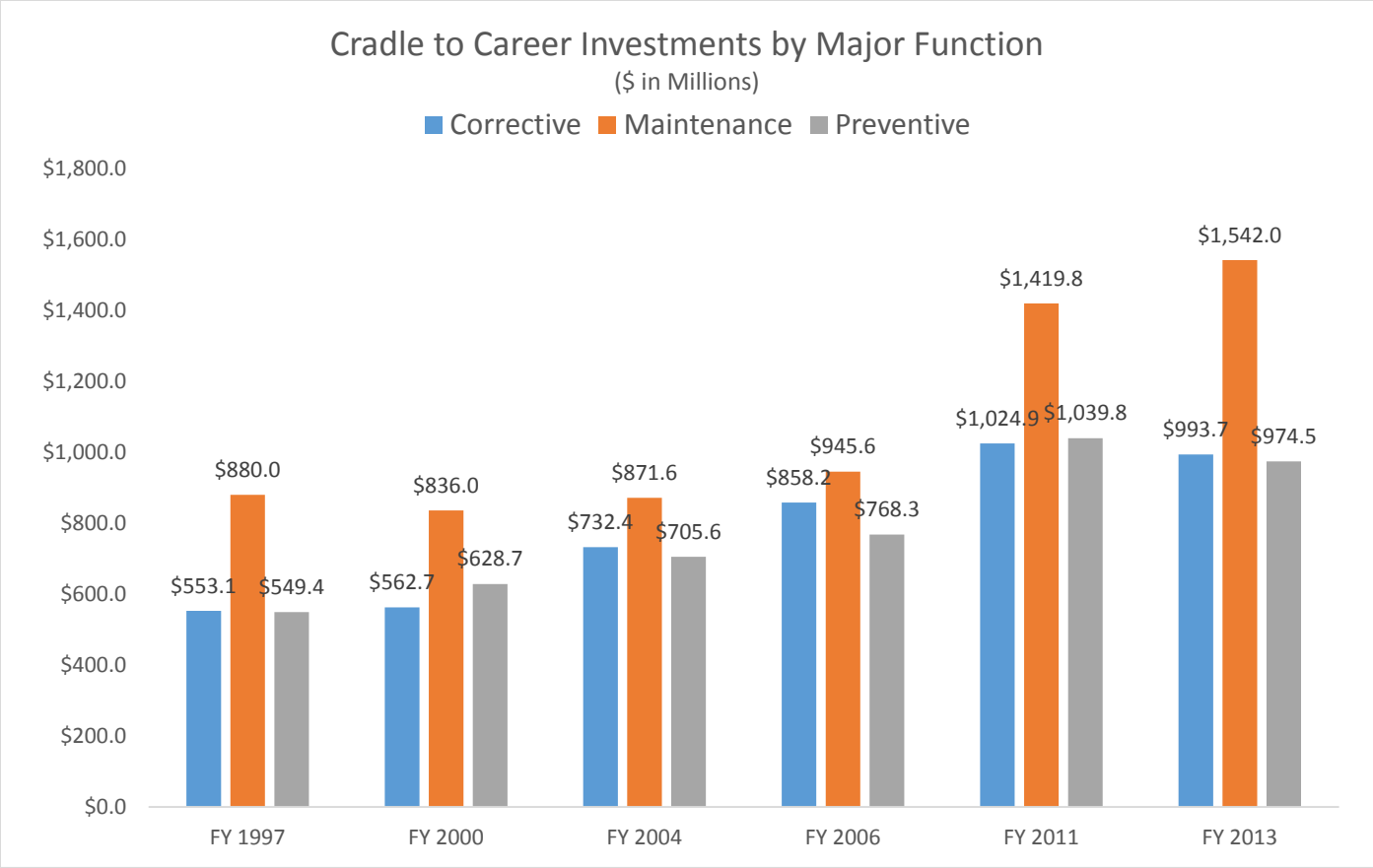


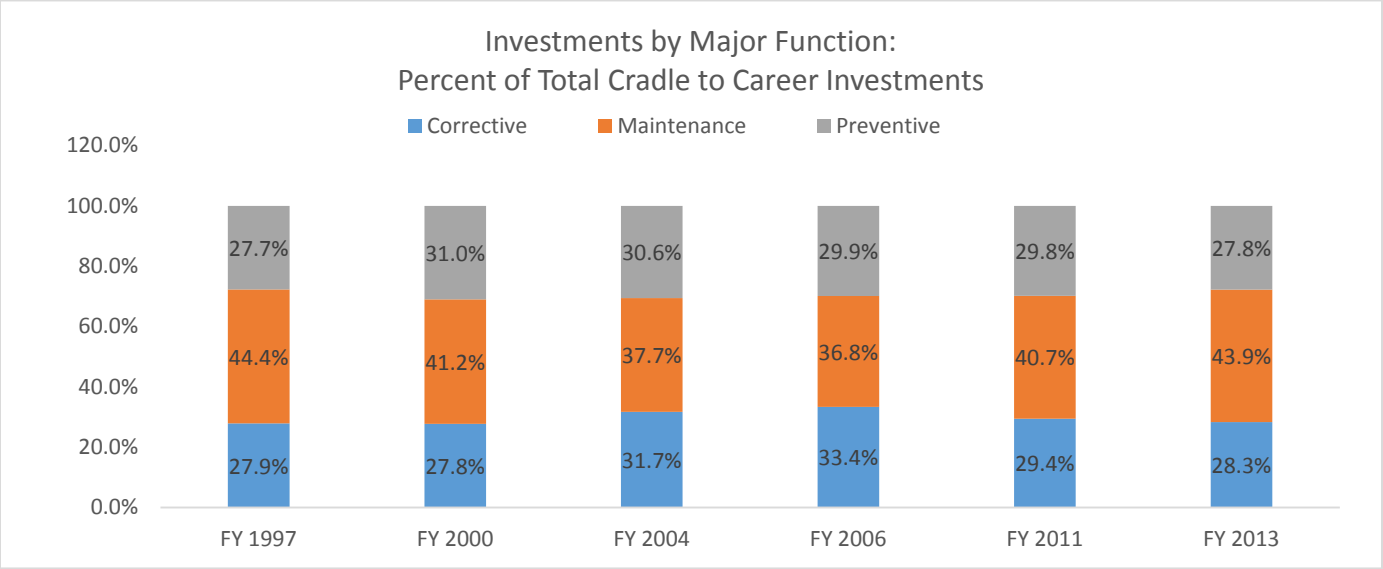
Change by Selected Program: FY 2011, FY 2013, and FY 2015

	FY 2011	FY 2013	FY 2015
Medicaid Payments	$609,384,005	$578,490,789	$676,055,858
Food Stamps	$290,235,415	$354,279,543	$379,422,233
TCA Payments	$69,383,771	$62,354,860	$58,414,746
Family Investment Staff/Admin.	$53,492,404	$61,975,239	$60,645,784
Foster Care Payments	$196,710,187	$136,937,534	$146,678,491
Child Welfare Staff/Admin.	$73,607,813	$77,626,605	$71,914,850
Child Care Subsidies	$29,567,425	$20,410,685	$22,497,625
BCPS Administration	$156,598,186	$160,038,684	$154,857,817
BCPS Instruction	$487,417,525	$472,947,720	$471,885,969
BCPS Special Education	$222,780,391	$212,956,294	$219,685,863
BCPS Food Services	$27,110,945	$37,364,674	$35,012,740
BCPS Student Transportation	$40,296,452	$45,793,017	$37,105,067
BCPS Student Services	$22,214,095	$29,651,576	$37,293,248
BCPS Plant/Fixed Cost	$325,792,051	$323,964,948	$354,297,751
Head Start	$30,609,712	$34,620,513	$15,925,863

Spending by Major Function

CORRECTIVE	MAINTENANCE	PREVENTIVE
Education (Special Education & Services)	Income Support	Education (Regular Instruction)
Health (Treatment)	Education (Enabling Costs: Transportation & Food Service)	Early Childhood Care and Education
Social Services (Child Protective Services; Foster Care; Kinship Care; Subsidized Adoption)	Education (Indirect Costs: Administration, Plant, Fixed Charges & Debt Services)	Health (Preventive Health; Maternal and Child Health; School-Based Health Services; Youth Violence Prevention; Medicaid Payments to Managed Care Organizations)
Police	Housing & Homeless Services (including Housing Subsidies; Subsidized Housing)	Youth Development
Judiciary		Employment Services
Detention & Corrections		Other (Private Community Building Investments; Family Preservation/Promoting Safe and Stable Families; Delinquency Prevention)

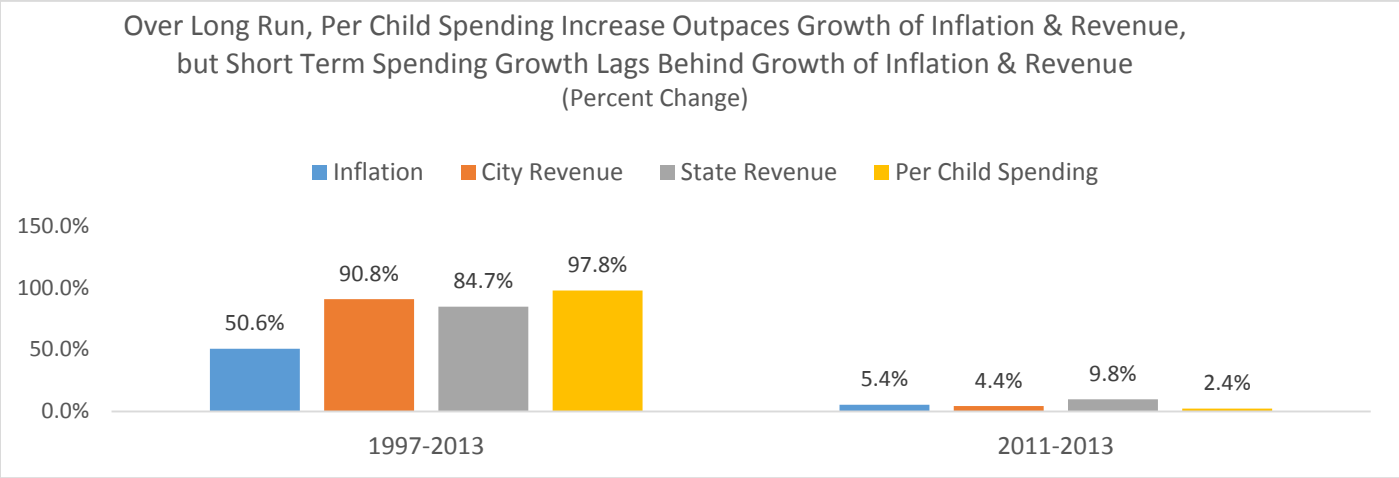




Cradle to Career Fund Mapping Change Driven by Fiscal Outlook & Policy Landscape

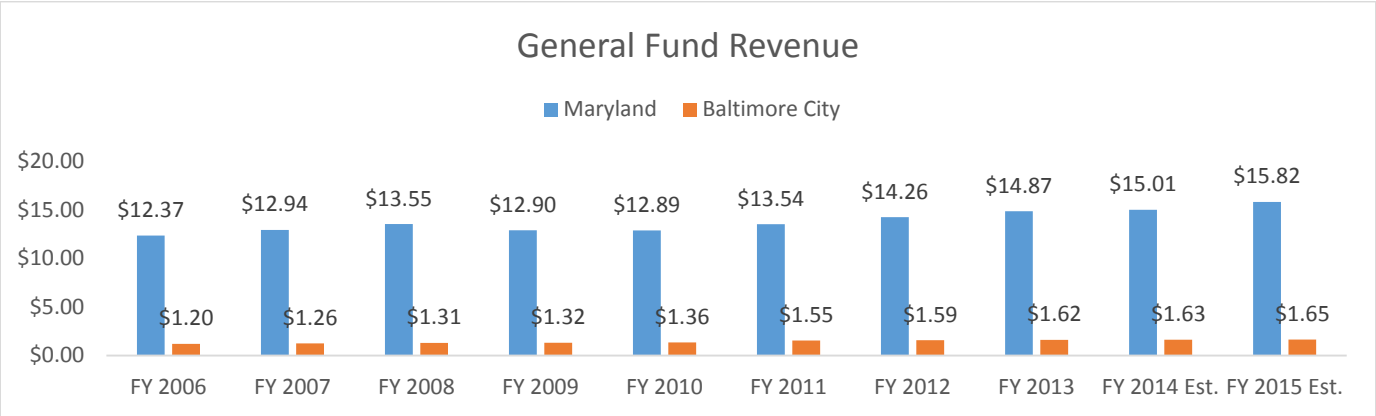
Unlike the long-term trends, the flat FY 2011 to FY 2013 growth in per child Cradle to Career investments lagged behind inflation growth as well as state and city revenue growth over the same period. As the

long-term trends suggest, spending growth has closely tracked revenue growth. This close correlation is not surprising, as the city and state budgets must be balanced each year.



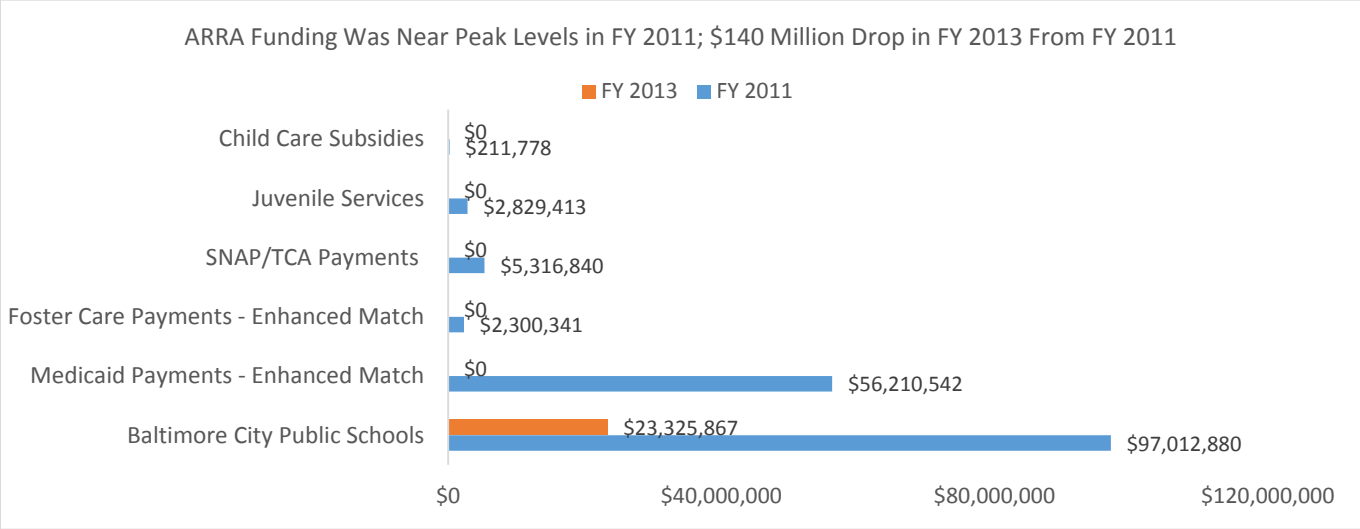
Changes in the policy landscape also greatly influence total investments and short-and-long-term change. After dropping $29 million from FY 2011 to FY 2013, Medicaid payments are projected to increase by $98 million from FY 2013 to FY 2015. Unlike some states, Maryland opted into the Affordable Care Act's Medicaid expansion, which is initially paid for entirely with federal funds. The FY 2015 state budget includes a related annual increase of $495.2 million in federal Medicaid funds.

While FY 2015 Medicaid spending is currently projected to go up, the uncertainty of the state fiscal outlook adds to uncertainty of this estimate. In March, the state Board of Revenue Estimates (BRE) lowered projections of FY 2014 and FY 2015 state revenue by $248 million. Then, the legislature cut more than $363 million from the fiscal 2014 and 2015 budgets. In July, the Board of Public Works cut an additional $77 million from the FY 2015 budget. In September, BRE releases updated FY 2015 revenue estimates and its initial projection for FY 2016 state revenue. Medicaid cost containment measures have been a consistent method to balance the state budget in recent years; and may be looming for FY 2015, along with reported potential across-the-board agency budget cuts.



Regardless of cost-containment, Cradle to Career FY 2015 Medicaid funding will significantly increase from FY 2013, after a drop from FY 2011. Like the fiscal 2015 increase, the fiscal 2013 drop is shaped by the changes in the fiscal and policy landscape. The federal economic stimulus bill passed in 2009, the

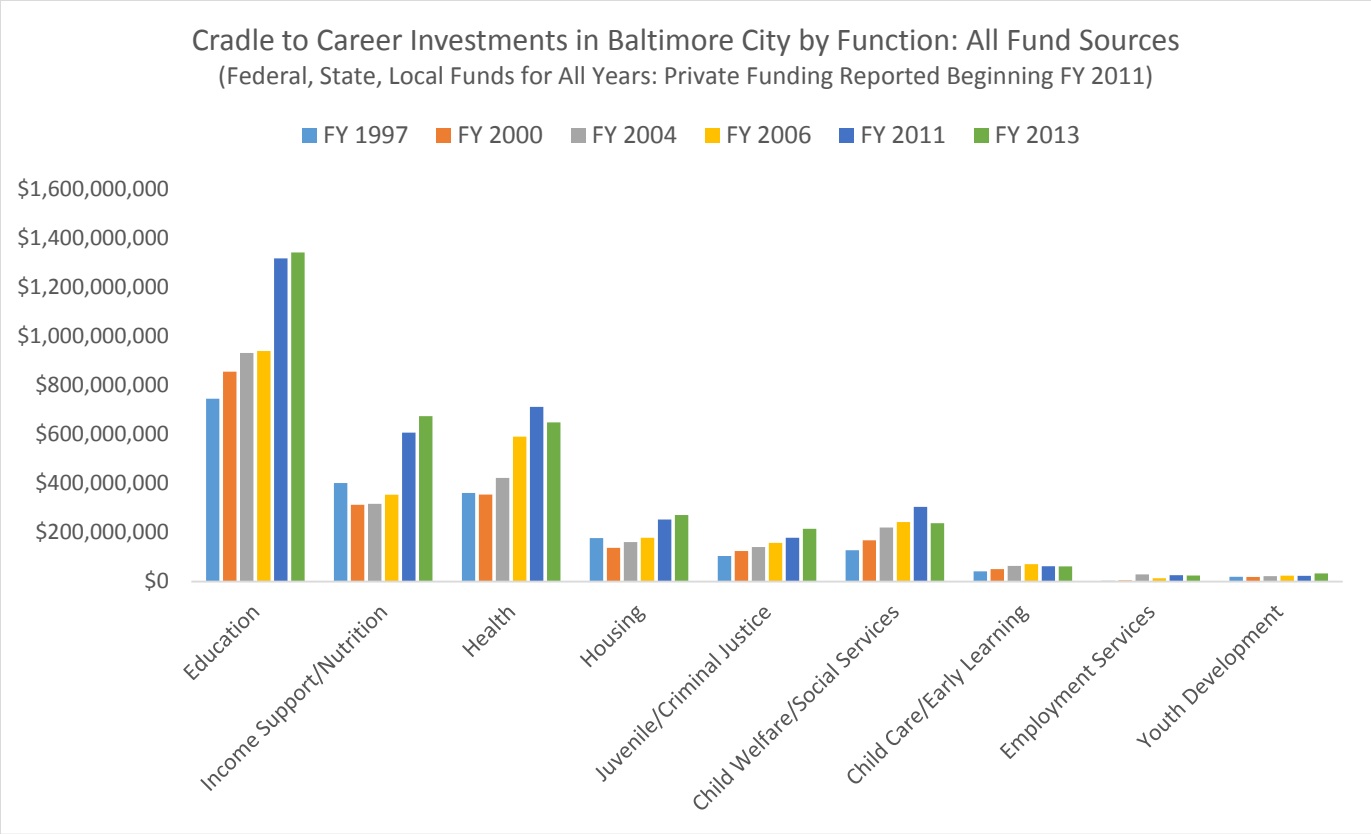
American Recovery & Reinvestment Act (ARRA), boosted federal funds across a variety of programs, including an increased federal Medicaid match peaking in FY 2011. ARRA Cradle to Career supplemental federal funds were $163.9 million in FY 2011 and dropped to $23.3 million in FY 2013.[4] By FY 2013, the boosted ARRA Medicaid match had run out. The state instituted cost-containment, including hospital and other provider rate cuts, which resulted in the reported cut in Medicaid payments to city children.



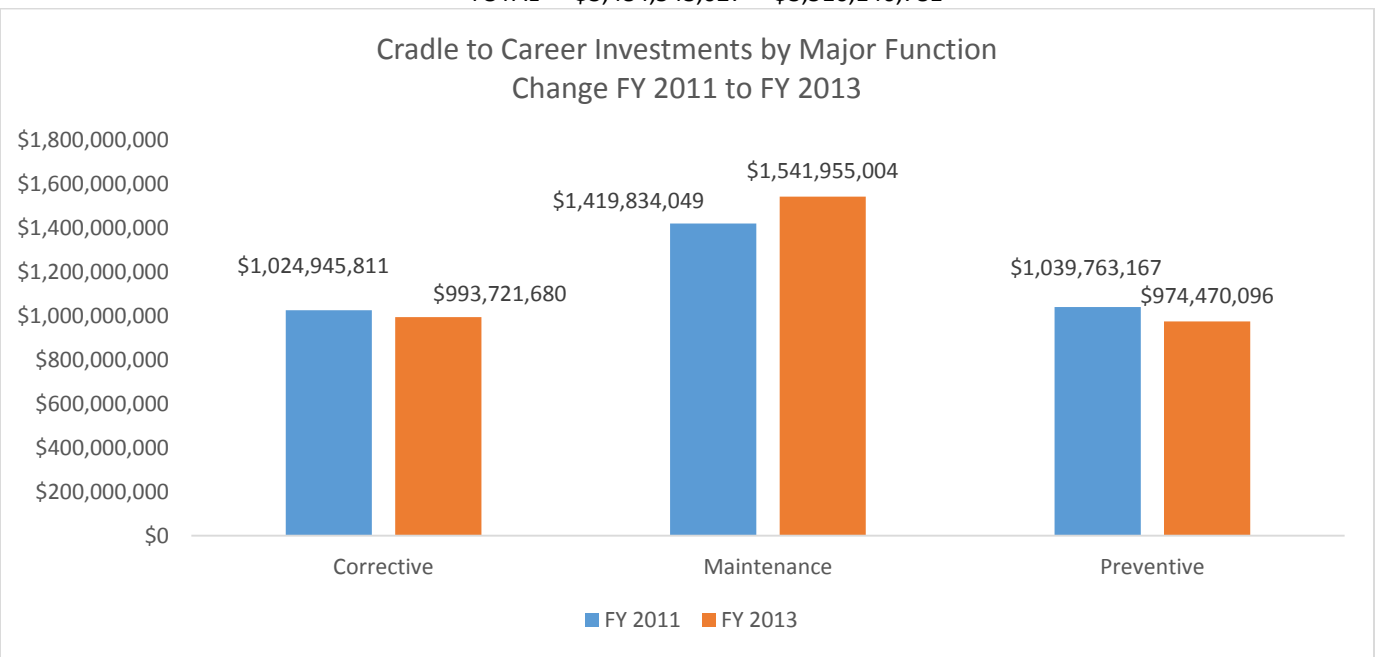
Surveying long-term trends in Cradle to Career investments by function provides several more examples of policy-driven spending change. The 1996 enactment of the federal Personal Responsibility and Work Opportunity Act – referred to as welfare reform – was followed by a significant drop in income support spending between FY 1997 and FY 2000 and relatively steady spending after that for a number of years. The 2002 state education finance reform legislation – the Bridge to Excellence in Public Schools Act – increased state aid to public schools by $1.3 billion a year. The increase was phased-in through FY 2008. As expected, education spending sharply increased between FY 2006 and FY 2011.

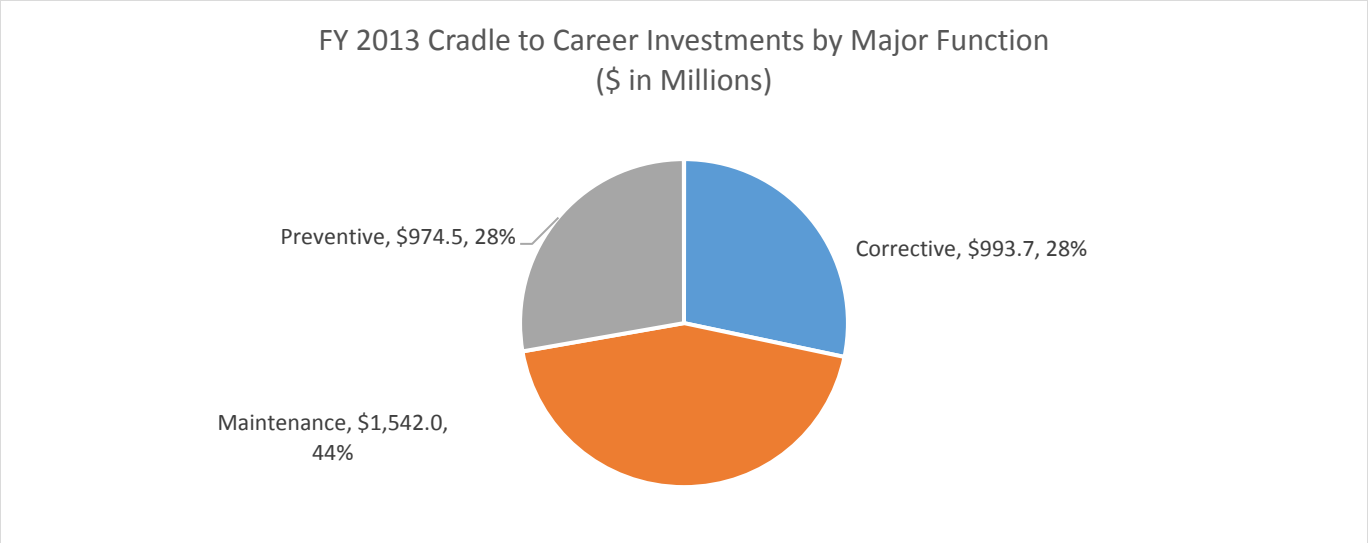
The Maryland Department of Human Resources implemented a multi-year Place Matters initiative to prevent children from entering care and to assure that children in care were placed in the least restrictive setting. After a successful recruiting drive of family foster homes, many children were "stepped down" from expensive group care to a family home placement. Although the timing of the Place Matters initiative and the versions of the fund maps does not exactly align, the fiscal effects of the policy reforms can be seen in the decrease in child welfare/social services spending between FY 2011 and FY 2013, when foster care payments in Baltimore City decreased by $59.8 million.

[4] The majority of boosted funds through ARRA supplemented K-12 education spending, where state and local spending levels are set by law and regulation, so overall K-12 education spending levels were temporarily boosted by the influx of federal funds. On the other hand, the added federal FY 2011 Medicaid match did not increase overall Medicaid spending, it just supplanted, or replaced, state matching dollars.

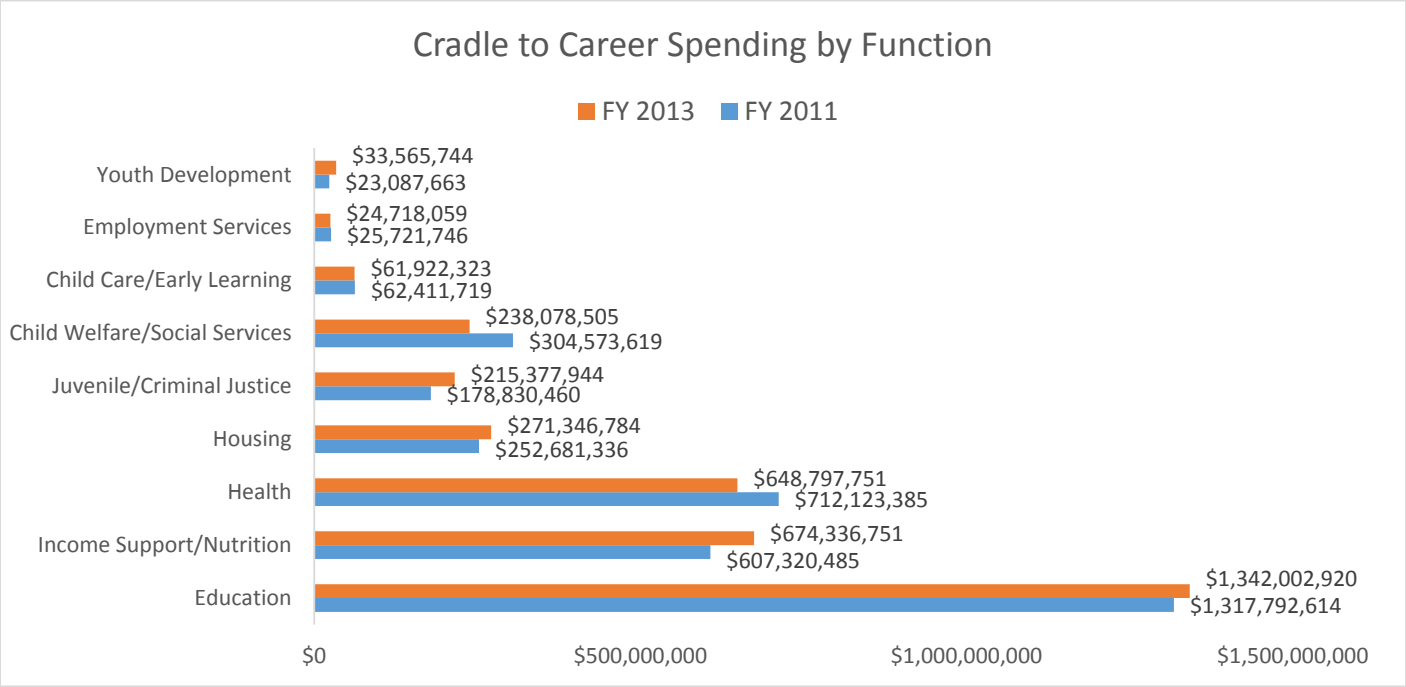


Investments by Major Function		FY 2011	FY 2013	$ Change	% Change
Corrective		$1,024,945,811	$993,721,680	-$31,224,131	-3.0%
Maintenance		$1,419,834,049	$1,541,955,004	$122,120,955	8.6%
Preventive		$1,039,763,167	$974,470,096	-$65,293,071	-6.3%
	TOTAL	$3,484,543,027	$3,510,146,781		





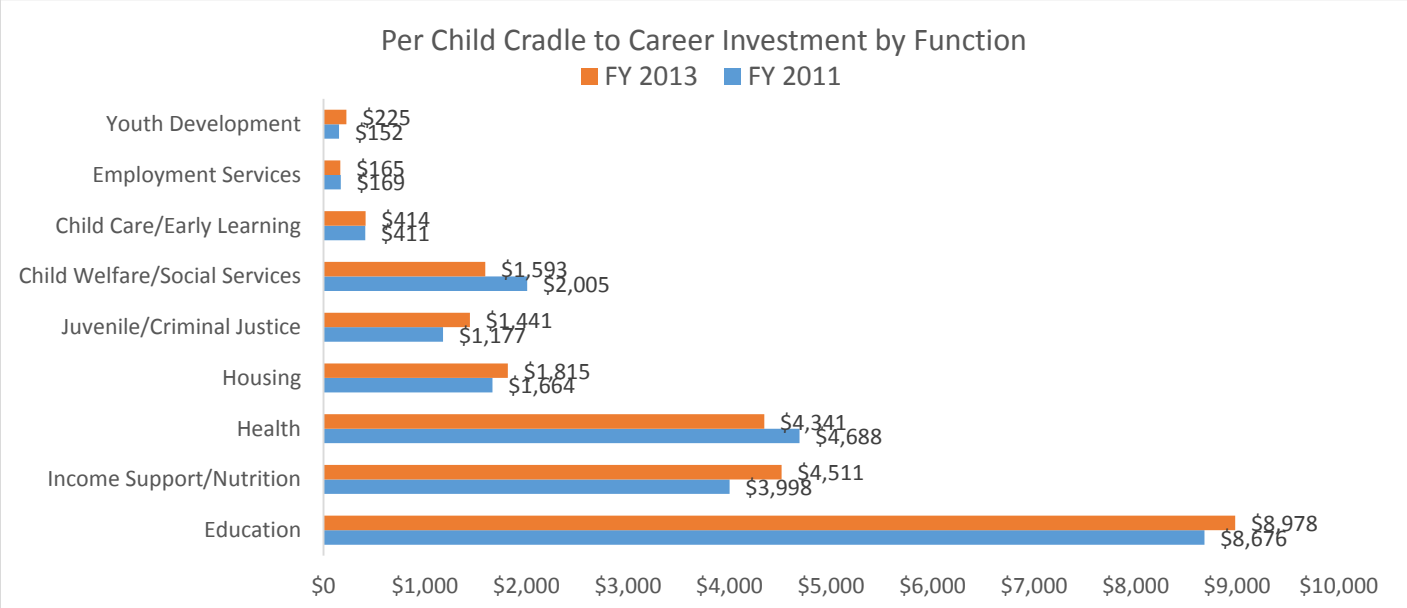
Spending by Function	FY 2011	FY 2013	$ Change	% Change
Education	$1,317,792,614	$1,342,002,920	$24,210,306	1.8%
Income Support/Nutrition	$607,320,485	$674,336,751	$67,016,266	11.0%
Health	$712,123,385	$648,797,751	-$63,325,634	-8.9%
Housing	$252,681,336	$271,346,784	$18,665,448	7.4%
Juvenile/Criminal Justice	$178,830,460	$215,377,944	$36,547,483	20.4%
Child Welfare/Social Services	$304,573,619	$238,078,505	-$66,495,114	-21.8%
Child Care/Early Learning	$62,411,719	$61,922,323	-$489,396	-0.8%
Employment Services	$25,721,746	$24,718,059	-$1,003,687	-3.9%
Youth Development	$23,087,663	$33,565,744	$10,478,081	45.4%
TOTAL	$3,484,543,027	$3,510,146,781	$25,603,753	0.7%



Per Child Spending by Function FY 1997 FY 2000 FY 2004 FY 2006 FY 2011 FY 2013

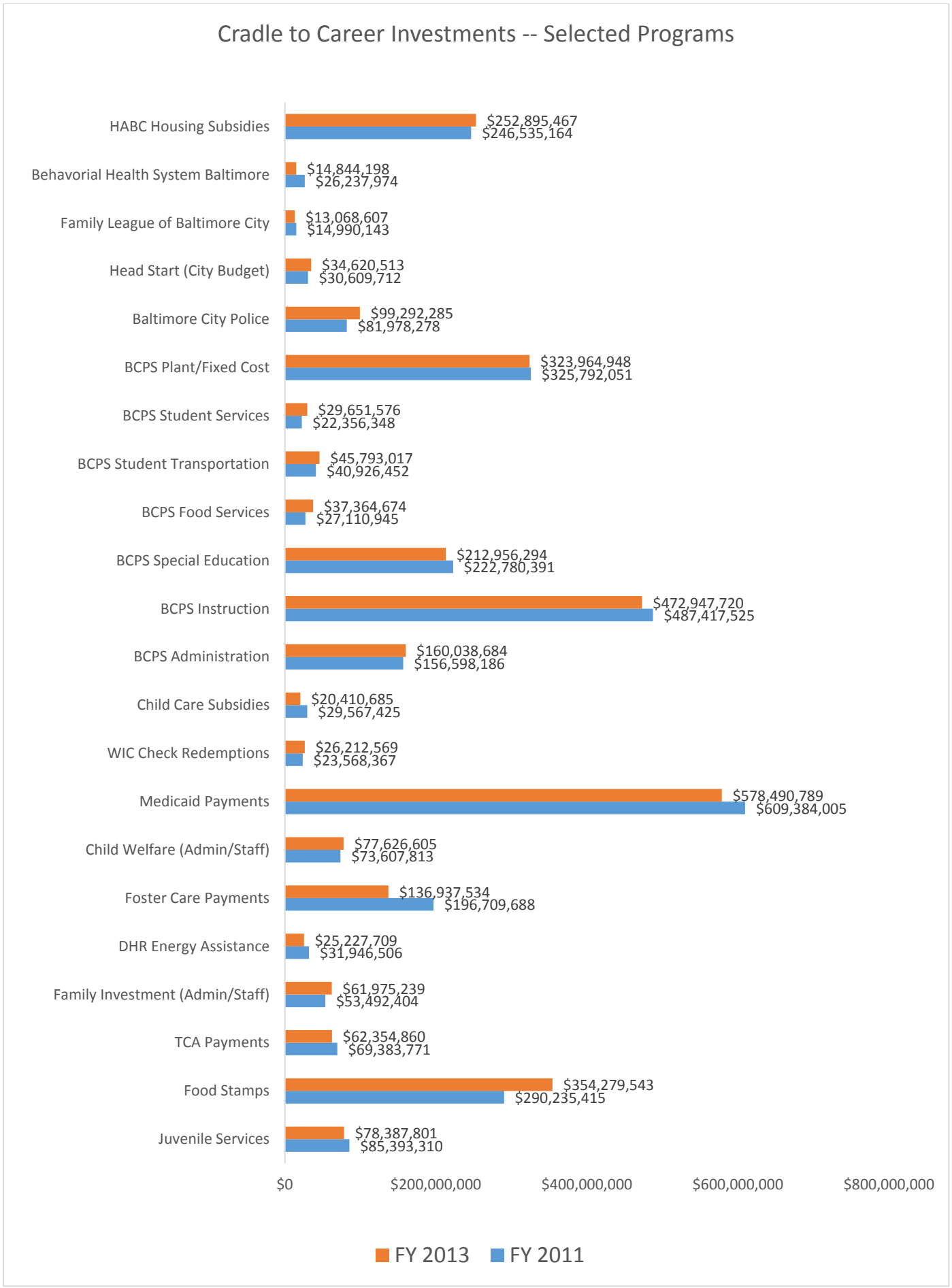
Education		$4,466	$5,334	$6,044	$6,252	$8,676	$8,978
Income Support/Nutrition		$2,404	$1,951	$2,056	$2,353	$3,998	$4,511
Health		$2,165	$2,211	$2,742	$3,927	$4,688	$4,341
Housing		$1,061	$857	$1,046	$1,189	$1,664	$1,815
Juvenile/Criminal Justice		$625	$776	$913	$1,048	$1,177	$1,441
Child Welfare/Social Services		$765	$1,047	$1,430	$1,611	$2,005	$1,593
Child Care/Early Learning		$250	$314	$415	$472	$411	$414
Employment Services		$19	$27	$188	$92	$169	$165
Youth Development		$118	$118	$144	$159	$152	$225
	TOTAL	$11,872	$12,635	$14,978	$17,104	$22,941	$23,483

Per Child Spending - Change by Function	FY 2011	FY 2013	$ Change	% Change
Education	$8,676	$8,978	$302	3.5%
Income Support/Nutrition	$3,998	$4,511	$513	12.8%
Health	$4,688	$4,341	-$348	-7.4%
Housing	$1,664	$1,815	$152	9.1%
Juvenile/Criminal Justice	$1,177	$1,441	$264	22.4%
Child Welfare/Social Services	$2,005	$1,593	-$412	-20.6%
Child Care/Early Learning	$411	$414	$3	0.8%
Employment Services	$169	$165	-$4	-2.3%
Youth Development	$152	$225	$73	47.7%
TOTAL	$22,941	$23,483	$542	2.4%



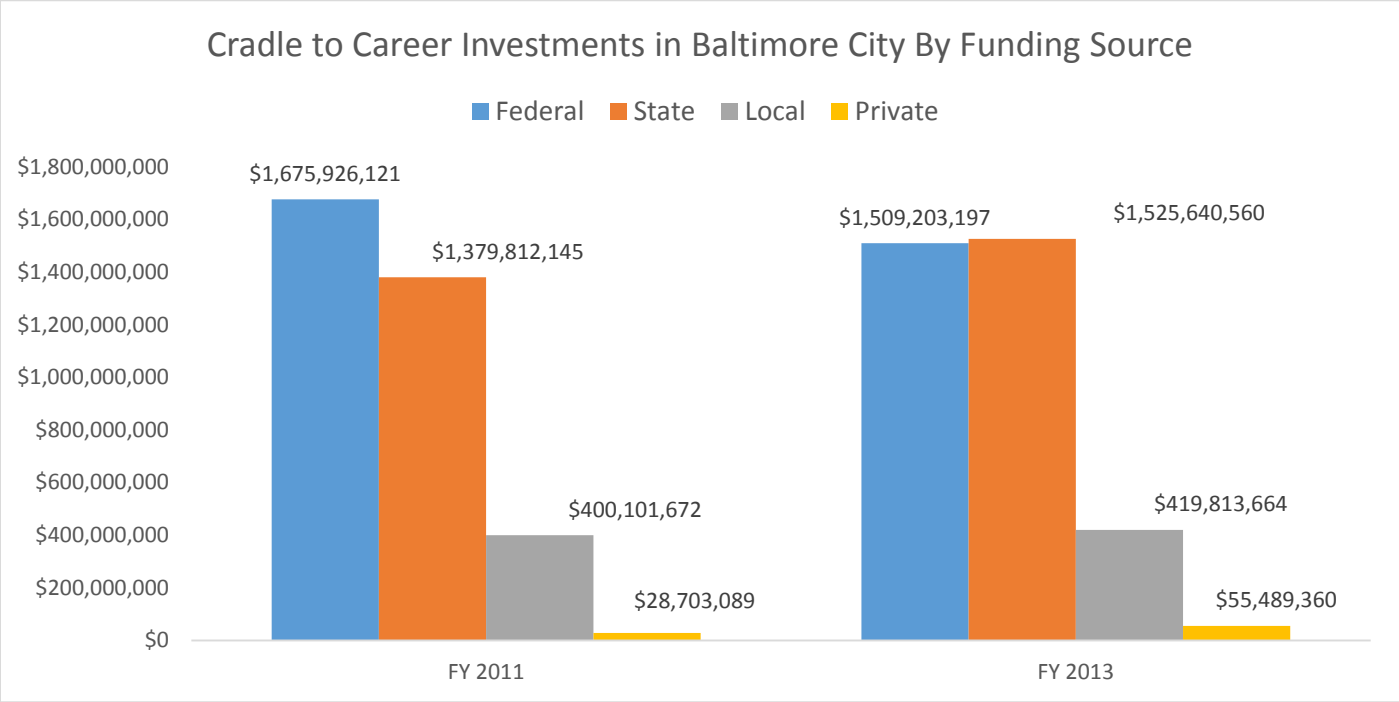
Change by Selected Program	FY 2011	FY 2013	$ Change	% Change
Juvenile Services	$85,393,310	$78,387,801	-$7,005,509	-8.2%
Food Stamps	$290,235,415	$354,279,543	$64,044,128	22.1%
TCA Payments	$69,383,771	$62,354,860	-$7,028,911	-10.1%
Family Investment (Admin/Staff)	$53,492,404	$61,975,239	$8,482,835	15.9%
DHR Energy Assistance	$31,946,506	$25,227,709	-$6,718,797	-21.0%
Foster Care Payments	$196,709,688	$136,937,534	-	-30.4%

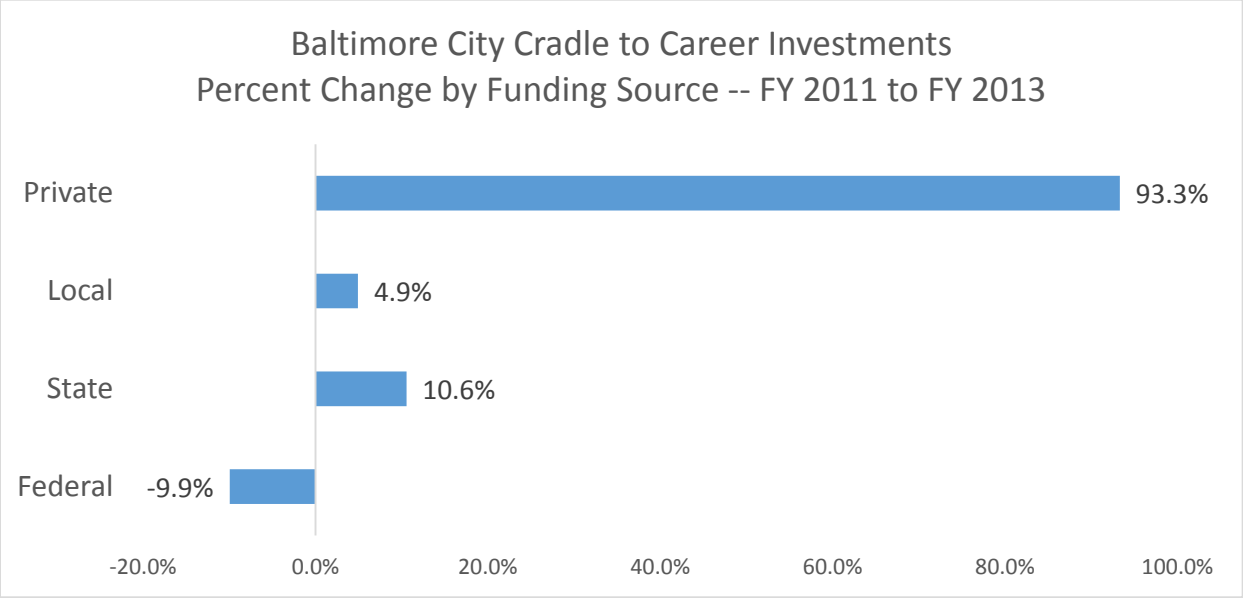
			$59,772,154	
Child Welfare (Admin/Staff)	$73,607,813	$77,626,605	$4,018,792	5.5%
Medicaid Payments	$609,384,005	$578,490,789	-$30,893,216	-5.1%
WIC Check Redemptions	$23,568,367	$26,212,569	$2,644,202	11.2%
Child Care Subsidies	$29,567,425	$20,410,685	-$9,156,740	-31.0%
BCPS Administration	$156,598,186	$160,038,684	$3,440,498	2.2%
BCPS Instruction	$487,417,525	$472,947,720	-$14,469,805	-3.0%
BCPS Special Education	$222,780,391	$212,956,294	-$9,824,097	-4.4%
BCPS Food Services	$27,110,945	$37,364,674	$10,253,729	37.8%
BCPS Student Transportation	$40,926,452	$45,793,017	$4,866,565	11.9%
BCPS Student Services	$22,356,348	$29,651,576	$7,295,228	32.6%
BCPS Plant/Fixed Cost	$325,792,051	$323,964,948	-$1,827,103	-0.6%
Baltimore City Police	$81,978,278	$99,292,285	$17,314,007	21.1%
Head Start (City Budget)	$30,609,712	$34,620,513	$4,010,801	13.1%
Family League of Baltimore City	$14,990,143	$13,068,607	-$1,921,536	-12.8%
Behavioral Health System Baltimore	$26,237,974	$14,844,198	-$11,393,776	-43.4%
HABC Housing Subsidies	$246,535,164	$252,895,467	$6,360,303	2.6%


Cradle to Career Investments -- Selected Programs
HABC Housing Subsidies
$252,895,467
$246,535,164
Behavorial Health System Baltimore
$14,844,198
$26,237,974
Family League of Baltimore City
$13,068,607
$14,990,143
Head Start (City Budget)
$34,620,513
$30,609,712
Baltimore City Police
$99,292,285
$81,978,278
BCPS Plant/Fixed Cost
$323,964,948
$325,792,051
BCPS Student Services
$29,651,576
$22,356,348
BCPS Student Transportation
$45,793,017
$40,926,452
BCPS Food Services
$37,364,674
$27,110,945
BCPS Special Education
$212,956,294
$222,780,391
BCPS Instruction
$472,947,720
$487,417,525
BCPS Administration
$160,038,684
$156,598,186
Child Care Subsidies
$20,410,685
$29,567,425
WIC Check Redemptions
$26,212,569
$23,568,367
Medicaid Payments
$578,490,789
$609,384,005
Child Welfare (Admin/Staff)
$77,626,605
$73,607,813
Foster Care Payments
$136,937,534
$196,709,688
DHR Energy Assistance
$25,227,709
$31,946,506
Family Investment (Admin/Staff)
$61,975,239
$53,492,404
TCA Payments
$62,354,860
$69,383,771
Food Stamps
$354,279,543
$290,235,415
Juvenile Services
$78,387,801
$85,393,310
$0
$200,000,000
$400,000,000
$600,000,000
$800,000,000
FY 2013
FY 2011

Change by Funding Source

	FY 2011	FY 2013	$ Change	% Change
Federal	$1,675,926,121	$1,509,203,197	-$166,722,924	-9.9%
State	$1,379,812,145	$1,525,640,560	$145,828,415	10.6%
Local	$400,101,672	$419,813,664	$19,711,992	4.9%
Private	$28,703,089	$55,489,360	$26,786,271	93.3%
TOTAL	$3,484,543,027	$3,510,146,781	$25,603,754	0.7%





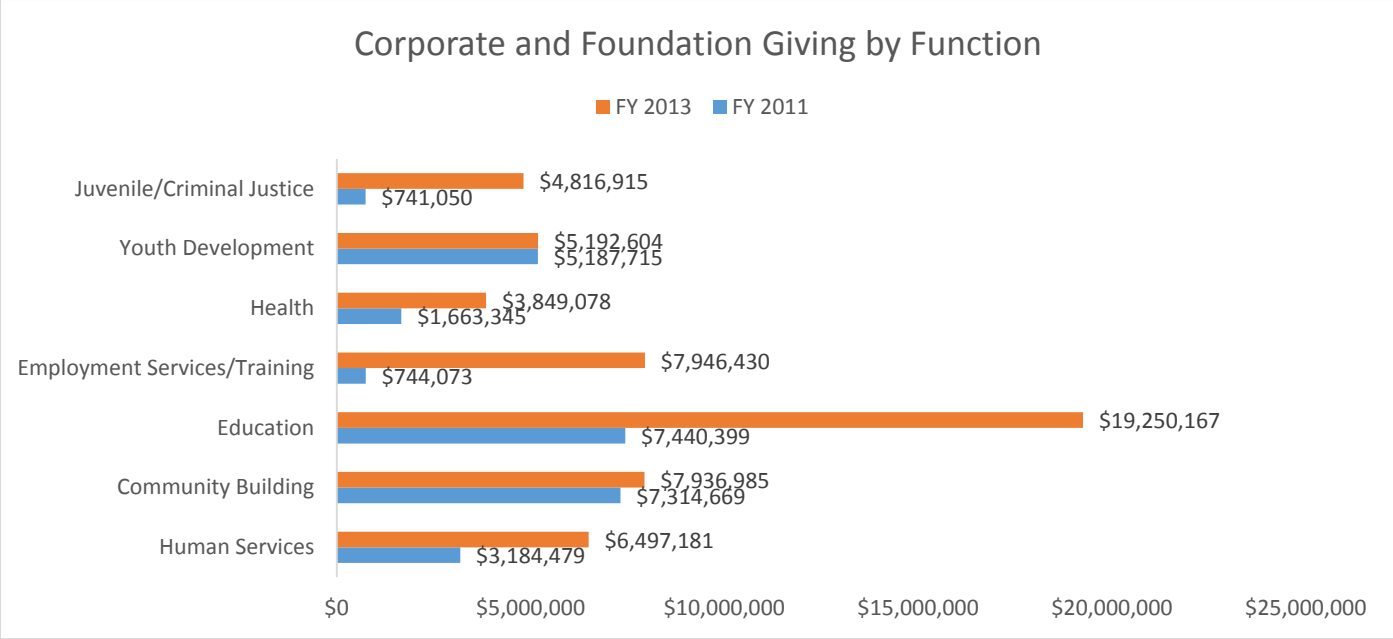
Spending Change by Agency Source – Administrative vs. Program Spending

	FY 2011	FY 2013	FY 2015	% Change - FY11--FY13	% Change - FY13--FY15
DHMH Medicaid Payments	$609,384,005	$578,490,789	$676,055,858	-5.1%	16.9%
DHMH Women, Infants and Children	$25,279,332	$27,997,095	$28,875,430	10.8%	3.1%
DJS Administration	$9,096,656	$9,272,343	$9,586,633	1.9%	3.4%
DJS Community Operations	$41,353,905	$38,230,971	$41,865,384	-7.6%	9.5%
DJS Residential	$34,942,749	$30,884,487	$33,541,974	-11.6%	8.6%
DHR Entitlement/Programs	$607,102,055	$595,658,265	$627,459,327	-1.9%	5.3%
DHR Administrative	$170,943,185	$167,728,215	$161,758,720	-1.9%	-3.6%
BCPS Admin/Indirect	$499,739,500	$504,072,640	$533,027,681	0.9%	5.7%
BCPS Instruction/Special Education	$732,412,011	$715,545,590	$721,507,932	-2.3%	0.8%
BCPS Enabling (Transportation/Meals)	$67,549,650	$83,167,691	$79,474,955	23.1%	-4.4%
City Dept. Health - Administrative	$1,265,612	$1,089,954	$2,353,870	-13.9%	116.0%
City Dept. Health - Programs	$45,960,416	$45,211,210	$43,256,482	-1.6%	-4.3%
DHCD Administrative	$1,957,602	$892,216	$992,183	-54.4%	11.2%
DHCD Programs	$35,602,344	$8,633,705	$9,958,548	-75.7%	15.3%
Mayor's Office -- Administrative	$11,470,320	$1,803,973	$3,261,222	-84.3%	80.8%
Mayor's Office -- Programs	$9,993,669	$66,284,706	$41,901,527	563.3%	-36.8%
City Police -- Administrative	$81,978,278	$99,292,285	$106,097,950	-5.1%	16.9%
City Rec/Parks -Administrative	$4,155,836	$4,463,629	$4,893,505	7.4%	9.6%
City Rec/Parks - Program	$3,020,426	$3,359,996	$3,804,717	11.2%	13.2%
Pratt Library - Administrative	$3,322,199	$6,847,361	$8,115,714	106.1%	18.5%
City - Judiciary - Administrative	$12,053,738	$12,453,970	$11,900,493	3.3%	-4.4%

Note: In FY 2011, Head Start funding in the City of Baltimore budget was budgeted in the Department of Housing and Community Development (DHCD). In FY 2013 and FY 2015, Head Start funding in the city budget is budgeted in the Mayor's Office of Human Services.

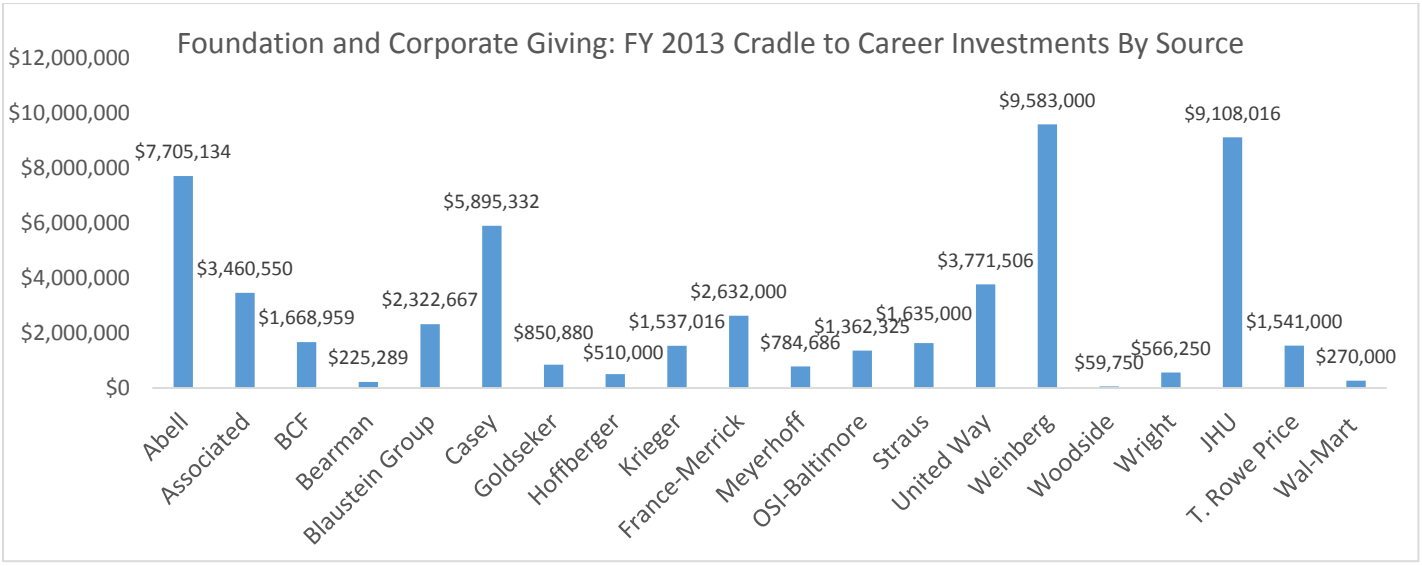
Private Cradle to Career Investments: Corporate and Foundation Giving

- $55.49 million in FY 2013 private Cradle to Career investments, up from $26.28 million in private funding in FY 2011.
- In FY 2011, 23 funders reported investment information, compared to 23 current respondents in FY 2013. Several foundations reported that they applied a broader Cradle to Career definition in FY 2013 for the selection and reporting of their FY 2013 investments to project staff who deferred to the funders' categorization of their investments. Consistent with prior years, capital investments were not included in the Cradle to Career fund matrix.



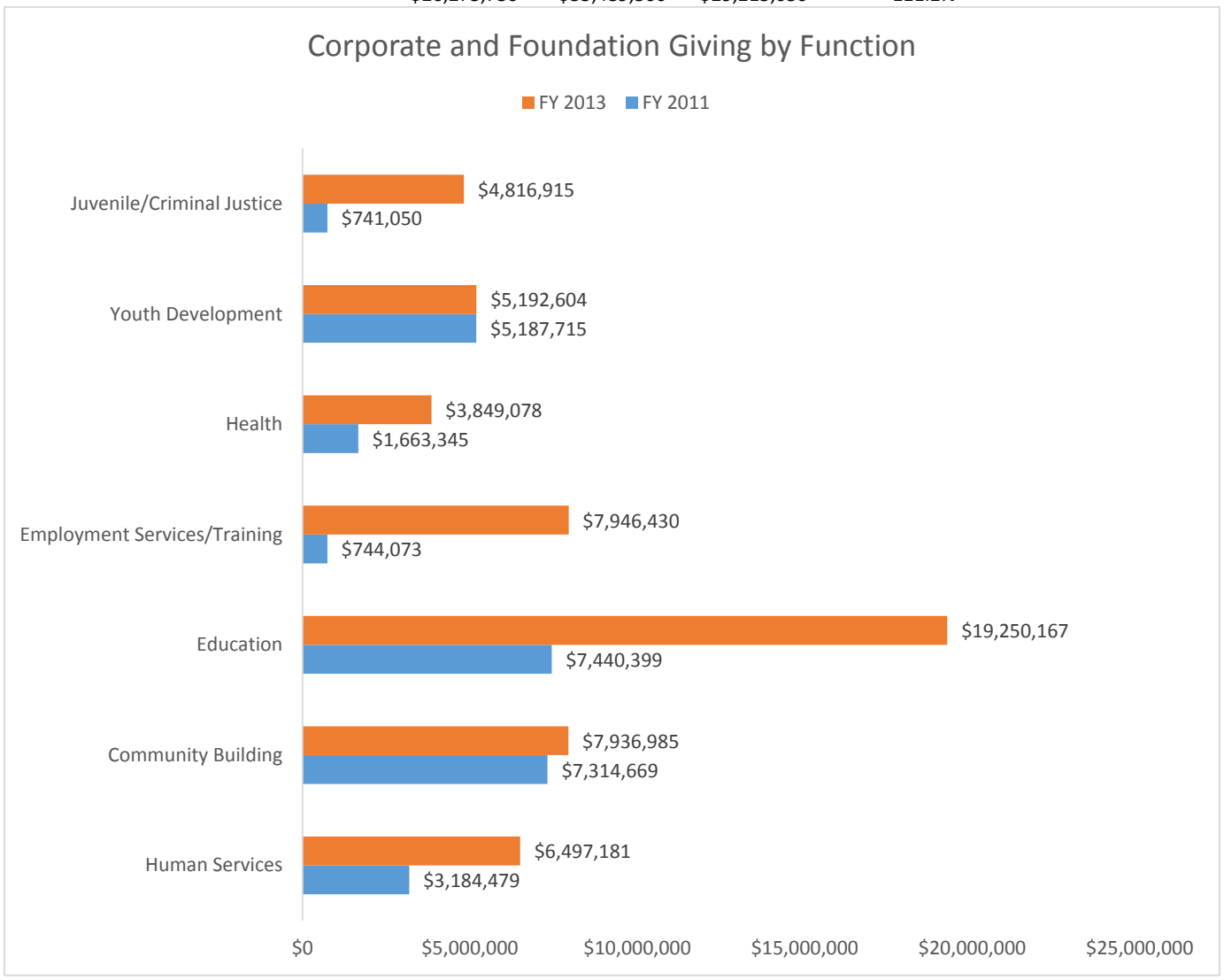
- The emphasis of private investments on certain functions mirrors availability of public funding sources. For example, 59.4% of private FY 2013 investments went to fund K-12 education, health, human services and public safety -- program areas which received 61.5% of all funding in the most recent state operating budget. Most of the public funding for these areas is required by statute or regulation. A potential opportunity may exist to explore re-directing some funds towards program areas that are not supported by these requirements or do not receive the bulk of existing public investments, such as early childhood care and education, career ready young adults, and employment services.
- $7.9 million of private FY 2013 funding went to support Community Building efforts, with $2.2 million for community development projects, like East Baltimore Development, Inc., and $5.7 million, or 10.4% of total investments, for special events or general operating expenses of community organizations, including neighborhood groups, as well as general support for providers and advocacy groups not identified specifically for other Cradle to Career functions. To more directly support evidence-based programs, explore providing capacity building and in-kind assistance for development efforts and special events of community organizations, rather than financial support for events and general operating expenses. The use of existing fiscal agents may ease administrative burden on organizations that may receive multiple awards.

Investments by Institution Source	FY 2011	FY 2013
The Abell Foundation	$3,049,605	$7,705,134
Annie E. Casey Foundation	$6,621,473	$5,895,332
The Associated: Jewish Federation of Baltimore	$2,964,445	$3,460,550
Baltimore Community Foundation		$1,668,959
The Herbert Bearman Foundation	$170,000	$225,289
Jacob and Hilda Blaustein Foundation		$1,047,500
Morton K. and Jane Blaustein Foundation		$430,000
Blaustein Foundations (Jacob & Morton Foundations)	$564,640	
The Charles Crane Family Foundation	$1,067,800	
Goldseker Foundation	$245,135	$850,880
David and Barbara B. Hirschorn Foundation	$521,000	$518,000
Hoffberger Family Philanthropies	$364,500	$510,000
The Marion I. And Henry J. Knott Foundation	$852,233	
The Zanvyl & Isabel Krieger Foundation	$794,779	$1,537,016
Morton and Sophia Macht Foundation	$266,095	
Morton and Sophia Macht Foundation – Associated	$336,700	
France-Merrick Foundation	$1,224,000	$2,632,000
Joseph and Harvey Meyerhoff Family Charitable Funds	$504,250	$784,686
Johns Hopkins University		$9,108,016
Open Society Institute-Baltimore	$1,333,867	$1,362,325
Henry and Ruth Blaustein Rosenberg Foundation	$455,500	$327,167
Elisabeth B. and Arthur E. Roswell Foundation	$19,000	
The Aaron and Lillie Straus Foundation		$1,635,000
T. Rowe Price Foundation		$1,541,000
Target Corporate	$125,000	
United Way of Central Maryland	$938,390	$3,771,506
Wal-Mart Foundation	$270,000	$270,000
The Harry and Jeanette Weinberg Foundation	$2,910,368	$9,583,000
Woodside Foundation	$104,000	$59,750
Wright Family Foundation	$572,450	$566,250
	$26,275,230	$55,489,360



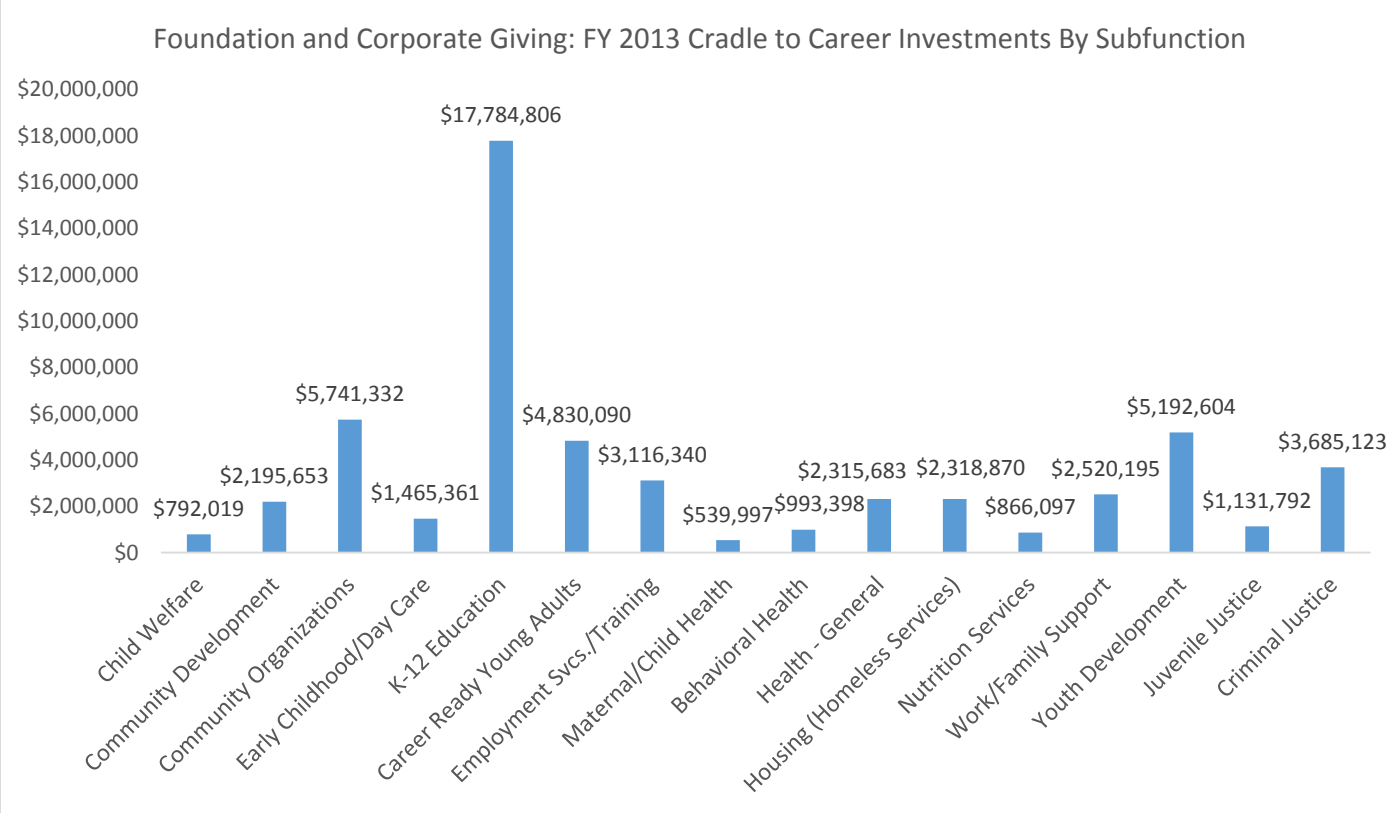
Cradle to Career Private Investments by Function

	FY 2011	FY 2013	$ Change	% Change
Human Services	$3,184,479	$6,497,181	$3,312,702	104.0%
Community Building	$7,314,669	$7,936,985	$622,316	8.5%
Education	$7,440,399	$19,250,167	$11,809,768	158.7%
Employment Services/Training	$744,073	$7,946,430	$7,202,357	968.0%
Health	$1,663,345	$3,849,078	$2,185,733	131.4%
Youth Development	$5,187,715	$5,192,604	$4,889	0.1%
Juvenile/Criminal Justice	$741,050	$4,816,915	$4,075,865	550.0%
	$26,275,730	$55,489,360	$29,213,630	111.2%



Many funders reported FY 2013 investments with greater detail regarding the purpose of the grant. Project staff were able to allocate FY 2013 private investments out by sub-function; although project staff were unable to report FY 2011 investments at the sub-function level.

Child Welfare	$792,019
Community Development	$2,195,653
Community Organizations	$5,741,332
Early Childhood/Day Care	$1,465,361
K-12 Education	$17,784,806
Career Ready Young Adults	$4,830,090
Employment Services/Training	$3,116,340
Maternal/Child Health	$539,997
Behavioral Health	$993,398
Health - General	$2,315,683
Housing (Homeless Services)	$2,318,870
Nutrition Services	$866,097
Work/Family Support	$2,520,195
Youth Development	$5,192,604
Juvenile Justice	$1,131,792
Criminal Justice	$3,685,123
	$55,489,360



Federal Assistance Award Data System

The vast majority of federal funds supporting Cradle to Career investments are passed through either the state or local budgets, for example Medicaid funds in the state budget or federal housing subsidies in the Housing Authority of Baltimore City budget. At the same time, certain federal grants are awarded directly to organizations, including universities, providers and advocates, in the community. To survey these direct federal awards, see the Federal Assistance Award Data System (FAADS) at www.usaspending.gov. Project staff queried FAADS for FFY 2013 awards to Baltimore City grantees.

Institution	Grant Description	Amount	Cradle to Career Amount
Johns Hopkins University -- School of Public Health	Strong Start for Mothers and Newborns	$590,904	$590,904
Johns Hopkins University -- 1101 E. 33rd St.	Johns Hopkins Community Health Partnership	$6,478,656	$1,556,627
Johns Hopkins University -- 1101 E. 33rd St.	Children and Famillies Services Programs	$199,954	$199,954
Johns Hopkins University -- School of Public Health	Maternal and Child Health Consolidated Programs	$27,250	$27,250
Dept. Health and Human Services			
Friends of the Family, Inc.	Community-Based Child Abuse Prevention	$632,449	$20,938
Kennedy Institute	Maryland Center for Developmental Disabilities	$532,215	$25,575
University of Maryland Baltimore	Maternal and Child Health Federal Consolidated Programs	$233,333	$7,438
Loving Arms, Inc.	Education & Prevention Grants to Reduce Sexual Abuse of Homeless and Street Youth	$187,160	$62,387
Loving Arms, Inc.	Basic Center Program Emergency Shelter	$187,160	$62,387
Aids Interfaith Residential Services	Transitional Living for Homeless Youth & Maternity Group Homes	$187,160	$37,432
Rose Street Community Center	Basic Center Grant - Emergency Shelter Runaway Homeless Youth	$186,857	$14,965
Maryland Disability Law Center, Inc	Developmental Disabilities Basic Support & Advocacy	$242,465	$3,056
Maryland Disability Law Center, Inc	Developmental Disabilities Basic Support & Advocacy	$61,017	$769
Maryland Disability Law Center, Inc	Developmental Disabilities Basic Support & Advocacy	$165,662	$2,088
Women Accepting Responsibility, Inc.	HIV Prevention Program for Women - Juvenile Delinquency	$160,000	$32,000
Department of Education			
University of Maryland Baltimore	Promise Neighborhoods - Safe Schools and Citizenship Education	$499,735	$499,735
Maryland Disability Law Center, Inc.	Program of Protection of Individual Rights	$183,928	$44,192
Creative City Charter School	Charter School Implementation	$175,000	$175,000
Maryland Disability Law Center, Inc.	Assistive Technology - State Grants for Protection and Advocacy	$18,091	$4,347
Department of Agriculture			
Parks and People Foundation, Inc	Community Greening Stewardship Program - Tree Stewardhsip	$203,290	$24,422
Housing and Urban Development			

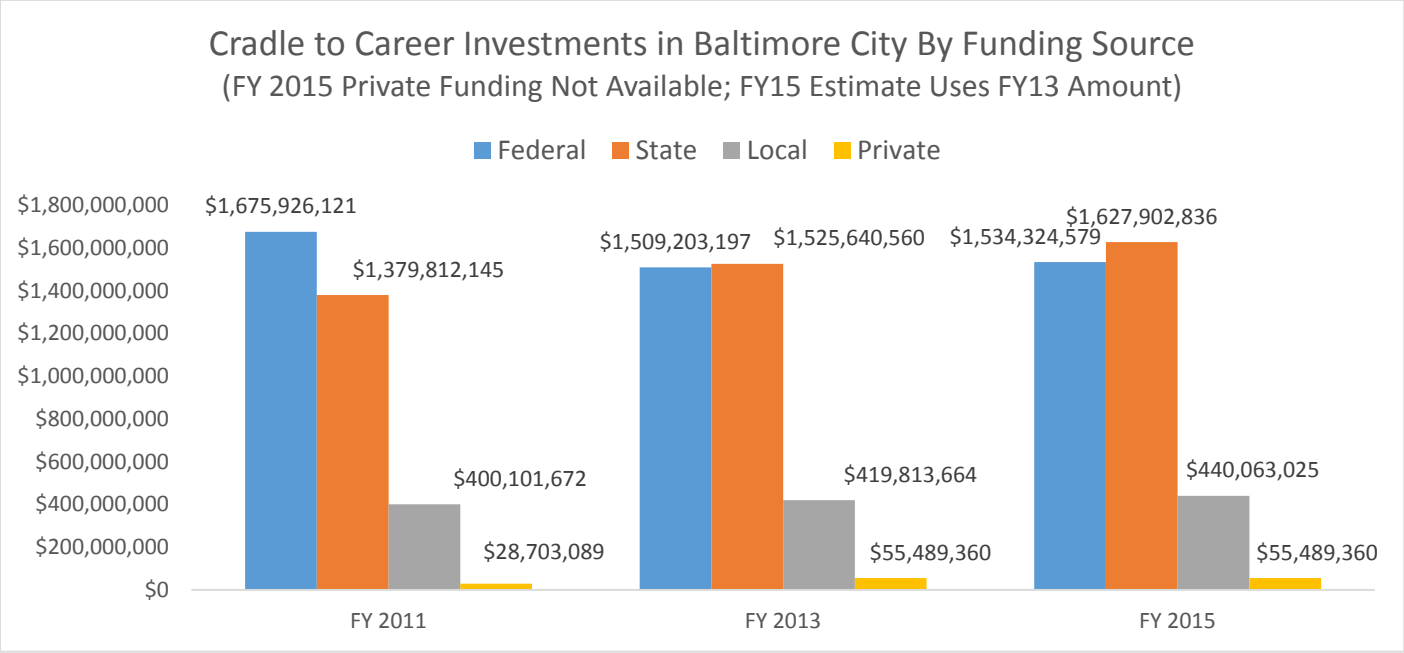
Baltimore Neighborhoods, Inc	Fair Housing Initiative - Private Enforcement	$324,411	$77,946.27
AIRS	Homeless Assistance Grants	$235,271	$56,528.59
AIRS	Homeless Assistance Grants	$188,564	$45,306.29
AIRS	Homeless Assistance Grants	$151,238	$36,337.97
AIRS	Homeless Assistance Grants	$109,316	$26,265.37
Social Security Administration			
Maryland Disability Law Center	Protection and Advocacy Grants	$100,000	$1,261
		$12,261,086	$3,635,112

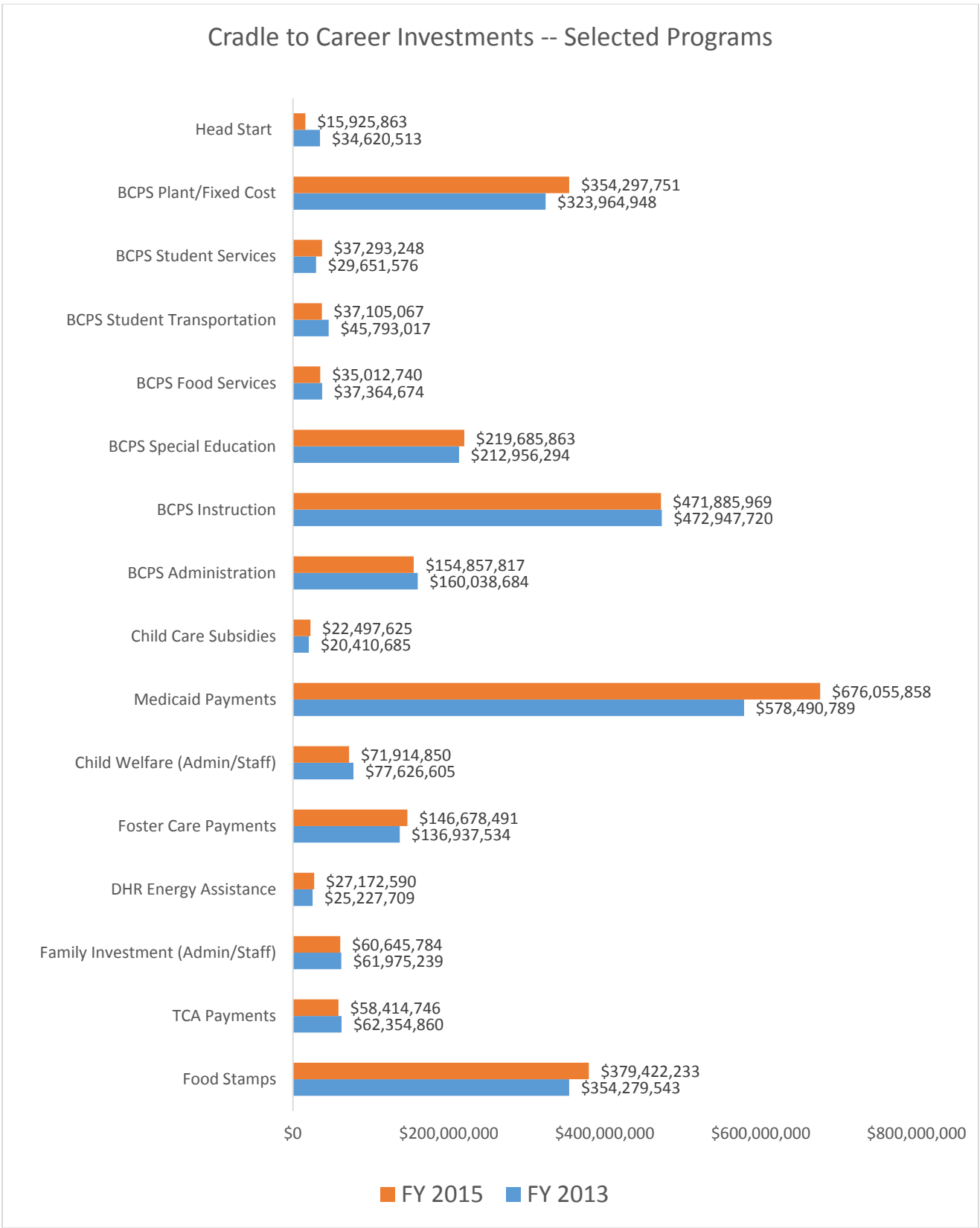
FY 2015 Cradle to Career Fund Matrix Preview

FY 2015 investments are estimated with appropriations data in the adopted FY 2015 State of Maryland, City of Baltimore and Baltimore City Public Schools operating budgets and include the July 2014 Board of Public Works cuts to the FY 2015 state budget. In FY 2013, $1.52 billion of the total $3.48 billion in Cradle to Career investments came through the state budget, whether state or federal funding. For example SNAP benefits are 100% federally funded but are included in the state Department of Human Resources budget. State agency officials reported actual FY 2013 spending for Baltimore City residents or clients for the bulk of state budget spending, for example SNAP benefits, and Foster Care, Medicaid and TCA payments. The FY 2015 estimate for Baltimore City for these entitlement and other programs is based on the rate of growth in the respective programs from FY 2013 to FY 2015 in the state budget. Additionally, spending in a fiscal year can be reduced through a deficiency reversion in the following budget. For example, the state fiscal 2014 budget included a deficiency reversion that reduced FY 2013 Medicaid spending by $72.6 million.

Other state budget FY 2013 spending items were allocated with actual data in FY 2013 state agency reporting. For example, the costs of Baltimore City youth in state juvenile facilities are allocated with the percent of Baltimore City youth of total facility population in each facility. These type of demographic data are not available for FY 2015; and the FY 2015 estimate uses the FY 2013 caseload or population data.

Many spending items in the city budget are direct Cradle to Career investments, like maternal and child health and youth workforce programs. These spending items and spending in the BCPS adopted budget will likely be similar to FY 2015 actual investments. Other spending items in the city budget, like Police or general health expenses, are allocated to Cradle to Career investments with July 2013 Census data on city population under aged 19, which are not available for FY 2015; and the estimate uses the July 2013 Census data.



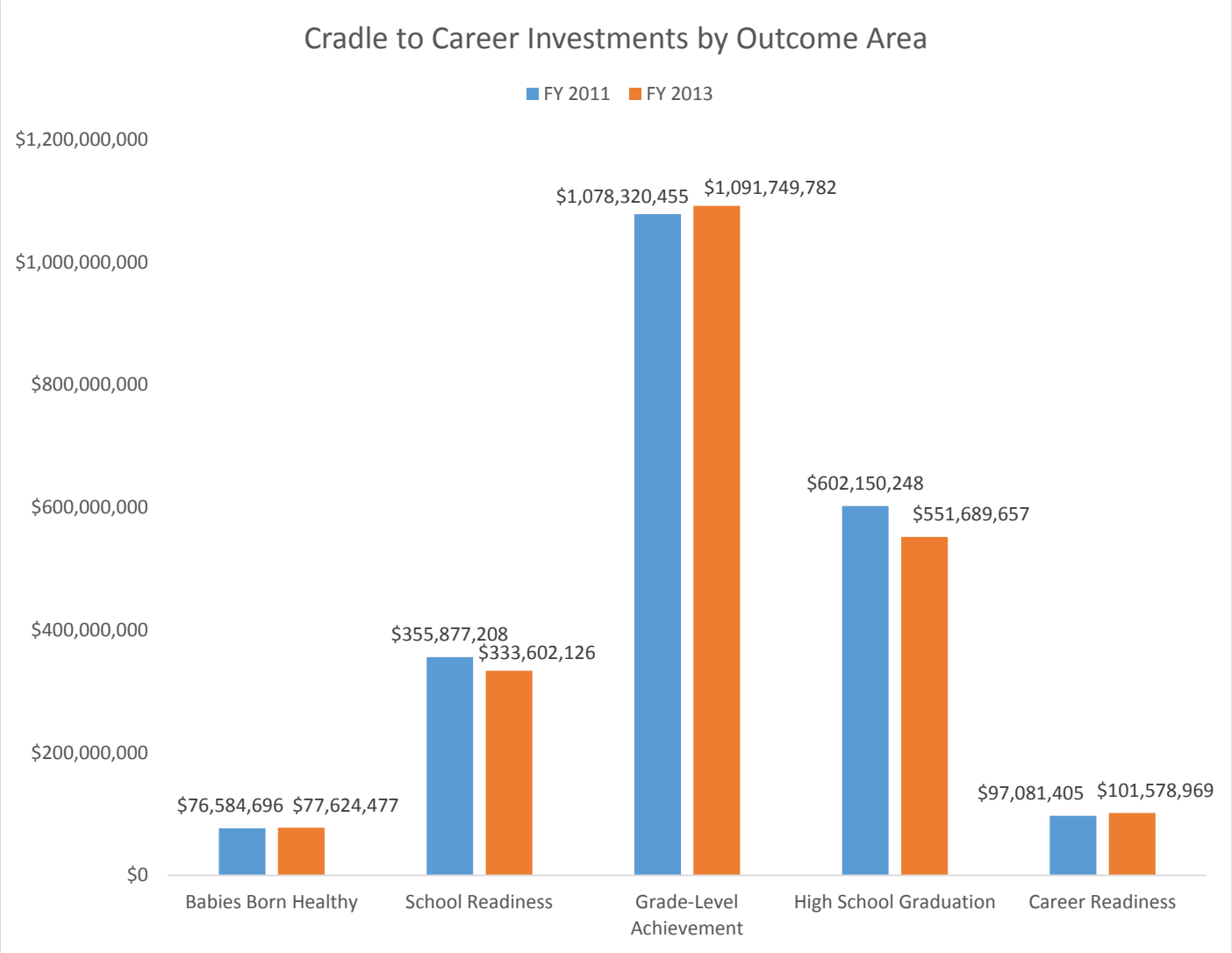

Cradle to Career Investments -- Selected Programs
Head Start
$15,925,863
$34,620,513
BCPS Plant/Fixed Cost
$354,297,751
$323,964,948
BCPS Student Services
$37,293,248
$29,651,576
BCPS Student Transportation
$37,105,067
$45,793,017
BCPS Food Services
$35,012,740
$37,364,674
BCPS Special Education
$219,685,863
$212,956,294
BCPS Instruction
$471,885,969
$472,947,720
BCPS Administration
$154,857,817
$160,038,684
Child Care Subsidies
$22,497,625
$20,410,685
Medicaid Payments
$676,055,858
$578,490,789
Child Welfare (Admin/Staff)
$71,914,850
$77,626,605
Foster Care Payments
$146,678,491
$136,937,534
DHR Energy Assistance
$27,172,590
$25,227,709
Family Investment (Admin/Staff)
$60,645,784
$61,975,239
TCA Payments
$58,414,746
$62,354,860
Food Stamps
$379,422,233
$354,279,543
$0
$200,000,000
$400,000,000
$600,000,000
$800,000,000
FY 2015
FY 2013

Cradle to Career Investments by Outcome Area

FY 2011 and FY 2013 Investments by Outcome Area Summary

	FY 2011	FY 2013	$ Change	% Change
Babies Born Healthy	$76,584,696	$77,624,477	$1,039,781	1.4%
School Readiness	$355,877,208	$333,602,126	-$22,275,082	-6.3%
Grade-Level Achievement	$1,078,320,455	$1,091,749,782	$13,429,327	1.2%
High School Graduation	$602,150,248	$551,689,657	-$50,460,592	-8.4%
Career Readiness	$97,081,405	$101,578,969	$4,497,564	4.6%

Note: Not all cradle to career investments identified in the fund matrix are included in the various outcome area fund maps. FY 2013 is the first fund map version to include career readiness funding, which was calculated for FY 2011 and FY 2013. For consistency with prior years, these career readiness investments – except for private corporate and foundation giving – are not included in the overall FY 2011 or FY 2013 Cradle to Career fund matrix.



Cradle to Career Fund Maps: Babies Born Healthy

Fiscal Outlook

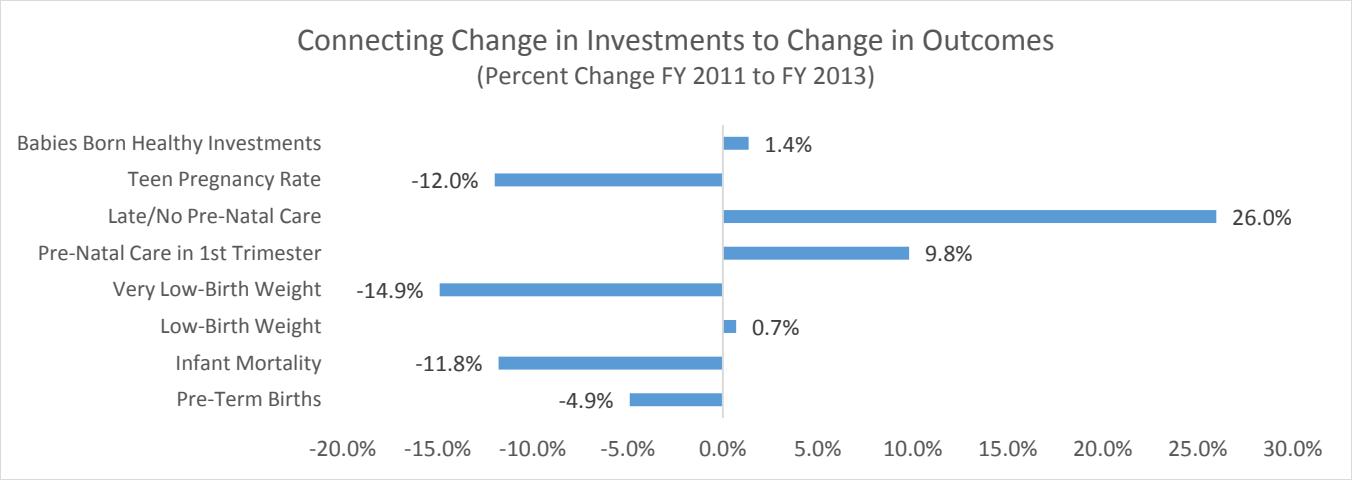
- From FY 2011 to FY 2013, babies born healthy investments increased $2.1 million, or 1.4% from $74.9 million to $76.0 million.
- From FY 2011 to FY 2013, babies born healthy investments per number of births, decreased $39, or 0.5%, to $8,523 in FY 2013 – from $8,562 in FY 2011.
- From 2010 to 2012, the most recent years of data, the infant mortality rate dropped 11.8%, the pre-term birth rate went down 4.9%, and the teen pregnancy rate decreased 12%.
- At the same time, the slower pace of spending growth has also coincided with negative change in some indicators, with the rate of low-birth weight deliveries slightly increasing 0.7% and the number of women who receive late or no pre-natal care increasing by 26%.
- $28.1 million in Medicaid-funded Neonatal Intensive Care Unit charges in FY 2013, down slightly from $28.6 million in FY 2011. 12 zip codes with highest Medicaid NICU charges accounted for 81% of total FY 2013 charges. Medicaid NICU charges dropped by 47.1% in 21224 zip code and 40.1% in 21217 zip code and went up by 128.6% in 21230 zip code. (See below for zip code detail.)

Policy Landscape

- B'More for Healthy Babies administers a number of healthy birth initiatives, including pre-natal care, home visiting, family planning and teen pregnancy prevention, expecting parent education, and B'More Fit, which offers weight management counseling and fitness classes for adults receiving government assistance.
- 3-year HHS grant for Johns Hopkins Community Health Partnership (J-CHiPS) initiative in East Baltimore

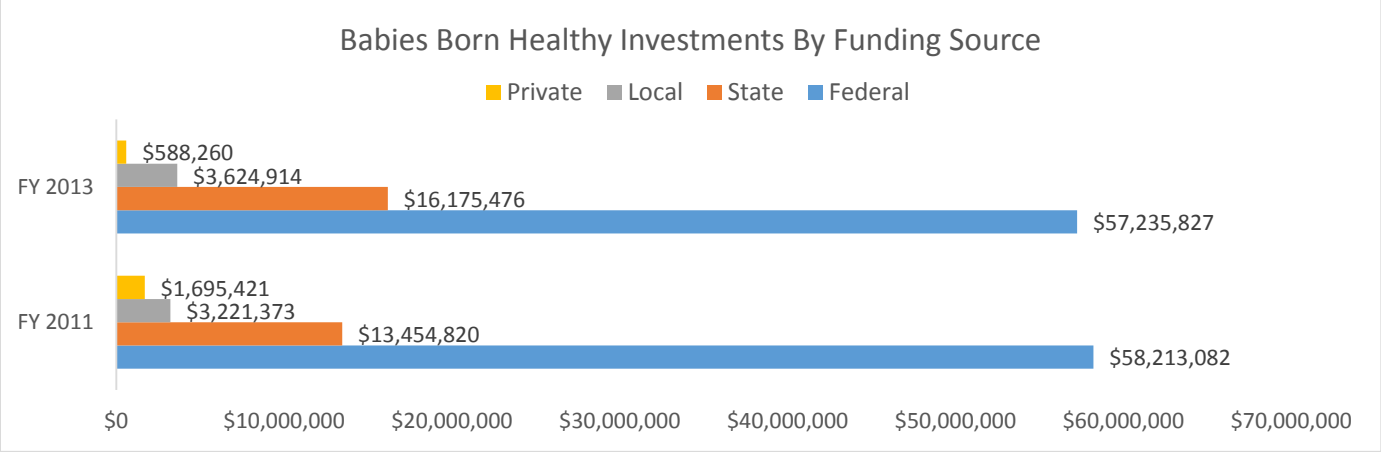
Recommendations

- Delve deeper into Neonatal Intensive Care Unit charges by diagnosis code data.
- Two zip codes with largest percentage declines in Medicaid NICU charges were 21224, which coincides with J-CHiPS service area, and 21217, which overlaps with Promise Heights. Identify successful initiatives that contributed to the drops in Medicaid NICU charges. Examine diagnosis codes to determine how much of drop was related to severity of diagnosis in the zip codes.
- Develop and negotiate with state and local partners a multi-year financing mechanism to capture and re-direct savings from avoided Medicaid-funded Neonatal Intensive Care charges through an identified Babies Born Healthy intervention, either City-wide or in a specific neighborhood or zip code.

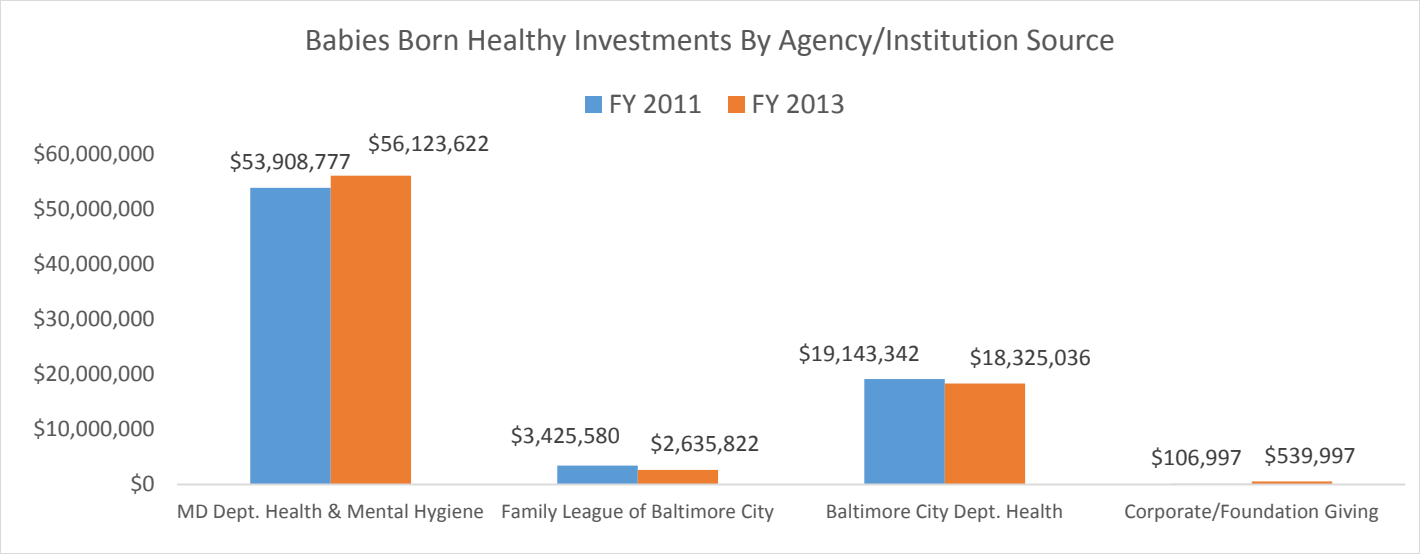


Note: The charts that connect percent change in investments and outcomes are aligned with time frames of versions of the Cradle to Career Fund Maps. Therefore, the most recent comparison available tracks the change in investments from FY 2011 to FY 2013 to change in indicator data between the same two fiscal years.

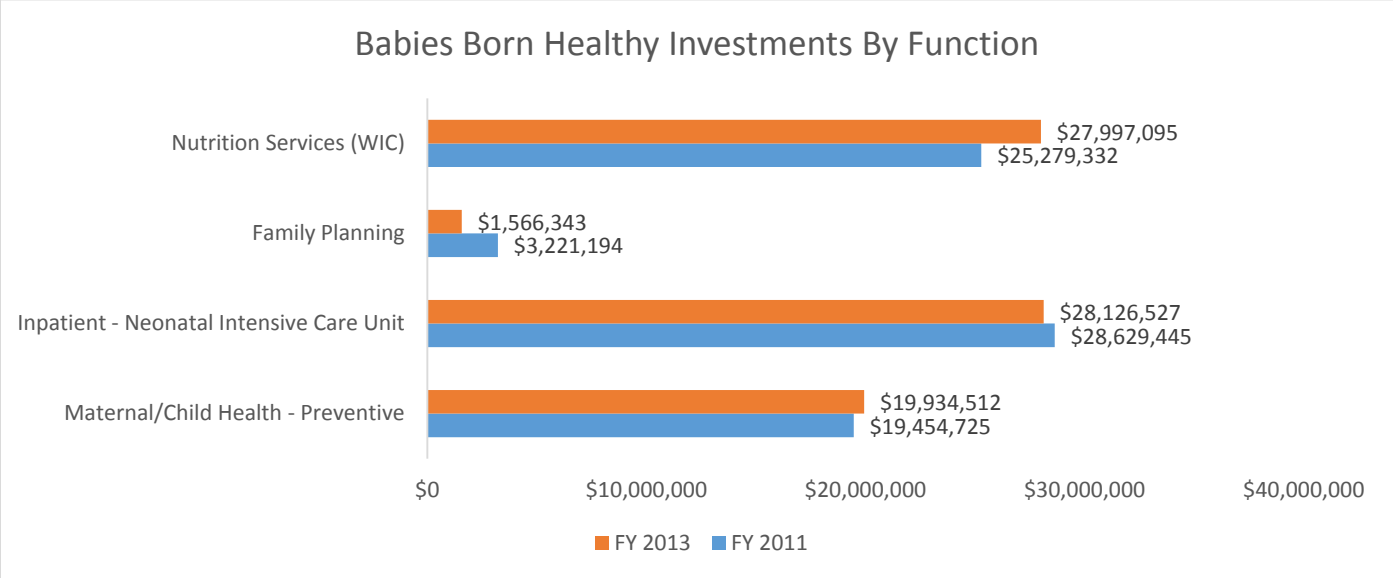
Spending By Funding Source		FY 2011	FY 2013	$ Change	% Change
Federal		$58,213,082	$57,235,827	-$977,255	-1.7%
State		$13,454,820	$16,175,476	$2,720,656	20.2%
Local		$3,221,373	$3,624,914	$403,541	12.5%
Private		$1,695,421	$588,260	-$1,107,161	-65.3%
	TOTAL	$76,584,696	$77,624,477	$1,039,781	1.4%



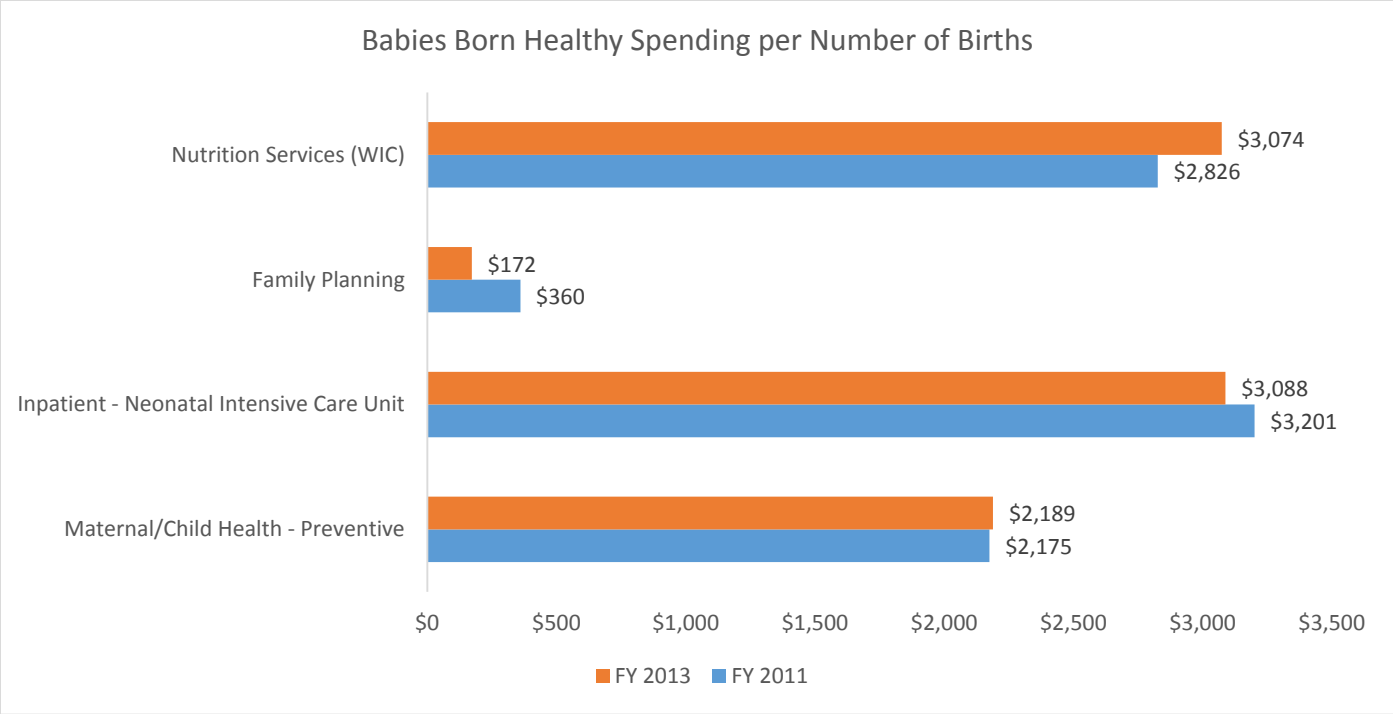
Spending By Agency/Institution Source	FY 2011	FY 2013	$ Change	% Change
MD Dept. Health & Mental Hygiene	$53,908,777	$56,123,622	$2,214,846	4.1%
Family League of Baltimore City	$3,425,580	$2,635,822	-$789,758	-23.1%
Baltimore City Dept. Health	$19,143,342	$18,325,036	-$818,306	-4.3%
Corporate/Foundation Giving	$106,997	$539,997	$433,000	404.7%
	$76,584,696	$77,624,477	$1,039,781	1.4%



Spending By Function	FY 2011	FY 2013
Maternal/Child Health - Preventive	$19,454,725	$19,934,512
Inpatient - Neonatal Intensive Care Unit	$28,629,445	$28,126,527
Family Planning	$3,221,194	$1,566,343
Nutrition Services (WIC)	$25,279,332	$27,997,095
	$76,584,696	$77,624,477



Investments per Number of Births	FY 2011	FY 2013	$ Change	% Change
Maternal/Child Health - Preventive	$2,175	$2,189	$14	0.6%
Inpatient - Neonatal Intensive Care Unit	$3,201	$3,088	-$112	-3.5%
Family Planning	$360	$172	-$188	-52.2%
Nutrition Services (WIC)	$2,826	$3,074	$248	8.8%
TOTAL	$8,562	$8,523	-$39	-0.5%



Medicaid-Funded NICU Charges by Zip Code

Zip Code	FY 2011	FY 2013	$ Change	% Change
21201	$380,724	$1,191,362	$810,638	212.9%
21202	$562,030	$967,014	$404,984	72.1%
21205	$1,288,890	$1,796,750	$507,860	39.4%
21206	$2,469,003	$2,133,818	-$335,185	-13.6%
21209	$214,011	$162,655	-$51,356	-24.0%
21211	$169,483	$91,105	-$78,378	-46.2%
21212	$661,910	$322,339	-$339,571	-51.3%
21213	$2,236,344	$2,334,414	$98,070	4.4%
21214	$790,139	$1,040,186	$250,047	31.6%
21215	$984,403	$1,575,141	$590,738	60.0%
21216	$1,568,813	$2,245,663	$676,850	43.1%
21217	$2,290,532	$1,362,557	-$927,975	-40.5%
21218	$2,211,353	$2,382,490	$171,137	7.7%
21223	$1,514,483	$2,076,185	$561,702	37.1%
21224	$3,166,475	$1,675,356	$1,491,119	-47.1%
21225	$1,494,838	$1,517,174	$22,336	1.5%
21229	$1,871,699	$1,724,329	-$147,370	-7.9%
21230	$848,285	$1,939,203	$1,090,918	128.6%
21231	$343,317	$164,091	-$179,226	-52.2%
21239	$1,543,948	$1,311,650	-$232,298	-15.0%

Cradle to Career Fund Maps: School Readiness

Fiscal Outlook

- School readiness investments went down $22.3 million, or 6.3%, from $355.9 million in FY 2011 to $333.6 million in FY 2013.
- From FY 2011 to FY 2013, school readiness investments per child under age 5, decreased $541, or 6.3%, to $8,002 in FY 2013 – from $8,542 in FY 2011.
- Despite the decrease in spending, the percent of BCPS kindergarteners testing fully ready to learn was up 15.8% between FY 2011 and FY 2013.
- Although after years of progress, school readiness scores dropped 2.2% from 2012-2013 to 2013-2014.
- Compared to FY 2013, the FY 2015 Baltimore City budget includes lower levels of funding for Head Start, with FY 2013 funding of $34.6 million down to $10.1 million in FY 2015. Federal funds go down by $24.6 million from $34.1 million to $9.5 million. State funds are up slightly to $618,434.
- Funding in the city budget for Head Start is supplemented by a 5-year $29 million federal HHS grant for a Birth-to-Five pilot program that will be used to support Early Head Start and Head Start centers.

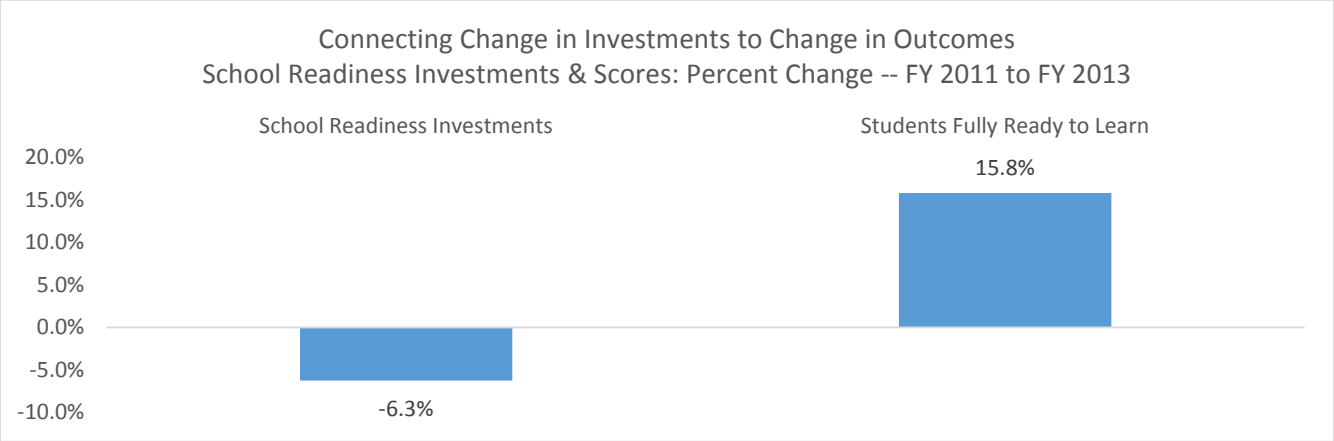
Policy Landscape

- School financing reform legislation of 2002 required local school districts to offer pre-kindergarten to children from a family who had income at or under 185% of the federal poverty guidelines (FPG) – the eligibility criteria for Free and Reduced Price Meals program, met by 89.1% of elementary students in 2013-2014. 2014 legislation expanded pre-kindergarten to children from families with income below 300% of FPG, or $59,370 for a family of three. $4.3 million is included in the FY 2015 state budget for expansion grants that can be used to expand or establish pre-kindergarten programs for eligible and newly eligible students as well as establish new or expand existing Judy Centers for eligible students or newly eligible students attending school in a Title I school attendance area.
- Enacted 2014 legislation expanded the Infants and Toddlers program, which offers early intervention services to children with disabilities, to allow children to continue to participate in the program until the beginning of the school year following the child's 4th birthday.
- 2014 legislation also codified the State Early Childhood Advisory Council, with purposes to coordinate early childhood care and education programs, conduct needs assessments and develop a statewide strategic report, due by December 1, 2015.

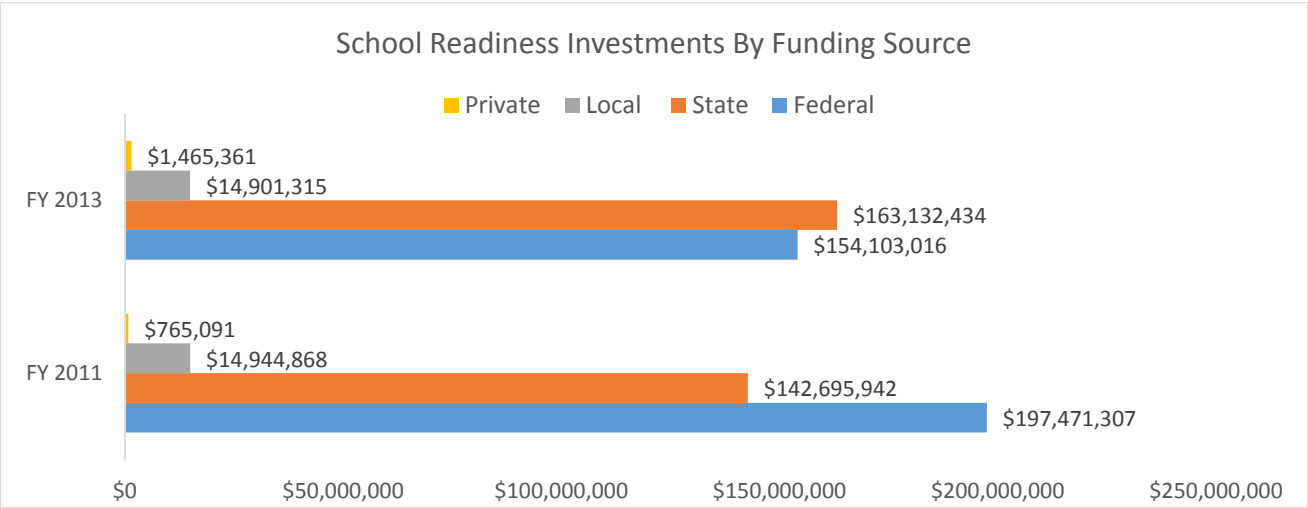
Recommendations

- The $29 million, 5-year grant could mean an estimated $5.8 million in funding for FY 2015, which would not replace the decrease in Head Start funds in the city budget. Obtain more information on the schedule of awards of the 5-year grant. Explore additional funding for supplemental fiscal 2015 support for Baltimore City Early Head Start and Head Start Centers to offset potential cuts in FY 2015 public funding.

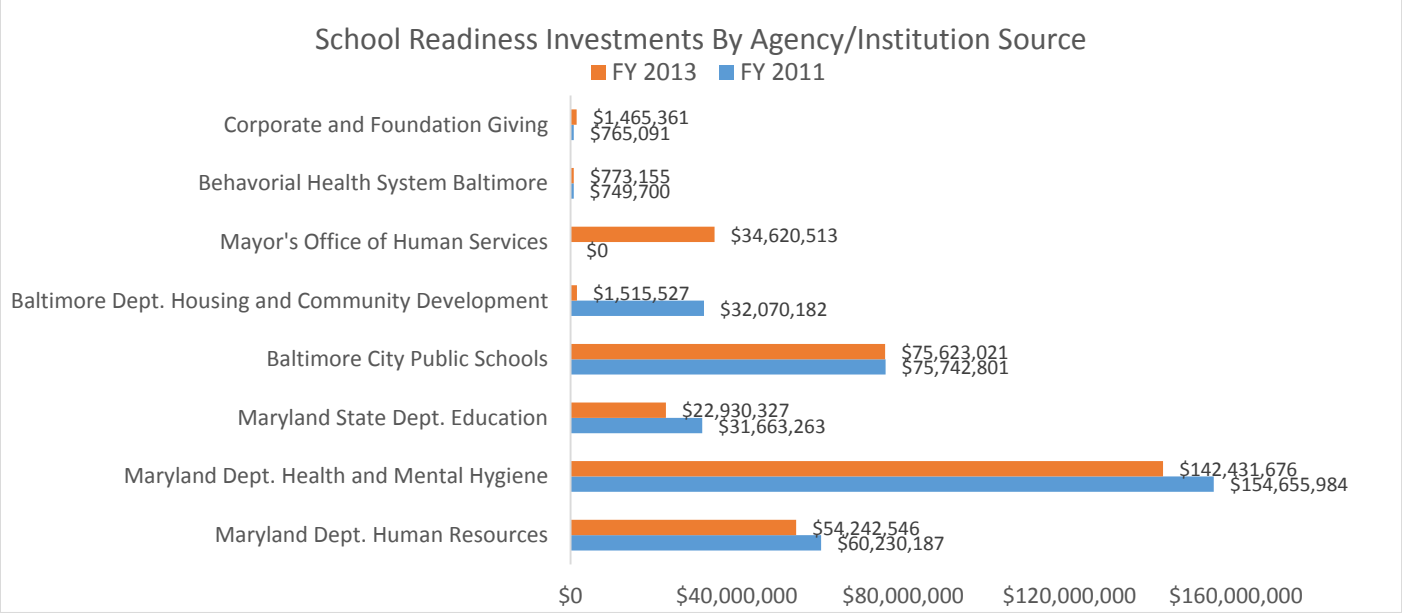
- State pre-kindergarten expansion grants give priority for participation to qualified vendors who meet certain criteria. Qualified vendors that receive a grant in a current year must receive at least the same grant in the next fiscal year. Partner with Maryland Family Network and BCPS to assure all vendors meet qualification criteria.
- Perform a needs assessment in Title I attendance areas for Judy Centers. Seek pre-kindergarten expansion grants to support expanding existing centers and the establishment of any needed new Judy Centers in Title I attendance area.
- Undertake an information campaign for providers and parents to inform them about the new age expansion of the Infants & Toddlers program.



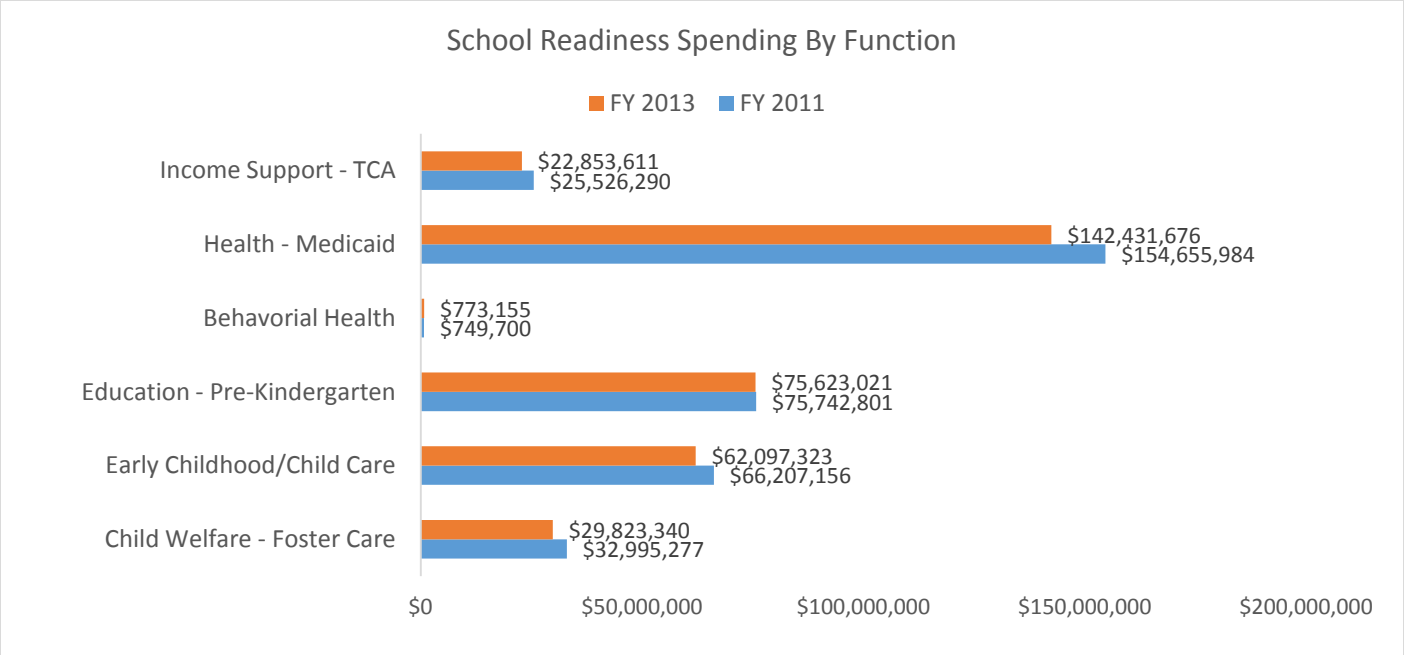
Investments by Funding Source	FY 2011	FY 2013	$ Change	% Change
Federal	$197,471,307	$154,103,016	-$43,368,291	-22.0%
State	$142,695,942	$163,132,434	$20,436,492	14.3%
Local	$14,944,868	$14,901,315	-$43,553	-0.3%
Private	$765,091	$1,465,361	$700,270	91.5%
TOTAL	$355,877,208	$333,602,126	-$22,275,082	-6.3%



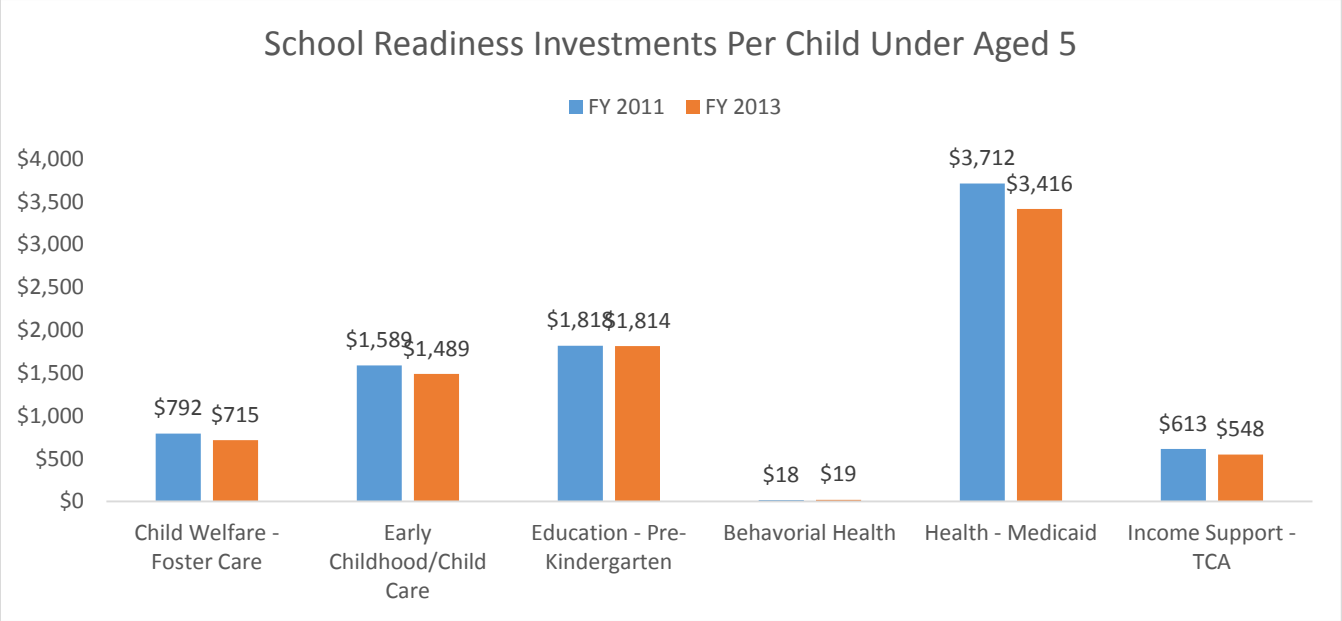
Spending by Agency/Institution Source	FY 2011	FY 2013	$ Change	% Change
Maryland Dept. Human Resources	$60,230,187	$54,242,546	-$5,987,641	-9.9%
Maryland Dept. Health and Mental Hygiene	$154,655,984	$142,431,676	-$12,224,308	-7.9%
Maryland State Dept. Education	$31,663,263	$22,930,327	-$8,732,936	-27.6%
Baltimore City Public Schools	$75,742,801	$75,623,021	-$119,780	-0.2%
Baltimore Dept. Housing and Community Development	$32,070,182	$1,515,527	-$30,554,655	-95.3%
Mayor's Office of Human Services	$0	$34,620,513	$34,620,513	
Behavioral Health System Baltimore	$749,700	$773,155	$23,455	3.1%
Corporate and Foundation Giving	$765,091	$1,465,361	$700,270	91.5%
TOTAL	$355,877,208	$333,602,126	-$22,275,082	-6.3%



Spending by Function		FY 2011	FY 2013
Child Welfare - Foster Care Payments - Children Under Age 6		$32,995,277	$29,823,340
Early Childhood/Child Care		$66,207,156	$62,097,323
Education - Pre-Kindergarten		$75,742,801	$75,623,021
Behavioral Health		$749,700	$773,155
Health – Medicaid Payments - Children Under Age 6		$154,655,984	$142,431,676
Income Support – TCA Payments - Children Under Age 6		$25,526,290	$22,853,611
	TOTAL	$355,877,208	$333,602,126



Investments per Child under Aged 5		FY 2011	FY 2013	$ Change	% Change
Child Welfare - Foster Care		$792	$715	-$77	-9.7%
Early Childhood/Child Care		$1,589	$1,489	-$100	-6.3%
Education - Pre-Kindergarten		$1,818	$1,814	-$4	-0.2%
Behavioral Health		$18	$19	$1	3.0%
Health - Medicaid		$3,712	$3,416	-$296	-8.0%
Income Support - TCA		$613	$548	-$65	-10.5%
	TOTAL	$8,542	$8,002	-$541	-6.3%



Note: Per child spending in the school readiness, grade-level achievement, high school graduation and career readiness fund maps are calculated using Census data for population by age of children and young adults that are reported in the following age groups: children under age 5; children ages 5 to 14; youth ages 15 to 20; and young adults ages 20 to 24.

At the same time, the state Department of Health and Mental Hygiene data for city Medicaid enrollees by coverage group and age group are reported in slightly different age groups for children and youth: under age 1, aged 1-5, aged 6-15, and aged 15-20. The DMMH data represent actual city enrollees by coverage group, including for TCA recipients and children in foster care. Therefore, these DHMH data are used to allocate actual Medicaid, TCA and foster care spending to children under age 6 for the school readiness fund map, to children aged 6-14 for the grade-level achievement fund map and children aged 15-20 for the high school graduation fund map.

The small differences in age group break-outs between the Census data and the DHMH Medicaid data account for the slight differences in reporting in age groups in the various cradle to career fund maps.

Cradle to Career Fund Maps: Grade-Level Educational Achievement

Fiscal Outlook

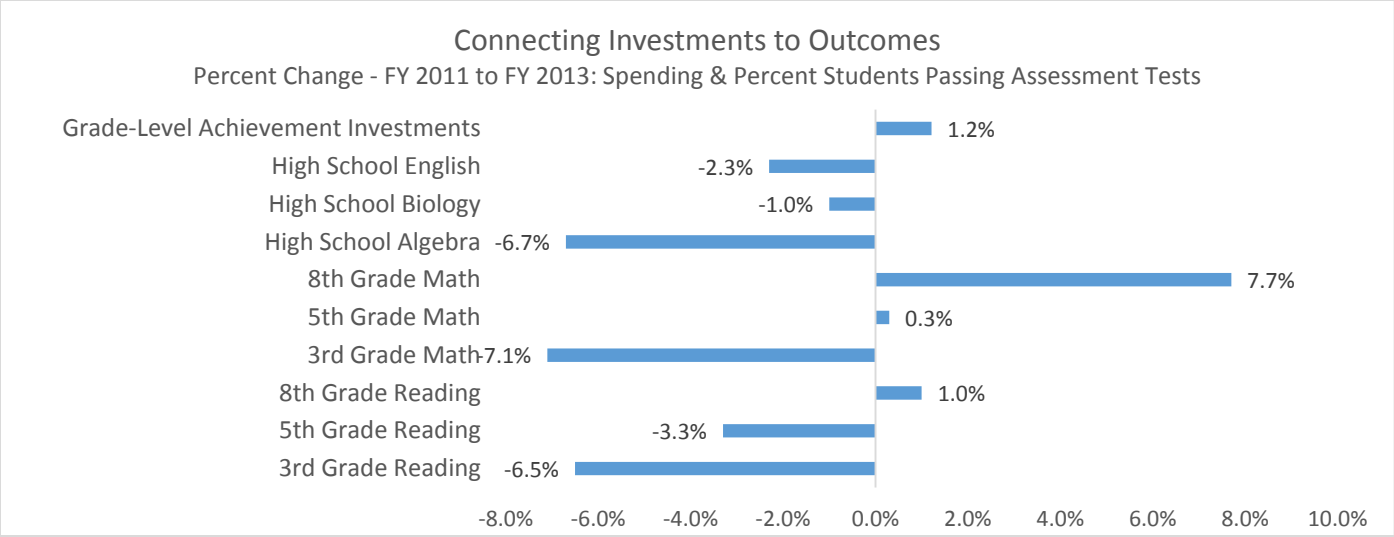
- From FY 2011 to FY 2013, Investments to assure students achieve at grade-level were up slightly, an increase of $13.4 million, or 1.2%, to $1.092 billion.
- From FY 2011 to FY 2013, grade-level educational achievement investments per child aged 5 through 14, decreased $96, or 0.6%, to $15,447 in FY 2013 – from $15,542 in FY 2011.
- Over the same period, change in Maryland School Assessment (MSA) test scores was mixed, with 3rd grade reading and math, 5th grade reading and all high school assessments test scores dropping, and 5th grade math and 8th grade reading and math scores up slightly.
- More recently, the downward trend in assessment scores has continued, with drops in 3rd grade and 8th grade reading scores and math scores for all grades in 2013-2014.

Policy Landscape

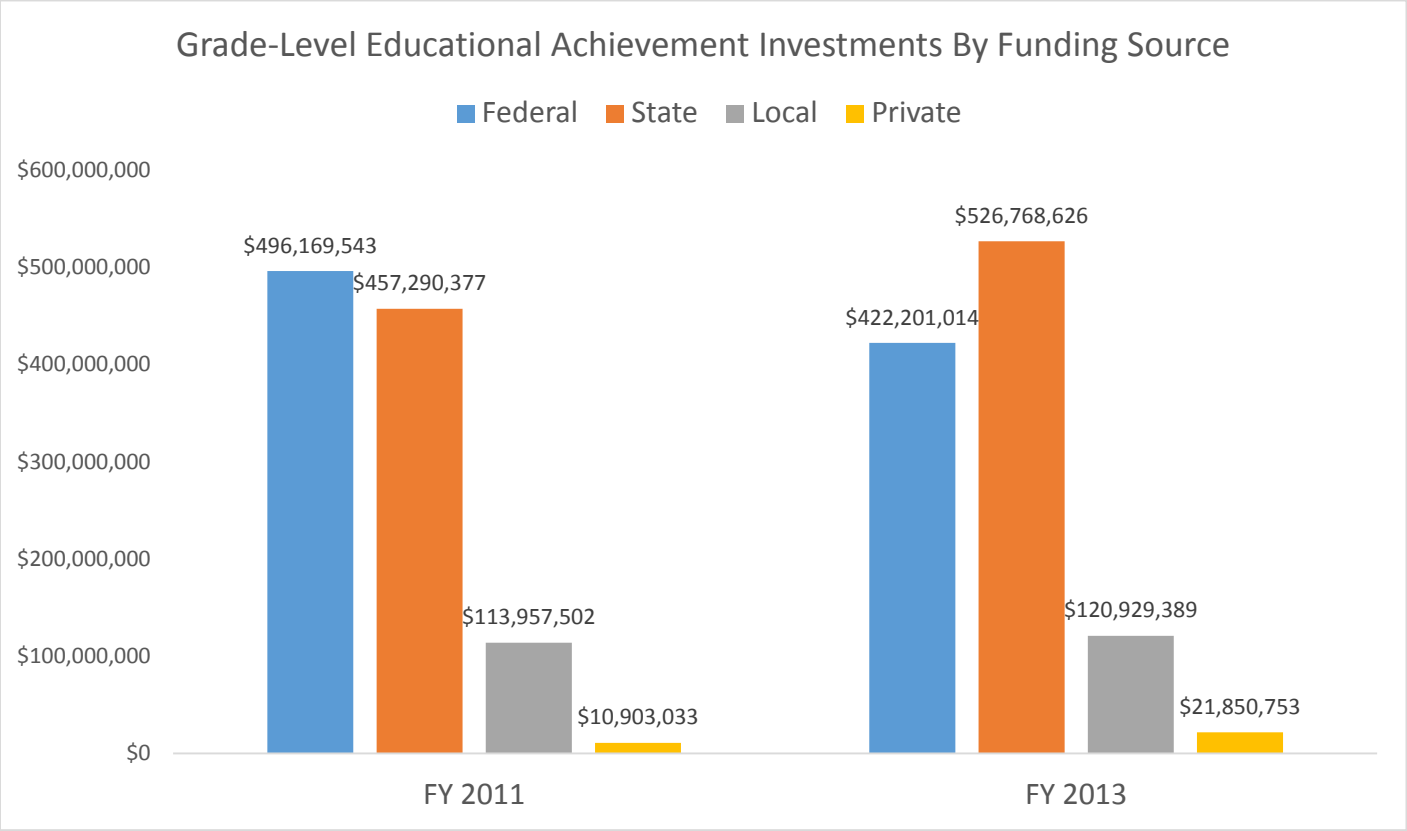
- As follow up to the 2002 legislation that revamped state public education financing, the Maryland State Department of Education is required to conduct a statewide study to determine the adequacy of educational funding to be completed by December 2016.
- 2014 state legislation created the Task Force to Study How to Improve Student Achievement in Middle School, with a report due December 1, 2014.
- Promise Heights is a US Department of Education-designated Promise Neighborhood that received $499,735 for a federal Promise Neighborhoods planning grant in FFY 2013 for local efforts to improve education outcomes and provide comprehensive support services. Projects that receive a planning grant often are awarded a subsequent Promise Neighborhood implementation grant.

Recommendations

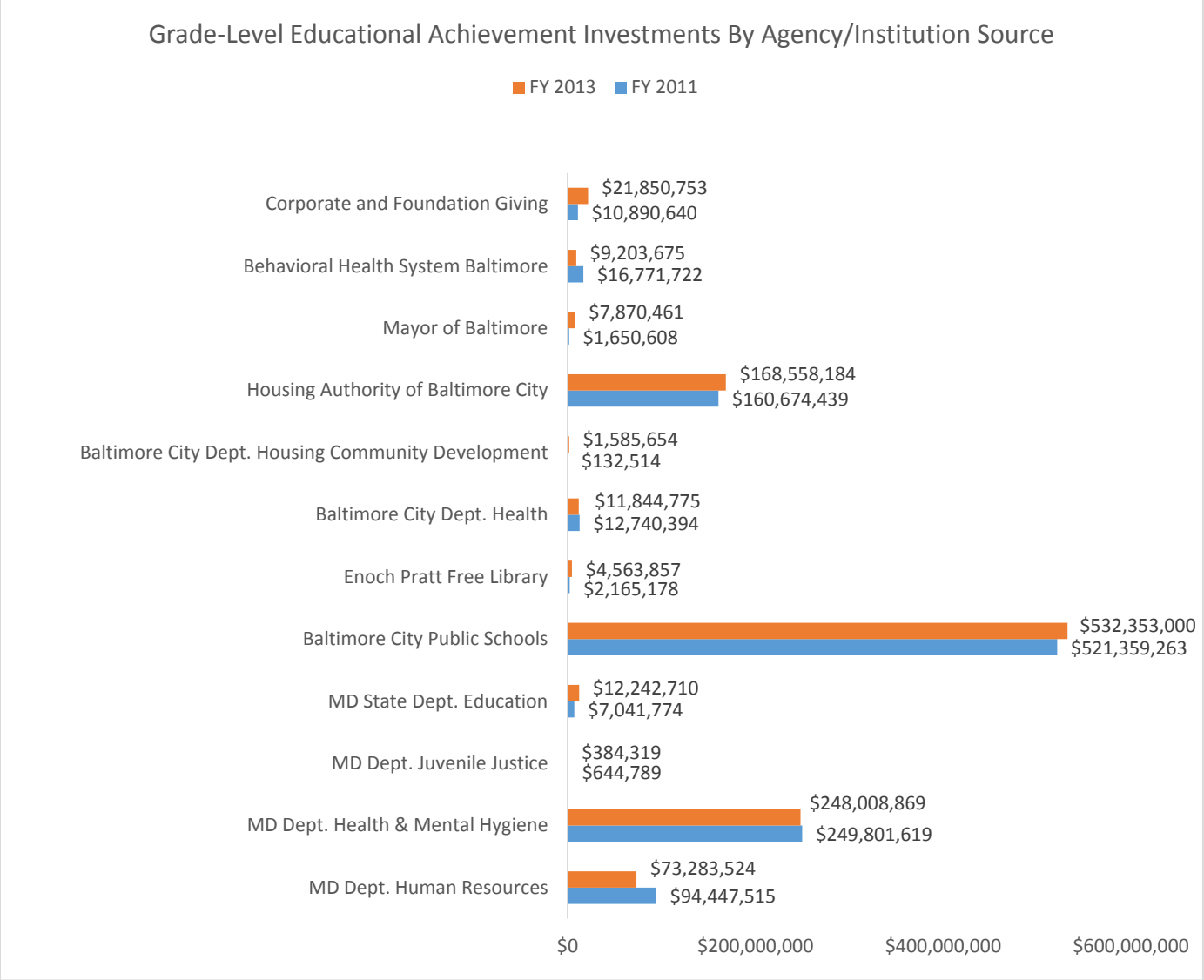
- Determine the release date of any interim report for the MSDE education funding adequacy study and task force on middle school achievement. Monitor and influence both the adequacy study and the middle school achievement task force.
- Monitor existing efforts to ensure technological readiness for PARCC online testing. In June 2014, MSDE reported 19 of 24 local districts reported issues during the first half of the PARCC field test.



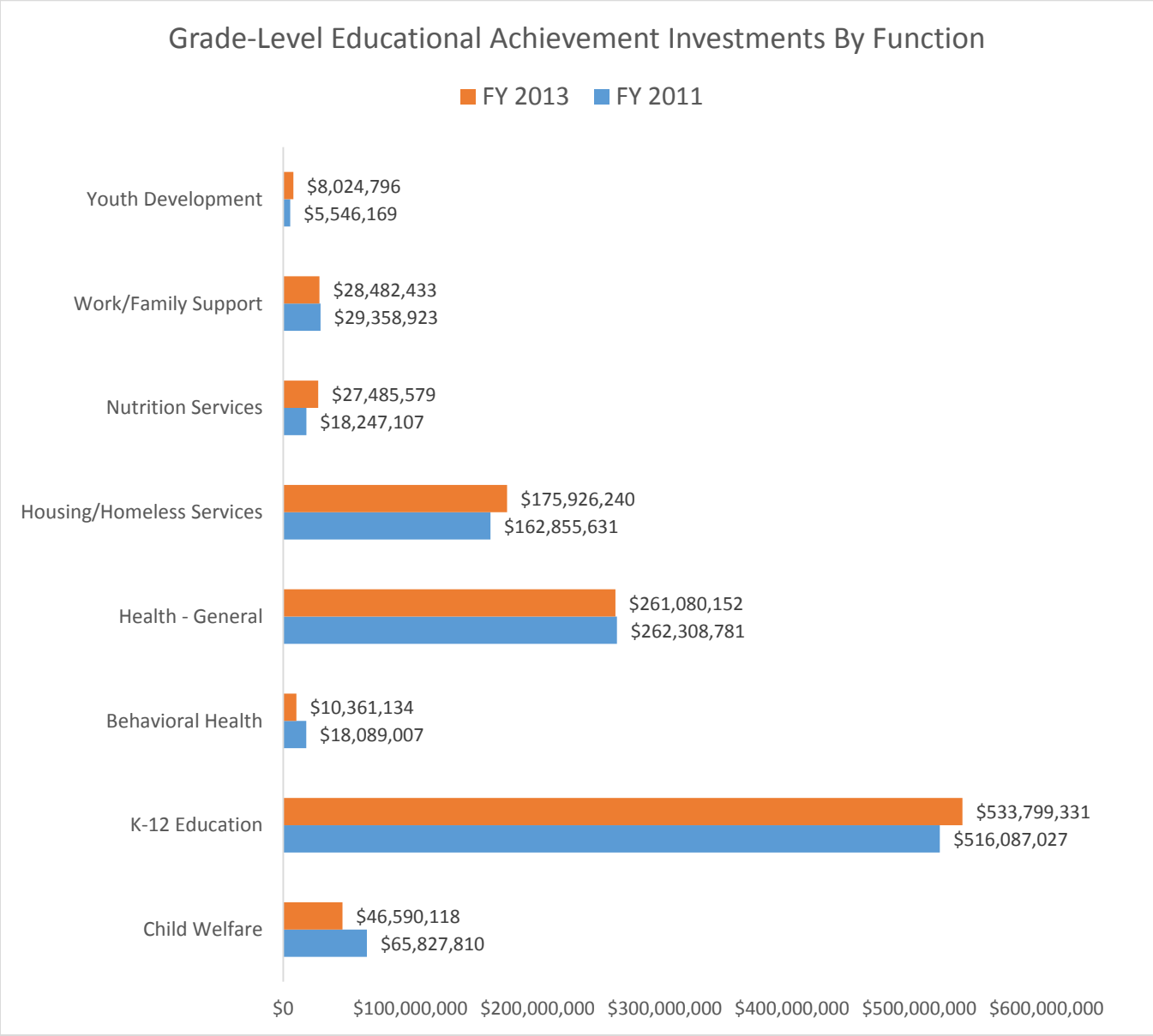
Investments by Funding Source	FY 2011	FY 2013	$ Change	% Change
Federal	$496,169,543	$422,201,014	-$73,968,530	-14.9%
State	$457,290,377	$526,768,626	$69,478,249	15.2%
Local	$113,957,502	$120,929,389	$6,971,888	6.1%
Private	$10,903,033	$21,850,753	$10,947,720	100.4%
TOTAL	$1,078,320,455	$1,091,749,782	$13,429,327	1.2%



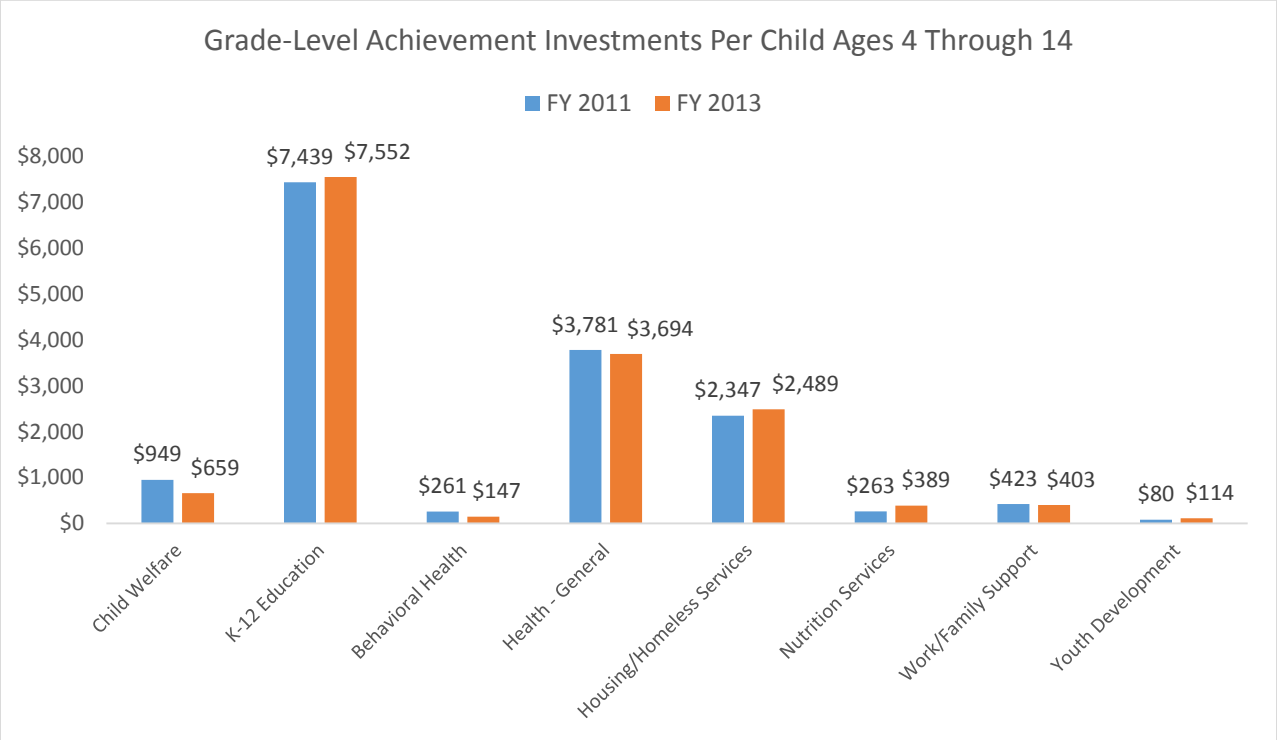
Investments by Agency/Institution Source	FY 2011	FY 2013	$ Change	% Change
MD Dept. Human Resources	$94,447,515	$73,283,524	-$21,163,990	-22.4%
MD Dept. Health & Mental Hygiene	$249,801,619	$248,008,869	-$1,792,750	-0.7%
MD Dept. Juvenile Justice	$644,789	$384,319	-$260,470	-40.4%
MD State Dept. Education	$7,041,774	$12,242,710	$5,200,936	73.9%
Baltimore City Public Schools	$521,359,263	$532,353,000	$10,993,737	2.1%
Enoch Pratt Free Library	$2,165,178	$4,563,857	$2,398,679	110.8%
Baltimore City Dept. Health	$12,740,394	$11,844,775	-$895,619	-7.0%
Baltimore City Dept. Housing Community Development	$132,514	$1,585,654	$1,453,141	1096.6%
Housing Authority of Baltimore City	$160,674,439	$168,558,184	$7,883,745	4.9%
Mayor of Baltimore	$1,650,608	$7,870,461	$6,219,853	376.8%
Behavioral Health System Baltimore	$16,771,722	$9,203,675	-$7,568,047	-45.1%
Corporate and Foundation Giving	$10,890,640	$21,850,753	$10,960,113	100.6%
TOTAL	$1,078,320,455	$1,091,749,782	$13,429,327	1.2%



Investments by Function	FY 2011	FY 2013	$ Change	% Change
Child Welfare	$65,827,810	$46,590,118	-$19,237,693	-29.2%
K-12 Education	$516,087,027	$533,799,331	$17,712,304	3.4%
Behavioral Health	$18,089,007	$10,361,134	-$7,727,874	-42.7%
Health - General	$262,308,781	$261,080,152	-$1,228,629	-0.5%
Housing/Homeless Services	$162,855,631	$175,926,240	$13,070,609	8.0%
Nutrition Services	$18,247,107	$27,485,579	$9,238,472	50.6%
Work/Family Support	$29,358,923	$28,482,433	-$876,490	-3.0%
Youth Development	$5,546,169	$8,024,796	$2,478,628	44.7%
	$1,078,320,455	$1,091,749,782	$13,429,327	1.2%



Spending Per Child Aged 5 Through 14	FY 2011	FY 2013	$ Change	% Change
Child Welfare	$949	$659	-$290	-30.5%
K-12 Education	$7,439	$7,552	$114	1.5%
Behavioral Health	$261	$147	-$114	-43.8%
Health - General	$3,781	$3,694	-$87	-2.3%
Housing/Homeless Services	$2,347	$2,489	$142	6.0%
Nutrition Services	$263	$389	$126	47.9%
Work/Family Support	$423	$403	-$20	-4.8%
Youth Development	$80	$114	$34	42.0%
TOTAL	$15,542	$15,447	-$96	-0.6%



Cradle to Career Fund Maps: High School Graduation

Fiscal Outlook

- From FY 2011 to FY 2013, Investments to assure youth graduate high school decreased $50.5 million, or 8.4%, to $551.7 million in FY 2013.
- From FY 2011 to FY 2013, high school graduation investments per youth aged 15 through 19, increased $130, or 0.9%, to $14,870 in FY 2013 – from $14,740 in FY 2011.
- Over the same time, using the graduating class cohort method, graduation rates improved 4.1% for all students and 13.8% for special education students and dropout rates were down 30.2% for all students and 27.2% for special education students.
- Between 2010-2011 and 2012-2013, or the most recent available data, the annual dropout rate for all high school students changed from 4.2% in 2010-2011 to 4.5% in 2012-2013, an increase of 7.9%;
- Over the same period, promotion rates for high school students dropped in grades 9 through 11.
    - For 9th grade students, promotion rate fell from 69.2% in 2010-2011 to 65.5% in 2012-2013, a decrease of 5.3%.
    - For 10th grade students, the promotion rate fell from 76.6% in 2010-2011 to 71% in 2011-2012, a decrease of 7.3%.
    - For high school juniors, the promotion rate fell from 82% in 2010-2011 to 74.8%, a decrease of 8.8%changes and promotion rates fell across high school grades, with 9th grade down by 5.3%, and both 10th and 11th grade falling by 8.8%.

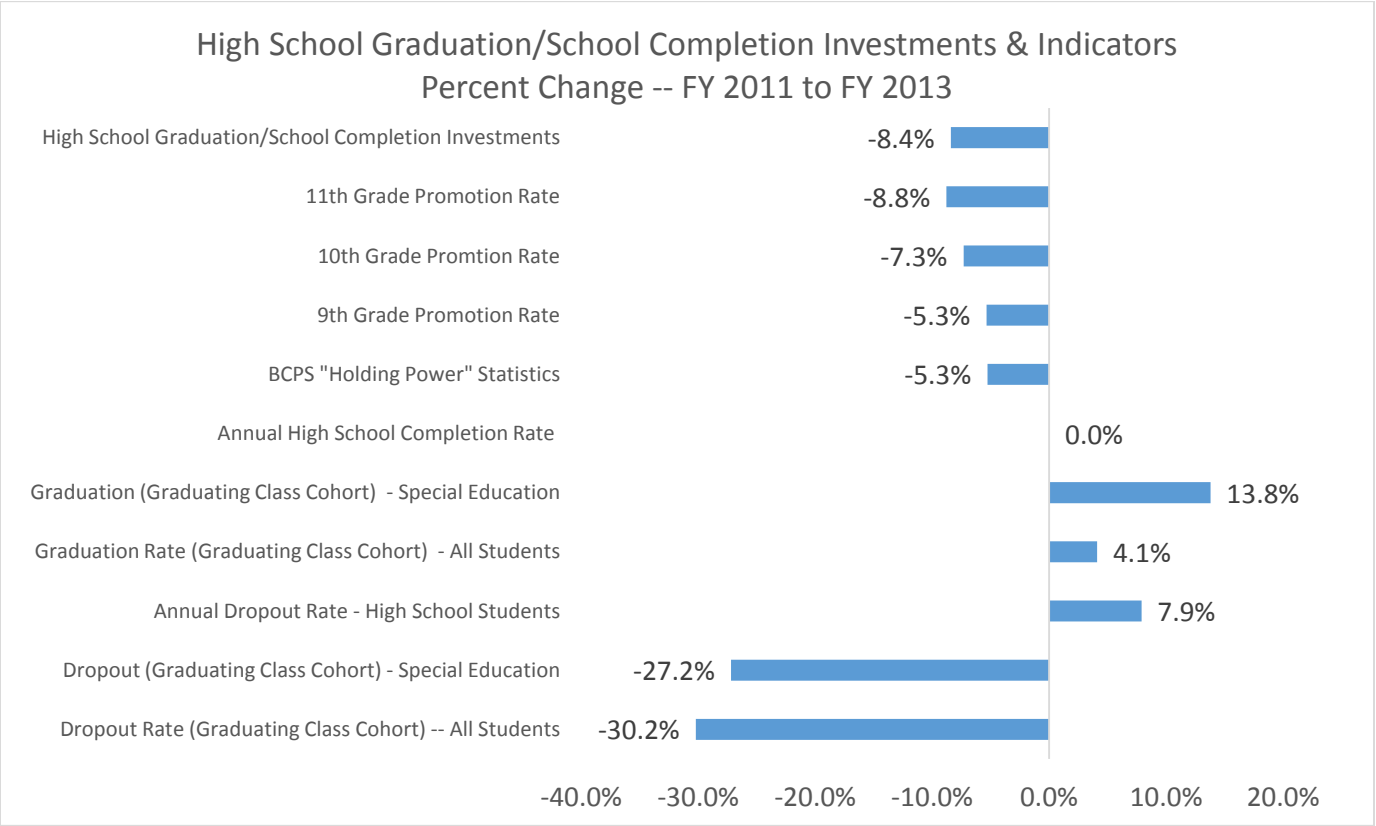
High School Graduation: Policy Landscape

- The College and Career Readiness Act of 2013 enacted requirements related to public school students who are dually enrolled in a public institution of higher education. These requirements specify that the state public higher education institution may not charge the student tuition, will charge the local school board a discounted tuition, and that the local board of education may not collect reimbursement of paid tuition from students who are eligible for Free and Reduced Price Meals, or 77% of BCPS high school students in 2013-2014.
- The legislation also required the state board of education to establish curriculum and graduation requirements that include career readiness assessments of all 11th graders beginning in 2015-2016 and transition courses for 12th graders who are not career ready beginning in 2016-2017.
- Other state legislation enacted in 2013 required the state Department of Labor, Licensing and Regulation to investigate alternative methods from the General Educational Development tests for demonstrating high school skills equivalency. Maryland currently uses the National External Diploma Program administered by DLLR, but it's relatively limited compared to GED.

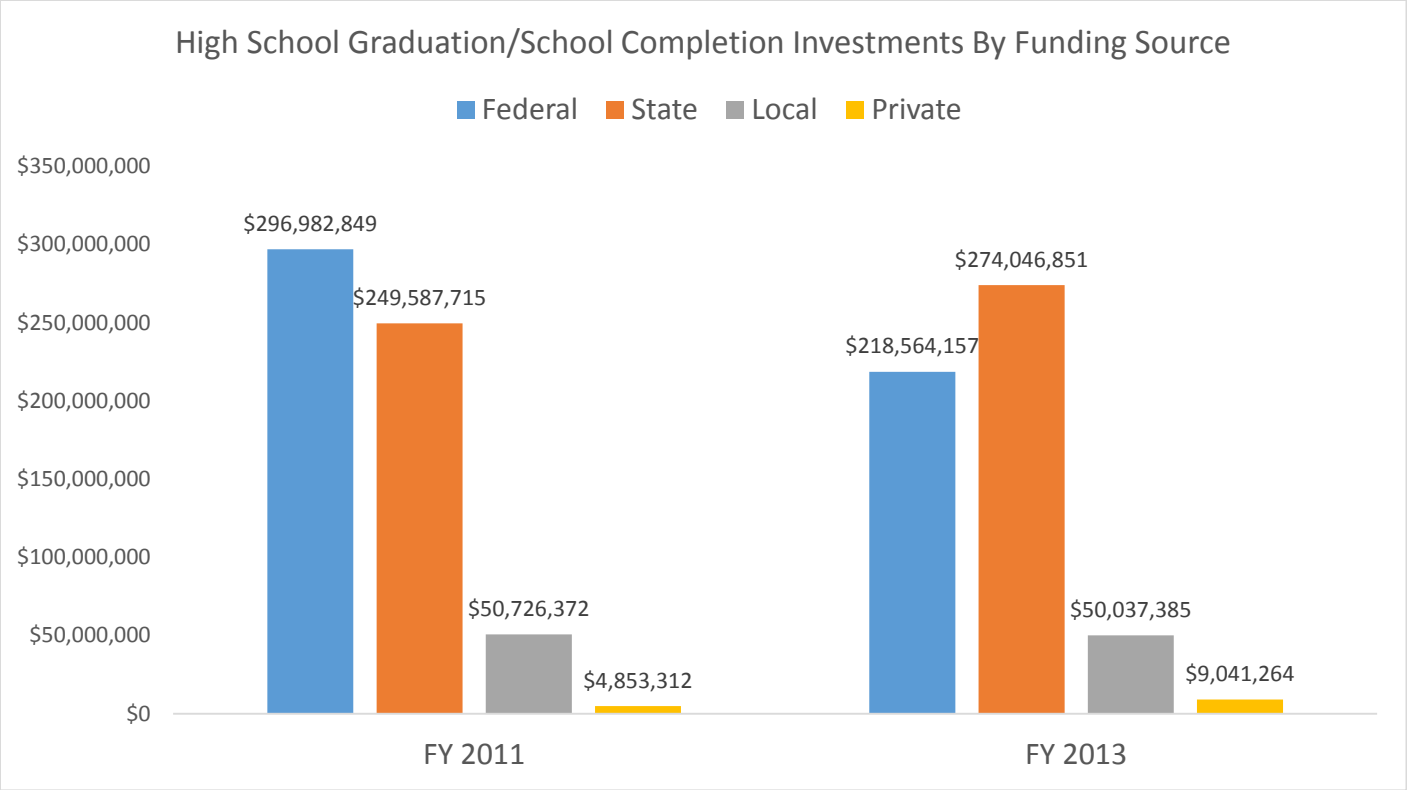
Recommendations

- Work with BCPS to maximize the number of dually enrolled high school students in the 2014-2015 school year, particularly those who are eligible for Free and Reduced Price Meals who will not pay tuition. High school career counselors can assist students in developing and implementing the degree plan.
- Partner with BCPS on development of college and career readiness standards.

- Support the recommendations of DLLR on alternatives to the GED, including expanding the use of the National External Diploma Program.

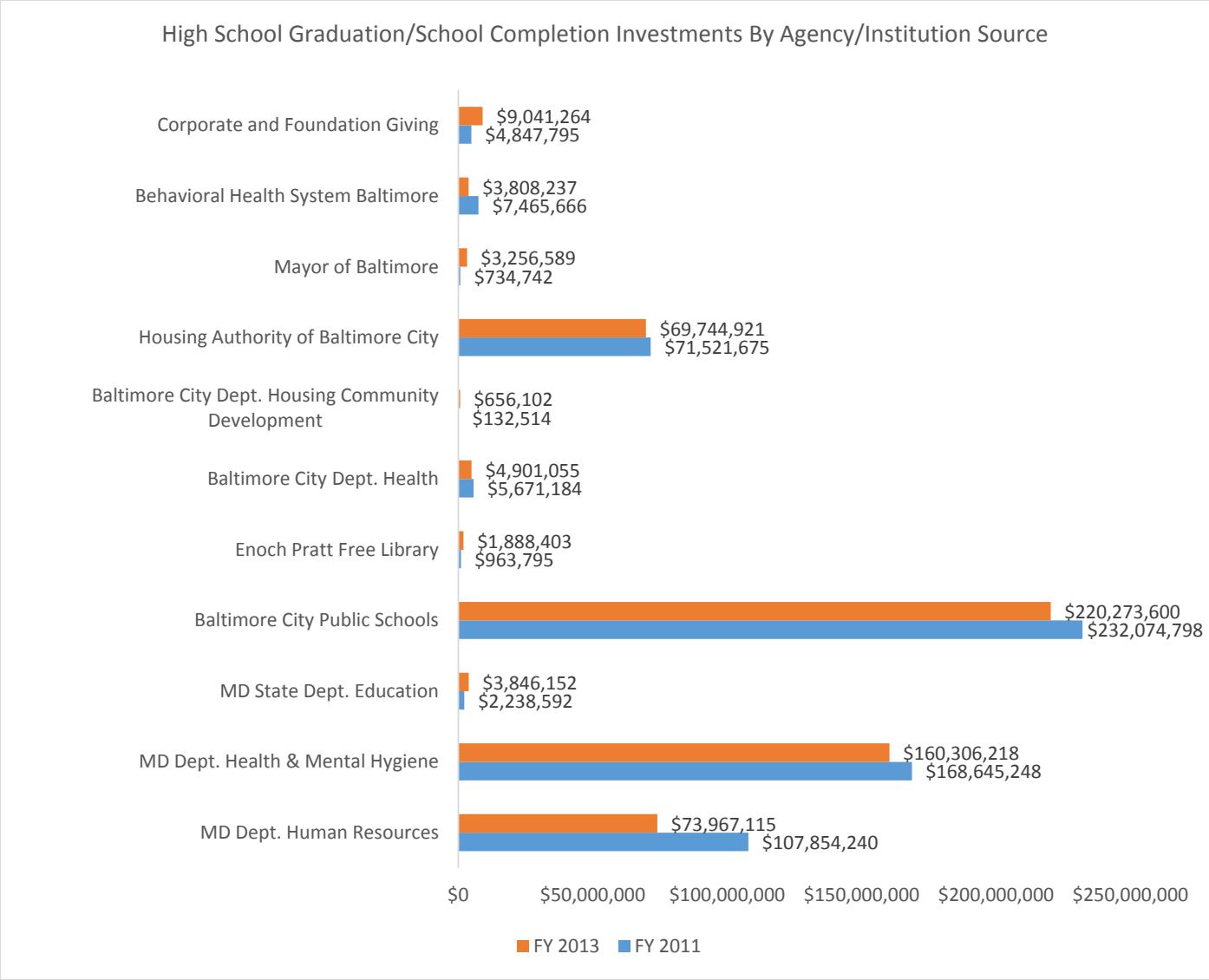


Investments by Funding Source	FY 2011	FY 2013	$ Change	% Change
Federal	$296,982,849	$218,564,157	-$78,418,692	-26.4%
State	$249,587,715	$274,046,851	$24,459,136	9.8%
Local	$50,726,372	$50,037,385	-$688,988	-1.4%
Private	$4,853,312	$9,041,264	$4,187,952	86.3%
TOTAL	$602,150,248	$551,689,657	-$50,460,592	-8.4%

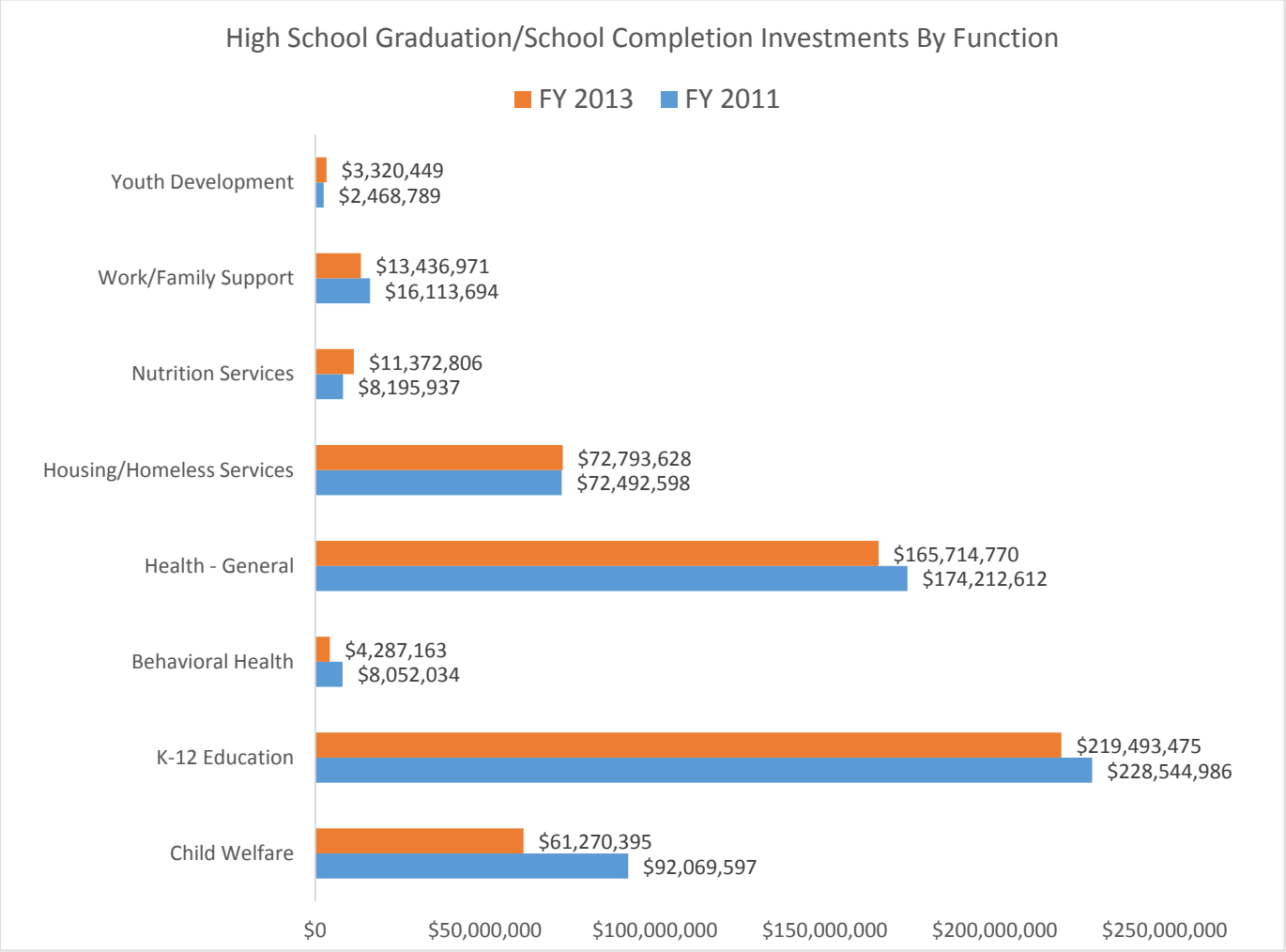


High School Graduation/School Completion Investments by Agency/Institution Source

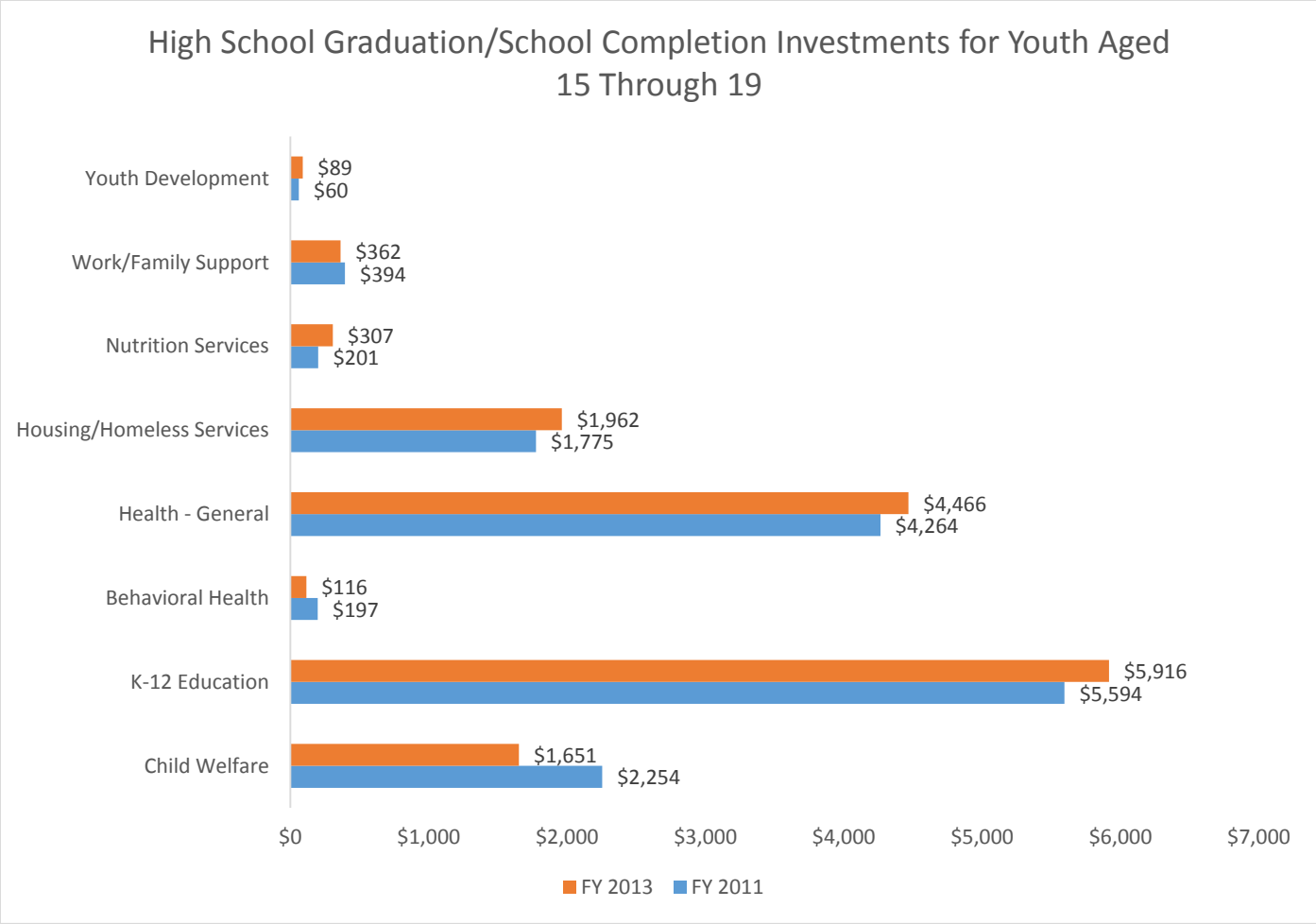
	FY 2011	FY 2013	$ Change	% Change
MD Dept. Human Resources	$107,854,240	$73,967,115	-$33,887,125	-31.4%
MD Dept. Health & Mental Hygiene	$168,645,248	$160,306,218	-$8,339,030	-4.9%
MD State Dept. Education	$2,238,592	$3,846,152	$1,607,560	71.8%
Baltimore City Public Schools	$232,074,798	$220,273,600	-$11,801,198	-5.1%
Enoch Pratt Free Library	$963,795	$1,888,403	$924,609	95.9%
Baltimore City Dept. Health	$5,671,184	$4,901,055	-$770,129	-13.6%
Baltimore City Dept. Housing Community Development	$132,514	$656,102	$523,588	395.1%
Housing Authority of Baltimore City	$71,521,675	$69,744,921	-$1,776,754	-2.5%
Mayor of Baltimore	$734,742	$3,256,589	$2,521,847	343.2%
Behavioral Health System Baltimore	$7,465,666	$3,808,237	-$3,657,428	-49.0%
Corporate and Foundation Giving	$4,847,795	$9,041,264	$4,193,469	86.5%
TOTAL	$602,150,248	$551,689,657	-$50,460,592	-8.4%



Investments by Function	FY 2011	FY 2013	$ Change	% Change
Child Welfare	$92,069,597	$61,270,395	-$30,799,202	-33.5%
K-12 Education	$228,544,986	$219,493,475	-$9,051,512	-4.0%
Behavioral Health	$8,052,034	$4,287,163	-$3,764,871	-46.8%
Health - General	$174,212,612	$165,714,770	-$8,497,843	-4.9%
Housing/Homeless Services	$72,492,598	$72,793,628	$301,030	0.4%
Nutrition Services	$8,195,937	$11,372,806	$3,176,869	38.8%
Work/Family Support	$16,113,694	$13,436,971	-$2,676,722	-16.6%
Youth Development	$2,468,789	$3,320,449	$851,660	34.5%
TOTAL	$602,150,248	$551,689,657	-$50,460,592	-8.4%



Investments per Youth Aged 15 Through 19	FY 2011	FY 2013	$ Change	% Change
Child Welfare	$2,254	$1,651	-$602	-26.7%
K-12 Education	$5,594	$5,916	$321	5.7%
Behavioral Health	$197	$116	-$82	-41.4%
Health - General	$4,264	$4,466	$202	4.7%
Housing/Homeless Services	$1,775	$1,962	$187	10.6%
Nutrition Services	$201	$307	$106	52.8%
Work/Family Support	$394	$362	-$32	-8.2%
Youth Development	$60	$89	$29	48.1%
TOTAL	$14,740	$14,870	$130	0.9%


High School Graduation/School Completion Investments for Youth Aged 15 Through 19
Youth Development
$89
$60
Work/Family Support
$362
$394
Nutrition Services
$307
$201
Housing/Homeless Services
$1,962
$1,775
Health - General
$4,466
$4,264
Behavioral Health
$116
$197
K-12 Education
$5,916
$5,594
Child Welfare
$1,651
$2,254
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FY 2011

Cradle to Career Fund Maps: Career Readiness

Fiscal Outlook

- Career readiness investments were essentially flat from FY 2011 to FY 2013, increasing $174,784, or 0.2%, to $96.7 million.
- From FY 2011 to FY 2013, career readiness investments per youth aged 20 through 24, increased $199, or 11.4%, to $1,951 in FY 2013 – from $1,752 in FY 2011.
- At the same time, the rate of BCPS graduates enrolled in a US college fell 3.8% for those enrolled within 12 months and 6.3% within 24 months of graduation.
- The rate of BCPS grads enrolled in a Maryland higher education institution fell by 2.4% and the rate of BCPS grads enrolled in a Maryland college that earned one year of credit within 24 months of enrolling fell 11.5%.
- In recent years, the proportion of BCPS graduates attending Community College of Baltimore County campuses vs. Baltimore City Community College has flipped, with more BPCS graduates attending CCBC than BCCC. For example, for the Class of 2007, 245 graduates attended CCBC and 450 graduates went to BCCC. While for the class of 2012, 671 graduates attended CCBC, where tuition is $102 per credit hour higher, and 319 graduates attended BCCC.

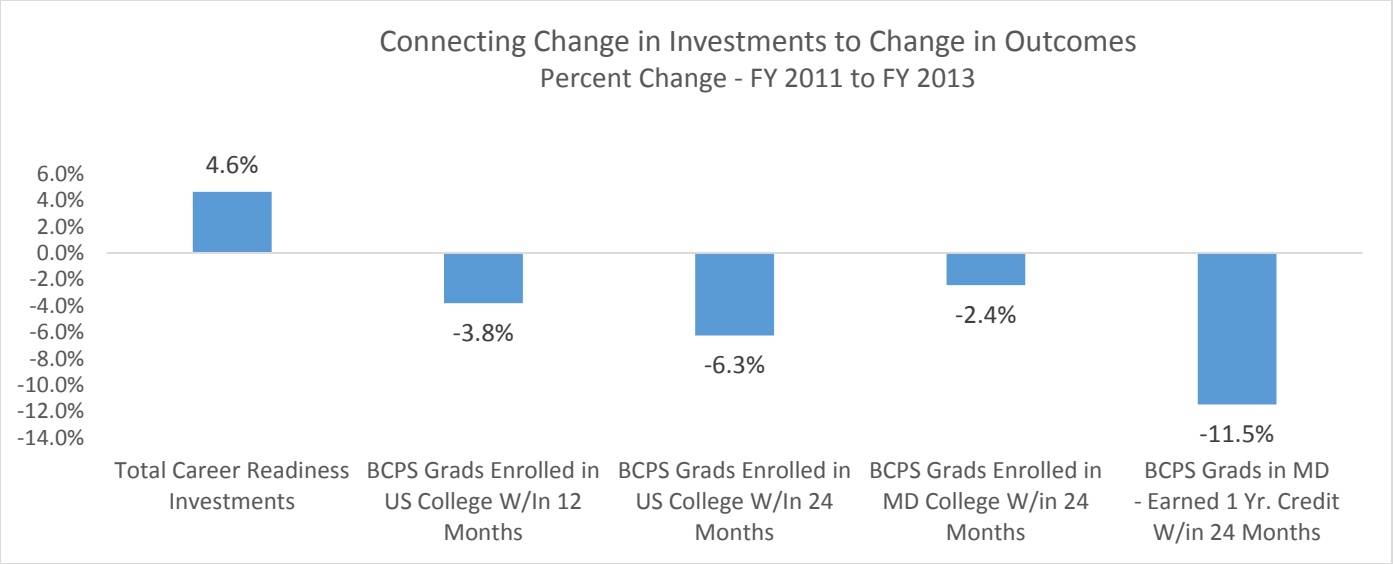
Policy Landscape

- The Teacher Scholarship Program awards students who meet certain educational criteria, including maintaining a 3.3 GPA, 100% of tuition, fees and room and board to attend a state public higher education institution with a department of education.
- Two 2014 state bills expanded tuition assistance, with one expanding eligibility for tuition and fee waivers to specified unaccompanied homeless youth and the other continuing assistance for a member of the Maryland National Guard receiving assistance.
- State legislation enacted this year adds requirements to the state's Loan Assistance Repayment Program to help in meeting federal loan forgiveness programs. Another state bill expanded the state's loan assistance repayment program for physicians to also include physician assistants.
- 2014 state legislation created a three-year Summer Career Academy Pilot Program beginning in summer of 2015 to provide students having difficulty meeting graduation requirements an opportunity for summer employment. The state superintendent will select four eligible school districts a year; and superintendents from eligible districts can designate eligible students, 60 in summer 2015 and 100 in summer 2016 and 2017. Eligible students earn a summer stipend up to $4,500 and on program completion can choose either a $500 grant or a $2,000 scholarship.
- 2014 state legislation established the Maryland College and Career-Ready Standards and Partnership for Assessment of Readiness for College and Careers (PARCC) Implementation Review Workgroup. The Workgroup's August 2014 preliminary report included best practices of many local school districts in the state.
- 2014 state legislation created the Regional Institution Strategic Enterprise Zone program that begins July 1, 2015. Qualified higher education institutions can partner with local economic development agencies to become a RISE zone, where qualifying businesses receive income and property tax credits and priority consideration for state assistance.

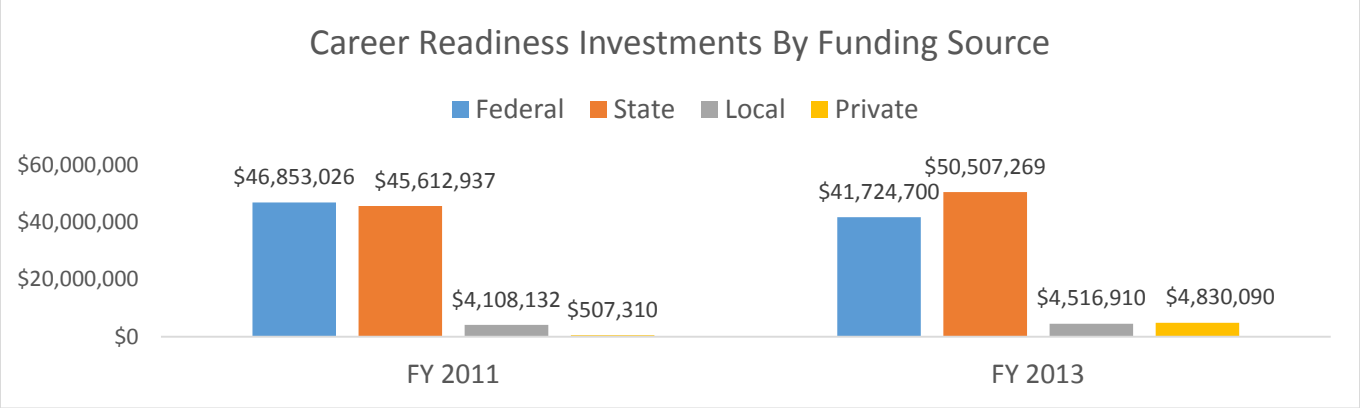
- The newly established Maryland Technology Internship program connects students to technology internships and awards up to $3,000 annually.
- The two-year state Foster Youth Summer Internship program began in January and provides internships in state government to foster children and former foster children aged 15-25.
- Maryland Early College Innovation Fund provides funding for start-up costs for new early college programs for accelerated pathways for STEM degrees and training. The FY 2015 state budget currently includes $1.4 million for the fund.
- A state-appointed special review committee conducted a comprehensive review of Coppin State University. Recommendations and an implementation plan were developed and began on July 1, 2013 and are ongoing through at least June 2015 under current campus leadership.
- The College and Career Readiness Act of 2013 standardized the number of credits needed to receive an associate's degree as 60 credit hours and 120 credit hours for a bachelor's degree. The Act also required that all students in state public higher education institutions must file a "degree plan" and that institutions must develop and track a degree pathway system.

Recommendations

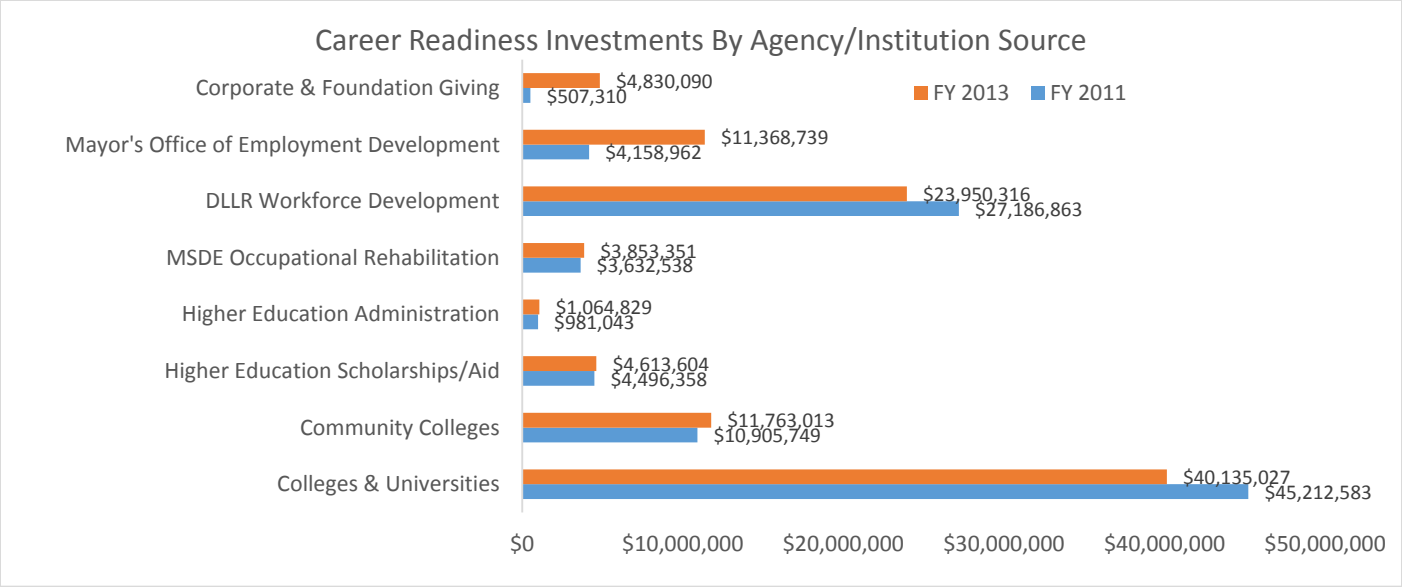
- Coordinate with BCPS and other partners to maximize opportunity for BCPS to be selected as an eligible district for each of the three years of the Summer Career Academy pilot.
- Partner with allies, including City legislative delegation leaders, to convene cross-agency FY 2016 "Ready to Earn" budget hearings in the upcoming state General Assembly session.
- Secure funding to pay for the cost differential in resident tuition between CCBC and BCCC, currently $102 per credit hour, and other support services, including transportation and child care, for BCPS graduates who choose to attend CCBC.
- Determine which city public higher education institution best meets the criteria for the RISE Zone program. Recruit and partner with economic development agency and business community to establish RISE Zone.
- Partner with BCPS to maximize the number of students and graduates participating in the Maryland Technology Internship program.
- Partner with BCDSS to maximize the number of foster children and former foster children participating in the Foster Youth Summer Internship program.



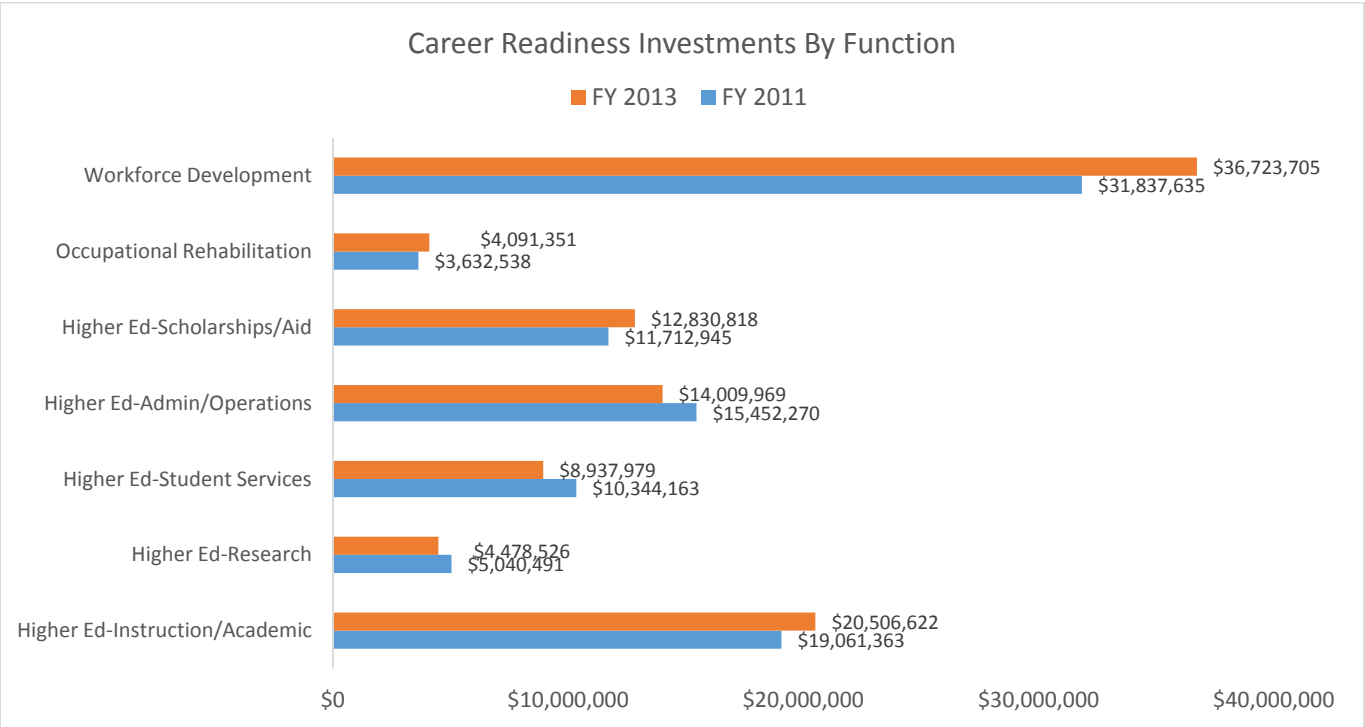
Spending by Funding Source		FY 2011	FY 2013	$ Change	% Change
Federal		$46,853,026	$41,724,700	-$5,128,326	-10.9%
State		$45,612,937	$50,507,269	$4,894,332	10.7%
Local		$4,108,132	$4,516,910	$408,778	10.0%
Private		$507,310	$4,830,090	$4,322,780	852.1%
	TOTAL	$97,081,405	$101,578,969	$4,497,564	4.6%



Investments by Agency/Institution Source		FY 2011	FY 2013	$ Change	% Change
Colleges & Universities		$45,212,583	$40,135,027	-$5,077,555	-11.2%
Community Colleges		$10,905,749	$11,763,013	$857,264	7.9%
Higher Education Scholarships/Aid		$4,496,358	$4,613,604	$117,246	2.6%
Higher Education Administration		$981,043	$1,064,829	$83,786	8.5%
MSDE Occupational Rehabilitation		$3,632,538	$3,853,351	$220,813	6.1%
DLLR Workforce Development		$27,186,863	$23,950,316	-$3,236,547	-11.9%
Mayor's Office of Employment Development		$4,158,962	$11,368,739	$7,209,777	173.4%
Corporate & Foundation Giving		$507,310	$4,830,090	$4,322,780	852.1%
	TOTAL	$97,081,405	$101,578,969	$4,497,564	4.6%

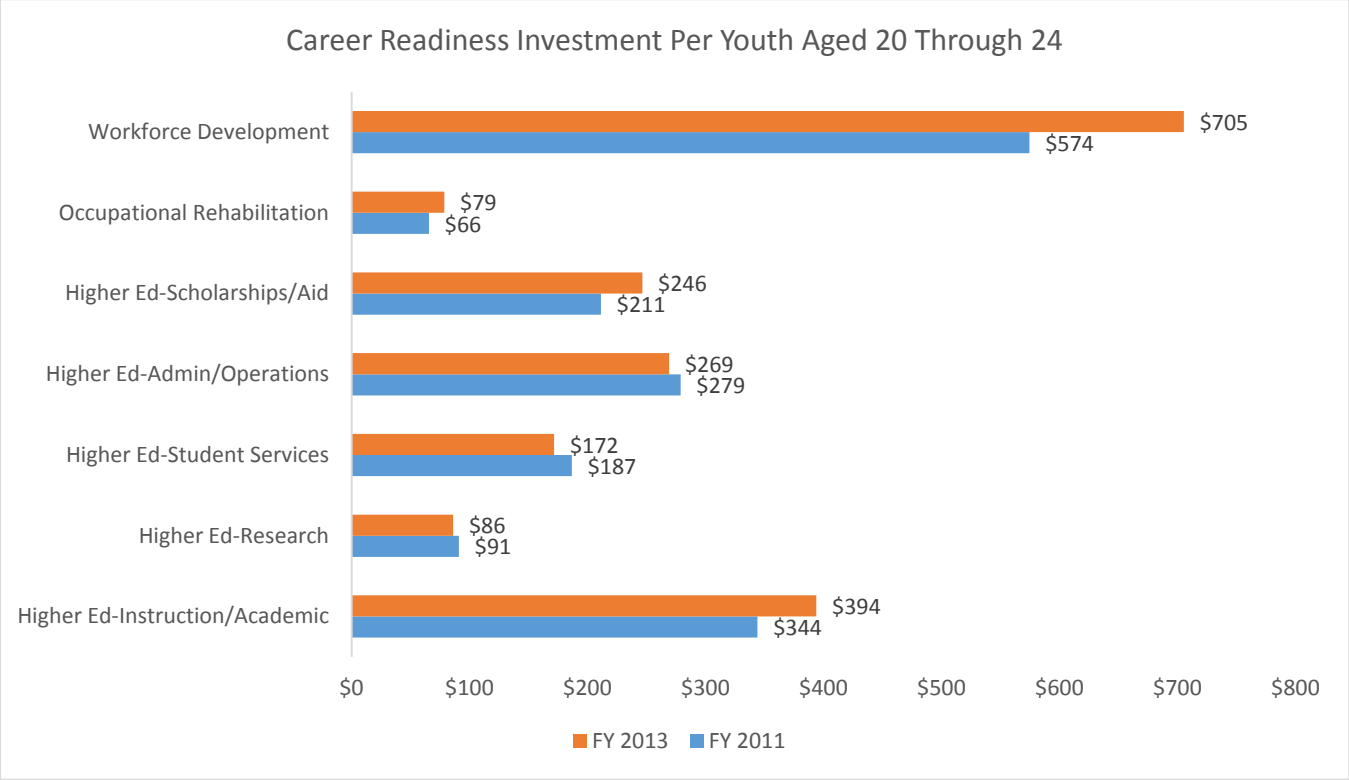


Investments by Function	FY 2011	FY 2013	$ Change	% Change
Higher Ed-Instruction/Academic	$19,061,363	$20,506,622	$1,445,259	7.6%
Higher Ed-Research	$5,040,491	$4,478,526	-$561,966	-11.1%
Higher Ed-Student Services	$10,344,163	$8,937,979	-$1,406,184	-13.6%
Higher Ed-Admin/Operations	$15,452,270	$14,009,969	-$1,442,301	-9.3%
Higher Ed-Scholarships/Aid	$11,712,945	$12,830,818	$1,117,873	9.5%
Occupational Rehabilitation	$3,632,538	$4,091,351	$458,813	12.6%
Workforce Development	$31,837,635	$36,723,705	$4,886,070	15.3%
	$97,081,405	$101,578,969	$4,497,564	4.6%



Career Readiness Investments per Young Adult Aged 20 Through 24

Higher Ed-Instruction/Academic	$344	$394	$50	14.5%
Higher Ed-Research	$91	$86	-$5	-5.4%
Higher Ed-Student Services	$187	$172	-$15	-8.0%
Higher Ed-Admin/Operations	$279	$269	-$10	-3.5%
Higher Ed-Scholarships/Aid	$211	$246	$35	16.6%
Occupational Rehabilitation	$66	$79	$13	19.9%
Workforce Development	$574	$705	$131	22.8%
TOTAL	$1,752	$1,951	$199	11.4%



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Supplemental Security Income and Social Security (Old-Age, Survivors, and Disability Insurance (OASDI) Spending on Baltimore City Children under Age 18)

"SSI Recipients by State and County," or "OASDI Recipients by State and County," July 2014, Social Security Administration. SSA reports age groups differently from Census data and other demographic data sources. For SSA age groups, children are defined as under age 18. Table 3 for Maryland of both publications provides number of recipients for each benefit by eligibility category for children under age 18 and the amount of payments for each benefit and category. See http://www.ssa.gov/policy/docs/statcomps/ssi_sc/index.html and http://www.ssa.gov/policy/docs/statcomps/oasdi_sc/index.html.

Federal Assistance Award Data System

See www.usaspending.gov. Single-year grants are either directly allocated to Cradle to Career spending, for example maternal and child health spending, or allocated with the percentage of city population under age 19, for example homeless assistance grants. Multi-year grants are allocated to FY 2013 using the number of grant years in the award.

State Agency Spending

The budget detail for the FY 2015 Operating Budget includes FY 2013 actual spending and is available at
http://dbm.maryland.gov/agencies/operbudget/Pages/FY2015OperatingBudgetDocs.aspx

The budget detail for the FY 2013 Operating Budget includes FY 2011 actual spending and is available at

http://dbm.maryland.gov/agencies/operbudget/Pages/2013ProposedOperBudget.aspx.

Medicaid Spending on Baltimore City Children under Age 21

Maryland Department of Health and Mental Hygiene staff provided actual total FY 2013 spending on Baltimore City Medicaid enrollees by coverage group and service type. DHMH staff also provided demographic data for age groups by coverage group and service type. The age groups used by DHMH to track and report enrollee demographic data are Under Age 1 Year, Aged 1-5 Years, Aged 6-14 Years, Aged 15-20 Years, and various age group for adults aged 21 through Aged 85 Years & Above. The "cradle to career" budget allocates the actual spending for each coverage group and service type by the corresponding actual percentage of enrollees under age 21 for each coverage group and service type.

Allocated total expenditures for enrollees under age 21 for each coverage group and service type are also allocated to federal and state funding sources using with Maryland's Federal Medical Assistance Percentage (FMAP), or the state's Medicaid matching rate that is 50%.

Maryland Department of Health and Mental Hygiene (DHMH) (Non-Medicaid)
Department of Legislative Services Office of Policy Analysis staff reported FY 2011 actual spending in DHMH Family Health Administration for Baltimore City recipients and administration for the Women, Infants and Children (WIC) program.

Maryland Department of Human Resources (DHR)/Baltimore City Department of Social Services (BCDSS)
FY 2013 actual spending data by program and funding source in BCDSS were reported by DHR and BCDSS Finance staff.

Maryland Department of Public Safety and Correctional Services (DPSCS)
Actual FY 2013 spending data by funding source for the DPSCS Operations - Corrections and for the Patuxent Institution. The "cradle to career" budget allocates Division of Corrections spending with demographic data on the percent of DCPCS Operations - Corrections admissions who are residents of Baltimore City (47.2%) and the percent of admissions who are youth aged under 19 (1.5%) who were under age 19. The fund matrix allocates Patuxent Institution spending with the percent of Patuxent Institution inmates from Baltimore City and the percent of youth inmates in the Patuxent Institution population. These data were reported in the DPSCS Operations - Corrections FY 2011 Annual Report, available at http://www.dpscs.state.md.us/publicinfo/publications/index.shtml.

Maryland Department of Juvenile Services (DJS)
Actual FY 2013 spending by funding source data for DJS Headquarters and Regions are available in the FY 2015 state budget documents. The "cradle to career" investment matrix counts all FY 2013 actual spending in the Baltimore City Region for Administrative and Community Services. (The DJS Regional Community Service spending includes expenditures for evidence-based programs and committed residential programs for youth residing in that region.) The DJS "FY 2013 Data Resource Guide," available at http://www.djs.state.md.us/data-resource-guides.asp, reported demographic data for state-operated juvenile detention facilities, including the percentage of FY 2013 admissions who were from Baltimore City. For example, 94.7% of youth admissions to the Baltimore City Juvenile Justice Center were Baltimore City. The "cradle to career" budget allocates state-operated detention expenses by facility with the facility's percent of admissions by Baltimore City youth. Reported FY 2011 actual DJS Central administrative expenses including Office of the Secretary, Departmental Support and Residential & Community Operations – Operations, are allocated to Baltimore City youth with DJS Intake demographic data in the FY 2013 Data Resource Guide, reporting that Baltimore City youth accounted for 14.5% of statewide DJS Intakes. The Data Resource Guide also includes demographic data for state facilities and committed programs by age and by the region of residence of the youth.

Office of the Public Defender (OPD)
Actual FY 2013 spending by funding source data are from the Maryland FY 2013 Operating Budget. Allocated to Baltimore City children with census data on the percent of Baltimore City population under age 19.

Maryland Office of the Attorney General

FY 2013 actual spending data by funding source for the Juvenile Justice Monitoring Unit (JJMU) are available in the FY 2015 state budget for the Office of the Attorney General. JJMU's sole focus was on monitoring youth detained at the Baltimore City Juvenile Justice Center. The "cradle to career" investment matrix, therefore, includes all JJMU FY 2013 expenditures.

Governor's Office for Crime Control and Prevention (GOCCP)

Actual FY 2013 spending by funding source data are from the Maryland FY 2015 Operating Budget. The "cradle to career" budget includes actual spending for Baltimore City allocation from the State Aid for Police Protection Fund. The state budget's appropriation statements for GOCCP include detail on state General Fund spending on Local Law Enforcement Grants. The "cradle to career" matrix includes actual spending on state grants for Baltimore City Foot Patrol, Baltimore City Community Policing, Baltimore City Violent Crime Control Grant, War Room – Baltimore City, and Baltimore City State's Attorney's Office – Prosecution of Gun Crimes and Violent Offenders. The remaining statewide GOCCP expenditures are allocated to Baltimore City children with data from the U.S. Census on the percent of Baltimore City residents under the age of 18.

Maryland State Department of Education (MSDE)

See Baltimore City Public Schools (BCPS) section in local-level funding sources below for data sources on state spending in BCPS. FY 2013 actual expenditures by funding source for the Maryland School for the Deaf, Maryland School for the Blind, Blind Industries and Services of Maryland, Aid to Nonpublic Schools, Grants to Educational Agencies, Interagency Committee on School Construction, and Juvenile Services Education Program – Headquarters are reported in the FY 2013 Maryland Operating Budget – Volume III in various places in the MSDE section. Statewide spending was allocated to Baltimore City children with the proportion of Baltimore City student enrollment relative to statewide student enrollment (9.94%). Enrollment statistics from "2012-2013 Fact Book," Maryland State Department of Education, available at http://marylandpublicschools.org/MSDE/divisions/bus_svcs/docs/Fact_Book_2012-2013.pdf.

MSDE staff reported actual FY 2013 spending for Judy Hoyer Centers and for the 21st Century Learning Centers. Project staff requested actual FY 2013 spending on the Child Care Subsidy Program for Baltimore City families and spending on early learning locations in addition to Judy Hoyer Centers in Baltimore City. The MSDE response for child care subsidy program and other early learning locations is pending receipt; and the FY 2013 spending levels are estimated with FY 2011 actuals and the rate of FY 2011 – FY 2013 growth by program in the state budget.

Children's Cabinet Interagency Fund – Family League of Baltimore City

Family League of Baltimore City staff provided their FY 2011 contracts. The information provided included the organization, program, funding amount, funding source, purpose or initiative and contract start and end date. See the attached tables for spending detail and summary of spending by function.

Governor's Office for Children

FY 2013 actual spending data for the Governor's Office for Children are from the FY 2013 Maryland Operating Budget. Statewide expenditures are allocated by funding source to Baltimore City using the percentage of Family League of Baltimore City spending as a percent of total statewide Children's Cabinet Interagency Fund expenditures.

Local-level Agency Spending

Baltimore City Public Schools

FY 2013 actual expenditures for Baltimore City Public Schools are from the "Operating Budget: Fiscal Year 2015," Baltimore City Public Schools, available at http://www.baltimorecityschools.org/cms/lib/MD01001351/Centricity/domain/8052/pdf/FY15-AdoptedBudget-CompleteBook.pdf.

Housing Authority of Baltimore City

FY 2013 expenditures are reported in "Moving to Work Program: Annual Plan for Fiscal Year 2013," Housing Authority of Baltimore City," available at http://portal.hud.gov/hudportal/documents/huddoc?id=fy13annualplanhabc.pdf.

Behavioral Health System of Baltimore

Behavioral Health System of Baltimore staff reported actual FY 2013 cradle to career expenses by program and by funding source.

City of Baltimore – Local Agencies

The adopted Baltimore City FY 2015 Budget includes FY 2013 actual spending data by agency and by program and by funding source. FY 2015 city budget documents are available at http://bbmr.baltimorecity.gov/. The cradle to career fund matrix counts 100% of spending for the following items:

- Baltimore City Department of Health
  - Maternal and Child Health,
  - School Health Services, and
  - Youth Violence Prevention
- Baltimore City Department of Housing and Community Development
  - Early Childhood Education/Before and After Care,
  - Dawson Center (child care center), and
  - Summer Foods Program
- Office of the Mayor of Baltimore
  - Education Grants (portion not counted in FLBC funding)
- Mayor's Office of Employment Development
  - BCPS Alternative Options Academy for Youth,
  - Workforce Services for Out of School Youth,
  - Youth Works Summer Job Program, and
  - Workforce Services for WIA Funded Youth
- Mayor's Office of Human Services
  - Head Start

- Sheriff
    - Child Support Enforcement

Circuit Court costs are allocated to Baltimore City children using data in "Annual Statistical Abstract: Fiscal Year 2013," Maryland Judiciary that show that 31.0% of total city filings were family and juvenile cases. See: http://mdcourts.gov/publications/annualreport/reports/2013/fy2013statisticalabstract.pdf.

Spending in the Department of Health and the Department of Housing and Community Development as well as the Mayor's Office that is not 100% counted as cradle to career spending are allocated to Baltimore City children with July 2013 Census data on percent of residents under age 19. Spending on the Enoch Pratt Free Library, Baltimore City Police Department, Baltimore City Department of Recreation and Parks, and Baltimore City State's Attorney are also allocated with the July 2013 Census data on percentage of Baltimore City population under age 19.

Private Foundation Sources

Direct Foundation Investments

FY 2013 direct "Cradle to Career" investments in Baltimore City children were reported by the various foundations through a survey conducted by Project staff. Project staff did not remove private investments identified as cradle to career spending, unless the grants were supporting capital spending.

Cradle to Career Investments by Outcome Area

Babies Born Healthy

See above for detail on data source and methodology for included investments. Maryland Department of Health and Mental Hygiene staff provided Baltimore City FY 2013 Neonatal Intensive Care Unit charges by zip code and by payer and by diagnosis code for each zip code.

School Readiness

See above for more detail on data source and methodology for included investments. Maryland Department of Health and Mental Hygiene staff provided percent of Baltimore City enrollees by coverage group by age group, including under age 1, aged 1-5, aged 6-14 and aged 15-20, as well as age groups for adults, and the percent of enrollees by coverage group under age 20. The school readiness fund map uses the percent of children under age 6 of all children overall, in the FAC Child and in the Foster Care coverage groups to allocate actual Medicaid, TCA and foster care payments to the school readiness fund map.

Budgets for each Individual BCPS school for the 2013-2014 school year are online at http://www.baltimorecityschools.org//site/Default.aspx?PageID=24389. Project staff reviewed the budget for each elementary or elementary/middle school and pulled out pre-kindergarten educator salaries by school. BCPS enrollment data for the 2012-2013 school year are available at www.mdreportcard.org and are reported as total enrollment, as well as enrollment for pre-kindergarten, kindergarten, elementary, middle and high school.

To estimate related pre-kindergarten costs other than reported pre-kindergarten educator salaries, project staff used the percentage of students enrolled in pre-kindergarten to allocate FY 2013 actual BCPS expenses by category, i.e., administration, instruction, special education, student services, transportation, plant, fixed charges, community services, food service, and debt service.

Grade-Level Educational Achievement & High School Graduation

See above for more detail on data source and methodology for included investments. The grade-level achievement and high school graduation are counting essentially the same cohort of investments by both agency/institution source and by function. Although, expenses related to education for youth committed to the juvenile justice system are entirely counted in the grade-level achievement fund map. Most of the investments are allocated to the grade-level achievement fund with the percentage of BCPS students enrolled in Kindergarten through Grade 8, with enrollment from the 2010-2011 school year for FY 2011 and with enrollment for 2012-2013 school year for FY 2013. These investments are allocated to the high school graduation fund map with the percentage of BCPS students attending high school.

For entitlement payments, actual Temporary Cash Assistance, Foster Care and Medicaid payments are allocated to the respective fund maps by the actual percentage of children either aged 6-14 or aged 15-20 in each Medicaid coverage group.

The grade-level achievement and high school graduation currently are counting all private investments from the following sub-function categories: child welfare; K-12 education; behavioral health; health – general; housing/homeless services; nutrition services; work/family support; and youth development. The private investments are allocated to the grade-level achievement fund with the percentage of BCPS students attending Kindergarten through Grade 8 and are allocated to the high school graduation fund map with the percentage of BCPS students attending high school.

Career Readiness

The FY 2013 version of the Cradle to Career Fund Maps was the first version to include an estimate of career readiness investments, for both FY 2011 and FY 2013. For consistency with prior versions of the overall fund matrix, these career readiness investments are not included as spending in the Cradle to Career matrix, except for the private investments reported by funders.

The July 2013 Baltimore Education Research Consortium report included data on Maryland higher education institutions attended by BCPS graduates from the Class of 2007 through the Class of 2012. For both 2010-2011 (FY 2011) and 2012-2013 (FY 2013) project staff calculated a cohort of attending BCPS graduates for each institution. To estimate the cohort, for four-year institutions, the sum of the most recent four graduating classes attending the institution was calculated; and for community colleges, the sum of the most recent two graduating classes attending the institution.

The FY 2013 and FY 2015 state budgets include FY 2011 and FY 2013 actual spending for state higher education institutions attended by BCPS graduates. The revenue data for the institution

are broken out by funding source, federal, state, tuition, or auxiliary funding, for example from the sale of athletic attire. For each institution attended by BCPS graduates, project staff calculated the percent of state funding and the percent of federal funding of the total institution revenue.

The state budget includes appropriation statements for public four-year higher education institutions and the Baltimore City Community College. The budget for the Maryland Higher Education Commission includes an accounting of state aid to other community colleges as well as state aid to non-public institutions attended by BCPS graduates. The detail reported in the state budget include full-time equivalent (FTE) students by term for these institutions. For each institution, project staff calculated the percent of the BCPS attending cohort of total FTE students.

The state budget reports expenditures for each public, four-year higher education institution and Baltimore City Community College by category, for example, Instruction, Research or Scholarships. For both FY 2011 and FY 2013 spending in institutions attended by BCPS graduates, project staff allocated actual spending by category by the percent of BCPS attending cohort of total FTE students. The allocated spending by category was split between federal and state sources with the percentage for each fiscal year of federal or state revenue of total institution revenue.

For non-public higher education institutions and other community colleges that receive state aid and were attended by BCPS graduates, project staff counted total state aid as instruction spending and allocated this spending by the percent of BCPS-attending cohort of total FTE students. State aid to these institutions is entirely funded with state funds.

The budget for the Maryland Higher Education Commission includes spending on various statewide scholarship and financial aid programs. Most of these programs are entirely funded with state funds, although a few receive small amounts of federal funding. Project staff calculated a total cohort of BCPS-attending graduates for all reported state higher education institutions and a total FTE student count for all of these institutions as well as the percent of total BCPS-attending cohort of total FTE students. These statewide investments in MHEC for scholarships and financial aid programs are allocated to BCPS-attending youth with the percentage of all BCPS-attending cohorts of total FTE students. Allocated spending is counted in the scholarships category and is split between state and federal with the actual percentage of funding by program.

The career readiness fund maps estimate FY 2011 and FY 2013 spending on occupational rehabilitation services on Baltimore City youth. $238,000 in reported FY 2013 private investments for occupational rehabilitation or career opportunities for individuals with disabilities from the Weinberg Foundation are counted. The FY 2013 and FY 2015 state budgets include actual FY 2011 and FY 2013 spending for the Maryland State Department of Education – Division of Occupational Rehabilitation Services (DORS). To estimate spending on Baltimore City youth, DORS spending is allocated by the percentage of BCPS high school students receiving special education services of statewide high school students receiving special education services

and then with the July 2013 Census data on the percentage of Baltimore City residents under age 19. Spending in DORS – Disabilities Determination Services is allocated to Baltimore City children using the percentage of statewide SSI recipients that were Baltimore City children.

An estimate of Workforce development FY 2011 and FY 2013 spending for Baltimore City youth is the final component of the career readiness funding maps. Private investments in career ready young adults of $491,810 reported in FY 2011 and $1,404,650 in FY 2013 are included. The FY 2013 and FY 2015 state budgets include actual FY 2011 and FY 2013 spending in the Department of Labor, Licensing and Regulation (DLLR) for the Governor's Workforce Investment Board (GWIB) and the Division of Workforce Development and Adult Learning (DWDAL). For the purposes of the career readiness fund maps, project staff factored out DWDAL spending on the Unemployment Insurance program.

The budget for the Office of the Assistant Secretary – DWDAL reports federal grants by funding source, including actual FY 2011 and FY 2013 funding Workforce Investment Act (WIA) Youth Activities, which are counted entirely in the career readiness fund maps.

Project staff used Census data for July 2011 and July 2013 on Maryland and Baltimore City population by age to calculate the percent of Baltimore City young adults of total Maryland working-age population. The number of young adults are the sum of population aged 15-19 and aged 20-24. The working-age population is broadly defined as the population of residents aged 15 to 79.

Spending in DLLR GWIB, the non-WIA Youth Activities spending in the Office of Assistance Secretary – DWDAL, DWDAL Workforce Development, DWDAL Adult Education and Literacy Program and DWDAL Aid to Education are allocated to Baltimore City youth with the percent of city young adults of total state working-age population. Spending in the DWDAL Adult Corrections Program is allocated to Baltimore City youth with the percent of inmates in state correctional facilities who were residents of Baltimore City and the percent of inmates that are under age 19.

The FY 2013 and FY 2015 city budgets contain FY 2011 and FY 2013 actual spending for the Mayor's Office of Employment Services by funding source for Workforce Services for Out of School Youth, the Youth Works Summer Jobs program, and Workforce Services for WIA Funded Youth. The career readiness fund maps include 100% of these investments.